

2020

**JOSÉ MANUEL
FERNANDES DOS
SANTOS**

DESIGN(ER) LEADERSHIP IN LARGE CORPORATIONS

Dissertação apresentada ao IADE – Universidade Europeia, para cumprimento dos requisitos necessários à obtenção do grau de Doutor em design pela via de opção de realização de um programa doutoral, realizado sob a orientação científica do Doutor Carlos Miguel Lopes Rosa, Professor Associado do IADE - Faculdade de Design Tecnologia e Comunicação da Universidade Europeia, e da orientação do Doutor Sebastian Fixson, Associate Dean of Innovation at Babson College e do Doutor António Cruz Rodrigues, Professor Associado da Universidade Lusófona.

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palavras-chave

Design Management, design executives, corporate design, design leadership.

resumo

Enquanto alguns acreditam que o fenómeno do ‘chief design officer’ está em crescimento, consultoras respeitáveis como a McKinsey entraram neste território e providenciaram dados e perspetivas importantes sobre o valor do design, evidência que parece sugerir que a liderança de design ao mais alto nível em grandes empresas é algo ainda raro e que não existem muitos designers de formação nessas posições.

Quando iniciámos esta jornada em 2017, articulámos a seguinte questão: Porque não existem mais designers no C-Suite das empresas F50? De acordo com dados publicamente disponíveis, cabiam nos dedos de uma mão os designers de formação (design, arte, arquitetura) nestas empresas a responderem ao CEO, agora em 2020 existe um. Estamos a progredir para uma liderança do design(er) nestas grandes empresas, ou talvez a regredir? Podemos afirmar que a década de 2010-20 que viu algum progresso neste domínio será equiparada com uma nova década de mais liderança do design(er), ou será que o design já está tão embebido em empresas através de iniciativas bem sucedidas de ‘design thinking’ que estará nas mãos de todos, e a liderança de design nas mãos de líderes tradicionais em diferentes domínios, não dos designers?

Esta investigação e tese de doutoramento ambiciona revelar quais os fatores a impactar esta realidade. Inclui os resultados de vários e recolha de dados, entre eles um questionário efetuado com executivos grandes empresas, outro com designers seniores a trabalharem em empresas, e os resultados de conversas pessoais com mais de 30 profissionais com experiência e perspetiva credíveis sobre o assunto. Esta investigação pretende-se relacionar estes dados e fornecer uma perspetiva sobre o estado da liderança do design(er) em grandes empresas, os resultados que mapeiam esta realidade, apresentando um meta-análise para a comunidade científica, professores, profissionais de design, e outros interessados na exploração deste tema emergente.

resumo longo

Enquanto alguns acreditam que o fenómeno do ‘chief design officer’ está em crescimento, consultoras respeitáveis como a McKinsey entraram neste território e providenciaram dados e perspetivas importantes sobre o valor do design, evidência que parece sugerir que a liderança de design ao mais alto nível em grandes empresas é algo ainda raro e que não existem muitos designers de formação nessas posições. Estamos a assistir ao efeito da globalização, e de disputas de comércio internacional que fizeram empresas tradicionalmente orientadas pelo design como a Apple focarem-se mais na otimização de custos, isto enquanto Jonathan Ive abandona a Apple para perseguir o seu próprio design com a LoveFrom.

Quando iniciámos esta jornada em 2017, articulámos a seguinte questão: Porque não existem mais designers no Conselho de Administração das empresas F50? De acordo com dados publicamente disponíveis, cabiam nos dedos de uma mão os designers de formação (design, arte, arquitetura) nas empresas F50 a responderem ao CEO, agora em 2020 existe um. Embora o impacto destas empresas na sociedade, e da quantidade de designers que elas empregam direta e indiretamente, será o design suficientemente importante para ser representado no C-Suite, e estarão os designers a serem convidados mas também dispostos e preparados para aceitar este desafio? Comparando com a era em que Henry Dreyfuss e Elliot Noyes geriam vastos programas de design nas maiores empresas dos Estados Unidos relacionando-se diretamente com os seus CEO’s, estaremos a progredir para uma liderança do design(er) nestas grandes empresas, ou talvez ao invés? Podemos afirmar que na década de 2010-20 se vislumbrou algum progresso neste domínio, especialmente na quantidade de designers contratados por estas empresas, indaga-se assim se estaremos perante uma nova década de mais liderança do design(er), ou será que o design já está tão embebido nas empresas através de iniciativas bem sucedidas de ‘design thinking’ (muitas vezes implementadas por designers) que o design passou a pertencer a todos e a liderança de design acabará nas mãos de líderes tradicionais em diferentes domínios, não de designers?

O primeiro passo do processo de investigação foi definir a estratégia que correspondesse aos resultados pretendidos com a tese, tendo em conta os objetivos e planeamento, assumindo ao mesmo tempo a complexidade do tópico e a dificuldade em aceder aos profissionais certos e aos recursos. Definimos uma aproximação multivariada, iniciando com entrevistas com entidades que podiam oferecer perspetiva e inspiração com base na sua experiência no domínio, a intenção era que estas conversas apontariam para as questões e tópicos que seriam utilizados para construir dois questionários, dirigidos a duas populações distintas, executivos e designers. Entrevistou-se num período de doze meses uma grande quantidade de pessoas com interesse

pessoal e participação no contexto da liderança de design em grandes empresas, profissionais de ensino que são agentes ativos na educação e preparação de designers que estão agora ou estarão no futuro em posições de liderança de design em grandes empresas, um grupo de presentes e futuros líderes de design em grandes empresas, empresas de recrutamento especializadas em design, profissionais de recrutamento executivo, e investigadores com investigação relevante sobre o tema. Das conversas gravadas, que obedeceram a um protocolo previamente definido, A maioria destas conversas duraram 1 hora, gravadas, resultou a afirmação unânime que a pergunta base desta investigação era importante, justa e adequada.

Quando iniciámos a investigação, não tínhamos uma direção clara sobre quais podiam ser as causas para a escassez de designers no Conselho de Administração das empresas F50. A expectativa era que, as conversas com especialistas do meio levariam a um conjunto de questões, fatores a impactar esta realidade. Sendo que as conversas foram iniciadas com a pergunta de base, começámos a recolher o que estas entidades consideravam questões e fatores, que resultou na habitual lista com diferentes tópicos agrupados. Por cada três entrevistados a mencionarem o mesmo fator, fomos criando uma lista de base, criando assim clusters semânticos no sentido de agrupar respostas e afirmações por semelhança. Com a evolução das conversas evolui também a leitura de bibliografia relevante para o tópico. Na última ronda de conversas, depois dos entrevistados dedicarem algum tempo à pergunta base, apresentávamos a lista dos fatores e pedíamos aos entrevistados para comentar e hierarquizar de acordo com o seu entendimento. A um determinado momento do processo, e de uma lista contendo mais que 16 grupos de condições, definimos os 10 fatores que estão descritos em detalhe na tese, utilizando excertos das conversas com os entrevistados. A ordenação da lista está baseada na sequência que os fatores foram sendo referenciados, conforme se tornavam mais fortes e relevantes. Tivemos pelo menos duas entrevistas que acharam que a lista de fatores demonstrava uma propensão contra o design.

Os fatores que resultaram destas conversas foram:

NECESSIDADE (não há necessidade, o design já está representado, estas empresas são líderes do seu setor)

PREPARAÇÃO (os designers não têm a educação e formação certas, as ferramentas, a mentalidade)

ASPIRAÇÃO (os designers não têm a aspiração/ desejo para assumir este cargo, impede-os de aperfeiçoar as suas práticas)

ESCASSEZ (não existem suficientes designers qualificados com a experiência certa no mercado)

FLEXIBILIDADE (designers tendem a focar-se no design, não tem experiência na gestão de outras áreas)

DESIGN CEO (não existem suficientes CEO's informados

- sobre o design, executivos que entendem o valor do design)
- EFFECTIVIDADE (não é o melhor local para os designers liderarem o design, existem demasiadas distrações)
- ACESSO (designers não são selecionados para o cargo, não são convidados, não são formados e guiados)
- CONSELHO (Conselhos de Administração e consultores não entendem nem aconselham adequadamente assuntos de design)
- ETHOS (a essência de cada designer, atitudes e comportamentos que geram preconceitos e pressupostos)

Definiu-se entre candidato e orientadores da tese e uma organização especializada em executivos de grandes empresas (The Official Board, mantêm a base de dados mais compreensível de quadros organizativos de empresas), um questionário curto para executivos focado na liderança de design em grandes empresas. O questionário teve que ser curto devido à natureza das entidades alvo.

Definiu-se igualmente entre candidato e orientadores da tese, um questionário mais amplo dirigido a designers seniores/ fase de carreira avançada em médias e grandes empresas, desta vez solicitamos ajuda a organizações que agregam designers nos diferentes domínios (IDSA – Industrial Design Association of America, AIGA – Professional Association for Design, Design Museum Foundation). Este questionário cobriu um conjunto de áreas, desde demografia a percurso da carreira e perspetiva.

Ambos os questionários tinham um conjunto de questões em comum, e sendo que não foram escritas da mesma forma, os dados recolhidos são comparáveis e permitem a comparação e criação de perspetiva. Os dados e as perspetivas dos dois questionários relativamente aos fatores revelaram o seguinte:

- NECESSIDADE – Executivos parecem crer que existe menos necessidade de designers nos Conselhos de Administração, que estes não contribuem o suficiente para o desempenho da empresa, designers não vem isso como razão válida para que eles não estejam a esse nível;
- PREPARAÇÃO – Sendo que existiram duas questões no questionário executivo sobre preparação (formação e mentalidade), tanto executivos como designers tendem a acreditar que a preparação é de facto um fator relevante para explicar a escassez de designers a este nível;
- ASPIRAÇÃO - Existe um desacordo fundamental entre executivos e designers sobre a aspiração/ desejo, uma grande quantidade dos executivos acreditam que os designers não estão presentes nos Conselhos de Administração porque não querem, não o desejam, e este é provavelmente o resultado mais distinto de

ambos os questionários;
ESCASSEZ – Executivos acreditam que existe uma maior escassez de designers qualificados que os designers;
FLEXIBILIDADE – Executivos pensam que os designers ao terem um foco limitado relativamente a sua atividade, torna-se um dos principais fatores explicando a escassez de designers no Conselho de Administração, muito para além daquilo que os designers acreditam.

A investigação, os dados recolhidos complementados com a experiência do autor correspondente desta tese, ajudou a definir o enquadramento que necessita de ser abraçado por designers e não designers. Este enquadramento está focado nos preconceitos e pressupostos que cada lado tem sobre o outro, muitas vezes não expressado, mesmo assim importante e presente de tal forma que impede as empresas de usufruírem do design ao máximo e os designers de contribuírem ao máximo para o sucesso das empresas e da sociedade em geral.

O futuro da sociedade e das empresas impactarão e serão impactadas pelo futuro do design, um formador com 30 anos de experiência que formou > 1.000 designers no decorrer da sua carreira afirmou categoricamente que o papel de um designer como o conhecemos no presente vai essencialmente desaparecer. Esta investigação e tese doutoral almeja revelar aqueles que podem ser os fatores, razões que impactam esta realidade, aborda o passado, o presente e o futuro da liderança de design em grandes empresas, relaciona os dados e fornece perspetiva sobre o estado da liderança de design(er) em grandes empresas, oferecendo resultados que mapeiam esta realidade, apresentando um meta-modelo, para a comunidade científica, professores, profissionais de design, e outros interessados na exploração deste tema emergente.

Keywords

Design Management, design executives, corporate design, design leadership.

abstract

While there are those that believe the chief design officer is a growing phenomenon, and respected companies like McKinsey have stepped into the arena and provided very important data and insights attesting the importance of design, evidence seems to suggest that design leadership at the highest level in large corporations is still rare and that there aren't many trained designers in those positions.

When we started this journey in 2017, we articulated the following question: Why aren't there more designers in the C-Suite of F50 corporations? According to publicly available data, there were less than a handful formally educated designers (design, art, architecture) in the F50 reporting to the CEO, now in 2020 there is 1. Are we progressing towards design(er) leadership in large corporations, or perhaps regressing? Can we say that the decade of 2010-20 that saw some progress in this domain will be matched by a new decade of more design(er) leadership, or has design been so deeply engrained in corporations through successful design thinking initiatives that design will be in the hands of everyone and design leadership in the hands of traditional leaders in different domains, not with designers?

This research and doctoral thesis attempts to shed some light on why the insights impacting this reality. It includes the results of various data collection efforts, among them a survey done with large corporations executives, another with senior/ mid-career designers working in large companies, and the result of personal conversations with more than 50 professionals with experience and credible point of view on the topic. This thesis attempts to connect the data and provide insights on the state of design(er) leadership in large corporations, and provides insights into the reality, while providing a meta-model for those designers, and others interested in changing it.

long abstract

While there are still those that believe the Chief Design Officer is a growing phenomenon, and respected companies like McKinsey have stepped into the arena and provided very important data and insights attesting the importance of Design, evidence seems to suggest that design leadership at the highest level in large corporations is still rare and that there aren't many trained designers in those positions. We are witnessing the effect of globalization and trade disputes that have made traditional Design led companies like Apple focus strongly on cost cutting, this is while Jonathan Ive leaves Apple to pursue his own Design ways with LoveFrom.

When we started this journey in 2017, we articulated the following question: Why Aren't There More Designers in The C-Suite of F50 Corporations? According to publicly available data, there were less than a handful formally educated designers (design, art, architecture) in the F50 reporting to the CEO, now in 2020 there is one. Despite the impact of these corporations in society at large, and the sheer number of designers they employ directly and indirectly, is design important enough to be represented in the C-Suite, and are designers being invited but also willing and able to take on that challenge? Compared to the era where Henry Dreyfuss and Elliot Noyes ran large design programs in the largest corporations in the US and engaged directly their CEO's, are we progressing towards more design(er) leadership in large corporations, or perhaps less? Can we say that the decade of 2010-20 that saw some progress in this domain, especially in the quantity of designers hired by these organizations, will be matched by a new decade of more design(er) leadership, or has design been so deeply engrained in corporations through successful design thinking initiatives (run many times by designers) that design will be in the hands of everyone and design leadership in the hands of traditional leaders in different domains, not with designers?

Before engaging with research itself, there was a need to define a research strategy that would fit the thesis goals, taking into account our objectives and timeline, while acknowledging the complexity of the topic and difficulty in accessing the right people and resources. We defined a multi-pronged approach, starting with 1:1 interviews with entities that could provide insights and inspiration based on their own experience in the domain, the intention was that these conversations would point toward the questions and topics that would be used to build two distinct surveys, aimed at two populations, executives and designers.

We interviewed throughout a period of 12 months a large number of people with a personal interest and participation in the context of large corporation design leadership, namely a Coach with over 30 years of training Design leaders in large corporations, a number of Educators that are active agents in the education and preparation of Designers that are now or will be in leadership positions in large corporations, a number

of present and past large corporation Design Leaders, design placement recruiters, an executive recruiter, and Researchers with impactful research on the topic. The majority of these conversations were 1hr long, recorded, with an organized protocol, and 100% of the interviewees stated the question posed by the thesis was either important, fair or simply adequate.

When we started the research, there wasn't a clear indication of what might be the reason(s) for the scarcity of Designers in the C-Suite of the top 50 US corporations. The expectation was that conversations with related specialists would spur a number of different reasons, insights impacting this reality. Since the conversations started with the broader question, we started to collect what the entities assumed were insights, and these started to populate a list that was clustered into several topics. For every 3 guests that mentioned the same insight, we created a shortlist. As the conversations with guests proceeded, so did the reading of relevant related research and publications. In the last round of conversations, after people had some time to respond to the open question, we would present the list of the insights assembled till that moment, and asked them to comment, rank these according to their understanding. At the end of the 25th conversation, and out of a list containing more than 16 clusters, we settled on the 10 insights that are described in further detail in the thesis, while using excerpts of the conversations with the entities to support the chosen list. The order of this list is based on the sequence they appeared in the discourse, as they became stronger and relevant. We did have a couple of the interviewees thought these insights were somehow biased against Design.

The insights that resulted from these conversations were:

- NECESSITY (there is no need, Design is already represented, these corporations are at the top of their game)
- PREPARATION (Designers don't have the right education and training, skillset, mindset).
- DESIRE (Designers don't want/ aspire this role, stops them from crafting their practice)
- SCARCITY (not enough qualified Designers with the right experience in the market)
- FLEXIBILITY (Designers tend to stick to Design, no experience in managing other areas)
- DESIGN CEO (not enough Design savvy CEO's/ Executives that understand the value of Design)
- EFFECTIVENESS (not the best/ right place for Designers to lead Design, too many distractions)
- ACCESS (Designers are not selected for the job, not invited, not mentored and groomed for it)
- ADVICE (Board of Directors and Consultancies don't understand and advise on Design adequately)
- ETHOS (at the core of each Designer, attitudes and behaviours that generate biases and assumptions)

We designed, along with the thesis coordinators and an organization specialized in tracking Executives in large corporations (The Official Board, they maintain the most comprehensive directory of corporate organizational charts), a short executive survey on Designer leadership in large corporations.

We also designed along with the thesis coordinators, a longer survey aimed at senior/ mid-career Designers in medium/ large corporations, this time soliciting support from organizations that associate Designers in different domains (IDSA – Industrial Design Association of America, AIGA – Professional Association for Design, Design Museum Foundation). This survey covered a number of areas, from demographics, career path and perspectives.

Both surveys had a number of questions in common, and though they were not written in the exact same way, the data collected is comparable and allows juxtaposing and insight generation. Data and insights from the two surveys regarding the insights revealed:

NECESSITY - Executives seem to believe there is less of a need for Designers in C-level positions, that they don't contribute enough to the performance, Designers don't see that as a valid reason for them not to be at that level;

PREPARATION - Though there were 2 questions in the Executive survey related to Preparation (Training & Mindset), both Executives and Designers seem to agree that Preparation is indeed a strong insight to explain scarcity of Designers at this level;

DESIRE - There is a fundamental disagreement between Executives and Designers on Desire, a large % of Executives believe Designers are not present at the C-level because they don't want/ desire to, and this might be the most differentiating result in both surveys.

SCARCITY - Executives believe there is a bigger scarcity of qualified Designers than Designers do.

FLEXIBILITY - Executives think that Designers having a narrow focus in terms of activity is a major insight in explaining scarcity of Designers in the C- Level position, much more than Designers

This research, the data collected combined with the corresponding author's experience defined the framework of needs to be addressed, by Designers and non-Designers. That framework is focused on the underlying biases and assumptions each side has of each other, often unspoken but yet prominent and present in such a way that it prevents companies from making the best of design, and Designers from contributing all they can to the success of companies and society in general.

The future of society and corporations will impact and be impacted by the future of Design, and a 30-year Design coach that has trained >1.000 Designers throughout his career boldly stated that the job of a designer as we know of it today will essentially disappear. This research and doctoral thesis attempts to shed some light on what might the insights impacting this reality, it touches on the past, present and future of design leadership in large corporations, it connects the data and provides insights on the state of design(er) leadership in large corporations, and provides insights that create a map to help understand this reality, while providing a meta-model for those designers, educators, recruiters, advisors and executives interested in changing this it.

Presidente do Júri:

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Reitor e Presidente do Conselho Científico da Universidade Europeia.

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Glossary of Terms

AIGA – American Institute of Graphic Arts

BA – Bachelor of Arts

BCG – Boston Consulting Group

CCO – Chief Commercial Officer

CEO – Chief Executive Officer

CDF – Corporate Design Foundation

CDO – Chief Design Officer, now sometimes the Chief Digital Officer uses the acronym

CMO – Chief Marketing Officer

C-Suite – Corporate Suite, also called Executive Suite

CX – Customer Experience

DEO _ Design Executive Officer, referred by some as the new version of the design savvy CEO

DMI – Design Management Institute

F50 – Fortune magazine top 50 US companies

F500 – Fortune magazine top 500 US companies

HBR – Harvard Business Review

IDSA – Industrial Design Society of America

IES:NCES – Institute of Educational Sciences: National Center for Educational Statistics. The Institute of Education Sciences (IES), established by the Education Sciences Reform Act of 2002, is the research arm of the U.S. Department of Education. The National Center for Education Statistics is the primary federal entity for collecting and analyzing data related to education.

MA – Master of Arts

M&A – Mergers and Acquisitions

MBA – Master of Business Administration

MDes – Master of Design

MLP – Minimum Lovable Products

MS – Master of Science

MVP – Minimum Viable Product

N-1 – Executive 1 step distanced from the CEO (N)

NPS – Net Promoter Score

O*NET. database - The O*NET Program is the US's primary source of occupational information, containing hundreds of standardized and occupation-specific descriptors on almost 1,000 occupations covering the entire U.S. economy

SIC Codes – Standard Industrial Classification (UK)

SOC Codes – Standard Occupational Classification (US)

SVP – Senior Vice President

TMT – Top Management Team

UX/UI – User Experience/ User Interface Design

VC – Venture Capital

1. Introduction

1.1 Research motivation

The corresponding author of this doctoral thesis has been a working professional in the domain of design and design management since 1989 and very early was given the opportunity to manage designers and began the journey of design management per se. In 2011, and after a number of professional experiences with different organizational formats and in different countries, accepted the challenge to go to the United States and start the journey of design management in large corporations, there was a curiosity about how these organisms performed in design terms and an ambition to progress in these organizations. Since then and throughout his career, in the many exposures to designers gathering and discussing design management, there were always heated discussions about the general lack of alignment between design and organizational agendas, the lack of empowerment, responsibility and accountability of designers in top leadership in their organizations, but the insights for the lack of designers in top leadership, especially in large corporations, was always elusive, with anecdotal evidence and lack of qualitative and quantitative data from a systematic approach to the topic. This research started from this motivation, with a focused question: 'Why aren't there more designers in the C-Suite of F50 corporations?'

1.2 Focus of the research

So that all readers are aligned with terminology, there is a need to break down the main research question and frame each of the terms that compose the aforementioned question.

Designers: For the purpose of this research, we decided to focus on academically trained designers as a definition of designer. It seems that the existence of design as an academic degree justifies the inquiry we are pursuing. It is understood this might ignore many degrees with the word 'design' in them.

While design training is a growing trend among large corporations (Kolko, J., 2018), until further proof neither a good nor bad thing, simply should not invalidate the core question of this doctoral thesis. On the other hand, executives have training in many other areas and that does not in itself invalidate the need for executives specialized in certain areas. Designers can also aspire to manage design or any other area, since many other executives may manage areas different from the ones they were academically trained on, as stated in recent research 'to get a job as a top executive, new evidence shows, it helps greatly to have experience in as many of a business's functional areas as possible' (New York Times, 2016).

A recent study (Design Council, 2017) defined what design meant for the purpose of their study. The authors did that by focusing on design skills, starting by identifying 23 occupations that make up the UK design Economy using Standard Industrial Classification (SIC) codes, and they mapped these against the US SOC Codes found in the Department of Labor's O*NET Database, reduced those skills to 13 that were above average importance across the 23 occupations. Further, they identified additional occupations which all say knowledge of design is important to their work, as well as two other skills on the list. Their objective was to analyse UK Government data sets and calculate the economic value workers using these skills contribute, and ultimately discuss if there is enough being done to promote and develop these skills.

The referred research focus was more on defining design skills needed, than designers themselves, and traced those skills to education syllabus and were capable of stating that, in the UK 'in 2017, just under 166,000 students took design and technology subjects, a 61% decrease from the year 2000' p.10. That is the reason why their definition of Designers includes a large number of design occupations that include, as examples, the ones in 'Figure 1'.

For the purpose of this research, and following the United States Department of Labor/ Bureau of Labor Statistics definition of a Designer is someone with formal education in any of these areas:

- Commercial and Industrial Designers

- Graphic Designers
- Fashion Designers
- Interior Designers
- Set and Exhibit Designers
- Media and Communication Workers
- Artist and Related Workers
- Architecture

We are aware that, if there were to be a strict definition of design, then areas like Media and Communication, Artist and Related should not be included, but data suggests these are all understood as ‘Creative areas’, and recruiters and hiring managers tend to place these majors in the same group as creative majors.

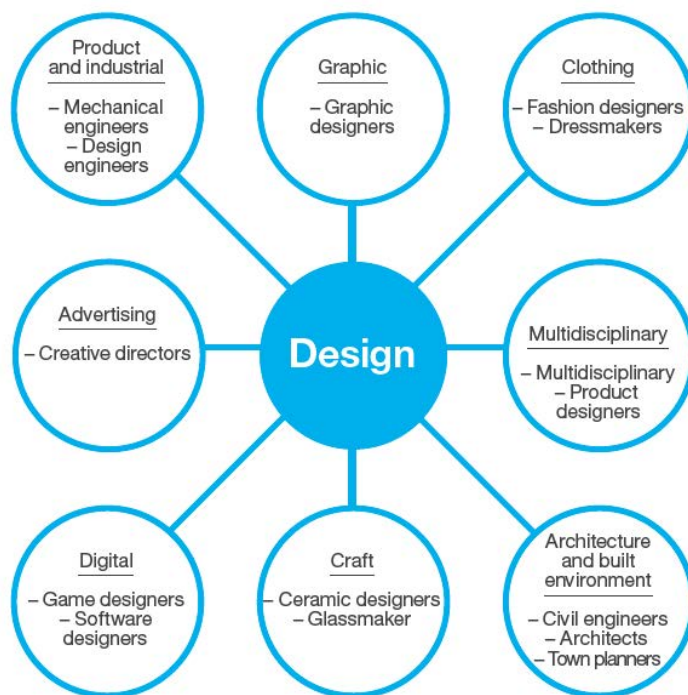


Figure 1 - Examples of design occupations, Design Council 2017, p. 18.

While the question underpinning this research clearly states ‘designer’, not ‘design trained’, it is important to acknowledge and research if there are in fact executives with formal design training in the F500 corporations. Design training, for

the purpose of this research, is the top skill that differentiates design (importance premium 40% - skills which were deemed by designers to be of above average importance for their role) from the work done by the Design Council in defining “Design (doing) – Knowledge of design Techniques, tools and principles involved in production of precision technical parts, blueprints, drawings and models” (Design Council, 2017, p.7) in ‘Table 1’. The importance of design doing is real because the majority of the corporate innovation by design is still executed by trained designers (Merholz & Skinner, 2016, p.31).

We have decided to add to design training a second set of skills around what is generally considered design thinking: ‘a discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity’ (IDEO, 2008). The growth of design thinking training in corporations is a reality that needs to be accounted as a part of design growth and awareness in corporations. Though there is an active debate on the term itself (Natasha, J., 2017), on the perception of what it delivers (Vinsel, L. 2017), on the impact generated by the training, on the possibility of existing separate from design doing, it is undoubtedly a reality in the design world that cannot be overlooked. This is supported by an enormous amount of design executive training (Kolko, J., 2018).

While secondary research identified Bachelor degree training for many of the executives accessed through publicly available data sets, there is some visibility of MBA training but very little visibility of other formal design training. There are many discussing in the design arena as to what consists adequate design training, if it is more time related (1 day, versus 1 week, versus > 1 month training) or origin related (a bona fide design school). Although very interesting as a topic, for the purpose of this research, while primary research undertaken shines some light on what type of design training professionals engaged, this research will not attempt to judge or qualify the training, it will just become a data point open to insight generation.

Table 1 - Skills that differentiate design, Design Council 2017, p.29.

Skill	O*NET 'domain'	Importance premium	O*NET definition
Design	Knowledge	40%	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
Operations analysis	Skills	23%	Analysing needs and product requirements to create a design.
Programming	Skills	22%	Writing computer programs for various purposes.
Drafting, laying out and specifying technical devices, parts and equipment	Work Activities	20%	Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
Engineering and technology	Knowledge	18%	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures and equipment to the design and production of various goods and services.
Fine arts	Knowledge	15%	Knowledge of the theory and techniques required to compose, produce and perform works of music, dance, visual arts, drama and sculpture.
Technology design	Skills	10%	Generating or adapting equipment and technology to serve user needs
Building and construction	Knowledge	9%	Knowledge of materials, methods and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
Computers and electronics	Knowledge	5%	Knowledge of circuit boards, processors, chips, electronic equipment and computer hardware and software, including applications and programming.
Geography	Knowledge	4%	Knowledge of principles and methods for describing the features of land, sea and air masses, including their physical characteristics, locations, interrelationships and distribution of plant, animal and human life.
Visualisation	Abilities	3%	The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
Thinking creatively	Work Activities	2%	Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
Interacting with computers	Work Activities	1%	Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.

C-Suite: The focus of this research is sharply on the C-Suite, and the executives that sit on it are often called Top Management Teams (TMT). The focus is not on the CEO nor the Board of Directors for a number of reasons. There seems to be quite a lot of research on CEO's, from many different approaches, ranging from career path, diversity, ethics, gender, training, skills, salary, etc. While it is great that Designers desire and work towards becoming CEO's, research says you don't become a CEO unless you have some sort of executive experience in relevant companies, as Christian Stadler from Forbes puts it 'the board members of Fortune 100 firms are intimately familiar with this dynamic, preferring to select internal candidates in 79% of the cases. Similarly, only 11% of the 222 CEO's in the long-living organizations that I studied were outsiders. In the most successful long-living firms, the number was even lower: 3%.' (Forbes, 2015).

This doctoral research started by looking into the Board of Directors of large corporations, the F50 (2017) revealed 589 people, almost all cases including the CEO and other paid executives but the majority of them being non-executive in their roles, many of these present in Boards of many different organizations (at least 28 in two or more F50 corporations), quite a few past CEO's. We are not underestimating their importance and impact in the running of large corporations, especially in major decisions like divestiture decisions, capital investment, expand or shut down operations. As a thought experiment, at the time we wondered if Apple's board of director list included Jonathan Ive, an executive at Apple with a past history of importance and impact from when Steve Jobs was still in charge and has not reduced his power and impact throughout the latest years with Tim Cook (The Verge, 2017). He was not, this fact supported the decision to dive one layer deeper into the C-Suite, this list generated 852 executives and Jony was part of this list, this would then become the focus of this research.

These executives are not necessarily in charge of everything going on in these organizations, we agree with descriptions of large organizations driven by executives as much as by external forces. Finkelstein and Hambrick who have done quite a lot of research on what they call the "upper echelons" of large corporations and how they function, introduced the concept of managerial discretion 'as a way to reconcile two then opposing views about the effects of top executives on organizational outcomes (Hambrick, D. C., Finkelstein, S. 1996). One view, coming out of the prevailing tradition of strategic management, was that top executives greatly influence what happens to their organizations. The competing view... was that executives have little effect because organizations are exceedingly inertial, swept along by external forces, and constrained by a host of conventions and norms' (Cannella et al., 2009).

In an interesting article titled "Who really makes the big decisions in your company" (Frisch, B., 2011), the author summarizes that senior C-Suite should be concerned with establishing a common worldview as the basis for decision-making, broadly prioritizing initiatives, allocating resources and managing dependencies, areas of concern in line with what it is believed design can and

should impact, on the other hand the type of activity and broad role Designers need to own in order to shape design growth and impact.

Fortune 50 (F50): While there is a large amount of innovation going on in start-ups, Fortune 500 (F500) companies which are all about scale and results, are still responsible for a large part of the impactful innovation driving the economy, if not directly from their internal powerhouse, through acquisitions of start-ups that can provide them with the innovation format and content they need. In many company lists published in the media (Fortune 2018 Business by design List, Fortune 10 Most Successful Companies, Fortune 10 Most Profitable Companies, BCG Most Innovative Companies), the large majority of companies been cited are still large companies, independently if they are F500 or not.

Some have stated the F500 is a very US centric list of corporations that does not express reality of design executive presence in large corporations throughout the world (e.g.: Italy, Germany, Japan, France, UK, etc.) where designers might have executive roles. There are two explanations for this decision, one is based on recent research that clearly states that ‘the United States is still considered the world’s number 1 economy and has been so since 1871 (Investopedia, 2017). Though this might be disputed because China has been gaining the U.S for a number of years, if one looks at nominal GDP, the U.S. maintains its leadership, followed by China and Japan. According to research on this topic, ‘large U.S. corporations also play a major role on the global stage, with more than a fifth of companies on the Fortune Global 500 coming from the United States’ (Focus Economics, 2018). The second reason is rather more practical, F500 companies have a lot of credible public data due to the intense scrutiny they are under.

While the topic of this doctoral thesis started with the F500 US list, a first peak into the top 3 corporations in terms of Board of Directors revealed a need to engage a smaller sample size for practical reasons, just these top 3 corporations have 32 members of the Board of Directors and 59 executives that respond to the CEO/ President/ Chairman. So, the choice was to reduce the sample size to the F50 corporations, knowing that extrapolating results to the other 450 may not be the best way to achieve F500 results, but then that is not our intent.

We started by characterizing F50 corporations and their TMT's. Below data visualization of the F50 publicly available data in 2017, starting with visibility of their total size versus size of Board of Directors and C-Suite 'Figure 2'. The most important sector is the Financials sector (10 corporations), but then the list is pretty evenly split between Technology (7), Health Care (6), Retailing (5), Energy (4) and there on covering 14 sectors, making this a good sample size regarding sectors covered 'Figure 3'.

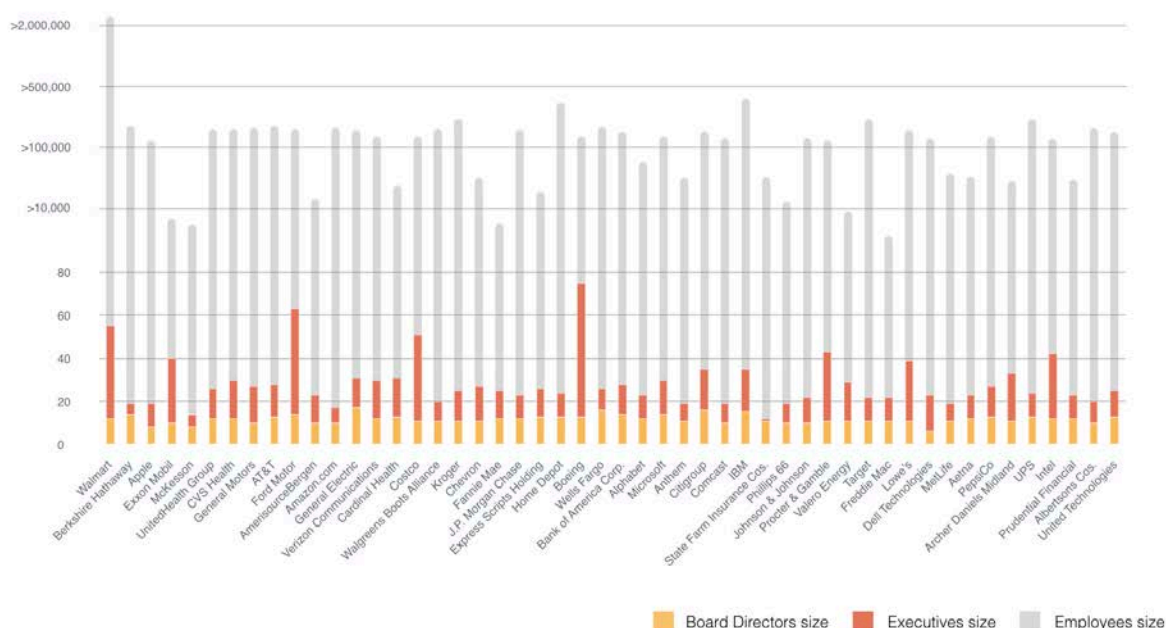


Figure 2 - F50 total employee count, size of Board of Directors and of C-Suite. José dos Santos 2020

These F50 corporations have an average of 10 independent member of the Board of Directors and 17 members of the C-Suite, including CEO/ President/ Chairman. While the average in the Board of Directors is pretty stable, the number of executives varies very much, we have organizations with more than 40 (Boeing 62, Ford Motor 49, Walmart 43, Costco 40) and 11 organizations with less than 10 executives.



Figure 3 - F50 Sectors. José dos Santos 2020

Research identified 845 executives in the F50 corporations. After sorting and clustering the titles, research has identified 13 groups of titles. A large number of these titles are CEO (111)/ President/ Chairman and Senior Vice Presidents (SVP) without a particular role in public data (total 284), but after this group the three largest groups of titles are Legal/ Administrative/ Compliance/ Counsel with 104 executives, Operations/ Purchasing/ Supply Chain with 98, and Finance/ Treasurer/ Comptroller with 88 executives. Number of executives per group of titles will steadily diminish until 12, then there are two areas each with 4 executives in the F50 corporations, Design/ Experience and Sustainability/ Social Responsibility 'Figure 4'. These 4 executives with a title openly connected to Design/ Experience represent 0.5% of the total executives, they all have academic training in Design/ Architecture/ Art. There are two executives, trained as architects, who do not seem to be in design related roles, a Senior Vice-President of Investor Relations (Michael P. McGuire/ CVS Health in 2017, now with Macy's in the same role) and Chairman and CEO (Charles F. Lowrey/ Prudential Financial). Though a small sample, on one hand might suggest designers are also capable of assuming different roles beyond design per se, on the other might suggest trained architects are better positioned to do so.



Figure 4 - F50 Executive titles. José dos Santos 2020

When the research started in 2017, based on publicly available data in on the Bachelor degree of these executives (9% not available or other), research has identified that 45% of them stem from Business/ Economics/ Accounting/ Finance, 21% from different engineering backgrounds, 9% from Legal, 5% from Medicine and Sciences, 4% from Computer Science, and then starts decreasing with a list of academic majors from Political Science, History, Marketing, Mathematics, Information Technology, Languages, and then with less than 1% (6 executives) what we have defined as designers which include Architecture and Art. 'Figure 5'. To be precise, there are some majors with less representation, like Journalism, Psychology, Agriculture, Physics, etc.

This secondary research on the F50 has validated the main question in this doctoral thesis, that there aren't many designers in the C-suite in the F50 corporations.

This is not to say design is not represented in these corporations, by designers, and many times at senior level. Recent research has identified 35 N-1 and N-2 executives in the F50 corporations, a list that includes well-known Chief Design Officers (or similar title) like Phil Gilbert/ IBM, Ernesto Quinteros/ Johnson & Johnson, Mauro Porcini/ Pepsico, and Ivy Ross/ Google-Alphabet 'Table 2'. Nevertheless, all these are N-2, the only two remaining designers in N-1 in 2019

were Phil Duncan/ Procter & Gamble and Jonathan Ive/ Apple (who left Apple at the end of 2019).



Figure 5 - F50 Bachelor's degree. José dos Santos 2020

Table 2 - Design Executive positions in the F50 in 2019 (N-1 and N-2). José dos Santos 2020

Company	Rank	Executive Job title	Level	Reporting to	Reporting Area
Walmart	1	Head of Design	N-2 to CEO	Executive Vice President and Chief Customer Officer	Customer
Apple	3	Creative Director	N-2 to CEO	Senior Vice President Worldwide Marketing	Marketing
Apple	3	Vice President of Industrial Design	N-2 to CEO	Senior Vice President Worldwide Marketing	Marketing
Apple	3	Vice President Special Design Project	N-2 to CEO	Senior Vice President, Hardware Engineering	Hardware Engineering
Apple	3	Vice President of Human Interface Design	N-2 to CEO	Chief Operating Officer	COO
UnitedHealth Group	6	Vice President, Design and Construction	N-2 to CEO	Senior Vice President and Chief Marketing Officer	Marketing
CVS Health	8	Vice President, Brand Innovation and Design and Executive Creative Director	N-2 to CEO	Chief Marketing Officer	Marketing
Alphabet	11	Vice President, Head of Design, Hardware	N-2 to CEO	Senior Vice President, Devices and Services	Marketing
Ford Motor	12	Vice President, Design	N-2 to CEO	Executive Vice President of Product Development and Purchasing, and Enterprise Product Line	Product Development & Connectivity
Ford Motor	12	Chief Designer, Mobility	N-2 to CEO	Chief Transformation Officer	Transformation
GM	13	Vice President of Global Design	N-2 to CEO	President, and President of Global Product Group, Cadillac and Quality	President, Product & Quality
Verizon	19	Head of Design	N-2 to CEO	Executive Vice President and Chief Marketing Officer	Mktg
Verizon	19	Senior Vice President, Chief Creative Officer	N-2 to CEO	Executive Vice President and Chief Marketing Officer	Mktg
Fannie Mae	22	Vice President and Head of Enterprise Design	N-2 to CEO	Senior Vice President and Chief Marketing Officer	Marketing
Microsoft	26	Corporate Vice President of Design, Experiences and Devices Group	N-2 to CEO	Executive Vice President, Experiences and Devices	Experiences & Devices
Microsoft	26	Corporate Vice President, Hardware Design & Technology	N-2 to CEO	Chief Technology Officer and Executive Vice President, Artificial Intelligence & Research	CTO, AI & Research
Home Depot	27	Vice President, Brand Marketing & Creative	N-2 to CEO	Executive Vice President, Outside Sales & Service	Outside Sales & Service
Comcast	32	Vice President, Design	N-2 to CEO	Executive Vice President, Chief Communications Officer (retiring in Dec 2020)	Communication (> Dec 2020)
Johnson & Johnson	37	Chief Design Officer	N-2 to CEO	Vice Chairman of the Executive Committee	Deputy CEO
IBM	38	General Manager, Design	N-2 to CEO	Senior Vice President, Digital Sales and Chief Marketing Officer	Digital Sales & Marketing
Target	39	Senior Vice President and Chief Creative Officer	N-2 to CEO	Executive Vice President, Chief Marketing and Digital Officer	Mktg & Digital
Target	39	Vice President, Food & Beverages, Product Design and Sourcing	N-2 to CEO	President of Food and Beverage	Food & Beverage
Target	39	Senior Vice President, Owned Brand Management and Product Design	N-2 to CEO	Executive Vice President, Chief Marketing and Digital Officer	Mktg & Digital
UPS	41	Vice President, Employee Communications and Creative Services	N-2 to CEO	Chief Human Resources Officer	HR
Intel	43	Vice President and General Manager of Design Enablement	N-2 to CEO	Senior Vice President Chief Technology Officer General Manager, Technology Development	CTO & Technology Dev
MetLife	44	Vice President, Global Brand Design	N-2 to CEO	Executive Vice President, Global Chief Marketing Officer	Mktg
MetLife	44	Vice President, Customer Experience Design	N-2 to CEO	Executive Vice President, Global Chief Marketing Officer	Mktg
MetLife	44	Senior Vice President, Global Customer Experience Design	N-2 to CEO	Executive Vice President, Global Chief Marketing Officer	Mktg
P&G	45	Chief Design Officer	N-1 to CEO		
P&G	45	Brand Design Director, Global Oral Care	N-2 to CEO	Chief Executive Officer, Health Care	Health Care
P&G	45	Director of Design, Global Innovation & Capability	N-2 to CEO	Chief Design Officer	Design
UTC	46	Chief Design Officer	N-2 to CEO	Senior Vice President & Chief Digital Officer	Digital
Pepsico	48	Senior Vice President and Chief Design Officer	N-2 to CEO	Marketing Director Transformation, Global beverages Group	Marketing
Pepsico	48	Vice President, Creative and Digital	N-2 to CEO	Executive Vice President, Global Operations	Operations
Pepsico	48	Vice President, Global Beverage Design and Brand Experience	N-2 to CEO	Marketing Director Transformation, Global beverages Group	Marketing

1.3 Research objectives

There were three objectives underlying this doctoral thesis:

Objective 1: Discover existing research specifically dedicated to reasons why trained designers do not occupy high level positions in large corporations;

Objective 2: Establish via engagement with designers and executives, insights that might be impeding designers from assuming high level positions in large corporations;

Objective 3: Generate a number of hypothesis that could be researched and discussed via qualitative research, creating a framework for understanding a reality that we knew from the start was complex and sensitive.

Since the beginning of the doctoral thesis and as soon as the corresponding author focused on the main research question, interaction with both designers and non- designers revealed a certain uneasiness with the inquiry. Some senior designers felt there was a certain insinuation that they were either not able or willing to be in high level positions in large corporations, some executives questioned if others representing design at that level were not doing a good enough job, if there was some sort of insinuation that designers would do a better job. The researcher had to explain several times that no insinuation was being formulated, it was a question about why a group of professionally educated people that were hired to do a job in a certain area were not reaching high level positions of management in large corporations, why despite so many stating that professional area was important and the fact that these organizations hire so many of those professionals to carry that job, they were not in top leadership positions in these large corporations.

Many have asked why, why this question, what would be the expected result. The corresponding author has explained that this is personal, but not self-directed, while some might argue the professional career of the corresponding author could have taken him to even higher-level positions in large corporations (he is currently Head of Design in a large global corporation, but not the Chief Design Officer), the reality is that this is not about the corresponding author or about his ambition or lack of it. The inquiry and the results that we have assembled is aimed at a mid-level designer, who has had formal design education, who has already done some people management and enjoyed it, who believes in the power of large companies and desires to be in a position where she can influence the design direction of the company throughout its many areas of impact, sitting side by side with other C-suite executives, managing design up and down, creating value for the

organization and for society. She should be able to aspire this role, she should be able to know how to get there, she should be able to create a plan and act upon it, and she should be able to get there. Hopefully this research and results will help that.

1.4 Research hypothesis

Like with similar research in a doctoral thesis setting, there was a need to start with one or more hypothesis. The most basic hypothesis was that, a) the reason why there aren't more designers in the C-suite of F50 corporations, is because there is no reason why they should be. The second hypothesis was that b) there are a number of insights that justify the reality underlying the inquiry, and that those insights are in fact hypotheses that needed to be researched and validated.

Hypothesis a) was explored by focusing research into reasons why they shouldn't be. Research validated the importance of design in large corporations, and the fact that these corporations employ and impact designers in equally large numbers. Underlying the answer that there was no reason designers should be in the C-Suite of large corporations was the fact that design is already represented in these large corporations, up to a certain level by designers, and in all C-Suites there is one of more executive in charge of representing design. And so, the door was open to the exploration of hypothesis b).

As we progressed with Hypothesis b), several findings started to gain importance, by the sheer number of times they were mentioned by different interviewees as they own explanation to our main question. Each of these findings became an insight, and we researched it and delivered an assessment, in some cases finding evidence and rationale that supported the insight, in others the opposite.

1.5 Structure of the thesis

This thesis is structured in a conventional way, following a chapter with the Introduction, there is a chapter with the Literature Review that covers design and designers in business context, covering history, the present and a vision into the future, while contextualizing large corporations as organisms and the role of

design in them. Chapter 3 covers Research Methodology and Procedures, with a description of the chosen methods, underlying rationale, and detailed information on research process and tools. Chapter 4 is about the Research Findings, namely the knowledge and data resulting from the different procedures adopted as research methodology. Chapter 5 is about Research Insights, where we connect the dots between the acquired knowledge and establish grounds for further discussion in Chapter 6 Final Considerations.

The remaining thesis consists of Chapter 7 the listing of the current research limitations and some avenues into future work, Chapter 8 bibliography and then the appendices.

1.6 Publications resulting from this research

There have been two separate publications in different stages of this doctoral thesis, both integrated in the Design Management Institute (Boston, USA) Academic Design Management Conferences (dmi:ADMC).

The first paper was submitted and accepted in 2018 for the 21st dmi:ADMC 'Next Wave', titled "Why aren't there more designers in executive positions in the top 50 Fortune 500 corporations?" (Appendix F), it presented a rationale for the topic and research choices, advanced definitions, shared results of phase 1 secondary research undergone and, explored a number of findings as groundwork for primary research in the following stage of this doctoral thesis. The corresponding author had a chance to attend the event and present in person the paper, embracing the opportunity to engage the academic community and exchange ideas on how to evolve with the remaining work.

The second paper was submitted and presented in 2020 for the 22nd dmi:admc conference 'Impact the future by design', titled "Design(er) leadership in large corporations" (Appendix F), it reported on the progress of the results of various data collection efforts, connected the data and provided insights on the state of Design(er) leadership in large corporations, it began to shed some light on what the most important underlying findings might be. This conference was impacted by the current Covid-19 crisis and it was fully online, the corresponding author presented twice to a large number of registered attendees.

2. Literature review

2.1 Design in Business

2.1.1 The designer in a business context

This section covers what makes a designer a designer, the importance of the project in the design attitude, business innovation models and the role of design project in this context.

Since the main inquiry at the basis of this thesis is “Why aren’t there more designers in the C-Suite of F50 corporations”, it is necessary to start at the beginning, on a definition of what a designer in the context of business and large corporations is or/ and is expected to be, and on what are the main components of business that limit or empower what the designer can bring to the table, especially in a context of design innovation. In an article entitled ‘If Managers Thought Like Designers’ (Rotman on Design, 2013, pg 27) Jeanne Liedtka (a business manager herself) hypothesises about what would actually mean for business strategy if managers took the idea of design seriously, what would happen if managers tried to think the way designers do, and after having studied how designers work and create for more than a decade, made 10 suggestions ‘Table 3’. These components of what designers do and how they think and behave helped us define what we later in this thesis describe as designer **Ethos**¹.

Professor Chris Conley who taught design at the IIT Illinois Institute of Design for almost a decade, published an article in the DMI Review titled ‘Leveraging Design’s Core Competencies’ (Conley, C., 2004), in it he describes what he understood as a firm understanding of the kinds of expertise that are at the core of design.

¹ Ethos means "custom" or "character" in Greek. As originally used by Aristotle, it referred to a man's character or personality, especially in its balance between passion and caution. Today ethos is used to refer to the practices or values that distinguish one person, organization, or society from others. So, we often hear of the ethos of rugged individualism and self-sufficiency on the American frontier in the 19th century; and a critic might complain about, for example, the ethos of violence in the inner cities or the ethos of permissiveness in the suburbs. Merriam-Webster. (n.d.). Ethos. In Merriam-Webster.com dictionary. Retrieved October 31, 2020, from <https://www.merriam-webster.com/dictionary/ethos>

1. The ability to understand the context or circumstances of a design problem and frame them in an insightful way
2. The ability to work at a level of abstraction appropriate to the situation at hand
3. The ability to model and visualize solutions even with imperfect information
4. An approach to problem solving that involves the simultaneous creation and evaluation of multiple alternatives
5. The ability to add or maintain value as pieces are integrated into a whole
6. The ability to establish purposeful relationships among elements of a solution and between the solution and its context
7. The ability to use form to embody ideas and to communicate their value

At the core of designer education (with our broad definition that includes architecture and art), though not specific to design per se, we have the 'project' as a unit that designers learn to apply their skills and competencies to (in Italian, *progettare* actually means to design), by understanding the typical phases and requirements that projects have in general. These characteristics of design professionals can be observed across a wide range of design professionals (Press and Cooper, 2003; Ravasi and Lojacono, 2005), and the 'Project' itself project is a means to an end in an ongoing battle for design to be recognized and accepted as a credible profession in the midst of others, Michlewski in 'Attitude' (Michlewski, K., 2016, p.7) describes this process as something typical of occupations that follow this path and use the professional project as a means to assert their place in society. In this context, the 'professional project' is a process through which occupations organize themselves to attain market power and recognition, and the project is an essential component of design attitude, a combination of "expectations and orientations one brings to a design project" (Michlewski, K., 2016, p.9). Though in design, this 'professional project' throughout the process of maturing as an occupation split itself in natural science led professional project and fine-arts led professional project, designers will marry both types of project attitudes depending on the context, on the application of design as their profession.

Table 3 - *If Managers Thought Like Designers*, Liedtka et al, 2013 p.26 (summary). José dos Santos 2020

1	They would realize that designing business strategy is about invention	Strategists search for one right answer and have paid more attention to science, and while scientists investigate today to discover explanations for what already is, designers invent tomorrow to create something that isn't. Strategy aspires to create a future that is different from the present, but powerful futures are rarely discovered primarily through analytics.
2	They would recognize the primacy of persuasion	Because strategy results in invention, it is contestable, and leaders must therefore persuade others of the compelling wisdom and superiority of the story they have chosen. Designers understand this, they know that in order to get their products and building done, they just persuade clients to pay for them, requires helping clients visualize the end result.
3	They would value simplicity	Objects people love are complex enough to perform its functions well, but no more complex than they need to be, they are often an elegant solution. Simplicity would generate strategies that would not be incomprehensible except to their authors, banal and self-evident, while emphasizing our positives while acknowledging our flaws.
4	They would aim to inspire	One of the saddest facts about the state of business design is the extent to which we settle for mediocrity, we don't even attempt to engage our audience at an emotional level, let alone to inspire. The differences between great designs and those that are just 'okay' is the way the former call us to something greater.
5	They would master the core skills first	In order for designs to be inventive, persuasive, elegant and inspiring, they need to work well, and for that designers need to master the technical elements, many times moving beyond conventional techniques, using their mastery to push the frontiers of design.
6	They would learn to experiment	Experimenting is what allows one to move from mastery to brilliance, from technical competence to true innovation. These can be experiments in the mind, like strategic planning where strategists imagine and test new futures, and can also be experiments in the physical world.
7	They would be more inclusive in our strategic conversations	Design teaches us about the value of including multiple perspectives in the design process, turning the process into a conversation. The more complex the design challenge, the greater the benefits of multiple voices and perspectives.
8	They would learn to talk differently	Putting a variety of people in a room together is not enough to produce superior designs, we must change the way we talk to one another. Most managers were taught to talk in business settings as if they were debating, advocating a position, while breakthroughs in conversation come from asking new questions, reexamining what we take as a given.
9	They would work backwards	Most managers are taught straight forward problem-solving methodology: define a problem, identify various solutions, analyze each, and chose one. Designers begin at the end of this process, by achieving clarity about the desired outcomes of the design and then working backwards.
10	They would start the conversation with possibilities	Great design occurs in the intersection of constraint, contingency and possibility, elements which are central to creating innovative, elegant and functional designs. In business, managers tend to start strategic conversations with constraints, as a result they get design's for tomorrow that merely tweaks today's.

The reality of business is one of initiatives that can be described as projects, or a combination of several projects that run through a number of phases or stages. These phases require different skillsets and competencies, and they also rely on

different ceremonies, rituals that are important to understand and align with what designers can do by training, beyond instinct and experience.

Sirkin's 'cash curve' model (Sirkin et al, 2007, p.7) is a great way to understand the alignment and misalignment between design project phases and that of business initiatives and project cycles. The model maps cumulative cash flow over time, through stages of Idea Generation, Commercialization and Realization. With differences in terminology, this model holds true to many organizations, and though it allows designers to perform and add value to the process, it also uncovers the underlying issues that reflect many times levels of misunderstanding and tension between designers and non-designers.

It is known that design is a crucial element of innovation, the training and tools made available to designers are particularly adapted to a number of challenges and allow designers to adopt a number of different roles in the innovation process (Hernández et al, 2018) 'Figure 6'.

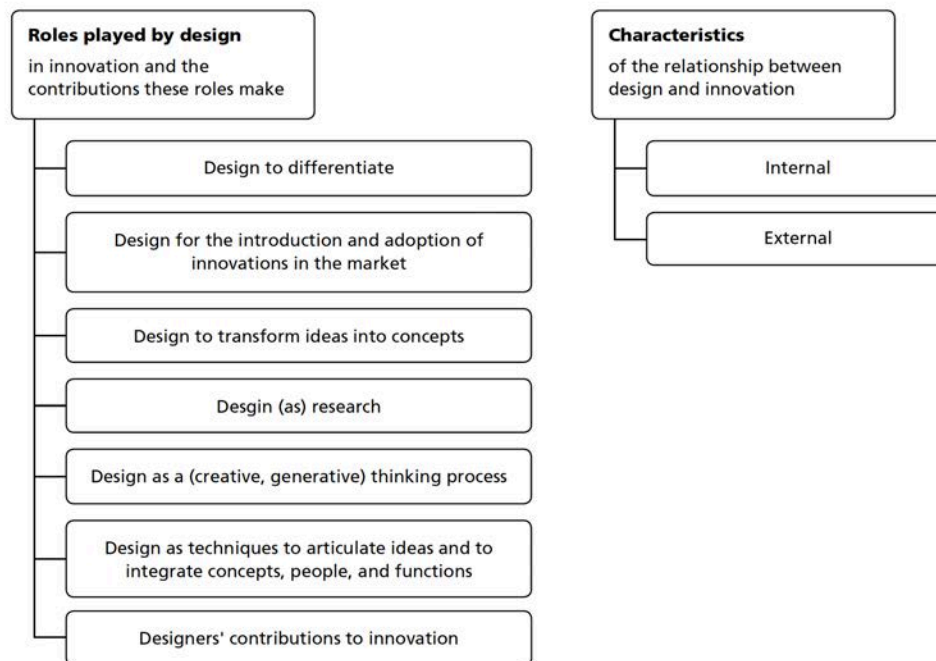


Figure 6 - Internal and external findings impacting design innovation, Hernández et al 2018, p.255

The activity of designing solutions is included in the commercialization stage, which incorporates all development methods and partners involved in the pre-launch activities of said solution. After the solution is launched, many believe the designer is relieved of his duties, but in reality there are many design activities that

are crucial for the correct deployment and realization of a solution, activities that may impact the scaling phase (time to volume) as well as cumulative cash (sales and margin) and staying power (market longevity), these range from adequate story telling allied with marketing, to continuous user research and usability testing that allows for agile process of improving on an idea after launching. Today, with Agile (Beck et al, 2001) mindset and methodology, along with Eric Ries Lean Startup model (Ries, 2006) the solution goes through a series of launches, with many different names (Beta launch, soft launch,...), that serve the purpose of a) launching the minimum viable products as early as possible, b) while learning as much with users throughout the process to mature the offer as quickly as possible. Note that the last two are circular models, while the cash curve could be seen as a linear, waterfall solution.

Much of the tension between designers and non-designers stems from the fact that, while Sirkin's model places the idea generation and commercialization blocks as equal in time, activities by the designer resulting from the major thinking and doing models learned at school are majorly focused on the idea generation portion of the process 'Figure 7 – Scenario 1' and even if we extend the design thinking process further into the commercialization stages, this implies duplication of idea generation following a traditional Divergence/ Convergence model of design also strongly followed by designers as core to their activity 'Figure 7 – Scenario 2'. The same applies to more software driven methodologies like those proposed by Agile and Lean Startup.

Authors like Chris Zook from Bain, while presenting a circular model that looks very similar to the Agile and Lean Startup models but is much more an innovation model built around the organization finding its core, clearly states that "for most companies and in more industries, the strategy cycle, from Focus, to Expand, to Redefine, has gotten shorter, and therefore companies more frequently confront moments of redefinition at their core" (Strategy & Leadership 36:1, 2008, p.28).

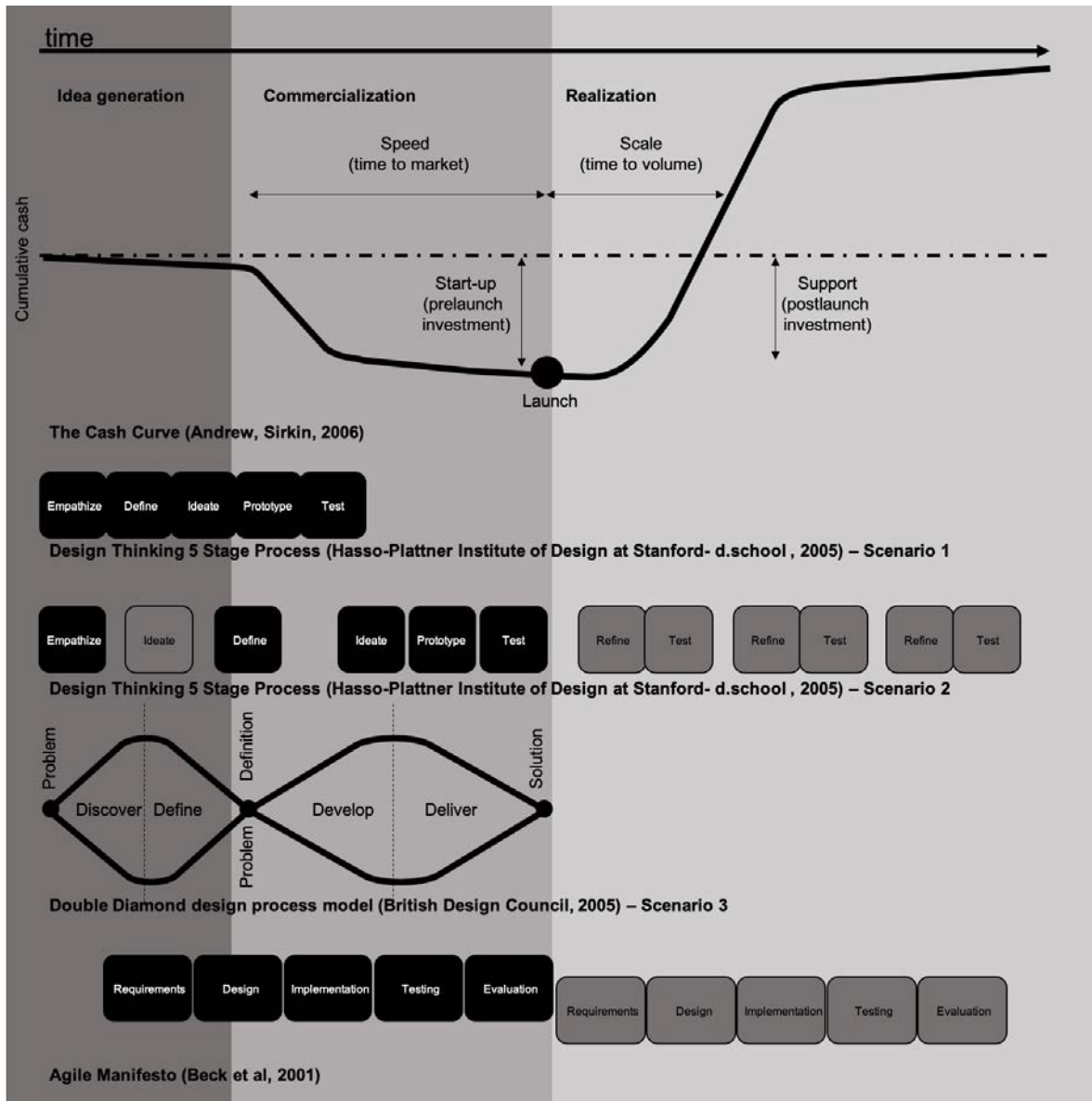


Figure 7 - Relationship between several innovation models. Jose dos Santos 2020

So, while organizations are doing their best to reduce the negative cumulative cash stages of their cycle in the idea generation and commercialization phases, while planning and working towards a shorter time to volume stage after launch (some organizations live and die by first year sales), designers often find themselves not having enough time and resources to develop activities in the idea generation and commercialization stages, namely activities of exploration which in the end impact the product return on investment both in terms of revenue and time to volume, “Our data also show that the extent to which designers have the freedom to make decisions on their own moderates the relation between

exploration activities and design innovativeness. In particular, we hypothesise and find that when designers have high levels of decision freedom, exploration has a more positive influence on design innovativeness than when they have low levels of decision freedom.” (Tabeau et al, 2017, p.216)

Many organizations build their key performance indicators (KPI) around concepts that are deeply connected to Sirkin’s cash curve, by quantifying time spent in idea generation and commercialization (time to market), respect for launch dates, scale (time to volume), number of solutions launched (breaking down numbers by type of innovation), to name a few.

2.1.2 Designer Ethos and career ambitions

This section builds the idea of the designer **Ethos**, by exploring design personal attributes and cross referencing them with large corporation executives’ attitudinal drivers. We cover the components of designer **Ethos** in some detail, and we discuss notions of design careers.

Designer **Ethos** is a complicated issue to address, because it is mostly about what makes a designer a designer. And if the definition and history of design is far from consensual (see next section ‘Short History of design in Business’), then it’s easy to understand that the definition of a designer is also not consensual. But beyond the craft elements that make a designer an apt professional in what she does in her line of work, essential skills and experience at design doing that vary if you are an industrial designer, interior, digital, architect or artist in a specific medium, what makes a designer a designer are more core beliefs and view of the world that define how a designer sees the world and perceives reality and the future, as well as how she is seen by others, some say this is deeply rooted in Morris’s utopian view of design “ Morris imagined a world in which human happiness and economic activity coincided. He reminds us that there needs to be a point to labour beyond making ends meet – and there is. Unalienated labour creates happiness for all – consumer and creator; whereas modern capitalism, in contrast, has created a treadmill in which this aspect of work has been lost. Capitalism, he explains, locks the capitalist into a horrible life, which leads

nowhere but the grave.” (Aeon, 2018). Translated into many cultures, the saying goes “where there’s smoke, there’s fire”, and in this case we are using it to explain that, many times what are assumptions and biases about designers have some element of truth in them, though like many generalisations, does not define all designers. The corresponding author says many times, he has never found anyone that didn’t like or appreciate design, independently from personal issues where designers are probably not that different from all other professionals where you will have all sorts of people in the vast spectrum of attitude and behaviour. But when we address core design beliefs that we encounter what we describe a ‘love/hate’ relationship with design, where the same core characteristics, behaviours and beliefs that define good design motivate attraction and distancing, curiosity and indifference, support and boycott.

In a recently published paper titled ‘Designers’ Professional Identity: Personal Attributes and design Skill’ the authors discuss the fact that “professional identity is a social and self-perceptive construct that describes how people understand themselves as professionals... and is a critical finding in professional performance and wellbeing” (Kunrath et al, 2020, p.2). They then map two distinct set of elements, the Personal Attributes (PA) and the Design Skills (DS). We were particularly interested in understanding the researcher’s findings on Personal Attributes, those that reflect more the inner motivation, sense of belonging, self-identification that we call **Ethos**, the design Skills are important, but intrinsically connected to **Preparation** ‘Table 4’. They acknowledge that this mapping out of the PA’s could support a better alignment between education/ preparation and professional practice/ career, and that belonging to a group/ profession impacts the self and performance, stating that their suggested framework “could allow designers to more systematically contrast their personal strengths and weaknesses with those valued in their design domain, and thus better fit their personal development goals to their professional context” (Kunrath et al, 2020, p.30).

Table 4 - Personal Attributes, Kunrath et al, 2020 (summary). José dos Santos 2020

Personal Attributes and Descriptions	
Confidence	Certitude of own personal abilities and professional competencies, being able to embrace innovative ideas and to start challenging projects, justifying own beliefs and (ethical) work.
Creativity	Spontaneous impulse to solve problems originated from an interaction with individual psyche and manifest as behaviour.
Emotions	Sensitivity to external inputs, self-awareness, and management of personal feelings, also related to moral and empathetic aspects.
Empathy	Psychological capacity to identify with other's feelings and thinking, which enables helpful and supportive behaviour.
Ethics	Awareness and positioning of possible environmental, social, health or design life performative consequences, or lack of compliance with legislation.
Leadership	Sense of autonomy and managerial attitude, searching and promoting ideas together with strategy and business, providing peers guidance and inspiration.
Motivation	Engagement in an activity due to an inner perception of enjoyability and inherent interest (intrinsic motivation), as well as because of its association with a value outcome (extrinsic motivation). Also, refers to one's curiosity and impetus for exploring and searching.
Openness	Acceptance and embracing of new and unusual ideas or methods, being able to deal with uncertainty and to make changes in a work plan by relying on ability to improvise and remake. Also refers to capacity to deal with different topics and to work with people from different cultures, ideologies or beliefs.
Responsibility	Willingness to learn and to assume responsibilities from mistakes, conscientiously assuming risks, taking care of project details, deadlines, and working within own beliefs.
Social Abilities	Perceived facility on the exchange of tacit knowledge via joint activities: being together, living in the same environment, sharing experiences, and transferring ideas to other people.

We wanted to cross these Personal Attributes with those of executives in top management teams, knowing that there are several issues affecting the body of work on TMT's, namely the need for better definition of this group of managers, impact that the CEO has on them and vice versa, impact of heterogeneity of the TMT in the way they interact and perform (Finkelstein et al, 2009, p.162). We revised literature on TMT behaviour, personality traits, attitudes (Carpenter et al, 2004) and decided on 10 attitudinal drivers that could be used in direct opposition to designer personal attributes:

- Systems Thinking – The complexity of large corporations requires a high level of systems thinking
- Scaling – Much of the large corporation effort is about scaling for growth, while optimizing
- Collaboration – Large organizations tend to be siloed, executives constantly strive for collaboration
- Conflict – In large organizations there is a fair amount of conflict around resources and priorities
- Power – Large organizations have many power-driven attitudes and behaviours that start at the top
- Certainty – Large organizations prefer certainty to high levels of uncertainty and related risks
- Lean – There is a strong pervasive culture in large companies of lean, minimum viable solutions
- Convergence – Large organizations may tolerate divergence, comfort zone is in convergence
- Pragmatic – There is a strong DNA in large companies around pragmatism, getting things done
- Class – Large companies organize around class, professional competence, functions

By crossing these with designer personal attributes we built a list of class, group attitudinal drivers that we have called **Ethos**, an association of values that generically characterize designers, and though some attitudes and behaviours observed in designers might correlate with their ethos, there is no implicit or explicit causation. Just as we are not stating that designers are the only ones, the only group of people, professionals, that embody this **Ethos**, but in many ways these core beliefs relate strongly to attitudes and behaviours that should be openly understood and cherished, from designers as an act of self-knowledge leading to an understanding of the impact on others and in organizations, from non-designers as an act of empathy leading to a better understanding of where they are coming from. We have described these as a balance between two sides of the continuum, tensions between two distinct approaches, assuming that designers are capable of

embracing and delivering both sides, but when ‘push comes to shove’ designers will typically feel more comfortable in one side of that continuum ‘Table 5’.

Table 5 - Designer Ethos. José dos Santos 2020

<i>Design Ethos ingredients</i>	
a) Solution Vs. System	Designers tend to be solution oriented and action biased, with many enjoying hands-on activity and attention to detail, the craft of a well-designed solution. Designers seem to be less prone to mapping systems, big picture dot connection, identifying patterns of behaviour and underlying structures;
b) New Vs. Scaling	There seems to be an inherent mindset to designers that drives them to like the new, the breakthrough, the discovery, while large organizations are very much about scaling, optimizing, doing more of the same but faster and with less resources;
c) Authorship Vs. Creation	Designers are more into creating a style, a mark, an individual memory, they might not be that much into CoCreation and collaboration. To make it worse, others expect that designers behave like authors, create a mark, and tend to rate the result independently from the process;
d) harmony Vs. Conflict	Designers are much more into creating harmonious relations and protected environments (with managers many times doing this for them), they are not really trained and comfortable in handling conflict, even in design critiques (though protected, peer to peer);
e) Fairness Vs. Power	Designers are always more comfortable in settings where soft power is exercised, where there some sense of equality and fairness, designers don't seem to be comfortable dealing with power the way Jeffrey Pfeffer defines it, they are not good at getting it, using it and keeping it, they actually think there is something wrong with having/ using it;
f) Possibility Vs. Certainty	Designers have a different way of assessing and managing risk, they tend to think and act in a riskier fashion, it's part of the testing and experimenting mindset, while large organizations are built around risk mitigation and avoidance, and certainty supported by numbers as a certainty driver;
g) MLP V. MVP (*)	There is a gap between what designers and others believe to be quality, the concept of ‘good enough’ (not necessarily perfection) is an area of disagreement, while they are more and more engrained in the practice of large companies, sophisms like Lean/ Optimization/ Value Engineering make designers cringe;
h) Divergence Vs. Convergence	Designers tend to intake many different sources of information and knowledge, and feel comfortable generating many alternatives, meanwhile others try to limit sources as they fail to see how they relate to the issue at hand, and tend to push very hard for convergence as early as possible;
i) Idealism Vs. Pragmatism	Designers are often humanists and people centred, positive by nature, amicable, not at ease things like closing down factories, firing people, being decisive and ‘thick skinned’, some of these considered pragmatic approaches when times require this type of measures;
j) Individualism Vs. Collectivism	Designers pursue a certain degree of individualism, resisting alignment on definitions, practices, models and all other group driven decision making constructs, this ends up confusing all others and creating an atmosphere of division, it also justifies a lack of progress in protection as a class (compared to engineers, marketeers, etc.);

(*) MLP (minimum lovable product). MVP (minimum viable product)

Let us go into detail on each of these components of Designer **Ethos**.

a) Solution Vs. System – Designers tend to be solution oriented and action biased, with many enjoying hands-on activity and attention to detail, the craft of a well-designed solution. Designers seem to be less prone to mapping systems, big picture dot connection, identifying patterns of behaviour and underlying structures. This might be squarely connected to the traditional different between design

thinking and systems thinking, described by some as mutually exclusive (Collopy, 2005) and by others as complimentary (Dubberly, 2006). It might also be connected to some of the most cited definitions of design that focus on problem solving, and depending if the problems are in itself systemic, designers in some cases tend to focus on the problem and not necessarily on the system. Designers are known to ask a lot of questions, and to attempt to enlarge the frame of reference by broadening the question, often rephrasing in search for the right question. But traditional design training tends to be focused on using tools like the brief which often are limited in defining systems, and the designer is known to start thinking about the solution before they even listen to the explanation of the problem, while some will go through a thorough period of ideation many actually fall in love with their initial solution to a problem that is easy to grasp. The issue that many discuss is that systems analysis requires a different way of thinking and mapping a system and all its components is hard and seen sometimes as a luxury, by those that expect work from designers and by designers themselves. System thinking increases in complexity as the size of the system being analysed, and systems thinking improves with experience.

b) New Vs. Scaling – There seems to be an inherent mindset to designers that drives them to like the new, the breakthrough, the discovery, while large organizations are very much about scaling, optimizing, doing more of the same but faster and with less resources. Designers love the new, the innovative, the disruptive, that expression that breaks with normality, that solution that was never seen in that light. They love to be in the front line of the change that we as users love but don't even know we need it or want it. And this allows designers to bring forth a battery of skills and thinking modes that are ideal for this mindset, from discovery and exploration, to divergent thinking, to attitudes of risk taking and even cost increase for the sake of value to the user, value which many times is estimated in line with the impact of the novelty, entering new markets, establishing leadership. Many large companies tend to be more focused on scaling ideas, and many of these ideas are not exactly new, they might be a result of incremental innovation and an upgrade of manufacturing and operational systems. In this context, methodologies like Lean and Agile have come of age, and speed is

paramount, just as optimization and value engineering. These large companies will create 'engines' for new ideas, start-up accelerators or venture hubs of the sort, where they invest so that a limited number of people come up with new ideas, but in many cases designers are not leading these efforts and corporations tend to have very strict success findings and expect growth and scaling from those ideas as early as possible.

c) Authorship Vs. Cocreation – Designers are more into creating a style, a mark, an individual memory, they might not be that much into cocreation and collaboration. To make it worse, others expect that designers behave like authors, create a mark, and tend to rate the result independently from the process. This core attitudinal driver is many times at odds with what designers say they like to do, which is to collaborate, and it is very much a result of the design educational system worldwide still very focused on preparing designers that will have a voice, that will carry a mark into the world, a recognizable character in their design. And while new and not so new methods and tools for collaboration and cocreation arise, designers will often be engaged but not necessarily wholeheartedly or at least not the entire process, there is an inherent element of their **Ethos** that pushes her constantly to influence the result through a personal mark, a design that carries the day. And corporations and design managers alike tend to rate designers according to their capacity to come up with that great design solution, independently if it was the result of cocreation or not, just as IP policies fall many times short of rewarding collaboration. As one designer that did an MBA noted, the hardest thing for her when she started was realizing she had to collaborate, even with people she disagreed and thought they didn't add a lot of value. Throughout the industry there is still a cult of the 'strong' designer, that is often in small circles called a narcissist and egocentric but excused because she produces beautiful designs. Associated with this and concerning collaboration with users and customers, come outdated and out of context remarks from those that apparently said "if you asked people what they wanted, they would have replied faster horses" or that "Apple does not do market research".

d) Harmony Vs. Conflict – Designers are much more into creating harmonious relations and protected environments (with managers many times

doing this for them), they are not really trained and comfortable in handling conflict, even in design critiques (though protected, peer to peer). When design education systems are built with a structured design critique approach, from fellow peers but also from external agents, designers learn how to have their ideas scrutinized and rejected, learn how to present and defend them but also to listen and refine, and many times to abandon these and start again. But even in those cases, designers, architects and artists alike tend to be a group of people that prefer to avoid this type of conflict, preferring protection to exposure, a finished state versus open. In many cases, the **Ethos** component suggested above serves as an excuse to avoid conflict from critique (I am the author). This is often explained as a requirement of fragile ideas that need a certain level of protection and nourishment, corporations are many times populated with people that are experts in killing ideas with a barrage of tolls such as 'we have done this before and failed', 'low hanging fruit' versus disruptive innovation, etc. leading many designers and managers alike to want to do their work in protected environment and only show the ideas to others when 'ready'. This definition of ready many times equals a state where it is hard to dismantle or abandon. This leads to descriptions of designers being too sensitive, being incapable of discussing their ideas openly, taking criticism and dealing with conflict. Even methodologies like Agile that require early prototyping and exposure to users/ customers, end up being an area of contention around definitions of the right timing and level of prototype

e) Fairness Vs. Power – Designers are always more comfortable in settings where soft power is exercised, where there some sense of equality and fairness, designers don't seem to be comfortable dealing with power the way Jeffrey Pfeffer defines it, they are not good at getting it, using it and keeping it, they actually think there is something wrong with having/ using it. This **Ethos** components is in many designers lodged deep down inside her way of being, of acting and perceiving the world, on treating other human beings. It is closely connected to notions of empathy, ethics and emotions listed in the afore mentioned designer Personal Attributes research, and it is deeply rooted in a prevalent optimism and a certain level of belief in utopia stemming from William Morris and his first descriptions of what design should be about. On the other hand, the recognized author

addressing issues of power in organizations Jeffrey Pfeffer, in his treaty on the subject called 'Managing with power: Politics and influence in organizations' 1994, provides data that suggests that "power is more important in major decisions, such as those made at higher organizational levels and those that involve crucial issues like reorganizations and budget allocations; for domains in which performance is more difficult to assess such as staff rather than line production operations; and in instances in which there is likely to be uncertainty and disagreement". He proceeds to present examples that attest to the need for political skills typical of high-level positions in large organizations, and he goes into a lot of detail on ways to recognize the need for power, how to get it, manage and use it to impact the objectives via budget and resources, "Factors that create the power of an organizational position: control over resources, control and access to information, and formal position" (Pfeffer, 1994, p.47). While the so called 'strong' designers exert their power via their design direction and may at times act with no respect for fairness, the majority of designers will tend to opt for the exercise of fairness versus the exercise of power.

f) Possibility Vs. Certainty – Designers have a different way of assessing and managing risk, they tend to think and act in a riskier fashion, it's part of the testing and experimenting mindset, while large organizations are built around risk mitigation and avoidance, and certainty supported by numbers as a certainty driver. Designers love to live in the realm of possibility and are neither trained nor comfortable in assuming certainty, especially if there is exploration and innovation in the process. Many others tend to want and strive for certainty, predicting and simulating (a business plan on a spreadsheet) as much and as early as possible to achieve a certain level of certainty, it is all about estimating, reducing and mitigating risks. The role of risk in innovation is not a new topic, as Donald Massaro stated in 1981, "first, innovation by definition is risky. Second, risk in general, is not encouraged in large corporations. Now we say it is, and we give a lot of lip service to encouraging managers to be risky. But when it really gets down to it, it is not encouraged. How do I know it is not encouraged? Because we do not reward risk taking. How many managers in your organization are rewarded for taking risks?" (Massaro, D. 1981). Risk management continues to be a big topic of

discussion in the C-Suite, Like John Maeda stated (CX Report', 2020) "start-ups have little to lose, while grow-ups have lots to lose". Designer/ CEO Alexander Wang stated in an interview, "You can't move forward without taking a risk. And if people are afraid of taking a risk because they don't want to make a mistake, then they kind of just go into cruise control and say I'm just going to do the same thing that's been told to me over and over again and that's been done in the past. I think especially in this industry where things change so drastically every single day, you have to want and be willing to take risks and change and question the way you do things every day" (Wan, A., 2016).

Risk is many times associated with experimentation. David Vismans, Booking.com's chief product officer stated in an HBR article dedicated to 'Building a Culture of Experimentation' 2020 that CEO's need to embrace the cultural requirements of experimentation, questioning notions of failure, of autonomy, suggesting that the lesson is that it's not so important whether any one experiment succeeds or fails; what matters is how decisions are adjudicated under uncertainty in an organization. They should not be based on faith or personal opinion alone. If they can be put to the test, they should be (Thomke, S., 2020).

g) MLP V. MVP – There is a gap between what designers and others believe to be quality, the concept of 'good enough' (not necessarily perfection) is an area of disagreement, while they are more and more engrained in the practice of large companies, sophisms like Lean/ Optimization/ Value Engineering make designers cringe. Quality, its definition and inherent management is a major area of contention for designers, and it is exacerbated by the popular culture of companies associating notions of quality, high quality, many times quality as luxury, with notions of design. Companies that mention design as their driver, their 'modus operandi' mention quality as many times as they mention design, and with that comes a notion of detail, of attention to detail in its many forms. The term Minimum Viable Product is a concept that originated in the lean start-up methodology introduced by Eric Ries in 2011, and it is deeply embedded in the digital train of execution and release, it is described as a version of the product (by then using product as a digital output, not as industrial designers called it before) that allows a team to collect the maximum amount of learning from users with the least effort,

above all it is expected to perform and much of the discussion centres around notions of 'good enough', "And let's be honest, how appealing is an MVP? Well, what can you say about it. It's alive. It works. Of course it works, we're a tech company. But does it move you? Do you really want to have it? To work with it? Meh" (Kniberg, H., 2016). Intuit's founder Scott Cook came out with the definition of a Minimum Awesome Product and some later coined it later a Minimum Lovable Product, one which not only performs but engages and retains the user via emotions and unwavering preference, thus requiring a lot more attention to detail and to quality. Underlying the notion of MVP is what the Facebook founder Mark Zuckerberg called "move fast and break things", which was intended to inform internal design and management on the culture he was creating, as well as a notion that more is always better, of quantity. And though many have stated the time for this type of approach is over (Taneja, H., 2019), many corporations still live and die by this culture. And designers are built to deliver MLP's much more than MVP's, that need the right exposure to users at the right time to avoid that the only person in love with the design, is the designer.

h) Divergence Vs. Convergence – Designers tend to intake many different sources of information and knowledge, and feel comfortable generating many alternatives, meanwhile others try to limit sources as they fail to see how they relate to the issue at hand, and tend to push very hard for convergence as early as possible. Designers are trained to use a hybrid model of divergence and convergence popularized by the Design Council's (2005) double diamond representation of the design process. In it there are phases of divergence and then convergence, described by what many also call the four D's (discover, define, develop, deliver), so basically stating that design is made with both states, divergence and convergence. Reality is divergence causes discomfort, especially for those not used to divergent thinking and especially for those pressed by time, to make matters worse designers tend to diverge in two different moments of the process, in the discover/ define stage and then later again in the develop/ deliver. While in a previous **Ethos** component (a) Solution Vs. System) we stated that designers are solution oriented and tend to focus on pretty early on what they believe to be the best, right solution, that is typically after a divergence model.

What comes into the divergence process, the scope of discovery will dictate a more or less systemic understanding of context, but it will still be divergence. And designers are trained to go through this process, either by thinking with their hands via sketching and doodling, or by prototyping, creating multiple alternatives and variations. There is data on the impact of staying too long in divergence as well as going to soon into convergence, so much of the tension between designers and non-designers is tied to the definition of the right time to do this change of pace.

i) Idealism Vs. Pragmatism – Designers are often humanists and people centred, positive by nature, amicable, not at ease things like closing down factories, firing people, being decisive and ‘thick skinned’, some of these considered pragmatic approaches when times require this type of measures. Though a more scientific definition of idealism and pragmatism might take us to German and American philosophers (DeVries, 2018), it is perhaps easier to define idealism as embedded with notions of morality and emotional bond in decision making, while pragmatism is often associated with realism and the rejection of emotional bond in decision making, it is many times associated to descriptions of designers being too tied up to the subject of their activity, too involved, too passionate and invested in it and often projecting personal versions of morality and right & wrong. The definition of business management and decision at the executive level in large corporations involves many decisions that are much more infused with pragmatism than idealism, these decisions might impact speed and cancellation, investment and divestment, hiring and firing, and though one would hesitate in generalizing that those that make these decision are insensitive and unempathetic, reality is the CEO who ultimately is accountable for these decisions has a number of typical confidants, “Who really makes the major strategic decisions in your company: the acquisition and divestiture decisions; the capital investment decisions; the where, when, and how to go to market decisions; the decisions to expand or shut down operations? I’ll wager that two or three names are popping into your head right now—confidants the CEO always consults. Maybe the CFO, the head of sales or HR, a major division head, a trusted board member? They are always the same few, occasionally joined by others with special knowledge of the issue at hand. Almost every organization I’ve

encountered has such a group that the CEO consistently taps” (Frisch, B., 2011), and somehow there is a perception that designers might not be cut for this type of exercise.

j) Individualism Vs. Collectivism - Designers pursue a certain degree of individualism, resisting alignment on definitions, practices, models and all other group driven decision making constructs, this ends up confusing all others and creating an atmosphere of division, it also justifies a lack of progress in protection as a class (compared to engineers, marketeers, etc.). Perhaps influenced by the education model that originates one of the previous **Ethos** components (c) Authorship Vs. Cocreation), designers are not very associative by nature and by design, Coyne and Snodgrass (1993) began their paper on ‘Cooperation and Individualism in Design’ stating that “Individualism encourages designers to be incommunicative, protective of their ideas, and unable to work as a team or involve clients and the community in the process. Design requires effective collaboration.” Designers have self-organized in professional associations since the 1800’s in Europe, following the steps of civil engineers who published their first charter in 1928 (Lees-Maffei, 2008, p.5). In the US professional associations date to the early 1920’s driven by the early design consultants like Raymond Loewy, Walter Dorwin Teague, Henry Dreyfuss who promoted industrial design as a creditable profession, but as John Maeda adequately portrayed in his CX Report in 2020, we presently have two design associations for graphic and industrial design (AIGA founded 1914, IDSA founded 1965), the Service Design Network founded in 2004, and three more organizations (CXPA, IXDA, UXPA) dedicated to business, design and usability splitting the market and definitions of design and none of them providing any kind of accreditation or regulatory power, not like in the field of engineering, finance/ accountants, marketing and legal. Though we do not have comparable data for other parts of the world, there is some evidence that this might be the case, which leads to a suggestion that perhaps designers and their individualism pose certain barriers to class structuring and organization.

There is at least anecdotal evidence that what defines a designer creates attraction and detraction from many non-designers, and this ‘love/hate’ relationship

might be at the core of the unspoken uneasiness about designer progression into the C-suite. More importantly, the generic core qualities of designers are being heralded as the needs of future corporations and come up often as the requirements for future designers, but we might still need to cross that chasm between wanting design but not in the C-suite, needing design but not enough to invest in it proportionally, respecting design and designers but allowing everyone to have an opinion and a stake in design. An SVP in a large institution that went through a major sales related scandal stated that “this is not a bunch of bad people, but a design perspective would have opened up questions, tension between sales and service, flushed out unintended consequences. Since the crisis, looking for root causes, I offered design thinking approaches to chart the retrospective, hasn’t been adopted”².

This paper comes out in a particular moment in the 20th century, and the words and questions of long time design coach feel especially pungent, “an executive position in a company is a moving target, the jobs that exist today will not exist tomorrow... what is the typical tenure of executives in large companies, and how much has their job description and responsibilities really change in the last 15 years (beyond titles and different/ more areas aggregated, mainly driven by digital)? Has it changed more in the last 5 years than in the 15 years before, is there a sign of bigger disruption?”³

This is a pivotal moment for a conversation about design careers. James Citrin ‘The Career Playbook’ describes the phases that a career goes through as 1. Aspiration, 2. Promise, 3. Momentum, 4. Harvest, 5. Encore, 6. Legacy (Citrin, 2008, p.13), and it’s been adopted by many, the latest reference is John Maeda in his CX 2020 report, comparing the career curve with the ‘Children and Gender Inequality Curve’ coming out of research in Denmark. Citrin proposes ‘The Career Triangle: Job Satisfaction, Compensation, and Lifestyle (p.15), which changes throughout the career phases, and while job satisfaction deals with the nature of the position itself, and compensation being pretty self-explanatory, lifestyle addresses the fit of the job to the person and vice-versa. He expresses the importance of the Aspiration and Promise phases for the Momentum phase, which

² Qualitative Research – Interviews: 12. Corporation leader in robotic products in the health domain (Appendix C)

³ Qualitative Research – Interviews: 23. Designer with an MBA that reached C-Suite role, now in a startup (Appendix C)

is described as the phase that tends to run from the early thirties through the early mid-forties, when one’s experiential value overtakes the potential value one has at the beginning of the career, this is done by accumulating experience, stature, skills and expertise. This is indeed a critical phase, as the author describes it “success in the momentum phase is also defined by the quality of the teams you build and manage. This is perhaps the first thing CEO’s and HR officers consider when deciding whether you’re a fit for an executive role in the company” (p.26) ‘Figure 8’.

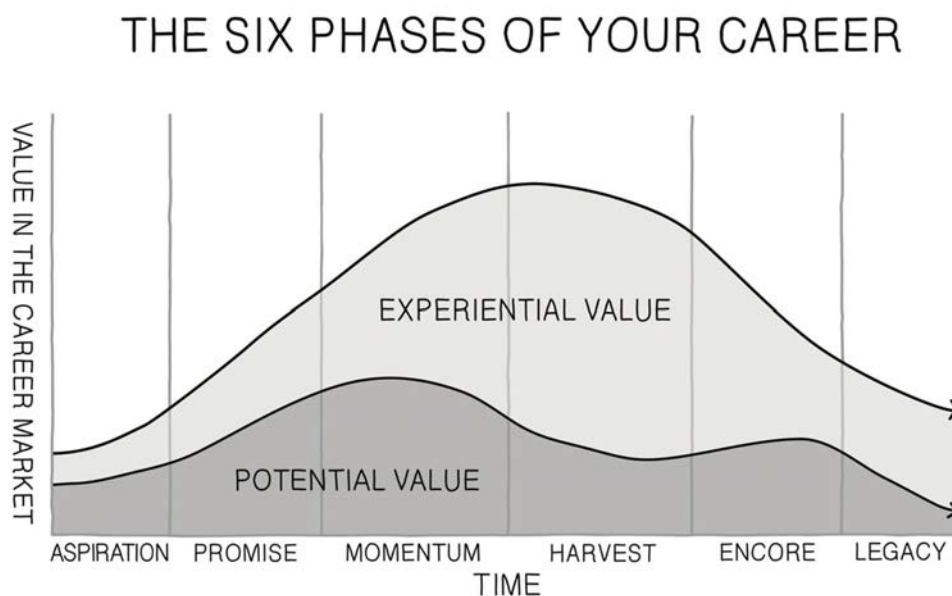


Figure 8 - The six phases of your career, Citrin 2008, pp13

Careers do not often follow a linear approach and we no longer have that many examples of lifelong employer- employee relationships like it existed in the past (Super, 1959), instead careers became more dynamic due to what the career theory specialists called in the 1990’s the “boundaryless career” (Arthur, 1994; DeFillippi and Arthur, 1995; Arthur and Rosseau, 1996). The authors describe this as people being able to move through different functions, organizations, industries, and locations during their careers. This career definition is at the basis of what we call as one of the insights impacting the lack of designers in executive positions in large corporations, insight EXPERIENCE addresses the expectation that corporations have that a good fit for an executive should have taken advantage of this boundaryless concept corporate culture supposedly provides. Career theorists

also study the impact of congruence and correspondence between the individual's traits and the working environment's requirements as crucial elements for adequate job performance (Flöthmann, 2017), this also applies to specific parts of the organization, like the C-suite, and much of what is presented later as the insight DESIRE can be seen as a lack of lack of congruence and correspondence between a designer's traits and what they perceive as this environment's requirements and expectations.

2.1.3 Short history of design in business

This section covers a short non-consensual history of design, covering design in business in the US from the past to present, and ends up with a theory of why design might have slowed its progression in American corporate world in the last 30 years. We also explore the career of 3 proto design leaders and the impact they had, while finding elements that connect them and explain their success.

This is not an exhaustive history of design, there are plenty of recognized design history books, many of them with a focus on design in business. Our intention is to recognize that history and remind ourselves that there isn't a single truth about this or any other history. Trummer in a volume commemorating forty five years of the Design Management Institute (Trumer et al., 2020, 31.1, p.11), , proposes a short history of design, from the early 20th century traditions such as Arts & Crafts, Art Nouveau and German Werkbund, to formalization of the discipline in academic settings with the Bauhaus in 1919, during and after the second world war with a number of designers and brands that benefited from leadership that understood the importance of design to the bottom line. The 1980's brought in postmodernism and questioned "good design" by introducing ornament and symbolism, impacting the number of companies embracing design beyond aesthetics, and since the 90's it's been all about the Internet and impact it has had on society, business and design.

But the history of design itself is far from consensual. In 1993 a design History Seminar held in Washington D.C. organized by the editors of the Design Issues Journal, where a number of fields were represented (philosophy, sociology, history

of technology, history of art, material culture studies, design education, and others), it became quite apparent that there was a clear lack of consensus around the history of design. That later led to an entire number (volume 11, number 1) in 1995 dedicated to the topic, the issue starts off with a number of arguments and counter-arguments between Victor Margolin and Adrian Forty and includes a number of where several renown authors from the many different perspectives came together to present what could be understood as either a pluralism of reasonable alternatives on the topic, or a structural lack of agreement on the history of design. Much of the arguments, going back to Nikolaus Pevsner's "Pioneers of Modern Design" first published in 1936, are focused on what should the history of design be focusing on, the boundaries for design history, and on a discussion if indeed the focus should be on design history or design studies. While this may be seen as an academic debate, much of it is seeded in the practice and impact of design in industry and in business, and one could argue that this lack of agreement between academics might be at the core of what we describe as a lack of boundaries in design today, leading to a wide and disperse range of opinions and definitions of design.

In 1988 Peter Lawrence, one of our interviewees, founder of the DMI design Management Institute and the Corporate design Foundation (Lawrence, 1988, Corporate Board July/August p.56) stated that design was a corporate asset requiring management like any other asset, commenting on the fact that many executives still treated design as superficial and expendable and suggesting designers need to participate in the customer research process. Though very influenced by a very physical product view of the world (the digital revolution hadn't kicked off yet) and therefore of Industrial design, the article uses a number of examples and success cases from Sony to Xerox and to the Ford Motor Company, making a case for design in large corporations as a necessity, and calling out that lack of attention to design in the management literature and education, as well as in companies (p.58). Peter Lawrence ends he article with 5 suggestions to companies that want to ensure they are using design as effectively as possible (summary):

- First, put someone very senior in charge of the company's design investment. He or she should have direct access to the CEO.
- Second, visually audit all the things that the company is producing, then review the design process that produced them. Do the products, brochures, advertising, etc., communicate an appropriate image of the corporation?
- Third, ensure that the resources are in place to achieve the highest level of design for the company—whether in-house design groups or outside design consultants. Using the best designers is extremely important.
- Fourth, use designers to serve your customers. Whether you are a manufacturing or service organization, ensure that industrial designers, graphic designers, and ergonomics people are applied to your interface with the public, whether a machine, a package, or a product.
- And finally, ensure there is an effective and on-going link between the objectives and strategies of the corporation and the design resource. It is not enough to have designers; they must be connected to the purpose and goals of the organization so that they can serve those as effectively as possible.

In the Spring 2006 edition of the Design Management Review ‘Time for Design’, the authors point out that design is, again, missing in management training and that business does not understand design adequately, “Design is hardly the core of any management training—or its practice. In fact, it’s not clear that we even agree on what design means. The problem runs deep. It’s not that design is ignored in management so much as it is assumed, implicitly, in a particularly narrow way. design is something that happens to products; or it’s equated with some kind of über-planning and analysis. Business needs to develop a deeper understanding of what constitutes design” (Liedtka J., Mintzberg H., Design management Review, 2006, p.25). The article is a great design masterclass for business managers, talks about the need for expertise, insights, engagement and adaptability, quotes Herbert Simon, an eminent business-school thinker who said in 1978 that “design is not a metaphor for management, but the very essence of it”. It also provides a framework to understand some of design tensions, by relating it to the nomenclature of design as a noun and a verb and to

Designer/ Designing/ Design. Interestingly enough, these tensions reflect core beliefs and behaviours as well as biases and assumptions that we use later on to map out one of the insights impacting the scarcity of designers in executive positions, designer **Ethos** ‘Table 6’.

Table 6 - Design Tensions, Liedtka et al, 2006 (summary). José dos Santos 2020

The Designer Tension: Who Designs?	The paradox around deciding who designs involves the apparent trade-off between a reliance on experts and visionaries capable of radically innovative—but potentially difficult to implement —solutions versus a reliance on users with a tendency to produce me-too designs that they enthusiastically execute.
The Designing Tension: How Designing Happens	Business leaders seeking better design thinking should pay careful attention to the challenges of preventing premature consensus emerging in the face of fear of chaos, and of maintaining the fluidity that is a prerequisite for breakthrough designs. Conversational design challenges leaders in ways that formulaic and visionary design do not. Business cultures that center on hierarchy, expediency, and authoritarian leadership get in the way of good conversations.
The Design Tension: When Is Designing Done?	The dilemma in all designing is how designs can adapt yet preserve their integrity. In other words, how can designing deal with change and continuity concurrently? At the extremes, there is no problem. Never can we not close or not adapt. So we do both, alternately.

Thirty-one years after Peter Lawrence’s article and thirteen years later the Liedtka and Mintzberg article, Mckinsey in 2020 issues a report entitled ‘Are You Asking Enough of Your design Leaders’ and Fast Company resumed the summary in this way:

Design has finally gotten its due. For years, designers complained that they needed to be brought into the C-suite to make strategic decisions alongside CEOs and CMOs. That has happened over the past five years, as 40 of the top 100 companies hired a chief design officer (CDO). But now there’s a new problem. According to a massive new study conducted by McKinsey, just about nobody knows what a chief design officer is actually supposed to do. McKinsey analysed 1,700 companies and conducted interviews with 200 senior design leaders and 100 CEOs. The key discovery? A few companies have empowered design leaders in the C-suite (and previous research shows that design-led companies have 32% more revenue than other companies). But at most companies, heads of design are ineffectively, and confusingly, integrated into C-Suites.

So, one wonders what has actually happened in the last thirty years since Peter Lawrence discussed the value of design in business.

The corresponding author has a theory, three decades ago, U.S. producers began manufacturing and sourcing in China for one reason: cost. With delocalization of manufacturing to other countries and lowering of cost to lower and lower levels, design (and art, and architecture) was no more a necessity but a luxury, and while in some cases there was an attempt to have it designed in one place and manufactured in another, the manufacturing side of things started to offer 'good enough' design and cost management again ended centralizing all activities elsewhere. This accounts for manufacturing companies, may not apply to companies that were born digital like Facebook and Google.

With the trend toward localization of manufacturing again, or just bringing it closer (onshoring and nearshoring), cost will go up and products will have to become more expensive to consumers, and this is where design might end up playing a role again, in defining aesthetics, quality, real and perception of value that justifies higher cost. Quantities might be more limited also, because countries will also enforce a 'made here' implicit policy, which will work for countries with large enough consumption markets, but smaller countries/ markets will have to stick together to have minimum quantity to justify manufacturing locally.

The term "industrial design" first appeared in America in 1919, but it was only when a generation of young designers emerged as industrial designers, among them Raymond Loewy, Walter Dorwin Teague, Henry Dreyfuss, Norman Bel Geddes, and Egmont Arens, that the discipline gained legitimacy. Carroll Gantz, an IDSA Fellow and former President of the IDSA, wrote many articles and at least 2 books about the history of the field. In his book, "Founders of American Industrial Design" he notes that "In June 1936, Carnegie Tech graduated the 1st 5 students ever to receive a college degree in Industrial design" (Gantz, 2014, p.85) He does not state whether it was a 4-year program or something less, but certainly, by the mid-30's programs had begun. Many other programs followed at different institutions around the country. Pratt Institute in NY had graduates in 1939 from a 3-year program. The University of Illinois established a BFA in 1937. The California Graduate School of design in Pasadena opened a 2-year program that

same year, the 1st in the country offering a master's degree in Industrial design. Cranbrook Academy of Art in Detroit began a program in 1937 as well. This means that we have more than 80 years of design education in the US, it is important we recognize some of the proto design leaders in large corporations, and describe the work and impact they had in design leadership in US large corporations. The reality is that design leadership can come in many forms, and even if there was ever a claim for the existence of Chief Design Officers, there are many different types of CDO's, many different ways to exercise the role and influence of the CDO.

We have decided to focus on three of these proto design leaders, though it is not our intention to write a biography of each of these personalities but approach their relationship with a specific company and many times a CEO and a C-Suite. This is the case of **Sara Little Turnbull** and 3M, **Henry Dreyfuss** and the Deere & Company, **Elliot Noyes** and IBM. The objective here is to unveil different realities and styles of design management, understand them in context and take whatever learning we might from it. It is also a way to reflect on the fact that what we are seeing today in many large corporations is in fact very close to what existed forty and 60 years ago, leading to the ever-present question on how much have we really evolved with design in large corporations in the US.

Sara Little Turnbull was born in 1917 and grew up in Brooklyn as the youngest of a Russian immigrant family of very sparse means. This early experience shaped the rest of her life and career. She attended Parsons School of design on a full scholarship. Using her insatiable curiosity allied with a multi-dimensional approach, Sara developed a keen sense for design with a small "d" because she didn't think design was to be practiced by an elite few tucked away in some remote studio. She was a pioneer of engaging the end-user in context, in their homes, out in the world (she was an avid collector, and a detailed archiver). Her goal was to demystify design. She established long-lasting relationships with Fortune 100 corporations such as Corning Glass, General Mills, Ford, Coca-Cola, NASA, Procter and Gamble, and 3M, where she was hired as a design consultant in 1958, a relationship that lasted several decades.

Her legacy is thankfully revitalized (including the history of her impact on the infamous N95 medical mask) by the Center for Design Institute. They are the custodians of Sara Little Turnbull's vast collection and archive. In a conversation with its President, Larry Eisenbach, he described how Sara "is a prototype of the way design should be influencing corporations. She used design strategically while helping people to see and teach them to ask why and to uncover the underlying influences and facts. People might have felt uncomfortable because she wasn't a discipline specialist; she was a generalist."

There was a moment in time where Sara addressed the 3M decision-makers with a pitch entitled "Who am I," and clearly stated what she could do for 3M, what she had accomplished for others, and ended with an enigmatic "what will it cost 3M." This is used as a great example of Sara knowing very well who she was and addressing decision-makers in a language that they could embrace. As an example of Sara's effectiveness, Amy Chen, a Center for design Board Director anecdotally recalled another company's senior VP writing to Sara on her retirement and observing, "Others may not have a clue what you did, but they understood the fact that you added several billion dollars to our sales and profits."

Sara was a 4'11" woman in a world of men, but that did not seem to intimidate her, on the contrary, she navigated the Board and engaged with CEO's one on one, using her ability to translate abstract and innovative concepts into a compass for business managers. As described by Amy Chen, "The CEO would tell a division manager that they needed to include Sara in an important meeting. The manager knew that Sara was a designer and thought, 'I don't have to talk to her, she's in design.' In addition to being very astute in many product areas and manufacturing practices, Sara was a great listener, and she would ask questions to get to the essence of WHY? Her job was to teach them how to see and how to think like a designer. On leaving the meeting, they would have a whole different perspective on what they were trying to do."

Her Title: The secret weapon

A phrase to remember: "The job of designers is to establish order out of chaos, essentially out of all the different variables, all the different possibilities, a designer's job is to create order."

Three qualities: Generalist, Humanist, Navigator

Henry Dreyfuss FIDSA is a past President of the IDSA (1965) and the organization recognizes him as one of their Chairmen Emeriti, they have a concise but thorough biography of Henry Dreyfuss in their site (IDSA, 1975), and it covers his work from the nineteen twenties to his death in 1972, touching companies and brands such as Bell Laboratories, General Electric, Hoover, Honeywell, Polaroid and the Deere & Company among others. He is a large corporation, large project designer and had a huge impact in the design profession in the United States. Deere & Company was founded in 1837, it is a well-known design-oriented company, in an area where some would argue design would not be a core function (farm equipment). An in-house design service for graphic design was established around the turn of the century, and hired Henry Dreyfuss as a design consultant for its tractors in 1936. In 1957 William Hewitt (President from 1955 to 1964), hired Eero Saarinen to design their new headquarters in Moline IL, a building that still stands today as one of Eero's finest functional buildings, but by then Henry Dreyfuss had been working with Deere & Company for 25 years, in its products, facilities, even stationary, he was the one to suggest Eero to William Hewitt. In research carried out by Peter Lawrence, President of the Corporate Design Foundation in 1987, Gordon Millar, Vice President of Engineering for Deere & Company, explained the role of Henry Dreyfuss in the organization:

Now the coordination of form and function and styling is handled through the Dreyfuss Organization. They serve as a consultant but it's a very powerful role because nobody fools around much with what they recommend, although there is' not a corporate edict saying they have to be used.

The relationship works in a very positive way and we have an exceptionally fine and long-standing relationship with them. It started out with Henry Dreyfuss, through our Chairman's office, and he influenced the motivation in our company to a greater degree, not only in style and form and colour and things of that nature but in pressing the limits of technology for our class of equipment. He was very much in favour of that and did an

awful lot to foster that within our company. His associates have carried on in that tradition.

The advantage of it at the beginning was because we were so very much decentralized. To show you how far it went, we were so decentralized that one engineering department couldn't get into another engineering department without a special pass. So, this (using Dreyfuss) was a way by which the top officer, our Chairman, could influence the design of the product and that was why it was so terribly powerful at the beginning... It provides a dimension you don't have when you have a captive organization ... They do provide a basis for the family resemblance of our machines through-out the world ... and in years gone by they clearly provided a communications function.

Henry Dreyfuss began his formal studies as a 16-year-old scholarship recipient in New York where he took classes taught by designer Norman Bel Geddes, an early leader of the streamlining design movement. After making some money he travelled to Paris and north Africa, he was then hired by Macy's to redesign poorly selling merchandise in New York City, but quit his job almost as he started and in the early nineteen thirties he opened his own design studio. Recently the Deere & Company published an article about the work of Henry Dreyfus with them, entitled 'The Future According to Henry Dreyfuss' 2020 9John Deere Journal 2020), in it they state that "Dreyfuss learned about people, their tendencies, their fears, their reservations, their ambitions, and their unbridled enthusiasm. He used those learnings to make the world more beautiful, and functional, through the products people interacted with every day". Henry Dreyfuss worked with Deere & Company for 36 years, in 1972 at his memorial service, William Hewitt stated that about Dreyfuss that "Henry did more than improve the design of our machines, I have in mind a great many different ways in which he added significantly to the quality of our corporate performance. His contribution was so broad and deep that I can only refer to it... Henry re-designed our trademark, our graphics, and our corporate letterheads; he revamped our packaging of parts, helped improve our advertising

and our corporate films, and often assisted in the selection of oil paintings, tapestries, and sculpture for our Administrative Center.”

His Title: The hidden persuader.

A phrase to remember: “People will more readily accept something new, we feel, if they recognize in it something out of the past, ...most of us have a nostalgia for old things. Our senses quickly recognize and receive pleasure when a long-forgotten detail is brought back.”

Three qualities: Overarching, Detailed, Nostalgic

When talking about the history of design at IBM, many tend to focus on **Elliot Noyes** who was hired in 1956 as a design consultant by the then IBM CEO and Chairman of the Board T. J. Watson Jr. who popularized the statement “Good design is Good Business”. Noyes was a well-respected architect with a history of design curation in the New York Museum of Modern Art, he worked only 50% of the time with IBM, the other 50% he was consulting with Mobil Oil, Westinghouse and Cummins Engine Company, etc. He built the basis of the ‘IBM design Program’ that is still running today, he did that by placing under the same program the products, buildings, corporate identity and marketing materials as an intentionally created program, deeply inspired by art & design. He brought into this endeavour many artists, designers and architects, among them Charles and Ray Eames, Eero Saarinen, Paul Rand. Perhaps Noyes’s was influenced by his former teacher Peter Behrens (1868–1940), whose work with the German industrial consortium Allgemeine Elektrizitäts Gesellschaft (AEG) in the early twentieth century at the epicentre of modernist design. Noyes identified himself as a curator of corporate character stating “It does seem to be a part of the role of the designer to help identify this character, and then express it in terms of the most meaningful goals and the highest ideas of the company and in the broadest context of our society and economy” (IBM 100, 2012).

This design program started in 1955 and was implemented throughout 1956, it existed for many years in only one document, a presidential letter which in IBM never changes, irrespective of who signed it, for many years the content never changed. There was also a corporate organization manual with 11 rights that are retained on the corporate staff and are not delegated to any division or operating

units, things like finance, personnel relations, and design was one of them. In an interview by Peter Lawrence with Gordon Bruce (Lawrence, P., 2016), one of Noyes' collaborators, Gordon described Noyes as someone who would listen closely to the CEO to get to the essence of the company, then build a strategy from the inside in, with internal staff, and work toward becoming dispensable. Noyes pioneered in so many ways, like establishing internal design reviews, bringing all products into a big white room, four to six times a year, with internal and external design directors, sometimes the CEO would stop by.

Throughout the years and as IBM grew, Eliot Noyes did not attempt to replicate what was happening with IBM or with other contemporary American firms that combined architectural and design practices (Skidmore, Owings & Merrill SOM, Caudill Rowlett Scott CRS, Walter Dorwin Teague and Associates), Eliot Noyes and Associates remained small but did not lose influence, he sought to extend the designer's "sphere of influence" over as many relevant aspects of IBM as possible.

His Title: The design curator.

A phrase to remember: "And this will happen only when good design—the awareness of it and the desire for it—begins to come out through their own skins. That is why this is not an outside movement. We are trying to start one within the company, using a variety of stimuli."

Three qualities: Artistic, Collaborative, Empowering

What brings together these three proto-designers, what seems to be the underlying findings that justify their success in corporate America? A number of things:

- A clear connection to a CEO that was driving the design agenda, as exemplified by correspondence between Eliot Noyes and the CEO of IBM (Harwood, J., 2011, p.34);
- A wide scope of action for design, ranging from products, to working environments, to communications;
- A programmatic approach to design, with implicit and explicit guidelines on how to achieve consistency and efficiency;

- A flexible, hybrid system of influence and direction between external and internal teams;

2.1.4 Framing Design Management

This section brings forth some historic visions of Design Management, the beginnings and the importance of certain institutions in its development.

In 1986 Peter Lawrence, then the President of the Corporate design Foundation President and a Design Management Institute President, in collaboration with the IBM Foundation and with support of the National Endowment for the Arts prepared a review of corporate executives speaking on design, from selected presentations given at the Design Management Conferences from 1979 to 1985 (Lawrence, P., 1986). This list includes executives from companies like Herman Miller, Apple Computer, Xerox Corporation, Sony Corporation, 3M and Crate & Barrel, and is a great snapshot of a moment in the United States history of design in large corporations. Lawrence talks about the importance of the material that “stems from the almost complete lack of information concerning the role design can play in helping to deal with today’s business realities, such as the increasingly complex and global marketplace, and the growing attention paid to quality, the user, and corporate image” ’Table 7’. We read the eight presentations and identified common themes that these corporate executives identified as being reason for the success of design within their corporations, interestingly enough these do not differ much from of what McKinsey (2019) and others are saying about the right conditions for design to thrive, this a good forty years after these executives articulated it. In many cases (quality, risk taking, taking the time,...) , this aligns also with what we have called designer **Ethos**, core components of what designers embrace as good design. These quotes are excerpts of their writing and thinking and are important to establish context.

“Top management has long supported – and will continue to support – a strong design organization. We have supported the function with funding for people and resources. We have supported it by involving the Director of design and the design managers in the management of our business.

The top management design Committee, which we mentioned earlier, is evidence of our commitment. design is so. Ingrained in our corporate operations we could not take it away". James Houghton, Chairman of the Board, Corning Glass Works, 1983

"First, it is an accruing resource. Each year we put a little of what we make and save into a visual and corporate image bank. I cannot imagine a better hedge against a prospect of a depression, of the financial or public relations variety. God corporate design is money in the bank. Second, and more important by far, Atlantic Richfield's design program expresses far more persuasively than any words I can summon the kind of organization we aim to be. We want to be unified and effective. We want to be modern and efficient. We want to be sensitive to the needs of our communities and the people who live there". Robert Anderson, Former Chairman, Atlantic Richfield Company, 1981

"So, you have the design of a company. Can design design a company? Absolutely yes! design influenced in a major way change at Herman Miller. We were a traditional manufacturer of residential furniture. We changed to modern furniture. We changed to institutional and contract furniture, then to office furniture, then to the working and healing environments, and then to systems, software and furniture – an integrated facility program. So, design and development designed a company and redesigned it during these 4 periods." Hugh De Pree, Former President and Chief Executive Officer, Herman Miller, 1979

"Our philosophy, which is reflected even in the first brochure we did, is that one starts off with something and when one first starts to understand the problem, it appears very simple, but then as one gets into it on starts to understand the subtleties of the problem and it appears very complex, and one comes up with a lot of complicated solutions. Most people stop there and end up with complicated stuff. But if one keeps pursuing it long enough, one arrives at the elegantly simple solution. We have tried to

reflect this – which is that simplicity is the ultimate sophistication.” Steven Jobs, Co-Founder and Former Chairman, Apple Computer, 1981

“The most important requirement in design management is that the top management of a company realizes the value of design for their company. In addition, I believe that both design and advertising must be handled in the same group. For example, we may need to think of a slogan prior to designing the product. For the further development of the company in the future, I believe it is indispensable to study the planning of a product in order to write advertising copy and at the same time determine the kind of design most suited for that product” Norio Ohga, President and CEO, Sony Corporation, 1985.

“It is our belief that good design can be used to make a corporate philosophy profitable. It has been so for us. We have grown consistently over the last twenty years, and during the last ten years the corporate growth has been twenty five percent per year compounded. Earnings have kept pace with that, and our company now is the single largest home furnishings retail store in table-top and kitchenware in the country. We do not intend to grow past the point where we might lose any of our quality. We have a strong feeling that people enjoy the quality level” Gordon Segal, President, Crate & Barrel, 1982

Framing the history of design and design management in the US without covering European and Japanese history of design and design management (eg.: Olivetti in Italy and Sony in Japan) is limited but a conscious choice of the corresponding author, because the focus of this thesis is on the United States, and on its large corporations that impact the entire world. We are aware that many of the ideas that evolved in the United States came from what was seen happening in Europe, just as an anecdote the famous statement “Good Design is Good Business” from Thomas J. Watson Jr in 1966 at IBM has a backstory told by Watson himself. Apparently in the 1950’s, and while walking around 5th Av. in NYC, he came across the Olivetti store, walked in and was marvelled by the entire

design program they had on display. He then ended up visiting Sr. Adriano Olivetti and that started a period in IBM that culminated with the above referenced memo.

Table 7 – Peter Lawrence, concepts addressed by different authors (summary). José dos Santos 2020

Views on Design, Editor: Peter Lawrence	
Application of Design to all company areas (products, identity, communication,...)	1, 2, 3, 4, 6, 8
Workplace Design for quality of life, environment where innovation thrives	1, 2, 3, 5, 8
Quality (be as good as you can be)	2, 3, 4, 7, 8
Integral to company mission, objectives, direction, strategy	1, 3, 5, 8
Designers in charge of running programs, not just participating	1, 5, 6
Investing in Design, as well as architecture and art	2, 3, 6
Open to experimentation, acceptance of failure, dealing with risk	4, 5, 6
Consolidating, centralizing Design teams under one leadership	1, 6
Internal function, with specific and occasional external support	1, 4
Invite well know specialists when necessary (architects, artists,...)	1, 2
Design at top management level	1, 3
Design from the beginning	4, 6
Taking the time, stretching the limits, persistence and preserverence	4, 7
Rewards and recognition	5, 6
Design driving, stimulating innovation	5, 7
Design recognizing customer needs, local market needs	4, 6
Design at the same level of other areas (engineering, marketing, research,...)	1
Design in charge of its own budget and resources	1
Integral part of the company culture	1
CEO + Design manager connection	3
Designers as teachers (how to see, what's important, stretch the thinking,...)	3
Dealing with constraints	3
Design opening up new markets	5
Top management realizing value of Design	6
Design and technical excellene and Research & Development	6
Design as advisor, counselor, auditor, policeman, judge in design issues	7
Embracing challenge of doing good design and making money	8
Design bringing sensuality, good taste into the business	8
Allowing Design to tell a story	8
1. James Houghton, Chairman of the Board, Corning Glass Works (1983)	
2. Robert O. Anderson, Former Chairman, Atlantic Richfield Company (1981)	
3. Hugh De Pree, Former President and Chief Executive Officer, Herman Miller (1979)	
4. Steven Jobs, Co-Founder and Former Chairman, Apple Computer (1981)	
5. Donald Massaro, Former President, Office Products Division, Xerox Corporation (1981)	
6. Norio Ohga, President and CEO, Sony Corporation (1985)	
7. Donn Osmon, Vice President, Marketing and Public Affairs, 3M (1985)	
8. Gordon Segal, President, Crate & Barrel (1982)	

The Design Management Institute started out as the first conference with and for executives focused on design management issues, this took place in Nantucket MA in 1976, Bill Hannon as Chair of design division at the Massachusetts College of Art (MassArt) who was organizing it called the gathering the design Management Institute and it stuck. DMI remained as part of the MassArt for a

decade, was then institutionalized itself and went through several stages, the first edition of the Design Management Review was in the fall of 1989, more than a decade after the institution started with their conferences, it is now commemorating 45 years of existence. Though design management in the United States starts earlier with the experiences of the corporate leaders collected in Lawrence's document (in 1973, IBM CEO Tom Watson declared "Good Design is Good Business"), the DMI has converged a lot of the activity in the design management arena both in the US and abroad, via its European conferences, the corresponding author was a member of its advisory council for a number of years.

2.1.5 Innovation and the role of design

In this section we cover definitions of design innovation and the different roles design leaders have in large corporation innovation. We also cover design thinking with a short history and status, merely because for many it has become synonymous with design innovation.

"Innovation can be a couple of things. It can be introducing something new. When I talk about introducing something new, what I mean is either a new product into an existing marketplace, or a new product into a new marketplace, which means basically creating a new market. It also can mean the changing of the established way of doing things. I am not going to talk about the latter. I am going to focus on the former, that is introducing something new, whether it be a new product into an existing market or a new product into a new market. I am also not going to be talking about innovation in small start-up companies. Because that is not a problem in this country. All you have to do is take a trip out to Silicon Valley on the West coast and you see an incredible number of start-up companies with innovation flowing out of all the doors. I really want to address the problem that we have, and that is innovation in large companies – large companies being over fifty or one hundred million dollars. This is where we have a problem, and we have to solve it if we really expect to keep this country in its industrial position on a world-wide

basis” Donald Massaro, Former President Office Products Division, Xerox Corporation, 1981 (Lawrence, P., 1986).

There are many ways to address the role of innovation in large companies and society at large, innovation matters for growth and renewal, it is critical for firm growth (Schumpeter J., 1934, 1942; Penrose E.T., 1959), and society growth (Romer P., 1986). All large consulting firms make similar arguments when they rank companies (BCG, 2020; Forbes, 2020). Innovation can come in many forms, it can vary between radical vs. incremental (Albertnathy et al, 1978), modular vs. architectural (Henderson et al, 1990), competence-enhancing vs. competence - destroying (Gatignon et al, 2002), and sustaining vs. disruptive innovation (Christensen C., 1997), to name a few.

According to those who have studied how to elevate design’s status within corporations, there is enough evidence to state that design is a major driver of innovation (Utterback et al, 2006; Verganti R., 2009), it is critical to differentiation and branding and positively affects companies’ financial and nonfinancial performance (Micheli et al, 2017; Kelley et al, 1995).

The role of design in innovation seems to be a topic of ongoing discussion, in the majority of cases requiring clarification of what is meant by design. For some, design is more a requirement of certain more consumer facing industries and inherently connected to materialization of products and services, and for those the role of design in innovation might be disputable since they see design coming at the end of the product development curve as an embellisher and packager of offerings, they see the role of design in innovation as a nice-to-have, not a required discipline. But as customer end-to-end experience becomes a necessity, the role of design has expanded beyond beautification (Breschi et al, 2017).

For others, design is a component of strategy and vision, a way of thinking that allows integration of innovation with customer experience and brand value, for these the role of design in innovation is perhaps more central to the company activity and a must-have (Lockwood T., 2009).

There are also those that relate the value of design in innovation to the stages of the innovation, while many believe in Larry Keeley’s definition of the 10 types of Innovation (Keeley et al, 2013) and might agree or disagree with the role of design

in all those 10 stages, reality is many companies see innovation as a cash curve like Sirkin, where managers struggle to achieve the required cash payback by managing the overall innovation process with the understanding that payback can come as planned but also take a lot longer, come indirectly, or even not come at all (Sirkin et al, 2007, p.7). The ones that champion this approach might see design coming in the Idea generation stage of the curve, less in the Commercialization and even less in the Realization (online solutions have in some cases shortened this curve tremendously, but the stages, even in agile instead of traditional waterfall, are still there). This is, of course, a limited view of design, or in many cases semantic misalignment of design, by calling design efforts in Commercialization and Realization stages different things (marketing research, marketing communications, packaging, merchandising, customer experience, life-cycle management, etc.)

There are still others that describe innovation as a cyclical activity of diversification based upon hidden assets (Zook, 2007, p.29), cycles rotating between Focus/ Expand/ Redefine require design in its many forms, if the Focus cycle requires a) core business definition, b) cost reductions, c) differentiating offer, it is understandable the role of design in one if not all of these success findings. If in the Expand cycle the attention is on a) repeatable formula, b) geographical and customer expansion, c) avoiding over-expansion, again, design is crucial. Zook mentions in his book 'Unstoppable' corporate internal demons, as he calls them, linked to self-awareness, companies not knowing who they are, not knowing where they are, and not knowing what they are really good at. Depending on your vision of design, it may or may not help the organization become more self-aware, but we would add to this a fourth component linked to self-awareness, knowing what design is and can do for them, in line with McKinsey's question "Are you asking enough from your design leaders" (Dalrymple et al, 2020).

But even if design might not be seen as comprehensive as some would expect (Design Council, 2019) or even if design is seen as more impactful in some industries and less in others, independently of the quantitative definition, general consensus is that design has a part to play in innovation and there is not only correlation but causation in its use and application. The level of understanding of

design, even when not understood as vital or core, dictates the extent to which design is applied and also to the proximity to the C-Suite that design and designers may have, as the place where innovation strategy and growth is discussed, prioritized and ultimately budgeted.

Innovation will continue to be important for every company, and a survival element of large companies that will dictate many different actions, one of them has been the growth of Chief Innovation Officers in large corporations, and some have speculated that the future Chief Design Officer will be the CIO. Same applies to organizations relying heavily in digital, by naming Chief Digital Officers. It is still unclear what will be the impact of this influx of many different Chiefs into the C-Suite and not necessarily the Chief design Officer. Maria Giudice actually believes the time is for Design Executive Officers (DEO) as a CEO that is either a designer or strongly infused and trained in design, many believe Jim Hackett/ Ford is a great modern example of a DEO (he has left Ford October 2020).

We need to address design thinking and its many detractors, it is not the purpose of this thesis or our intent to approve or disapprove of design thinking, merely to acknowledge it as a part of the design reality, now and in the future, in small and large organizations, public and private and governmental.

First mentioned in the early 2000s, highly influenced by IDEO (Brown, 2009; Kelley & Littman, 2001), who by the way have had to retract some of their recent posts on diversity because the Design Thinking model has been called out for not being inclusive enough (Fortune, 2020), and management scholars who were close to the phenomena (Boland & Collopy, 2004; Martin, 2009), the notion of design thinking has been covered by many (Dunne & Martin, 2006; Brown, 2008; Brown, 2009; Martin, 2011) and it suggests that anyone can learn and apply the process to any innovation challenge (Martin, 2009; Brown and Katz, 2011).

In a recent study by Prof. Dr. Jan Oliver Schwarz of AMD, a global assessment of the practice of design thinkers, after presenting the state of Design Thinking, justifying its present popularity and proposing a definition “design thinking can be understood as the application of design methods by multidisciplinary teams to innovation challenges”. Design thinking is therefore helpful for business challenges which goes beyond the traditional focus of industrial design (Seidel and Fixson,

2013). Liedtka describes design thinking, when viewed as a practice, as comprising an integrative framework bringing together creative and analytic modes of reasoning while being accompanied by a process and a set of tools and techniques” (Liedtka, 2015, P.12). The report goes on to address two areas of focus: 1) How do design thinkers understand the world of the customer? 2) How do design thinkers deal with the future in their projects?, and concludes that generally described as design user research techniques are still critical to understanding consumers, that future thinking using design tools is still necessary to deal with the future, and ends with a warning, that the rapid adoption of design thinking in practice is outpacing academic research when it comes to understanding its practice and impact, and in many ways this might be the origin of the current backlash against design thinking.

Lee Vinsel, in an article titled ‘The Design Thinking Movement is Absurd’, states that design thinking has allowed an invasion of “Sunday designers” (Vinsel, Lee., 2018), and cites Natasha Jen from Pentagram who famously stated that “design thinking is bullsh*t”, he ends his article with “design thinking’s not about design. It’s not about the liberal arts. It’s not about innovation in any meaningful sense. It’s certainly not about “social innovation” if that means significant social change. It’s about commercialization.”

Natasha Iskander wrote that ‘design thinking Is Fundamentally Conservative and Preserves the Status Quo’, an associate professor of Urban Planning and Public Service at New York University, she believes that design thinking is a way to preserve the privileges of the designer above those she should be serving, the people (Iskander, N., 2018). And this is just a small sample of the backlash about design thinking, above all coming from the design community but not entirely.

Organizations have jumped to the opportunity to establish a design thinking culture inside their organizations, an article in the Executive Magazine states that “design thinking allows organizations to thrive in today’s ever-changing landscape. To realize its full value, design thinking must be pushed beyond “Innovation Centres” to everyone in the organization, with the goal of improving all aspects of the enterprise, not just product development. It requires the right mindset and toolset embedded in a culture that supports risk taking, divergent thinking and

freedom to collaborate” (Korn Ferry, 2019). While others have written about the necessity for those corporations to keep a close control of the use and deployment of design thinking because it fundamentally pushes employees to embrace something they have at all cost been trying to avoid: failure, leading to findings that leave employees feeling shocked and dismayed, while demonstrating their difficulty in distancing themselves from what they are accustomed to do. Charlie Hill, an IBM Fellow, brings in a different perspective that combines scaling design with a notion of design thinking rolling out to the entire organization, combining a craft/ technical career path with a management track, all the way to VP (Design Museum Foundation, 2019).

More and more research keeps being published on the topic. Recently, a group of researchers created a questionnaire to measure design thinking mindset (Dosi, Rosati, Vignolli, 2018), after a comprehensive literature review defined the 19 constructs of that mindset and tested them with two different sample populations, many of these constructs of design thinking mindset are in core tenants of design, and they served us to define **Ethos**, one of the insights impacting the question underlying this thesis.

- A. Tolerance for - Resilience of - Being comfortable with Ambiguity – Uncertainty.
- B. Embracing Risk.
- C. Human centeredness.
- D. Empathy / Empathic.
- E. Mindfulness and awareness of process.
- F. Holistic view/consider the problem as a whole.
- G. Problem reframing.
- H. Team working.
- I. Multi- / inter- / cross- disciplinary collaboration.
- J. Open to different perspectives/diversity.
- K. Learning oriented.
- L. Experimentation or learn from mistake or from failure.
- M. Experiential intelligence / Bias toward action.
- N. Critical Questioning.

- O. Abductive thinking.
- P. Envisioning new things.
- Q. Creative confidence.
- R. Desire to make a difference.
- S. Optimism to have an impact.

In an article published in the Swedish Design Research Journal entitled 'Exploring the Use of design thinking in Large Organizations: Towards a Research Agenda' (Carlgren et al., 2016), the authors state their paper seeks to contribute to closing the gap in knowledge by describing what happens when large firms embrace design thinking and start applying it in practice. The conclusion of the empirical research was that, in the three clusters they collected their feedback on design thinking: 1) perception of the term design thinking, 2) use of design thinking, and 3) who uses design thinking, they state that "perceptions of design thinking vary a lot among individuals using it, and also that it is used in a variety of ways in organizational settings. Depending on how design thinking is defined it is used for different purposes and by different people" (Carlgren et al, 2016, p.14).

There have been many attempts to kill design thinking or replace it for something different, but none of them really succeeded. Roger Martin proposed a concept of Integrative Thinking as an essential tool for design leadership in the future, "modern leadership needs integrative thinking. Integrative thinkers embrace complexity, tolerate uncertainty, and manage tension in searching for creative solutions to problems" (Martin & Austen, 1999, p.2). Though presented in 4 steps (Salience, Causality, Sequencing and Resolution) much like the 5 steps of design thinking (Empathise, Define, Ideate, Prototype, Test), the authors present this as a heuristic process, not as an algorithm, they call the process an art form, and the practitioner a relentless learner who builds a tool box that allows them to sort out the tensions resulting from natural complexity, a management style for "enigmatic problems that face our organizations in the new millennium." The journalist and author that made the term design thinking popular in the business world, Bruce Nussbaum, also attempted to distance himself from the concept. In an article entitled "Design Thinking is a Failed Experiment: So, What's Next" (Nussbaum, B., 2011) argued "design thinking has given the design profession and society at large

all the benefits it has to offer and is beginning to ossify and actually do harm... Companies absorbed the process of design thinking all too well, turning it into a linear, gated, by-the-book methodology that delivered, at best, incremental change and innovation” and goes on to introduce a new concept that connects to the one mentioned above by Roger Martin, Creative Intelligence, or CQ and defines it as “the ability to frame problems in new ways and to make original solutions. You can have a low or high ability to frame and solve problems, but these two capacities are key and they can be learned. I place CQ within the intellectual space of gaming, scenario planning, systems thinking and, of course, design thinking. It is a sociological approach in which creativity emerges from group activity, not a psychological approach of development stages and individual genius.” This concept too never left the pages of the academic articles.

It is fair to say that design thinking is here to stay, it occupied a void caused by designers failing to engage all others than designers themselves in the design process, it stems from a ‘black box’ approach that designers engaged in while going on about designing, and the simplicity of design thinking principles and generic qualities that allow them to be applied to almost any situation makes it hard to go away or be substituted by any other similar construct. More importantly, if and when designers do not embrace design thinking dissemination and application in corporations, others will occupy themselves with it, many times without the backing of the ‘design doing’ brought in typically by designers.

2.1.6 Design Leadership today

This section is about the design profession in the US, the impact of digitalization, and the state of design leadership at the executive level and overall leadership.

On the topic of design as a profession, the Design Census 2019, focused on ‘understanding the state of design and the people who make it’ is published by AIGA (American Institute of Graphic Arts, now the Professional Association for Design), Google and Accurat. Because AIGA has a much stronger community focused on what was traditionally called Graphic/ Visual design areas, the census

is strongly skewed towards this type of design “after communication/ graphic design—which far exceeds every other industry—most designers work in business and the arts, including fine art, art history, and design history” p.16, and though these professionals have strongly evolved towards digital design (UX/UI) it has not entirely encompassed it. Industrial designers also started in 1965 their own association, the IDSA Industrial Designers Society of America. The image below from John Maeda’s CX 2020 report ‘Figure 9’ describes the reality of design associations serving the design community, where AIGA despite being the oldest association has not stopped digital designers from grouping themselves around specifically targeted associations (CXPA, ISDA, UXDA).

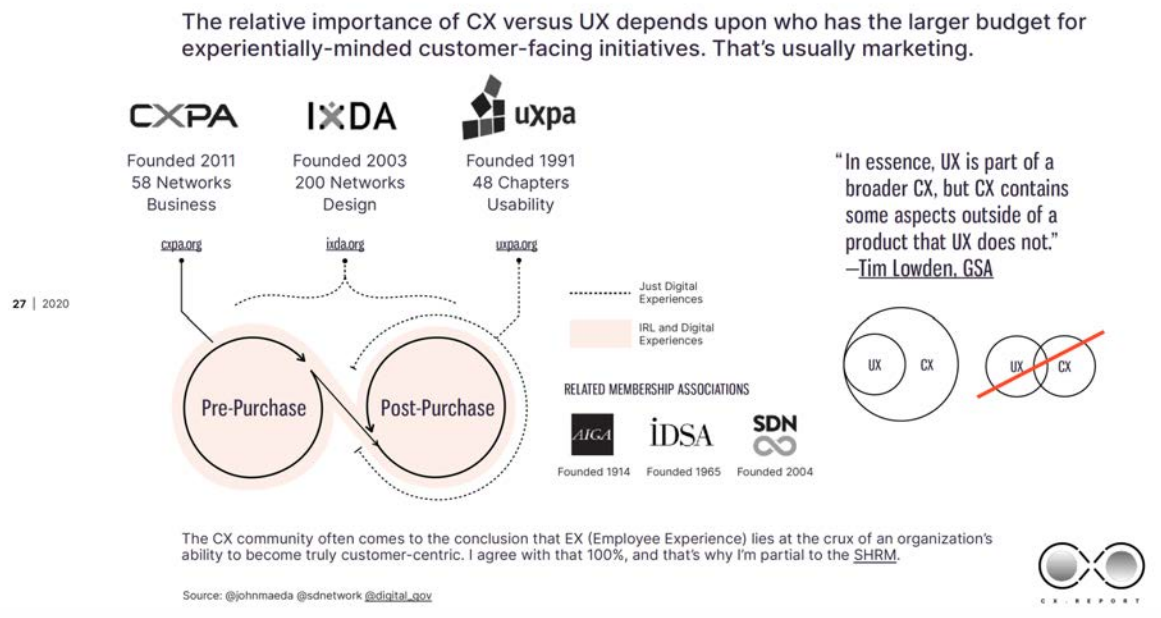


Figure 9 - The Design Community and its organizations, Maeda 2020

In a volume dedicated to ‘Design Leadership and Leadership by Design’, the authors argue that “design leadership and ‘leadership by design’ might be portrayed as representing two countervailing trends in leadership development, as distinguished by their use (or abuse) of empathy”, claiming that “one can succeed to some extent in the world of design in three parallel ways: (1) by giving people exactly the designs and products they say they want; (2) by giving people something that serves the higher, broadened understanding of their own needs; or (3) by delivering services and products that change, enlarge or revolutionize –

perhaps in some culture-changing way – the people’s sense of what they want or how they live” (Muratovski, G., 2018, p.5).

McKinsey in 2018 did some research into the topic of the business value of design, they interviewed 200 senior design leaders and 100 top executives ⁴ using their McKinsey Design Index (MDI), and what they found was that, while in the past five years companies that added senior design roles doubled, 90 percent of these companies were not reaching the full potential of design, only 10 percent of respondents had reached the highest level of design-leadership maturity by performing in the top quartile across four key areas (design leadership, cross-functional talent, iterative processes, and end-to-end user experiences). Later, in 2020 they published a follow-up to that research, entitled ‘Are you Asking Enough From Your design Leaders’ state that from 4 areas that identified in a previous study that were tied directly to improved revenue growth and shareholder return (design leadership, cross-functional talent, iterative processes, end-to-end user experiences), CEO’s would have to address design leadership as their top priority, they concluded that there was a “a lack of clarity about where and how senior design leaders can contribute, and uncertainty about how much to expect of them in their role” (Dalrymple et al, 2020, p.1). They also suggest three interventions (p.2):

- Embrace user-centric strategies, improving not only products and services but also the full user experience and, in some cases, the organization itself.
- Embed your senior designer into the C-suite while cultivating a collaborative top-team environment in which your design leader
- Make the most of user data through a balance of quantitative and qualitative design metrics and incentives that enhance user satisfaction and business performance.

When diving deeper into bullet point two on embedding the designers into the C-suite, they gathered data from the interviewees and clustered the answers into 5 types of design leadership, five role archetypes for design ‘Figure 10’.

They argue specifically that “although companies can employ any of these archetypal models successfully, the ones that best position design leaders to

⁴ Though there is not definition or characterization of what a ‘senior design leader’ is, for the purpose of the research we assume these are trained designers, and therefore all conclusion and recommendations are applicable to our definition of designers.

deliver on the full business value of design are the C-level roles with direct CEO sponsorship, such as “the executive” or a senior “community leader.” These archetypes provide a platform for design leaders to address organization-wide issues, while positioning them as a senior-level peer with the clout necessary to unblock problems for their teams quickly” (p.5).

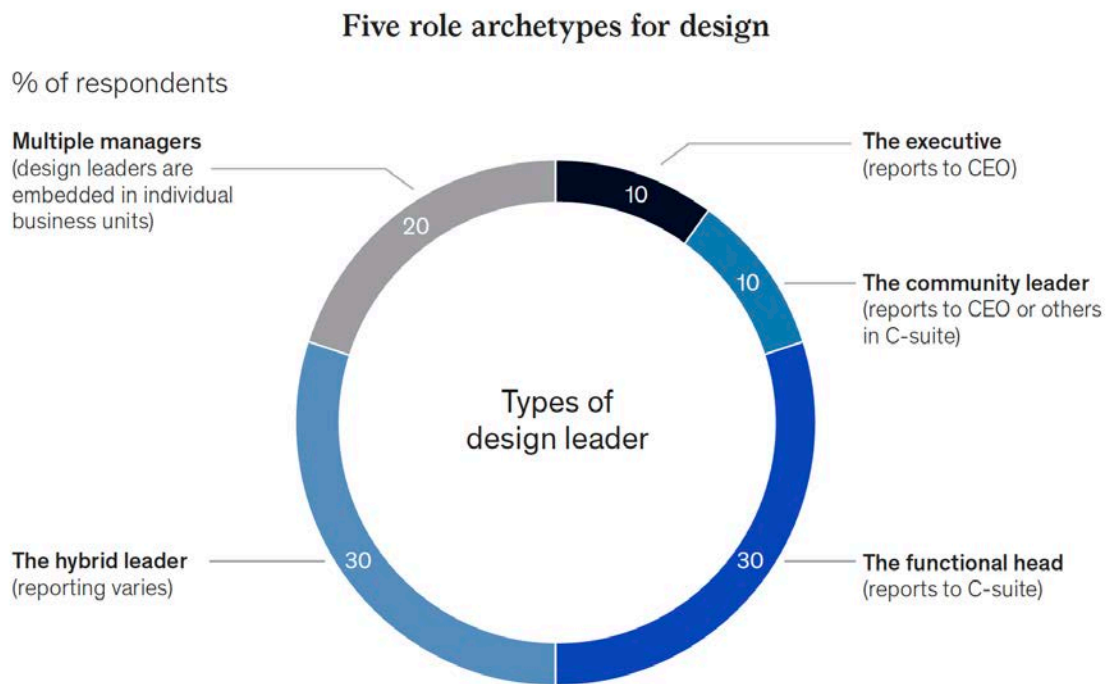


Figure 10 - 5 role archetypes for design, Dalrymple et al, 2020

The team at McKinsey then attempt to describe what a particular Chief Design Officer would do, responsibilities and interactions, divided into 3 areas (user experience, organization, design team) ‘Figure 11’ and provide a number of questions that allow understanding if the organization is managing design poorly, under delivering on what design could achieve. They end their report clearly stating the importance of the CDO working hand-in-hand with design leadership to achieve organizational transformation beyond end-to-end user experience improvement “for companies looking to enjoy the growth and performance of their design-led peers, the journey begins at the top, with senior design leadership. This crucial role often languishes too far down in the organization to have its needed impact. At other times, CEOs set the bar too low for what designers—and design—can deliver. Farsighted CEOs instead empower their design leaders to be

catalysts for broad strategic transformation, not only for end-to-end experience improvement for users but also for the organization as a whole” (Dalrymple et al, 2020, p.4), this description of the ‘farsighted CEO’ driving expectations was the basis for number one insight defined for later research with senior designers and executives, **Design CEO**.

In the 2018 report published by Harvard Business Publishing on the state of leadership development in the executive summary the publishers write that “we found that effective leadership development programs are a major driving finding in organizations’ ability to successfully transform. Simply put, organizations that make Leadership & Development a true strategic partner have higher success rates with their transformation efforts than those that do not. Still, when we compared findings from the 2016 and 2018 studies, we saw that while many organizations have intended to give L&D a more strategic role, that objective hasn’t necessarily been achieved.” (Beer et al, 2016, p.2.).

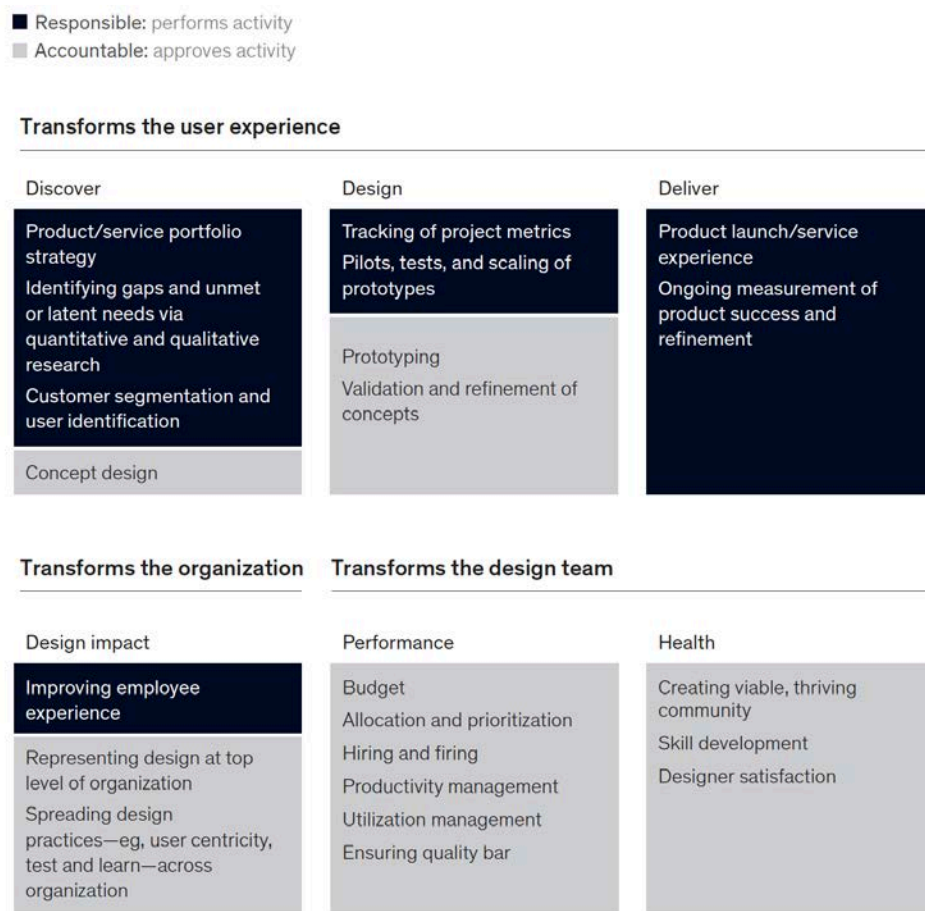


Figure 11 - Chief Design Officer responsibilities and interactions, Dalrymple 2020

This is a bi-annual effort from the publishers, and I expect the 2020 report will be severely impacted by the current Covid-19 crisis, nevertheless the seeds to what is impacting design leadership might already be palpable in the 2018 report. All industries represented in the F50 are in the midst or completed in the last three years a huge transformation, and their survey findings suggest that all too many leadership development programs today are not hitting the mark, citing 1. Insufficient Innovation, 2. Not enough Support from the Top, and 3. Questionable Program Effectiveness as the major obstacles. Millennials are much more critical of leadership development programs than Boomers, and this researcher thinks that is a great thing, provides a fertile ground for more improvement in this sector. The three areas of focus suggested by the report are an important element for setting strategy for design leadership in the future.

But even with the introduction of concepts like Emotional Intelligence and the identification of different types of leadership that attempts to connect personal temperament with context (Goleman, 2000), or even Curiosity Quotient which the London Business School portrays as a sense of curiosity that drives new habits (Dore, 2009), we have to acknowledge what many have said about the so called 'Leadership Industry', probably none so incisive as Jeffrey Pfeffer in his 'Leadership BS: Fixing Workplaces and Careers One Truth at a Time', "decades of writing, books, conferences, TED talks, blogs, speeches, and so forth have had no (let me emphasize that again) no effect in the aggregate on employee engagement, job satisfaction, leader tenure, leader performance, or the availability of leaders to fill positions. The leadership industry has completely failed" (Pfeffer, J., 2015). He follows up by saying that the biggest problems arise from the confusion between how leaders "should" be versus how they are, and the reasons why they are the way they are. When listing reasons why leadership is failing, he mentions:

- No expertise or experience required to be a "leadership expert"
- No, or even worse, misleading and misguided measures of program, book, and talk effectiveness
- Divergent interests between leaders and those led, and even differences in measures of leader well-being and organizational success

- Conceptual imprecision about leadership concepts and ideas (which is *not* just an academic issue)

In 2019 the IIT Institute of Design published a report titled 'Lead with Purpose', among other research findings and results, the editorial team provided four design roles to chart the organizations' future (Executive Vision Partner, Vision Interpreter, Action Aligner, Producers), issued instructions to design organizations (embrace the Flywheel of design which has 4 parts: design Leadership, Problem-driven Pathway, generalized design Competency, Specialized design Competency) and spoke directly to designers regarding behaviours and competencies (Clarify Language, Understand the Business, Assess Impact). The report delivers a final message to all readers, that design must be held accountable for themselves if they are to stop the repeated cycle of having to defend their worth and value (IIT Institute of Design, 2015).

Though design leadership does not necessarily manifest itself simply by assuming the title of Chief Design Officer, in the context of the current exploration we are interested in defining what leadership means at this level. We scanned a few thought leaders and summarize their definitions of what makes a great CDO.

The Design Council published in 2018 an article entitled 'The Secrets of the Chief Design Officer' (Pallister, J., 2018), introducing the new era for design based on 'making things people want'. The article asks this same question, and several high-profile people state their opinion, ranging from ability to balance between left-right brain, ability to recognize different types of design problems, ability to help the whole company be more creative, ability to perceive market changes, all this enjoying a certain degree of freedom. The article evolves into recommendations and recruiting tips for Board members looking to appoint a CDO, as well as generic definitions of what makes a great CDO, stretching from the need to conform (cultural fit, alignment with CEO and shareholders, diplomacy and patience) to the need to disrupt (be bold, hire misfits, empathy with people), and maps the CDO as someone that has to show a high level of versatility and flexibility, able to think big and to engage in storytelling. One can't help but wonder how different would this advice be if it was aimed at other C-suite hires (Chief Marketing Officer, Chief Innovation Officer, or even Chief Information Officer).

Kevin McCullagh from Plan describes a chief design officer as someone capable of working on different planes, at the strategic, visionary level but also executional when necessary (McCullagh, K., 2016). In another take, Dave Benton from Adobe 99U in an article titled 'How designers get a seat at the CEO table' 2014 states designers at this level need to understand how the business is run at the same as they helps the organization appreciate what design can do for them (Benton, D. 2014). CDO's will have to embrace many of the characteristics of any executive in that position, and like Neil Irwin summarizes it in his article in the New York Times (Irwin, N., 2016) as balancing the paradoxes of leadership while inspiring trust.

Giudice, a stout advocate of the existence of the Design Executive Officer (DEO), describes her as having the following qualities:

- **Change Agents:** DEOs aren't troubled by change; in fact, they openly promote and encourage it. They understand traditional approaches, but are not dominated by them. As a result, they are comfortable disrupting the status quo if it stands in the way of their dream. They try to think and act differently than others. They recognize this ability as a competitive advantage.
- **Socially Intelligent:** DEOs have high social intelligence. They instinctively connect with others and integrate them into well-defined and heavily accessed networks. They prefer spending time with employees, customers, and strangers rather than equipment, plants, or spreadsheets. "Everyday people" are a source of strength, renewal, and new ideas.
- **System Thinkers:** Despite their desire to disrupt and take risks, DEOs are systems thinkers who understand the interconnectedness of their world. They know that each part of their organization overlaps and influences another. They know unseen connections surround what's visible. This helps to give their disruptions intended, rather than chaotic, impact and makes their risk taking more conscious.
- **Intuitive:** DEOs are highly intuitive, either by nature or through experience. They have the ability to feel what's right, by using their intense perceptual and observational skills or through deep expertise. This doesn't mean they

have a fear of numbers. They know that intuitively enhanced decision making doesn't preclude rational or logical analysis. They use both—and consider each valid and powerful.

- Risk takers: DEOs embrace risk as an inherent part of life and a key ingredient of creativity. Rather than avoiding or mitigating it, they seek greater ease and command of it as one of the levers they can control. They recast it as experimentation and invite collaborators. A failed risk still produces learning.
- GSD: Finally, DEOs can be defined by a new set of initials: GSD—short for “gets shit done.” They feel an urgency to get personally involved, to understand details through their own interaction, and to lead by example. DEOs make things happen.

2.1.7 The future of design and designers

This section covers the state of the world and the importance and impact of large corporations in dealing with present and future problems, as well as design futures in the cross section of craft and management, the different professional scenarios impacted by technology and societal changes, the necessary skillsets and the role of design in this new paradigm. We touch on design in different stages of corporations, and the impact of large corporations in the designer population. We end with a call for action for designers to ‘go big’ and embrace large corporations in order to impact world transformation.

We started this thesis in 2016 and finalized it in 2020 while in home confinement due to the Covid-19 crisis that changed the world as we had known forever, and designers are being called to step up to this new reality, “Can design or design thinking help reverse this “unequal struggle” between empathy and animus? I won't pretend to have the answer. But if design and empathy have anything in common, that's a cause all designers, especially Americans, should join.” (Fortune, 2020) In another take at this, Azeem Azhar in his influential ‘Exponential View’ states that “I am struck that on certain key issues—facial

recognition, climate change, systemic racism, polarisation and harmful content and social media—leadership has come from execs of large firms (although not Facebook!). Corporate execs are filling in, not perfectly, the moral vacuum where we would normally expect to find our political leaders” (Azhar, A., 2019). There are already signs of a significant disruption in the world, impacting values, business models and the livelihoods of millions of people, and some companies are rising to the occasion, knowing they have to ‘walk the talk’ in front of their consumers (Fortune 2020). While some governments have acted in ways that, from where we stand today, look adequate and appropriate, many large corporations have stepped up in ways that have become as powerful if not more than governments. And in many ways because these large corporations are global, they have impacted places and people that otherwise would have not via their local government. While many cry out the end of capitalism itself as a misused and abused world order, and the continuous debate on the impact of inequality and lack of diversity in social innovation, as well as a glimpse of what many call nationalistic and country specific protective measures, it is not foreseeable that large global corporations and some sort of shareholder system (with more or less government intervention) are going away. This is not meant as a defence of large corporations or of any of the tenants of capitalism and present social order, it is more a statement based on analysis and synthesis of what is known as future scenarios.

These large corporations will evolve, according to management theories that look at this phenomena from a broader perspective, cycles of integration and disintegration, along with divestiture and mergers & acquisitions will continue to happen, this impacted by equally cyclical world crisis that tends to be plotted as expected by those that research and hypothesise on this topic. For each of these moments, for each of these stages in the cycle, there is a design reality, there is a design opportunity and a design possibility. This thesis and research by others question the way ahead and suggest alternative ways for design to positively impact corporations and society at large.

There will always be a difference between what some call start-ups and end-ups (Maeda, J., 2016) and this research does not discount the value of one versus

the other, they are both important to the economy and to social balance and there are plenty of studies on the impact of either an excess of one or the other in society. And design too is different in start-ups and end-ups, and comparing those needs is an exercise worthy of further research, but this research is not focused on the start-ups but on large end-ups, and though some could argue the state of an end-up is a direct consequence of its path from when they were a start-up, we have not done the necessary research to identify if there truth to that statement, not what happens to start-ups that have design at its core when they started up and after then scale, go public, and become a large end-up.

Today, there is an estimated designer population among the F50 around 50.000 professionals, not counting all the external design subcontractors and agencies (the math behind this value is presented at a later stage in this thesis, when exploring the insight **Scarcity** as one of the 10 impacting the inquiry we have started with, 'Why aren't there more designers in the C-Suite of the F50 corporations'. But we have 1 trained designer in the C-Suite of the F50 (N-1) and 34 design managers as N-2 (21 of them trained in design according to the definition of this research). Though some state this reality has improved dramatically, there is not enough data to definitely make that argument, especially in light of other developments in corporate functions. So, we can only agree that this state of affairs must improve, and for that to happen designers and CEO's together with the TMT's must embrace a different approach to design, this research proposes a way for more designers to reach the C-Suite of large corporations as one element of this change, surely not the only one, but an important one. But it starts with designers recognizing the importance of large corporations in the context of design evolution and impact in society, and with designers wanting, desiring to be a part of this context and knowing what to do to get there.

Hopefully this research will come across as a defense of design and designers at the highest level of corporate management without impacting the need for design and designers at every level in the company, these two are not mutually exclusive. Just like the research is not suggesting there is only one way to represent design in large corporations, but as long as there is a TMT group, the

argument is that 1) design should be represented at this level, 2) in specific cases represented as design (even if combined with other areas, but design as the head), 3) that designers should also be counted as potential holders of that seat/ position (though not necessarily only designers). Even if new concepts of organization design become important in large organizations (eg.: holacracy (Fortune 2015), heterarchy (Mueller, J.R., 2014), and others), some of these might or might not benefit design management, but design and designers need a seat at the table, whatever shape and size that table might be.

Donald Norman wrote an article in *The Journal of design, Economics, and Innovation* entitled 'When You Come to a Fork in the Road, Take It: The Future of design' (Norman, D. A., 2016). He addressed what in many ways are the gaps in design preparation, namely the excessive dependency of the craft side of design in detriment of time spent on social sciences and general literature, as well as lack of training in STEM components (science, technology, engineering, or mathematics) while design seems to claim itself as the interface between people and technology. As he bluntly puts it "designers who only focus on crafts can add value to products and services, but they cannot take the lead role in designing them. Engineers and businesspeople decide what is to be done. Designers help to enable the results, but they seldom make decisions or lead design teams. Craft-based design is an admirable profession, but it is limited in aspiration and capability" p.344. He then addresses the gaps in design as an evidence-based discipline, and mentions the fact that computers changed everything and the two major areas of evolution in the larger design area (experience/ interaction design, and service design), entered design through different domains (psychology, human findings, computer science, marketing, management, etc.). He understandably advocates for Human Centred design as the rightful bridge between people and technology, and defends all its attributes by stating that "Human-centred design moves us away from the concept of the designer as a guru. It moves us into an important profession with systematic methods for discovering the needs of people and society, developing proposed solutions, testing, and refining them. We used to be an opinion-based field. Today, we are an evidence- based field. We have become human-centred" p.345. The fork on the road that he alludes to (author: Yogi Berra) is the one between design

as craft or design as a way of thinking, and he advocates that both are important for the future of design, and therefore we should 'take it' (p.346). The future of these two paths, with different levels of maturity, is something he goes into more detail, but in general the craft path will find its way in the craft movement and online courses, while the thinking path will require new educational offer, knowing that presently management is taking on the role of training design thinking. And while this is the present reality, Norman believes design thinking needs to step away from the economic emphasis of management and business schools and focus more on people, while acknowledging and appropriately for this topic of design leadership in large corporations that designers can and should evolve into strategic roles and exploration p.347.

A 'fork on a road' is a great thing, it's about options. But what will the road look like in the future, what will be the future jobs that designers can aspire to add value to? In a report by Cognizant entitled '21 Jobs of the Future: A Guide to Getting – and Staying – Employed for the Next 10 Years' (Pring, B., 2017), there is a long list of jobs organized from 'Low-to-mid tech' to 'Mid-to-high tech', and from "Within the next 5 years" to 'Within the next 10 years' 'Figure 12'.

Not a single job has the title 'design' in it, and when going through the requirements for each of the jobs, though some low tech listed no preparation needed (example: Walker/ Talker: Any type of work background and life experience will be considered), there wasn't a single one requiring design training. In comparison, many required Computer Science, Math Physics and general technology related training. As we discuss the future of design, there are at least 4 jobs that align well with what designers are being trained to do in some fashion (might not be described as such): Walker/ Talker, Digital tailor, Personal memory curator, Augmented reality journey builder. This is really not about the jobs and the work done by this entity, the researched is using this as concept to frame the discussion of the future of design training, and these 4 Jobs of the Future 'Table 8' have a lot in common with what are seminal, structural elements of design training that should be used as a starting point for future education, that of 'bridge', 'translator' and 'storyteller', but they all require a certain level of technology training that is still not embedded into the majority of the design education offers out there.

21 Jobs: The Road to 2028



Figure 12 - 21 Jobs for 2028, Cognizant, 2017

The future of design is also shaped by the perceived impact of technology in design, we selected a few of the major authors and institutions discussing the topic. AIGA, Google and Accurat executed the Design Census 2019 (AIGA, 2019), and when asked what technologies will have an impact in design going forward, designers mentioned artificial intelligence, augmented and virtual reality, as well as collaborative design software, p.55. The research also shares details about skills important to win in the future, as well as importing issues affecting design ‘Figure 13’. Again, as expressed in other afore mentioned research, the top issue reported by designers is “Lack of awareness of design Impact”, “Designers not having a seat at the table” and “Diversity in design + tech”, with the first of these concerns not even being mentioned in the list of issues in the 2107 census.

Table 8 - Potential jobs for a designer in the future, Cognizant, 2017 (summary). José dos Santos 2020

			DESIGN TODAY	DESIGN TOMORROW
6	Walker/ Talker	Any type of work background and life experience will be considered.		
13	Digital tailor	Experience and/or qualifications in fashion, tailoring, sewing, upholstery, general arts, interior design.		
18	Personal memory curator	Exceptionally strong EQ — supportive, encouraging and patient/ Excellent interpersonal and communication skills/ Genuine concern for the welfare of others/ Narrative and storytelling capability/ Strong creative skills.		
19	Augmented reality journey builder	Bachelor’s degree or equivalent experience accredited film schools a plus/ Minimum of five years’ experience in demonstrated MMORPG competitive gaming (either at the high school, university or accredited club level)/ Proficiency with creative language/lingo of AR hackathons, game jams, skins, surfaces, planes, “escape rooms,” SDKs, simultaneous localization and mapping (SLAM) and headmounted displays.		

John Maeda, who began publishing the design in Tech report in 2015 and now evolved into the 2020 CX (Customer Experience) Report, has long been considered one of the leading minds making sense of design in the technology driven world (he is an MIT graduate) and forecasting via active discussion and cocreation the future of design. In his latest report he goes into detail about the fourth industrial revolution, characteristics and impact, but above into an argument that designers need to “speak machine”, supported by a future vision that conforms to an acronym he proposes: LEAD – Light, Ethical, Accessible, Dataful.

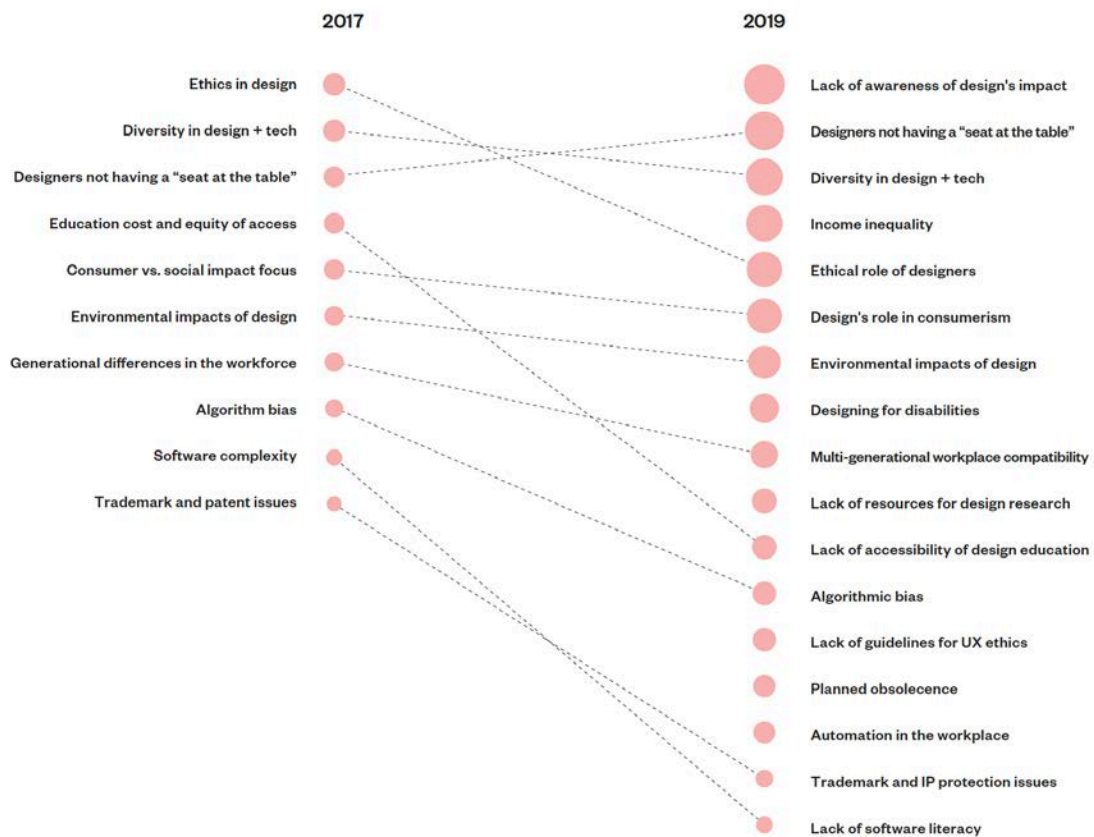


Figure 13 - Design skills to win in the future, AIGA 2019

One of the most interesting discussion he supported was by asking all his ‘fans’ who owned the Customer Experience, design was one of the largest response, but the survey itself had 70% of designers of sorts as the audience. He has written a book titled “How to Speak Machine: Computational Thinking for the Rest of US” (Maeda, J., 20019), in it he describes what he means by ‘speaking machine’, he describes it as the act of embracing computation, describing its three alien-like properties as 1) Machines Run Loops, 2) Machines Get Large, 3) Machines are Living, and three ways computational products are unique, 1) Machines are Incomplete, 2) Machines can be Instrumented, and 3) Machines Automate Inbalance. One of the most important elements he signals for designers is this constant pressure of the designers to learn, appreciate and apply technology and computational powers to evolve with design and its impact, Designers are being asked to lead a digitization revolution for which many were not prepared for to start with, technology was always a consequence and necessity of manufacturing and

production, later for distribution and communication, never as the fodder for design itself.

In an article published by the Sloan Management Review in 2020 'Four Skills Tomorrow's Innovation Workforce Will Need' (Marion et al, 220) the authors argue that 1) Omniscience, 2) Entrepreneurial Mindset, 3) Bottom-Line Focus, and 4) Ethical Intelligence allied with structure will be needed for tomorrow's innovation workforce where design plays an important role. This is while they signal what will be the major battlefield of this transformation, the need for organizations to experiment and change their organizational structures in order to retain digital folks (not specifically, but including designers) (p.12).

And this brings us to automation and to many design professions being supposedly threatened because automation, artificial intelligence and machine learning will eventually make them obsolete (Peart, R., 2016; Shaughnessy, A., 2018; Brunner, K., 2016). The designer and author Marty Neumeier published a book titled 'Metaskills: The Five Talents for the Robotic Age' (Neumeier, M., 2012), where he proposes that human talent is what is required to conquer a new paradigm, he writes that there is a 'thread' running through all the meta skills he proposes, aesthetics. His suggested 5 principles are:

- 1) Feeling (empathy and intuition)
- 2) Seeing (systems thinking)
- 3) Dreaming (applied imagination)
- 4) Making (design and testing)
- 5) Learning (auto-didactics)

This set of principles may seem to be in opposition to 'speaking machine' but the future of design and designers might be in the balance between these two approaches, being thoroughly human while learning and embracing technology in all its forms, being business fluent and results oriented while human centred and ethically empowered, being an active champion on the value of design while demonstrating it hands-on personally and via design teams. Above all, leading design and designers, taking chances and embracing bigger opportunities, impacting business, society and people.

Strategy is also an important element of the future of design and designers, though it is not entirely clear how to elevate design to a strategic level, as Micheli puts it “following evidence of its positive contribution to innovation and company performance, many firms are seeking to elevate design to a strategic level. However, little is known as to how this can be achieved” (Micheli et al, 2018). Since Harvard Business School professor Michael Porter introduced in 1979 the 5 forces tool to analyse an industry's attractiveness and likely profitability, it has become one of the most popular and highly regarded business strategy tools. Along with The Value Net Model developed by Adam Brandenburger and Barry Nalebuff, and published in their 1996 book ‘Co-Opetition’, strategy has relied on these as great tools to understand business context, but hardly the best way to dream up new ones or reshape existing. In the last years, we have seen elements of “strategy” and “design” merge, first through companies like IDEO who has moved into the strategy and innovation space, as well as traditional management consultants like McKinsey buying and attempting to integrate design into their business model. This convergence has sparked a conversation about the blurred lines between strategy, innovation and design, and about the role of creativity in the strategy making process, with reputed strategy academics stating that strategy needs creativity and mentioning the role of design led innovation (Brandenburger, 2019). Jeanne Liedtka in an article entitled ‘In Defence of Strategy as Design’ (Liedtka, J., 2012) defines the following implications for strategy as design:

1. Like design, strategic thinking is synthetic
2. Strategic thinking is abductive
3. Strategic thinking is hypothesis-driven
4. Strategic thinking is opportunistic
5. Strategic thinking is dialectical
6. Strategic thinking is inquiring and, inevitably, value-driven

In 2015 Gjoko Muratovski wrote an article in The Journal of Design, Economics, and Innovation entitled ‘Paradigm Shift: Report on the New Role of Design in Business and Society’ (Muratovski, G., 2015). The article takes the readers through the last 175 years of structured design, the importance of design in innovation, and the changing landscape that gives rise to the corporate

designer. Similarly, to others portraying this paradigm change and the effect in design (Fabricant, 2014), the author sustains that design thinking arises from the economic shift that coincided with manufacturing largely moving to the East, while the West moved toward a knowledge economy more focused on technology and services development, this being the same shift that led to the repositioning of products design firms into strategy and innovations consultancies. The author also suggests that the inhouse design team comes primarily out of a necessity triggered by the advance of digital technologies and the need for corporations to communicate 24/7 and real time with their stakeholders.

The article goes on to present a number of cases, evidence to describe the new role design is playing in business and society, covering “design as a strategic business resource”, “design and business”, “design entrepreneurship” and “design for social innovation and sustainability”, a total of 23 cases of design playing a new role. The author stated that “large businesses who are already well known for their design-led practices have started placing even more emphasis on the importance of design by introducing designers to executive roles, which clearly demonstrates their commitment to design-led innovation (e.g., Apple, Nike, Coca-Cola, IBM). However, it should be noted that these designers have been promoted to executive roles not simply because they are designers, but because of their ability to align design with business interests, and to communicate—in business terms—how design can add value” p.135. In 2020, there is one N-1 executive in the F50 (and 34 N-2), Apple has lost their CDO, Nike continues to have design in executive positions, Coca-Cola has lost their CDO and IBM has a long time design manager (not a designer) working for a sales and marketing SVP. After referring the evidence and citing megatrends, the author asks about the future of design and suggests several trends:

- The growing need for in-house design teams and the impact in smaller design studios
- The emergence of big data and the rise of the Internet of Things and the impact in data visualization
- The diminishing influence of print design because of the rise of modular digital design

- The rise of UX/UI design as an entire new sector of activity in design
- design thinking allowing a growing number of people calling themselves “designers” even though they might never have studied design.
- Human centered design creating a need for more learning of appropriate research skills, and the impact of the growth of thinking design on craft/ skills-based designers
- The incorporation of design into areas like auditing, risk assessment, business strategy as organizations learn to use design beyond the traditional problem solving into as a problem finding activity.
- The emergence of new customers in the government and non-profit organizations, in an attempt to use design to address complex social and sustainability issues.

The article concludes with a prediction that:

The world today needs designers that are not only aesthetically sensitive, but also culturally aware, inquisitive, and able to think both vertically (logical thinking) and laterally (intuitive thinking). In addition to this, designers need to be conceptual thinkers capable of engaging with a broad range of stakeholders and communicating with clarity and conviction via visual, verbal and written means. They also need to have the ability to analyse problems and organize information related to how people interact with information, technology, knowledge, cultures, environments, objects, and society. Their work should be centered on designing purposefully for specific people and situations, rather than producing self-initiated artistic endeavours. They should be curious about the needs of other people, and not only about themselves. All of this suggests that the social construct governing the meaning of design has changed, and the word “design” now denotes an evidence based, human-centric approach whose purpose is to help businesses, communities, and individuals. ‘Table 9’.

Table 9 - Recommendations for the future of design, Muratovski 2015 (Summary). José dos Santos 2020

AGILITY	
Develop a new take on teams	Assemble taskforce-like teams to focus on your organization's "must win" challenges, such as building capability to enter a new market category or helping to rapidly integrate newly acquired companies into the culture.
Foster new behaviors and mindsets	Develop the behaviors and mindsets essential for shaping a culture that supports your organization's transformation program. Key to any successful transformation is an organizational culture that is change ready and collaborative and that promotes a learning mindset.
Streamline capabilities	Looking at the strategic vision for your organization, focus on the top three to five capabilities essential for your organization's near-term and future success, instead of using the massive, more static type of competency model that is common today. Evaluate capabilities each year and align them with new business initiatives.
Focus on resilience	Help people throughout your organization get comfortable with the uncomfortable by fostering a culture that takes calculated risks, learns from failure, promotes learning agility, and uses data analytics to make informed decisions.
LEARNER-DRIVEN DEVELOPMENT	
Encourage storytelling	Foster the use of storytelling as a leadership skill to help employees embrace and execute the organization's transformation program. Make sure that in these stories, leaders provide the "why" behind the transformation.
Use reverse mentoring.	Use flipped classrooms and reverse mentoring programs to enable young leaders to mentor and coach senior executives. Provide opportunities for leaders at all levels to be seen as teachers.
Enable experimentation.	Provide programs that enable employees to explore new functions, work with different teams, and practice new skills on the job. This allows people to integrate learning with work and makes learning a continual process rather than a one-time event.
Leverage new technology.	Deploy technologies that make learning more engaging, more accessible, and more personalized. Take advantage of new tools and resources (such as virtual classrooms) that enable you to reach a critical mass of learners around a transformation under way in your organization.
PARTNERSHIPS	
Focus development close to customers	Deliver development programs to younger, front-line leaders closest to customers and partners. They will be instrumental in executing your organization's transformation.
Learn from innovators	Look outside your industry to organizations that have innovative programs and approaches you can bring to your own organization.
Foster talent mobility	Work with other parts of your business to design a facilitated talent-mobility program featuring job-to-job transitions and ongoing movement of people into new projects and assignments. Ensure that these experiences challenge employees as well as expose them to different business functions and regions.

Along the same lines of paradigm shift, Kees Dorst in an article entitled 'Design Beyond Design' (Dorst, K., 2019), argues design needs a change of paradigm, from a 'problem solving' activity to a 'problem framing' one. He states that design must stop limiting itself by the problem-solving approach, instead using a problem situation as a starting point and then reframe it as system transformation. This

reflection hints at an accusation many times aimed at design, that despite its big problem concerns and intellectual discussions, designers tend to shy away from complex and systemic problems, the so called ‘big, hairy and wicked problems’ (Buchanan, R., 1992) choosing to act at the extremity of know level of the system, delivering project based solutions that do not address the system. This is the basis of what Kees Dorst is proposing, a new paradigm for design thinking and doing:

When problems move from being very complicated to truly complex, our ways addressing them ought to shift radically. If design is entering a time of true complexity, we have to radically shift our thinking and move away from design paradigms based on problem solving to create a new paradigm based on complexity theory and systems thinking. These disciplines demonstrate that in really complex systems, newness comes from the emergence of order, rather than goal-directed creation; change is achieved through influencing the system, rather than implementation of a plan to solve the problem; and new state of relative stability can be achieved by creating resilience, rather than striving for an immutable structure—that so-called solution. In a complex problem situation, any attempt to search for “the” solution would be riddled with assumptions. In a truly complex situation, there IS no solution—the way to achieve progress is to create high-quality interventions to bring the whole system forward into a more desired state.

2.2 Large Corporations

2.2.1 Top Management Teams

This section describes the characteristics of TMT’s and attempts to explain why design and designers need to be at this level. We discuss implications of being at this level and possible justifications why design and designers are not at this level, while acknowledging that designers are not the only ones not represented in the C-suite and that there is evidence that the C-suite has other diversity and inclusion

issues. We also clarify once more why we are focused on the TMT's and not on the Board of Directors.

While there has been an incredible amount of research and publications on the CEO of large corporations, specifically about the impact of the CEO attributes on firm performance (Liu et al, 2018), and even on the importance of the CTO and the optimal position in the top management to ensure that adequate resources are committed to innovation efforts (Garmes et al, 2018), not much has been written about what this thesis has been calling the C-Suite but in organizational terminology is defined as top management teams (TMTs). Withstanding the work of Hambrick and Mason on the upper echelons, there is a need to address what is generally defined as senior executives in the TMT, responsible for one or more functional areas in their organizations, the group of people where this research has identified a scarcity of trained designers, leading to this research's main question.

Management research focusing on TMT (Menz, M., 2012) has identified six types of TMT members:

- Chief Financial Officer
- Chief Information Officer
- Chief Operating Officer
- Chief Marketing Officer
- Chief Strategy Officer

There is evidence that in many F50, design is responding to one of these functions/ roles, with either exact definitions or similar ones 'Table 2'.

Menz defines them collectively as senior executives in the TMT responsible for one or more functional areas in their organizations, executives typically involved in strategic leadership and decisions, and he details the history of the emergent research on TMT's, starting in the 70's when functional leaders joined the C-Suite for the first time. In his review paper, the author goes through studies of TMT's and covers roles, characteristics, presence and turnover, as well as relationships with other TMT members, organization and environmental findings, and outcomes, concluding that "the functional executive is not just the head of an organizational function; a significant part of the role comprises strategic decision making and

leadership as a TMT member”, which seems to justify the need for designers to go beyond functional roles and aspire to become TMT members if they wish to engage in strategic decision making, there is correlation but not necessarily causation. Menz concludes his report with a characterization of a number of opportunities for further research, stating that the area of research regarding functional TMT members, both established and unexplored, has the potential to become an important area of study for TMT’s.

For the purpose of this research, more attention shall be dedicated to Opportunity 4: Functional TMT Members and TMT Impact, in Menz’s paper because there is research that ties design’s impact to the bottom line of corporations that invest in design as a component of their innovation strategy (DMI, 2015). Though there is an identifiable lack of research tying individual functional TMT members’ influence on strategic decision making, while almost all research considers leadership and strategic decision making as key functional executive roles, and this in itself might be at the centre of apparent lack of believability of the data that says design is a major contributor to the company’s performance in the market (if no one can be made individually responsible, then all are, and vice-versa).

There have been other research studies on TMT demographics, leadership style and contextual findings impacting firm innovativeness, reinforcing something which has been said by other authors regarding TMT’s, that “TMT demographic characteristics play a role in the prediction of firm innovativeness. However, this predictor role becomes even stronger if TMT leadership is taken into account” (Sperber et al, 2018, p.310).

Menz justified our methodology research while addressing TMT’s while stating “for exploring both intraorganizational and boundary-spanning ties of functional TMT members, social network theory (Granovetter, 1973) may be a suitable lens. Although employing the corresponding quantitative research designs, potentially using surveys, will be demanding, their contribution to explain the effectiveness of the various functional TMT members is likely to be substantial.” (p.72), and one the most interesting elements of his research is the identification of areas that undermine the task of any TMT to claim responsibility for specific outcomes,

namely the lack of clear function-specific measures that enhance an organization's strategy and effectiveness. In a recent research report by McKinsey design on the business value of design (Dore et al, 2018) substantiating that design is poorly integrated, the report ask a number of questions organized under four themes: Overall Accountability (entire C-suite), User Insights (heads of marketing, strategy, R&D, sales and operations), Products and Service design (product, R&D, and business-unit leaders) and, Ongoing Development and Measurement (business-unit and product or customer leaders). The questions asked are about responsibilities and aim to clarify function-specific measures that, in this case, would make the job of a CDO much easier, they range from questions like "Who owns which parts of the end-to-end customer experience? If it's more than one leader, how do they ensure consistency as needed?" to "Which senior leaders can authorize design changes to existing products and services or can trigger the development of new ones?".

One other element of further research that aligns well with what design can bring to the table is what the author calls ambidexterity "an organization's ability to be aligned and efficient in its management of today's business demands while simultaneously being adaptive to changes in the environment" (Raisch & Birkinshaw, 2008, p.375). Menz proceeds to suggest that some of the functional TMT members are more connected to exploration-oriented roles, while others more into exploitation-oriented roles, the number and nature of these roles will define how ambidextrous the TMT might be, and an individual TMT member might be expected to engage in ambidextrous actions and behaviours (Menz, M., 2012, p.73). Designers have long been identified as ambidextrous (O', C. A., Iii, R., & Tushman, M. L., 2013) and Roger Martin did extensive research into the difference in design thinking brings to business (design thinking as 50% analytical and 50% intuitive) and consequent behaviour that designers bring to innovation (Martin, 2009), suggesting that they would fit right at home in ambidextrous C-Suites, even if there is evidence that they might actually be more at home on the exploration side of the spectrum (K. Tabeau et al, 2017).

Boris Groysberg published in the Harvard Business Review what the author identified as 'The Seven Skills You Need to Thrive in the C-Suite' (Groysberg, B.,

2014), based on an extensive study of several dozen top senior search consultants at a top global executive-placement firm in 2010. These are in order of priority:

- 1) Leadership
- 2) Strategic thinking and execution
- 3) Technical and technology skills
- 4) Team - and leadership - building
- 5) Communication and presentation
- 6) Change-management
- 7) Integrity

While some of these might be qualified as ‘hard skills’ (Strategic thinking and execution, Technical and technology skills, Communication and presentation), the others fall more on the ‘soft skills’ category, and some of them are closely tied to ‘personal skills’, like Integrity, and to some degree Leadership which not surprisingly is the top skill according to this study. There are thousands of references about leadership, but it is nonetheless a quality/ skill that not everyone agrees can be taught, and designers are certainly not taught leadership as part of their design curriculum. Also, important to note, that once an executive reaches the C-Suite, their technical expertise matters less than their leadership skills and core business practices (Groysberg et al, 2011).

As part of this thesis, we asked questions about soft and hard skills necessary for designers and executives, and this was asked in a survey to mid-career/ senior designers, and to executives in F500 (Appendix D and E). Results shared further ahead seem to suggest that the skills that are most important for design do not necessarily align with those expected for a senior/ mid-level design manager, and these skills do not align with what Boris Groysberg and his research defined as skills necessary to thrive in the C-Suite.

One of the interviewees in our qualitative research, an experienced manager with long time exposure to executives in C-suites described the situation as “Those top fifty companies have an average of 10 or 12 people at the board and they want to keep it to 12 not 13. So maybe one of the 12 must go out to let a designer in, they will ask if the business will be better if they are sitting there, have a seat

instead of digital, or supply chain, or legal. And, by the way, I think my CMO does a great job at leading design, so what are you complaining about?”⁵

Of course, this is not just about the quantity of executives, but their role and the role of the CEO and centralization, in a paper titled ‘Who Lives in the C-Suite? Organizational Structure and the Division of Labor in Top Management’ (Guadalupe et al, 2014) the authors state that beyond CEO’s span of control with functional executives, it is important to acknowledge the differences in the roles played by the executives and their subordinates.

To be fair, the scarcity of designers as executives in the C-Suite of large companies is not unique to design. In a report titled ‘Career Patterns of Supply Chain executives: An Optimal Matching Analysis’ (Flothmann et al, 2017), the authors analysed the career of supply chain executives to understand their backgrounds and career paths, their starting point was a shortage of supply chain executives on a global scale. They were able to distinguish among six career paths to supply chain executives, starting with their previous experience and covering the journey they make to arrive at an executive position, this type of approach might prove useful for further research on how to support designers into their journey to the C-Suite.

And this research would be remiss if it didn’t address the fact that there is an ongoing debate about the lack of women in the C-suite of large corporations, as well as in the CEO role. As the HBR puts it in an article on the topic “The news about U.S. women’s presence in the C-suite — and especially the CEO job — has been pretty bleak. Nationwide, fewer than 5% of CEOs of public companies are women. In the Fortune 500, that number fell by 25% from 2017 to 2018, dipping from 32 (6.4%) to 24 (4.8%), before rising back in 2019”. ‘Research: Board Experience Is Helping More Women Get CEO Jobs’ (Tinsley, C. H., & Purmal, K., 2019). While there are aspects that explain the lack of women in the C-Suite that probably align well with reasons why there aren’t more designers in the C-Suite, we have not executed any research on the topic and therefore excuse ourselves from speculating. One thing we can all assume, more designers in the C-Suite of large corporations also means more women, data shows that in design, with

⁵ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

fluctuations between the type of design, 53.4% of Designers are Female, making them the more common gender in the occupation (Census Bureau, 2017). There is data suggesting that women are being invited more to become members of the Board of Directors before becoming CEO's, and that is helping them get more CEO jobs (Tinsley et al, 2019). Anecdotal evidence seems to suggest that women might embrace design and its core tenants of empathy and people-centredness to the point of hiring more designers to the C-suite (of the 34 identified designers in N-1/2 position in the F50, 7 are women).

We made a conscious choice not to focus the research question on the Board of Directors but on the executives in the C-Suite, the TMT's, largely because according to research on the topic, a position in the Board of Directors is usually a step up from a TMT, many times even a step up from the CEO position, with many ex-CEO's taking on several positions in different Boards as a natural evolution after (or in parallel) with their role as CEO (Rebeiz, 2016). Nevertheless, several of the interviewees talked about the importance of the Board of Directors, a two-time CDO stated "it is very important to have more designers in the Board of Directors of large corporations, so they can advise executives and CEO's on the importance and business value of design"⁶ another who has written books on design leadership stated "If you talk to executive search companies, ask them about board level, why aren't there more designers sitting on boards. That is the next level to shoot for"⁷.

In a McKinsey report on 'The Board Perspective, 2018', after researching the link between Board effectiveness and financial performance, they stated that setting a comprehensive strategy, assessing value creation and debating strategic opportunities are core Board activities, but TMT's need to work hard to support the Board in areas like digitization, talent and succession planning, and risk management, making the role of the TMT even more important (McKinsey, 2016, p.14).

⁶ Qualitative Research – Interviews: 11. Three-time Chief Design Officer with experience at Board level (Appendix C)

⁷ Qualitative Research – Interviews: 19. American multinational information technology company (Appendix C)

3. Research Methodology & Procedures

3.1 Chosen Methods and Rationale

Before engaging with research itself, there was a need to define a research strategy that would fit the thesis goals, taking into account our objectives and timeline, while acknowledging the complexity of the topic and difficulty in accessing the right people and resources.

The literature review covered different models of dissertation research (Poggenpohl et al, 2003), foundations and methods (Sato, 2000) and the different writings of Nigel Cross on Design Methodology (Design Research: A Disciplined Conversation, 1992; Design Research: A Disciplined Conversation, 1999; Designerly Ways of Knowing: Design Discipline Versus Design Science, 2001). The research area of this doctoral thesis is focused on the development of knowledge of a particular context that impacts design, and the expectation was that the knowledge produced may later transform in different forms of practice. This research started with a given statement describing a situation, and hopefully would end in enough specification to implement a solution, artifact, or the basis for such a follow-up.

In order to define the appropriate research methodology, we analysed the epistemological theoretical subjects proposed by Love (1998) which was crucial for the definition of what were the sort of fundamental issues that needed to be addressed and the instruments to deploy. We identified the need for instruments that collected factual knowledge, statistical evidence and authoritative testimony, and we had identified from start that the topic would entail biases and assumptions that needed to be addressed with potential counterclaims.

We also reviewed literature on mixed methods research and the writings of Schoonenboom, "Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e. g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration" (Schoonenboom et al,

2017, p.108), as well as the seven major plus the ten secondary design dimensions of mixed methods research, focusing first on Purpose and the classification proposed by Greene, Caracelli and Graham in 1989, leading to research decisions that would serve Purpose, namely *Triangulation* (seeks convergence, corroboration, correspondence of results from different methods), *Initiation* (seeks the discovery of paradox and contradiction, new perspectives of frameworks, the recasting of questions or results from one method with questions or results from the other method), and *Expansion* (seeks to extend the breadth and range of inquiry by using different methods for different inquiry components).

We were inclined to design a methodology that would result in a diversity of views, connecting knowledge in an iterative way, learning from different perspectives, juxtaposition and explaining complexity. We also needed to make design decisions regarding timing and issues of simultaneity and dependence, there was a need to run some of the components of the research concurrently (talking to the guests, while building the list of insights), while others required sequential development (building surveys had a high level of dependency from the results of the 1:1 interviews). After the qualitative and quantitative components were brought together, we needed a strategy to mix, integrate the results in a *Point of Integration* “any point in a study where two or more research components are mixed or connected in some way” (p.116), which in the case of this research was the list of insights that explained the inquiry and at a later stage the meta- model for design executives produced.

In terms of typology, we settled on Exploratory Sequential Design, a first phase of qualitative data collection and analysis is followed by the collection of quantitative data to test or generalize the initial qualitative results (p.11), a dynamic hybrid combination of initial secondary research to validate the research inquiry, surveys that focused not only on designers but on executives, interviews with entities that would provide recognized perspectives and experience, while doing literature review on related topics.

After validating the enquiry with factual data, we decided to begin with 1:1 interviews with entities that could provide insights and inspiration based on their own experience in the domain, the intention was that these conversations would

point toward the questions and topics that would be used to build two distinct surveys, aimed at two populations, executives and designers. This period of interviews was first planned for three months, then extended to twelve, the fact that the corresponding author is full-time employed and that the target entities were hard to engage impacted the timeline. Meanwhile, and after the tenth conversation, we felt we were able to build the said surveys.

More than the surveys, it became apparent that distributing them to a larger target group required partnerships, and each of these ended up impacting the design of the surveys. One of the objectives was to ensure that a list of questions, particularly about the insights that we had started to settle on, was asked to both executives and designers so that data could be cross referenced. While the conversations with entities continued, the two surveys were shared with target users during a period of 3 months in 2020, then the data was analysed and cross referenced, connecting dots with what was heard from the 1:1 interviews.

Reflecting on literature review that led us to Edmonson et al work (2007) on methodological fit, and resulting from the intermediate if not nascent state of prior theory and research on the topic, we wanted to ensure that the chosen approach would avoid typical problems arising from doing either quantitative or qualitative research, with consequential impact in the outcomes.

3.2 Qualitative Research (1:1 interviews)

We interviewed throughout a period of 12 months 30 professionals with a personal interest and participation in the context of large corporation design leadership see 'Table 10', namely a coach with over 30 years of training design leaders in large corporations, a number of educators that are active agents in the education and preparation of designers that are now or will be in leadership positions in large corporations, a number of present and past design Leaders in large corporations, recruiters that are specialized in design placement in large corporations, a recruiter in one of the largest executive search companies in the world, and researchers that have done impactful research on this topic. The majority of these conversation were 1hr long, recorded, with a protocol organized around the following questions:

- Is the thesis question a good, fair question, the right question to be asking?
No, Why?
- If yes, what is your point of view on the question, do you agree with the insights mentioned (at a later stage in the conversation)?
- What would be great research to do, data to explore on the topic?
- Who would be a great person to talk to about this, someone who has in-person experience on the topic?

Table 10 - List of 1:1 interviews. José dos Santos 2020

Ref	F50	Entity	Main title
1		World leader in designer training & coaching	Coach
2		One of the largest public Universities in the US	Educator
3		world's oldest collegiate school of business	Educator
4		Executive training coach specialized in leadership	Educator
5		Founder Design Strategy MBA in a reputed college.	Educator
6		Design Thinking Executive coach in a large public University	Educator
7		Strategic design course creator at Business school	Educator
8		Researcher, educator and author of design management books	Educator
9		Associate Dean of an MBA program infused with Design Thinking	Educator
10		Large multinational home appliance manufacturer	Leader
11		Three time Chief Design Officer with experience at Board level	Leader
12		Corporation leader in robotic products in the health domain	Leader
13		Large American multinational financial services company	Leader
14		Large American telecommunications company	Leader
15	X	Large American multinational conglomerate in the health sector	Leader
16	X	Large American multinational corporation specialized in medical devices	Leader
17		International corporation leader in lighting & beyond	Leader
18		Largest home improvement retailer in the United States	Leader
19		American multinational information technology company	Leader
20		Design Leadership book author and Executive	Leader
21		Large American multinational corporation in the apparel sector	Leader
22		Innovation consultant and experienced board member	Leader
23		Designer with an MBA that reached C-Suite role, now in a startup	Leader
24		Design Executive in largest global beverage company	Leader
25		Only Latin Woman twice CDO in top 50 Fortune 500	Leader
26		Global executive search and advisory firm speiaized in Design	Recruiter
27		Global search firm specialized in creative Executive positions	Recruiter
28		International executive search firm focused on Top Management Teams	Recruiter
29		Researcher in design leadership in the digital era	Researcher
30		Researcher at renown school teaching systemic, human-centered design	Researcher

These interviews provided direction that helped build the two surveys that are being presented in the following sections, and they provided invaluable context

and anecdotal data that will be used by us throughout the paper, referring to each of these interviewees in the footnote area, their name is not being disclosed for confidentiality reasons, their transcripts are in Appendix C.

3.3 Qualitative + Quantitative research (surveys)

3.3.1 The executive survey

We designed, along with an organization specialized in tracking executives in large corporations (The Official Board, they maintain the most comprehensive directory of corporate organizational charts), a short executive focused survey on Designer leadership in large corporations. The survey had to be short due to the nature of the target respondents, large company executives with very little time to spend on non-essential activities, and the partner we co-designed the survey with was very explicit about what they had learned from doing this many times before (Appendix D). The questionnaire was sent by the before mentioned organization, introduced by one of the co-authors of this thesis (Prof. Sebastian Fixson for academic credibility purposes), it had 7 questions, multiple answer in nature, with some room for additional comments. The survey was sent to 22,000 (opt in via valid email with the usual 4% hard bounced), the detected opening rate was “average” at 7% (many companies disable this function), the unsubscribe rate was “average” at 0.4% (meaning that executives were not annoyed). There were 54 respondents to the executive survey, relevant from a qualitative point of view (the intention), it still does not provide a clear insight on what they might think about the topic, and we discussed possible reasons:

- Academic constraint (only big names like Harvard command higher response)
- Weak Incentive (we granted \$10 to a charity of their choice per filled questionnaire, but might have not been enough)
- Weak Interest (executives do not really know or do not really care about design organization, executives (including designers) may have many other priorities to worry about).

Though we could speculate even further (that designers do not reach the C-Suite of these large corporations because the CEO's and executives actually know, or believe they know, what design is capable of delivering and don't believe design needs to be at that level), that is all this is, speculation. This topic is listed at the end of this thesis as a potential area for further research, the real reasons behind executives' disinterest in design related issues.

3.3.2 The senior/ mid-career designer survey

We designed, along with the PhD Coordinators, a longer survey aimed at senior/ mid-career designers in medium/ large corporations, this time soliciting support from organizations that associate designers in different domains (IDSA – Industrial design Association of America, AIGA – Professional Association for design, Design Museum Foundation). This survey had forty multiple answer questions covering eight sections:

- Demographic data on the respondent
- The company/ corporation they work/ worked
- Education and training
- Career path
- The design team
- Design definitions
- Insights impacting scarcity of designers in the C-suite
- State of design

It was made available via link to senior, mid-career professionals in the above-mentioned platforms, because it was not by personalized invitation it was open to other designers but initial questions allowed us to calibrate the answers. It was answered by 36 senior/ mid-level designers, of which 45% worked in Fortune 500 companies in the period between 2017-2019, 29% of them in executive roles.

3.3.3 Alignment and misalignment between the surveys

Both surveys had a number of questions in common, and though they were not written in the exact same way, the data collected is comparable and allows juxtaposing and insight generation. The three areas that both surveys addressed were:

- State of design in the company they worked in
- design definitions
- Insights impacting scarcity of designers in the C-suite

When listing the insights that are at the basis of the question driving the thesis research, though we listed 8 insights in the senior/ mid-career designer, we used only 5 of those to reduce complexity while focusing on the insights we and collaborating partner thought were more relevant to the target group. As an example, while one of the insights cited many times by the interviewees was “because there aren't enough design savvy CEO's, design champions that understand the value of design”, our partner believed that this group would not rate this insight high, or at all, because it focused on their potential shortcomings. The insights that were covered by both surveys were:

- **Necessity** (there is no need, design is already represented, these corporations are at the top of their game)
- **Preparation** (designers don't have the right education and training, skillset, mindset).
- **Desire** (designers don't want/ aspire this role, stops them from crafting their practice)
- **Scarcity** (not enough qualified designers with the right experience in the market)
- **Flexibility** (designers tend to stick to design, no experience in managing other areas)

The insights covered by the senior/ mid-career designer survey and not covered by the Executive survey were:

- **Design CEO** (not enough design savvy CEO's/ executives that understand the value of design)
- **Effectiveness** (not the best/ right place for designers to lead design, too many distractions)
- **Access** (designers are not selected for the job, not invited, not mentored and groomed for it)

After the surveys were conducted, and through the ongoing 1:1 interviews, we added two more insights, these were not used in the surveys, they were generated by the repetitive feedback from the entities interviewed:

- **Advice** (Management consultancies and advisory boards don't influence CEO's positively about Design)
- **Ethos** (What makes a designer a designer is at the same time seen as an asset and a liability)

4 Research Findings

4.1 Framing the research findings

When we started with stage 2 of the research, there wasn't a clear indication of what might be the findings justifying the scarcity of designers in the C-Suite of the F50 companies. The expectation was that conversations with related specialists would spur a number of justifications impacting this reality, hypothesis to be explored. There are two arguments that have come up since the first time we articulated this inquiry, one is that things are a lot better than they were in the past and that these things take time, and the other that some of the design managers in N-2/3/4 that don't have the title of CDO and don't sit in the C-suite are in fact important design leaders, managing often very large teams and exhorting as much power as a CDO in these huge companies.

Among many addressing the argument that things are a lot better than they were, and that we actually seeing a strong growth of the designer in leadership position in the last five to ten years are people like Maria Giudice (Giudice and Ireland, 2014) and McKinsey (Dore et al, 2018) who recently stated that "the number of executive design leaders among the world's 100 largest companies has doubled over the past five years". It is very hard to gather robust data to compare how many designers are in positions of leadership in the F50 40 years ago, we do have an understanding of 1 N-1 and 34 N-2 in the F50 today, but looking back the best way to picture the reality is through the Corporate Design Foundation archives, kindly shared by Peter Lawrence (Founder and Chairman 1985-2014) and through the foundation's publication @Issue, and we did analysed data from a survey done by the CDF in 1985 to 87 of the largest companies in the US, and scanned through the list of companies and uses-cases published during the 13 years it was published (1995-2008). But perhaps it is not if we have seen evolution, which we have and probably more in the last 5 years as some have stated. But the reality is still that we do not seem to have evolved as much as it would perhaps be expected, especially taking into account the apparently overwhelming data on the impact of design in the bottom line and the fact that no

one disputes the importance of design. Let alone the evolution of designers in these leadership positions (of the 34 N-2 Executives in the F50, 21 are design/ architecture/ art trained). The second part of this argument is focused on the statement that this, this coming of age and leadership with a seat at the table, takes time. Many mention Marketing as an example. Groysberg et al in a 2011 article entitled 'A New Path to the C-Suite' stated that during most of the twentieth century marketing and sales operated separately (Groysberg et al, 2011) but after the turn of the millennium these areas started to converge and balance each other out, mainly because of the Internet, but the lines between these two areas are still blurred and many carry the double role and title of marketing and sales (CCO Chief Commercial Officer). The journey of marketing and of the CMO has indeed not been easy, as described by articles such as 'The CMO is Dead' Forbes 2012, and "The CMO is Dead: Long Live the CMO" Forbes 2016, and the troubles marketing is facing might actually align pretty well with those of design (Heisler, S., 2020), but we have an understand, that lacks proper research and comparison, that Marketing has grown to be indispensable in the C-Suite of the Fortune 500 in the last 25 years, while Design has been advocating its indispensability for the last 40 years and we are still not at the same level, and though a large percentage if not all F500 corporations have marketing in their C-Suite, we have not done the research to state how many of those positions are held by trained marketeers.

The second argument is related to the fact that these large corporations are huge behemoths and some of the design managers have a lot of responsibility, manage a large budget and a large set of people (Albert Shum, Corporate Vice President of Design, Experiences and Devices Group, Microsoft, N-2 reporting to Executive Vice President, Experiences and Devices, reportedly manages a team of 500 designers) and just because they are N-2/3/4 does not make them less important than if they were in a N-1 position, responding directly to the CEO, like a design manager in one of the top F50 said, these people are CDO's, they just don't have the title. Though this is true, and it is nonetheless an important element to take into consideration, reality is that could be said about finance, operations, marketing, technology, legal, but these areas do have a representative in the C-suite, so the core inquiry in this thesis remains valid.

Since the conversations started with the broader question, we started to collect what the entities assumed were insights, and these started to populate a list that was clustered into several topics. For every 3 guests that mentioned the same insight, we started creating a shortlist which at a certain point had 3 main insights. As the conversations with guests proceeded, so did the literature review, and soon those justifications were 5, and then 8. In the last round of conversations, after the interviewees had some time to respond to the open question, we would present the list of the insights that were clustered and organized, and asked them to comment and rank these according to their understanding of their impact in the thesis question. At the end of the 25th conversation, and out of a list containing more than 16 clusters, we settled on the 10 insights that will be described in further detail, while using excerpts of the conversations with the entities to support the chosen list 'Table 11'. The order of this list is based on the sequence they appeared in the discourse, as they became stronger and relevant, enough for us to add them to the list. Nevertheless, a couple of the interviewees thought these insights were somehow biased against design.

Table 11 – Insights resulting from main thesis question. José dos Santos 2020

Insights impacting "Why Aren't There More Designers in the C-Suite of F50 Companies"	
Design CEO	There are not enough Design savvy CEO's/ Executives that understand the value of Design
Necessity	There is no need, design is already represented, these corporations are at the top of their game
Effectiveness	This is not the best/ right place for designers to lead design, too many distractions
Desire	Designers don't want/ aspire this role, stops them from crafting their practice
Access	Designers are not selected for the job, not invited, not mentored and groomed for it
Preparation	Designers don't have the right education and training, skillset, mindset
Scarcity	There aren't enough qualified designers with the right experience in the market
Flexibility	Designers tend to stick to design, no experience in managing other areas
Advice	Management consultancies and advisory boards don't influence CEO's positively about Design
Ethos	What makes a designer a designer is at the same time seen as an asset and a liability

These insights that came up via the research align with research by Micheli et al in 2017 on elevating design in the corporation, where they identified six practices that underpin the enhancement of design's status in corporations 'Figure 14'. They also identified tensions which "should be identified and addressed if design is to be elevated to a strategic level, since the same practice can play both positive and negative roles", and these tensions align well with what we call design **Ethos**. Status by itself might be considered important, but some could argue by

itself will not result in a seat in the C-Suite. Some could say that the main reason why there aren't more designers in the C-suite of F50 companies is that design lacks status, but we believe the problem runs deeper, the research in question failed to prove that other functions that have a seat at the highest level of the corporation have status, and if it is that what creates causation beyond correlation.

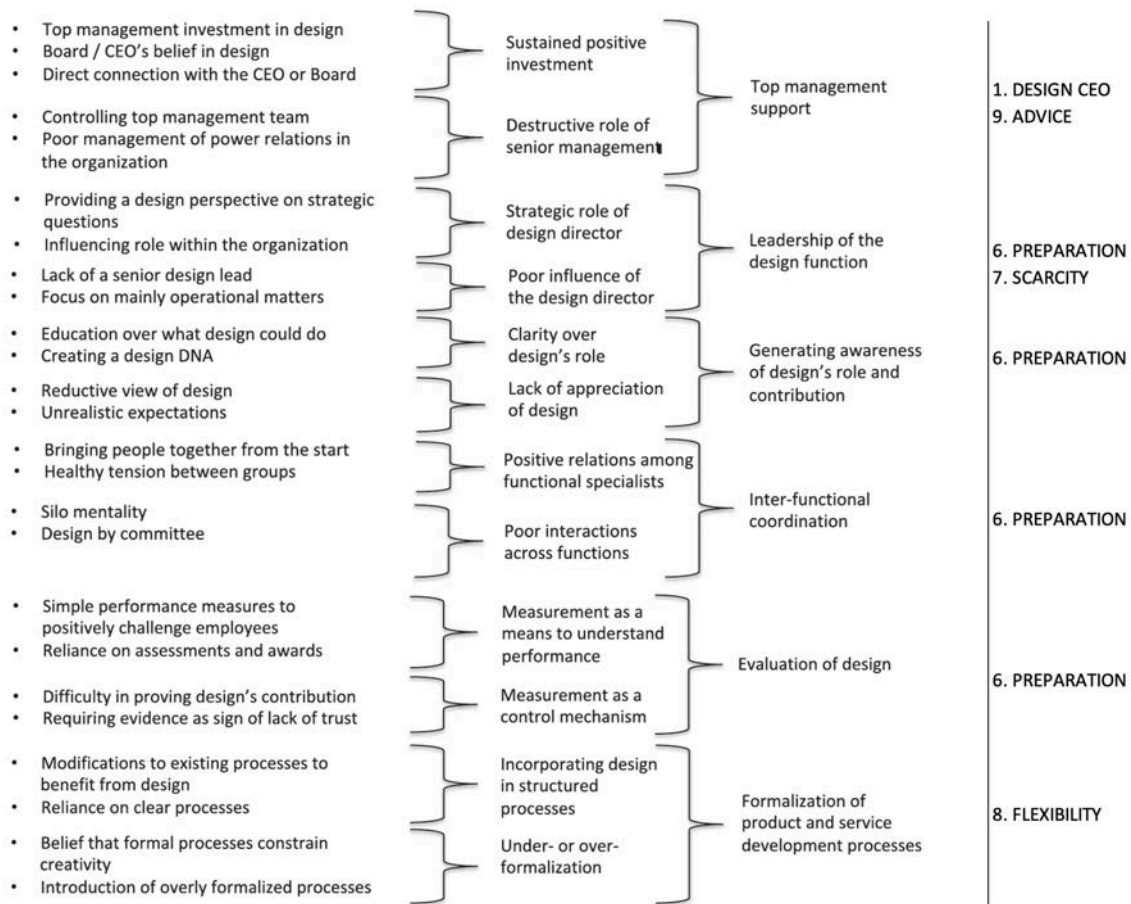


Figure 14 - Practices underpinning design practices in corporations, Micheli 2017, and alignment with inquiry insights. José dos Santos 2020

While the top management support practice the research team identified aligns perfectly with what we call **Design CEO** (Micheli et al, 2018) “this study shows that support from top management is required to trigger investment in design” (Homburg et al., 2015, p.19), and **Advice**, a lot of the practices identified in the research are connected to performance issues of the design function already in the company (Generating awareness of design’s role and contribution, Inter-functional coordination, Evaluation of design) , and that in itself might explain why design and internal designers do not get elevated to a higher position, elected to a seat in the C-Suite, would still not stop a CEO or TMT to find someone external

that could come in and solve the performance issues identified by the research team. We believe that many of these issues related to design performance results from a general lack of **Preparation** “the appointment of a design director can act as a catalyst in the design elevation process, but only if the design director is able to play a leading role, lobbying and effectively communicating design’s value” (Micheli et al, 2018, p.19). and **Flexibility**, hopefully as we explain each of the insights this will become more apparent.

The research suggests links between elevation practices and forms of legitimacy, listing three common types of legitimacy (pragmatic, moral and cognitive), defending that “the acquisition of moral legitimacy appears to be a discriminant finding between organizations where design was regarded as a service and those that were utilizing design strategically. design as dominant perspective corresponds to a high level of cognitive legitimacy, whereby design is widely utilized as the main explanation for the organization’s success” (p.32) ‘Table 12’. At the end of this research paper, we present as final considerations a way to possibly change the scenario at the centre of the question that launched this research, by presenting a meta-model for design executives with a designer scope of action and a CEO scope of action, because we do not believe that these situations can be successfully changed without change in both scopes of the equation, the designer and the leader of the organization.

Table 12 - Elevation practices and forms of legitimacy, Micheli 2017 p.646

Form of Legitimacy	Nature of Elevation Practices
Pragmatic—relates to making the business case for design	<i>Top management supports</i> the introduction and resourcing of design <i>Awareness of design’s</i> role and contribution starts to be generated The success of specific projects that involved design is <i>evaluated</i> and demonstrated
Moral—relates to design being the right thing to do	<i>Leading role of the design director</i> in championing design as a relevant but alternative way of operating Designers are part of <i>cross-functional teams</i> constituted at the beginning of projects Product and service development <i>processes are formalized</i> and design plays a salient role
Cognitive—relates to value creation through design being taken for granted	<i>Top management support</i> is always present <i>Awareness of design’s</i> role is constantly generated and reminded to employees Projects are <i>regularly evaluated</i> and evidence of success communicated within the firm Product and service development <i>processes are formalized</i> but kept flexible to allow design to play a relevant role especially in the initial phases

4.2 Research Findings

4.2.1 Interviews findings

The most important findings gathered from the 30 qualitative interviews we executed may be summarised in the following way:

- **100% of the interviewees thought the inquiry was good, needed, interesting, that made them think about possible explanations and justifications.** A few of them suggested variations of the inquiry (the presence of design and/or design thinking and not necessarily designers, executive leadership and not necessarily C-Suite, start-ups instead of large companies, etc.), but no one discounted the inquiry. One of the interviewees put it this way “the role of designers in creating and shaping society, and then how obviously large corporations are the major drivers of that, then the question of why aren't there not more designers in C-Suite positions is a fair question, absolutely” ⁸. One other interviewee, a designer coach with plenty of experience in this domain stated “I think it is a relevant question. If designers were happy as they were, I could understand that they felt your question didn't make sense. But the reality is that most design leaders I know are complaining all the time about the fact that they don't have enough budget, don't have enough influence, are not involved in the strategy of the brand or the category or the company. So, if they would not complain and would be super happy about what they do and what they deliver, and it didn't matter who leads them, then I would agree with that reaction. But they don't, they are complaining, they are frustrated, they want more influence they are convinced that they have an added value to all those things” ⁹.
- **When faced with the inquiry unaided, interviewees discussed their own experience and understanding suggesting several factors and hypothesis,** with a few exceptions of very personal statements they were all assembled in the 10 insights we have submitted in this thesis;
- **When faced with a list of factors (that grew larger as the conversations advanced), interviewees stated that they pretty much covered the**

⁸ Qualitative Research – Interviews: 11. Three-time Chief Design Officer with experience at Board level (Appendix C)

⁹ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

ground in terms of possible justifications and expressed their opinion about all or specific ones that resonated more with them, they ranked them in several different ways, some of them further clustering some of the findings, some hesitating in the ranking exercise per se and just stating they were equally important;

- **The very first interview with a non-designer that is and has been an executive for many years** ¹⁰ **resulted in an opinion that, no matter what should or could be done regarding the topic, designers would find it hard to penetrate the C-Suite of large corporations** because they didn't belong to some sort of overt club whose members co-exist beyond simple demographics, education choices, career path. With some exceptions, this executive said corporate America chooses their own, and they follow unspoken rules that resemble more of a secret club than anything else. We have not done the research to support or disavow this opinion, when asked about it other interviewees shared they didn't believe in this, they think of it being much more about meritocracy and high standards and requirements, this 'theory' did not come out as strongly as with the first interviewee again;
- **Several interviewees stated at the end of our conversation, or after it, that the whole discussion made them think about themselves**, their own career choices and professional direction, with some using it to do a deep inquiry into their own motives, some saying they feel they'd like to aim for a higher position, go for a CEO job, basically entertain ideas that had possibly been dormant in their own mind. We found this stimulating, and an interesting consequence of the engagement with them;

4.2.2. Combined findings of the executive and designer surveys

Regarding the qualitative and quantitative research done via surveys, these are the combined findings:

- **Design education and training & correlation with Managers/ Executives position:** Of the respondents, 58% are Design (Art & architecture) trained, though 44% of them are Design Managers and 100% are/ were at some point Executives. Of the respondents there were no PhD's, which might

¹⁰ Qualitative Research – Interviews: 13. Large American multinational financial services company (Appendix C)

indicate lack of research in design or academic ambition in the sample this survey reached. 'Figure 15'.

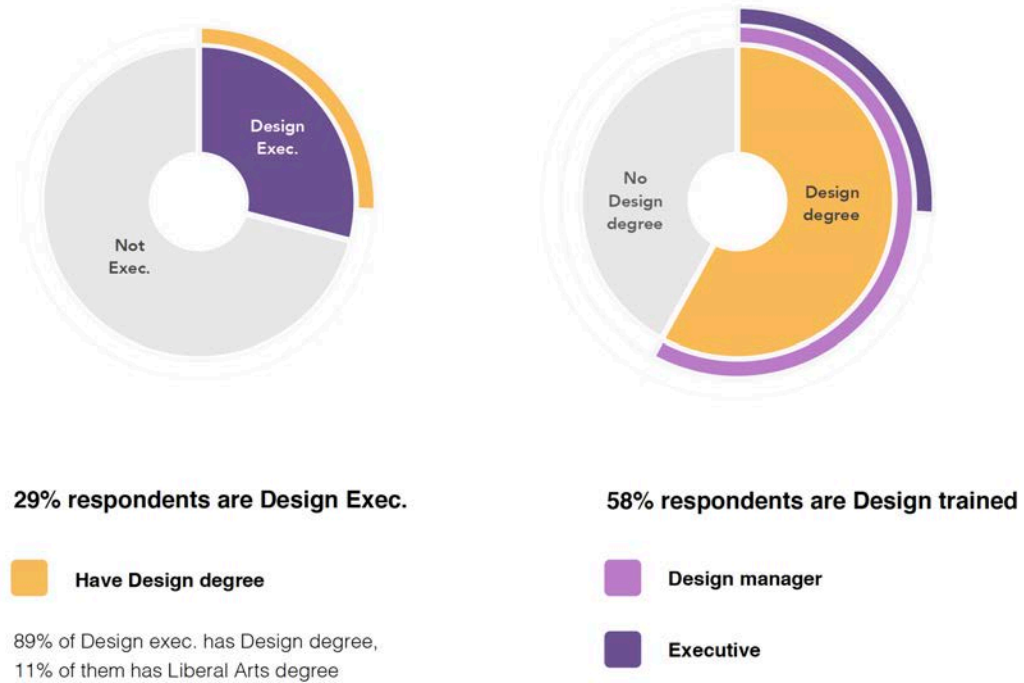
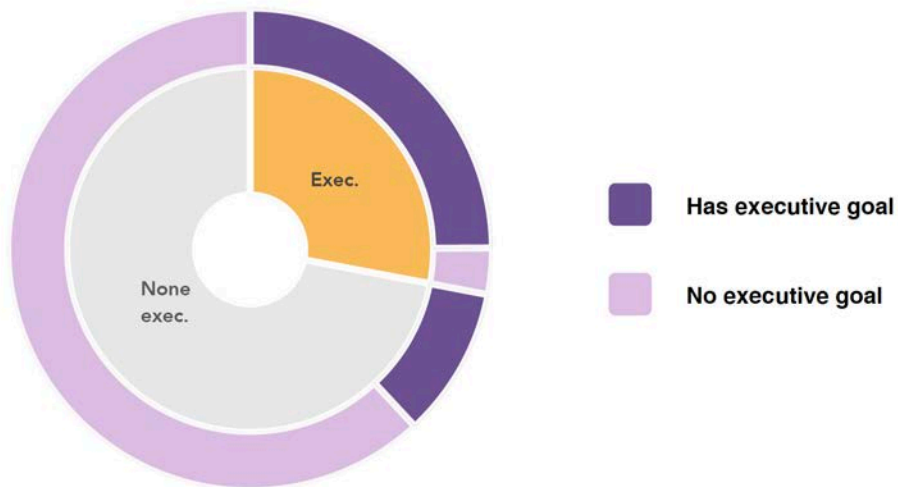


Figure 15 – Combined executive and designer survey findings, design education and training. José dos Santos 2020

- Design executive tenure & was this a career goal?** The largest majority are not in executive role (72%), but the ones that are had this as a career goal (89%). Of the ones that aren't, it seems only 14% have that as a career goal, and the main reason cited for not having it is "no desire, no aspiration, not a personal ambition", which seems to align with one of the 10 hypothesis for scarcity of trained designers in executive roles. 'Figure 16'.



Design thinking training in last 3 years?



Figure 16 - Combined executive and designer survey findings, design executive tenure. José dos Santos 2020

- **Design management & team size, team composition:** The majority of the respondents (80%) manage direct (+ indirect reports), where the majority are designers. 'Figure 17'.
- **Design team activities:** The majority of the work in the three main areas listed (Digital, Industrial, Communication design) is done by the team managed by the respondents, but there is still quite a lot of that work (71% in Communication Design and 68% in Digital Design) done either partially or not even by their teams, and an array of areas typically related to Design. 'Figure 18'.

- Design budget status & correlation with reporting distance from the CEO:** Of the respondents, and of these that manage teams, 65% manage totally or part of the design budget, while 35% do not and the data suggests the further away from the CEO the least control of the budget. Half of the budget is typically for salaries, with a 28% dedicated to external subcontracts. 'Figure 19'.

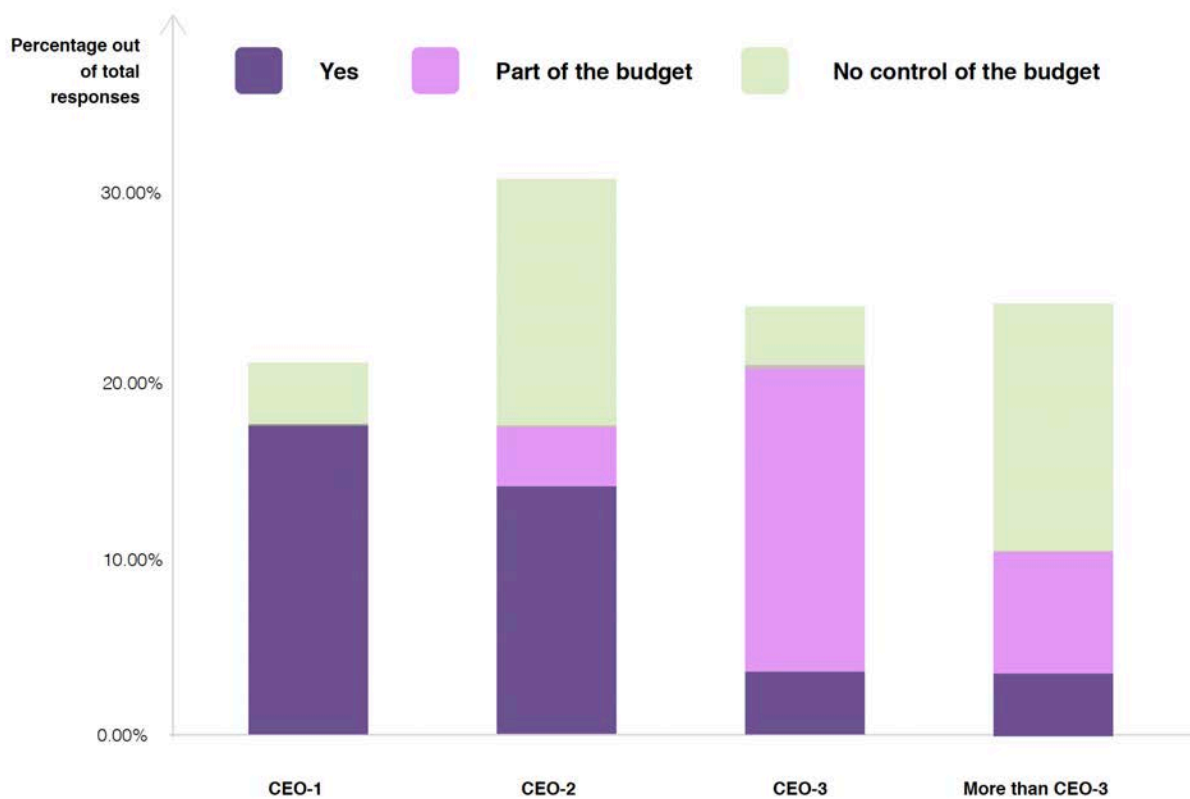


Figure 19 - Combined executive and designer survey findings, budget and distance to CEO. José dos Santos 2020

- Skills for Designers VS. designer skills for Executive role:** Thinking creatively, Design and Visualization were listed as most important for Design, while most important hard skills for a senior/ mid-level design manager were Interpersonal skills with superiors, Teamwork and Analytical thinking, and most important soft skills were Imagination, creativity and curiosity, Initiative and Integrity & maturity. This seems to suggest that the skills that are most important for design do not necessarily align with those

expected for a senior/ mid-level design manager (top three skills Executive roles: business thinking, future vision, communication). 'Figure 20'.

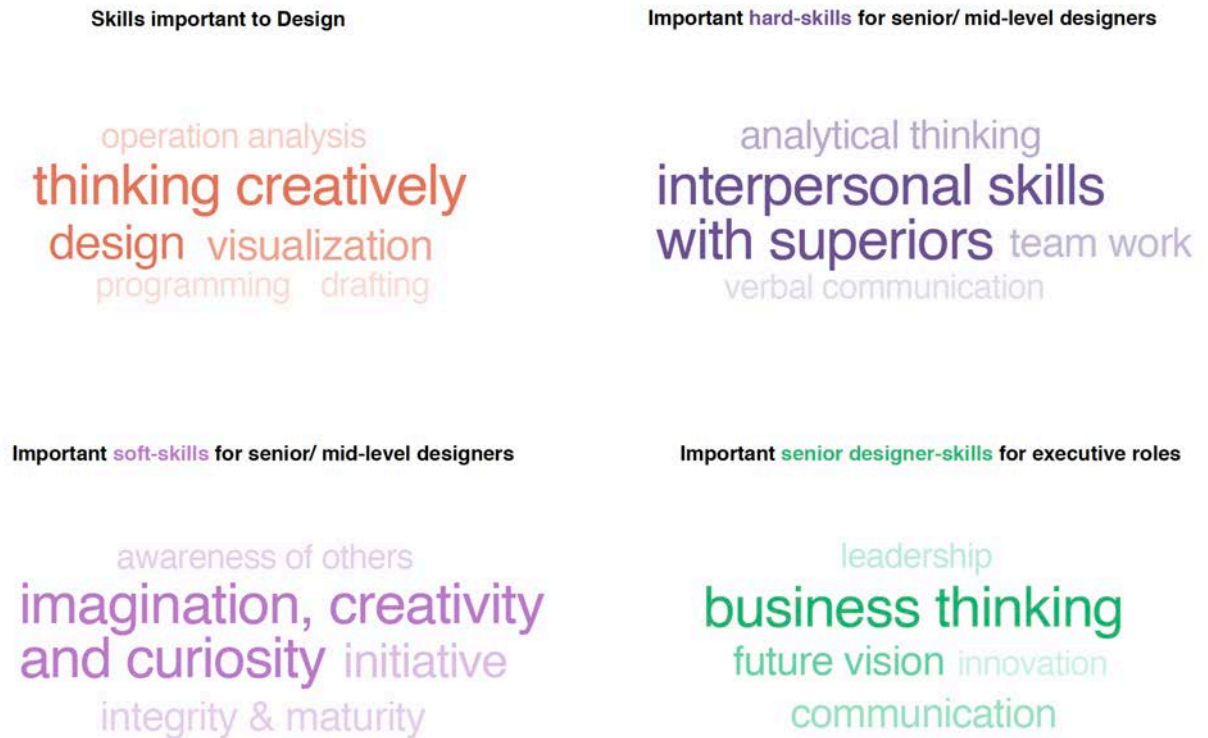


Figure 20 - Combined executive and designer survey findings, designer and executive skills. José dos Santos 2020

- **Validating statements inspired by findings from a report by the Design Council Designing the Future Economy** (Design Council, 2017): The first two statements generated general agreement (80%) the third one a little over 50% with a few (10%) disagreeing. The third statement has a slight different scale when compared with the statement in the report (p.8), which focuses in the UK. 'Figure 21'.

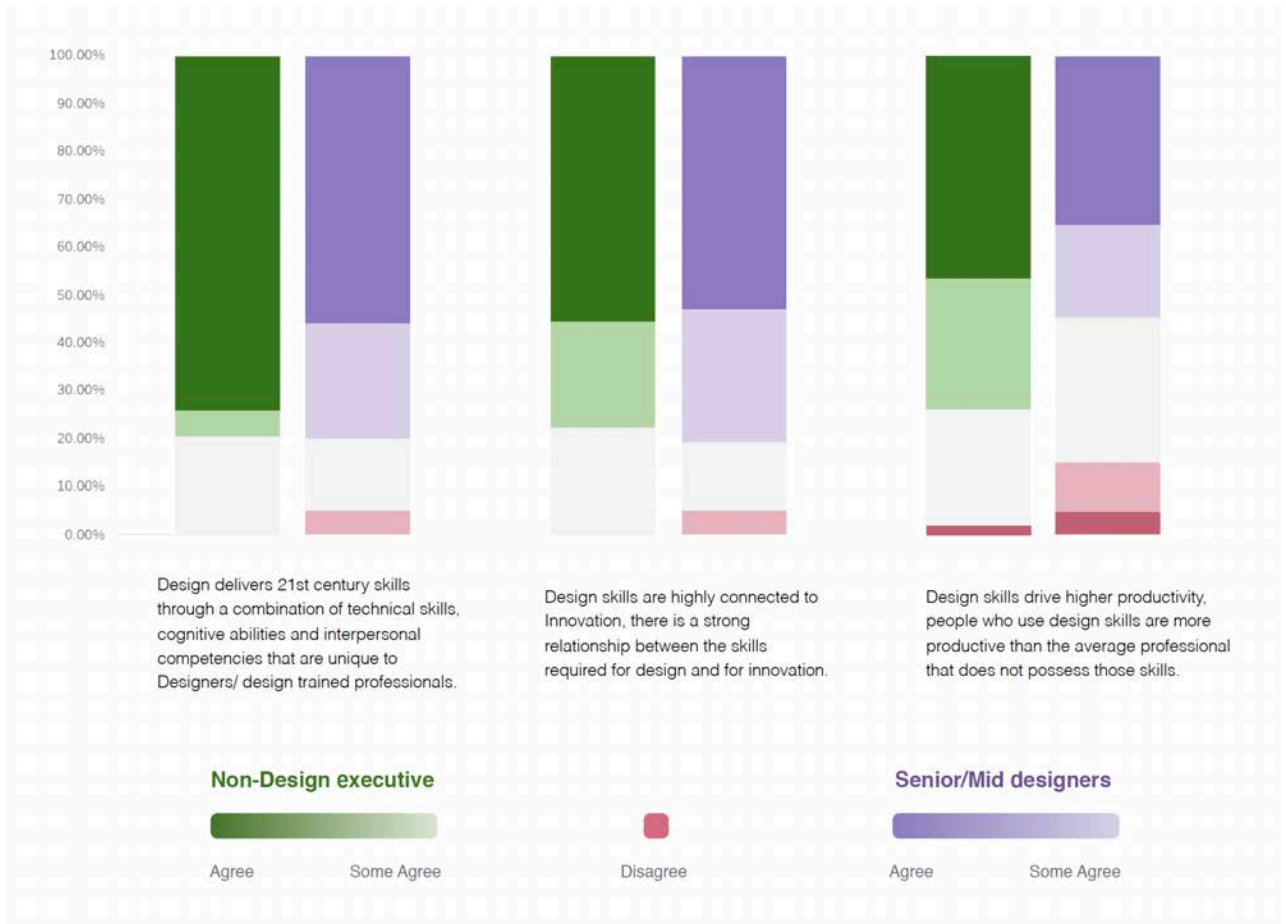


Figure 21 - Combined executive and designer survey findings, validating research statements. José dos Santos 2020

- **What are the reasons for scarcity of designers in executive-level positions:**
 - **Necessity** - executives seem to believe there is less of a need for Designers in C-level positions, that they don't contribute enough to the performance, Designers don't see that as a valid reason for them not to be at that level;
 - **Preparation** - Though there were 2 questions in the Executive survey related to Preparation (Training & Mindset), both executives and Designers seem to agree that Preparation is indeed a strong finding to explain scarcity of designers at this level;
 - **Desire** - There is a fundamental disagreement between executives and Designers on Desire, a large % of executives believe Designers are not present at the C-level because they don't want/ desire to, and this might be the most differentiating result in both surveys.

- **Scarcity** - executives believe there is a bigger scarcity of qualified designers than Designers do.
- **Flexibility** - executives think that designers having a narrow focus in terms of activity is a major reason/ finding in explaining scarcity of designers in the C- Level position, much more than designers 'Figure 22'

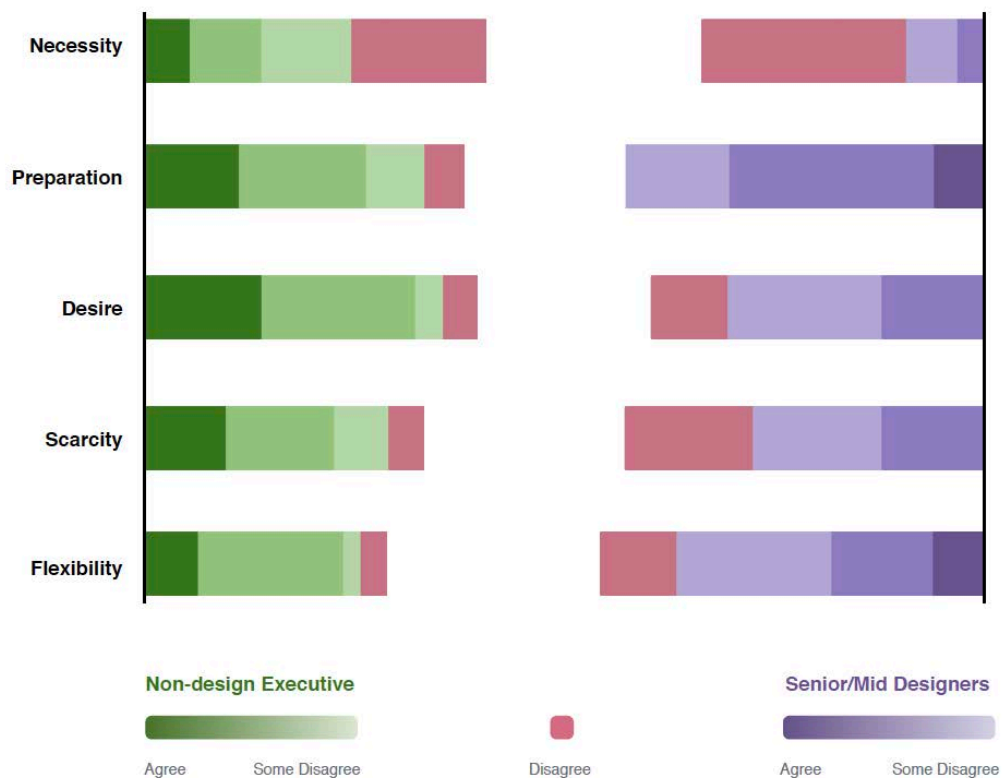


Figure 22 - Combined executive and designer survey findings, reasons for scarcity of designers. José dos Santos 2020

- **Would you advocate for a centralized or a distributed Design function in your company?** Of the designer respondents, majority in medium/ large companies, 68% stated that Design was represented at C-Level, and of those another 70% by a formally trained designer. For the executive respondents, almost 50% is represented on a C-level. 17% not sure might mean it isn't represented at the C-level (if these people don't know...), in this sense almost 50% say it's not. Not sure seems to align with No Design function/ Distributed/ Hybrid. Designer respondents are divided regarding an Autonomous (Yes) vs. an Integrated (No) Design function in the executive

suite, with some in the Depends category citing culture and executive stance on Design as justification. For the executive respondents, 4 out of 19 that have C-suite level representation but not fully dedicated to Design, and they think that it is a good idea. 10 out of 26 (blanks) might be saying that having a C-level that is combined with other functions is good enough for them, even though they could have said NO. It could be the response means, we already have it. The 84% of designer respondents favourable to a Centralized and hybrid model of governance is fairly equal and larger than those that favour a Distributed model. For the executive respondents, half of their companies have either centralized or some sort of mix in design function organization. This seems to say that almost 3/4 of the surveyed companies prefer a centralized/ hybrid solution to a distributed by business unit. 'Figure 23'.

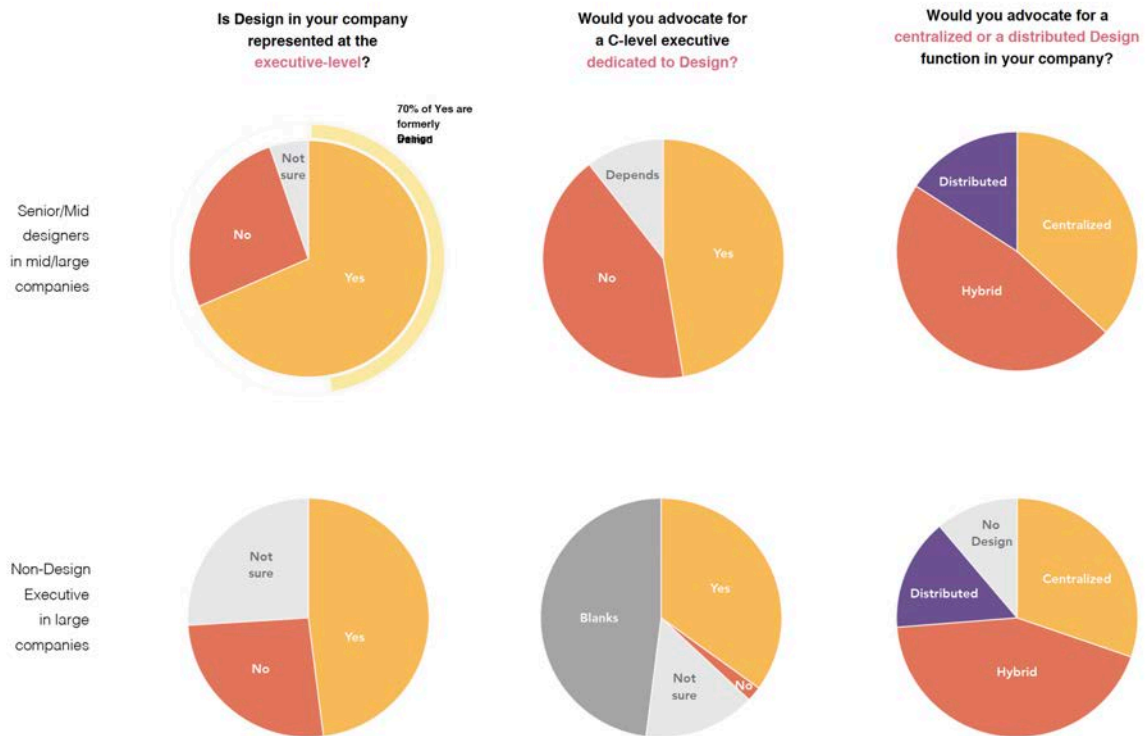


Figure 23 - Combined executive and designer survey findings, centralized or distributed function. José dos Santos 2020

5. Research insights

5.1 Design CEO - There are not enough Design savvy CEO's/ Executives that understand the value of Design

This insight generally describes a corporate context where there aren't enough design savvy CEO's/ executives that understand the value of design. This came up very early in the conversations, and none of the interviewees denied it though not everyone considered it the most important justification. Some scholars have speculated that strong top management support is required to elevate a function's status (Webster, 2005), but is such support inevitably conducive to design acquiring higher status?

Many are familiar with the Steve Jobs + Jonathan Ive powerhouse at Apple, but when you think of other large corporations that embrace design and have opted for not having a Chief Design Officer, you wonder if that would make a difference. Satia Nadhela at Microsoft has great design leaders like Albert Shum and Ralf Groene, and Sundar Pichai at Google has Ivy Ross and Andy Berndt, surely there is more than one way to lead by design, but what if it does require a strong bond between a CEO and a trained design executive at the highest level of the company? Now at Logitech, the duo Bracken Darryl (CEO) and Alastair Curtis (CDO) are being hailed as the new powerhouse 'Logitech quadrupled its profits with one big design idea' (Wilson, M., 2020), but is it because they are in the same consumer product category as Apple and that world needs another power duo? One of the interviewees who places senior designers in large organizations commented about a Chief Design Office and CEO partnership, "John inspires design, but doesn't necessarily facilitate it. He has a great relationship with the CEO, but he doesn't have a second in line that makes him look good. How solitary the leader's job, the CEO just left, will the company stand for design in the same way?" ¹¹. This was repeated time after time by many of the interviewees, "it all

¹¹ Qualitative Research – Interviews: 24. Design Executive in largest global beverage company (Appendix C)

comes down to the CEO, but these folks never learned anything about design at school. Exceptions are in luxury brands, they are the only ones that give power to creativity' ¹².

One of the interesting reflections was that, not only having a good CEO was important, but also issues with timing and strategy around personal goals, an expert in this domain with a book written about it stated "I really do think that it's on the rise, and it's going to take some time, and that in order for designers to be successful every person I interviewed said they cannot be successful if they don't have a CEO who doesn't believe in the power of design. if you Join a company intending to change the CEOs belief system, ain't going to happen, you'll set yourself up for failure. The average amount of time you're going to be in a company is two to five years at the max, average people are in in and out of companies with between two and three years, so you have to ask yourself, what kind of impact can I make within that three-year period and if part of your job is to convince the entire company and people above you that your valuable, that is not a good use of your three years" ¹³.

There are good examples of design savvy CEO's, and the way they talk about design and the actions they embrace say a lot about their commitment. In an interview to the Harvard Business Review, the CEO of Intuit Scott Cook described how he recognized the value of design and committed to it (Smith, B., 2015). Scott, who describes himself as not having much formal design education, shows how important design became to their operation and how impactful it was to their success.

Mark Wilson wrote an article in Fast Company in 2015 titled 'The CEO of the future is a "designer-in-chief" (Wilson, M., 2015), and in it he states that "A century ago, the CEO was a fearsome whip-cracker. Fifty years ago, he was motivator dangling corporate incentives. And now, according to the 2015 Wolff Olins Leadership Report, the CEO has evolved into something new: The designer-in-chief of corporate culture, a mentoring figurehead who gets into the trenches with his employees and inspires them to create the next great innovation.... The new CEO is almost like some sort of rebel general, inspiring small guerrilla-style teams

¹² Qualitative Research – Interviews: 22. Innovation consultant and experienced board member (Appendix C)

¹³ Qualitative Research – Interviews: 19. American multinational information technology company (Appendix C)

to dream up new products or experiences. They rally the troops rather than outright command them. They empower their employees to think and work like designers, observing problems or scouting trends, and developing coordinating solutions that don't get lost to bureaucracy.”

One of the **Design CEO**'s that everyone is looking at right now is Jim Hackett, who was at Ford until recently, but who was a CEO with Steelcase, a company known for its' deep relationship with IDEO. In an article published in the Detroit Free Press titled 'Anxiety builds among Ford employees. Hackett says that's fair, but he's confident' (Wall Howard, P., 209), the author states that “Hackett describes himself as "a conductor in an orchestra, getting everyone to play their independent music in a coordinated way”. He added, “I want to think about the problem”. Hackett's role is very clear to those who get it, Lodge-Jarrett said. “He challenges us in the elements of our culture that need to shift. He brings that design-thinking, human-centred approach.” The Business Insider says of Jim “Hackett is something of a CEO intellectual, popular in Silicon Valley and a proponent of what's sometimes called "design thinking," a discipline that stresses looking at problems from many different points of view to develop more complete solutions. But the one-time University of Michigan football player and athletic director is no egghead. Calling himself a "huge proponent of a healthy balance between thinking and doing," he said that although deep contemplation in the pursuit of good strategies is worth it, a CEO "can't enjoy endless hours walking in the desert, thinking about things.”” Unfortunately, the unrest described by the Business Insider 'Ford's new CEO has a plan to reinvent the company — but it may not be enough to please Wall Street' (Debord, M., 2017) came true, Jim Hackett left Ford in August 2020 (Ford, 2020).

Though this hypothesis is very focused on a design savvy CEO, it is important that other executives are design savvy, especially if they are able to work closely with design delivering impactful results to the bottom line. In an article published by the Design Museum Foundation titled 'Designing in Blue, how IBM Adopted Design at Scale' 2018, a senior designer in IBM and speaking of his experience with Phil Gilbert as his manager stated:

I met Phil when we were both asked to talk with the executives running IBM's software business about how to improve the design of our products. At that meeting, I immediately recognized that Phil was a rare executive who not only understood design deeply, but, even more importantly, was also an exceptional leader. I told him as much as we left the meeting, and I added that if he could win backing for a new design initiative, he could count on me to help him make it happen. I told him that even if we didn't agree on every detail, his leadership would make all the difference, and I would give him my full support. At that same meeting, Phil had already identified a very basic problem, the lack of designers on many teams. He proposed that, as a rule of thumb, every product team should have, on average, one designer for every eight developers writing code. Having previously been the sole designer on a high-performing team of about eight developers, this made sense to me. In fact, it felt like a minimum benchmark. This target skills ratio proved to be a powerful organizing idea. It made the scale of the problem immediately clear: it was obvious that it would take several years to fill the gap. At the same time, it allowed an incremental approach where we could focus initially on getting a few teams enabled with the right skills. If that worked, we could scale up to more teams over time. The ability to articulate a view of the overall target state, combined with a focus on delivering meaningful outcomes right from the start, framed our initial approach. (Design Museum Foundation, 2019)

Another designer turned CEO that is cited often is Mark Parker from Nike, in 2018 Chief Executive magazine ran an article about Mark titled "A Designer at heart, CEO Mark Parker helps Nike hit It out of the park" (Kuehner-Hebert, K., 2018). In it they describe Mark as a "designer by heart, Nike Inc. CEO Mark Parker has helped the Beaverton, Ore. sports footwear, apparel and equipment company post stellar financials by not only encouraging continuous product innovation, but also by volunteering his own successful design ideas... In 2006 Parker was appointed CEO, and the success of Nike in recent years can be traced to that date,... Parker assumed the top post and led the way for Nike Air and a multitude of industry-breakthroughs in product design, Nike's profits have increased 57

percent and the company's market capitalization has more than doubled. Indeed, Park still continues to make his mark on design, as one of three members of HTM, a three-person design collaboration, alongside designer Tinker Hatfield and creative consultant Hiroshi Fujiwara, that functions as Nike's core R&D team. Since launching in 2002, the trio has launched over 30 limited-edition shoes".

In general, it is important to recognize who are the CEO's of the companies one desires to work in, and work with as a CDO. In a long research piece by the Darden Business School and published under the name 'Fortune 100 CEOs: What We Can Learn From Their Stories About Making It to the Top' (Darden, 2020), this is how they describe what they had learned about the CEO's they looked at:

- 80% worked in the same company for more than 10 years
- 9% worked there for more than 40 years
- Graduate level, 89% of the F500 don't come from ivy leagues schools
- Top 10 schools, good institutions but not the most visible
- Experience matters
- Patience to wait for 40 years
- 54% had Graduate degrees, a variety of degrees
- A lot of MBA's, MA's, MS's, 5% PhD
- 7 CEO's graduated from Harvard, 5 Penn, 3 Columbia...
- These brands enabled them to go work for these companies
- Some companies where it is very helpful to have a degree related to the business, Tech needs Tech (Apple, Google, IBM, ...). In contrast others don't Goldman Sachs/ History, Anthem/ Psychology, Lowes/ Marketing, Target + Nike/ Political Science. You might need to learn that language...
- Different functions, 25% started in operations, 22% finance, 17% engineering, 13% sales & marketing, ... all the different functions. That might be where they start, but they bounce between different functions before they reach there... there is no right path
- Doug McMillan/ Walmart, worked in all business segments, need to understand deeply the areas. Many paths to success, but be happy, it makes you more successful, competent, capable.
- Do not follow the salmon, find your own path.

After going through the research, we believe that, though a smart and supporting CEO is important for many other areas represented in the C-suite, like a two-time global CDO has put it in his interview, “while the CEO may not fully understand in detail the inner workings and impact of other areas like Finance, legal and even Marketing, they do not question the fact that they are essential and need open representation in the C-suite. With design, lack of understanding of the inner workings and impact, and lack of recognition of why designers might do a better job at representing design than any other professions, leads to considering design non-essential at that level, and there aren’t enough examples, cases, data to prove him or her wrong”¹⁴. So, it is our belief that this hypothesis, a design savvy CEO, is indeed an important one that needs addressing, and because data shows the CEO is indeed more impactful in choosing the TMT than other executives and/or Board of Directors, this is directly impacting the fact that there aren’t more designers in the C-Suite of large corporations.

5.2 Necessity - There is no need, design is already represented, these corporations are at the top of their game

This insight generally describes a corporate context where there is no need for a designer in a C-suite position, design is already represented in some shape or form by one or more executives, these corporations are at the top of their game so it is arguable that they don’t need a designer in this position.

There are certain elements to this insight that makes it nuanced. There is 1) the need for design in the company, 2) the need for design representation at C-suite level and 3) the need of a designer representing design at the C-suite level. Though it was stated by some of the Interviewees that some sectors (consumer goods, technology,...) may need design more than others (banking, insurance,...), general consensus is that this opinion might be seeded in definitions of design closely associated with form giving and aesthetic qualities of physical objects and spaces, not necessarily with the opportunity exploration and strategy potential of design. There are plenty of cases of the importance of design in banking (Intuit, Capital One,...) and in Insurance (InsurTech, New York Life), many times led by smaller companies and start-ups upsetting the status quo of larger corporations,

¹⁴ Qualitative Research – Interviews: 26. Global executive search and advisory firm specialized in Design (Appendix C)

leading them to foster and support start-up eco-systems to create some level of endogenous breeding of design innovation (Bonzom, A., & Netessine, S., 2016).

In general, the majority of data collected pointed towards a reality where no present day CEO or Executive in a large corporation would say design is important, so the discussion is more focused on how it is represented in a C-suite (design alone, or design+another, or another area+design) and, if it is represented by a designer or a representative of design. So, even if the representative does not bear design in the title, it ends up coming down to what other area is leading the aggregation of areas (engineering+design, innovation+design, customer experience+design, etc.). But like one of the Interviewees that two of his bosses grow to be large company Chief design Officers said “I have zero shadow of Doubt that design should be managed by designers. I know that design should not be managed by non-designers” ¹⁵.

The same experienced VP of Design said “I think there are maybe alternatives to having a design on a C-Suite because you can have successful design teams in-house the achieve the result without needing that C-Suite position, or there is the consultancy model where design and design thinking is absolutely having an effect, but it's not necessarily through having a seat at the C-Suite. There's a limited number of positions you should and could have on a C-Suite, and there are other ways for design to have influence, some of it probably comes back down to that necessity. Is it important? I think that it is the perception that it's important. And then I think on the other side of it is, there are not enough examples of it yet, and if you can only quote five, you know, okay. It's not broken and there's not enough cases of showing what a difference it makes to make everybody think they need to do it” ¹⁶.

In general, one can argue that design needs to be present in all corporations independently of their sector, customized to the sector and company. It can also be argued that design needs to be represented at the C-level, independently of the mode of representation. What remains open to discussion is the need for a designer representing design at this level, and while the results of the surveys and conversations point towards benefits of design being represented by a designer,

¹⁵ Qualitative Research – Interviews: 11. Three-time Chief Design Officer with experience at Board level (Appendix C)

¹⁶ Qualitative Research – Interviews: 11. Three-time Chief Design Officer with experience at Board level (Appendix C)

reality is there is not enough evidence of the impact of this type of design leadership, not enough examples of the differentiated impact and results.

The argument of necessity was also looked at from the perspective of reality, the reality of the C-suite and what needs to happen for changes to occur, what designers need to do to make that change happen. An experienced designer coach commented “If you cannot express, build a case for that need in a company, and that if you do that, then the company will become more competitive or profitable whatever, then it will not happen”¹⁷. But there were very strong words about the importance of having a designer in the C-suite, such as these expressed by a two-time Chief design Officer, “do I believe that it is better for design to be represented by a designer? You bet, no doubt. I still very strongly believe (this is based on experience and based on the people that were not necessarily designers, leading design in various structures), that we have a more, not just positive from the point of the designers themselves, more valuable result, we have an input and delivery to the company which is more worthwhile than if we had it delivered or led by a non-designer. We can deliver that over a few years, not just over a couple of quarters. As a trained designer it's built into my curriculum, it's built into the fact that I have spent at least a number of years studying design, and therefore being more naturally prepared, it's wired, I can do it”¹⁸.

Necessity also tends to be an excuse for lack of readiness from the part of the corporation, an SVP in charge of customer insights in a large financial institution (PhD in organizational psychology) put it this way when questioned if her corporation had a Chief design Officer, “No. we’ve proposed it in the past but got the message the organization wasn’t ready for it. A very large part of the business has posted a head of consumer experience which will include branch experience as well as digital and call center that’s as close as we have gotten so far. I’m on the B2B side so that won’t affect my organization”¹⁹.

To confirm what we had collected from other means of research, we mapped the organizational chart of a number of F50 organizations to understand where

¹⁷ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

¹⁸ Qualitative Research – Interviews: 16. Large American multinational corporation specialized in medical devices (Appendix C)

¹⁹ Qualitative Research – Interviews: 12. Corporation leader in robotic products in the health domain (Appendix C)

design was positioned, what areas were representing design, and where were the highest-ranking designers 'Figure 24'.

Regarding **Necessity**, and after all the data and insights collected throughout the research, it is our understanding that all corporations need design (capital D), reaching strategy and operations, physical and digital, discovery and delivery. This does not mean that some corporations in certain areas who might be less user/customer facing (eg.: Oil and Gas) need less design, or a different type of design (service design, communication design, design for diversification and differentiation, to name a few), but we have not found evidence of an area represented in public large companies as in F500 that doesn't need design in some shape or form. The question then might be, is it important enough to be at the C-suite level, singular enough to justify a seat onto itself (design+other areas), and why would a designer be more qualified to lead design than anyone else. Depending on the case, might not make sense to have design in the C-Suite, and if it is represented in some sort or fashion, might not require a unique seat, but it is our understanding that if it is represented, and if it is a unique seat, it should be a designer because we have sufficient evidence that says that designers are better qualified at representing design in a unique seat at a C-Suite level, and this despite how hard it might be to find the right designers for the job.

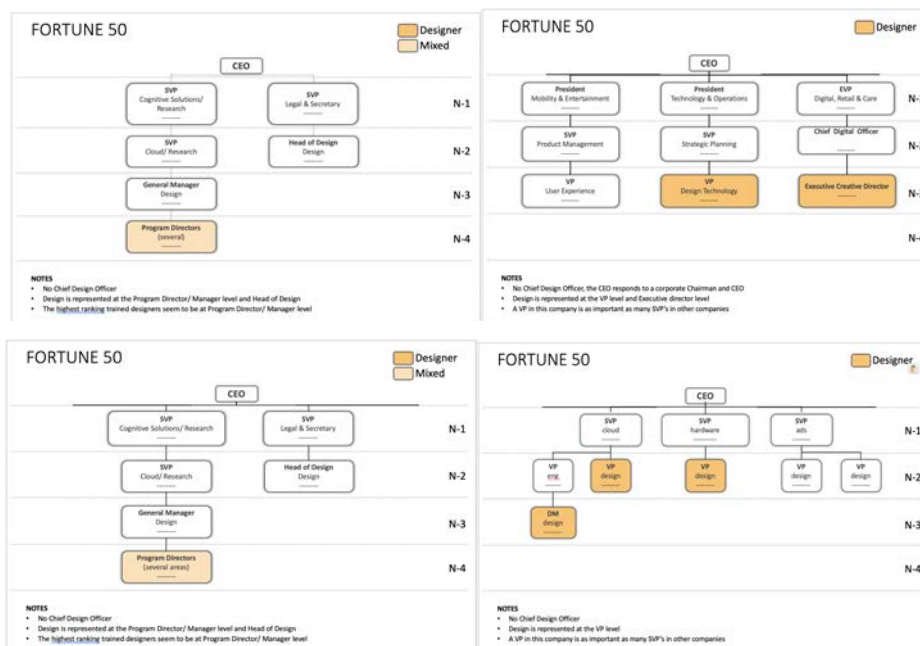


Figure 24 - Position of highest-ranking designer in 4 examples of F50 organizations. José dos Santos 2020

5.3 Effectiveness - This is not the best/ right place for designers to lead design, too many distractions

This insight generally describes an argument that the C-level position is not the best place for designers to lead design, that there are too many matters and practices that impact design's effectiveness in the company, too many so-called distractions. The term effectiveness was purposefully chosen instead of efficiency, following a classic definition the effectiveness is about doing the right things, while efficiency is about doing things right. There is a component to this hypothesis which is cited by a few designers, that being in the C-suite stops them from being 'close to the ground', and from 'crafting their practice'. A few also used this insight to question if it was needed for a designer to be at this level to be effective, and thus spurring a large conversation about models of design leadership (centralized v. distributed, autonomous v. integrated).

The general consensus from interviews and the data from the surveys points towards a correlation between being in the C-Suite with being able to model the direction, format the action, impact the deliverables and results of design in a different way, a more effective way. The arguments that design management at the C-Suite level stop designers from being more hands-on in design is similar to many other professions, and it is above all a matter of choice by those that agree to embrace the managerial route in large corporations. Like one of the interviewees with C-suite experience "on **Effectiveness**, Yeah, I think you have to because that's where the resources are assigned, the direction is assigned...it's not the only one, but you got to think it wouldn't do any harm. In the C-Suite they're talking about five to ten-year plans, and those plans might be just growth through acquisition, or growth through expansion into new markets with existing products, or new product development and a big push to implement a new technology. In each of those are quite different, and if you're not going to be there for those types of discussions, you're just going to end up with what you get and you're going to have to play catch-up so I tend to agree with you"²⁰. This vision was corroborated

²⁰ Qualitative Research – Interviews: 11. Three-time Chief Design Officer with experience at Board level (Appendix C)

by another two-time Chief design Officer, “the middlemen, the middle person, the middle woman who may be the person sitting at the board level representing design among potentially other functions that need to be represented, needs to be a darn good advocate. The alternative to sitting at the board is to have a number of levers and direct access to the decision maker or makers, a representative who is fully not just sold to the idea of design, but fully committed to the idea of design”²¹.

I asked an experienced designer coach if he thought the C-suite might not be an effective place for a designer to sit, and he replied: “I don't agree, because if you are not sitting there, you will not get the mandate that will allow you to be effective lower in the organization. In most companies, if you don't have a design sit at N-1, those that sit there will not use design to make strategic decisions. Efficiency (doing things right) does not require a presence at this level, but effectiveness (doing the right things) does. Design must sit at N-1, if not today certainly in the future, some see it already, some look away, some put their heads in the sand, but modern companies will get challenges that need design competence and design thinking mindset to solve real problem that the world is facing already, and that companies will face as well’²².

All that we have learned in this research is that, as long as we agree on the definition of effectiveness, that of producing a decided, decisive, or desired effect (Merriam Webster), then being a member of the TMT focused on design’s priorities, plans and impact cannot be deemed as not effective, that being the case would require explanation on why is design different from any other areas in the corporation that are represented in the C-suite. Designers that prefer to stay a few levels distanced from the C-suite because they believe this is a more effective way to manage design might be confusing their love for the craft of design with what is really better for design and for the corporation itself, if such a designer does not understand that the activities of the TMT impact the effectiveness of design and require the presence of design (and designer) to discuss, prioritize, define and budget design, then perhaps this designer is not the right designer for this job.

Yes, there may be lot of ‘distractions’ and uninteresting conversations in the C-Suite, and in many cases very focused on a certain type of discussions

²¹ Qualitative Research – Interviews: 16. Large American multinational corporation specialized in medical devices (Appendix C)

²² Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

(quantitative and short termism), and quite often complex (systems) and hard to deal with (hard decisions), but if design (and designers) want to be a part of the solution, they need to embrace being a part of this team, accepting all that comes with it, perhaps engaging in changing how the C-Suite works from inside. We heard from a few of the interviewees that they would like to be a member of the C-Suite but “in their own terms”, and we believe this is the wrong approach, change will not likely come from the outside, but from within. **Effectiveness** is tightly connected to the measurement of effectiveness, and therefore to the discussion of metrics that attest the many ways design impacts positively organizations, this for us in an area of mixed scope of action, between designers and CEO’s, embodied by the question McKinsey asked in the second phase of their research on the business value of design “Are you Asking Enough From your Design Leaders” (McKinsey & Co., 2020).

Another model that has been used to discuss a corporation’s performance, this one very popular in the last 17 years, is the Net Promoter Score (NPS). This simple but apparently effective key performance indicator is here to stay, and though many designers don’t see it as such, it is indeed a designer’s metric, it’s about customer love and loyalty, it’s open source, and its simple. But in reality, and inside corporations, designers are still not using NPS as a design KPI, not knowing how to impact directly its outcome, how to create a link to good design practices. There are many exceptions, at Intuit chief product and design officer Diego Rodriguez says, “I can log in at any point and see the verbatims coming in. It’s very grounding and humbling” (Colvin, G., 2020).

There is one extra insight that did not come out in the research per se, but we believe there is something to it that deserves further exploration. It’s one of those uneasy topics among designers and it is connected to Donald Norman’s ‘fork in the road’ between craft and strategy, it is that traditionally the flow of designers into managerial track (and academics) was justified by many designers as lack of craft quality, basically, that those that can’t design become managers. Craft designers have voiced in explicit and implicit ways that there is a certain lack of respect for designers that don’t design, while recognizing the benefits of a good manager, there is a possibility that designers prefer to be managed at the highest level by

someone who is a trained, professional manager who is not a trained designer, perhaps a design champion as described by Charlie Hill/ IBM (Design Museum Foundation, 2019). It could be craft designers believe it's really about the results, a good design manager might be able, in their mind to deliver better results than a designer turned manager that is incapable of making real changes. The Peter Principle (Wikipedia) of promoting designers to become managers beyond their capability might be at the heart of this, while some companies have created a track that allows both Craft and Strategy designers to move up in their career all the way up to VC, the majority of companies only have one track for career growth, the strategy one leading to management. So, this becomes an issue, a hard one to assess because this would require designers to have this open conversation about a possible lack of trust and respect of craft designers towards non-craft designers, this fueling discussions about design thinking and design doing as two opposite sides of design. The corresponding author also has anecdotal data collected throughout his career that many craft designers, especially the really talented ones in crafting formal solutions with a high degree of aesthetic quality, though essential to the design process and recognition, become sequestered by their own talents and rely far too much on them, stopping them from evolving in many different directions, it seems that once they are recognized as being exceptional craft designers, they will stick to that. On one side, it's a good thing that one recognizes what they are good at and builds on that, on the other that proves to be a limited survival strategy because that talent becomes commoditized and the career hits a glass ceiling in an age where it is not easy to go out and explore other alternatives anymore, so many of these craft designers find themselves stuck in organizations and disgruntled because others that do not possess their qualities get promoted and thrive.

5.4 Desire - Designers don't want/ aspire this role, stops them from crafting their practice

This insight generally describes an argument where designers don't want, don't aspire this role, it comes with a number of unwanted responsibilities and impact in the personal life and ethos of a designer (see **Ethos**). Interestingly enough, what

many non-designers described as a lack of desire in line with Aesop's fable of the 'Fox and the Grapes' (there are many who pretend to despise and belittle that which is beyond their reach), did not match the response from the senior/ mid-career designer survey which seems to state that designers do want the position. This is despite the fact that several of the conversations with design leaders have pointed towards a real concern about unwanted but expected levels of accountability and a concern about lack of preparation for the job. The contradiction that was felt by us is that many designers voiced that a presence of a designer in the C-Suite was necessary for the growth and impact of design, but they were unsure and hesitant about taking on the role. Not having the desire for this position, and the necessary persistence to get it and the resilience to keep it came through as a real insight towards the scarcity of trained designers at this level.

While many things have already changed and will change even more in the years to come, regarding large corporations, many designers when describing and thinking of large corporations, still align very much with the depiction of Gordon MacKenzie's 'Orbiting the Giant Hairball: A Corporate Fool's Guide to Surviving with Grace' 1996' (Mackenzie, G., 1998).

This insight scored very high in designers and non-designers, like one experienced manager put it "the number of designers in my career who said I want to be a design manager, I want to be a design director, and when you either explain what that entails, that it is increasingly the people management track versus the individual contributor track, you know, that's a little fork in the road that they either then do it and don't like it, or now I don't want it because I don't feel prepared and I don't want to spend my time doing that"²³.

One other very experienced manager whose boss is the Chief Digital Officer and always reported to the Chief Technology Office, and Chief Medical Officer said he loved it, it would all be connected, driving consistency, experiences. Furthermore, when asked "why not report to CEO? because he would be sucked by his vortex, enough of his boss's meetings, would do it if there was a chance though"²⁴. A researcher that did some relevant work in the domain questioned

²³ Qualitative Research – Interviews: 11. Three-time Chief Design Officer with experience at Board level (Appendix C)

²⁴ Qualitative Research – Interviews: 14. Large American telecommunications company (Appendix C)

”executive position is important, but it might also be the case of being more executive and disconnected from the design process actually makes it harder to have that direct concrete benefit that we see teams having”²⁵. Christopher Simmons in an article published by Adobe/99U in an article titled ‘...How designers get a seat at the CEO table’ 2014, candidly discloses that not everyone is destined to be a leader, or wats to be, and that is fine (Benton, D., 2014).

This is perhaps one of the most crucial insights impacting our core inquiry of ‘why there aren’t more designers in the C-Suite of the F50’, the answer being that they don’t want to, they do not desire, aspire to be in that position, some for personal reasons (work/life balance), some for professional reasons (waste of time). There is no fault, or harm in not wanting to be in this position and role, design needs one and all to succeed, and this role may not be more important in the scope of things than any other designer doing her job in a corporation. We believe this challenge, this journey is not for all designers, but the ones that set their eye on this really need to desire the position, they need to do it for the right reasons, embracing all that comes with it, they need to do so with passion and persistence, and they need to endure what it takes to get there. Nonetheless, and as a word of caution, what designers need to avoid is continuously commenting on their personal lack of impact in their organizations because they are not listened to, taken into account, because they are not a part of the C-Suite, while not wanting to deal with all the requirements and expectations of being at this level. And this needs to happen early in life, so there is time to access the gaps and build their experience and curricula in a way they will be ready for the challenge. This sidliner critical positioning of designers in large corporations and in the media at large, without accepting that, contrary to what they might believe, they are not ready and prepared to be at that level, they have not done what is required to be chosen to be at that level, and they insist in acting like there is a high level of cluelessness or lack of knowledge and understanding from others, or minimizing the requirements of the job, almost a personal vendetta towards design. This does not help design and has created a perception witnessed by the corresponding

²⁵ Qualitative Research – Interviews: 26. Global executive search and advisory firm specialized in Design (Appendix C)

author and many others, that of designers loving to nag about the fact that they are not included, while not doing enough to be included.

5.5 Access - Designers are not selected for the job, not invited, not mentored and groomed for it

This insight describes a context in which designers are not selected for the job, not invited, not mentored and groomed for it. While many designers cite this as a true insight impacting the reality described by the question we pose, this is seen by non-designers as a typical complaint of a group of people that don't try hard enough to get these jobs, several of them citing 'nagging' and 'complaining' designers as a typical attitude from designers. But a three-time Chief design Officer put it bluntly "there is a hierarchy mismatch, it could be the same number of years of experience, but one is a business leader and is a VP and the designers is a director, there is a bias"²⁶. We asked why they were not being taken into account, his answer: because designers haven't been given opportunity to prove themselves at that level, their role has not been validated, customer centricity has not been taken seriously, we are still into technology mode, experience in this domain is new.

But a designer coach with plenty of experience was quick to voice what many say about this topic: "totally disagree. What sits behind permission, is fear. Why do you say we don't have permission, because they fear the CEO, they fear to talk with the guy, to go into the room, maybe get beaten the first time and get back the second time and improve Etc. Fear is a big driver for not development of people in general"²⁷.

There is a hand full of specialized design and creative executive search boutiques in the US, and a few more throughout the world, many stemming from the same outfit or mentor. These people, because many of them relate to the job as people placing designers via personal relationships, are hired by some corporations to fill their top-level design positions, we have no data to prove how many design executives are placed via internal promotion and how many come via

²⁶ Qualitative Research – Interviews: 13. Large American multinational financial services company (Appendix C)

²⁷ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

executive search, but these companies boast a pretty hefty placement history. The other executive seats are filled by internal promotion or executive placement, but it looks like these executive placement companies, large multinationals with offices throughout the world, don't have designers in their databases. In a conversation with a director in one of the 4 top executive placement corporations in the world, he stated that some engagements start HR/ Business leader or functional leader, that marketing may not mean education in marketing and work experience more important (common exception is engineering because of the required technical detail). They tend to privilege career success and experiences, and pay attention to what kind of companies has the person worked with, roles and responsibilities. He also talked about how academy companies (like Philips) are important. While these companies may not be the major obstacle for the scarcity of designers in C-Suite positions in large companies, the fact that they don't have designers in their databases and therefore don't understand how to place them, leaves designer executive placement in the hands of the specialized companies, which in itself makes the whole selection and placement process special in nature, less streamlined like with other executives.

One other conversation, in this case with a design coach, when asked if he believed the reason executive search companies did not have designers in their database was because there was no demand for it, he said "you are right, if there is no demand from the market, they don't have designers in their databases. Future employers will be the McKinsey's and Accenture's of the world, and then they will end up in the databases, because that's where they traditionally look for candidates for the corporations' ²⁸.

Michelle de Tulio in an article titled 'What Does it take to be a design Leader?' (DiTullo, M., 2017), states "recently throughout the business press, there have been countless articles about CCOs and CDOs and their value. Large companies like Coca Cola, Pepsi, 3M, Electrolux, and Hyundai have added these positions over the last few years. Most people behave like this is a remarkable new development. It has been the right of the professional practice of design to have a

²⁸ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

seat at the table since the inception of the industry. We just stopped demanding it.” So perhaps it is all just about demanding it!

Throughout the research, access did come out as a potential justification to the reality of designers in the C-Suite of large corporations, though there are different realities behind what we clustered as access. When we speak of not selected for the job, not invited, not mentored and groomed for it, while there a number of components to this state of affairs that are squarely in the scope of action of designers – applying for the jobs having acquired the right level of preparation and experience to make them the best candidate, or even designers choosing to have a mentor who is versed in executive matters and may support the necessary growth of the designer – others may require joint work with entities in the market that provide access and grant the right support to anyone aspiring to reach the C-Suite. So, executive recruiting companies like the ones continuously named as top ranking in their field (Forbes, 2020) need to start having a better understanding of the phenomena of design at the C-Suite level, while making an effort to search, identify, qualify designers to be in their vast databases. And design executive search companies perhaps need to do more, in a conversation with a CDO placed in a large global design executive search, he mentioned that he believe the recruiting agency was basically asked to fill the position, they reached out to him and pushed him towards the finish line. He didn't feel they asked all the necessary questions (eg.: how many salary levels were there in the company and what was the promotion and growth history for someone in design), they didn't prep him or the company about design and his expectations (eg.: while a director at his level when hired is given a certain type of attention, he landed in a large room, with no team, and effectively had to write his own job description and path to growth).

5.6 Preparation - Designers don't have the right education and training, skillset, mindset.

This insight describes an argument where designers don't have the right education and training, skillset, mindset. While these elements are all different in nature – education what you get in school, training what you can get throughout your career (hands-on/ academia), skillset embodies hard + soft skills and result

from natural and apprehended means, and mindset which is more related to a set of attitudes closely related to ethos – they all seem to stem from education choices which might be built on values and core beliefs, much more than structural limitations. A global executive search and advisory firm lead asked an important question ‘If the future is about learning, are designers good at learning (self-propelled learners), and can they design a new way for people to learn faster, better, effectively?’ (Cheng, B., 2019). Another experienced coach stated “you have to get ready to get into that position, because if you are in that room, then the people in that room talk maybe of an hour five minutes about design and the other 55 minutes about other things which may be unrelated to design, but the expectations are that if you are in that room that you have an opinion and knowledge about other areas as well. And most designers don't want that, don't get it, don't understand it, or are not able to do it, or a combination”²⁹.

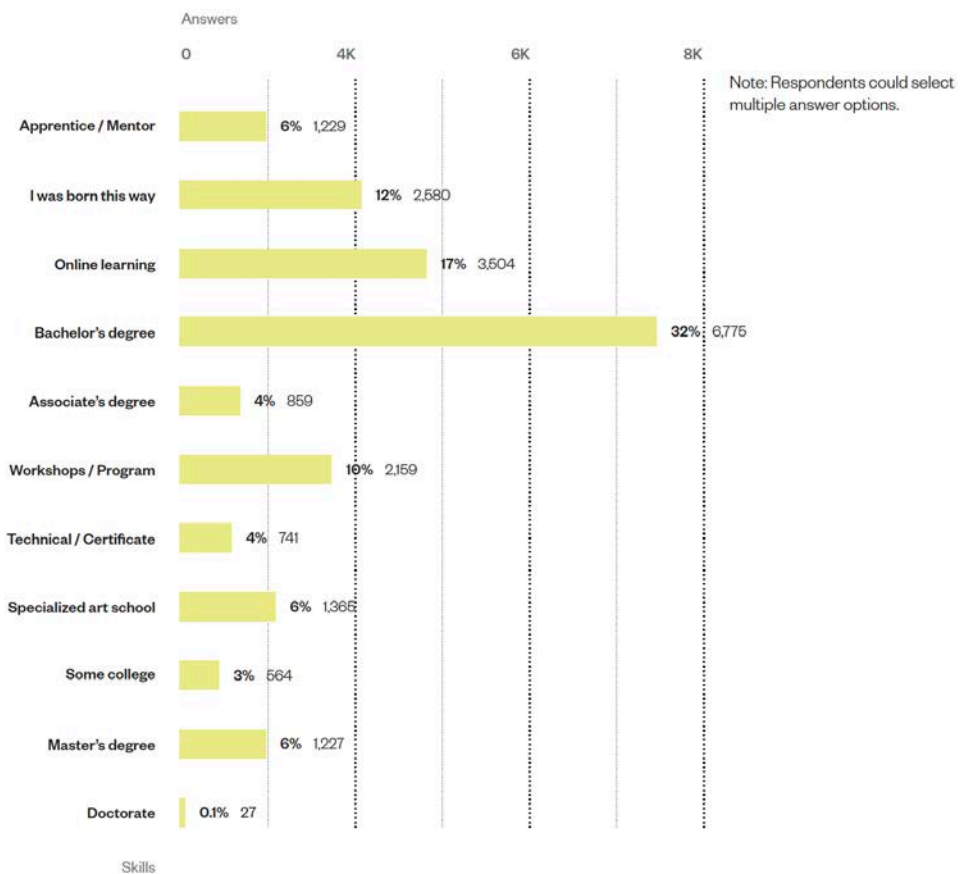
The Design Census 2019 focused on ‘Understanding the State of Design and the People Who Make it’ paints a picture of everyone that is active in the design arena in the US, who is actively participating in the design economy in some fashion (“student, educator, freelance, permalance, self-employed/small business owner, full-time agency designer, and full-time in-house designer, plus an option for those currently unemployed) and an expanded set of design disciplines that reflect how new technology is broadening the roles of designers.” (AIGA, 2019, p.5). The same study presents what they call ‘path to education’ and conclude that Bachelor’s degree is still the most prevalent path (justifying our interest in understanding design education starting at the Bachelor level), while online training and other workshops and training being on the rise. One piece of data that aligns with our own data from the senior designer survey is the lack of designers doing PhD thesis, researching design via a thesis like this one ‘Figure 25’.

The element of lack of preparation given by corporations, but also pursued by designers on their own, is an important topic, like a two-time experienced Chief design Officer put it “we don't have the cross functional training, we today market leaders that become business group leaders, which is what you need to do in

²⁹ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

order to have the right credentials. So, preparation is a big thing, because if you don't have preparation you don't have permission' ³⁰.

Design school was a big topic of conversation, one of the interviewees with experience in training designers after they leave design school stated that 'it's very simple, design schools do not educate designers to lead. There are very few schools that do a little bit about this, but most design schools are about design doing, maybe a little bit about managing design, but not how to lead design. And that's not a bad thing, because if you're going to lead design, you need to know how to design' ³¹.



This year we honed in on education experience with an expanded set of 11 answer options that better represent the increasingly alternative paths to education sought by designers. (Previous censuses provided just three options: no degree, college degree, and advanced degree.)

Bachelor's degrees are still the most prevalent, with online learning and other workshops and programs on the rise. Hats off to the designers who were "born this way." 🎓👏👏👏

Figure 25 - Path to education, Design Census 2019

³⁰ Qualitative Research – Interviews: 16. Large American multinational corporation specialized in medical devices (Appendix C)

³¹ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

It is known that designers are used to taking on new challenges in areas that are new to them, and they are accustomed to learning enough to be able to come in with suggestions and recommendations that reveal a healthy mix of naivety (in a positive sense) and acquired knowledge, along with hybrid expertise stemming from experience in different sectors. So it is highly unlikely that they would not be able to learn new subjects and acquire new knowledge, even if these were more of the technical or scientific area, there is nothing intrinsic in the nature of a designers that would make them less suitable to learn certain things in lieu of others. A researcher with relevant work in this domain stated “what I understand about people who get elevated that level of leadership is they have some experience showing responsibility for profit and loss in some form, and designers still have a weak spot just in that particular area. Data that I recently saw on our survey indicates is that most design functions are kind of stuck at talking about design in terms of usability and customer satisfaction still and that being able to connect the lines between designs contribution and profit and cost savings is still a really rare skill. So, I think that this fundamental lack of P&L ownership almost by definition means design leaders are not going to be considered at C-level”³².

But the reality described by a few non-designers and the data collected from the senior/ mid-career designer survey suggests that beyond design education that might have some known shortcomings, designers are not betting on their own preparation, further education beyond design related skills, which in turn affects their experience and subsequent access to C-suite level positions. Like a lifetime design coach categorically stated “we have educated >500 designers worldwide about design and business, successfully most of them after finishing training got more responsibility, more budget, more people, more everything. In Europe there are 17 Masters and BA's in design, but none of those schools and none of those professors teaching there are people who have done this in reality....So, it's not only the low quality of the design schools, because you could say let them focus on design doing, it's also the fact that designers don't look for education after that”

33.

³² Qualitative Research – Interviews: 26. Global executive search and advisory firm specialized in Design (Appendix C)

³³ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

One of the continuing debates is about design thinking, all the positive and negative that has come from the growth of it as a training topic, confused often with a complete and bona fide design degree. As one of the experienced managers put it “now, in both cases I think it's changing for the better. People are seeing that having design thinking type skills - you know, a number of business courses now that are promoting design thinking and problem solving and how that's what shapes a company - is happening, but it's non-designers that are grabbing that and then going away and getting a six month or a two week course and they're coming back and saying I'm a designer, that really pisses me off big time, but that happens. Then I think on the other side as you've got a few people that are out there are senior design leaders inside corporations who do a good job, but there's not enough of them and even the ones that are there, I don't know if they're promoting the work they do or they're promoting themselves”³⁴.

One of the topics we pursued in the conversations with some of the interviewees was the MBA finding, if designers that did an MBA felt that it had the right return on investment, if it allowed them to evolve in their careers the way they somehow expected, planned. While all that did an MBA expressed that it was important, fundamental to their professional career, none of the ones we engaged described it as a deal breaker, and the exercise above mentioned revealed that out of the 4 design executives, 2 did an MBA and 2 didn't, while 2 other did and changed sectors. An experienced design manager stated that “I don't think just turning up and saying I've got a master's in design and I've got an MBA is going to get you a seat at the table. It will help you, but you'll still accepted you have to get in and work your way up in my opinion”³⁵. Another one, a designer that did an MBA, asked why he had done it and his response was to break his own complex that he couldn't do numbers, and something he discovered, that everything is possible if you can deal with each function of the company at a time. The future of the MBA was also a topic of discussion, and someone with a lot of business experience in this domain stated “because when everybody believes in that mindset, they all lead from the same perspective which then does not create differentiation in the marketplace, it's like following a false God. An MBA might

³⁴ Qualitative Research – Interviews: 11. Three-time Chief Design Officer with experience at Board level (Appendix C)

³⁵ Qualitative Research – Interviews: 12. Corporation leader in robotic products in the health domain (Appendix C)

have been appropriate for many, many years, but now if you can look at the people that you admire, who are those CEOs that stand out that we admire and track their story, I don't know this for sure, but I have an I have a hunch they all didn't do MBA's”³⁶. In an article published in AXIOS by Shane Stavisky titled ‘The death of the MBA’ (Savitsky, S., 2017), he mentions that “U.S. graduate business schools — once magnets for American and international students seeking a certain route to a high income — are in an existential crisis. They are losing droves of students who are balking at sky-high tuition and, in the case of international applicants, turned off by President Trump's politics. Why it matters: The once-venerated MBA is going the way of the diminished law degree, pushed aside by tech education. Graduates of the top 25 or so MBA schools still command the elite Wall Street and corporate jobs they always did, but the hundreds of others are scrambling, and some schools are shutting down their programs. Survivors are often offering new touchy-feely degrees like "master of social innovation." The value of an MBA is uncertain: MBA grads are facing shifting expectations from employers with more options than ever. "Especially for someone who might be 25 or 30, they're leaving with an MBA, and there's a question from employers, 'Well, you've got an MBA, but what else can you do for me?'" said Michael Prebil of the think tank New America”.

We engaged Gjoto Muratovsky PhD, author of many publications on design in business context, and asked him the core question of the present thesis, why aren't there more trained designers in the C-Suite of the F50, to which he replied “that’s because MBA degrees are still seen as prerequisite for these kind of positions. Also, not all trained designers are suitable for such roles. Running a company requires a different type is skillset to what a traditional designer might have. An advance understanding of design thinking certainly helps, but additional corporate experience and professional development might be necessary. Especially for F500 companies”. When we shared opinions and data about the decline of the MBA, Gjoko replied “you do not need an MBA to do a start-up. But it’s an entirely different story if you want to run a major corporation. You simply need to understand how things work on that level. It’s complex. And MBA for

³⁶ Qualitative Research – Interviews: 19. American multinational information technology company (Appendix C)

businesspeople is what an MDes is for designers. Now, if you have many years of experience in either area, you probably don't need a masters. Your experience and results in the field will speak for themselves. But you need to spend a lot of time climbing the ladder. Also, you need to understand that CEOs must perform on a quarterly base in America. That's how Wall Street operates. They don't really have much time to be creative and develop long term strategies when they have to report profit every 3 months - or they will lose their jobs. It's much more complicated running a Fortune 500 company than a start-up or a small / medium size company. There are lots of variables in question and the CEO is just one of these variables. Designers would probably be better on a VP level, with a focus on driving long term innovation, while the CEO focuses on short term wins”.

According to the Engineering Management Institute, “engineering is the most common undergraduate degree of the F500 Chief Executive Officers (CEOs). It has been for some time. Approximately one third of CEOs majored in engineering and only 11% graduated from business school.” ‘Why Engineers Make Great CEOs’ (Forbes, 2014). This might be another insight that impacts access to Designers to this selective group, a strong engineering, highly technical group of CEO's might not see Designers as prepared to take on the challenges of the C-suite. The article identifies top characteristics that make Engineers particularly qualified (attention to detail, engineers know other engineers, understanding technology, responsibility and perseverance), nothing about human centric characteristics. In the last characteristic, perseverance, the author describes what many could review as a description of design’ “engineers are constantly up against a wall. They're told it won't work, the market is too small, or an idea has been tried before. To succeed within this environment, engineers by nature must be stubborn and enjoy solving problems; difficult problems”.

Then there is the issue of Wisdom, seen by many as the most important element in management. In ‘Management Half-Truths and Nonsense: How to Practice Evidence-Based Management’ the authors go back to Plato to explain the origins and importance of wisdom, suggesting that “wisdom means "knowing what you know and knowing what you don't know" (Evidence et al, 2006, p.3), especially striking a balance between arrogance (assuming you know more than

you do) and insecurity (believing that you know too little to act). This attitude enables people to act on their present knowledge while doubting what they know. It means they can do things now, as well as keep learning along the way” p.52.

In the Design Census 2019 (AIGA, 2019), on the topic of “What do designers think about the future of the industry”, the report states that designers are still fighting the good fight to prove they deserve a “seat at the table,” despite the ongoing acquisition of design talent by businesses and consultancies. Since 2004, large consultancies and corporations have acquired more than 100 independent design-related companies, with around 60% of those acquisitions occurring since 2015 (Maeda, J., 2019), design might be more valuable than ever, but its place in the corporate hierarchy is still uncertain. We are reminded of one of the statements made by a design coach with a lot of experience, that stated future design employers will be the McKinsey's and Accenture's of the world.

Preparation was indeed a top insight to explain the scarcity of designers in the C-Suite of large corporations, and this was brought up as a top reason from both designers and non-designers. Design education must change to adapt to the changing environment of corporations and society, perhaps this coming decade and impacted by the disruption Covid-19 has brought to all parts of society including education, design education too will see a dramatic change. If we consider the teaching of design to non-designers in different educational settings (London Business School 40 years ago with Peter Gorb, Stanford D-School founded in 2005) an experiment, we have to perhaps agree that it has turned into a successful one, perhaps too successful according to some. On the other hand, if we consider the teaching of other ‘languages’ to designers, like business, management, marketing, via Masters in design Management and in design thinking or similar (Wu, S., 2017), we might be forced to accept that perhaps this was not as successful, but we have not done this research and cannot in good faith make this statement. If in the future (as perhaps already in the near past), an MBA will not hold the keys to the C-suite, then one might ask if there is some secret recipe. Not to our knowledge, while a bachelor's degree may well be in one of the design/ architecture/ art schools that exist, and even if they change and bring in earlier basics and knowledge of business, management and marketing,

the issue of preparation is much more connected to decisions after the Bachelor's degree and include a combination of formal training and hands-on training and experience in taking on missions, jobs that might not align nicely with a typical, traditional design career.

5.7 Scarcity - There aren't enough qualified designers with the right experience in the market

This insight was added because several of the interviewees stated that, if the F50 companies decided all at once to hire a new designer for an executive position in their C-suite, that they would have a very hard time because there were not enough qualified designers with the right experience in the market, that many of the most qualified designers leave the workplace in the 45-50 age group to pursue personal projects (Jonathan Ive to lead his design consultancy), many times not related to design per se (grow a vineyard like...).

The IES:NCES recently reported that in 2016–17, over two-thirds of the 1.0 million associate's degrees conferred by postsecondary institutions were concentrated in three fields of study: liberal arts and sciences, general studies, and humanities (387,000 degrees); health professions and related programs (186,000 degrees); and business (122,000 degrees). Of the 2.0 million bachelor's degrees conferred in 2016–17, more than half were concentrated in five fields of study: business (381,000 degrees); health professions and related programs (238,000 degrees); social sciences and history (159,000 degrees); psychology (117,000 degrees); and biological and biomedical sciences (117,000 degrees), and while we have no data to prove this scarcity of qualified designers, there is data about the number of designers being trained and launched into the market, according to the same source, in 2017, just in US colleges, there were 20,127 Bachelor degree graduates (1st/ 2nd major) in design & Applied Arts (IES:NCES, 2020).

There is data suggesting that F500 may be employing directly around 500,000 designers (if indeed IBM had at a certain point 2,000 designers in HR training the company in design thinking (that number since then has gone down), this is a 500,000 people company, not counting with all the other designers in communications and digital, we may assume that the average ratio might be

something like 1:200 (some like Apple might have more, and some like Berkshire Hathaway a lot less). Albert Shum/ Microsoft said he has 500 designers, the ratio of 1:200 seems to hold. The estimated designer population among the F50 might be around 50.000, not counting all the external design subcontractors and agencies.

A retired high level design executive told my interviewee “Bob doesn't know what happens to people who get past mid-career in design because it seems to be vanishing from the field after about the age of 45 and there just aren't a lot of people left around in a field, that's kind of why there aren't more of them in the executive roles, so the question that's like in the direction of where do they go, what's actually happening to the senior designers and if they're not that many if there is a lot of attrition from the field”³⁷.

We asked a designer that did an MBA, groomed himself, invested to reach what seemed to be the highest position in a large company, why had he left after a few years, he stated “I had the feeling that I was reaching my goal when hired by ‘X’, but all those guys they were working for themselves, they were not the founders of the company, even the family people didn't know anything about the product and the user, they were accountants”³⁸.

Kevin McCullagh from Plan, in an article called ‘Design Leadership in Flux’ (McCullagh, K., 2016), stated that “design leaders have long complained that they cannot find the right talent. But a number of findings have made it harder. The rate of flux can be bewildering: As the range of design problems widens and shifts, so does the range of skill sets required to crack them”, suggesting that there is indeed a scarcity and the reasons might be tied to the complexity of the job to be done.

Nevertheless, one other interviewees with a very deep knowledge of the design market, stated “I don't think so, I don't have the data, could be because of designers idealistic view of the world, not sure if there are more or less designers than lawyers and engineers, but I don't think so. I could list 200 people in the 45/50-year-old range that should be in the database of the recruiting companies.

³⁷ Qualitative Research – Interviews: 26. Global executive search and advisory firm specialized in Design (Appendix C)

³⁸ Qualitative Research – Interviews: 22. Innovation consultant and experienced board member (Appendix C)

Maybe not that many, design is a young profession and many companies don't have this position established, but I don't agree' ³⁹.

There is data out there that suggests that, at least in graphic/ visual design domains where AIGA has its community, this is a reality. Below graph from the Design Census 2019 and the comment of the publishers with their interpretation “The drop off rate for full-time employees working inhouse or at an agency (as well as contract/permalancer workers at the same companies) is around the four-year mark, which is when many designers reportedly tend to stagnate” p.19 ‘Figure 26’

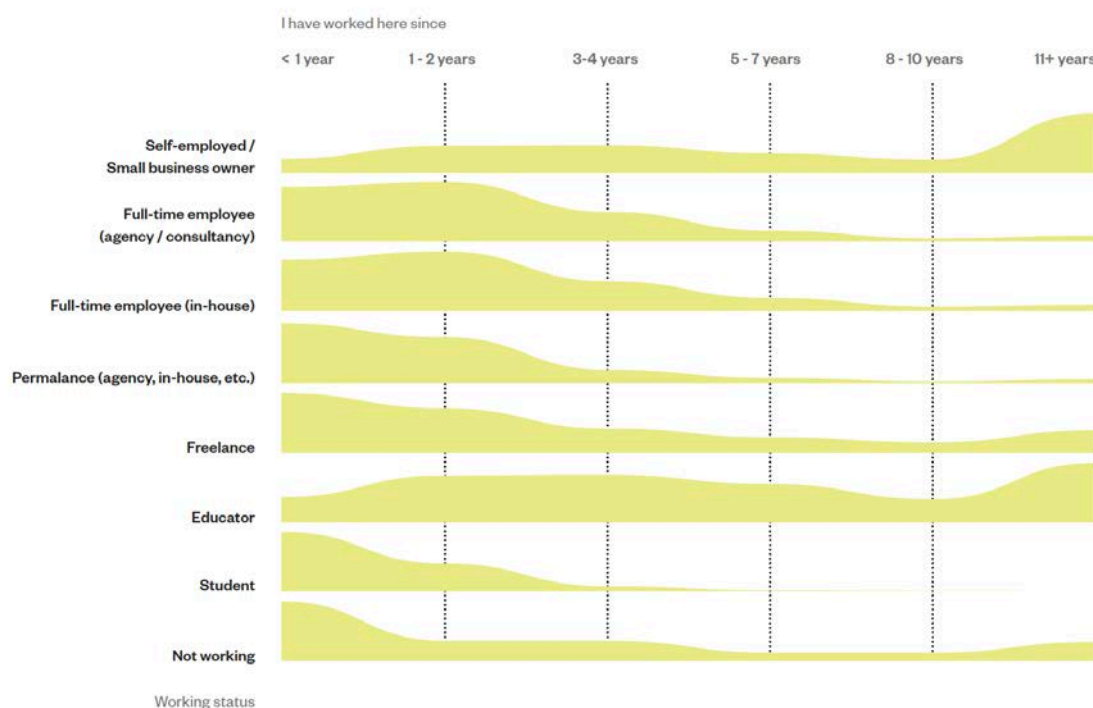


Figure 26 - Designer working status, Design Census 2019

Further research may go into this topic, not only in establishing if indeed there might be a true scarcity of trained designers for leadership positions in large corporations, which we do believe there is, but in establishing reasons that can explain the phenomena. One of the places to start will be in the number of trained designers/ architects/ artists in schools at the Bachelor level, compared to say graduates from engineering, marketing, business and management related studies, while data we have seem to suggest there is a gap, what we could not define is the size of the gap. Another place to look would be at what age are

³⁹ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

designers entering and leaving large corporations, because the amount of time they spend in a large corporation might signal issues like complacency or tiredness. The age they leave large corporations and what happens next is also an interesting area of research, qualification of the urban myth that designers are leaving to pursue more worldly, socially and personally type of projects (the vineyard). One thing we believe we can establish, it is that scarcity might be the culmination of other insights before this, starting with a lack of desire to be in a C-Suite position, followed by lack of investment in the right preparation, not enough exposure to experience and consequent lack of interest in fighting for the top positions when offered the access. If indeed there is a scarcity of designers ready to take on this type of position, then the industry will resort to others that, despite not being trained designers have demonstrated that they can learn just enough to become great design managers.

5.8 Flexibility - Designers tend to stick to design, no experience in managing other areas

This insight describes an argument that designers tend to stick to design, they reveal no experience in managing other areas, and this being something that defines the necessary flexibility for anyone to get a position in the C-suite of a large corporation. We have all heard the inspiring examples of CEO's that started in a low wage area in the company and do a multitude of jobs gaining experience before he/she reaches the top echelon of the corporation (Stettner, M., 2018). Several examples are used for executives, where they might start as an engineer, but might take on a job at managing a group of people and knowledge area that is not associated with their training, and then might take on a country/ market/ segment, while delivering results and accumulating experience in many different domains. In the research domain, this is many times called job rotation and has been identified as one of the oldest and most powerful ways for leaders to develop, research studies show that many managers consider job experiences as the primary source of learning (McCall et al, 1989).

In an interview Chris Callani/ designer and CEO of Wake, 'Former Facebook Designer Reveals How to Become a Designer Founder' (Laurinavicius, T., 2016), he states that "My path to being a designer and founder was a result of just saying

“yes” over and over again. I kept taking on more projects, different jobs, and eventually I started to learn more about my strengths. I kept focusing more on what I wanted to do. I met and worked with people who inspired me. And from there, the momentum just kept building.” In an article published by the New York Times titled ‘How to Become a C.E.O.? The Quickest Path Is a Winding One’ (Irwin, N., 2016), the author states that “experience in one additional functional area improved a person’s odds of becoming a senior executive as much as three years of extra experience. And working in four different functions had nearly the same impact as getting an M.B.A. from a top-five program.... In effect, the increased ability to collect and analyse such troves of data raises the possibility that in the future we’ll be able to better understand what types of education the workers of the future most need, how companies can best recruit future star performers and how individuals can position themselves to benefit from shifts in what skills the modern economy most rewards”, and cites many examples that represent one common way to collect experience across functions, by pursuing opportunities that are adjacent to, yet different from, existing expertise. The same article presents data on how chief financial officers stated their role had expanded beyond traditional accounting and finance-related work, most commonly into human resources and information technology. While other data, this time related to MBA students, stating that those that remained specialists received fewer offers and lower starting bonuses than those who had worked across various specialties.

This lack of experience might be rooted in comfort zones that designers have and might dictate how they deal with new experiences outside their domain, like a two-time Chief design Officer puts it, “In my opinion a big reason, we don't want to lose the whatever it is, the fire but also maybe the sexiness of being a designer. Jony Ive can keep on wearing his white or black t-shirts, go anywhere and nobody cares, but we know that if we become C-Suite level, we probably need to start dressing differently as well and having a slightly different outlook on things. This is a very important reason, that goes beyond education”⁴⁰.

One could argue that design, being such a bridging activity between different knowledge and functional areas in companies, impacted by and impacting on

⁴⁰ Qualitative Research – Interviews: 16. Large American multinational corporation specialized in medical devices (Appendix C)

many different areas in the pursuit of delivering complete customer experiences, does not need to rotate jobs and/or change domains in order to gain experience. Not only that, but the experience a senior designer accumulates doing his job is just as relevant and unique, as one of the most experienced Chief Design Officer puts it, “history favours the bold, being subversive with goodness in the heart. Doing the right thing that we know it is true, doing it off the grid. The first three years was bashed, ‘what the hell are you doing’; but you are the one that told me to never take NO for an answer. Same leader that threatened in the past are the champions. If you want to do the work, you need the bloody nose, but for good reasons”⁴¹. One other interviewee talking about a well know 3-time Chief Design Officer, ‘he speaks the language of the C-suite, he also has someone with him that makes a great team, together they are capable of communicating the vision and execute it’⁴².

We were curious about the career moves, linearity and steps taken by designers that remained focused in design, and designers that started out in design and then changed areas, in this case both of the subjects moved to the Finance area after an MBA and never came back into design, one of them reaching a C-Suite position in a large F-500 company, but not in design (not even aggregated to his job).

One of the interviewees, a designer and design coach with a critical eye towards designers, when asked about experience stated that “it is linked to education and preparation, experience in a career becomes impossible if you don't invest in education, designers say you need to think out of the box but they keep themselves in their box. If they prepared themselves more, learned new things and said to the organization that they wanted more responsibility, that would happen just like with other people’⁴³.

We did some qualitative via public information in LinkedIn profiles, mapping the careers of 4 designers in executive positions and 2 that started out in design and moved areas, a small sample and focused on design careers solely, without much to compare to when it comes to executive careers, though we believe from

⁴¹ Qualitative Research – Interviews: 14. Large American telecommunications company (Appendix C)

⁴² Qualitative Research – Interviews: 24. Design Executive in largest global beverage company (Appendix C)

⁴³ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

anecdotal stories that executives pride themselves in making many career moves, laterally and across the board, and that becomes a part of who they are and why they are able to reach the C-Suite.

Flexibility allied with experience is indeed an important, if not the most important insight in response to our question, both explicitly and implicitly. While experience in itself is a result of doing something for a very long time, what we are discussing here is the cumulative experiences resulting from job rotation, hence the term flexibility and not experience. While some could argue that experience is crucial for any other job, let alone a job in the C-Suite of a Fortune 50 company, what is meant by experience in the case of design is an interesting debate because of the nature of design, touching different areas of the service offering which in turn exposes designers to many different areas of learning. Far more than rotating jobs in areas other than design, we believe an accumulation of experiences in the design area but within different design specialties is positive, a trained industrial designer will gain from managing a team of digital designers, while adding design research and establishing strong links (even if not as a manager) with other areas like branding and marketing. This lack of flexibility might also impact the perception that a designer might not be able, capable of managing others in areas other than design, and in many cases where the corporation decides to have design aggregated with other areas, there might be a hesitation in hiring a designer for the job. Of course, at that moment, it probably crosses the mind of a CEO that sending a manager trained in other domains to a design thinking weekend bootcamp just might do it, while the idea of sending a designer to a business, management or marketing weekend bootcamp might not cross his/her mind.

5.9 Advice - Management consultancies and advisory boards don't influence CEO's positively about the value of design

This insight resulted from a discussion with some design executives on the reasons why in so many cases design is ill positioned to change the fate of the company by design, and the fact that many Board of Directors and Consultancies don't understand and advise on design adequately. It is also true that advice can and often comes from within, in a research undertaken by the Centre for Executive

Succession of the University of South Carolina (Wright et al, 2017), they listed the top confidants of the CEO and any and all of these are responsible for advice to the CEO and may suffer from the same lack of understanding of the value of design in business ‘Figure 27’.

Confidants to the CEO



Figure 27 - Confidants of the CEO, Wright et al 2017

Nevertheless, this topic is much centred on external advice. The term widely used to describe how a large organization is organized is a Blueprint, a schematic high-level definition of how the organisation is supposed to function depicted in many cases in a number of organisational charts and supportive explanations of the benefits of such layout. This exercise is majority of times top down, in particular moments of the company (mergers & acquisitions, spin-offs of parts of the company, etc.), done by a small group of high level executives, in the case of large public companies consulting the Board of Directors and in many cases consultancies specialized in this type of efforts.

In an early conversation with a two-time design executive in large corporations, he stated how important it is to have more designers in the Board of Directors of large corporations, so they can advise executives and CEO’s on the importance

and business value of design ⁴⁴. Similarly, someone with a vast research and a published book on the topic, stated “If you talk to executive search companies, ask them about board level, why aren't there more designers sitting on boards. That is the next level to shoot for” ⁴⁵.

In a later conversation with a long tenure design executive in a global corporation, she stated that “they had just received a new blueprint in the last three years and it was all wrong in the way it positioned design in the corporation, revealing no understanding of the way design worked” ⁴⁶.

In the last 10 years, consultancies have gone on a shopping spree for design companies, according to John Maeda’s highly respected ‘Design in Tech’ report (recently been renamed CX Report), it would be a fair expectation that all this M&A activity by consultancies, many times responsible for advising CEO and Board of Directors of large companies on their future Blueprints, would render their advice more insightful and constructive as to the role and value of design in large companies, but that does not seem to be the case. Anecdotally, the corresponding author has lived first hand a situation where a member company of a large consultancy was installing business innovation practices in a large corporation without bringing design into the conversation, when questioned and since it was known they had a large design army in their group, the answer was that their company was very large and they hadn’t had a chance to integrate design in all their operations. In another conversation with a senior designer who was part of one of the design companies bought by a large consultancy, when asked if he had seen signs of strong, positive integration of consultancy practice with design, his answer was categorically ‘No’.

The global consulting market was in 2019 \$188 billion, and Gartner stated what John Maeda has repeatably called out, that digital (design) companies have been the primary drive of growth among the top 10, and that there are clear signs of rising demand in technology consulting. The reason why we have not called this insight consultancy is because there are many other components to the consultancy services, we are particularly interested in the advice component of

⁴⁴ Qualitative Research – Interviews: 11. Three-time Chief Design Officer with experience at Board level (Appendix C)

⁴⁵ Qualitative Research – Interviews: 20. Design Leadership book author and Executive (Appendix C)

⁴⁶ Qualitative Research – Interviews: 10. Large multinational home appliance manufacturer (Appendix C)

consulting, the service that supports top down, CEO driven projects traditionally given to outside recognized consultancies that, in many cases, help the CEO and Board of Directors do what they intended to do any way. This type of service can have many shapes, but one that we have focused on are corporate blueprints, as described by McKinsey in their article 'Getting organizational redesign right' (Aronowitz, S., 2015). We believe that, despite the large swath of acquisitions of design companies in the last ten years, these top consultancies do not understand the value and impact of design, and in the case of McKinsey who has done extensive research in the business value of design (by the designers), they have companies under the McKinsey umbrella that provide innovations services to large corporations without integrating design, and this is a fact witnessed by the corresponding author and confirmed by some of the interviewees. This insight incorporates all elements that might turn into CEO advice, be it consultancies, the members of the Board of Directors, and other CEO's. If there are not enough executives in the C-suite that have experienced the impact of design in large corporations, with designers at the helm sitting in C-Suite positions, these executives who tend to later become members of several Board of Directors will not adequately advice CEO's on the topic. If there are not enough CEO's in large companies experiencing the power of design and designers, enough Steve Jobs's, Braken Darrel's and Jim Hacket's out there, it is hard for that advice to flow to interested and curious CEO's.

But designers cannot sit and wait for this reality to change, that is why we have created the meta-model later presented later in this thesis, as a cyclical virtuous circle of impact, a wheel of consequences of sort, that could in time improve this reality.

5.10 Ethos - What makes a designer a designer is at the same time seen as an asset and a liability

As previously described in 2. Literature Review, it's "an association of values that generically characterize designers, and though some attitudes and behaviours observed in designers might corelate with their ethos, there is no implicit or explicit causation. ... We have described these as a balance between two sides of the

continuum, tensions between two distinct approaches, assuming that designers are capable of embracing and delivering both sides, but when ‘push comes to shove’ designers will typically feel more comfortable in one side of that continuum”.

Mind you that designers are very critical about themselves, and like a designer coach put it “the personality of a designer is probably one of the root causes for the current situation, designers are autistic, not empathetic, not good storytellers, not good listeners, not good collaborators, characteristics that you need a top score if you want to be in that boardroom. Though a lot of designers say they are all this, I totally disagree with that and this is based on teaching >500 design leaders or designers and design managers around the world having worked with designers and design leaders of number one or number two in the world. This is my opinion, they are bad storytellers, not empathetic, arrogant, not good collaborators, not good listeners, they are bad influencers, and they point at the bad marketeers, bad R&D people, bad engineers, but they don't understand them and they don't have the knowledge to counter arguments from those functions”⁴⁷.

The list of 10 core beliefs we gathered are not meant to be exhaustive, they are also not scientifically plotted, nor resulting from a deep study in designer behaviour and attitudes. They are put together as a list of tensions that have come up in many different pieces of data and conversations like the one above, it shows up in a structured manner (though organized differently) in the research done by a group of researchers when they created a questionnaire to measure design thinking mindset (Dosi et al, 2018), and in reality may be a different list depending on who is putting it together. What we believe is that there is a moment in the life of a designer when she needs to question herself what she believes and what she wants out of her career, and in that precise moment, defining these tensions and figuring out what they want to do about establishing a better balance between them is crucial, and we identify this as the starting point for a designer. We did not use **Ethos** as one of the listed insights to interviewees, after we asked them ‘top of mind’ what they believed to be the factor(s) explaining the core question in this research, we shared a number of insights but not **Ethos**, because we believe that

⁴⁷ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

it could become a conversation about biases and assumptions, which we know exist, but that in itself is not the sole answer to the question we have been asking.

6. Final considerations

6.1 The designer in the room

This research, the findings and insights, combined with corresponding author's experience has led to a framework of needs to be addressed, by designers and non-designers. This framework is focused on the underlying biases and assumptions each side has of each other, unspoken but yet prominent and present in such a way that it prevents companies from making the best of design, and designers from contributing all they can to the success of companies and society in general.

A professor in one of the world's oldest collegiate school of business, when asked why aren't there more designers in Executive positions replied, "why isn't there more design thinking? Narrow question might be restrictive. Part of design thinking is foresight, in large corporations done many times by Chief Strategy Officer, how many of these are design trained? How are they looking over the horizon, evaluating threats and opportunities, exploring the fuzzy zone? It's complicated because some are just there grooming for higher position"⁴⁸.

While in many cases design and the design function is seen as the support necessary to allow other areas to drive decisions and establish direction, design is used by marketing, engineering, finance a tool to beautify their plans and boost their ideas, we aim for a future where marketing, engineering and finance support design in decision making and direction, work closely with design to empower their ideas and make them more impactful, more robust. Not necessarily because design's ideas are better, but because they come from a different place, a different **Ethos**. But it should not be necessarily about design, like a 20-year veteran and two times Chief Design Officer puts it, "recruit the army we don't control, invite people into our tent, convince them to work with the tools we have, some of them come back as coaches, not only in their business but in the organization, they

⁴⁸ Qualitative Research – Interviews: 3. Educator in world's oldest collegiate school of business (Appendix C)

have 150 coaches, spreading the gospel in their businesses, ‘yes, and’ is a design thinking mantra and when someone uses it he knows he did it. The world is constantly changing, but inviting others, and capturing their imagination, having them come back, is a great thing”⁴⁹.

The future of society and corporations will impact and be impacted by the future of design, and a 30 year design coach that has trained >1.000 designers throughout his career boldly stated that “the job designer of today will disappear, computers, AI and other similar technologies will take away the role of the designer as a problem solver, this has happened in other professions. There is an opportunity, if designers understand this and make a shift from problem solving to problem definition, and then to problem owning, but this means responsibility and accountability and we are not ready for it. For this, we need to be at N-1. Designers will also become machine trainers, AI trainers beyond people trainers. But you need to know machine language”⁵⁰.

Another very experienced designer that was a CEO and sold her company to a very large corporation, while looking at the future of design stated “one of the things about designers that they need to leverage more is their intuition, curiosity and their ability to tap into many different domains. A lot of them have experience in multiple domains, that's a superpower that goes unspoken. And so, when they elevate up, they really have to look at what they're great at and what skills they need to be better at and what skills do they need to learn, and so it's not so much about staying in a particular domain, it's about building the skills needed in order to lead in companies at scale”⁵¹.

In 2007 The Journal of Business Strategy dedicated a whole volume to design and Business, edited by Roger Martin and Jeanne Liedtka, two renown design scholars. Roger Martin wrote an article entitled ‘Why Can’t We Be Friends’ (Liedtka, J., & Martin, R., 2007) where he states in his preface “designers make executives nervous by combining what appears to be a lack of interest in rigorous, quantitative analysis with the inclination to propose—with apparently reckless abandon—radical departures from the past. executives might love the promise of

⁴⁹ Qualitative Research – Interviews: 14. Large American telecommunications company (Appendix C)

⁵⁰ Qualitative Research – Interviews: 1. World leader in designer training & coaching (Appendix C)

⁵¹ Qualitative Research – Interviews: 19. American multinational information technology company (Appendix C)

creativity, yet they find designers hard to take. Designers find executives inexplicably wedded to mediocre status quos and inclined to apply impossibly high standards of proof to design ideas ... thus ensuring those ideas go nowhere. Designers long for access to the purse strings executives control, but they find executives almost too conservative to tolerate” (p.6). This is at the core of what is still going on between designers and executives almost 12 years later. He then proceeds to explain the structural differences between designers and executives in different ways, the first consisting on a prototypical clash between Analytical Thinking vs. Design Thinking, another on a fundamental tension between Reliability vs. Validity with a curve diagram identifying the area in between reliability (business people) and validity (designers) where a 50/50 type of thinking is needed, but where by definition it is hard to find business people and designers living. He follows up with 5 tips for designers and executives ‘Table 13’ where he touches some of the elements that we have compiled as designer **Ethos**, a list of issues that need to be addressed by both designers and executives, a concept we explore further ahead in more detail.

The answer to the question “Why can’t we be friends” defies common sense, though common sense itself needs to be challenged and something different from science, which is something John Dewey does very well in his paper on ‘Common sense and science: their respective frames of reference’ published by the Journal of philosophy in 1948 (“Dewey, J., 1948). The reason why it defies commonsense is because one could say there is enough evidence of the value of design in business in the last 50 years (at least), but recent research as the one executed by McKinsey in 2019 seems to question the evidence or how that evidence has been absorbed by business managers.

Table 13 - 5 tips for designers and executives, Martin et al, 2007 (summary). José dos Santos 2020

	DESIGNERS	EXECUTIVES
1	<p>TAKE INATTENTION TO VALIDITY AS A DESIGN CHALLENGE.</p> <p>Inattention to validity is and should be treated as just another design challenge for the designer, to be tackled with the same gusto and enthusiasm they apply to traditional design challenges.</p>	<p>TAKE INATTENTION TO RELIABILITY AS A MANAGEMENT CHALLENGE.</p> <p>Inattention to reliability is and should be treated as just another managerial challenge for the executive, to be tackled with the same fervor and enthusiasm they apply to traditional management challenges.</p>
2	<p>EMPATHIZE WITH THE “DESIGN-UNFRIENDLY ELEMENTS.”</p> <p>In the case of the schism between the worldview of the designer and the executive, a better understanding of, and empathy for, the executive’s point of view enables the designer to probe what constitutes a reckless decision versus a sensibly aggressive decision, from the executive’s viewpoint.</p>	<p>EMPATHIZE WITH THE “RELIABILITY-UNFRIENDLY ELEMENTS.”</p> <p>Only by empathizing with designers and really understanding their concerns and ways of operating can the executive devise managerial structures that take into account both the needs of the organization and needs of the designers.</p>
3	<p>LEARN & SPEAK THE LANGUAGE OF RELIABILITY.</p> <p>It is incumbent on the designer to learn the language of the executive—the language of reliability. Just like anybody who takes a job in another country and needs to learn the local language in order to function, designers need to learn the language of reliability to be successful in communicating with executives.</p>	<p>LEARN & SPEAK THE LANGUAGE OF VALIDITY.</p> <p>Again, both sides need to engage in the same discipline—learning one another’s language. The executive needs to learn and speak the language of validity. Executives will not get productive innovation from designers if they force them to exclusively speak the language of reliability. It is incumbent on executives to learn the language of validity so they can actually communicate with designers.</p>
4	<p>USE ANALOGIES & STORIES.</p> <p>An analogy or story helps the business executive see this is not a case of substantiation based exclusively on future events, because the solution is also based in part on past events. In the end, executives will need to convince themselves that the idea falls into an acceptable range of reliability if they are to adopt it.</p>	<p>SHARE DATA & REASONING, NOT CONCLUSIONS.</p> <p>For executives, sharing data and reasoning but stopping before imposing conclusions helps designers come up with a solution that can elicit a “Yes!” The solution designers come up with may make executives nervous on the margin. But it is less likely to be a design that executives feel compelled to reject out of hand as too scary and dangerous.</p>
5	<p>BITE OFF AS LITTLE A PIECE AS POSSIBLE TO GENERATE PROOF.</p> <p>Designers don’t love the notion of biting off a little piece, because it feels to them like any parsing or phasing of the solution will destroy its integrity. Most designers would rather have everything done in one swoop and not look back. But designers need to develop skills in biting off as little a piece as possible to give themselves a chance to turn the future into the past.</p>	<p>BITE OFF AS BIG A PIECE AS POSSIBLE TO GIVE INNOVATION A CHANCE.</p> <p>Executives have to listen to designers when they say, “We will have to do ‘this much’ of this idea or we won’t really know whether it will work.” Doing “this much” may be a frightening notion when not much reliability-oriented proof is available. But just as the designer has to stretch to bite off as little a piece as possible, the executive needs to stretch to bite off the biggest piece possible, without feeling she is being irresponsible.</p>

Research and data like the one by the DMI and Motiv Strategies, funded by Microsoft, with analysis of the performance of US companies committed to design as an integral part of their business strategy (they tracked the value of publicly held companies that met specific design management criteria, and monitored the impact of their investments in design on stock value over a ten-year period, relative to the overall S&P Index) where “2015 results show that over the last 10 years design-led companies have maintained significant stock market advantage, outperforming the S&P by an extraordinary 211%” (DMI, 2015) sounds pretty conclusive and should drive businesses to adoption of design, period. This research is run by respectable companies, the data is statistically relevant, communicated in visual language that aligns with other business management dashboards. And yes, there seems to be a slow adoption of design, and a scarcity of designers in executive positions. Reality is this has also been claimed by marketing and they too claim impact in business performance and suggest the

presence of a CMO in the C-Suite has positive impact (Germann et al, 2015). So, like many have told the researcher in the interviews, this is not a specific issue about design, but about all areas not considered core by traditional business management (finance, operations, human resources, legal, marketing and information (Wright et al, 2017). There are others that have suggested this is just a matter of infancy, that design is very young as a profession, that we are going through the same pains that marketing went 50 years ago.

The corresponding author has a theory that lacks validation via specific research, that business leaders may not believe the role of design in the performance results as being determinant, they might agree that design is important, but they dispute the fact that all the performance results can be attributed to design. And in reality, if you still believe design is about aesthetics and beautification, it is understandable that one might not believe that the results of these corporations are tied to design, one might say that in their minds there is some correlation but not enough causation to justify a strong connection between design and performance results. Understanding what would it take for CEO's and TMT's in F500 corporations to believe in a strong causation between design and business performance is in itself a design opportunity, that could only be approached by first and foremost questioning these personalities about their system of beliefs.

6.2 Meta-model for executive designers

While all the data collected seems to point towards the lack of design savvy CEO's as a major justification for why there aren't more trained designers in the C-Suite of F50 companies, we would like to propose a meta-model that attempts to encompass more insights that we believe impact this reality. It starts with the designer **Ethos** and does end up impacting design CEO's and their awareness and decision making, but focusing simply on the CEO's is narrow view of the problem at hand.

The reason why we decided to build a meta-model, or a model of a model per definition, is because our intention is not to provide a model that can work as some sort of recipe for any designer that wants to aim and reach an executive position in the C-Suite of a large corporation, each person will have a model that she should

build in her own image. This meta-model comes with our analysis of why it was built this way, it provides a framework for building your own model, it has certain rules and theories supporting it.

While the most common applications of meta-modelling are in the software industry (Wikipedia) and in NLP neuro-linguistic programming (Elston, T. 2018), we were actually inspired by the work done by Mike Young (A Meta-Model for Change, 2015) who set out to “present a model of change which is both academically rigorous and practitioner-friendly” (Young, M., 2009). Young did a theoretical meta-analysis of a broad range of change-related literature including: learning; personal, social, situational and emergent change; helping, systems thinking, process improvement and leadership; to identify themes across all the change-related literature, and created nine common themes, a model for change as well as a model for learning, for both organizations and the individual ‘Figure 28’.

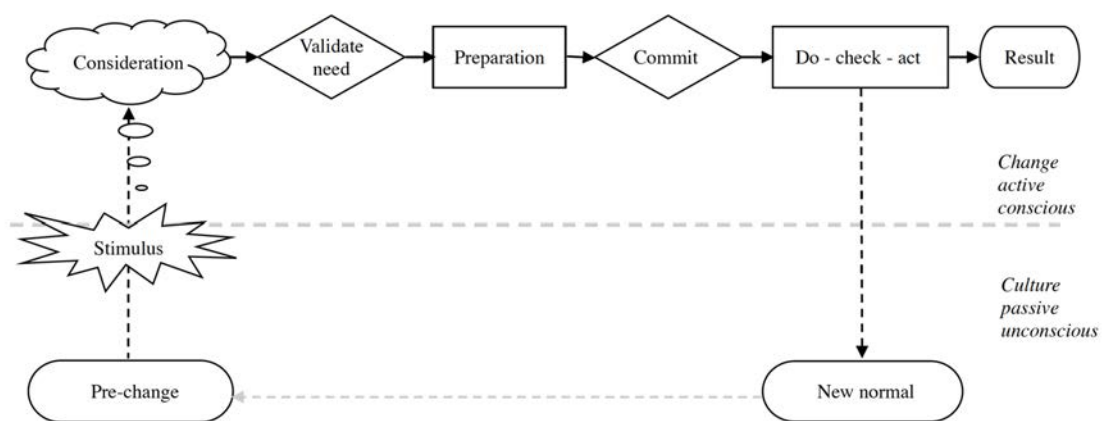


Figure 28 - Meta-model for change, Young 2015

We developed a Meta-Model for Executive Designers to support the creation of individual models, by framing the thinking and creating a vocabulary that can be used to talk about this object. We used the insights we have explored and identified as the structural concepts in the object, reorganized them and elaborated on the rules and relations between these concepts.

This meta-model is not just for the designer, it is also for the CEO of any large corporation that is curious, interested in embracing design and designers in

executive positions, it reflects the reality that we have found through the research, that this reality can only be solved if these two entities work collaboratively. The meta-model can and should also be used by other enablers, facilitators, and partners in this journey, from educators, to mentors, executive search agents, directors and other executives, there are specific concepts where they can and should play a part that can have a huge impact in this reality.

The meta-model is built in a virtuous circle like Young's meta-model, a sort of 'wheel of consequences' underlying it. In this meta-model, the designer **Ethos** is at the basis of a lack of **Desire** for this type of journey (it is a journey, a very long one), that lack of desire impacts investment in **Preparation**, which in turn impacts the **Flexibility** and experience that the designer accumulates or not during her career, this in turn influences **Access**, which provokes a **Scarcity** in the market, informing those that give **Advice** to the **Design CEO** on C-suite matters, they in turn question the **Necessity** of a designer at that level, and lack of example, use-cases and metrics end up complicating the case for **Effectiveness** in designers and non-designers. All these stem from and fuel the core difference between designers and non-designers, in a perpetual 'chicken and egg' situation, excusing and excluding one and all from their responsibility in fixing this very important issue. This meta-model is built as a plan of action, where correlation can be established but causation still to be proven, where both designers and CEO's have a 'scope of action', or areas where they can individually and in two circumstances , together (**Effectiveness** and **Access**) impact the meta-model and its results. 'Figure 29'.

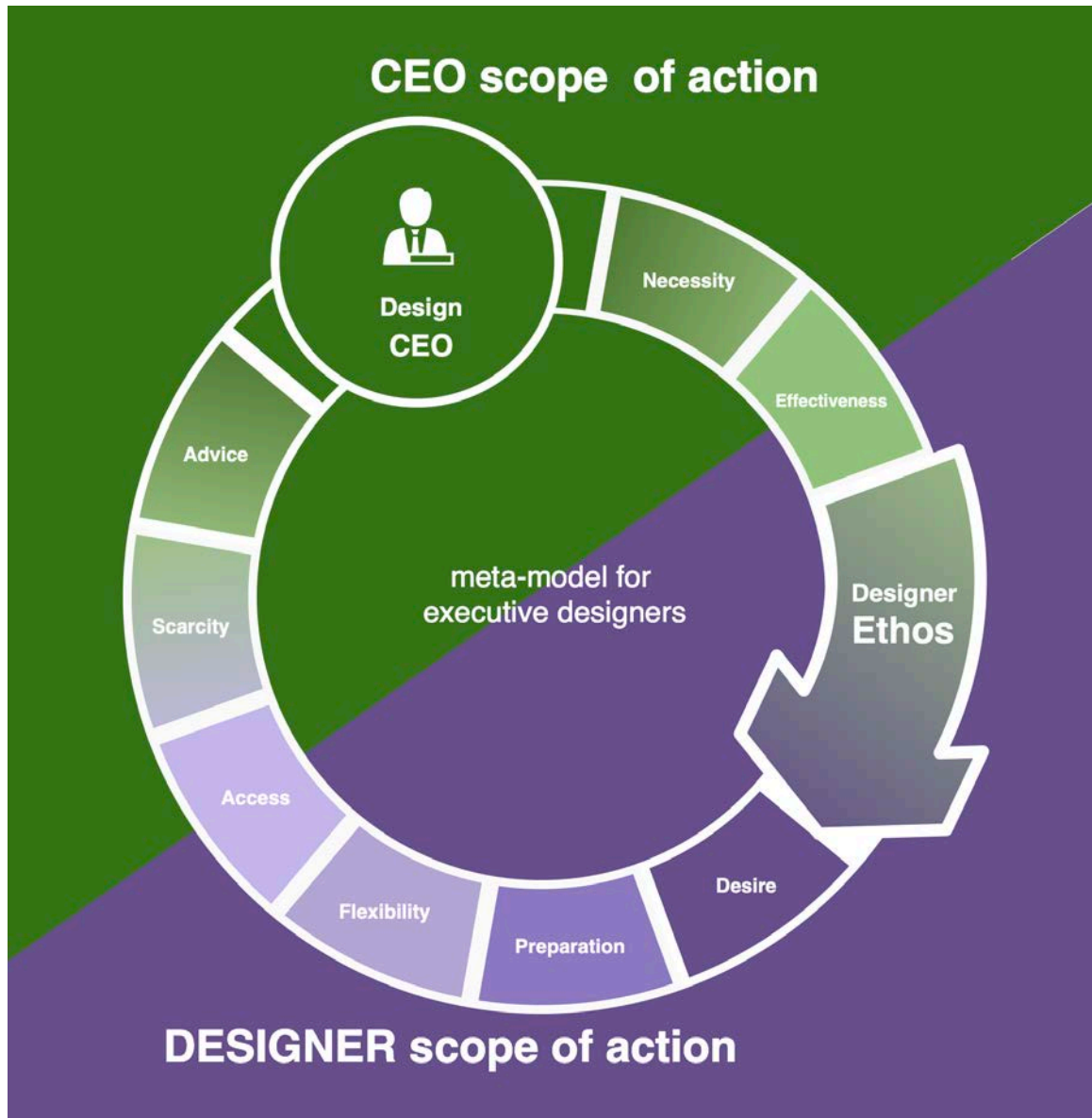


Figure 29 - Meta-model for design executives. Jose dos Santos 2020

Starting with **Ethos**, the 10 core beliefs that define designers, an association of values that generically characterize designers and relate strongly to attitudes and behaviours, should be openly understood and cherished, from designers as an act of self-knowledge leading to an understanding of the impact on others and in organizations, equally from non-designers as an act of empathy leading to a better understanding of where designers are coming from, but it needs to start with designers. We have described these as a balance between two sides of the continuum, that originate tensions between two distinct approaches, assuming that designers are capable of embracing and delivering both sides, but recognizing that when ‘push comes to shove’ designers will typically feel more comfortable in one

side of that continuum. This is important, this recognition from designers of what makes them a designer at a certain point in their career (not too early, around the Momentum stage of Citrin's career model, late thirties as a marker) is crucial, not to make designers forget who they are or change what led them to design and makes them a designer, but as a formative experience in learning to see the other side, a sort of 'walk in the other person's shoes' with all the empathy and 'language' learning that might lead to a change in behaviour, a more bridging type of attitude that will create more opportunities for debate and learning.

The **Desire** component needs to be fueled by a desire to be at the C-Suite level, but also to embrace large companies and all they mean to the economy and society at large, indulge in all the messiness and complexity that these large companies offer, assuming all the accountability and high pressure that comes with the job, essentially enabling designers to 'go big!'. This is a different route to being an entrepreneur in start-ups, and there is no judgment or valuation of one model over the other because they are equally important and necessary, but this journey requires a desire, a willingness to invest in herself at a point in life where a decision needs to take place, one in favor of large companies and focused on reaching the highest levels of management in one, as a trained designer (according to the design census 2019, most designers are working in either very large or very small companies, and the responses are remarkably similar to 2017 census). This is important, because the requirements of management in large corporations, are different from those of management in many other organizations, they differ with size and even with type of organizations, with many differentiating large public organizations from other large organizations, like non-profits, governmental or the military. There is a path to scale that is important to understand, embrace and prepare for adequately if this is the desired outcome.

For the purpose of this research, independently if the choice was a Bachelor in one or the other type of design, architecture or art, **Preparation** for an executive position really starts at the Promise stage of Citrin's six phases of a career. Throughout the Aspiration phase, the focus should be on being a great designer, learning what it takes to create great design, hands-on, fully immersed in all aspects of innovation, creation and production. In general, the wider a designer

might take her interests, the more curious she is about the world what makes it run the way it does, the deeper she is capable of diving in subjects that matter and interest her, the better chances that she starts this phase leads to an interesting Momentum. It is at this stage, and after defining her **Ethos** and making explicit her desire to aim for a design executive position in a large company, that the preparation really starts. To be clear, decisions about preparation that lead to the Aspiration phase (first job) and the Promise phase are very important, but a position in the C-Suite of a F50 will likely come around forty five and fifty year old, and the **Preparation** phase that tends to matter most is the period between mid-thirties and forty-five years of age, a Momentum of ten to fifteen years that require special attention. This thesis is not about defining what that preparation should be, our question was related to insights behind scarcity of designers in C-Suite positions in the F50, and preparation has been identified as one of them, but for every designer there will be a plan that is closely tied to her **Ethos**.

The **Flexibility** component requires a close attention to evaluation of one's strengths and weaknesses, and using that to constantly make decisions about opportunities that are placed in front of us, or that we go out of our way in order to be exposed to them. These might be opportunities to strengthen an already existing specialization that is core to the activity, but might also entail acquiring new skills in a different design field, it might mean scaling your team or taking on a new one, bringing in new competencies or working closely with external partners, doing bottom line driven design deliverables while creating vision based initiatives to capture the minds and hearts of executives. It might mean taking risks, facing failure, opening up to being inexperienced at something completely new, while trusting her own training as a designer. This mindset, hand in hand with continuous preparation, sets the ground for that moment in time when the designer remembers her ambition, her desire, and defines her **Ethos** to establish a map of her career evolution. For every person and for every company there will be a path, there is no guaranteed result, there are many different ways to lead design and the seat at the table may change with the make-up of the table itself.

Access must be sought, as much as battled for. While there is certain truth to the value of being in the right place at the right time, if you prepared yourself

adequately, and if you exercised the right amount of flexibility, access should not necessarily be an issue, but requires hard work nonetheless. This work might be in the shape of understanding, for the type of organization, sector, location you are open to embark in, what does access look like. It's about identifying the path to access as much as the brokers and facilitators, the network and the partners, the explicit and implicit hurdles to get access. But this is from the designer scope of action, this is the first component that also has a CEO scope of action, and his/her journey is different. It is above all a journey to establishing access rules, to define access in a way that will not stop the right candidate to try and get the job, even if they are a designer by training. A two-time CDO of a large global corporation, now retired, was invited by the CEO to find externally the next design leader for the organization, this is besides the fact there are 300 designers inside the organization. This exemplifies access and needs to be the concern of the CEO, making explicit rules and engaging internal and external partners to help build a culture of access to design and designers.

While designers impact **Scarcity** in a direct way, it is up to the CEO to ensure that the right type of work and support is done so there isn't a scarcity of trained designers to occupy a seat in the C-Suite. In the end, it is the same type of work that a CEO must engage if they are serious about diversity in its many shapes and forms, it is not good enough for a CEO to say that there aren't enough qualified designers out there, she must work closely with internal HR departments, with executive search companies, with educational and training institutions, to ensure that there are enough qualified candidates for the job. And this might require work done well ahead of the need per se, a path to access might include offering the right support, training, mentorship to designers to allow them to become qualified and ready for the position. Many of the designers we engaged in conversations noted that, while the corporation has a structured, formal training path for managers from different areas to prepare for executive positions, designers are often left out, not invited, not included in these trainings. That has a direct impact in **Access** and it is a responsibility of the CEO, it is an important characteristics of a design savvy CEO to understand this and work consistently for change in the organization.

Whoever is giving **Advice** to CEO's in large companies needs to work harder to understand the business value of design and generate the right type of advice. And CEO's seeking (and often paying for) advice, from external consultants, executive search companies, members of the Board of Directors and their Top Management Team, must be curious enough to ask the right questions, to demand for the right advice to inform their decision on how to effectively bet on design and designers. CEO's must question themselves and those they seek advice from on what it takes to build a truly effective, customer centric design organization, explore different models and blueprints, different ways to address performance. This requires courage, to create a path that is often not there, and there might not be enough examples of how it is done, so it might require adjusting and fine tuning as you grow. This requires vision, to establish new goals, define new horizons and empower design and designers to work towards those in collaboration with other areas, in equal standing, with a direct connection to you so you can learn and influence direction. This requires planning for a culture change, for a structural change that recognizes and empowers design while creating the right levels of accountability.

As this period requiring courage, vision and planning builds up, one of the most important areas that will require addressing is related to **Necessity**. There will be many questioning if design really needs to be at the C-Suite level, and if for that to take place a designer is really the best choice. Arguments for necessity will range from 'our industry does not require design at the c-level position, we are not Apple', to 'our corporation should be focusing on scaling operations and growing through optimized sales & marketing, design will add extra cost to our operations', to 'we already have design represented in the C-suite, Bob is managing the entire front and back-end customer experience team'. For all these questions, there must be an answer that defies assumptions and biases toward design and designers, while conversations might evolve into return on investment and use cases, it has been proven that this change requires the courage, the vision and the planning of a **Design CEO**, one that finds the right candidate, defines the right strategy and pushes ahead with top-down drive. Yes, it does require change management with all that it is included, in Logitech they substituted marketing with design, that is a

bold move. P&G brought in their external consultant as Chief Design Officer, another bold move. Microsoft just grouped Design Windows and Devices under Ralf Groene, yet another bold move, by design, with a CEO making the call.

Once a CEO has decided on a designer she is taking on for the role of CDO, **Effectiveness** is a shared responsibility of the CEO and the Designer, but the CEO needs to drive. It should be the top priority for their engagement, it should require a due diligence period that questions how the corporation builds strategy and define success, it requires a clear definition of design key performance indicators that are tangible enough to be defined both quantitatively and qualitatively. Our recommendation is that this period of establishing clear guidelines for effectiveness is critical for design and the corporation, understanding what the customer values and what can design do to deliver, establish the right base line data so you can track evolution and improvement, set-up the right practices and tools, involve different partners in a win-win plan that shines the light on the right indicators. It is a shared responsibility of the CEO and the designer, but the designer needs to drive, the setting up of the right design structure, the right team, with the right level of overseeing and connection to other value adding functions, with the right exposure to customers, the right assets and resources to ensure effectiveness in design, allowing the designer to be in charge but also delegate without dissolving her accountability, providing the right distance and protection but also the strong exposure and connection necessary to win together.

This paper provides no solutions per se, the intent was to research the hypothesis and provide data that points to potential justifications, hypothesis behind the scarcity of designers in the C-suite of large organizations, hopefully we will have achieved this, allowing further work on potential solutions to ameliorate this situation.

7. Limitations and Future Work

This research has generated just as many questions as it has tried to respond to, this is a list of some of the limitations we encountered that did not compromise the research, rather introduce new directions, themes for further research.

7.1 Sample composition and size

We believe we formulated a focused research question, and what was apparently a good idea, to research design leadership in F50 corporations because they have a lot of credible public data due to the intense scrutiny they are under, turned out to be a limiting factor for exactly the same reasons. These corporations, exactly because they are under so much scrutiny, have a very choreographed way of communicating, with strong guidelines (and legal implications) on who/ what/ when/ how communication can occur. We tried to engage many agents in these corporations that either did not respond, responded with limited engagement, responded and engaged but asked for anonymity. They are also not that open to academic endeavors like PhD research, they fail to see how that can benefit them, and sometimes the fact that the corresponding author did not come to them through a bona fide business school affected the outcome. We are satisfied with the engagement we had, but it took a lot longer to have access and to have the conversations we needed to create the insights we did and make sense of the subject.

7.2 Lack of previous focused research

There is a growing body of research on non-CEO C-Suite positions, particularly when these positions have unique antecedents and consequences for the organization, and we addressed this in the literature reviews phase. There is also a large body of work addressing design in its many forms and designer leadership in general, also covered in the literature review. Nevertheless, we believe there is a lack of previous research in the phenomena of design leadership in large

corporations, visibility in areas such as design organization, design business impact, design scope of work, design relationship with other executives, design top level hiring practices, and other prior research that would have allowed us to do a more focused literature review.

7.3 Scope of discussion

The corresponding author is a professional with over thirty years of experience in design and design management, experience ranging from start-ups, to consultancies, medium and large size companies. The author also has some pedagogical experience with both designers and non-designers, but always as a parallel activity, not as a professional academic and with a limited exposure to conducting research that culminates in academic papers of the magnitude of a doctoral thesis. Therefore, the scope and depth of discussions in this thesis may not be comparable to those of experienced academics and scholars.

7.4 Breadth of research

Throughout the research process, the corresponding author came across a multitude of topics that seemed interesting to explore, but each of them would literally become a thesis of their own, potentially distracting the author from the focused topic of the research question. Here are a few of the most important ones:

7.4.1 Designer personality

One of the topics that has come up often doing the research is on the role of personality in the insights that impact the inquiry at the core of this thesis. Many cited the work of Daniel Goleman on leadership styles heavily influenced by personality (Goleman, 2002), and others have suggested the study of Myers Briggs seminal work on type indicators (Myers, 1962), there is some research on the introvert characteristics of designers (Adobe, 2016) as well as some evidence of how that introversion can be detrimental to a promotion to senior management roles (Moutafi et al, 2007). But throughout the 1:1 conversations and the research done, what came through a lot louder was the designer characteristics that

influence and impact the way the designer feels and behaves in specific situations, what we have decided to call designer **Ethos**. We did not have a chance to do Myers Briggs to existing CDO's and other design executives to establish if there were indeed personality traits that unite them all, but we believe via anecdotal and other qualitative data that these people are very different from each other, personality wise, we feel there are a lot of differences between Jonathan Ive/ ex-Apple, Ernesto Quinteros/ Johnson & Johnson, Mauro Porcini/ Pepsico, and between Ivy Ross/ Google, Robin Beers/ Wells Fargo, Joanna Peña-Bickley/ Amazon, but reality we have not done that research and it is a path worth pursuing for another researcher.

7.4.2 Design and scale

One of the open questions encountered as we navigated the topic is whether design has more impact and recognition in smaller companies, there seems to be data on how design is impacting start-up sectors, perhaps there are more corporations below the F50 threshold that have design as a main innovation driver, and several authors have claimed design works better in smaller scale corporations (Muratovski, 2015; Selene, 2015). One other inquiry in need of further research is what happens to designers in design driven start-ups once these corporations grow, become large companies, go public, do they stay at the helm, do they scroll back and stick with more operational and craft-based roles. Further research is necessary to address this open question and its different arguments.

The latest Business by design list from Fortune has 25 global companies (Fortune, 2018), 9 of them in the F500 list and 15 in the Global F500, so one could say that, according to Fortune's definition, large corporations are investing in design. Nevertheless, important to note that, with the exception of Apple, none of the Business by design 25 companies are among the top-ranked companies in their industry sector, and from the Fortune 25 Most Important Private companies, only one coincided with the 25 Business by design, AirBnB 'Figure 30'.

One should not forget that in this F500 list there is Apple #3, the company that has through the use of design grown into the most profitable company in the world, owning 20% of the market share of mobile smartphones but 80% of their margins, one of 6 companies in the F500 with a designer as an executive, Jony Ive (who has

since end of 2019 left Apple). It is known that Apple is a case in itself, but one could not avoid the 'elephant in the room'.



Figure 30 - Fortune 25 Business by Design. José dos Santos 2020

7.4.3 Design and business sectors

Another open question is related to arguments that designers have stronger representations in some industries than in others. The F50 list populated by companies in areas such as wholesalers (McKesson), healthcare (United), retailing (Walmart), and it could be that some might not be prone to use/ need design as much as other companies in sectors like household and technology. While it is true that this list has companies that are in sectors that one might identify as less prone to use/ need design, reality is that the array of sectors and companies is pretty balanced, covering a number of areas as diverse as transportation, food & beverage and technology. And there are plenty of cases of design driven innovation in areas like wholesale, healthcare and retailing, in fact in almost every sector represented in the F50, excluding Apple as the best in its sector, there is a case for a design driven innovation creating some sort of disruption in the sector, the fact that these companies are not as large and recognized than the ones in the sample this research is focused on does not disprove the fact that design is

important is distinct sectors. While it is true the largest number of companies are in the financial sector (10), Intuit has shown how design driven innovation impact results and growth. A different argument might in fact be that, in line with past history of financial institutions, (e.g. banks), good design thinking and doing applied to these companies, more human centric approaches and user experience would certainly not hurt the sector. This assumption of some sectors might be more prone to design than others might be more connected to a lack of understanding and recognition of design's range of impact addressed in the next open question.

7.4.4 Design range of impact

While design has evolved from when it was just considered a tool for formal and aesthetic treatment of products, claiming that design's full range of impact in business is fully understood might not be a reality and requires further research. While many organizations may recognize design as capable of impacting the left side of the design Council's Double Diamond of design activity 'Figure 31', it is not entirely clear how many organizations really do recognize this to be true, and furthermore, it is not easy to understand if informally designers have not been relegated to the right side of the Double Diamond, while other executives adopted design thinking principles to engage in the left side of the Double Diamond, for reasons that require further research.

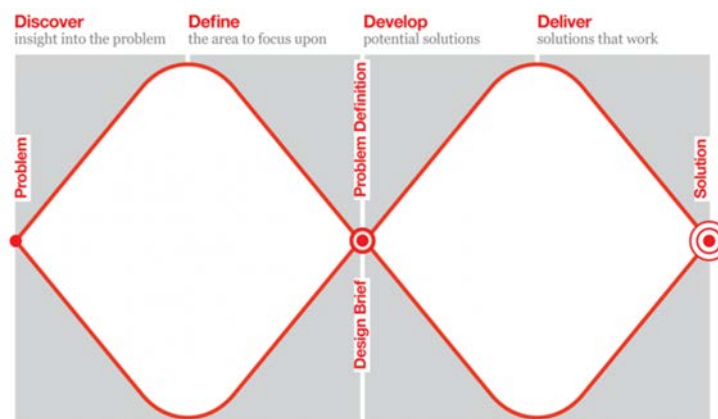


Figure 31 - Double Diamond design thinking model, Design Council, 2004.

7.4.5 Fortune 50 Vs. Fortune 500

The focused sample of this research was the top 50 Fortune 500 US corporations, and apart from a moment where we extrapolated the potential number of designers impacted by F500 corporations we have kept away from extrapolating any of the insights and data from the top 50 to the remaining 450 or even other universe of large corporations. Though we have proven that the sample is valid from a range of sectors perspective, it would be inappropriate to make any other extrapolations beyond the one we made. There is a possibility that the number of designers in executive positions of the remaining 450 corporations of the F500 is higher, we did not extend the research to the entire F500, we can only say that we did not come across references that signaled a different reality, meaning many designer trained executives in N-1 position in these large corporations.

7.4.6 US Fortune 500 and Global Fortune 500

Throughout the thesis and research it has become apparent that the US design reality is molded in many ways by the European reality, particularly the one that developed before and after the second world war in Germany, but also Italy and the Scandinavian countries. The reality of large corporations has also been influenced by large European Corporations, and though interesting to dive into, we did not dive into comparing large Fortune 50 or 500 corporations with global Fortune 500 corporations, understanding if there are more designers in the C-Suite of those corporations, establish comparisons and parallels between the corporations, their history. This is an interesting line of research that might have informed the work in this thesis, but that was not the purpose of the thesis and therefore we did not pursue it.

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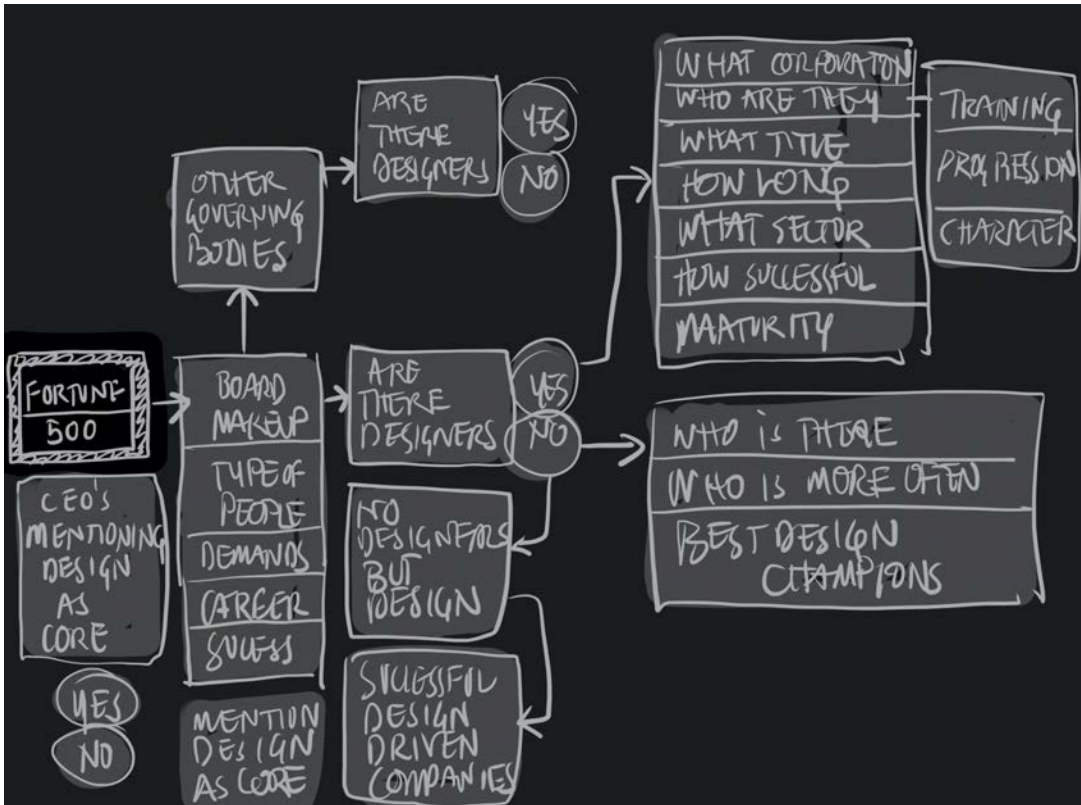
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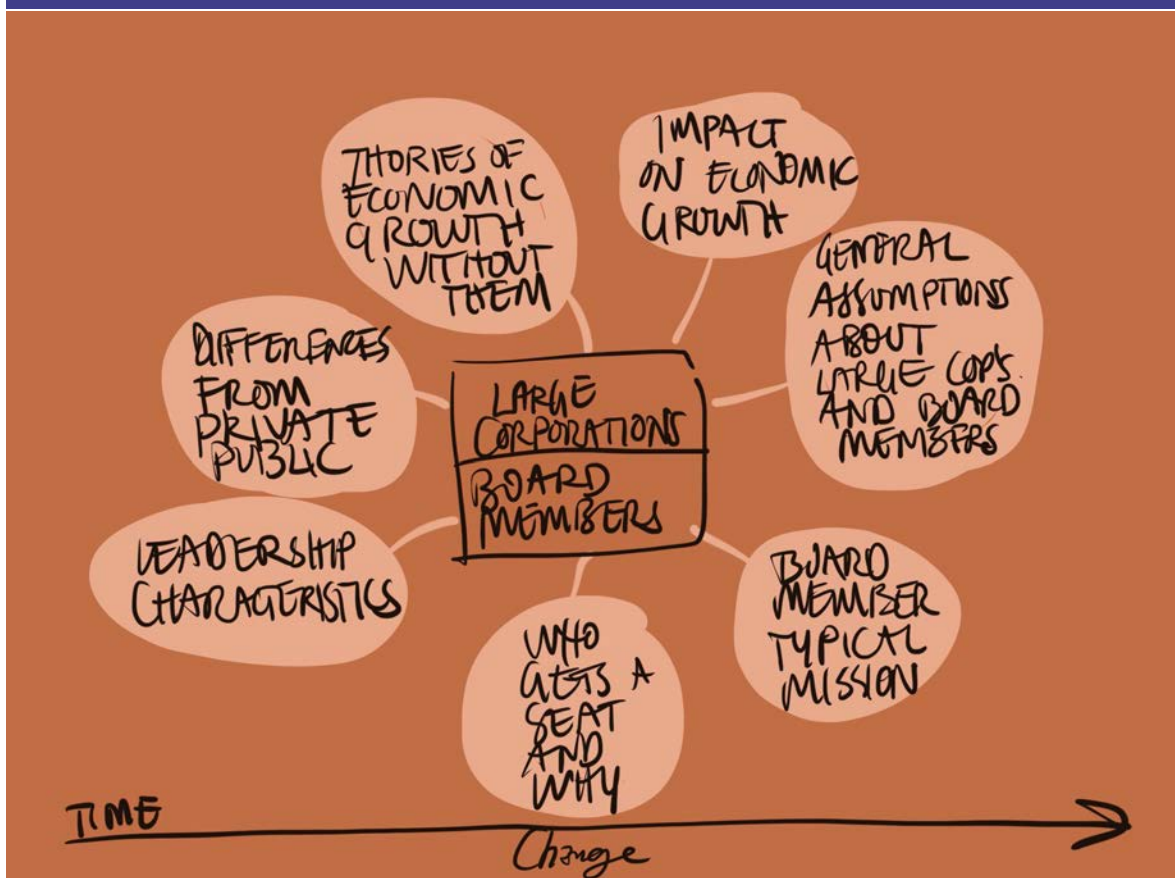
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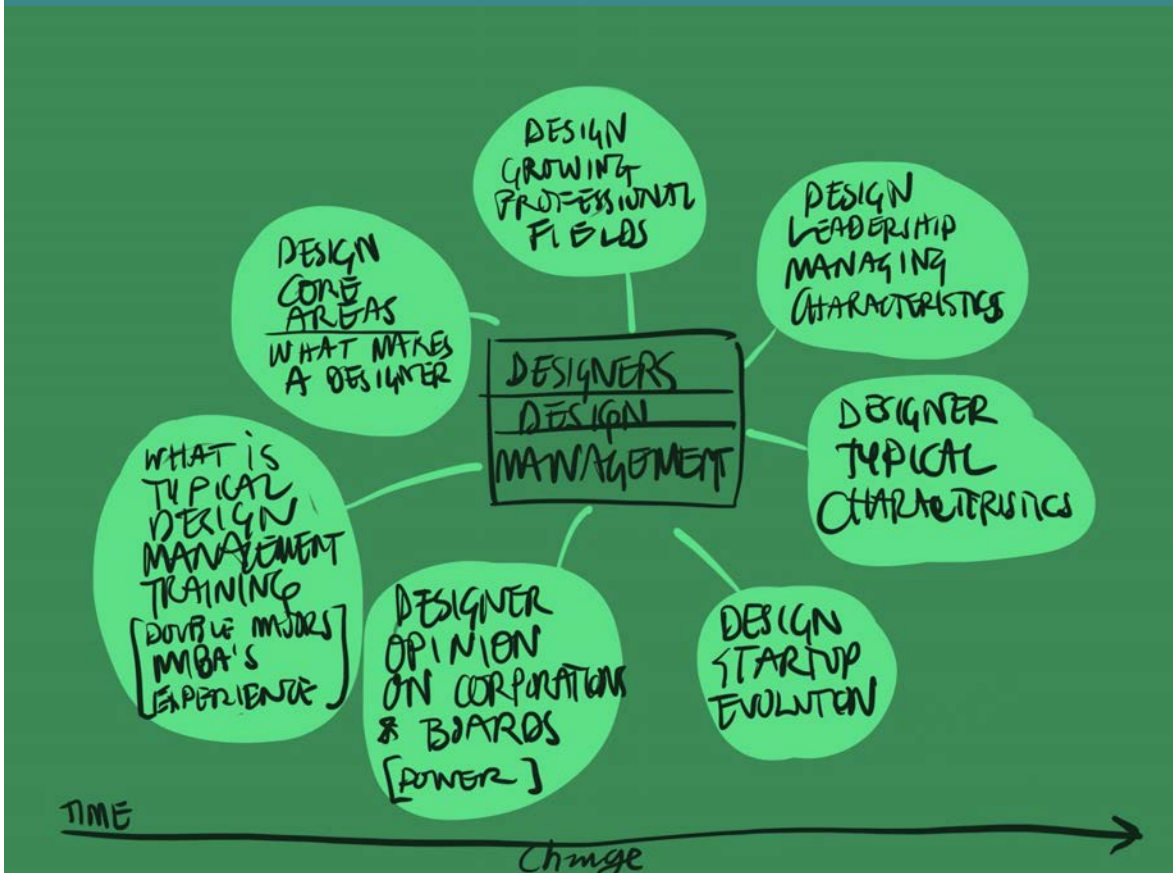
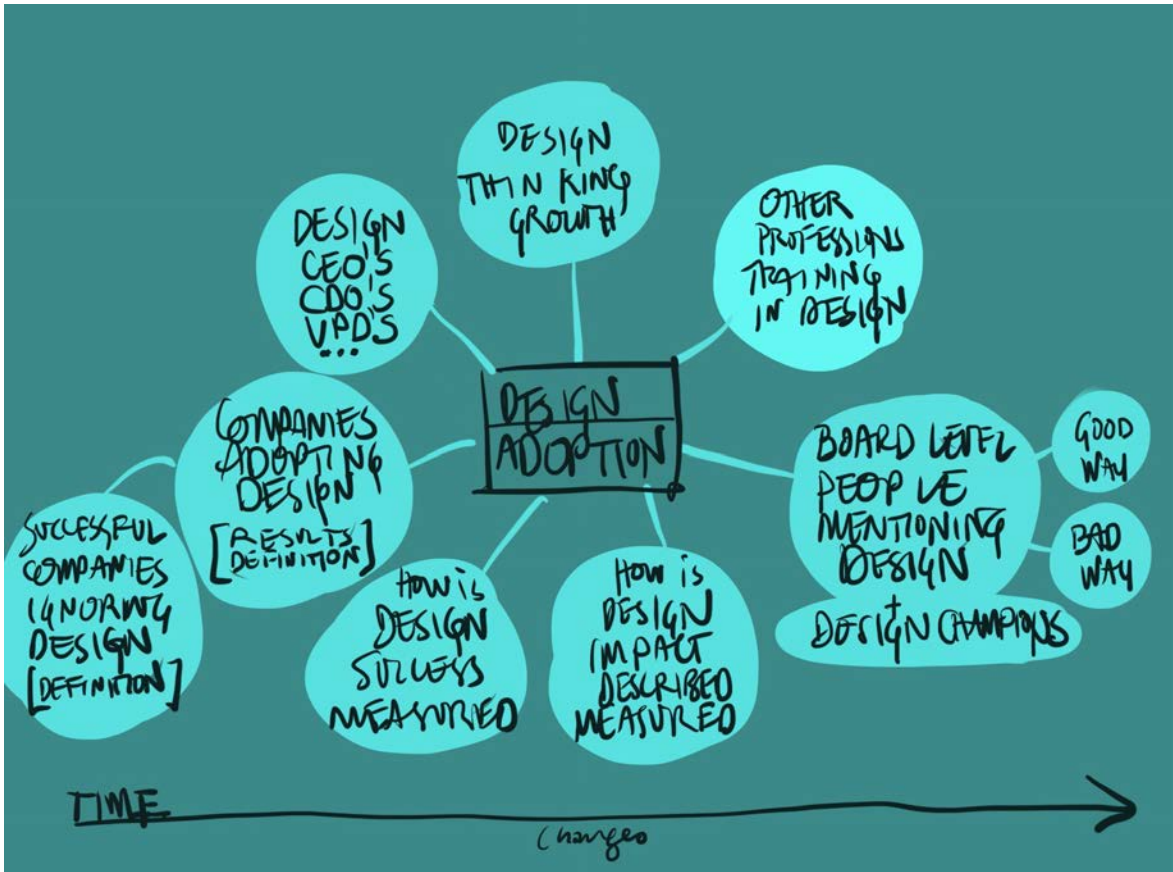
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Appendices

Appendix A: Initial scoping and mind maps

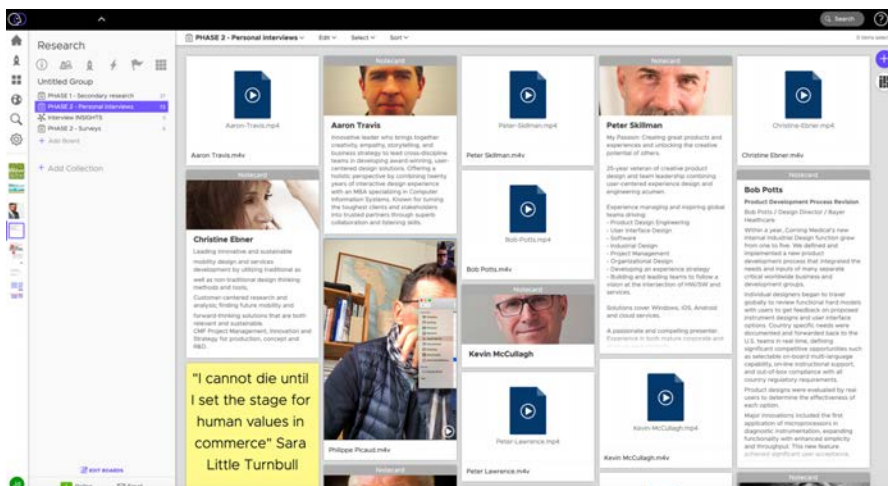
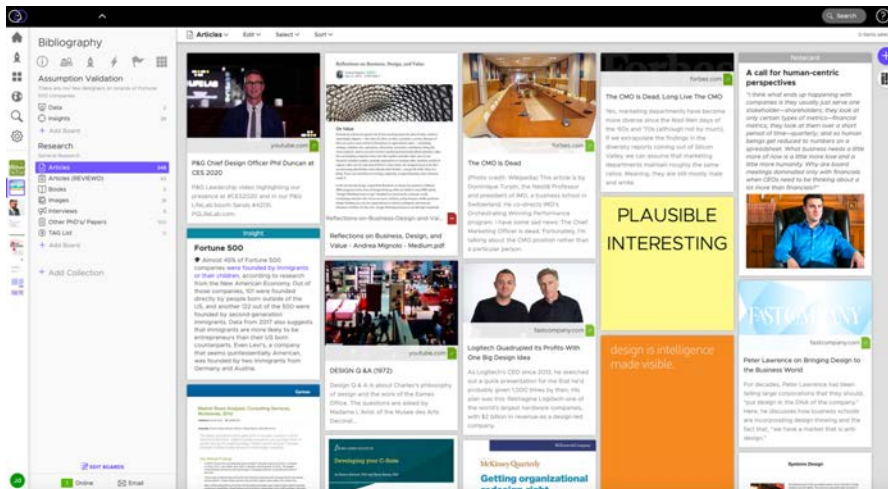
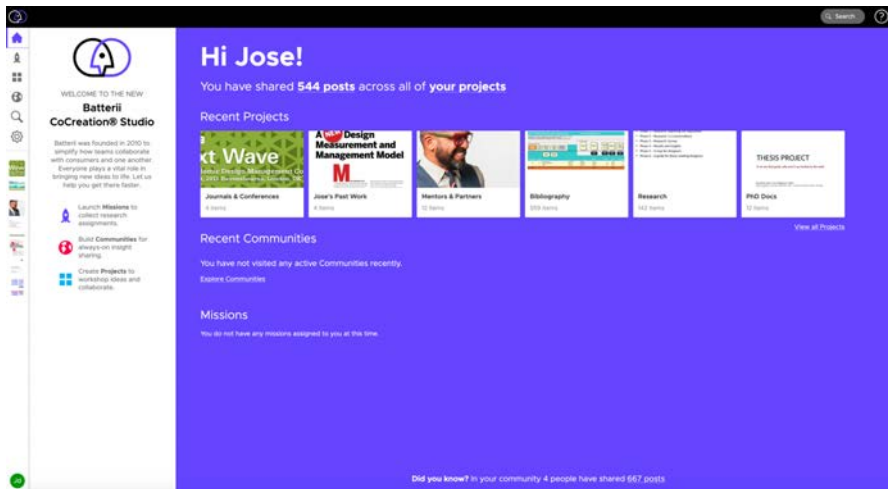






Appendix B: Research management tools

We have built and used an online collaboration platform for the research project, this has allowed us to collect, analyse, synthesize, and make sense of all the data and knowledge gathered over the last 4 years.



Appendix C: Interview Transcripts

We have transcribed and maintained a database of the 1:1 interviews with the relevant actors, not all have been transcribed. The names are occluded for confidentiality reasons.

Ref	F50	Entity	Main title
1		World leader in designer training & coaching	Coach
2		One of the largest public Universities in the US	Educator
3		world's oldest collegiate school of business	Educator
4		Executive training coach specialized in leadership	Educator
5		Founder Design Strategy MBA in a reputed college.	Educator
6		Design Thinking Executive coach in a large public University	Educator
7		Strategic design course creator at Business school	Educator
8		Researcher, educator and author of design management books	Educator
9		Associate Dean of an MBA program infused with Design Thinking	Educator
10		Large multinational home appliance manufacturer	Leader
11		Three time Chief Design Officer with experience at Board level	Leader
12		Corporation leader in robotic products in the health domain	Leader
13		Large American multinational financial services company	Leader
14		Large American telecommunications company	Leader
15	X	Large American multinational conglomerate in the health sector	Leader
16	X	Large American multinational corporation specialized in medical devices	Leader
17		International corporation leader in lighting & beyond	Leader
18		Largest home improvement retailer in the United States	Leader
19		American multinational information technology company	Leader
20		Design Leadership book author and Executive	Leader
21		Large American multinational corporation in the apparel sector	Leader
22		Innovation consultant and experienced board member	Leader
23		Designer with an MBA that reached C-Suite role, now in a startup	Leader
24		Design Executive in largest global beverage company	Leader
25		Only Latin Woman twice CDO in top 50 Fortune 500	Leader
26		Global executive search and advisory firm specaized in Design	Recruiter
27		Global search firm specialized in creative Executive positions	Recruiter
28		International executive search firm focused on Top Management Teams	Recruiter
29		Researcher in design leadership in the digital era	Researcher
30		Researcher at renown school teaching systemic, human-centered design	Researcher

1. World leader in designer training & coaching

The job designer of today will disappear, computers, AI and other similar technologies will take away the role of the designer as a problem solver, this has happened in other professions. There is an opportunity, if designers understand this and make a shift from problem solving to problem definition, and then to problem owning, but this means responsibility and accountability and we are not ready for it. For this, we need to be at N-1. Designers will also become machine

trainers, AI trainers beyond people trainers. But you need to know machine language.

Executive search companies: You are right, if there is no demand from the market, they don't have designers in their databases. Future employers will be the McKinsey's and Accentures of the world, and then they will end up in the databases, because that's where they traditionally look for candidates for the corporations.

Ethos: It's true that many times if you promote a good designer to a managerial position you lose a good designer, but that is true for any other professions. Designers are not that different from other professionals. I always knew I was not the best designer, my mission has always been to create the best conditions for designers to grow. So while it is true not all designers make good design managers, but I know many that have taken that decision consciously, they continue to be creative but accept that they will design in a different way.

Flexibility: This is linked to education and preparation, flexibility in a career becomes impossible if you don't invest in education, designers say you need to think out of the box but they keep themselves in their box. If they prepared themselves more, learned new things and said to the organization that they wanted more responsibility, that would happen just like with other people.

Scarcity: I don't think so, I don't have the data, could be because of designers idealistic view of the world, not sure if there are more or less designers than lawyers and engineers, but I don't think so. I could list 200 people in the 45/50 year old range that should be in the database of the recruiting companies. Maybe not that many, design is a young profession and many companies don't have this position established, but I don't agree.

Preparation: Yes, we have educated 700 designers worldwide about design and business, successfully most of them after finishing training got more responsibility, more budget, more people, more everything. 700 in 7 years, that's 100 a year. In Europe there are 17 Masters and BA's in Design, but none of those schools and none of those professors teaching there are people like you and me who have done this in reality. They have read the five books about design management and the sixth book is a combination of the other five books and the seventh book is a combination of the other six books. They are people who leave the university through the front door, and go back in by the backdoor and then start to teach design management. So it's not only the low quality of the design schools, because you could say let them focus on design doing, it's also the fact that designers don't look for Education after that.

Permission: Totally disagree. What sits behind permission, is fear. Why do you say we don't have permission, because they fear the CEO, they fear to talk with the guy, to go into the room, maybe get beaten the first time and get back the second time and improve Etc. Fear is a big driver for not development of people in general.

Desire: Difference between what they say (I want to be more...), what they do (focus on the design project...), what they feel (just let me design, no boring stuff please). They also don't want to be accountable, because you may have a high salary but in a bad year half of it might not be paid. They might desire, but not aspire.

Effectiveness: I don't agree, because if you are not sitting there, you will not get the mandate that will allow you to be effective lower in the organization. In most companies, if you don't have a design sit at N-1, those that sit there will not use design to make strategic decisions. Efficiency (doing things right) does not require a presence at this level, but effectiveness (doing the right things) does. Design must sit at N-1, if not today certainly in the future, some see it already, some look away, some put their heads in the sand, but modern companies will get challenges that need design competence and design thinking mindset to solve real problem that the world is facing already, and that companies will face as well.

Necessity: I tend to agree.

If you cannot express, build a case for that need in a company, and that if you do that, then the company will become more competitive or profitable whatever, then it will not happen. Those top five fifty companies have an average of 10 or 12 people at the board and they want to keep it to 12 not 13. So maybe one of the 12 must go out to let a designer in, they will ask if the business will be better if they are sitting there, have a seat instead of digital, or supply chain, or legal. And, by the way, I think my CMO does a great job at leading design, so what are you complaining about?

The designers I know that have reached these positions have done it through 20 years of really hard work, backward forward, backward forward, falling down and standing up, falling down standing up. It's a continuous struggle because the moment you are in that position, does not mean that you stay in that position. Design is the little thing in the corner, if you see what organizations spend on design compared to what it spends on R&D, compared to the spend to marketing, at the highest level (we benchmarked 30 companies, and LEGO is at the top) it is 0.9% of total cost, and then you go very fast down to 0.0 something. So, if your piece of the pie is a little sliver and not even a section anyone, if you want to make that section bigger, that only works when another section gets smaller.

It's very simple, design schools do not educate designers to lead. There are very few schools that do a little bit about this, but most design schools are about design doing, maybe a little bit about managing design, but not how to lead design. And that's not a bad thing, because if you're going to lead design, you need to know how to design.

I think it is a relevant question. If designers were happy as they were, I could understand that they felt your question didn't make sense. But the reality is that most design leaders I know are complaining all the time about the fact that they

don't have enough budget, don't have enough influence, are not involved in the strategy of the brand or the category or the company. So, if they would not complain and would be super happy about what they do and what they deliver, and it didn't matter who leads them, then I would agree with that reaction. But they don't, they are complaining, they are frustrated, they want more influence they are convinced that they have an added value to all those things.

second one has to do with the personality of a designer and which is probably one of the root causes for the first reason, designers are autistic, not empathetic, not good storytellers, not good listeners, not good collaborators, characteristics that you need a top score if you want to be in that boardroom. Though a lot of designers say they are all this, I totally disagree with that and this is based on teaching 700 design leaders or designers and design managers around the world having worked with designers and design leaders of number one or number two in the world. This is my opinion, they are bad storytellers, not empathetic, arrogant, not good collaborators, not good listeners, they are bad influencers, and they point at the bad marketers, bad R&D people, bad engineers, but they don't understand them and they don't have the knowledge to counter arguments from those functions.

You have to get ready to get into that position, because if you are in that room, then the people in that room talk maybe of an hour five minutes about design and the other 55 minutes about other things which may be unrelated to design, but the expectations are that if you are in that room that you have an opinion and knowledge about other areas as well. And most designers don't want that, don't get it, don't understand it, or are not able to do it, or a combination.

first one is knowledge and competence which trained designers no not have so they can get into that position. As an example, I was at a lecture with 420 designers, senior designers, design managers and directors, I presented my leadership program to them and asked how many had any training after they finished design school, 2 out of 420 said yes. So if you think there is an elevator that will take you for free onto the top floor of the building, it's nonsense. You ave to develop, you have to learn, you have top educate yourself.

Two reasons behind your question, nothing to do with the 845 executives, and nothing to do with the CEOs of those 50 companies, it has to do with the designers.

3. Educator in world's oldest collegiate school of business

Designers, people trained in design

Penn has a design school

Design thinking

Roger Martin

Background is in marketing

Design thinking starting from outside in

Understanding deeply your customers

Marketing building in that, fast experiences

Started in marketing
Design thinking more a value system, beliefs
6 years ago, book with Christine Moorman (Strategy from the outside in)
Strategy outside in
Value proposition in the shoes of the customers/ user/ competitors
User experience, value chains, customer experience maps
Design through the lens of marketing
Innovation
Successful in spreading design thinking into other areas
Highly integrative
Leader of IDEO London
Practitioner of IDEO methodology
He didn't understand how clients define success
Deficiencies in what the clients were
Impact of design hard to define because being so integrative
Contingency model, varies by type of industry
Financial sector has little design thinking
Products more prone
Fidelity... vanguard of this (I mentioned)
Large hospitals...
Concept of which companies are exercising a value proposition leader s+ thought
leadership
Jefferson Hospital in Philadelphia
Hospital system in the country with a design department
Innovation value
Contingencies... some companies are more likely to take on design thinking
Book...
Why more designers in executive positions
Why isn't there more design thinking
Narrow question might be restrictive...
User centric... experimentation...
Part of design thinking is foresight
Large corporations Chief Strategy Officer
How many of these are design trained
Looking over the horizon
Threats opportunities
Fuzzy zone
Complicated because some are just there for grooming for higher position
Scanning, executing foresight
(I am enjoying the discover...)
He was seriously going into architecture and do Stanford D School
IDEO UK leader loved design, but not very strong in Business
Bill Hewlett (Hewlett Packard) said "marketing was too important to be left to
marketeers" that's where Peter Gorb went for his statement about design
Two competing hypothesis (it's the executives/ corporations or it's the designers/
design schools), survey has to be structured in that way

5. Founder Design Strategy MBA in a reputed college.

Sadly, when you do these kinds of things in an Art & Design school, there is no data, there's none of that kind of self reflexive research taught or collected, so I don't have specifically that data unfortunately. It's all anecdotal, you know examples of this person did this in this person does that and and you know people who have hired our students and their reactions. And the other thing is that the program is still new enough that many of those students have just not advanced far enough to have the kind of impact that they will in the future.

Always happens when an entrepreneurs company gets built, and and there's a point where starting something and growing it are different skills, and so they either have to be kicked out of the company, often with a nasty fight, or they need to find a way to leave gracefully and go start something new.

Designers are never happy, they change jobs and become a consultant, then you get tired that you never get to follow anything too deeply and point to it put in your portfolio because you've only worked on little bits of lots of things, so you go back in-house or you go out on your own, or you really want to become more strategic and work at the strategic level, and then you really have nothing to point to, so you want to go get your hands into product again. That's just what it is, and there's people on the business side the deal with that as well.

This is one of the reasons we created the DMBA, because there are designers in all disciplines who complain they don't have the influence they think they deserve, it's not necessarily the responsibilities of leadership positions that they want, it's the influence over the strategic decisions of what design projects has to be working on, and you can't expect to have the influence if you don't learn some of the issues and the language so that you can have those conversations at that level. So, sure designers need to step up, by all means, and once you step up and learn those things and start to have those conversations, that's where the culture issues really kick in.

Generations of people have been trained with business tools where this is completely invisible, like the balance sheet or the rest of the accounting and so what's interesting is we have some new tools on the horizon language, which was absolutely a designers tool. For make a design early way of approaching business model.

The DMBA is different, other MBA's out there will train you to be a Design leader, but this MBA is not just for you to step into a VP design role, you should be able to step into any leadership role and lead from a designer's point of view (Maria Giudice/ The Rise of the DEO)

I'll give you an example, Instagram. It has like 13 people, they have been around for three years at most, they get bought by Facebook or 1.1 billion dollars. What did the balance sheet say the company was worth the day before the sale? 82 million dollars (by the way investors put 50 million in the week before that). So,

where did the extra Billion come from? So, the very thing that business people want the most is the thing that none of their tools sees.

The vast majority of a company's value at the end of the day, which you can only really measure if it gets acquired or it goes public, that goodwill that suddenly shows up in the accounting, on the balance sheet, the vast majority of that is qualitative value, and it doesn't appear in until the day after the deal.

This thing of saying there are not enough trained designers is a bit of cop out. There was a time when there were not enough MBA's in the world, if this is important to you go make those things happen, you go train those people into those positions if necessary. You don't just give up, right? On one level, they just don't care, but I do think that this is a culture thing, some companies get this, you know, LVMG gets that design is incredibly important, P&G did for a while, NIKE does, there are plenty of companies. In fact, if you look at the companies that have the best return on investment, the best revenue, design is always important to them. The problem with other companies is that they don't understand or they don't believe it.

You've identified a ton of factors, and I think which one is more important depends on the culture of the company.

Today we have in the agile startup entrepreneurship world this concept of the pivot, but so I just need to differentiate the pivot isn't the reframe, the pivot is what you do because you reframe. But what often happens is people will pivot without acknowledging the worldview switch, and so they'll just pivot to something else with the same worldview of what users need, and it's the lack of being able to accept that the world is different from what I see it or not.

And the second thing is the reframing, and the problem with reframing is that it's underemphasized but that's where the Designer traditionally has had to go back to their client, or go back to the boss and say 'hey, I know you told us that we needed to design one of these, but our research says nobody wants it, but our research identified an even better opportunity, it's one of those, so we need to go make more of those, and that reframing is everything, that's the most important part of the process and requires the most amount of courage from everyone involved.

But those first two things require the qualitative mind, and the first one of course is designed research, which is all about qualitative engagement with customers and competitors, understand the qualitative side. When we say Design research some of those Quant people go; oh, they're going to use market research techniques to talk to customers, great. Those are the techniques right? So very often the design research perverted from the beginning

For sure, I think it's great that a bunch of quote-unquote non-designers, people with non design backgrounds are learning and have an appreciation for design thinking, for sure. Many often don't know the difference, they don't know how to

gauge their own skills in it, they think they're better at it, faster than they probably are but I think they start to have an appreciation for it if they learn two things: and this is the other problem with design thinking, is that very often the thing that gets focused on in design thinking is prototyping and the iteration, which is really important for people. Of course, there are still lots of people, especially the quantitative optimizers that are like, you know, I'm not going to pay for the work I don't use.

So someone goes and gets a certificate in an IDEO Workshop in design thinking they're not suddenly a designer. There is, as you know, a whole set of design crafts passion, sound design, graphic design, interaction design, Etc., and knowing about design thinking does not suddenly make you a designer in any of those disciplines. Those take multiple years. So the crafts of design are a different thing than design thinking, which lots of people already have comfort and practice or come up to speed quickly. And anyone can be a design thinker.

6. Design Thinking Executive coach in a large public University

Look at what happened with Jewel (vaping), they had fabulous design, and it got them in a whole lot of trouble because they weren't thinking about the unintended consequences of the system that they were creating. And then they couldn't find an off ramp.

Ralph Bona/ Priceline used to talk about how important it was to have people who question assumptions, and how rare it was to have people who could reframe a situation or reframe a problem space, and to me that's what executive teams lack in part because they've grown up in many cases in the organization not questioning things.

The shifting of thinking is going to have to come ultimately from the top of organizations, how it happens I don't know.

So, do I need a designer to create a journey map and increase my awareness of all of the elements of the experience I'm creating for a customer? I don't know that I need little D designer to do that.

Yes, design can lead it, but it's bigger than design.

They are what I call inside out, not outside in. They may be very smart, but they're very focused on driving from the inside. Again, with product managers even very senior ones, you know, draw me a journey map and they're drawing it like 'we provide a website, we provide a thing. They're not telling me what's a customer doing, they're telling you what they're doing.

I would also think that this is just a different type of thinking, and that's why design thinking came about ultimately, it's a different mindset. I love hanging out with designers as they talk about movies and they read books and they write like they

live in the world, this is why humanities intersecting businesses becoming more and more important.

Everybody's checking the box, I have that organization, have them go those interviews, but we're getting out of those organizations is bullet points, you're not actually developing empathy throughout the organization. The designers are not being brought into the mainstream right at the beginning. I study all this through the lens of the product managers, because I see 350 of them here, so I see a lot. And what I see a lot is 'oh yeah, we have that organization, so we haven't done a very good job of integrating designers at any level, so why would we integrate them at the highest level?

On the factors, the one about they all leave (scarcity), well what's wrong with the system that they leave? the system doesn't appreciate them from the very first day, not from when they hit the glass ceiling. So, I would unpack some of it and I think it goes back to this challenge of customer versus human centeredness. They need to be embedded on teams at the lowest level in order to see the impact that they can have.

I have some students who have no training in design, who are really good at design thinking, they have the sensibility, the empathy.

That's another way to frame what you're thinking about, which is to say the executive team needs diversity and perspectives in heuristics. We're in a rapidly changing World, they got to figure out how technology that is going to disrupt their industry, so we're in a place right now where we need creative seniors. I could make the same argument you're making about a woman being present on the leadership. So, the question as a woman is what do I bring, I bring differences in perspectives and heuristics.

There is a guy called Scott Page (Uni Michigan) who writes about diversity, the role of diversity, and he's proven analytically that diversity trumps ability on a team that's engaged in innovation work, but he measures diversity in perspectives and heuristics though. I bring different perspectives by virtue of my background, I bring different heuristics by my training right, etc.

Then you can say designers often bring this set of capabilities, the R&D people bring that set of capability to a systems map at the senior leadership team, and the capabilities they bring to bear when you say this team requires these capabilities. Yes, and the design person often embodies this cluster of them.

And this is part of what we do with our four quadrant model environment, only less than 5% of MBA and engineering students are diverging learners, lower left hand corner, customer empathy. It comes down to having sufficient diversity on the team that's doing the Innovation work, and you're talking about the senior team that's leading Innovation work. Who do I need on that team to lead the innovation cycle. So, if you think about it that way then then it doesn't matter if I call them a designer.

But I guess how I would look at this, I think we put too much into the individual and not enough into the team. So, I would unpack it in terms of what are the capabilities that need to be present on an executive team for the company to be able to innovate. It doesn't matter who embodies the system thinking, but A) how do I get that present on a team and then B), how do I get everybody on the team to take advantage of those capabilities, or to listen to the right individual at the right time?

7. Strategic design course creator at Business school

I think it's a vital question to be asking especially we're competing in a global environment and if we don't ask those questions somebody in China's asking those questions, I think we have to come up with new ways of doing things. I think it's vitally important that you're asking these questions.

I just don't think the corporate system is a breeding ground for designers to thrive, because you're trying to create something new and there's no shortage of people in a corporation who are ready to say NO, very hard to find people who say YHEA. So you need a corporation that has those kinds of thinkers in place who will bring designers along.

I think that there is a certain lockstep to the system and they may be open to a designer being in the c-suite. But what does that really mean? I mean it may look good, It's a great buzz word, but in practice, what does that mean? The people that I've talked to in upper management, the champions of design what I usually hear, it's a rule rather than the exception, they say 'I don't know what they do, but got to have what they do'. So, they don't have a clear understanding of what design is, and I would still argue if you ask them 'would it be good to have a designer?' I would still want to know what do they think a designer does and how are they defining that for themselves? And how does that fill out that hole in the c-suite.

As a designer, I'm trying to steer clear of a system that breeds a certain kind of executive.

I really believe that there needs to be an alignment of design with domestic manufacturing. It drives me nuts that we design products and they automatically go offshore to be made and we are stuck with a landfill of products that are made very cheaply but they are made to be replaced not repaired.

As you're talking about this, what keeps coming in my mind is the system. Is there a the systemic reason, you could ask the same question of why aren't there more women, or why aren't there more people of color, and it is not that as a designer I don't want to drive the bus, I very much want to be in the driver's seat. However, if you're talking about Fortune 500 companies and that kind of system, I don't think it necessarily attracts big abstract thinking, It could be very narrow unless you have a very rare bird.

I guess the word I think of is, it feels confining to have to take on that role. If a corporation could take it on in such a way that a designer could fashion their own role, I think that that would be much better, because I think that's how designers are, they think of the possibilities whereas if you enter an official executive role it may already be pre-established.

About joining a large corporation: I don't think so, because I'm not someone comfortable in a corporate setting, unless that was an organization that I built myself. I feel that to end up in a c-suite is to try kind of fit myself into already an established mold and that's not a good environment for me. I know my aspirations, and I think that that was something I wish somebody would ask me that when I got out of MBA school. I think that would have probably saved a lot of chest beating and wailing because I still felt I was not a good fit.

I think a role of a designer is to identify the problems, because if you don't at least do that, then you're trying to hit an invisible Target. I found that the hardest managers to work with were those that would just say 'well, just create something we'll just do something' and they had no clear understanding of what it is they were trying to accomplish. And just if you don't give voice to the problems, doesn't mean that the problems go away, it just means they aren't going to be addressed.

I think that if more designers pitch themselves as creating order that would probably resonate more strongly with the c-suite.

I just came across this definition that Sara Little Turnbull had of design that I think about, I embrace all the time. Before when I was doing my class, I always thought that the definition of design was problem solving, whatever the resources you have, the timeline, whatever the constraints that you have to work with you come up with a solution. But Sara's definition kind of broke that wide open for me, and she said that the job of designers is to establish order out of chaos, essentially out of all the different variables, all the different possibilities, a designer's job was to create order.

Whereas designers, I don't think necessarily that they can't, I just I just think that their minds perhaps work differently, and that's why there's design thinking.

What I learned from my MBA was that there's a very different language being spoken. I came out of the business school being able to talk about Net Present Value, which is not something that I think a lot of designers are able to do, but I think still at the top of companies it's a very quantitative approach and if you can prove something with numbers, well, that's the way to go.

We had someone from Stanford Business School, her name was Sarah little Turnbull, and she was a groundbreaking industrial designer. I recently joined the board of directors that is championing her Legacy and she was a corporate America's secret weapon, she worked with a range of big Fortune 500 company. She worked for General Mills, she worked for 3M, she worked for NASA as a hired

gun. But the reason that she was in those companies is because the people at the top of those companies recognize her brand of secret sauce.

I got Phil Condit who was the president of Boeing at the time, and I really wanted him to come speak to us because he had developed this force behind a new design Paradigm with the 777 project, and he was very candid with us that the project probably would not have gotten off the ground were he not the president of the company, but he understood that you needed to get everybody talking at the very beginning, rather than having design be linear. The marketing team does it, throws it over to design, who then throws it back to marketing, and somehow it advances to manufacturing and then they have something to say. They did a study and the amount of time it took them to do a normal plane was two and a half times longer than what they did with the 777, they could have made two and a half more planes, but it required somebody at the very top understanding and embracing design, and I don't know that I've heard of an exception to that rule.

I think that design makes great inroads when you have a champion for it at the top.

It was a rude awakening to step outside once I got my MBA, to see how I was still very much an odd duck. People did not know what to do with me, either have an MBA or you're a designer. There was just not a real understanding that the two were compatible in my experience.

I see design as a wonderful buzzword, but I'm not sure I see the walk, I see the talk, I hear the talk.

So the class was really structured to give them a broad view of what design was, everything from industrial design to architecture, and that was the very first class at Haas to address the idea of design. I know the class was taught for a good 25 years after that, Sarah spun it off, and my understanding now is that there is a core class on design thinking. So, design thinking is now a thing at the time when I put the class together, I think the University of Michigan, the University of Texas at Austin, maybe MIT, and I think the London School of Economics. It was like counting on one hand how many business programs were addressing design.

So the wonderful thing about Berkeley is that they were open to student initiated projects, and I approach Sara not long after that conversation in her class, about putting together a class that taught aspiring manager what design was. I did not set out to make them into designers, but I wanted to educate them on how to not get in the way, how to understand making thoughtful design decisions, and it was so interesting because what I found was that they would make very subjective decisions, it was fascinating the kind of feedback that they were comfortable giving things like, 'I don't like that color change that color' without any real thought behind that what was driving that decision, and it was to me as a designer. It was as surreal I think as saying to an accountant, 'I don't like that number two, don't use that number two'.

So it was not long after that that I was in Sara's intro to manufacturing class and that was the first time I felt I was able to speak with any sense of agency, because they were talking about marketing as a discipline for identifying user needs and wants and then all of a sudden they started talking about manufacturing, making products, and it was like this whole big gap of how do you translate the abstract wants and needs into something that has been manufactured, and that's when I really realized that design was not embraced or understood.

Berkeley had, don't know if a policy, but they had a practice of hiring one odd duck every year for each class, and I found out I was the one, the year before me it was a music composer and it dawned on me when, I think we were in our economics class, we were in our cohort class and everybody went around the room saying that they came from finance, or economics, or marketing and when it came to me I said I was a designer and I had my own business, and then room got really quiet and everybody turned around and looked at me, and that's when I realized that design was not understood or recognized as a strategic perspective.

11. Three-time Chief Design Officer with experience at Board level

Two reasons you believe helped your success, 1) the fact you left school with a double major, Design and Human Factors, that gave you a head start in dealing with more technical and numbers based conversations. 2) the fact that you were ready to be at that level and corporations you have joined were ready to have a Chief Design Officer.

We also discussed on how important it is to have more designers in the Board of Directors of large corporations, so they can advise executives and CEO's on the importance and business value of Design.

12. Corporation leader in robotic products in the health domain

In some of these companies, you wonder of the phases they go through where they might be recognized as design leaders and then they cease to be, you wonder what happened, if they ignored design, overinvested in design.

Companies like SJ Johnson and Whirlpool invested a lot of money on trying to start new businesses and in many cases 100% of these fizzled out, they realized they had a business, they were not a new business development company. Those that made this type of misstep, "I'm sure there are many others where they spend buckets on design and then, you know not get any return on it and actually damaged the reputation of Design within that company to some degree.

I think all companies start with an entrepreneur who you could argue that is what a designer is, someone who sees a problem, comes up with a solution, develops it, markets it and builds a business. I mean that in its broadest sense is design, now they don't call it. It's not what you go to college to learn. If you can't go to college to be an entrepreneur or an inventor or whatever. I think that just happened, so many of the massive company so they started with one individual probably a scientist or a mathematician or a chemist or whatever, you know coming up with something

and developing it. And being a designer, they get on they have to bring in marketers and engineers and designers and salespeople to flesh that.

If you think about an organization as an organism that is growing and is in its early life stage that role of design and creation, because designers are creative topic, versus if it's very mature and it's a well-oiled machine just running and therefore (design can be) perceived as bad and it's a block and tackle come up with some IP, don't actually develop anything but just use it stop anybody else from doing anything pipe strategy, then where does design play designed them to be much more influential early on and when you've got this big monolithic Corporation, you have to start wondering, you know, what is there what is their purpose?

I don't think, I don't see Jony Ive as a big self-publicist, I think he is actually shied away from self-promotion, and I respect that a lot. There are a few others out there that I think they really are just about their own brand, it's almost the automotive the fashion model, but when that starts coming into consumer goods or heaven forbid banking or Medtech or something like that, It's not about you, you're but player just like everybody else (Designer EGO).

Now, in both cases I think it's changing for the better. People are seeing that having design thinking type skills - you know, a number of business courses now that are promoting design thinking and problem solving and how that's what shapes a company - is happening, but it's non-designers that are grabbing that and then going away and getting a six month or a two week course and they're coming back and saying I'm a designer, that really pisses me off big time, but that happens. Then I think on the other side as you've got a few people that are out there are senior design leaders inside corporations who do a good job, but there's not enough of them and even the ones that are there, I don't know if they're promoting the work they do or they're promoting themselves.

WHY: I think there are maybe alternatives to having a design on a c-suite because you can have successful design teams in-house the achieve the result without needing that c-suite position, or there is the consultancy model where design and design thinking is absolutely having an effect, but it's not necessarily through having a seat at the c-suite, there's a limited number of positions you should and could have on a c-suite, and there are other ways for design to have influence, some of it probably comes back down to that necessity. Is it important? I think that it is the perception that it's important. And then I think on the other side of it is, there are not enough examples of it yet, and if you can only quote five, you know, okay. It's not broken and there's not enough cases of showing what a difference it makes to make everybody think they need to do it.

I don't think just turning up and saying I've got a master's in design and I've got an MBA is going to get you a seat at the table. It will help you but you'll still accepted you have to get in and work your way up in my opinion.

The number of designers in my career who said I want to be a design manager, I want to be a design director, and when you either a explain what that entails, that it is increasingly the people management track versus the individual contributor

track, you know, that's a little fork in the road that they either then do it and don't like it, or now I don't want it because I don't feel prepared and I don't want to spend my time doing that.

On preparation. Yeah, I think a big part of it is that most people aren't prepared for it, so if they do desire it and they go forward and they don't get listen to because they hadn't prepared themselves well enough to understand what they were asking for or how to ask for it.

On Permission. That to me sounds like a victim mentality like, but I do think it's a steeper climb, there is a headwind there because it is not the norm. But if you're competent individual and you have a good point of view and you can make that argument crisply and successfully to the right people, and they believed you and they value it then it's going to stick in your going to go forward.

People would say 'you're not a designer anymore" and I was actually quite horrified, but in some ways it's true, but actually that's not you know, I lead the Design Group, I'm responsible ultimately for what comes out of that group. So in terms of the staffing, and the facilities, and the budget, acting and critiquing of the work that goes through, or even saying these are the things that we're not doing today that we need to be doing, and that's design to me. That's the design thinking part of it, what problem we got ourselves, do we have the right skill sets, are we making good arguments, are we presenting our case? ... But I think that that is design, and design management, design thinking, design doing its part and parcel of it.

On Effectiveness, Yeah, I think you have to because that's where the resources are assigned, the direction is assigned...it's not the only one, but you got to think it wouldn't do any harm. In the c-suite they're talking about five to ten-year plans, and those plans might be just growth through acquisition, or growth through expansion into new markets with existing products, or new product development and a big push to implement a new technology. In each of those are quite different, and if you're not going to be there for those types of discussions, you're just going to end up with what you get and you're going to have to play catch-up so I tend to agree with you.

on Necessity, is a c-suite representation different to just having respect for design, is there a shift in outcome. You have some you have a great design department, and a great brand, and great products, and not have c-suite representation. Does the C-Suite really make a difference? I got to think that it does, because that is a place where decisions ultimately get made, but I don't know how big of a difference it really makes.

(On Jonathan Ive and Steve Jobs/ Tim Cook at Apple). It's trust, it's respect on both sides. I don't think they they wouldn't make a decision that involves design, you know design Big D design, product interface, retail environment, architecture of Campus, whatever, without including the chief design officer be it Jobs or Cook, they seek out in the same way they wouldn't make a legal decision without talking

to their chief counsel or whatever it might be. That takes a long time, they are no longer an employee at that point, they're actually a pillar of the company.

And again, that's what I think, certain design schools that teach that notion of problem identification and then problem solving and then delivery and there are others that don't worry about two-thirds of that, we just we just going to do a video and you're going to learn from CAD tools and how to render, and it's like that's the saddest thing in the world to me.

No, I think designs important for all of them. Design verb and noun are both equally important across all those different Industries.

The CEO probably says, I need a legal guy, I need an HR guy, I need a marketing person for selling it, I need an engineering person for making it, I don't know if I need another one of you somehow bridging all of this.

So you're trying to weave it trying to put design into musical chairs with three bodies (design, marketing, engineering) but only two chairs.

Design inside organizations so often is viewed as shared service, you'll have business units that own the P&L and design team run across those, in the same way that marketing runs across, regulatory run across, manufacturing run across those. You've really got Business Units with BU Presidents or SVP's running those, design has a interesting spot because you'd have a head of engineering, so the technical side, and a head of marketing, the sort of social science side, and design bridges that feasible / viable / desirable. But there's plenty of Engineers who will tell you they are the design and marketeers will tell you they're doing the design.

The automotive world is very different, in automotive and Fashions a designer is almost the brand for the period that they're in charge, it's a creative field. Car styling and fashion styling, half a businesses around is that probably going to be successful because of its appearance or not, and then the other half is almost back back room stuff.

So I think again for you to be successful at the highest level, you need more than one string to your bow.

Chuck is the same was a dual degree in both industrial design and human factors, and I think that human factors is seen more as a science and that gives it, rightly or wrongly, more credibility inside a corporate environments because Chuck can quote statistics and whatnot.

Stefano Marzanno, I give him credit because he absolutely elevated designed to a senior position within an organization.

Sean Carney in the early part of my career, very good designer but wasn't and isn't, I don't think this is a discredit, your classic designer's designer, but

understood the value of design in business, took a real interest in the ROI and bottom line, and the business strategy.

I really only ever had two bosses who have both gone on to be Chief Designer Officers at a number of companies.

When you say designers, that's a pretty broad term. There are designers that have incredible knowledge of the craft and the Aesthetics form function manufacturer-ability, there are others that maybe their undergraduate was in an unrelated topic and then they come into design and are going to design management.

It doesn't seem like there's enough of (designers in the C-suite) given the importance of what that work is, and it may be because that's just historically how it's been and it's a hard nut to crack, and it may be because as you said earlier some designers don't want to go there.

But it does exclude a little bit the fact that so many designers have such an impact because they start their own companies and they have their own consultancy

I have zero shadow of Doubt that design should be managed by designers. I know that design should not be managed by non-designers.

The role of designers in creating and shaping society, and then how obviously large corporations are the major drivers of that, then the question of why aren't there not more designers in c-suite positions is a fair question, absolutely.

Decisions rights v. service provider.... but do designers have decision power?
(first chat)

Leaning for future design students

corporations with more power than countries

agent of change, what do you need to do

shameful that we don't realize what we need to do

decision rights v. service provider

speak the language

'I'll take imagination over knowledge any time' Einstein

people on self-promotion

they get there and don't want more

designer/ engineer that starts a company, different

founder becomes important, they are a 'designer'

why in Fortune 50 has less than 1% have a designer in the c-suite?

Is that accurate?

Is it true?

What is the problem?

Maybe not a problem

From training to where they are/ position (design >> MBA >> where are they)

What is the mesh, the stuff that is stopping them getting to this position

13. Large American multinational financial services company

If the answer is "they don't have the right skills" then as a future vision it might be about mapping those skills, one that keeps popping up is systems thinking, synthesis and holistic

Training people in DT becoming a home for design in these corporations, either integrated or not in HR (IBM case)

If a designer does not have an MBA he/she cannot aspire to an executive position, because they can't contribute, don't have the vocabulary... how can this be teased out, would this requirement in itself make a big difference? Is it incompatible, if you really love design, art, you can't love finance and marketing?

Design is usually present, but associated/ aggregated with other areas, perhaps at N-2/3 levels. Two distinct realities, the CDO where Design is by itself present, perhaps aggregating other areas, and design integrated in other areas, perhaps under innovation. When design is not at the CDO level, where is it located? With what other areas (typically)?

Why is N-1 presence of design leadership important? What sort of influence would they yield in the company, what would be different, what impact, degrees of influence?

Can this topic of designer leadership be addressed without asking if they would do a better job than other people leading design? Yes, by reminding that one statement does not imply the other, that there should be more designers leading design does not necessarily imply that others should not/ cannot lead design, perhaps even better

Un understanding that design leadership in Apple is more relevant, needed than in a bank

Asking questions about designer leadership to non-designers leading design creates a certain tension, not that they have anything against designers at their level/ higher, as long as it does not question their ability to lead design

Design as a distributed activity throughout the organizations, ranging from B2B and B2C sides, perhaps the question then becomes why should they be under one roof, respond to one design leader...

Consumer/ Customer experience being a new home for Design, covering the multiple touch points where customers engage with the organization, physical and digital space

Organizations not 'being ready' for Chief Design Officers, what could that be a sign of, what does it mean to not be ready?

1. Does your organization have a Chief Design Officer or similar role?

No. we've proposed it in the past but got the message the organization wasn't ready for it. A very large part of the business has posted a head of consumer experience which will include branch experience as well as digital and call center that's as close as we have gotten so far. I'm on the B2B side so that won't affect my organization.

2. If no, where does Design sit in the organization (eg.: Under Innovation)?

We have several design groups within Wells Fargo for different parts of the business. My group is customer insights and experience design for the head to be digital channel. There's also groups in retail, wealth and investments, mortgage, and probably something I'm forgetting.

3. What is the title of the highest ranking Designer(s) in the organization, where are they situated (eg.: VP Of User Experience, 3 steps away from CEO)

I have the highest role in the B to B side and it would be similar on the retail side and my title is senior vice president head of customer insight and experience design. We have yet to have an executive vice president in charge of design. I report to the head of the digital channel who reports to someone who reports to the CEO so I guess that makes me four down from the CEO.

4. What is the academic training of the person representing Design at the Executive level, responding to the CEO (eg.: Marketing)

I have a PhD in organizational psychology my boss and her boss and his boss have MBAs as does the CEM.

Does not feel irritated about the question, but wondered about it

Is it important for every type of organization?

Maybe Apple but not necessarily in all organizations, not in a bank

Question has assumptions, maybe serves to open the discussion

If there was a designer at that level, what sort of influence would they render, what would be different in the company

There is merit in having a seat in the operating level, but wonders... what degrees of influence would still accomplish levels N-2/3/4

5 factors... WF explored having someone report to the CEO, but there is no appetite, unfortunate but real

Chosen to be part of training, business acumen for executives

3 months, 4 different times, one week first time

Simulation of an operating committee, CEO, CFO,... and plan out in 5 quarters

how to keep it afloat and profitable, competing with other teams

Directions, stock, swaps, reducing/ increasing head count, etc.

Social science researcher, without an MBA she could not contribute

Different vocabulary, she is Head of Design and Customer Insights

Open her eyes to... this is why we have a difficulty getting their attention to what we believe it is critical, but they have another set of priorities

"this other stuff is important, that's why they don't pay attention"

Regulations risk management, investor relations, complex financial instruments,...

The majority have an MBA, senior managers in a bank, everyone has it

Relationship manager, head of marketing (important rebranding), financial

strategist, audit,... they all had standard business background

California College of arts, with combined MBA + Masters doing good work

MBA more focused on finance and marketing... we view the world differently

A designer with an MBA: Amanda Linden, designer at Wells Fargo, did an MBA and then career took off... Yahoo... now at Facebook
She might have a different take on the question
MBA might be important, but no one could have convinced her to do a business degree... loves design, history, art,... different mindset
Path that attracts designers, venn diagram does not incorporate profits and efficiency
Easier to teach the practice of Design Thinking (D.School stuff), easy to teach anyone, they enjoy the process, something on a very basic, physiological level... ahh yes, thank you!!! I don't have to know the answer, I can collaborate...
While, she took classes on business level... balance sheet calculation, not exactly the same.... not how she would spend her time
Trained 500 people in DT at WF, excited in working that way, value of people that can lead do design thinking
WF sales scandal... not a bunch of bad people... but a design perspective would have opened up questions, tension between sales and service... unintended consequences
Since the crisis, looking for root causes, she offered design thinking approaches to chart the retrospective, hasn't been adopted
Did a presentation, making business more human, when we teach design approaches we help the organization build capabilities for the times we are living in Experience strategy, agility capabilities,...
MBA set of capabilities v. design capabilities, very analytical, take a backward look to set future strategies... in the world we live today, unpredictable, this does not work
Design helps you slide a piece of the future, prototyping, experiments, user research... we don't want to break things into little parts
Analytical, synonym of being smart.... privileged to that instead of synthesis, holistic... different mindset to the table
Each region looks fine but all together...
My question... what are the missing capabilities that organizations need, and why aren't designers providing those capabilities... look at systems, synthesis
Roger Martin, Susan .../ IDEO knows this person, conversation theory, she is doing something special
Catherine Courage, head of product at Citrix, then DocuSign and now Google, business focused design leader, she has a paid board seat
Thomas Lockwood
Prototyping the question before getting into the research...
Base level skills are still necessary, on top designers have to...what do designers bring to the table in addition

14. Large American telecommunications company

Because designers haven't been given opportunity to prove themselves at that level, their role has not been validated, customer centricity has not been taken seriously, we are still into technology mode... experience in this domain is new.

There is a hierarchy mismatch... it could be the same number of years of experience, but one is a business leader and is a VP and the designer is a director... there is a bias.

Design needs pedigree, must respect among others

Designers may be at the same level of the other executives, but that doesn't mean they listen to them.

Leading design is leading several teams spread through the organization, some in-house, some consultants, some with directly while others as a practice lead (they continue to respond to sales, marketing, etc.)

Capital One adventure, reporting to someone who reported to the CEO, just like in Verizon. There was no design department in Capital One. Most companies have design in pockets, spread throughout the company. He took over a design team of 42 designers, 60% contractors... small teams. Built a centralized design team, founded One Design (check Medium, One Design channel). Built the team to over 100, improving the business, improve the customer experience to improve the business, was able to prove design's worth in this domain. Capital One had pedigree, CEO from Stanford, Executives from McKinsey... assumptions were always going to be done. Design Thinking team, focused on digital Design, hired a woman from D. School, Evelyn Huang, she and all her designers were a Director level, that team grew and she became a VP, he built other leaders to have 7 Design VP's, one of big accomplishments was VP's with CEO and other VP's... everyone says they believe in customer centricity, but they look at it and do things their way... if a designer is a Director at that leadership table, no one pays attention, they are listened to but... most companies are hard to direct... business executives will pay a lot more attention... based on this practice, research, this is what we did and this is what we should do.

Build out in Capital One when new experiences were launched, customers were appreciating what was done.. site, app, branches, audio, Alexa,... first launch in Alexa, most popular bank. Design team, prove through VP he/she had impact, had other business leader ask for a VP in Design. They bought Adaptive Path, a group of 40, had pedigree, catalyzed the level of respect that they bought into the organization. He was Head of Design, no one is a Chief. Look into Capital One. Wrestle with a definition with Design, Evelyn with an MBA and then went to teach, hybrid group of people that don't have training in design and then shifted, tracking these folks. Russ Wilson/ Google

Verizon, Chief Experience Office, started a 20+ design team, built that into 100 and acquired a design agency called Moment design. Centralized design studio. One VP of design at Verizon (Kevin Dalvy), Scott reports to Chief Marketing Officer, he reports to CEO, both VP's report into Scott. These are the most senior design leaders.

Verizon/ Capital One, he has seen hierarchy mismatch... it could be the same number of years of experience, but one is a business leader and is a VP and the designer is a director... there is a bias. Try and understand why are they not being taken into account, they have been dealing with this, promote people up to

appropriate level. His answer is: because designers haven't been given opportunity to prove themselves at that level, their role has not been validated, customer centricity has not been taken seriously, we are still into technology mode... experience in this domain is new... why not Board of Directors. Scott stepped down from Verizon 2 weeks ago... resetting himself. Kevin and another person will be in charge, he might do a book... venture and private equity world... ex AirBnB guys and a designer fund. If he believes something, it should be more influenced by strategies, means, etc... the one dramatic change is at when they are bought and direction is refit... opportunities generated from that.

15. Large American multinational conglomerate in the health sector

GE Healthcare spinning off, away from lighting

Healthcare very successful, they like it

It's still going to be great,

New CEO Kyrin Murphy (Irish)

Bob report to someone that reports to him

His boss is the Chief Digital Officer, Bob loves that

It will all be connected

Driving consistency, experiences

Tomorrow in healthcare is the future of many organizations

Always reported to Chief Technology Office, and Chief Medical Officer

Team is responsible for Design Thinking, trained 10.000 people since 2009

All products, customer engagements, patient experience

Design of hospitals, workflow, responsible and accountable for all embedded software in all products

Digital Officer is creating a new organization to invest in the platform stuff

RACI consulted for the platform level

A different team is doing development, he and his other partner are connected at the belly, work together

He is very happy for this, brand new, this summer...

60 people in his team, studios in bunch of countries, 2 in Asia outpost in Beijing,

Studio in Bangalore, Paris, Upsala/ Sweden, Milwaukee

Industrial, user interface, interaction, design research, cognitive psychologist,

business background, engineering, ergonomists/ human factors...

All the businesses, in the past they did lighting and

11 years, general manager, first executive to run design, over 80 years of design led, never a strategic driver

When they came to him, they wanted design to be strategic

He was in P&G

Only in the fall he was made a VP, there was never this

Huge step forward for the team, seat at the table

It was a valued resource, sometimes strategic

Engineering culture would squeeze off the last declaration station before they go to the market

Catchers of assignments v. co-drivers of the business

Pediatric adventure series

Creating company and branded language

Magic of Science and Empathy, emotional

Created partnerships

It's still not in the DNA, there is some DNA in some of the business

This is not a design driven company

They are partners, because they don't argue with him on money

He tells them what he needs and allocates the FTE's to what needs to be done

They are in all the rights tables, interaction with CEO, working with customer sites

He does not need to explain that design is great

How he got there:

1. Make it about everybody else, not about design; Chief Marketing Office who thought he was doing a grand architecture, spent \$1.5 M and he presented something and the CEO said we are not doing that, Bob said I will put the CEO in a Hero movie set and he is going to be in charge, he is going to solve it, 1.000 people started the conversation, they told the story. The inverse, waving the hands and saying how good he did it in the past.... Red in the face, pounded hands on the table... no time for fluffy stuff, I need cash now.... He was in trouble, talking about design thinking, he didn't care... 3 years later comes in and say where are the signature elements in this product... engineers had been removed... he was telling the story

2. 60 designers V 55.000, recruit the army we don't control. Invite people into our tent, convince them to work with the tools we have, some of them come back as coaches, not only in their business but in the organization, they have 150 coaches, spreading the gospel in their businesses, 'yes, and' is a design thinking mantra and when someone uses it he know he did it... world constantly changing, but inviting others, and capture their imagination, having them come back

3. History favors the bold, being subversive with goodness in the heart. Doing the right thing that we know it is true, doing it off the grid. The first three years was bashed, 'Schwartz, what the hell are you doing now', but you are the one that told me to never take NO for an answer. Same leader that threatened in the past are the champions. If you want to do the work, you need the bloody nose, but for good reasons. Don't be a jerk.

(Lawrence Murphy/ ex-design lead)

4. Show up as a businessperson in the context of your job description. Stop the 'if it's CEO, I'll come', need to be able to work across, clear leads and lead pipe, set vision and context, where politics, customers, are going. Marketing, sales, business.

Why not reporting to CEO? Because he would be sucked by his vortex, enough of his boss's meetings, would do it if there was a chance though. Why you have all these studios close this one, When the discussion is going wholesale... stay still and let it blow.... Nixon, Rosegarden ... hide and say nothings, when there is a fire storm... looking for people to cut.... Bring them a plan... he doesn't do it... where is the plan? Still working on it.... They move on, solve the big problems.... He has gotten away, let the wind blow and then makes the move. Any other business leader.

He has data on design thinking being adopted MENLO the design thinking strategy, after Edison, they use it as design. They found that most of the IP that comes out of those sessions come out of IP and HR... we are not creative, I am here because I have to... end of the week we can't get rid of it. They realize they can do it, make sense of it, they can actually connect dots, make a doodle, the

better HR people actually understand human behavior and add another touch to the ideas, and come up with idea, then the IP person say what they want.

17. International corporation leader in lighting & beyond

I can only remember one guy, quite some time ago, who spent a lot of time with Design, who was multidisciplinary enough that he could play the role of design representative in an executive committee, the only one I could have trusted.

FLEXIBILITY: In my opinion a big reason, we don't want to lose the whatever it is, the fire but also maybe the sexiness of being a designer. Jony Ive can keep on wearing his white or black t-shirts, go anywhere and nobody cares, but we know that if we become c-suite level, we probably need to start dressing differently as well and having a slightly different outlook on things. **TOP REASON**, which goes beyond education.

SCARCITY: is interesting, I've never thought of that, but there might be something there. I know at least one guy that groomed himself to become C-suite, put himself through business school, got his dream job, and then quit after 2 years and went and do a start-up. But there are also those that did the same thing for 15/ 20 years, earned their money and then dropped out or were laid off, so they might drop out for different reasons. And once you are out, it's hard to get back in the game.

PREPARATION: We don't have the cross functional training, we today market leaders that become business group leaders, which is what you need to do in order to have the right credentials. So preparation is a big thing, because if you don't have preparation you don't have permission.

ACCESS: We are typically not groomed to be there, the only place I was groomed was at [L] where, at a certain point I said to HR I wanted to evolve and they said, why don't you run a country, we will help you run a country, so do something different.

DESIRE: I believe there is truth in that, designers might say they desire, but we don't have the desire. If I take a hard look look at myself, I might say I want to be there, but I don't know if I really want to be there because I know it's rough and tough.

EFFECTIVENESS: Sounds like a cop-out, that it's not a good place to be. A believe the majority of CEO's might think that design is very effective.

NECESSITY: It's not a question of necessity, it is needed. There is a relative understanding from a C-Suite about the value of design, maybe not 5 years ago. If we asked CEO's is Design needed, they would say yes it is needed.

It also matters the amount of time we have to spend, impact the middlemen on the importance of design... this is too much of a chance, too much risk. In large

organizations, there is so much turnover, that person will change, no stability. Therefore, 100%.

The middlemen, the middle person, the middle woman who may be the person sitting at the board level representing design among potentially other functions that need to be represented, needs to be a darn good advocate. The alternative to sitting at the board is to have a number of levers and direct access to the decision maker or makers, a representative who is fully not just sold to the idea of design, but fully committed to the idea of design. Without being too specific on our case, we don't have it, I partially had it at [O] I had it much better at [L] and I had it quite well at [M], even though less sophisticated, much more style driven.

the objective would be that design is present in 100% of the cases at the highest possible level, just like you couldn't imagine running a business without a strong marketing, engineering, purchasing, operations and finance structure.

I still very strongly believe (this is based on experience and based on the people that I've seen leading design in various structures that were were not necessarily designer), that we have a more not just positive from the point of the designers themselves, a more more worthy, more valuable result, we have an input and delivery to the company which is more worthwhile than if we had it delivered or led by a non-designer. We can deliver that over a a few years, not just over a couple of quarters.

As a trained designer it's built into my curriculum, it's built into the fact that I have spent at least a number of years studying design, and therefore being more naturally prepared, it's wired, I can do it.

Do I believe that it is better for design to be represented by a designer? You bet, no doubt. I've been in Corporate settings where I've had fantastic design Advocates who were not designers, but in order to become real design Advocates, but in order for these people to become those great design Advocates and to potentially actually be great design leaders in a structure, and design leaders meaning not just leaders of designers, but leaders of the design function, they have to invest time to get there. And by time I don't mean to say it's too difficult, it requires a certain passion, drive, commitment to get there.

CEO: This idea that it depends on the CEO is a bit weak. One other job I had before, I was not even Head of Design, I was reporting to a CMO who reported to the CEO. This guy saw what design could do, this was the CEO that I was more removed from, he could be anybody but if you get the opportunity to do your thing (unless you're a really bad CEO, which is unusual at this level), unless the design value proposition is off and removed from the reality. So, the CEO is important but not determinant.

17. LEO FRISHBERG

Your question might be too small of a question, and you need to figure out why does it matter, what are the implications? To what extent does innovation suffer

when designers are not in that position in large companies? Correlate innovation and design, the value of design in the context of innovation.

At Intel, at a certain point the newly appointed CEO said he was going to compete with Apple on experience, and I approached him and told him that if he decided to create a position for an Experience officer at the C-suite he should hire me. because unless you have design taking a seat at the table, you would never have Intel competing with Apple.

I think you can answer the thesis question without ever getting to the value of having design in large corporations at the top through historic forensics. Another way of answering it is through asking is there a competitive advantage to having/ not having designers at the top? This goes to the core of Necessity, we don't need them because we've been very successful, but does that explain why Sears went bankrupt, why Kodak went bankrupt, might they have been more adaptable to the changing environment if they had thinkers in that C-suite that were more open to lateral thinking?

Your thesis is a moment in time, which is a good right. We now have enough history of large corporations, a hundred years, and we have a history of design becoming more formalized, which again happened in the 20th century. Why is it important that design be in the c-suite? And I think you're going to be challenged on that, and I think you probably need to have an answer for that.

Very similar topic might be empowerment and lack of empowerment in corporate structures, the path of underrepresented minorities.

Flexibility: I personally I think of all of the trades and all of the professionals and all of the disciplines that I'm aware of, flexibility is one of the key pieces of being a designer, it is the thing I feel most capable of doing.

Access/permission gets us back to the old boys club, systems perpetuate themselves, they do that through exclusion, inclusion based on filters that are self-reinforcing, and therefore unless you look like them, you're not going to slip through the filter. Access better than Permission, It says the institution is preventing access but it is an institutionalized form of prohibition, there's nothing written down, nothing in the bylaws saying no to designers.

Fundamentally, design is really different from Finance. Could I sit down and become a finance person? I could, I would probably slit my wrists before I actually got too far because it's not what I want to do, but I could sit down after two years of learning all the GATT and everything and really understanding how to move numbers around and what the purpose is of that. I really could get pretty masterful at that within three, four years. I could not take any of my finance guys and turn them into a designer after four years.

And so I don't agree about Effectiveness, Desire, Preparation, Scarcity, Flexibility. Those are easily overcome through training, because the thing one needs to do to

run a company or to manage a company, a designer can be trained to know what those things are and get our foot in the door way faster than actually being able to do elegant design.

I can train a designer to do many things, but I can't take somebody who's an analyst or whatever they're currently doing and make them into a designer, it is an asymmetrical path.

For me the most important factor is Access. I don't subscribe to the idea of democratization of design, I don't think you can just turn somebody into a designer by saying 'hey, you get to go do this'. It takes either by birth, certain wiring in the brain, and it also by will, by opportunity but mostly a mixture of talent and an opportunity to become a designer, it takes years to do that. It doesn't take all that much to build a business, you don't need that same depth of experience to do that, it isn't rocket science. Some who can barely put two numbers together have been fabulously successful in putting businesses together, that is not to diminish or discount those folk's abilities and what they succeeded in doing

Just something as simple as abductive reasoning has not been honored in our society, all the way down to elementary school, you're just daydreaming. We've just now discounted an entire way of thinking.

These organizations are our super-organisms, this whirlpool doesn't know what this whirlpool is doing and they're actually working counterproductive, because they're each stopping the other from proceeding, but they don't have any communication internally. So, you know, those are sort of the things that you could imagine happening as well as corporations get larger and larger and larger that these super-organisms get out of hand.

But there's some pretty obvious things right you could claim are going to impact the nature of Corporations.

But the other question is, who is in these positions and why isn't design part of their ethic which is the flip side of the question. By understanding what they value, If this is what's required to get to the C-suite, then we are not enabling designers to be successful in that environment.

20. Design Leadership book author and Executive

One of the things about designers that they need to leverage more is their intuition, curiosity and their ability to tap into many different domains. A lot of them have experience in multiple domains, that's a superpower that goes unspoken. And so, when they elevate up, they really have to look at what they're great at and what skills they need to be better at and what skills do they need to learn, and so it's not so much about staying in a particular domain, it's about building the skills needed in order to lead in companies at scale.

I really do think that it's on the rise, and it's going to take some time, and that in order for designers to be successful every person I interviewed said they cannot be successful if they don't have a CEO who doesn't believe in the power of design. If you join a company intending to change the CEO's belief system, it's not going to happen, you'll set yourself up for failure. The average amount of time you're going to be in a company is two to five years at the max, average people are in and out of companies with between two and three years, so you have to ask yourself, what kind of impact can I make within that three-year period and if part of your job is to convince the entire company and people above you that your valuable, that is not a good use of your three years.

Just be careful that design is just one of the many functions that are getting to the C-Level, look at engineering leaders and see if there is a difference, there are a lot of engineering led CEOs. My take is it is because their ability to quantify

About MBAs: Because when everybody believes in that mindset, they all lead from the same perspective which then does not create differentiation in the marketplace, it's like following a false God. An MBA might have been appropriate for many many years, but now if you can look at the people that you admire, who are those CEOs that stand out that we admire and track their story, I don't know this for sure, but I have a hunch they all didn't do MBAs.

If you see designers in a high-level position, look at the CEO, the CEO already has the belief system and understands the values design. That's what I call a DEO, Design Executive Officer, you get Jim Hackett (Ford) and Ray Anderson (Intuit).

Because there's so much stuff out in the world, they've now tied design to be the biggest differentiator in business success, they are now making arguments and creating business cases around why design is important in business. So now, we have some of the tools we can hold that data up, but what we're also fighting against is the deep-rooted belief system, it's almost like behavior change. It takes years for people to change their behavior, it takes years sometimes to change people's beliefs. So now that we have more and more leaders in those levels, we just have to keep adding more and more and more until there's a tipping point.

The quantitative data that's been available has only been within the last couple of years as well. So, for years and years, it was very difficult to make a business case for design and in the business world, it's all about numbers. It's all about managing risk and being able to measure and quantify it, and for years and years it's been hard to quantify the value of design, which makes it a harder argument. You could offer qualitative information, you could talk about the importance of delight, but thanks to McKinsey and the DMI who have tracked design, who have made the connection between design and the success in business and how it ties to shareholder return. We now have something to point to and say, there is value in design.

If you talk to executive search companies, ask them about board level, why aren't there more designers sitting on boards. That is the next level to shoot for.

I got a degree in Fine Art, I did not get a Business degree, but I led a very successful company that was billing 20 million in revenue before I sold it to Facebook. I started out as a designer and by necessity became a CEO, and figured it out, what how do I become a successful CEO. But a CEO is always going to come in from some context, they're always going to be good at something and suck at other things.

I would argue that the one of the many roles that designers bring to the table is unlocking possibility, unlocking creativity, imagination combining that with analytics. So when you can combine analytics and Imagination into one person, that's a very powerful super power, but people tend to think of design as this archetype, this narrow archetype that is again belief perception, you got to look at the whole person as a life experience and what they can bring to the table.

The factors listed sound a little biased against design, you can say the same thing and take the word design out and put in engineering, try that exercise right? Because when I think about engineering I think of it as a function, a component of a product or service experience, design is a function or component of that experience, right? So if engineers who just have a different function, could elevate why not design?

A lot of people come to design from different disciplines, I went to school in the 80s, no such thing as interaction design, it was industrial design and I believe is exactly the same thing as interaction design, just two different subtracks that came from the same thing.

About the Invision study and the way to position designers, what was interesting about that was showing 5% of designers that they pooled at level 5, but almost 40% are still at level 1 and that is because the vast majority of people in business still define design as an execution task, they don't either know or believe that design and designers are strategic in nature. There's a disconnect, a belief system that design is about execution, It's about making things look good, and that it is somebody else's job to think about the strategy.

The question being why designers are not accelerating, the answer is that they are. When I compare where I started out almost Just eight years ago to where we are today, there is a steady rise of designers in executive positions. I think a more specific question is why is it taking so long when you think about it. I've been a professional designer since my early twenties like 30 years, in this industry, and the ability for designers to be sitting at the table has only been really possible within the last five years, within the last five years there's been an acceleration, but I've been waiting for 25 years for that moment to happen.

I've seen huge increase over the last eight years of creative problem solvers getting elevated to the highest levels of organization and I'm excited that it's happening, but also seeing a lot of obstacles along the way when people who aren't either business oriented or engineering oriented entering organizations.

There's a friction in in the system, so I'm really fascinated by understanding what that why that is.

And so I'm really fascinated about designers who are also think like who are are highly creative problem solvers, but when you combine it with business Acumen you get this like incredible super power, which is what I call the DEO.

8 to 9 years studying the topic, trained artist and designer and became a CEO of a large organization called Hot Studio which I sold to Facebook in 2013.

21. Large American multinational corporation in the apparel sector

Rather call him CDO, they really are the CIO, the Chief Information officer.

The C-Suite, that's a very rigid structure that's been the way it is forever, right? So what does it look like, when you get somebody in there that looks like a scatterbrain and doesn't really know what they're talking about.

I can see it being a real struggle for a c-suite and a CEO or Board to integrate this freewheeling holistic thinking everything matters individual into that when you're trying to make decisions and you can get people in there who are very bombastic and that's going to create all kinds of Havoc. You can also get the people like Sarah, who are exceptional listeners, and they don't need to talk a lot. They just need to say when they see something or hear something. So, this idea of my role in design, in my profession, as being one of service is to recognize these different characteristics of individuals. The quiet ones doesn't mean they're necessarily shy, means that they don't know how to express the ideas in their head, you have to actually give them the opportunity to do so.

Designers don't have deep discipline specific knowledge in the areas that those people on the c-suite think are the most important in terms of the company being successful, and they're missing this holistic vision and strategy aspect. They understand strategy, but this holistic notion of having somebody on the board who can look across those and say I hear you saying this, hear you saying that, but there's something here in the middle and I'm not hearing that I think are connecting the two.

An effective CEO, they want their company succeed. They are pretty objective about all the components of the organization what they contribute, they have to be a generalist because they're not going to actually do the work. Their role is to do strategy. So the CDO is playing a foil in the same seat as the CEO because that's their role too, it is to look across the disciplines (if they realize what the role is about designer strategy) and make connections between them, help the organization move forward in the direction that the CEO and the board wants the company to move.

SLT: Sarah is a prototype of the way design should be influencing corporations. Because she used design strategically, and she was helping people to see and

teach them to ask why and to uncover the underlying, and she made lots of people feel uncomfortable, because she wasn't a discipline specialist, she was a generalist.

SLT: About the person who had first hired her, who was then the CEO chairman of the board at the time, a senior VP in the company said to her, "I don't think he knew what you did, other than the fact that you added several billion dollars in sales to the housewares".

Sara Little Turnbull (SLT): The CEO would tell a senior level of person that they needed to go to talk to Sarah, and they knew that Sarah was in Design and they'd say 'well, I don't have to talk to her, she's in Design'. So they go to this room close the door and Sarah would ask a couple questions most of which were, anything the person said would be WHY, she was no expert in any of these areas. She didn't need to be, her deal was to teach them how to see and how to think as a designer that was her job, and they go in there with this question, not wanting to go there, and then come out of the room and they would have a whole different perspective on what it was they were trying to do.

Of course a designer is not going to get into the c-suite without the the Clairvoyance and prescience of a CEO.

And that is what the desire brings to the c-suite because they're going to hear what people say. They don't talk just about numbers in that c-suite, they talk about strategy. Absolutely, the designer can impact and influence strategy because they're going to hear things, things that the other people are too functional focused on because they're all discipline specific.

It's about the holistic aspect of it, a designer who's really good is a sponge. That's all part of the creative process is being able to step back and look at things in a broader perspective to absorb information.

SCARCITY: The design person needs to be able to talk the language and understand that language, but they don't have to bring that stuff, you don't have to bring the goods.

DESIRE: It's a very small percentage of designers who want to do this to begin with, I think it may be less than 1%. Doesn't mean that it's not right, and it's one of those things that could be proliferating, if you're going to go public, people going to find out, "hey, this company is really successful, what's their c-suite look like? They have a corporate VP of Design. What the heck is that?"

I mentioned earlier about educating the visually impaired, if you can talk in the language of the c-suite people which is dollars and cents, about strategy and how utilization of a creative process can impact their bottom line positively, then you're going to make in-rows, and it's a special designer who has this balance of the analytical and the creative. They've been through the creative process they live that, so they have empathy with those people, but they also understand that

design is one aspect of a business that's going to be successful. These companies are understanding that design is a Powerhouse when applied, and you see that in companies that are highly successful.

So, I don't have any real strong answers for you other than to say should designers mean the c-suite? Yes, and no, and the no part is that Designers, when you find a good one, you want to keep them doing what they're doing, and you pay them a lot.

10 years later, I approached Portland State University and said I would like to develop an industrial design program. They put me in touch with a gal, she knew of this individual the PSU had brought into who had been at Disney University named Mike Mike Pipie, and he put together a thing called Creative Industries, a creative boot camp over the summer aimed at people that were not designers, not from creative backgrounds, and we called it "Strategic Product Design: building a sustainable future". We had 24 students, they never institutionalized this.

Mid 80's I was discussing with Sohrab Vassoughi/ Ziba that there was no longer any educational capacity in the state of Oregon to develop industrial designers, and we were lamenting that and agreed that we needed to do something about that. We talked about that design was not just about the creative aspect of it, it had to be multidisciplinary. You because that's how people work in the real world, and this is true all disciplines you go into a university colleges. If it's all this tunnel vision, you eat sleep poop with these people of your own discipline and it's very rare that you go outside of that.

I was able to seamlessly move from the creative side and supporting them to working with Management, or legal, or in the factories, Marketing, sales, engineering to get Done. So that's where my bridge role is coming.

Yeah, so it's about educating those individuals who are on more of the analytical side, and I found this my role is this bridge player because I understood if some point that I enjoyed interacting with these people. Understanding their jargon their lingo, their processes and integrating that with what I was doing on the creative side because without both of those together, you don't have the legs of the stool to stand up.

The deliverables, results of many other activities are coming from the head, Designers typically produce things that are coming from the heart.

The second one is that I saw my role as a designer to help the individuals on the other side, that I called the visually impaired, help them understand this very mysterious magical thing called Design.

My role in management of design was to ask what's stopping you from being as Innovative, creative and productive you can be, I'm going to help remove those obstacles.

I think is a great question. It brings to mind a number of different things from my experiences. My approach to management and people professionally, even outside of Nike, has been one that was informed by a quote. It's my favorite quote by a gentleman by the name of Mahatma Gandhi and the quote said "there they go, and I must follow them for I am their leader".

I'm a highly uncompensated full-time employee of a month number of different nonprofits.

23. Designer with an MBA that reached C-Suite role, now in a startup

A good designer wants to change the world, in a certain way he is like a demigod
When I finished my school I had a lot of offers, 12 from consultancies and one from an industry

I went to work for a consultancy, but the owner was ego centric, destroyed work done by other people

3 months after he was fired, strong character fighting the owner

Second internship, factory, office furniture and he discovered the factory

He started designing since he was 6, using his father's shop (he was a farmer)

He designed a table + bed to play, he was 9 years old, no one in the family knew this was a job

5 years to get through his BA, he was not interested in schoolwork

Boarding school in Paris, he was too often in the workshop, he dreamed he would become a vet

He met a psychologist in the boarding school, he did a test with IQ result

"you are a right-side brain person, your tests in creativity, 3D, physical stuff, architecture?"

No, I have architect friends unemployed. why not design? I don't want to do acrylic furniture.... But there is more to it, an architect for products...

School in Paris, 3 weeks showing products, he went, met the students, went for an open day

He entered the room, and that changed his life

After school he said he wanted to start his own agency, but he went to work for an industry

He stayed in a switch company (Legrand) for 10 years, not just giving ideas but seeing it come into production

He loved working with users, contractors, understanding their pains, easy to install switches

He worked in standardizing the lines in Portugal, then went to London to do the same

(The Mini was not able to redesign their own Mini)

He prepared the project brief and worked with very good design agencies

Became a nightmare, marketing was very poor... "I have no power, I am wasting my time"

His boss was engineering, he wanted to move to Marketing but was very hard

Then went to work for Facom, was invited to design a meta language

He was in the marketing team, he had power, he had money

Quality of the tools were fantastic, they had a lifetime guarantee

The adjustable wrench was a great challenge, with production in China
Everyone saying it was impossible to have quality in China
Prototyping, mock-ups, parts back & forth, he had to go there to see
They were doing things by hand, he showed them CNC in the Internet
2 Months after 2 CNC were there manufacturing the tools, 2 years to set it up
He became more powerful, but he lost his boss, and then he had to work with engineering
He decided to break the glass ceiling, he wasn't participating in the strategy
Then Stanley bought Facom and Black & Decker
He asked the CEO if he could do an MBA, and the CEO said yes
He said he's pay for it, and HR helped him/ trained him to get a good one
He was a right-hand brain in a left-hand world, and he did the ESSEC
He tried INSEAD and the English level was very high
He didn't have to go through the GMAT, he was complexed because he wasn't at the level of the other students
This was a very good experience, they would invite experts from the different areas
It was hard, work at night, first time he had to read books to learn something
He got his diploma cum lauda and did a very good entrepreneurship project
Develop a mobile phone for the luxury brand, a personal stature object
He designed the Mont Blanc mobile phone, a partnership with Blackberry
At the same time someone did the same for Christian Dior
He went back and asked FACOM to build a new brand, his boss blocked the company, he quit his job (2008, crisis), and in 2010 he joined Group SEB
In France there are only a few types of companies that have this job, Car industry, Legrand, Schneider, Group SEB (family company), a corporate job of VP
But there was Fredric Boevry was there before and he quit
In between the system reorganized around design and all the marketing that was terrified to bring back design into marketing, he had the power the power to choose the consultants but not the power to choose the design, he could travel, and spend money, but had no power to change the mind of anyone
He tried hard to push, fighting one of the BU managers, and then he became his boss
He waited and he was fired, it took more than a year but they acted well
While working in Groupe SEB, he met a marketing guy in the business of home comfort
Stand fans, what can we do about this... I need something for next week...
This will take at least 2 weeks... I need something anyway, they did something anyway
For 2 years they developed the project... can I have a mock-up for Friday
We created a 1:1 poster completely silence and connected to home office
The CEO said let's do it, and they put design + engineer and to prove good design
Useful, durable, desirable... he got together with a company that could do it
Inside, they don't do it internally because the quantities are not enough to manufacture internally
But many times, when you get the final product you don't even recognize the product
When he got the first prototype, which was very bad

He had a team of 17 designers that had never visited a factory
Good design requires to know how to manufacture things
Hard to change that mentality, with a supplier that was capable
220 products launched every year... 750 people in Engineering , marketing and design, but only 17 designers
All projects in an excel sheet, all projects that didn't meet the numbers were stopped, they stopped his project after 2 years
He was disappointed, he asked if he could have the rights to the fan design
He also bought their tooling for the blade
He left the company with the right to develop the fan and the tooling
Emanuelle Nardin (Devialet, high end sound speaker)
A great start-up, an engineer who was into Hi-Fi amplifier, who designed a PCB with zero distortion
He asked a designer to design a box for his amplifier, they got together with a marketing guy
They invited rich people in a cave, switched off the lights and on the amplifier, with Diamanda Galas singing, most people were crying, they then created a piggy bank and people would put in an envelope of how much they would put in the company, they raised 1M Euros
His title was Chief Product Officer, trying to be like Apple, have a designer to represent the customer
He gave it a try, and he quit after 6 months, the three founders were fighting every day
The company has one guy left with a fake office, the designer is still there working 2 days a week, finance is in control
They have very strong technology and good licensing agreements
He said he wanted to launch his own company
He launched his product on Kickstarter, this was a dream
The story of the coolest cooler, but he used real figures
He needed \$500K for tooling he needs 41 molds and to pay for development and return money
He needed to sell 1.M products to pay for everything
He put the stuff on Kickstarter and didn't raise money, and had 99 people that want the product
He had Le Monde advertising his product, he learned a lot
He then tried to get money from investors, and they asked him for a business plan
He asked which one they wanted, the optimist, the real one, etc
He invited an old friend to see the product, who was a VC
And he told him he was a good designer, a good prototype, but a bad engineer because the PCB was burned and had 41 tools, he offered to buy his company off and he said no
He told him that he would never make it because Stephane was not willing to put his money down, he then decided that he could pay the first tolling + sell the first container, and if he sold his first container he could pay for the second, so he didn't need the VC investor
He sold his first container just using online sales
He has knowledge for industrialization, and he knows enough about China to get good prices

He has been doing this for the last 3 years
Bluetooth connection, sensors, cold/ hot flow, managed by an App
Jean Louis Frenchaud designed the app
Sensor in the ceiling and the ground, the fan understands, the PCB has the science
Durability is guaranteed and resists UV, polycarbonate, 10 years guarantee
All assemblies done by screws, hard but easy to maintain if there is need to substitute components, separate motherboards
Packaging, biodegradable, no plastic no polystyrenes
Designed for DHL drop test

MBA. To break his own complex that he couldn't do numbers, and something he discovered, that everything is possible if you can deal with each function of the company at a time... the experts would come in and say the same, 'what could I do if I had power...' a CEO once said, I am a boat captain, I have a lot of buttons and levels in front of me, all of them saying they are all important, but they don't see the meteorology, the rocks, they don't know where you need to go.

WHY: He has the feeling that he was reaching his goal when hired by Groupe SEB, but all those guys they were working for themselves, they were not the founders of the company, even the family people didn't know anything about the product and the user, they were accountants.... Steve Jobs was nearly a designer, Jony Yves left the company because Tim Cook doesn't take care of the product, the relationship between the creative people is not good. Some of the best companies right now are created by designers themselves, problem is that a designer is not trained for business, in marketing they studied Michael Porter and he describes design as a tool for marketing, not as a key element of the strategy. We are not being able to create a new world, Group SEB prefers to do products launching in a carpet bombing way than bet on the right ones, marketing insights has more time to test products than the designer to create a design and a prototype. SONY launched the first Walkman, but then they didn't know which one people wanted and started to launch a bunch of products, then Apple did the iPod.

Chef de Project/ Chef de Produit, coming from business school, out fresh from a Bachelor degree, then they get the power to define product strategy, and they only know excel

Designers:

Too egocentric

Too much kalimero

We don't want to face our fears

No credibility with managers

It's our fault, we are not communicating efficiently

They are also protecting themselves

They are always fighting, they achieve it all via fights

We are very naive

When I met the chairman of Black & Decker, it was incredible

They were capable of connecting numbers

Zero sensitivity, zero dreams

When he started in Legrand he was dressed in a certain way, he was not taken seriously

Then he moved to another company, he decided to use a tie and a jacket, it changed completely

All the designers laughed, but in Germany designers are at the same level of the engineers

In France when the discussion becomes serious, designers are left out of the conversation

Design now is just a process, with design thinking

The best company continues to be Apple, three products a year, leading

Jony Ive nevertheless states the same problems we state, he was put aside by marketing in the same way

It all comes down to the CEO, but these folks never learned anything about design at school

Exceptions are in luxury brands, they are the only ones that give power to creativity

“my team has only one goal, create desire” Bernard Arnaud LVMC

While very successful companies put design in the forefront (Apple, IKEA,...) it seems other companies don't, and are incapable of understanding and replicating the model

You need to talk to psychologist, this a resistance from the corporate world against creativity... and then designers want to be demigods, change the world

I also had a problem because I thought everyone else's job that was not creative was less important and less cool than design

Another problem is that we, designers, are meeting among ourselves and not inviting other people to the conversations, we were never able to get the conversation going with CEO's, the ones that are good at using design, when these guys talk to each other it will be better.... Even DMI is designers talking to designers

26. Global executive search and advisory firm specialized in Design

If the future is about learning, are designers good at learning (self-propelled learners), and can they design a new way for people to learn faster, better, effectively?

What are the attributes a CEO needs from a Design executive, that are in any way different/ specific to a designer? Ask the organizations that have created the position of a design executive what they need/ expect from a design executive.

Ambiguity and risk aversion... would other executive agree that they don't deal well with ambiguity and have a higher risk aversion than designers?

What is the experience of design companies being bought by consultancies and other companies, how has integration/ assimilation non, has there been added value beyond another typical M&A?

Is a designer someone who did a degree in design? That is not the point, a designer can be many things, and perhaps can come from many backgrounds, and doing a design degree does not make you a designer. This could be said about many different areas. But there are designers, that do a design degree at the BA/MA level, who call themselves designers and want to pursue a career in design.

Does it all come down to the CEO, is he/she in the end the best guarantor for Design importance in the company? Is there a way to connect companies that have a Designer as CEO, or someone with good designer training (Jim Hackett/ FORD) to championing design, making it more important and central, the number of designers in the company?

"there is no reason to believe that the future will have the equivalents of today's Fortune 500 companies. Take a look at the companies that were the equivalent of today's Fortune 500 50 years ago. Lots do not exist." Is this true? How different is the mix? What has been the fundamental change/ pattern? What are the implications for Design?

Is a designer the same as someone with design training? If yes, what type of training? If no, why not? Could other professions serve as an example, can you be from another area, train in marketing and be equal to a marketer? Are there areas where this is possible and others where it's less like that?

"Why is being an executive important for a designer if executives are no more or less powerful than other humans who work in organizations?" Is this a real question (based on data of what executives do v. others in the company when it comes to yielding power), or is it in itself a typical designer question along the lines of "who wants to be powerful" and "why should you aspire to be powerful"?

Is there more writings/ articles by journalists and scholars about design, design leadership, design thinking in the last 5 years compared to previous 15?

Low % of companies that thinks of design in a strategic way, and less that understand it.

An executive position in a company is a moving target, the jobs that exist today will not exist tomorrow... what is the typical tenure of executives in large companies, and how much has their job description and responsibilities really change in the last 15 years (beyond titles and different/ more areas aggregated,

mainly driven by digital)? Has it changed more in the last 5 years than in the 15 years before, is there a sign of bigger disruption?

Executive position for a designer means they have the vision, skills, aptitudes and desire to run a company... do designers that have this and start companies have a higher rate of success than any other founders (alone or in a team)?

27. Global search firm specialized in creative Executive positions

So much depends on the ability to connect dots
Charles Jones speaks the language of the C -Suite
Needs but also contributions
One of the most effective
Others look at people that utilize design
Very few breakthrough
Bumping into that
No one like him
Effective as him winning over
Maybe it's a team, Chuck and Philips
Visio and ability to execute
Surround yourself with right partners
More creative visionaries
They don't teach that at Design school
Architects have hat, discipline split
Chuck is at the intersection of what Design is capable
Mauro inspire Design, but not necessary facilitate
Great relationship with Indra, he doesn't have a Philip...
Musical chairs... what's coming up
Newell just laid off a bunch of people
Design Studio in NYC and they were laid off
How solitary the leader is
Well Pepsico stand up the same way now without Indra
This should be simpler, but....
The onus is very much on design
Design's ability of valuing, building relationships
More Design's responsibility, being able to articulate
She has relationship with Jason Schupbach Arizona
Jason Schupbach | The Design School - ASU Design School
Reinventing the way Design is taught
Making this information and envision a new Design Organization
The largest University in the country
Chicago (IIT and ...), Harvard , Stanford the furthest along

28. International executive search firm focused on Top Management Teams

No understanding of topic till now, not prepared
No data today about CDO, will search and come back

Finding new people, relevant clients and sources

Companies they looked for similar roles
Internal database
If there designers in their database? will look into it
Public databases, events, etc, they look for people
Some require subscription
Some engagements start HR/ Business leader, functional leader
Depends on the clients
Marketing does not mean education in marketing, work experience more important
Common exception is engineering, technical detail
Career success and experiences
What kind of companies has the person worked with, roles and responsibilities
Regression analysis, what companies have they worked before trumps it all
Academy companies like Philips are important... some are private companies
Though majority are public, processes, high expectations and shareholders
Good career experience, trained the right way
Hoping between companies less important, but want to know why people moved
Inconsistencies

Appendix D: Executive survey

Thank you for being with us!

You are being invited to take part in a research study conducted by Sebastian Fixson, Professor of **Innovation and Design** at **Babson College**.

This survey will help to better understand the **role of design and designers** in **leading innovation** in **Fortune 500** companies.

The survey comprising 6 questions will take you **about 3 minutes** to complete.

The survey is **anonymous**, and no one will be able to link your answers back to you. Please do not include your name or other information that could be used to identify you in your survey responses.

Given that this study is **voluntary**:

- Please close this webpage if you do not wish to participate.
- You can skip questions or stop the survey at any time.
- If you agree and want to participate, click the **Next** button on the right to start the survey.

Questions?

Please contact Professor Sebastian Fixson at sfixson@babson.edu.

14%

Next

1. Most effective structure for your company

How is the design function structured in **your company**?

- Design is **centralized** globally
- Design functions are **distributed** by business units
- Hybrid (a **mix** of centralized and distributed)
- No design function** exists in the company
- Not sure

If **nonexistent**, what do you believe would be the most effective way to structure your company's design function?

- Design centralized globally
- Design functions distributed by business units
- Hybrid (a mix of centralized and distributed)
- Not sure

Additional comments:

Previous

28%

Next

2. Full time or part time C-level design Executive

How is the design function represented at your company?

- C-level executive fully dedicated to design
- C-level executive managing design among other areas (e.g., marketing)
- No C-level representation of design
- Not sure

If not represented at the C-level, would you advocate for a C-level executive dedicated to design?

- Yes
- No
- Not sure

Additional Comments:

Previous

42%

Next

3. Hiring a Chief Design Officer (or similar executive title)

Who had the most important role in Hiring the CDO in your company?
(If nonexistent, what would you recommend?)

- CEO
- C-Suite
- Board of Directors
- Executive Search
- Not sure

What is your current CDO's formal training?
(If nonexistent, what is the CDO training you recommend?)

- A recognized design education
- Other formal education
- Not sure

Additional comments:

Previous

57%

Next

4. The value of design skills in leading innovation in large companies

Please indicate your level of agreement

	Disagree	Disagree somewhat	Neither agree nor disagree	Agree somewhat	Agree
Design combines technical skills, cognitive abilities and interpersonal competencies	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design skills are highly connected with innovation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design skills drive higher productivity	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Previous

71%

Next

5. Current research shows that few trained designers work in executive level positions (Last question!)

In your opinion, what are the reasons?

Most designers...

	Disagree	Disagree somewhat	Neither agree nor disagree	Agree somewhat	Agree
... have only narrow work experience (only in design)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... do not think strategically enough for executive level positions	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... are not striving for C-Level positions	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

In your opinion, could the reasons also be?

	Disagree	Disagree somewhat	Neither agree nor disagree	Agree somewhat	Agree
Too few qualified designers are available	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current Design training is not adequate for leadership positions	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
The design function does not contribute enough to belong at the C-level	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Previous

85%

Next

Thank you so much for your appreciated insights! (One very last question)

The data collected in this survey will be promptly aggregated and analyzed by Professor Sebastian Fixson. We let you know when the conclusions of the survey are available on The Official Board.

Should Professor Sebastian Fixson or his research team need to dig in some specific points, would you be agreeable to speaking with them over the phone?

If this is the case, please send an email with your name, position and company to sfixson@babson.edu.

To be crystal clear, whether **you do or do not agree** to speak with the researchers, your above entries remain **anonymous**, and no one will be able to link your above answers back to you.

Thanks again for sharing your valuable experience.

Previous

100%

Next

Appendix E: Designer Survey

Design(er) Leadership in Large Corporations - Full

Survey Flow

Standard: INTRODUCTION (1 Question)
Block: YOU (3 Questions)
Standard: YOUR COMPANY/ CORPORATION (4 Questions)
Standard: YOUR EDUCATION & TRAINING (7 Questions)
Standard: YOUR CAREER PATH (13 Questions)
Standard: YOUR TEAM (3 Questions)
Standard: DESIGN PROFESSIONS (4 Questions)
Standard: HYPOTHESIS (2 Questions)
Standard: STATE OF DESIGN (4 Questions)
Standard: CONTACT (2 Questions)

Start of Block: INTRODUCTION

Q0 The State of Design(er) Leadership in Large Corporations

Thank you for being with us!

You are being invited to take part in a research study part of a doctoral thesis on the role of designers as design leaders in large corporations.

The survey will take you about 12 minutes, it is aimed to reflect the highest position that you held or still hold in a company/ corporation.

Unless you chose to identify yourself, the survey is anonymous, and no one will be able to link your answers back to you.

Participating in this study is voluntary:

- Please close this webpage if you do not want to participate.
- You can stop the survey at any time, but we appreciate if you complete it.
- If you agree and want to participate in this study, click Next button on the right to start the survey.

Best regards,

José Manuel dos Santos

PhD Student, IADE Universidade Europeia, Laureate Universities, Lisbon Portugal.

Sebastian Fixson, PhD (thesis coordinator)

Professor of Innovation & Design

Associate Dean of Innovation
F.W. Olin Graduate School of Business
Babson College

Note: Data collected will be handled as private and confidential, we will not use your answers for marketing purposes

End of Block: INTRODUCTION

Start of Block: YOU

Q1

Your Name (optional)?

Q2 Your age group?

▼ 25-35 (1) ... >65 (4)

Q3

Your gender?

▼ Male (1) ... Other (3)

End of Block: YOU

Start of Block: YOUR COMPANY/ CORPORATION

Q4 The name of the company, the one where you held/ hold the highest position (optional)?

Q5

Sector of the company?

- Aerospace & Defense (1)
 - Energy (2)
 - Financials (3)
 - Food & Drug Stores (4)
 - Food, Beverages & Tobacco (5)
 - Health Care (6)
 - Household Products (7)
 - Industrials (8)
 - Motor Vehicles & Parts (9)
 - Retailing (10)
 - Technology (11)
 - Telecommunications (12)
 - Transportation (13)
 - Wholesalers (14)
-

Q6 Fortune 500 in 2017-19?

- Yes (1)
 - No (2)
-

Q7 Size of the company?

- <100 (1)
- 100-999 (2)
- 1,000-9,999 (3)
- >10,000 (4)

End of Block: YOUR COMPANY/ CORPORATION

Start of Block: YOUR EDUCATION & TRAINING

Q8 Bachelor degree?

- Art & Design (1)
- Business & Management (2)
- Computers & Technology (3)
- Criminal Justice & Legal (4)
- Education & Teaching (5)
- Liberal Arts & Humanities (6)
- Nursing & Healthcare (7)
- Psychology & Counseling (8)
- Science & Engineering (9)
- Trades & Careers (10)
- No Bachelor/ Other (11)

From what school(s) (12)



Q9 Masters/ Post-Grad?

- Art & Design (1)
- Business & Management (2)
- Computers & Technology (3)
- Criminal Justice & Legal (4)
- Education & Teaching (5)
- Liberal Arts & Humanities (6)
- Nursing & Healthcare (7)
- Psychology & Counseling (8)
- Science & Engineering (9)
- Trades & Careers (10)
- No Master/ Other (11)

From what school(s) (12)

Q10 MBA?

- Yes (1)
 - No (2)
 - From what school? (3) _____
-

Q11 PhD?

Yes (1)

No (2)

From what school? (3) _____

Q12 Design Thinking training you have done in the last 3 years?

Design Thinking definition: The activity of solving problems with a solution-based approach, using five stages: Empathize, Define, Ideate, Prototype, and Test.

	Title of training (1)	How long (2)	What school/ provider (3)
Design Thinking 1 (1)			
Design Thinking 2 (2)			
Design Thinking 3 (3)			

Q13 Design Doing training last 3 years?

Design Doing definition: Design Techniques and knowledge, tools and principles for crafting, making actual design deliverables.

	Title of training (1)	How long (2)	What school/ provider (3)
Design Doing 1 (1)			
Design Doing 2 (2)			
Design Doing 3 (3)			

Q14 Other relevant training last 3 years?

	Title of training (1)	How long (2)	What school/ provider (3)
Other training 1 (1)			
Other training 2 (2)			
Other training 3 (3)			

Start of Block: YOUR CAREER PATH

Q15 Were you ever or are you now in a Design Executive role?

A group of professionals that compose what is generally referred as the executive suite, responding directly to the CEO/ President/ Chairman of a large corporation.

- Yes (1)
- No (2)

Display This Question:

If Q15 = Yes

Q16 How long were you in or have been in Executive roles?

- 1-3 Years (1)
- 3-5 Years (2)
- 5-15 Years (3)
- > 15 years (4)

Display This Question:

If Q15 = Yes

Q17 Was this a career goal?

- Yes (1)
- No (2)

Display This Question:

If Q15 = Yes

Q18 Main reasons you ended up in an Executive role?

- Design leadership needs to be at Executive level (1)
 - It's the best place for a designer to lead Design (2)
 - Desire, aspiration, a personal ambition (3)
 - Natural progression, I was invited (4)
 - I had the right training, preparation, tenure (5)
 - Other (describe) (6)
-

Display This Question:

If Q15 = No

Q19 Is this a career goal?

- Yes (1)
- No (2)
- Not sure (3)

Display This Question:

If Q19 = Yes

Q20 Why do you have this as a career goal?

- Design leadership needs to be at Executive level (1)
 - It's the best place for a designer to lead Design (2)
 - Desire, aspiration, a personal ambition (3)
 - Natural progression, I expect to be invited (4)
 - I have the right training, preparation, tenure (5)
 - Other (describe) (6)
-

Display This Question:

If Q19 = No

Or Q19 = Not sure

Q21 Main reasons why this is not a career goal?

- Design leadership does not need to be at Executive level (1)
 - It is not the best place for a designer to lead Design (2)
 - No desire, no aspiration, not a personal ambition (3)
 - Have not been invited, not sure it would be welcomed (4)
 - Don't have the right training, preparation, tenure (5)
 - Other (describe) (6)
-

Q22 Do you manage Design direct/ indirect reports (indirect = not in your team, but you are co-responsible)?

Yes (1)

No (2)

Q23 What is your reporting distance from the CEO?

CEO-1 (1)

CEO-2 (2)

CEO-3 (3)

More than CEO-3 (4)

Q24 Do you manage an annual Design budget in your company?

Yes (1)

No (2)

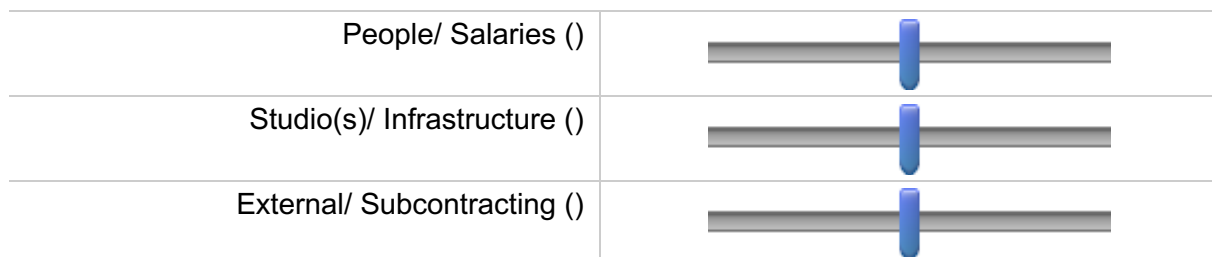
Part of the budget (3)



Q25 What is the composition of your annual Design budget

Should add to 100%

0 10 20 30 40 50 60 70 80 90 100



Other (describe) ()



Display This Question:

If Q22 = No

Q26 Who/ what functional area in your company manages the Design Team?

- R&D (7)
- Engineering (8)
- Business Development (1)
- Innovation (2)
- Marketing (3)
- Sales (4)
- Research (5)
- Other (describe) (6) _____

Display This Question:

If Q22 = No

Q27 The highest ranking Executive in charge of Design, reporting to the CEO, what is his/her academic training (list several if necessary)?

- Art & Design (1)
- Business & Management (2)
- Computers & Technology (3)
- Criminal Justice & Legal (4)
- Education & Teaching (5)
- Liberal Arts & Humanities (6)
- Nursing & Healthcare (7)
- Psychology & Counseling (8)
- Science & Engineering (9)
- Trades & Careers (10)
- Not sure (11)

End of Block: YOUR CAREER PATH

Start of Block: YOUR TEAM

Display This Question:

If Q22 = Yes

Q28 What is the size of the internal Design team you manage (direct + indirect reports)?

	Design team	
	Direct (1)	Indirect (2)
<10 (1)	<input type="checkbox"/>	<input type="checkbox"/>

10-50 (2)	<input type="checkbox"/>	<input type="checkbox"/>
50-200 (3)	<input type="checkbox"/>	<input type="checkbox"/>
200-500 (4)	<input type="checkbox"/>	<input type="checkbox"/>
>500 (5)	<input type="checkbox"/>	<input type="checkbox"/>

Display This Question:

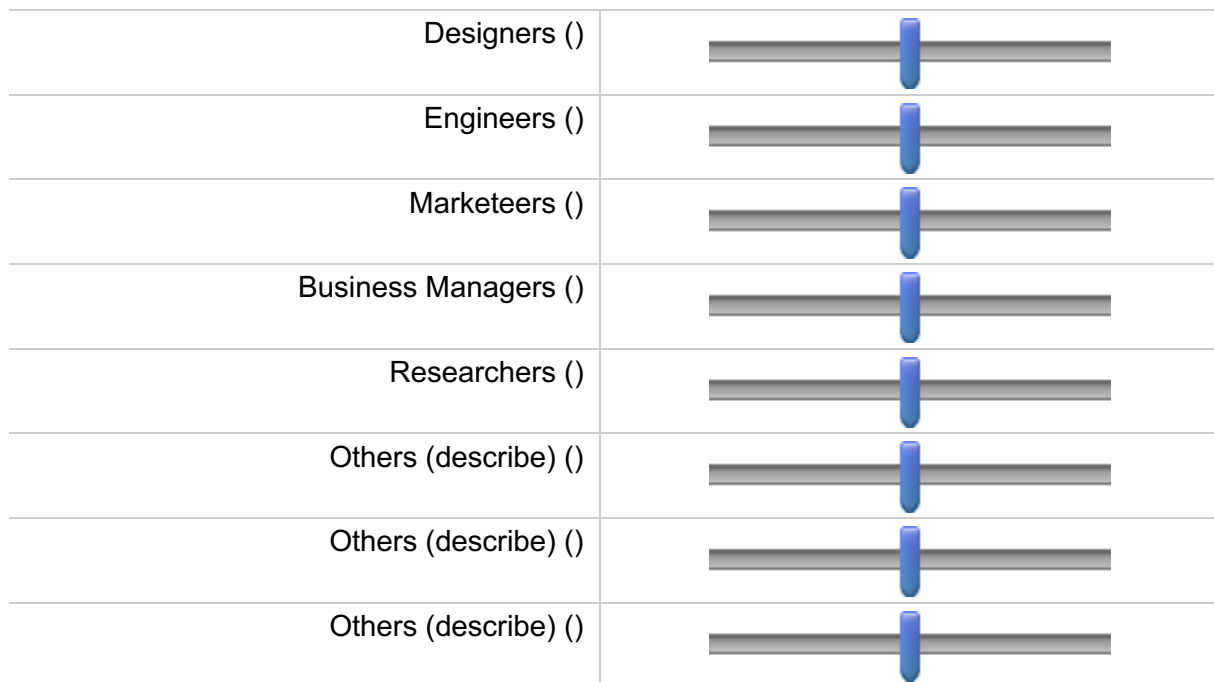
If Q22 = Yes



Q29 What is the composition of your internal team?

Should add to 100%

0 10 20 30 40 50 60 70 80 90 100



Display This Question:

If Q22 = Yes



Q30 What is the main activity of your Design team, and how much is it done internally or via external/ subcontracting?

	Not applicable (1)	Not done by my team (2)	100% Done by my team (3)	Only partially by my team (4)	Fully subcontracted (5)
Industrial Design (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication Design (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital Design (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interior Design (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (describe) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (describe) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (describe) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: YOUR TEAM

Start of Block: DESIGN PROFESSIONS

Q31 Rank these skills according to how important they are to Design (drag and drop)?

_____ Operations analysis - Analysing needs and product requirements to create a design. (2)

_____ Geography - Knowledge of principles and methods for describing the features of land, sea and air masses, including their physical characteristics, locations, interrelationships and distribution of plant, animal and human life. (10)

_____ Visualisation - The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged. (11)

_____ Programming - Writing computer programs for various purposes. (3)

_____ Design - Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings and models. (1)

_____ Drafting, laying out and specifying technical devices, parts and equipment - Providing documentation, detailed instructions, drawings, or specifications to tell others

about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used. (4)

_____ Fine arts - Knowledge of the theory and techniques required to compose, produce and perform works of music, dance, visual arts, drama and sculpture. (6)

_____ Engineering and technology - Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures and equipment to the design and production of various goods and services. (5)

_____ Interacting with computers - Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information. (13)

_____ Technology design - Generating or adapting equipment and technology to serve user needs (7)

_____ Building and construction - Knowledge of materials, methods and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads. (8)

_____ Computers and electronics - Knowledge of circuit boards, processors, chips, electronic equipment and computer hardware and software, including applications and programming. (9)

_____ Thinking creatively - Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions. (12)

Q32 Indicate the likelihood of each of these **hard-skills for a senior/ mid-level designer?**

	Extremely unlikely (33)	Somewhat unlikely (34)	Neither likely nor unlikely (35)	Somewhat likely (36)	Extremely likely (37)
Analytical thinking (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Listening (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quantitative aptitude (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verbal communication (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teamwork (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Interpersonal skills (w/ subordinates/ colleagues) (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpersonal skills (w/ superiors) (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q33 Indicate the likelihood of each of these **soft-skills for a senior/ mid-level designer?**

	Extremely unlikely (18)	Somewhat unlikely (19)	Neither likely nor unlikely (20)	Somewhat likely (21)	Extremely likely (22)
Awareness of others (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humility (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humor (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Imagination, creativity, and curiosity (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Initiative (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrity (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maturity (23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-awareness (24)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (25)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q34 List the top 3 typical senior designer skills that you believe are **important for executive roles**.

- 1. Important design skill for C-Suite (6)

- 2. Important design skill for C-Suite (7)

- 3. Important design skill for C-Suite (8)

End of Block: DESIGN PROFESSIONIONS

Start of Block: HYPOTHESIS

Q35 These statements are inspired by findings from a report by the Design Council (2017, December 06) Designing the Future Economy, please indicate your level of agreement with them:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
- Design delivers 21st century skills through a combination of technical skills, cognitive abilities and interpersonal competencies that are unique to Designers/ design trained professionals. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Design skills are highly connected to Innovation, there is a strong relationship between the skills required for design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

and for
innovation.
(8)

- Design skills
drive higher
productivity,
people who
use design
skills are
more
productive
than the
average
professional
that does not
possess
those skills.
(9)



Page Break

Q36 One of our research findings is that there is a relative **scarcity of designers in executive-level positions**. In your opinion, what is the reason?

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (4)	Agree (6)	Strongly agree (7)
- Because there aren't enough design savvy CEO's, design champions that understand the value of design. (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Because they're not needed, corporations are doing well enough with their present solution. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Because designers don't have the right training for the job. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Because it is not the best place for designers to lead Design. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Because designers don't have that ambition, they don't want the job. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Because they are not selected for the position,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

not invited for the job. (10)

- Because there aren't enough qualified designers in the marketplace. (15)

- Because designers have no experience in managing other areas beyond Design. (16)

Other (describe) (17)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

End of Block: HYPOTHESIS

Start of Block: STATE OF DESIGN

Q37

With the next questions, we would like to explore your views on the **most effective ways to structure the design function**.

First, what is the **state of design leadership** in your company?

	Yes (1)	No (2)	Not sure (3)
Is design in your company represented at the executive-level? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If it is, is the executive a formally trained designer? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q38 Second, in your company, would you advocate for a **centralized or a distributed Design function**?

Centralized meaning that there is an executive in charge of all design activities in the corporation, in a single or many different locations, answering to the CEO. Distributed meaning designers sit with different teams and respond to different business managers, they answer for design in their results to the CEO.

- Centralized (1)
 - Distributed (2)
 - Hybrid (describe) (3) _____
 - Other (describe) (4) _____
-

Q39 Third, would you advocate for an **autonomous vs. integrated Design executive seat** in your company/ corporation?

Autonomous meaning there is an executive with a single responsibility for design in the C-suite, integrated meaning there is an executive that manages several areas,

including design.

- Autonomous (1)
 - Integrated (2)
 - Depends (describe) (3) _____
-

Q40 Third, would you advocate for the Design **executive seat in your company/ corporation to be given to a formally trained designer**, vs. a professional with any other formal training?

For the purpose of this research, and following the United States Department of Labor/ Bureau of Labor Statistics definition of a Designer is someone with formal education in any of these areas: commercial and industrial designers, graphic designers, fashion designers, interior designers, set and exhibit designers, media and communication workers, artists and related workers, architecture.

- Yes (1)
- No (2)
- Depends (describe) (3) _____

End of Block: STATE OF DESIGN

Start of Block: CONTACT

Q99 Thank you very much for your time. If you would like to receive a **summary report of the results**, please leave us your e-mail and we will be happy to send you a copy.

Q100 In case you are interest in an a **follow-up conversation** on this topic (30 min 1:1 conversation), please leave your e-mail and we are happy to schedule a phone call. Thank you very much!.
