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# Converting Designer's Identity

## Observations for Revising Competence

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**Description**

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**Abstract**

Design as a concept is a universal and cross-technical language as well as a subject of countless debates about the relationship between its theory and practice. Throughout history, design has manifested itself as the many means of a man in taking control and constructing arrangements over the natural space and environment. Over the centuries design has evolved not only because of technical advancement but also for the sake of its ideological virtues. Economics, science, and culture are all touched by the demand and need for design, and people who are working as the pioneers of it, designers, are currently experiencing probably the most controversial transmutation, that the field-specific industry has ever encountered so far.

The purpose of the thesis was to investigate how the practitioners of design could convert their ingenuities to tact future challenges and at the same time maintain their enthusiasm as well as satisfaction with their chosen profession. The closure sought after was also to present suggestions about how the process of converting oneself could be approached from the perspectives of individual abilities, desires, and motives. To achieve these prescribed objectives mixed-method research was conducted among selectively recruited professionals.

As indicated by the study it became clear that a career in design should not be expected to be linear since characteristic responsibilities typical for certain design roles are blatantly intermingling. Generally speaking, designers do possess absolute apexes in terms of occupational standards considering morale and work ethics. Furthermore, a designer is likely to consider a change of profession at some point during their career. It was also discovered, that a designer's ability to interact as an adhesive force is an attribute beyond the measurements of computational efficiency. As conclusive, a designer should commit to and uphold a lifelong learning trajectory by constantly examining the worth of one's outlooks and deeds of design concerning the frequently reinterpreted value of design in general. Additionally, the findings suggest that the essence of design as well as the tranquil mettle of a designer sustaining far into the future is empathy.

Artificial intelligence (OpenAI ChatGPT 3.5) was utilized within the context of the research to conduct specific phases of thematic analysis and also to create the glossary of subject-specific terms by utilizing relevant online references.

**Keywords/tags (subjects)**

Career, identity, competence, digital designers

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**Kuvailulehti**

**Antti Hämäläinen**

**Muotoilijan ammatti-identiteetti ja murros – havaintoja osaamisen uudistamisesta**

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**Tiivistelmä**

Muotoilu käsitteenä näyttäytyy universaalina ja poikkiteknisenä yleiskielenä sekä lukemattomien sen teorian ja käytänteiden välistä suhdetta tarkastelevien keskusteluiden aiheena. Historian saatossa muotoilu on näyttäytynyt monin eri menetelmin ihmisen konventioina hallita sekä järjestellä vallitsevaa luonnon tilaa ja elinympäristöä. Vuosisatojen myötä muotoilu on kehittynyt teknologisen edistyksen ohella myös sen ideologisten arvojen myötävaikutuksesta. Talous, tiede ja kulttuuri ovat kosketuksissa muotoilun tarpeeseen sekä kysyntään, ja muotoilijat alansa edelläkävijöinä todistavat paraikaa ehkä kaikkein kiistan-alaisinta muutosta toimialakohtaisen teollisuuden historiassa.

Opinnäytetyön tarkoituksena oli tutkia, kuinka eri muotoilijarooleissa työskentelevät asiantuntijat voisivat tulevaisuuden haasteisiin vastatakseen konvertoida osaamistaan työn mielekkyyttä, merkityksellisyyttä ja ammatti-identiteettiään menettämättä. Tavoitteena oli myös esittää ehdotuksia siihen, kuinka oman asiantuntemuksen konversioprosessia voitaisiin ajatella lähestyttävän yksilöllisten kykyjen, halujen ja motiivien näkökulmista. Näiden tavoitteiden pohjalta lähestyttiin valikoidusti sekä kokeneita että urallaan orastavia muotoilijoita tarkoituksena suorittaa määrällistä ja laadullista tiedonkeruumenetelmää soveltava tutkimus.

Tutkimuksen löydökset osoittivat, että muotoilijoiden urakehityksen ei voi odottaa olevan suoraviivainen, koska eri muotoilijarooleille tyypillisten vastuualueiden työtehtävät sekoittuvat voimakkaasti näiden roolien kesken. Yleisesti ottaen muotoilijat edustavat ammatillisin standardein tarkasteltuna erittäin korkean työmoraalin sekä -etiikan taitajakuntaa, joskin mitä todennäköisimmin muotoilija tulee jossain vaiheessa uraansa harkitsemaan ammatinvaihtoa. Lisäksi havaittiin, että muotoilijan kyky toimia yhdistävänä voimana erilaisten yksilöiden sekä sidosryhmien välillä on voimavara, joka ei ole laskennallisen tehokkuuden mittausmenetelmin todennettavissa. Muotoilijoiden tulisi sitoutua elinikäisen oppimisen ylläpitämiseen arvioimalla säännöllisin väliajoin näkemystensä ja aikaansaannostensa arvoa suhteessa muotoilun yleiseen alati tarkastelun kohteena olevaan kokonaisarvoon. Perimmäiseltä luonteeltaan muotoilun olemus sekä muotoilijan sovinnollinen tulevaisuuteen kurkottava luomisvoima on empatia.

Keinoälyä (OpenAI ChatGPT 3.5) käytettiin tutkimuksen kontekstissa suorittamaan tiettyjä temaattisen analyysin työvaiheita sekä luomaan asiasanasto relevantteja verkkoviitteitä hyödyntämällä.

**Avainsanat (asiasanat)**

Ura, identiteetti, kompetenssi, digitaalinen suunnittelu

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# Glossary

| Term and Abbreviation | Definition |
|---|---|
| Artificial Intelligence (AI) | A field of computer science that aims to create systems or machines capable of performing tasks that would typically require human intelligence (Russel & Norvig, 2016). |
| British Broadcast Company (BBC) | A public service broadcaster in the United Kingdom, providing a wide range of television, radio, and online services (BBC, 2024). |
| Capability Maturity Model (CMM) | A framework used to assess the maturity level of an organization's processes and provide guidance for improvement (ISACA, 2019). |
| Content Management System (CMS) | A software application used to manage and publish digital content on the web (Adobe., 2024). |
| Computer-Aided Design (CAD) | The use of computer software to create 2D or 3D models and designs for engineering and architectural purposes (Suzuki, 2021). |
| Computer-Aided Manufacturing (CAM) | The use of computer software and machinery to automate manufacturing processes, including planning, machining, and assembly (Rouse, 2011). |
| Customer Experience (CX) | The perception and feelings customers have about their interactions with a company throughout the customer journey (Oracle, 2024). |
| Design for Excellence (DFX) | A systematic approach to product design that aims to optimize various factors such as cost, quality, manufacturability, and sustainability (Hessing, 2015). |
| Design to Cost (DTC) | A product design approach that focuses on meeting cost targets without sacrificing quality or performance (Juozitis, 2019). |
| Design Value Index (DVI) | A metric used to measure the effectiveness of design investments by tracking the performance of companies that prioritize design in their business strategies (Sheppard, Kouyoumjian, Sarrazin & Dore, 2018a). |
| European Institute of Entrepreneurship Development (iED) | A European organization that provides support and resources for entrepreneurship development and innovation projects (European Institute of Entrepreneurship Development, 2024). |
| European Union (EU) | An economic and political union of 27 member states located primarily in Europe, promoting economic and social cooperation among its members (European Union, 2024). |

| | |
|---|---|
| Human-Computer Interaction (HCI) | The study of how people interact with computers and how to design interfaces that are user-friendly and intuitive (Interaction Design Foundation, 2016a). |
| Information Communication Technology (ICT) | A broad term that encompasses technologies used for communication, data management, and information processing (Rouse, 2023). |
| International Business Machines (IBM) | An American multinational technology company that provides hardware, software, and consulting services (IBM, 2024). |
| Natural Language Processing (NLP) | A branch of artificial intelligence that focuses on enabling computers to understand, interpret, and generate human language (Stanford University, 2024). |
| Nielsen Norman Group (NN/g) | Leading user experience research, training, and consulting firm dedicated to improving the usability and effectiveness of digital products and services (Nielsen Norman Group, 2024). |
| Project Management Institute (PMI) | A global professional organization that provides certifications, resources, and best practices for project management professionals (Project Management Institute, 2024). |
| Standard and Poor's 500 (S&P 500) | A stock market index that measures the performance of 500 large companies listed on stock exchanges in the United States (Investopedia, 2024). |
| Software Engineering Institute (SEI) | A federally funded research and development center that focuses on software engineering research, education, and technology transition (Carnegie Mellon University, 2024). |
| Return on Investment (ROI) | A measure used to evaluate the efficiency or profitability of an investment, calculated as the ratio of the net profit to the initial investment (Investopedia, 2024). |
| User Experience (UX) | The overall experience of a person using a product or service, encompassing usability, accessibility, and satisfaction (Norman & Nielsen, 1998). |
| User Interface (UI) | The means by which users interact with a computer system, including graphical elements such as buttons, menus, and icons (Interaction Design Foundation, 2024). |
| World Wide Web Consortium (W3C) | An international community that develops open standards to ensure the long-term growth and compatibility of the World Wide Web (World Wide Web Consortium, 2024.). |

# 1 Introduction

The inclination, as well as scope of capabilities typical for a designer and/or a creative, have become subjects of significant reformation demands during past years, particularly in the field of digital product and service development. Roughly a decade ago the priority of a creative talent working in a multi-lateral organization could have been considered to focus on dismantling the ingrained routines of design practices plus having the ownership of conservable aesthetics and visual consistency of corporate identity. Nowadays, consistency with aesthetics is a subject of incessant iteration executed to optimize the customer experience for proofing, ensuring, and boosting up a feasible business continuum.

Personally, almost with two decades of experience in design specific profession, I've noticed that cross-technical skills and knowledge of visual design practices along with a dialectic demeanor are no longer sufficient. Also, a solution-specific mindset with troubleshooting capabilities and fundamental technical know-how is required in addition. No need to mention, that the ability to both adopt and maintain customs for constant learning is the very least but not necessarily a matter of quantum in the long run.

## 1.1 Research Objectives

Most of the skills prescribed above address design operators and conductors by nature when the creative masterminds might have quite a diverse list of claimed knacks to chew over. Anyhow, the digital sector of the design industry has undergone and will continue to undergo a rupture, due to which all classes of formal competencies are no longer immutable. Design as well as its outcomes have been reverse-engineerable throughout the decades, however on a digital scale recursive carbon copy of a system, solution, or application most likely does not re-establish the advantages of the original implementation. Not any longer since the game was changed already way before any of us had even noticed it.

The objective of the thesis is to probe, identify, and concretize matters vital to both study and assimilate for succeeding in a designer's or a creative’s role in the future. The conclusion chapter of my thesis provides alternate suggestions for examining professional identity so that suitable paths of progression under ever-changing circumstances can be recognized. I believe the outcome

provides beneficial information about how a designer or a creative could consider improving one's potential without losing the very essence of professional identity and sensibleness plus the significance of daily labor. I believe the deterioration of design tradition plus the accelerating reformation of industry-specific practices are causing a designer to question the importance and relevancy of one's profession. Also, it might be very hard for a designer to pinpoint the exact spot of a project during which the design actually and practically concretizes or even happens in the first place. Are we talking about an actual unique design or merely a repetitive lineup composed out of already existing patterns? What is the actual contribution as a designer in relation to the outcome produced?

## 1.2 Delineation

The professional profile targeted within my thesis is a designer/creative oriented on delineating certain front-end surface-level structures of a digital product or service. Such profiles are digital designer, UX designer, UI designer, concept designer, content designer, and service designer to name a few. By setting up this delineation, other fields of design such as mechanical design, dynamical design, and aerospace design, for example, are excluded from the scope. The study of these mentioned as examples has a fundamentally diverse relation between theory and substance than digital design. Digital products and services have their share within all forms of industrialized design for sure, yet it is imperative to establish this threshold among the various design profiles and diverse forms of design expertise.

## 1.3 Research Questions

From the scope of software development and the field of digital product/service design my goal is to provide answers to the following main questions:

RQ 1. As the requisites of design continue to evolve, how a designer (either freshman or veteran) could re-invent oneself without losing his/her professional identity?

RQ 2. As the requisites of design continue to evolve, how a designer (either freshman or veteran) could adapt and convert oneself according to the turn of events generated by this evolution?

RQ 3. Why might a designer experience a decrease in the sensibleness of his/her daily labor?

RQ 4. Why might a designer experience a decrease in the significance of his/her daily labor?

RQ 5. What kind of career signposts a newly appointed junior designer and a seasoned senior designer could follow?

RQ 6. What are to be characterized as the most significant matters in a design according to designers?

The research pays to inspect and re-enlighten the areas of importance and relevancy within design from both business and professional perspectives. This incorporates an evaluation between the needs that a design must fill business-wise and the needs that a designer tries to fill for experiencing success and job satisfaction. Ultimately, I consider this as a question of balance between a satisfactory level of professionalism and a nominal level of individualism. My prime motive with utmost importance would be to help both inexperienced and experienced designers to perceive as well as comprehend the halves of digital product/service design - particularly as a commodity and generally as an industry.

# 2 Literary Review

The theoretical part of the thesis delves into design in-depth and strives to both elaborate and comprehend the formative landscape of expertise around designers. Written knowledge published and empirical outlooks shared by the selected authors as well as data provided by publicly available statistics and existing research reports will be utilized within composing the theoretical frame of reference. Also, the contemporary premise of the design profession is excavated and clarified with the help of these resources.

Design, identity, and the symbiosis between them are the main concepts on which this chapter focuses. Design as a vast theme incorporates affairs distinctive to diverse fields of expertise so the chapter aims to cleanse the stalk of design in covering only the linchpin matters concerning the delineation. Identity will be examined predominantly from an occupational standpoint. The research does not aspire to characterize an optimal or otherwise advantageous identity that a designer might, should, or ought to manifest. The reciprocal coefficient between design and identity is presumptively the expanding horizon by the help of which an identity can be thought to be converted over time.

## 2.1 What is Design?

“Ultimately, design is about problem-solving. The design process begins when a problem or need is identified. Then the designers work through a structured sequence in which they research information and explore ideas until they come up with a potential solution” (Holmes, 2009, Chapter 1, p. 5).

Should a designer always initiate with precise objective, outcome, or result in focus or is there an alternative way to uncover the elements of an advisable design? Are the remedies of design always attuned according to the veritable needs that a design aims to meet? Does it always take an ordered arrangement of progression to advance from entropy to coherence? Marvels of art, science, and engineering share various aspects of design as a conjunctive factor. Yet it can be controversial to unequivocally determine which features of a certain design are fundamentally academic and which on the other hand are specimens of state-of-the-art craftsmanship for example. A query to the anatomy of design needs to be made to enlighten the subject as well as to reach for possible responses to the questions prescribed above.

The bewildering behemoths of design like the pyramids of Egypt or the Great Wall of China, for example, continue to astonish generations one after another although the stature of a pyramid as a mausoleum and the insuperability of a wall as an obstacle are uncomplicated presumptions in terms of expediency. The scale and techniques applied in attaining such magnitude however is the eminent design mystery. Online Etymology Dictionary originates the word “design” from the Italian verb “disegnare”, which signifies “to draw, paint, and/or illustrate a plan”. (Online Etymology Dictionary, 2023). Collins Dictionary defines the word “craftsman” as “someone who practices a craft, like an artisan” (Collins English Dictionary, 2023).

## 2.2 Design as a Concept

German design theorist and consultant Bernhard E. Bürdek has traced the very first definition of design back to the 16$^{th}$ century and it is articulated (Oxford Dictionary, 1588, as cited in Bürdek, 2015):

- a plan or scheme devised by a person for something that is to be realized,
- a first graphic draft of a work of art, or

- an object of the applied arts, which is to be binding for the execution of a work.

The approach seems rather pragmatic and even today it serves as an explanatory premise of design in general, however, a clear indication of fine arts, rather than craftmanship, is undisputable as if the design would have been something to be evaluated only according to its beauty, aesthetics, or appeal. On the other hand, it would take over one and a half centuries for the era of modern manufacturing to gradually originate, so art from the perspectives of recreation, entertainment, and religion, for example, was probably the only admissible medium for design to manifest itself at the time.

**Origin of Design**

Bürdek accredits antique era Roman Vitruvius (ca. 80 -10 BC) to be one of the very first ancestors of design who declared functional criteria for architecture by providing a standpoint for approaching the craft through art, science, history, and philosophy (Bürdek, 2015). In this sense, Vitruvius can be also regarded as one of the very first craftsmen, not only according to his vision but also due to his heritage preserved and relayed over the ages. Architecture, infrastructure, agriculture, and warfare have presumably been the initial areas upon which design has emerged and gradually evolved to procedures deemed as beneficial.

Throughout the centuries of evolution, the deeds of craftsmen have probably molded the basis for diverse techniques in general – at least in the sense, that we are currently observing them and being influenced by them. The Encyclopedia Britannica describes how the craftsmen eventually became machinists along the progression that took place during The Industrial Revolution. Practically both the benefits as well as the disadvantages of hand tool precision were replaced by augmented possibilities to expand the utilization of raw materials and capital goods (Ray, 2023).

**Industrial Design**

Another German design expert Michael Erlhoff demarcated design as a practically justifiable matter that must be assertive regarding function and purpose (Erlhoff, 1987, as cited in Bürdek, 2015). Furthermore, English art historian and critic Edward Lucie-Smith implies, that every design artifact must instantiate about in which purpose they are to be used. A good example of early standardization is the drop-shaped prehistoric flint tool, which was used in various sizes as an axe,

spearhead, and arrow tip (Lucie-Smith, 1983). Arguably the many benefits of this flint or more like wedge were proven through the act of experimenting so in retrospect it seems logical how cuneiform was ever invented.

Lucie-Smith considers Christopher Dresser (1834-1904) as the first designer who had back in his time an unaffected awareness of the industrial nature of his deeds. Originally Dresser was an educated botanist with inexhaustible enthusiasm toward plantae figures as natural representations of rationalism and logic. Later he became widely acknowledged due to his designs for casted iron, glass, and ceramics (Lucie-Smith, 1983). Dresser's background is to be considered a remarkable example of how the concept as well as outcomes of design can be catechized from some disparate angles. Clearly, one could say, that Dresser's view about design was fundamentally organic and unique in a way, and his inferences, were so productively remunerating, that the homestead for an entire domain of fabrication was acquired out of them.

Industrial design – as Lucie-Smith defines it, equals "the design of machines and of objects made by machines" (Lucie-Smith, 1983). Research university Georgia Tech in Atlanta U.S.A. institutes the foundation of industrial design upon German art school Bauhaus (1919-1933), which encompasses an ideology for combining various forms of art to spawn "a craftsman artist." (Georgia Institute of Technology, 2023). This distantly resembles an idea about the omnipotent Renaissance man, that according to Michal Ray, was introduced by Leon Battista Alberti (1404-1472). This tenet of an Italian "Uomo Universale" renders the man in endeavor to exceed his customary capabilities within the areas of science and art (Ray, 2023). Yet as pompous as this may sound, it metaphorizes a significant objective of creating something new and surpassing from the ground of existing constants. Lucie-Smith points out, that American industrial design evolved through the influence of Bauhaus during the 30s exactly like so by associating design with marketing. Consumer perspective enabled design to come across what once existed and what could be done further with the help of science and engineering to improve a product (Lucie-Smith, 1983).

## 2.3 Design as a Process

"The Design Process is a learning process because even if our final designs are not successful, we will have a better understanding of the problem and will be able to deal with it better the second time around" (Wise, 1990, p. 27). An inspection of some common abstracts is essential for

understanding further what design is and what its characteristics are from a process perspective. Within our case design will not be concretized into an outcome based on tangible material or general physics. Our design artifacts, so to speak, are virtual rather than actual, but the process itself is committed to facts of an actual ground.

Author and editor Karen Holmes characterizes the design process as an interdependency between creativity and innovation that are both vital for business as well as technological expertise (Holmes, 2009). Undoubtedly design as an act must be more than a series of repetitive attempts to solve the mystery of aesthetics or ergonomics for finding an optimal purest form. Next, a brief introduction shall be taken to selected design process models.

**Design Squiggle**

British illustrator and designer Damien Newman once had only half of a minute to convince his client about how beneficial the process of design within a software development project would be, so he sketched a draft by using some of his previous pitch previews as references (Newman, 2018). The draft shown in **Figure 1** eventually became the following figure latterly entitled “Design Squiggle” and quite frankly it succeeded in capturing the sense of chaos preceding an actual state of design being conceptualized and implemented. Despite its origin, the idea is generally applicable through various areas of design. Quite soon after numerous search engine queries over the subject, it becomes clear, that the figure has been a somewhat prominent conversation piece among design professionals, and this alone has probably supported the concept to maintain its unquenchable popularity.

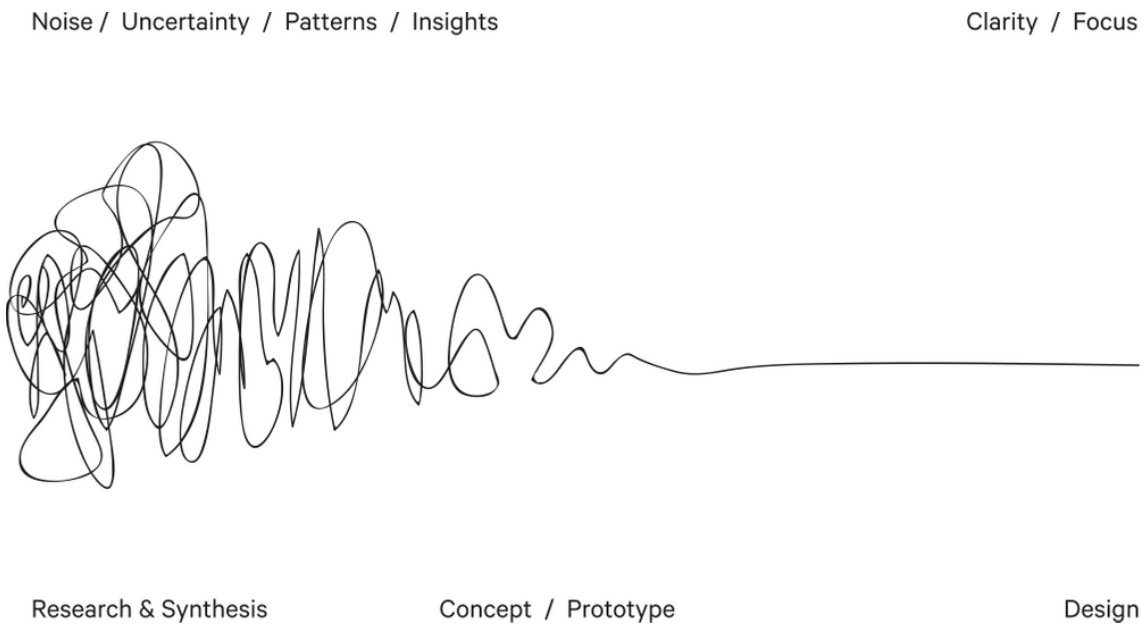


**Figure 1:** The Design Squiggle by Damien Newman (2018) is available for download in several formats from https://thedesignsquiggle.com/download/.

**Double Diamond**

Design Lead and Strategist Jeffrey Humble at The Fountain Institute appoints Alex Osborn, an American advertising executive and "The Author of Brainstorming" as the father of the Diamond Process Model. Osborn's perception of the creative process metaphorized a diamond that extends from the top to the bottom (Humble, 2023). British Design Council's interpretation of a double diamond process model presented in **Figure 2** divides design practices into four specific stages. These stages are further divided into main categories, which are both halves of the actual performance. The name "Double Diamond" underlines the uniformity of these halves in terms of labor factor and effort required (Ball, 2019).

The Double Diamond model explicitly illustrates how defining the problem is, or more like ought to be, equally arduous and complex as working towards and eventually obtaining the actual solution. Humble also remarks that the idea of a Double Diamond is to regard the problem as equally significant as the solution. The first left-hand side diamond called the Problem Space is where exploration, synthesis, and problem definition are being made. The second right-hand side diamond called the Solution Space is where realization, operation, validation, and scaling are taking place (Humble, 2023).

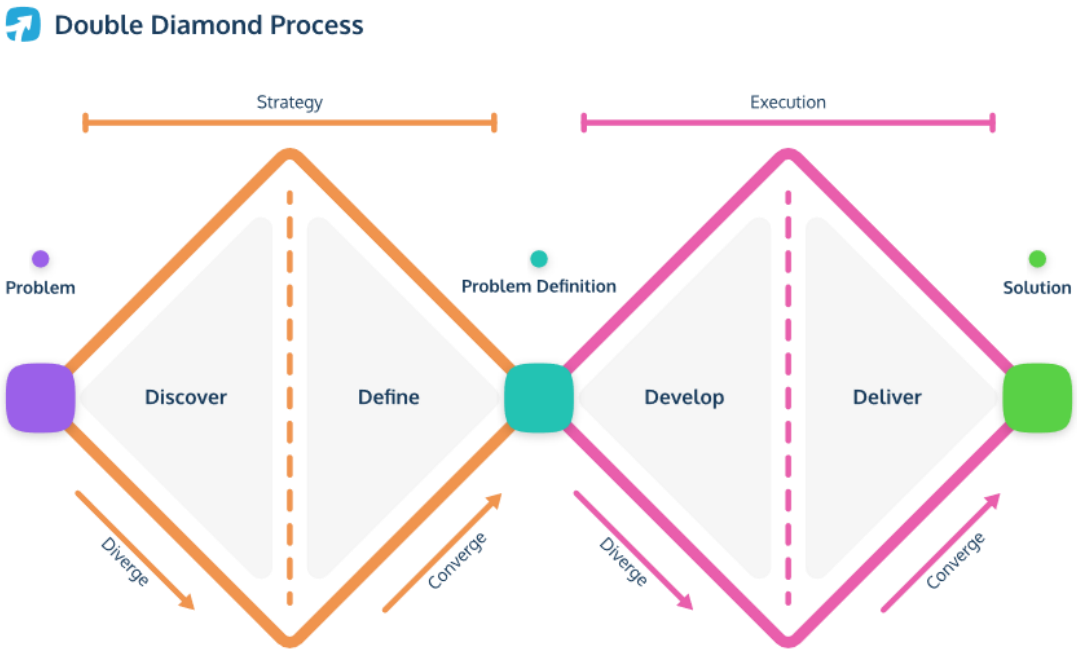


**Figure 2:** Double Diamond Process reprise by ProdPad (2020).

**Loop**

The short documentary “The Loop” renders a detailed and multilateral characterization of the design process model of International Business Machines (IBM). The company had an apparent need to adopt a customized practice of design thinking ideology since the operational environment along with a distribution model was changed from prescheduled release cycles to continuous delivery. The core of the model is to absorb a gradual increment of knowledge over the utilization of design and implementation so that the process would be iterative by nature (D’Avella, 2017). Subsequently, Project Officer Renner Modafares at IBM has published a series of design thinking-related blog posts referring to the following **Figure 3** since it is elusive in trying to encapsulate design thinking into a simple literary explanation of some sort (Modafares, 2018).

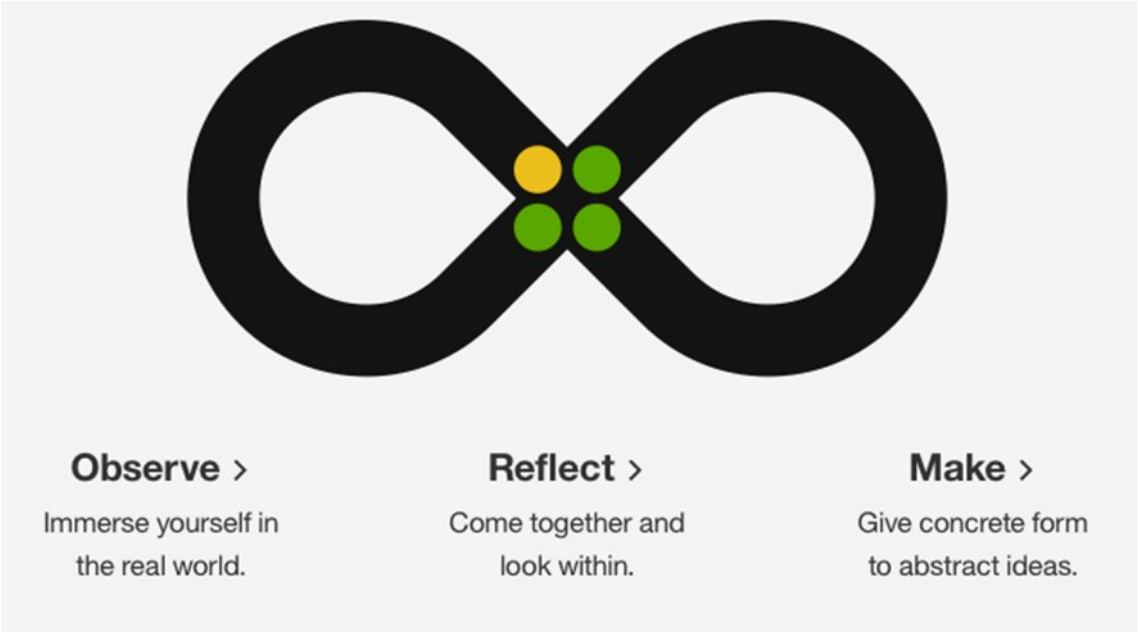


**Figure 3:** Enterprise Design Thinking Loop of IBM sampled by Renner Modafares (2018).

Chief Designer Sarah Gibbons at Nielsen Norman Group alleges Design Thinking methodology as a firsthand and practical approach to problem-solving. This approach as a process encompasses six specific stages sequentially entitled as (Gibbons, 2016a):

1. Empathize
2. Define
3. Ideate
4. Prototype
5. Test
6. Implement

These stages are sub-sequences of the tripartite main flow, which dismantles into 1) understand, 2) explore, and 3) materialize (Gibbons, 2016). We can see that the loop model of IBM constructively renames these parts of that main flow, however, it does not shed any light on possible substages whatsoever. General Manager of Design Phil Gilbert at IBM emphasizes not to be driven into despair if the understanding of the user's needs is not an instant 100 percent or even 50 percent. He has seen an accumulation of this percentage actualized over a period, and it takes a while for every person to get into The Loop (D'Avella, 2017). Perhaps this is the reason why the model does not have a deeper resolution or specific thresholds between sequential periods.

One can simply orientate in finding an own pace of comprehending the methodology and practices through those three top-level themes.

**Pithy Comparison**

Both Design Squiggle and Double Diamond appear to be linear models. An obvious apposition with start-middle-end-specific progress must influence thinking as well, so in that sense, The Loop presents a rather subversive alternative. There is no queue or series of certain events to follow along any longer, at least not in theory, so in a way traditional kind of manufactural ethos can be considered to lose its ideological significance and practical magnitude. An idea of a repetitive self-sustaining cycle of creation sounds like something that veritably challenges our capacity to observe, think, and respond. However, it might be one of the very few alternatives for prevailing or even succeeding in the field of contemporary rivalry.

**Brief Discussion**

We are undoubtedly somewhat used to relating obscure but imminent matters according to that traditional way of thinking. Aims to formulate an absolute, exhaustive, and prompt conclusion out of chaos probably has an evolutionary basis. Yet the world has become far more complex when compared to the ages of our design ancestors like Vitruvius. Chaos today appears already to be something beyond our wherewithal and apprehension. Therefore, our exertion for furtherance and productivity needs to be somehow reclaimed during future days to come. In a way, all these models are interpretive undertakes for describing how design is conceived by using perceivable fragments of gradually accumulating knowledge as pollen. The acumen of dedicated design experts is needed to deliver the primordium of the design, but knowledge cerebrated out of information is needed to enable the very existence of that design in the first place.

## 2.4 Design Methodologies

“Where a technique tells you ‘how’, and a philosophy tells you ‘what’, a methodology will contain elements of both ‘what’ and ‘how’. The methodology is itself a system and a change in any one stage affects all the others” (Checkland, 1981, p. 162-163).

Design types such as visual design, user interface design, user experience design, product design, concept design, content design, and service design all have a bearing magnitude when a role as well as the identity of a designer is taken under closer examination. A comparative overview of certain design methodologies assists us in understanding what alternative approaches there are for a design professional to apply when the design process is initiated. These methodologies are often described as design tools and occasionally the systematical framework of one is considered fundamentally more salient in terms of efficiency than an actual design implementation tool like software, platform, or technology.

PhD Deborah Gabriel classifies the method as a utensil when methodology justifies the utilization of a method (Gabriel, 2011). Design method overview on Design Methods Finder (https://www.designmethodsfinder.com/methods/search/all) enlists 70 alternative design methods, that can be applied within the context of various design methodologies. The methodology may, according to technologist John Spacey, be universal enough to be implemented in all areas of design (Spacey, 2017). Dr. David Kung at The University of Texas at Arlington remarks that methodology within software development is recurrently misunderstood because activities of 'what to do' instead of 'how to do it' are often in focus alone. "Software development needs a process and a methodology" (Kung, 2014, p. 37). Since digital product design is our focus area, we shall concentrate on delving into selected methodologies typically applied within software development.

**Waterfall Model/Methodology**

It is somewhat ambiguous whether a so-called Waterfall model should be regarded either as a software development process model or a generic design methodology although both implications are justifiable. AI-powered collaborative article on LinkedIn enlightens the history of the Waterfall methodology and enumerates its six stages (https://www.linkedin.com/advice/3/how-did-waterfall-methodology-emerge):

1. Requirements analysis
2. Design
3. Implementation
4. Verification
5. Integration

6. Maintenance

Practically speaking Waterfall is, according to Enrique Corrales, a sequential regimen in which every stage needs to be finished before the next one in line can be started. Design-wise, this necessitates abundant work of rectification for both crafting and engineering the front end, since the lucrativeness of a project relies heavily on it. For example, if any exceptions emerge during the implementation stage, it may be mandatory to intermit only to restart the design stage again. (Corrales, 2022a).

Hypothetically, the waterfall would sound like an ideal approach if the stages following one another would be adamant in terms of prerequisites and interdependencies. Usually, the cases are not that simple, not even on the most rudimentary level. Corrales states, that rather it is one of the many requirements for design practices to anticipate possible distractive alterations, that might present themselves at some point in the project life cycle. (Corrales, 2022b). LinkedIn article credits Waterfall because of its trustworthiness and homogeneity, however, the biggest disadvantage of it is the apparent lack of adaptability within projects involving a considerable amount of uncertainty and unknown variables. Other alternative methodologies are recommended for optimizing cross-team collaboration and operational feasibility.

**Agile Methodologies**

Global non-profit Agile Alliance organization underlines Agile methodology as “the ability to create, respond, deal with and ultimately succeed in an uncertain and turbulent environment”. Agile as a mindset values resilience, strength to cope with uncertainty, and the ability to cooperate within self-organizing teams. The methodology is founded on 12 principles entitled collectively as the “Agile manifesto”, which establishes guidelines for software development practices. Agile methodology manifests itself as an adaptable approach rather than an adamant code of conduct. Agile methodology strives to deliver customer value frequently and iteratively through feedback and continuous learning (Agile Alliance, 2023).

The index view of agilemanifesto.org presents the spirit of Agile in a nutshell. Social skills such as interaction, collaboration, and tolerance of changes are surpassing the prescriptive rigidity such as conventions of certain processes or tools, a necessity for up-to-date documentation, and

boundaries of an anomaly-sensitive plan. Fundamentally Agile could be regarded as a contrast of unidirectional process mentality favoring decrepit traditions and high levels of bureaucracy. Ph.D. Gaurav Kumar and Professor Pradeep Bhatia are compiling the following as some of the most popular Agile methodologies (Kumar & Bhatia, 2012):

- **Extreme Programming (XP)**
  Focuses on improving a project in five certain ways: *Planning* divides the project into iterations during which certain repetitive actions such as release cycling are to be executed. *Managing* provides an open work environment and handles time tracking and problem-solving. *Coding* produces test-steered development code composed through pair programming. *Design* evaluates concepts on every level whenever possible. *Testing* ensures quality by verifying the code before an actual release.

- **Scrum**
  Versatile project management procedure is suitable for complex cases with rushed time limits and exclusive objectives. Progression is based on working sprints that will follow one after another in between 2- or 4-week intervals. A scrum team does not necessarily occupy traditional developer nor test engineer roles however a dedicated Scrum Master runs the team and supervises productivity.

- **Feature Driven Development (FDD)**
  Both customer and architecture-oriented process with five iterative functions: Initially a high-level object model of the desired outcome is created. Once after the model is refined the second step is to create a list of grouped features. The third step is to assign owners for these prescribed feature groups and plan the development. Each feature will be modeled in detail and finally, the actual coding, testing, and packaging is done.

- **Crystal Method**
  An alternative toolkit of methodology elements for prioritizing people over tools, maneuvers, or processes. Crystal Method is applicable to meet the needs of exquisite projects. Extensive or security-specific projects for example need more of the elements than compact routine projects. Organizations can develop and use only the elements that are necessary by utilizing small teams within small non-critical projects.

According to a survey conducted by an international consulting company KMPG back in 2019 over 68% of corporate correspondents throughout Europe, Asia, and South America prefer Agile methods because of increased efficiency within product delivery practices. Only 12% of the correspondents did not apply Agile at all, however, 81% had started their Agile transformation within the past three years (de Koning, Weijland, Koot & van Eerde, 2019). Undoubtedly Agile methodologies establish a contemporary foundation for modern software development. Yet there are certain shortcomings as Kumar & Bhatia underline; “Main emphasis is on development rather than design and user. It focuses on processes for getting requirements and developing code and does not focus on product design” (Kumar & Bhatia, 2012).

**Design Thinking**

Design company IDEO, which was founded back in 1991 by David Kelley, Bill Moggridge, and Mike Nuttall, has been entitled to inventing the actual term as well as the practices of Design Thinking although the pioneering front of human-centered design in the form of vanguards, authors, and publications had been manifested itself little by little already decades before (IDEO, 2019). Within the previous section, a design process model entitled "The Loop" was introduced and further analyzed by using Gibbons's prescription as a framework. The six stages of the design thinking process are clarified in the following **Table 1** (Gibbons, 2016):

**Table 1:** Stages of Design Thinking according to Gibbons (2016).

| | |
|---|---|
| Empathize | Data gathering for understanding users' behaviors, words, thoughts, and emotions |
| Define | Conflation of findings for pointing out the gaps in users' experiences. Exploration of methods to address user needs in innovative ways. |
| Ideate | Generation of subversive and imaginative solutions for the defined user problems by disregarding existing conventions and technology base. |
| Prototype | Creation of palpable mock-ups out of the concepts refined for testing and evaluating ideas through feedback. |
| Test | Solicitation of input from users to point out whether if the solution meets their needs and contributes to their intuition, intelligence, or deeds**.** |
| Implement | Actualizing the vision by certifying that the solution is real and resonates among the users. |

Gibbons emphasizes the flexibility and scalability of the process due to its collective, repetitive, and modular nature (Gibbons, 2016). The following **Figure 4**, a diagram distributed by Nielsen Norman Group, depicts a workflow of the process and itemizes the six revolving phases within it.

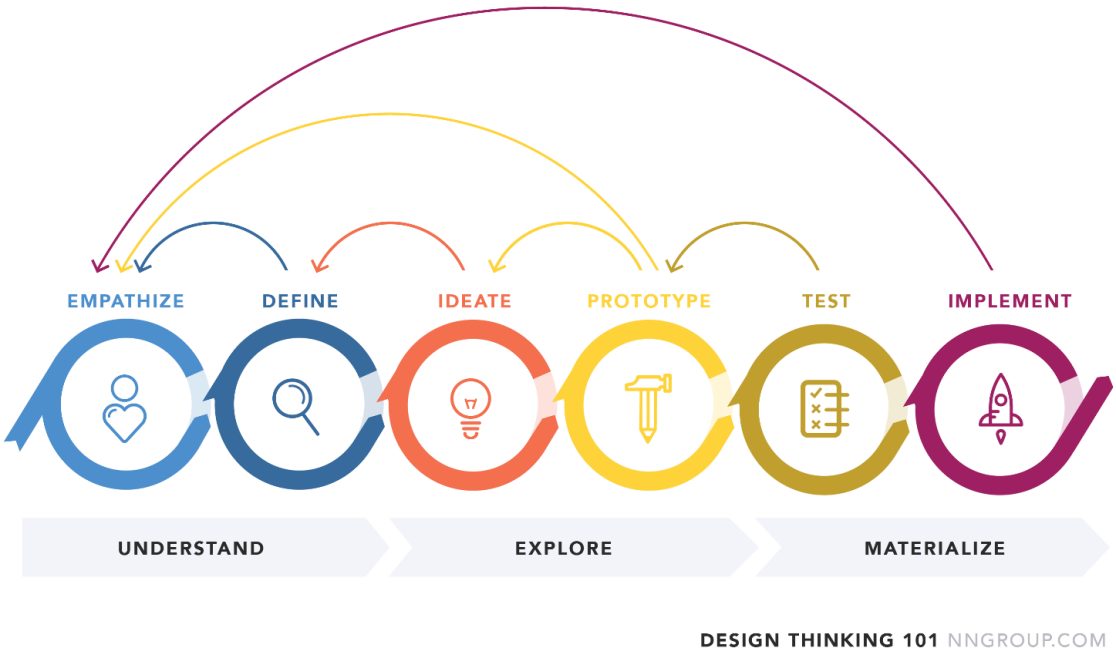


**Figure 4:** NN/g's Design Thinking Process curated by Gibbons (2016).

**Design Sprint**

Back in 2010 Jake Knapp, a designer at Google came up with an idea about a design-dedicated work week during which a small team of selected experts advance from the recognized issue that needs to be solved to the actual validated result. On Monday the problem is outlined. Preliminary alternatives of possible solutions are sketched on Tuesday. The best drafts are selected on Wednesday. A prototype is to be built on Thursday and tested on Friday (Knapp, 2016). Before the initiation of a sprint week, the problem needs to be defined, a team has to be assembled and a venue must be reserved. The handbook of Design Sprint method resembling a field guide contains an illustrative nutshell bulletin of the weekly schedule shown in **Figure 5** (Knapp, Zeratsky & Kowitz, 2016).

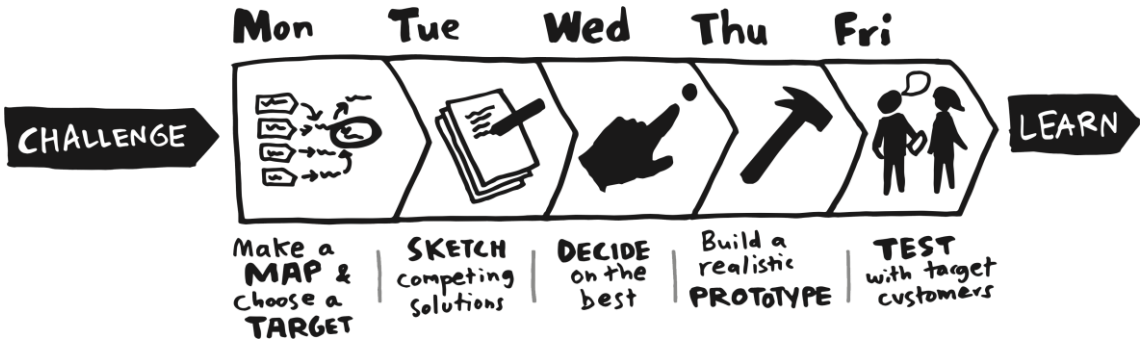


**Figure 5:** Design Sprint fast-forwards an arduous workshop over a single week (Knapp, 2016).

Senior Product Designer Al Abut with extensive experience in startup circumstances considers the Design Sprint method to be beneficial in teaching collaborative design basics. Yet some of the disadvantages are time consumption, intermediate outcomes, and debilitated design leadership. (Abut, 2021). Similarities with Design Thinking appear obvious although the method does not exceed itself any way near the actual implementation.

**Consideration**

Kung's opinion about waterfall is, that it applies eligibly on gentle issues with somewhat foreseeable attributes. Agile on the other hand takes over vicious issues that will require design for transition and a continuous supply of tiny amendments within swift release cycles (Kung, 2014). This anecdote could be also considered to explain digitalization as both a prevailing and augmenting circumstance; Technological innovations productized to cope with increasing complexity are in fact accelerating the increment of complexity. On the other hand, only technology enables the administration of increasing complexity, as Ph.D.'s Erik Hollnagel and David D. Woods wrap it up; "The complexity of the current technological environment is not only something that must be mastered but paradoxically also provides the basis for the ability to do so" (Hollnagel & Woods, 2006, p. 1).

Uncertainty and turbulence designated by Agile Alliance unquestionably are to some extent consequences of technological complexity that is a universal phenomenon. Therefore, a reasonably straightforward argument could be made, that Agile Methodologies along with Design Thinking are fundamental servants within every business problem manifesting itself in ever-varying reality, however this moderately unrecognizable concept of technological complexity as a

prevailing circumstance is easy to take for granted and therefore Waterfall, with its emphasis on implementation and delivery, can be argued as non-eligible. Design veteran, author, and founder of the Made by Many consulting company Tim Malbon describes the Design Thinking method as an attractive idea privileging practice for creating concepts without the necessity let alone obligation to consider possible constraints and boundaries within realizing them (Malbon, 2016). Designer and writer Rebecca Ackerman draws a similar speculation by stating that means of Design Thinking are solely focused only on initiating the creative process which may discard the final implementation phase entirely (Ackermann, 2023

**Concessive resolution**

From the ground of my own experience, the latter phases colliding the ideated concept with technological complexity can be turmoil particularly if the actual product development software stack is heavy and release pipelines are convolute. Such preconditions might be tacky when an iterative product development loop with prompt response time must be established. Abut encourages creative teams to improvise through experimenting and to avoid collective thinking for decision-making since extroverts are prone to monopolize conclusive dialogue. In addition, Agile Methodology in its extreme end with heavy regimentation and strict formalization “makes a team anything but quick and nimble”. Whatever the design and implementation methodologies are, rigid design basics must be established without utterly halting the implementation pipeline. Fundamentally, productivity in terms of design processing is all about using the right tools at the right time so, that the true costs of proactive work have covered solutions to relevant problems (Abut, 2021).

## 2.5 Design for Accessibility

”Accessibility means that people can do what they need to do in a similar amount of time and effort as someone who does not have a disability. It means that people are empowered, can be independent, and will not be frustrated by something that is poorly designed or implemented” (Duggin, 2016).

Design of a product or service for maintaining forms of consistent, aesthetic, and appealing patterns of interaction is mandatory in terms of product and service development. Accessibility requirements call for certain logic to be implemented already during the very early stage of the

design process. EU directive comprising legislation on the accessibility requirements for products and services has come into effect in late June 2022 (Directive [EU] 2019/882 of the European Parliament and of the Council, 2019). Design-wise the requirement for accessibility includes an ample variety of content-specific precepts such as page and form structure, color contrast, and responsivity through different screen sizes and aspect ratio. The World Wide Web Consortium (W3C), an international standardization organization consisting of member organizations, develops standards, guidelines, and methods for both building and improving the accessibility of the World Wide Web. Documentation, resources, instructions, and tutorials are available at https://www.w3.org/WAI/design-develop/.

**Aesthetics**

Professors Thomas Munro and Roger Scruton are examining aesthetics on a philosophical level as "ideas of beauty and taste" that can be approached as a concept, experience, and object (Munro & Scruton, 2023). Interaction Design Foundation determines aesthetics as an archaic set of constants originating from the essence of beauty. Designers utilize aesthetics in refining the ability of a design to both attract and engage (Interaction Design Foundation, 2016). This brings us closer to the common interpretation of aesthetics as an impression of how a product may feel, look, and act.

**Designer and Accessibility**

The baseline for implementing certain logic and coherence in terms of accessibility can be overlooked and even interpreted as a liability in terms of aesthetics. Designer, accessibility specialist, and author of the Design Domination podcast Colleen Grazer has covered some of the most common misconceptions that designers might have about accessibility. It might be hard for a designer to perceive the benefits of accessibility from a brand point of view, and some may even think that subsuming accessibility makes the design downright appalling. Accessibility as a process has been considered as a nonrecurring indispensable treatment that takes extra time and creates redundant expenses (Grazer, 2020). The consideration and incorporation of accessibility are built into the design process and the conventions of testing and evaluation are something a designer must comply with even if it might feel something that is restricting or otherwise interfering with the creative contribution.

**Aesthetic-accessibility Paradox**

Software engineer and founder of UX Movement publication Anthony Tseng argumentatively states, that “the more accessible an interface is, the less aesthetic appeal it will have.” This paradox supposedly complicates the efforts of design when the needs of both the majority and minority must be met without estranging either one. Although balancing between these attributes might be hard in terms of creativity, accessibility feasible as well as visually pleasing compromise can be achieved as the following **Figure 6** demonstrates (Tseng, 2019).

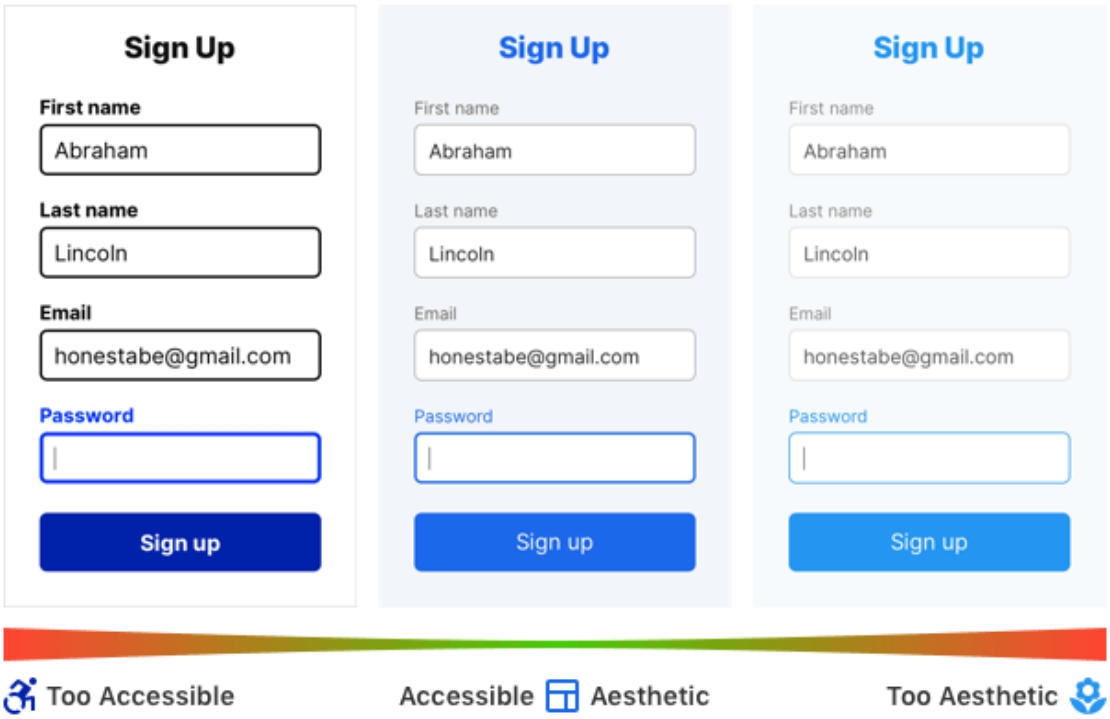


**Figure 6:** How a balance between the extreme ends of accessibility and aesthetics could be achieved without compromising either one (Tseng, 2019).

## 2.6 Design Maturity

”Maturity is an unfolding journey of self-knowledge that is not static and therefore never completely the same. It keeps on building on itself by increasing clarity to improve awareness, understanding, management, and growth of the self” (Parikhal, 2016).

Design maturity focuses on investigating and clarifying the level of integration that design practices possess within a business organization. Design in general and all sub areas of it, such as business design and service design for example, can be both examined and compared by using design maturity as a framework (Pernice, Gibbons, Moran & Whintenton, 2021). Within this sense design as a term could be primarily referred to e.g., actions taken in retracing as well as pointing out undetected touch points and obscurities of existing value chains. Alternatively, design can be considered as a core function fueled by strategy and no business, product, or service-related decisions will be made without implementing design practices.

**Groundwork**

A half-century ago personal computers, mainframes, and peripheral devices were rather primitive in terms of user experience - at least primeval from a contemporary point of view. Professor of Information Sciences and Technology John M. Carroll in Pennsylvania State University addresses that the basis of what became known as human-computer interaction (HCI) was laid during the late 1970s and it gained influences from cognitive psychology although most of the users back then were information technology professionals. HCI is rather a collection of various scientific theories than a specific methodological or technical study. The concept of “usability”, which is contemporarily discoursed as “user experience”, was originally delivered by HCI and it is an indefinitely ever-relevant idea (Carroll, 2015). In a way, both HCI and design can be seen to share this common aspect of being in a constant state of evolution and evaluation. Due to this adjacent nature, it seems rather congenital to assess as well as administer the emergence of HCI and design in a similar fashion – paying constant attention to the apparent state of their maturity.

**Initial Model**

Project Management Institute (PMI) grounds the trending popularity of various design maturity models through the most popular model called the Capability Maturity Model (CMM) introduced by the Software Engineering Institute (SEI) back in 1987 (Rosenstock, Johnston & Anderson, 2000). A workbook of CMM authored by Kenneth M. Dymond depicts this model shown in **Figure 7** as a five-step ascending staircase (Dymond, 1995).

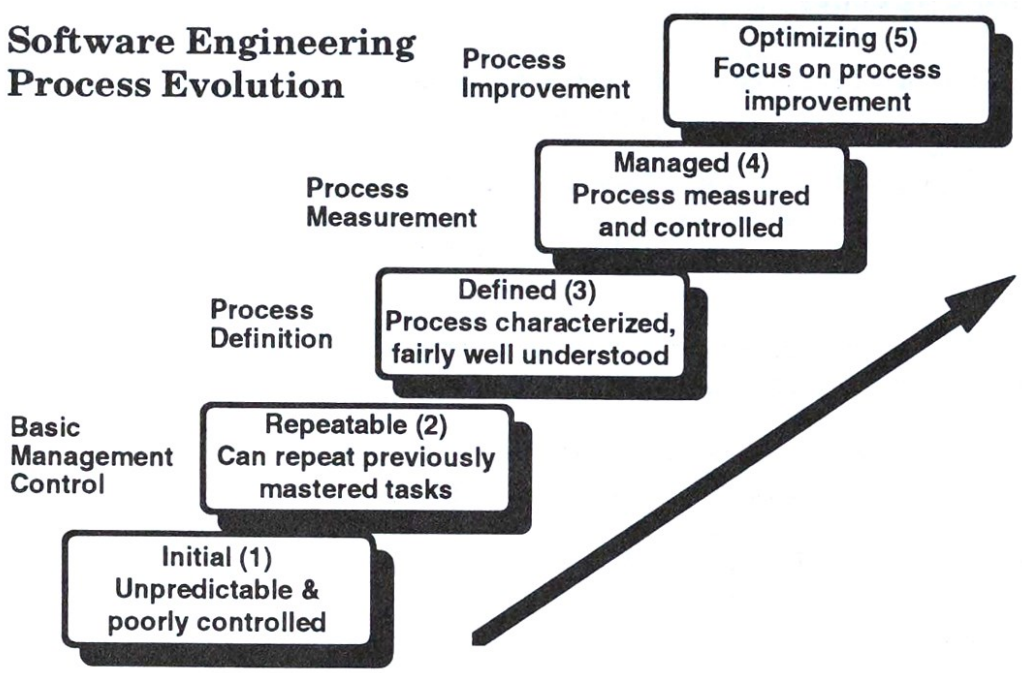


**Figure 7:** Capability Maturity Model (Dymond, 1995, Chapter 1, p. 17).

Schematically speaking CMM somehow manages to expand the phasing as well as a narrative of Newman's Design Squiggle although comparably design, according to Newman's point of view, would originate somewhere after phase three and eventually achieve an adequate level of refinement towards the very end at phase five. Nevertheless, CMM with a backbone of an engineering performance, renders a prompt construe about how an evolvement in terms of design could also be approached.

**Design Maturity Model Alternatives**

Let us take a look at Nielsen's model presented in **Figure 8**, which includes six levels of design maturity. The highest level cannot be reached by a certain team, unit, or department alone when other factions are following behind. Typically, an organization needs to augment its capabilities and become ripe enough on each of the levels before a leap from the current level onto the next level can be taken. (Pernice, Gibbons, Moran & Whintenton, 2021).

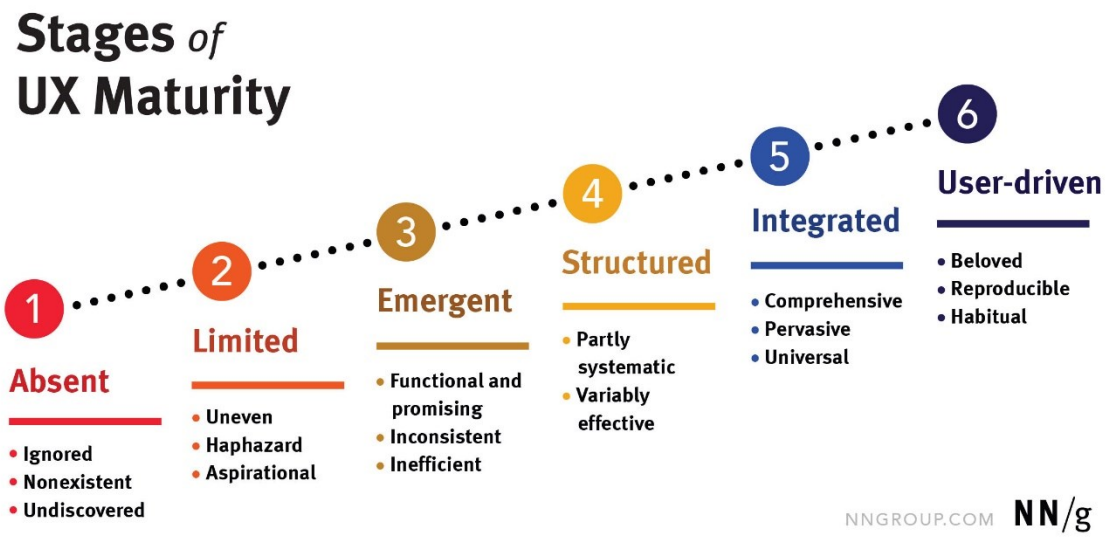


**Figure 8**: NN/g's UX-maturity model for assessing the present state of UX-related pros and cons (Pernice, Gibbons, Moran & Whitenton, 2021).

The model of InVision presented in **Figure 9** portrays design maturity as a solar system populated by organizations with varying undertakings of design practices and diverse intentions to bring them further. According to a survey conducted by InVision back in 2018, the vast majority of organizations were neophytes in terms of design maturity. Whereas Level 1 producers utilize screen design only, visionaries on Level 5 obtain process excellence and business intellect through design (Buley, Avore, Gates, Gonzales, Goodman & Walter, 2019).

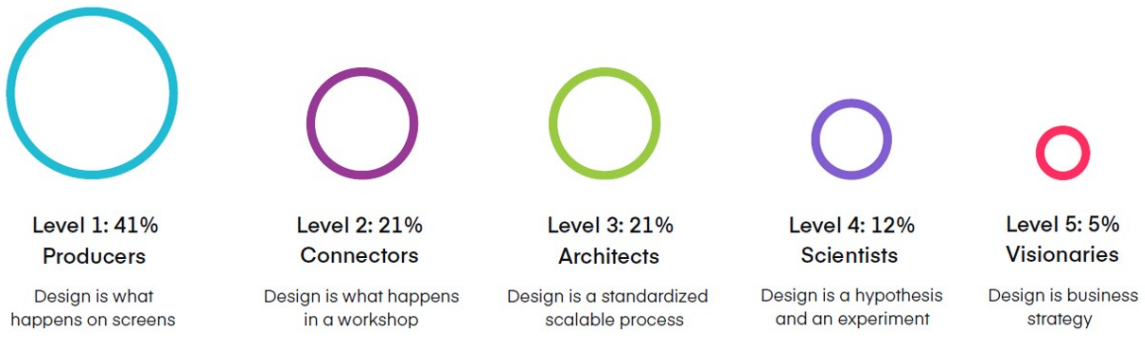


**Figure 9:** The maturity solar system of InVision (Buley, Avore, Gates, Gonzales, Goodman & Walter, 2019).

Survey data indicates, that 80% of the correspondent companies occupied design-dedicated teams but only the peaking 5% had already incorporated design into business strategy. (Buley, Avore, Gates, Gonzales, Goodman & Walter, 2019). The concept of design maturity compels employees with creative responsibilities to broaden the design perception beyond the team-level circle of influence. This alone has a significant fundamental impact on all groups of stakeholders.

**Observables**

How to illustrate and present something like “design maturity” in a sententious fashion? Since both are essentially in a constant state of transformation, picking up clear signals of advancement can be overwhelming. Design Competence Lead Susanna Lähteenmäki at Telia has unraveled the basic concept of the design maturity model with the help of a group of designers. Common interpretations based on group discussions are for example while the models outline occurrences at each stage and indicate any gaps, they do not provide insight into the model’s value. Additionally, the business incentive for an organization to progress to the next level is not clarified – any concrete suggestion to ascend could be argued and evaluated according to the apparent situation (Lähteenmäki, 2019).

**Noteworthiness of Design**

Chief Architect Ben Morris from Mintel states, that most maturity models are the results of indiscriminate rationales and unproven conclusions. Practically the models are encouraging only to promote level ascends rather than consideration of actual tangible outcomes (Morris, 2019). Design could be regarded as an entity whereas a designer with a taming wit pursues to cultivate it. Yet design also radiates the essence of itself outwards – visions, standpoints, and opinions about the current state of design are aroused also among other practitioners besides designers. Within almost any result-driven community same applies also to strategy, policy, and management in general, however for some reason and despite the signals it generates, design does not necessarily possess a status eminent enough to be regarded as one of the fundamental cultural cornerstones with palpable output.

## 2.7 Design Automation

”Automation is the creation and application of technologies to produce and deliver goods and services with minimal human intervention. The implementation of automation technologies, techniques, and processes improve the efficiency, reliability, and/or speed of many tasks that were previously performed by humans” (Rouse, 2023).

Design automation is generally known as a part of the manufacturing process however certain entities of automation have become evident also within digital product and service design. Such entities are for example design systems, content planners and publishers, dynamic content generation, and most recently various artificial intelligence tools. Fundamentally, design automation is, according to Autodesk Corporation, “an approach that helps you capture and reuse engineering knowledge and intent”. The concept of design intent prescribes relationships between design items and specifies the behavior of the outcome when its characteristics are adjusted. At the same time, design automation can be scaled and customized according to the developing maturity of the organization (Autodesk, 2021).

The ongoing progress and prevalent evolution of design automation places a question about how a designer could benefit from already existing possibilities and upcoming innovations of automation in such a way, that those would connive endeavors to convert oneself. Design automation with the prevalence of consistency as well as lead time efficiency is a conducting momentum within major international companies that have solidified their brand and expertise on the market.

**Design Automation Tools**

Every industry has its palette of choice when it comes to enablement, management, and development of design automation integrity. Within our scope of design proficiency tools like Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) are not the most common for a designer to master. Yet it might be somewhat baffling to determine a generic set of ancillaries for contemporary design purposes since nowadays there are so many of them and most of them are versatile in terms of applicability.

**Design System**

Designer and Senior Software Engineering Manager Rune Madsen slates the history of design systems back to the early 1400s when composable typesetting and the basics of typography were invented. (Madsen, 2020). Yet the very first representation of and formula for systemized design might be the golden ratio, which was, according to Jacob Obermiller and Sara Berndt, recognized already by the ancient Greeks Euclid and Pythagoras. It took over a millennium until Luca Pacioli, an Italian mathematician, eulogized the golden ratio in his book “De Divina Proportione”, which is greatly revered also because of its diagram content illustrated by no other than Leonardo da Vinci (Obermiller & Berndt, 2020).

Product Design Director Anmar Matrood traces the origin of the contemporary design system concept back to the late seventies. A book published in 1977 and entitled “A Pattern Language: Towns, Buildings, Construction” by architects Murray Silverstein, Sara Ishikawa, and Christopher Alexander is generally regarded as the magnum opus of systematized design principle. The prime idea behind the concept was inspired by the methods discovered when examining how medieval towns were originally built. Almost two decades later in 1994 the book “Design Patterns: Elements of Reusable Object-Oriented Software” by Erich Gamma, Richard Helm, Ralph Johnson, and John Vlissides brought the concept further into praxis. Matrood divides the design system into the following terms (Matrood, 2020):

- **Design:** a blueprint illustrating the appearance and operation of something
- **System:** a unified whole formed by interrelated entities interacting
- **Components:** a part or element of a larger whole
- **Component library:** is a repository for documented and coded user interface components
- **Standards:** are prescribing level of quality
- **Principles:** are propositions serving as the foundation for a system

Most of the contemporary UI/UX design systems parse down into design patterns, components, and items by following such terminology. It is quite common even for a medium-sized company to have a dedicated design system of its own. Although UI/UX/CX designers and a visual designer are most likely to profit the most from the system, other designers can also gain imminent benefits from it since the system is practically a language for constructing design. The following **Figure 10**

presents a fragment extracted from a design system containing application-building components for digital solutions in healthcare (Better, 2022).

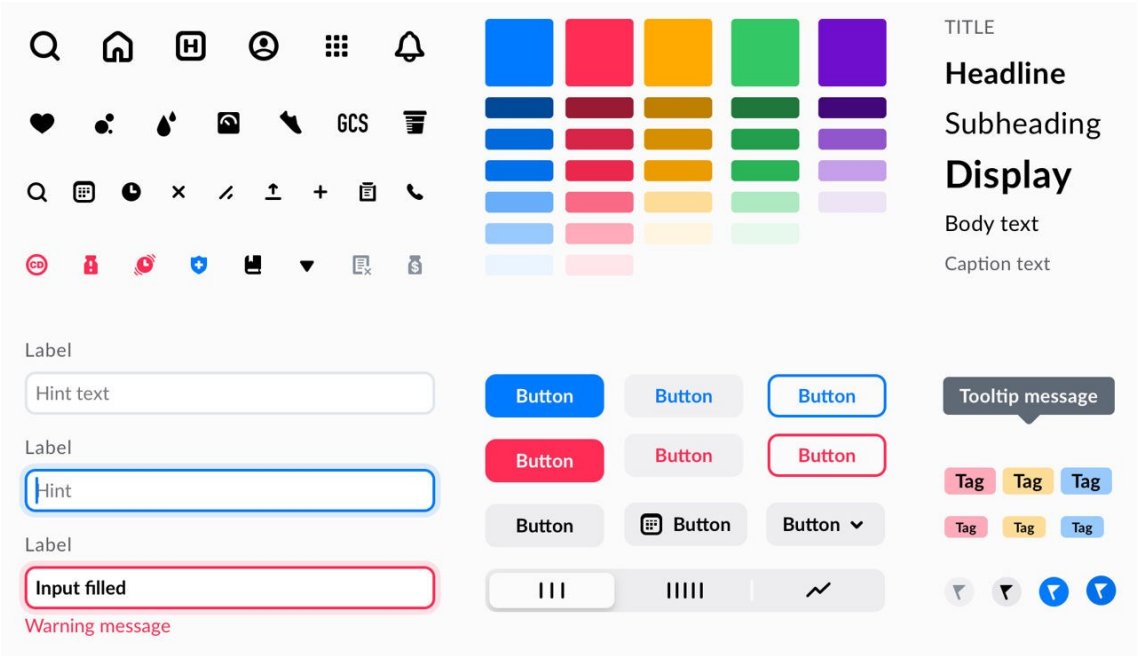


**Figure 10:** Sample components of a design system by Better Platform (Better, 2022).

**Content Planners and Publishers**

Digital content strategist Carlos Alonso condenses the origin and present state of digital publishing; The initiation of digital publishing can be traced back to 1971 with the establishment of Project Gutenberg, which embarked on a mission to digitize the US Declaration of Independence. Today as digital media using electricity and devices to conduit up-to-date information continues to evolve and expand, print media using pulp and ink to document dated information continues to become extinct (Alonso, 2019). Practically, digital content, digital publishing, and cross-device platforms in general have engendered new ways to both observe and consume media. The reformative progression has been somewhat meandering around as well as following the evolution of social media and the growing supply of various handheld devices.

For its part practices in distributing and publishing content must roll on equally instantaneous as accessing, consuming, and sharing the content. The difference between a content planner and a publishing client is not definite. Neither is the disparity between design and planning when such a client is utilized within content management. Present equivalents of content planning and

publishing platforms are for example WordPress content management system (CMS), Smartly.io social media advertising platform, and HubSpot marketing automation platform. All of these are substantial not only from the perspectives of app development and technical productivity but also in terms of design necessities.

**Dynamic Content Creation**

Business Development Specialist Peter Duffy specifies dynamic content creation as a calculated emitting of message variations with fragments of ingredients crafted according to the user's desires and interests. Ideally, such a procedure can be orchestrated and optimized with Natural Language Processing (NLP), a machine learning technology by the help of which computers are "taught" to understand the meanings behind words as well as images (Duffy, 2020). Rather conventional term "personalization" attires the concept with a practical outfit often referred to as one of the basic components for running successful e-commerce.

For instance, a push notification by a streaming service for recommending a certain series and a marketing email from a retail sports chain for promoting a sale of your favorite sneakers are both outcomes of an algorithmic procedure to generate a unique engagement proposition. Naturally, some data about the user's preferences as well as about one's behavior must be applicable to make the method work. Therefore, author Kellison Ferreira suggests, that dynamic content creation as a whole is a data-driven strategy rather than a mere instrument of content production. This extends the context in which content production is typically seen; however, it also demands attention to data-gathering responsibilities and technical infrastructure resources in general (Ferreira, 2021). On a constitutive level dynamic content creation intersects several areas of design, combines different purpose-specific tools, and utilizes a collaborative platform to both optimize and manage all activities.

**Artificial Intelligence**

The notability and substance of Artificial Intelligence (AI) emerged virtually overnight after the first version of ChatGPT, a generative natural language processing tool developed and distributed by OpenAI, was released in late 2022. Actually, OpenAI had released the first version of DALL·E, an AI-based image-generating tool, almost two years before ChatGPT, but it did not achieve as much attention probably because of its unilateral capability to produce images according to written text.

Researchers, scientists, Information Communication Technology (ICT) specialists, and journalists among many others began to experiment with ChatGPT and soon the world was not only astonished but also wide awake and worried about any possible threat that AI might present indirectly toward economics, politics, art, and ethics. Eventually, Future of Life Institute published an open letter targeted to developers of AI for pausing the training of NLP models until consistent regulations and universally applicable legislation for governing AI evolution have been established (Future of Life Institute, 2023).

At the moment AI does not quite yet seem to have a genuine ability to create something impulsively or instinctively. A question "Can AI create something spontaneously?" was made to an AI and it gave the following reply: "Human creativity often involves emotion, personal experience, and intentionality. AI does not have feelings or consciousness, and it doesn't create with a specific purpose or intent. Instead, it generates content based on patterns and structures it has learned from its training data. So, while AI can produce new and innovative outputs that may seem spontaneous, its 'creativity' is fundamentally different from human creativity" (Microsoft & OpenAI, 2023). Although the creative limits of AI are still somewhat undiscoverable it is most important also for a designer to start having experiments with it.

**Outline**

In a certain way behind the forefront of possible aversions toward design automation lies a mundane concern about technology surpassing the competence and expertise of a craftsman. Undoubtedly such vicissitude will happen, but not probably in such a way that one might anticipate by observing only the most evident facts. Thomas H. Davenport, an author specializing in AI, and Nitin Mittal, an AI consultant, share a mutual perspective about the necessity of human intervention in optimizing the efficiency of AI - certain predetermined parameters must be entered for the generative AI model to make it create something and the outcome needs to be assessed, rectified and even revised if necessary (Davenport & Mittal, 2022). In that sense, automation should contribute to drafting instead of stealing the ultimate marrow of creativity, which would continue to persist as a virtue of a human designer. Automation does not dilute the requisites to obtain an appropriate level of software competence and computer skills, however, it clearly will change their prominence.

## 2.8 Design as a Merchandise

”Design is a method of problem-solving however the value of design is difficult to define. Design is hard to isolate as a function and the design function operates differently by industry. That makes benchmarking to standardized measurement metrics difficult” (Design Management Institute, 2023).

What is the monetary value of a design concept as a commodity when there are no expenses related to raw materials or refinery level for example? How a price tag for a design could be calculated and according to which arguments? Are there other means of evaluating the worth of a design alternative besides user research, focus group feedback, customer satisfaction, A/B testing, etc? Determining a reasonable yet profitable price of work and selling the expertise can be troublesome for a designer, particularly if one decides to convert from a certain area of expertise, let us say direct marketing for example, to a whole new field of proficiency like email marketing or marketing automation. The matters prescribed above are all relevant when aiming to clarify whether if design concept alone really has value from an economic point of view and how a designer could use the value as leverage to convert oneself.

**Design Costs**

Production costs of manufacturing or shipping costs of container freight for example are relatively straightforward to both estimate and optimize. The profit margin is constantly revised according to operating expenses that cover consumables like electricity, fuel, water, spares, etc. PhD of Economic Sociology Adam Hayes elaborates, that production costs encompass all expenses within running a company including manufacturing costs, which are direct expenses incurred in product creation. To put this in other words, for an expense to be considered as a production cost, it must have a direct link to the company’s revenue generation. (Hayes, 2022). Design-wise this is usually not the case, since the problem of putting a price tag on an outcome of the problem-solving method is somewhat paradoxical.

Design engineer and product developer Siim Sild benchmarks the Design for Excellence (DFX) philosophy in clarifying the concept of Design to Cost (DTC) as a decisive framework by the help of which product development can be optimized. DTC aims to implement the estimated acceptable level of costs during the development cycle of the project in such a way that given cost targets will

become independent variables to advise management and decision-making. Attainability of DTC however requires certain reliability in terms of responsibility, freedom, and autonomy (Sild, 2022). DTC suggests that design should be extended observably throughout the entire project lifecycle instead of being one of the initial resource-reliant phases with only little to no expertise over the latter parts of the project. Design solution alone as a deliverer is an assumption qualified to ensure the authenticity of designated requisites, however, verifiable virtues predicted by this assumption are not prone to actualize instantly but rather in the long run.

**Design Value**

Back in October 2018 global management consulting group McKinsey & Company published a report containing a synthesis of distinct design insights collected from various companies on demerged industries within over five years. The leading experts in both business and design within these companies were approached either with a survey or with an interview. The analysis from the ground of the given responses provided a basis for disclosing four distinguishing principles of valuable design (Sheppard, Kouyoumjian, Sarrazin & Dore, 2018b):

1. Utilization of both data and analytics within steering an organization's design strategy and measuring its efficiency – exactly like the observance of financial competency. Sustenance of design leadership with preciseness similar to which turnover and expenses are managed over.
2. Constitution of a culture by the means of which specious obstacles between different areas of design can be deconstructed to join resources in focusing on the user experience.
3. Administration of the necessary freedom for design experts to work in cross-functional teams that are sharing duties and maintaining interconnectivity while augmenting the user experience.
4. Integration of user insights incessantly during iteration cycles, test events, learning activities, and training workshops to ensure minimum risk circumstances for continuous development.

These "Top Quartile of Design Performers", as McKinsey & Co. entitles them, have certain aspects of a classic quaternary, such as earth, wind, fire, and water. Achieving the excellence of design value through all these dimensions is moderately infrequent even among the biggest companies performing on a global scale. The illustrative representation of McKinsey & Co.'s quaternary presented in **Figure 11** underlines the value of design as an outcome of an ecosystem that has an ability to self-arrange by sharing artifacts, skills, and knowledge (Sheppard, Kouyoumjian, Sarrazin & Dore, 2018).

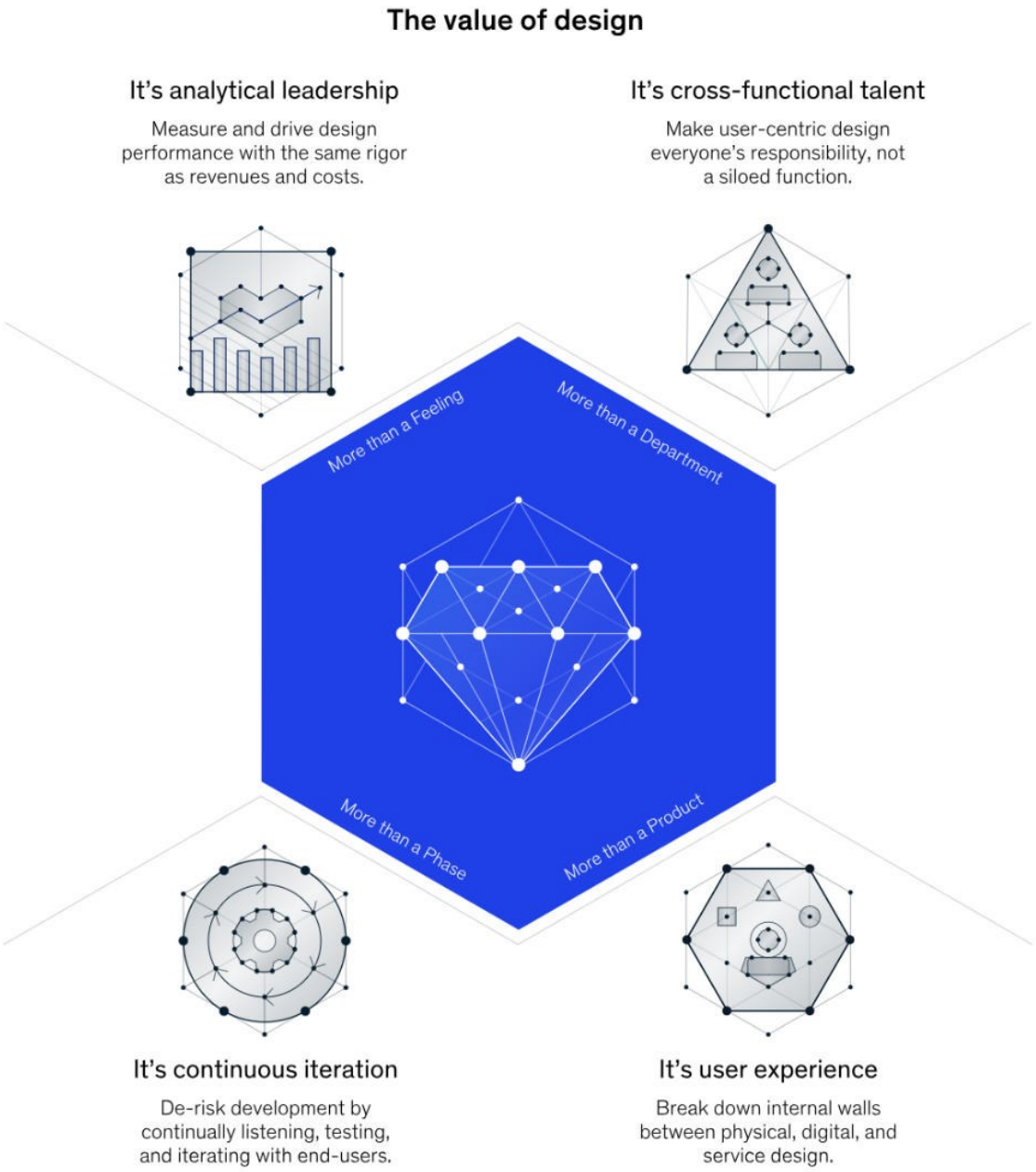


**Figure 11:** Elementary factors within spawning and cultivating the business value of design (Sheppard, Kouyoumjian, Sarrazin & Dore, 2018).

**Design Investment**

Design in the form of a painting, sculpture, installation, or utensil for example can be considered as a noteworthy subject of investment particularly if the author or manufacturer is either classically or contemporarily famous and the item itself is unique. Most likely the financial value of a such is not imminently affected by fluctuating stock exchange or socioeconomic turmoil. Yet some of such items do not necessarily possess any kind of function or practical purpose

whatsoever so determining the actual monetary value requires certain expertise in terms of research, inspection, curating, and trend awareness. On the other hand, determining the value of an intangible design with precogitated function or purpose adheres to the author as well but not primarily concerning the traditional sense of auteur heritage but rather through fundamental cultural and introspective change.

Case study of the Design Value Index (DVI) and particularly Design consultant, strategist, and transformation leader Jeneanne Rae's article about the insights engendered by DVI indicates, that obliging circumstances, sufficient resources, and open-minded ambiance must prevail to foster the influence of design across the organization. The DVI diagram shown in **Figure 12** commences Rae's article by introducing the advantage that a group of design-centric companies was able to achieve within a decade when comparing their ascension in return on investment (ROI) to the Standard and Poor's 500 (S&P 500) (Rae, 2016). In addition to that, the diagram also serves as a reminder about the aftermath of the global financial crisis, which escalated during the autumn of 2008. The S&P 500 is a common stock index rate tool used to track the share prices of the leading public companies in the United States (S&P Global, 2023).

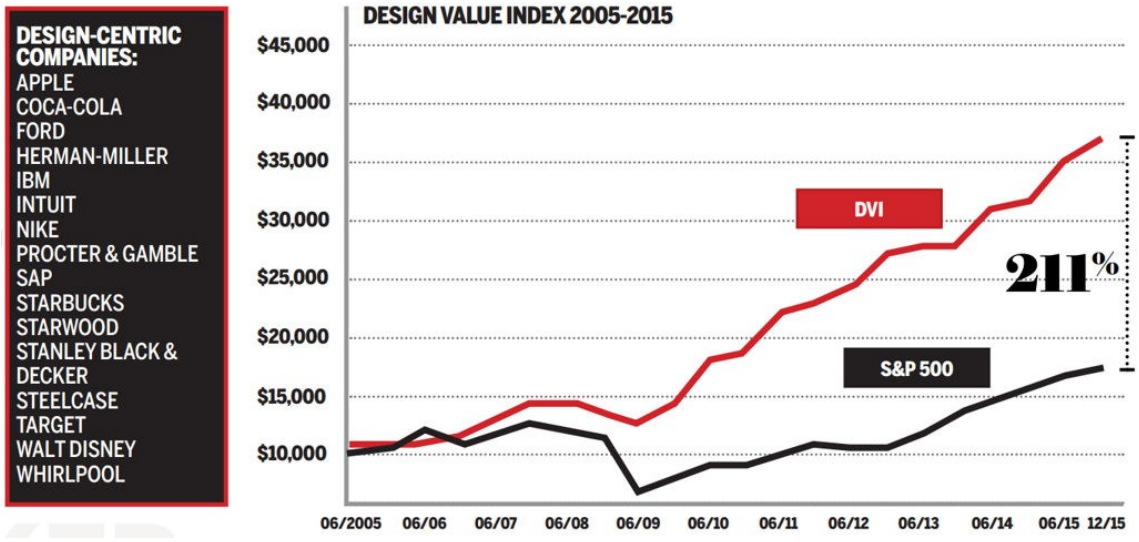


**Figure 12:** Comparison between the ROIs of DVI and S&P 500 within a decade (Rae, 2016).

Findings behind the lingering but persistent climb of DVI indicate, that within design-centric companies design has a prominent, persuasive, and investment-driven role supported by the senior leadership. However, the relevancy of and for design must be earned until the status and

perception of the value of design ossifies into the culture of an organization. Therefore, an actual management of the design function by a senior-level executive and frequent reporting of the results design brings about, is imperative (Rae, 2016). Communities that are not yet investment-driven in terms of design value something like this does not happen overnight, so determining the value of design and underlining the significance of it as an investment contests the frame of references through which design has been traditionally scrutinized by designers themselves.

Fluent journey maps, intuitive usability, engaging content, and appealing aesthetics are all matters of qualifiable measurement, however the value proposal, that these substances of design are crafted to bring about in the first place, commonly alludes to some tardy accrual of probity or virtue. Consequently, an instant manifestation of the value of a design is associated with the worth of a medium, peripheral, or device so it seems justifiable to question whether if design is not entirely detachable from the volumes it materializes itself upon.

## 2.9 Speculations

The taken deep dive into design has enlightened the matter in constitutive respect so let us return to the interpellated contents inquired in the very beginning of this chapter.

Q Should a designer always initiate with precise objectives, outcomes, or results in focus or is there an alternative way to uncover the elements of an advisable design?

We have come to understand the subject enough to state that design as a problem-solving method concentrates on creating a form, appearance, sequence, or perceivable archetype of anatomy for interrelated abstracts that lack an ensemble of a system. The outcome usually has some sort of purpose or function in terms of serviceability. The world, perimeters of experience, and circumstances within our technical environment continue to become more complex so obtaining a solution for a certain problem through a seminal initiative requires not only tolerance of perplexity but also the ability of witty unlearning.

The idea of an iterative looping continuum as a working cycle of design has provably revamped the entire regimentation of design and probably the most inconspicuous thing about it is the fact that this idea has been contemporarily recognized already way before all the gadgets and apparatuses, that we have inadvertently learned to consider collectively as the frontline of digital design. Also,

communities and organizations share this obscure misconception to some extent at least and therefore the horizon between clearly defined, steady, and dependable result-driven design and re-iterative, instructive, and debugging discipline of design may appear polarized. So, the answer depends greatly on the complexity or simplicity of the problem itself, on the culture under whose sphere of influence the design is being conceived, and on the expertise of the people with whom a designer is working to find a valid solution. The quest for an eligible design approach is also a question of whether a designer formally appropriate for the job is either an army of one or a champion among the many.

Q Are the remedies of design always attuned according to the veritable needs of which design aims to meet?

Even an ongoing long-term project with overtaken sub-objectives and moderated burn rate can be driven into a phase during which the next steps in terms of design validation appear obscure. Cooperative targets may become diffused because of the hidden agendas of different stakeholder groups or schedule does not hold well any longer. Expectations, insistence, and uncertainty common for preceding a nascent project may re-emerge on the home stretch of an endeavor and something like this is without exception extremely disconcerting not only for the experts in design but for other professionals also.

British Broadcasting Corporation's (BBC) Digital Media Initiative serves as an example of a multiyear project that ended up being canceled due to undisciplined management, technical difficulties, and exceeded budget. The goal was to enhance methods applied in making use of footage and audio. Originally an outsourced assignment was later taken over and re-initialized internally with nonexistent results (https://www.bbc.com/news/entertainment-arts-22651126).

Design, like any other asset, needs to be overseen with high emphasis to both assort and interlace the types needed for progression. A designer can lead oneself to a certain extent but cannot surpass occurrences brought about by the limping dominion of higher authority. Ownership of a design is effortlessly administered but earning such through practice and expertise is a conquest, that requires appetite, courage, and perseverance. Therefore, the apparent support that a community, association, or organization can radiate toward design function is critical particularly under unfavorable and capricious circumstances.

Q Does it always take an ordered arrangement of progression to advance from entropy to coherence?

The preceding responses provide lucidity over this puzzling subject also, but additionally, it is possible for a design or a concept to become accidentally conceived. An article in the Finnish subscription newspaper Helsingin Sanomat wraps up the profile of Cal Henderson, a founding member, shareholding partner, and Chief Technology Officer of Slack Technologies. According to Henderson the concept of Slack was a semi-accidental brainchild of the founder mastermind Stewart Butterfield, whose former company Tiny Speck was developing a game called Glitch, which was subsequently suspended. Instead of initiating a new game project, Butterfield decided to refine a self-made messaging platform, that had been used for communication during the development of Glitch. Eventually, a concept and a brand with a current worth of over 20 billion dollars was born (Raeste, 2023).

Naturally, it involved much more than Butterfield's insight and took way longer than overnight to validate the proof of concept for Slack, but the story paints a sterling example of how a setback or undesirable turn of events can be cultivated to sprout something beneficial. This of course requires creative freedom and discharge from previous commitments because a fresh foundation cannot be established without energy, conviction, and time. Despite all the methods, models, tools, and resources available, sometimes an ability to see the potentiality of some existing entity just might be the missing link for bringing up an exquisite design.

## 2.10 What is Identity?

"Man is a machine by birth but a self by experience. And the special character of the self lies in its experience not of nature but of others. A man enters the lives of other men by recognizing his own thoughts and feelings in them. The knowledge of nature teaches man to act and makes him master of the creation" (Bronowski, 1965, p. 106).

The Cambridge Handbook of Identity originates the word "identity" to the Latin term "idem", which has been subsequently formalized as "identitas", meaning sameness. Also, concepts of self, individuality, and authenticity are related to identity by deriving the idea of an inner moral instructor with ethically conscientious guidance (Bamberg & Dege, 2021). An individual can be examined through the context of personal identity, cultural identity, professional identity, gender

identity, religious identity, etc. Presumably, all the aspects are not relevant within our case yet certain dimensions of identity require closer inspection to acknowledge the features that have the biggest impact on vocational selection-related matters. I believe this to be useful in outlining the identity of a designer.

Ph.D. of Clinical Psychology Beverly Daniel Tatum addresses, that “The concept of identity is a complex one, shaped by individual characteristics, family dynamics, historical factors, and social and political context. Who am I? The answer depends in large part on who the world around me says I am” (Tatum, 2008). As a clarification to Tatum’s discourse, identity is being shaped by both our unique idiosyncrasies and our social affiliations. Additionally, it involves our thoughts and impressions about how others may view and categorize us (Facing History & Ourselves, 2021). As Professor of Political Science James D. Fearon at Stanford University articulates ”in ordinary speech and most academic writing, ‘identity’ means either (a) a social category, defined by membership rules and allegedly characteristic attributes or expected behaviors, or (b) a socially distinguishing feature that a person takes special pride in or views as unchangeable but socially consequential (or, of course, both [a] and [b] at once)” (Fearon, 1999, p. 36).

**Personal, Social, and Professional Identity**

Professor Suzanne Degges-White at Northern Illinois University divides the concept into two basic types: personal identity and social identity. Personal identity interprets the differences of self from others around and social identity substantiates similar characteristics shared with others. One significant characteristic common for social identities is that such are recurrently being utilized to rationalize why some groups with diverse social identity characteristics have different knowledge, abilities, and efforts than others (Degges-White, 2021).

Our social self-perception encompasses both reflections and projections we have filed within our horizon of experience over work life in general. The personal or private side of life is probably not an exception experience-wise however the distance or proximity between these basic type samples is an interesting subject. Would something originate from the personal side that drives motives on the social side, particularly through professional context, or vice versa? This question must be contemplated. Chief Design Specialist Aino Vepsäläinen adduces the trading line of designers as a field of high ethics and morale since the usefulness of a design concerning the

footprint it imprints must be purposeful in terms of necessity, equity, and sustainability. However, this definition of the purpose of design does not impart anything whatsoever about what kind of a person a designer is. Designers are commonly juxtaposed to or considered even as artists and this standpoint is emphasized whenever a discussion about a certain “hero designer” takes place. While an artist expresses oneself through his/her work and takes a stand on various themes, a designer’s task is to produce valid solutions (Vepsäläinen, 2015).

Industrial postdoc and Ph.D. Kamila Kunrath at Aarhus University focuses on defining personal attributes and design skills to both examine and evaluate a designer’s professional identity, which is ”considered to be a context-related aspect of the whole individual identity and has been defined as a dynamic understanding of professional responsibilities, actions, beliefs, and values by synthesizing knowledge” (Kunrath, 2019, p.16). A scholastic trifecta model presented by **Figure 13** serves as an illustrative example of how professional identity takes its shape through coalescing themes (Preston-Shoot & Mckimm, 2010).


**Figure 13:** Model of professional identity formation (Preston-Shoot & Mckimm, 2010).

**Personal Attributes**

The elements of **Table 2** distinguished by Kunrath according to references in design literature are not technically design-related. Rather these are categories for individual facets of thinking,

emotions, feelings, and attitudes. Behavior, interplay, and decision-making are conducted by oneself on the grounds of them (Kunrath, 2019).

**Table 2:** Personal attributes affecting professional identity (Kunrath, 2019).

| Element | Description |
|---|---|
| Confidence | Certitude of its 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 an individual psyche and manifest as behavior. |
| Emotions | Sensitivity to external inputs, self-awareness, and management of personal feelings, also related with moral and empathetic aspects. |
| Empathy | Psychological capacity to identify yourself with other's feelings and thinking, which enables to act towards help and supportive behavior. |
| Ethics | Awareness and positioning about any possible environmental, social, health or design life performative consequences, or lack of compliance to legislation. |
| Leadership | Sense of autonomy and managerial attitude, searching and promoting ideas among strategy and business view together with 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 embracement of new and unusual ideas or methods, being able to deal with uncertainty and to make changes on the work plan by relying on the 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. |

**Design Skills**

By using references to design literature Kunrath also identified a necessary skillset in terms of the lucrative design process. These items aligned in **Table 3** are features not distinctively pertinent to a designer by default. Rather they are achievable through education, training, and practice. Work quality increment, performance output, and postulated mindset of continuous learning are being acquired through them (Kunrath, 2019).

**Table 3:** Design skills affecting professional identity (Kunrath, 2019).

| Subcategory | Description |
|---|---|
| Cognitive Abilities | Capacity of think 'designerly'; understanding the nature of the problem to be solved; developing a distinct way of thinking about the problem and solution spaces; demonstrating high level of abstraction for idea generation and evaluation rounds. |
| Cognitive Strategies | Ability to set strategies of learning, problem framing, solution development, and problem-solving that allows the flow of the cognitive abilities. |
| Personal Communication | Capacity to communicate clearly and directly, attending to details and empathizing with an audience. |
| Interpersonal Communication | Awareness of communication ability in order to make public presentations, set collaborations, establishing rapport, and to communicate among a team. |
| Education-based Knowledge | Awareness of basic and specialized knowledge in design that compounds the formal education, and domain of technical and design language. |
| Practice-based Knowledge (know-how) | Abilities based and developed through practice, expertise and know-how gain. Such as good imagination/ representation, IT competencies and use of software, negotiation capacity, and appliance of previous knowledge. |
| Managerial Competency | Perceived competency for managing generic tasks, in a personal level and with the colleagues or among the team. |
| Project Management | Competence in developing and managing the project such as planning, progressing among the tasks and phases, and evaluating effectiveness and outcomes. |

## 2.11 Identity and Design Career

Both personal and professional sides of life generate certain expectations for an individual in making a career out of the selected craft and expertise. Specific fields of industry and expertise

used to be (and a few of them still are) somewhat prominent in delivering lifelong employment relationships with promotional possibilities. It is not exaggerated to say, that a designer most likely does not have this option to choose. There are exceptions of course, yet finding an ascending, salary-wise ever ever-mounting, and balanced path in the profession, is today rather coincidental. Nevertheless, both personal and social types of identity probably have their career-changing significance right next to a sharply written resume, up-to-date online portfolio plus the latest and greatest of hardware, software, and workwear. Kunrath crystallizes, that “career development for designers involves a lifelong learning process that allows self-identification and recognition as a design professional” (Kunrath, 2019, p. 47).

As obvious as it undeniably sounds the chores demanded from an educational and pedagogical point of view may not be commonly acknowledged among various designer guilds. Kunrath with her colleague PhDs Philip Cash and Jason Li-Ying have implied that the acts taken for acquiring further knowledge and new skills to strengthen personal professionalism in design and to revamp a professional identity requires not only personal but also technical growth. As personal attributes tend to improve slowly over time design skills are fundamentally augmented during a pertinent educational span (Kunrath, Cash & Li-Ying, 2017).

**Self-identification**

Within self-identification and professional perception as a designer, psychological matters such as awareness, commitment, and motivation are interrelated with provisional aspects like environment, circumstances, and practice. Both an ability as well as volition to adapt are necessary for resolving the disparities between the revered simulacrum of an “ideal designer” and the current premise of professional identity (Kunrath, 2019). Perpetual reflection of self and closer introspection, when necessary, without oppressive criticism, should be assessed as pillaring occurrences spontaneously exemplified by the contemplator oneself.

**Professional Recognition**

The progress of professional recognition is reiteratively associated with the ability to perform and behave in a dependable, coherent, and satisfactory manner. Also, the educational background, adapted level of expertise, and the requisites of work in practice influence the experience of being recognized as a design specialist (Kunrath, 2019). In addition, confronting vocational challenges,

surprises, and abruptions with anticipation along with an unprejudiced stance shall question yet also at the same time fortify the sense of self as a professional by compelling to develop resilience.

## 2.12 Designer's Ego

Confidence, self-reliance, ambition, and vision of a designer could be entitled collectively as ego. The Encyclopedia Britannica dismantles the psychoanalytic concept of ego through Freudian theory about it being responsible for the administrative functions of personality by combining the external and internal worlds. The contribution of the ego regulates the coherence of behavior by comprising reference points related to past events in life (Augustyn, 2023). Yet arrogant as it may sound as a term, in my opinion, "ego" is a figurative representation of the temperamentality needed to gain expertise as well as authenticity over the craft of design in general. The counterpart of ego could comprise abilities like empathy, self-criticism, humility, and courtesy for example.

Author, writer, and designer Eric Karkovack acknowledges, that a fraction of a healthy ego is undoubtedly a good thing in terms of confidence, determination, and sense of direction. An effusive amount of ego however makes one deaf to others' opinions, tames the craving for learning, and bases the abilities to both think and act on mere instinct only (Karkovack, 2023). To put this into other words, excessive ego makes you selfish, lazy, and unconcerned. Product Designer Pedro Canhenha also advocates a healthy ego in getting oneself employed in the first place and further adopting the composure to forge an abiding career. An undisciplined ego may eventually lead to self-alienation and detachment from labor, peers, and development teams (Cahenha, 2019).

**Strength and Development of Ego**

The developing personality of individual hosts the "Superego", which represents the control of coexisting delegation of primitive instincts and impulses "Id", by merging parental and societal standards. A strong ego does not get overwhelmed because of intuitive drives, and it copes successfully with environmental and social pressure by maintaining consideration as well as the sense of options available in retaining a chosen direction (Augustyn, 2023). Contrasting or more like balancing between ego and the counterparts of it is something that an individual must be able to perform not only from a personal perspective but also from a group point of view. This is

undeniably one of the key elements in succeeding as a member of a team or community. Furthermore, an individual resilient enough and capable of steering oneself forward under challenging circumstances most likely achieves a sustainable balance between ego and its counterparts.

**Perseverance of Distinctive Aptitudes**

Expediting requisites of continuous learning have changed the perspectives for evaluating the competence, feasibility, and performance of an employee. Recent trends are suggesting that obtaining a so-called t-shaped skillset is a proper way to improve possibilities for exceeding the outlines of a standard job description of a designer. According to what I have discussed with several ICT specialists during the past years, the best dev ops teams usually consist of people with transferable skills and high anticipation of learning opportunities.

A condensed article about the history of psychometric testing prescribes how the needs of employers as well as recruitment trends have affected the assessment of potential candidates. Instead of being restricted to a test measuring personality or intelligence, an aptitude test evaluating cognitive skills, rather than knowledge or a specific skill set, may be commissioned to candidates (https://www.aptitude-test.com/blog/articles/the-history-of-psychometric-testing).

Author and Psychosocial Specialist Kendra Cherry affirms the frequent use of these aptitude tests as a convention when assessing academic potential or career suitability, but the concept also provides a reliable indication of the potential to further improve abilities in specific areas. At the end of the day, aptitude tests aim to predict the completers' ability to learn new things and they can assist you in getting ideas about what you are good at or what you might be good at (Cherry, 2023).

**Aptitudes of Both Novices and Professionals**

One of the few trending workplace platforms Glassdoor emphasizes comprehension over distinctive aptitudes as a career-supporting asset. Distinguishing an aptitude from an interest takes introspection in terms of abilities, experience, and knowledge. Whereas an aptitude is a combination of intrinsic talent and ability an interest is either need, desire, or craving focused on

characteristics of a certain subject or target. Aptitudes have a tendency to persist invariably when interests can change conclusively through life (Glassdoor, 2021).

Discovering the most consummative learning trajectory with the aid of aptitudes and interests is not straightforward. It may be rather overwhelming in fact and can even cause frustration to a certain extent, particularly if the target or learning objectives have not been clearly defined. Goals of professional learning are equally important as goals of profitable employment in general. It is just a matter we all must become aware of by ourselves. Finding one's aptitudes just might be the simplest way to start from.

## 2.13 Design and Identity – Synthesis

European Institute of Entrepreneurship Development (iED) has propounded that we are currently experiencing the fourth stage or phase of The Industrial Revolution, although this conception was not entirely agreed upon among researchers examining the phenomena (iED, 2019). One way or the other technology and industries on the line continue to develop further. The progression of the future shall awake compulsive requisites for professions of which we have not currently even heard about. Southern Illinois University's professors Stephen Dollinger's and Stephanie Dollinger's research findings on the ligatures between identity and creativity demonstrate that individuals with high prioritization of their personal identity as well as information-seeking activities are inclined to possess high potential for creativity. Such individuals have most likely shown exceptional skills in terms of creativity already during their early childhood (Dollinger, Dollinger & Centeno, 2005).

**Vantages**

Designer – kind of like the master of handicraft being re-deployed during the first decades of The Industrial Revolution – can be seen as advised, improvised, and self-acknowledged by traditional premises of the trade-specific culture. Quite many of the fundamentals within the study of visual design for example have begun to lose their relevancy on a practical level. At the same time mediums, formats, and tools have changed and multiplied at such a pace that keeping up with the latest is almost a full-time job of its own. The most recent addition to the palette of modern-era designers is naturally Artificial Intelligence with its many conformations, which have transmitted numerous renditions of how certain deeds previously regarded as chores of a design professional

are now becoming acceleratively automatized. Perceiving something as metaphysical and as impersonal as an AI to create textual, visual, or scripted content is something that is not necessarily easy to accept yet much harder to fully consent to.

**Compulsories**

Most fields of expertise have their silent edict in terms of honorability, integrity, and trade secrecy. A designer domiciliates oneself as being worthy of and commensurate with the tribe of one's peers by delivering insightful and advantageous progenies sophisticated to serve their purpose. To do this designer extracts fragments out of the sphere of one's experience, cultivates intelligence by enriching the existing knowledge with fresh information, and combines requisites with specimens of a potential solution. All this requires commitment, obstinacy, and certain squeamishness out of which something new is about to sprout. Eventually, the solution, a design, or a concept of such, is an amalgamation of a designer's professional psyche and array of preconditional arrangements. Dollinger's research findings imply that an individual consciously rejecting superficial identities and collective associations most likely adduces more inventive creations (Dollinger, Dollinger & Centeno, 2005). On this basis and from the ground of my personal experience I consider the identity and design capabilities of a designer to be inseparable. A designer cannot conduct oneself without observing, typifying, and nourishing one's identity when a design is being conceived.

**Discussion**

Let us rewind to the era that we started from – the dawn of the 16$^{th}$ century. Bürdek accentuates the prominence of Leonardo da Vinci as the first personification of a true creative with technical rather than creative comprehension over design. Actually, da Vinci incarnated the designer as an inventive engineer however designers today are not inventors any longer (Bürdek, 2015). The ambiguity of uncompromising and visionary design authorship has become practically impossible to possess because the philosophical dogmas of design have become so ordinary. On the other hand, the prevailing small-scale manufacturing and do-it-yourself culture spreading through social media are reverbing the heritage of da Vinci by substantiating the idea, that a competent mind with a nifty pair of hands makes a creative. It is practically possible to obtain an entry-level design expertise by using for example social media and learning platforms as an educational institution.

Although collaboration as a skill, that cannot be utterly acquired through remote or self-studies only, can be adopted through peer exposure, practice, and experience sharing.

**Afterthoughts**

Remarkably the arcane of design does not seem to be something exclusive in terms of education, vacancy, or mentoring any longer. In his article “The Vanishing Designer” designer and developer Chuánqí Sun criticizes modern-era data-driven culture, loss of personality, and standardized study schemes that are resulting in formal and vapid design outcomes. Lead time efficiency, quantifiable productivity, and measurable success have surpassed all remedies of innovativeness and risk-incurring creativity. Designers as well as outcomes of design have lost their idiosyncrasies only to become commodities (Sun, 2021).

Methodological streamlining along with facilitated collaboration, anomaly-avoiding systematization, uniformized automation, and qualifiable conformity are leaving very little room for evolutionary exceptions, that are required for an existence to develop itself further. Everything today from a design expenditure perspective seems to be so forethoughtfully calculated, that an aberration of any kind might be straightforwardly prejudiced as a distraction instead of a possibility. Under these superior circumstances and for the heritage both recognized and perpetuated a designer must re-invent oneself to exemplify, preserve, and triumph in design.

**Unsettling facts**

The Association of Visual Communication Designers in Finland (Grafia) has conducted biennial industry research among its members since 2015. The results back in August 2021 indicate, that experts working as designers are highly educated and well-employed officials and entrepreneurs on average. However clear majority (approx. 63 %) of all correspondents had not been engaged with any re-educative commitments, although the impression about the significance of digitalization concerning future perspectives of employment was commonly shared among the group (Soramäki & Ojala, 2021). The most recent result from October 2023 shows, that the situation has not been significantly improved since the majority (approx. 60 %) of correspondents were still re-educationally disengaged. Roughly a third on the other hand had begun to utilize AI within their daily labor (Soramäki & Ojala, 2023). The research does not shed any light on the possible reasons for such disengagement, although the abated covid pandemic is thought to have

affected the matter. Nevertheless, there must exist some fundamental erudition impeding distraction typical for the common stance of the field of design.

# 3 Research Procedures

Specialists working in the field of design have come to realize, that the repertory of various design practices has broadened substantially, and from this angle, it just might be overwhelming for some of us designers to apprehend career-related whereabouts. In my opinion, a person does not necessarily have to be career-oriented by nature, yet I find it paramount for a design professional to obtain some sort of insight about how, when, and according to what self-developmental plans must be made. Media, advertisers, and the public sector continue to employ design professionals, however, the contemporary trend of in-housing design manpower as a resource just might have already achieved its peak, at least here in Finland. Designers, either in-house or agency side, are individuals sharing common interests, ambitions, and perceptions as well as having domestic responsibilities right next to the job-specific duties. The ongoing phase in life, the current self-perception as a professional, and the present step in their career alone can guide him/her to develop themselves better as a designer.

## 3.1 Methodology

Applying mixed methods enables a more comprehensive examination of a particular phenomenon, facilitating the collection of more diverse and detailed data that could encompass multiple methodologies or paradigms. Interpretivism as a paradigmatic method begins with the premise that knowledge in the human and social sciences cannot adhere to the natural science model, as there are meaningful aspects of human experience like for example emotions, standpoints, and values that cannot be objectively “understood”. Rather than striving to uncover “truth”, interpretivism is set to engender comprehension by adopting a stance of relativism. (Farrow, Iniesto, Weller & Pitt, 2020).

Although my research questions are not unequivocally verbatim with the hypothesis prescribed right below, I believe mixed method to be the most suitable implementation alternative, since scrutinization of the subject as well as questions awaken from the grounds of them require both quantitatively and qualitatively measurable substance for examination. In addition to the grade of

gathered data, interpretivism steers the research to consider also individual aspects and contextual variables that are vital in compiling understanding.

## 3.2 Hypothesis and Targeting

Kind of like there are numerous alternatives to conduct, coordinate, and evaluate design in general, there are also a diverse set of options to implement digital design in particular. These options for implementation are usually different framework alternatives such as content management systems, front-end user interface libraries, marketing automation platforms, and consoles of social media channels, etc. Technology enables design as we currently know it, even though the concept itself should be masterminded already before the means of technology come along.

Could it be possible, that the increasing complexity of the working environment together with the accumulating experience and growing self-assertiveness of a designer leads to self-affected technological detachment? Those of us designers, who do not see or otherwise cannot imagine themselves being preoccupied with the responsibilities of a creative director, lead designer, or brand manager, for instance, can have various doubts related to the continuity of their skill-specific demands on the labor market. These doubts hold true in certain areas of design, such as desktop publishing, package design, and point-of-purchase, however situation can vary quite dramatically within a relatively short period of time. I feel considerable to present, that to some extent a certain amount of technological detachment prevails among designers, and this might have an atrophying influence over the motivation for learning. Maybe this could have something to do with a narrow interpretation of technology being the only instrument of science endeavoring from uniqueness to exceptionless repeatability and total automation.

**Target Group**

The target group of the research consists of designers, who currently have a scope-specific job description such as Visual Designers, UI Designers, UX Designers, Concept Designers, Content Designers, Service Designers, and Strategic Designers. Participants from both private and public sectors with either in-house or agency-side positions were reached, however, only the most conventional type of agreement (full-time job) is covered within the context of the research.

This shortcoming in the research excludes the findings from the perspectives of part-time work, voluntary work, and unemployment.

**Recruitment of Participants**

Participants of the target group were recruited via LinkedIn by utilizing the existing contact network. Selected existing contacts were prioritized yet also new contacts were acquired by using the research proposal as an invitation. Gathering up a group heterogeneous enough, however, was extremely challenging although both Finnish and English language alternatives were applicable. Twelve participants in total were acquired although the desired level in terms of heterogeneity was not achieved, which undeniably has significance in construing the results. Each of these correspondents was approached through LinkedIn messages with a research proposal. Detailed instructions were sent right after an affirmative answer to the proposal was received.

## 3.3 Data Collection and Analysis

Data collection of the research is divided into stages by complying with the principle of explanatory sequential design, which contrives quantitative data collection before qualitative data collection. Thus, the findings and results accumulated from both methods can be combined within the reporting narrative (Ortlieb, 2019). The first stage involved a survey containing a structure of quantitative question arrays. Webropol survey application of JAMK was used as a platform and the survey was triggered to an email address provided by a participant. Once the survey was responded to, the date and time for the second stage involving a semi-structured interview was scheduled according to the correspondent's wishes. All participants received leading questions beforehand via email so, that they were able to prepare themselves for the interview conducted via Teams. Each interview session was recorded for transcription.

**Data Required**

A literary review of the research is set to contribute the basis for rationalizing RQ1 and RQ2. Data provided by the survey and emanating from the interviews serve as building blocks for accumulating comprehension during the research process. Quantitative data extracted out of the survey holds a key for rationalizing RQ3 and RQ4 and it is processed in a spreadsheet format. Qualitative data accumulated from the ground of the interviews is processed to affine codes

required for supporting the set of themes. Qualitative data also supply a fulcrum for rationalizing RQ5 and RQ6 and all the variables are:

- Age
- Years of design-specific work experience in total
- Number of years exerted on design-specific studies
- Current amount of design-specific vacancies
- Current designer type/title
- Current employment status
- Current level of experienced labor sensibleness
- Current level of experienced labor significance
- Priorities related to the current scope of responsibilities
- Knowledge of certain design-related concepts
- Value perspective of certain matters according to the current scope of responsibilities
- Ideal value perspective of certain matters related to the desired scope of responsibilities
- Current requisites out of design scope
- Preferred requisites out of design scope
- Preferred methods for learning new skills, methods, and/or concepts

**Data Collection Period**

Data collection was initiated in the early spring of 2023 and invitations were sent from the end of February to the beginning of May. All attendees had accomplished the survey by the end of May. Four out of twelve were surveyed in English. Interview sessions started in mid-March and were concluded by the end of June. Two interviews out of twelve were conducted in English. Unresolved, incomplete, or otherwise insufficient correspondences did not occur.

**Method and Approach**

The division and categorization of a large data quota is remarkably easier through thematic analysis, and it is also notably beneficial when seeking out subjective data, like the experiences, perspectives, and beliefs of a participant. When an existing premise and previous knowledge with stated facts portray the theoretical frame of reference then a deductive approach to thematic

analysis is the most appropriate (Crosley, 2021). Therefore, these options are used in deciphering the qualitative research quota to identify all substantial matters addressing the research questions and hypothesis and to uncover meanings relevant to the subject.

# 4 Survey Results

This chapter will introduce the quantitative survey results per each question presented. Qualitative data obtained through the semi-structured interviews will be analyzed and integrated within the next chapter. Precise itemization of designer types involved is shown below in **Table 4**, which collates responses to the question “Which of the following designer types/designer titles is the closest or equivalent to your current job description?” UI Designer and UX Designer titles were the largest representative portion out of all participants. The research failed to cover Concept Designer and Content Designer titles, so in this respect results, analysis, and conclusions remain partially undetermined. A clear majority of the respondents (83%) are in-house designers and the remaining (17%) are agency-side designers.

**Table 4**: Amount and ratio of designers involved.

| Type / Title | n | % |
|---|---|---|
| Business / Strategic Designer | 1 | 8.3 |
| Concept Designer | - | - |
| Content Designer / Producer | - | - |
| Service Designer | 1 | 8.3 |
| UX / UI Designer | 7 | 58.4 |
| Visual Designer | 3 | 25 |

## 4.1 Age Distribution and Experience

The first four questions of the survey focused on mapping the range of expertise by exploring age distribution, years of experience, and education, as well as the accumulated amount of field-specific job vacancies. As shown in **Figure 14**, which collates responses to the question “Specify your age range”, middle-aged seasoned designers constitute the majority of the research sample.

A quarter of the designers are in the early stages of their careers, although a correlation with **Figure 15,** which illustrates collated responses to the question “Current years of design specific work experience”, is not seamlessly concordant. Yet three-quarters of the designers have close to or over a decade long work experience.

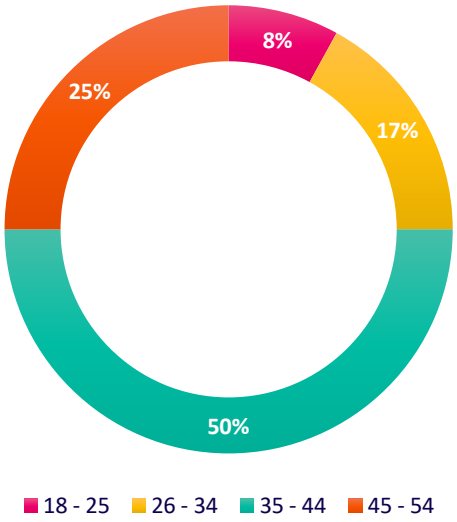


**Figure 14:** Ratio of the age ranges between correspondents.

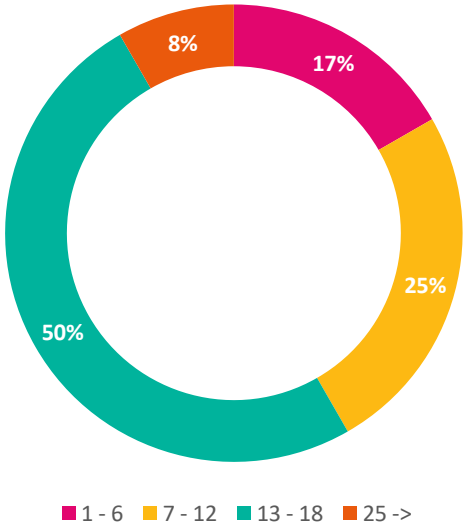


**Figure 15:** Ratio of design-specific work experience between correspondents.

Responses to the question “Total number of years exerted on your current design expertise specific studies?” show an average duration of design education to be approximately five years, as **Figure 16** indicates. **Figure 17** collating responses to the question “Current amount on design specific vacancies”, shows that individuals have accumulated an average of six job positions. Employment relationships with different employers and different job descriptions or positions of a certain employer were both validated within the question.

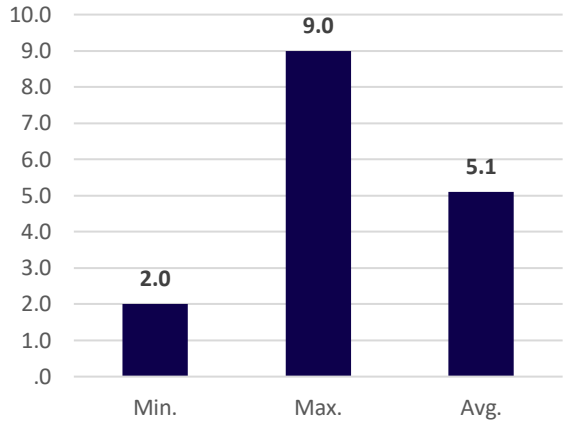


**Figure 16:** Years exerted on design expertise-specific studies.

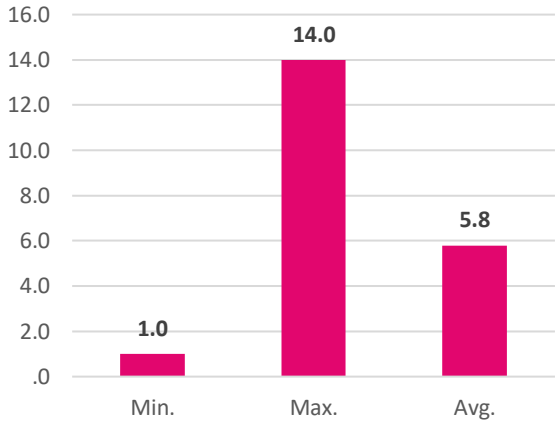


**Figure 17:** Amount of design-specific vacancies.

## 4.2 Experience of Sensibleness and Significance

Regarding the sensibleness and significance of daily labor, the overall situation among the respondents appears to be better than I had personally anticipated. As indicated by **Figure 18**, which collates responses to the question "What is your current experience of sensibleness within your daily labor?" only 17% of the respondents perceive their work to be somewhat sensible, while for the majority, the experiences divided between 58% of a considerable and 25% of an absolute. No responses were given to the lower ends of the five-level Likert scale.

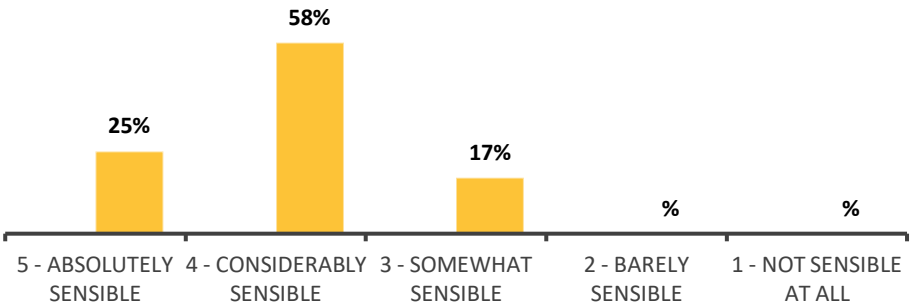


**Figure 18**: Current experience of labor sensibleness.

The question "What is your current experience of significance within your daily labor?" is distributed in a slightly different way than the previous one. Responses indicated by **Figure 19**

show, that a single respondent finds the chores as barely significant, when the half sees them as considerable. Experiences of the remaining divide between 25% of a somewhat and 17% of an absolute. No responses were given to the lowest end of the five-level Likert scale.

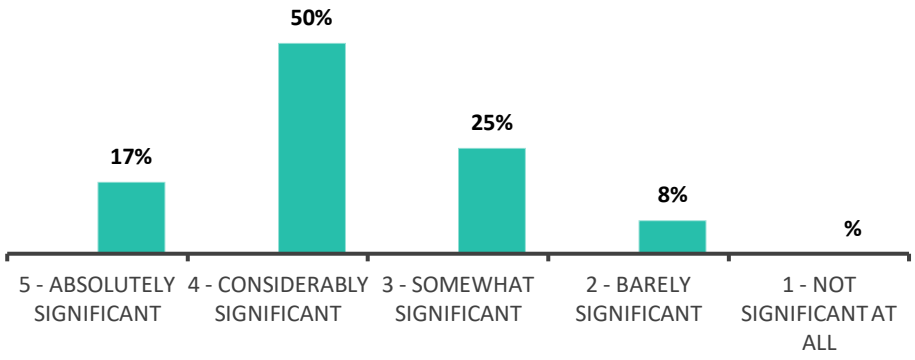


**Figure 19**: Current experience of labor significance.

## 4.3 Design Roles and Affiliates

The next question presented an assertion “A statement can be made that different types of design expertise are blending with each other when for example new concepts are drafted or existing implementations are developed or otherwise refined further. How would you perceive the tasks related to these different kinds of types to be prioritized within your current scope of design responsibilities?”, and an example “The responsibilities of a visual designer should focus on prioritizing Visual Design expertise and Content Design expertise for instance could be secondary” followed. As shown in **Figure 20**, primary responsibilities were logical across all respondents except for two UX/UI Designers, one of whom had a primary focus on Concept Design and the other on Service Design, and one Visual Designer with a primary focus on Customer Experience Design. Some degree of consistency specifically concerning the type of UX/UI Designer appears in the dispersion of secondary and tertiary responsibilities, although the number of individuals in relation to the entire sample is blatantly overrepresented. Therefore, the phenomenon cannot be considered as an emerging pattern. However, what can be stated is that for the most part secondary responsibilities of a UX/UI Designer are focusing on Visual Design, and tertiary responsibilities are on Service Design related matters. On a secondary level Concept Design and Service Design related matters seem to be equally emphasized among UX Designers.

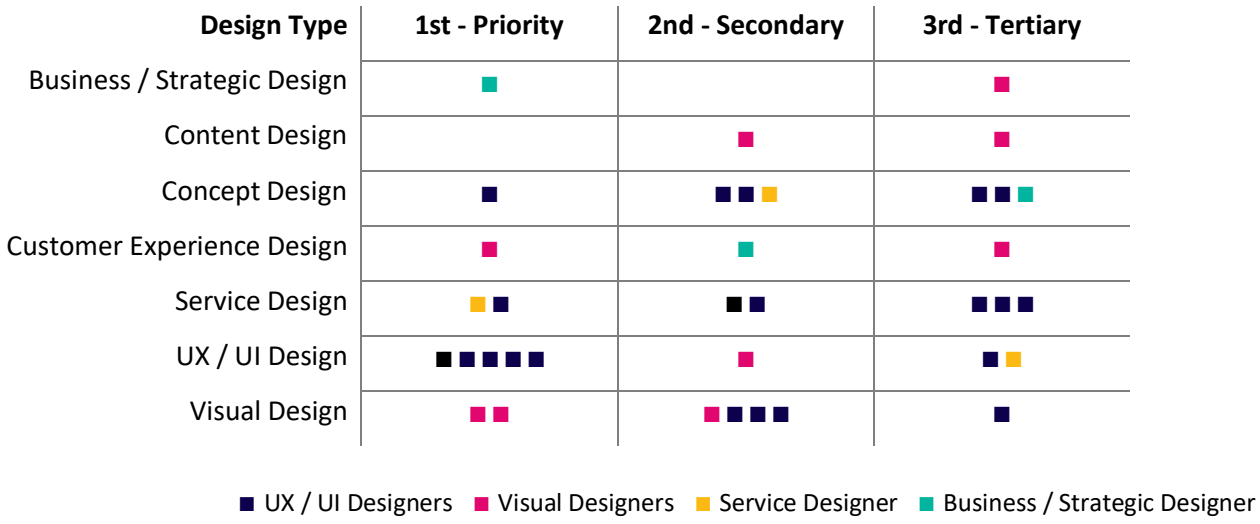


**Figure 20**: Design role-specific duty fluctuation according to design types.

**Figure 21** recapitulates responses given to the question "Are you particularly familiar with or generally abreast over some of the following concepts?". Respondents replied by evaluating their knowledgeableness of each concept on a five-level Likert scale. Design Thinking proved to be the most recognized concept, while Design Automation, on the other hand, turned out to be the least familiar. The rest of the concepts are all above the basic knowledge level, yet the awareness of Design Maturity on average seems surprisingly low.

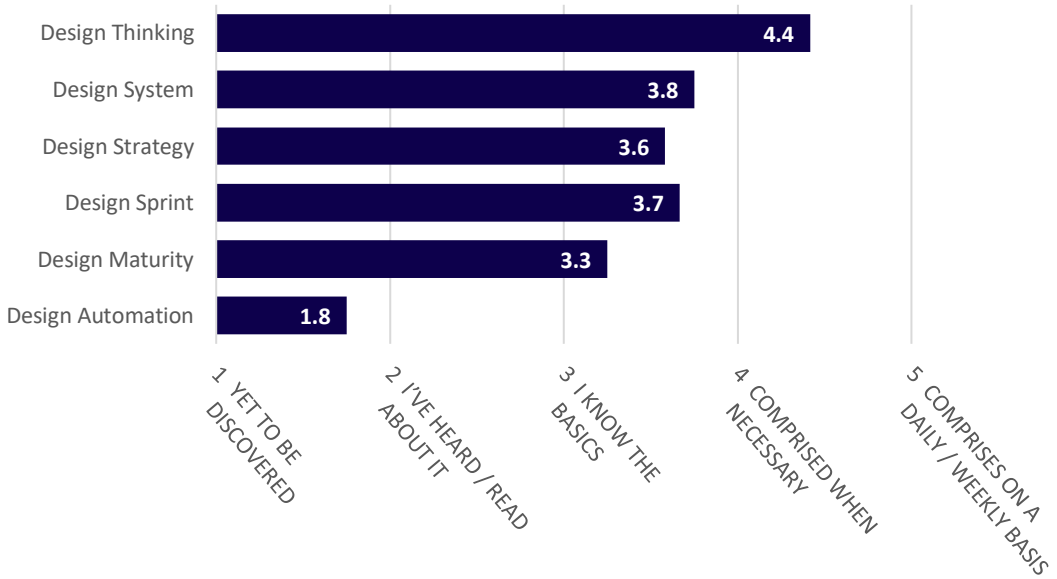


**Figure 21**: Familiarity with the key concepts.

**Figure 22** is a comparison chart consolidating the responses given to the questions "How are the following matters ranked within your current scope of design responsibilities?" and "How would you desire the following matters to be ranked within your scope of design responsibilities?" The average of the answers to the first question is indicated by the label "Putative," and for the second question, the label used is "Desired." Impression and Consistency as putative matters are the only ones in terms of importance, that reach out toward the very top of the five-level Likert scale. Impression also encloses not only the highest value for desirability but also the highest difference between the labeled values. Budget / Costs presents the lowest values as well as the highest inverted value between the labels. In terms of desirability Coherence, Aesthetics / Appeal, and Accessibility have quite significant differences in relation to their putative values. The difference in values in terms of Responsiveness is moderate in favor of the desired label. Schedule / Timetable and Implementability share even scores between the labels and both as putative matters are ranked to the lowest.

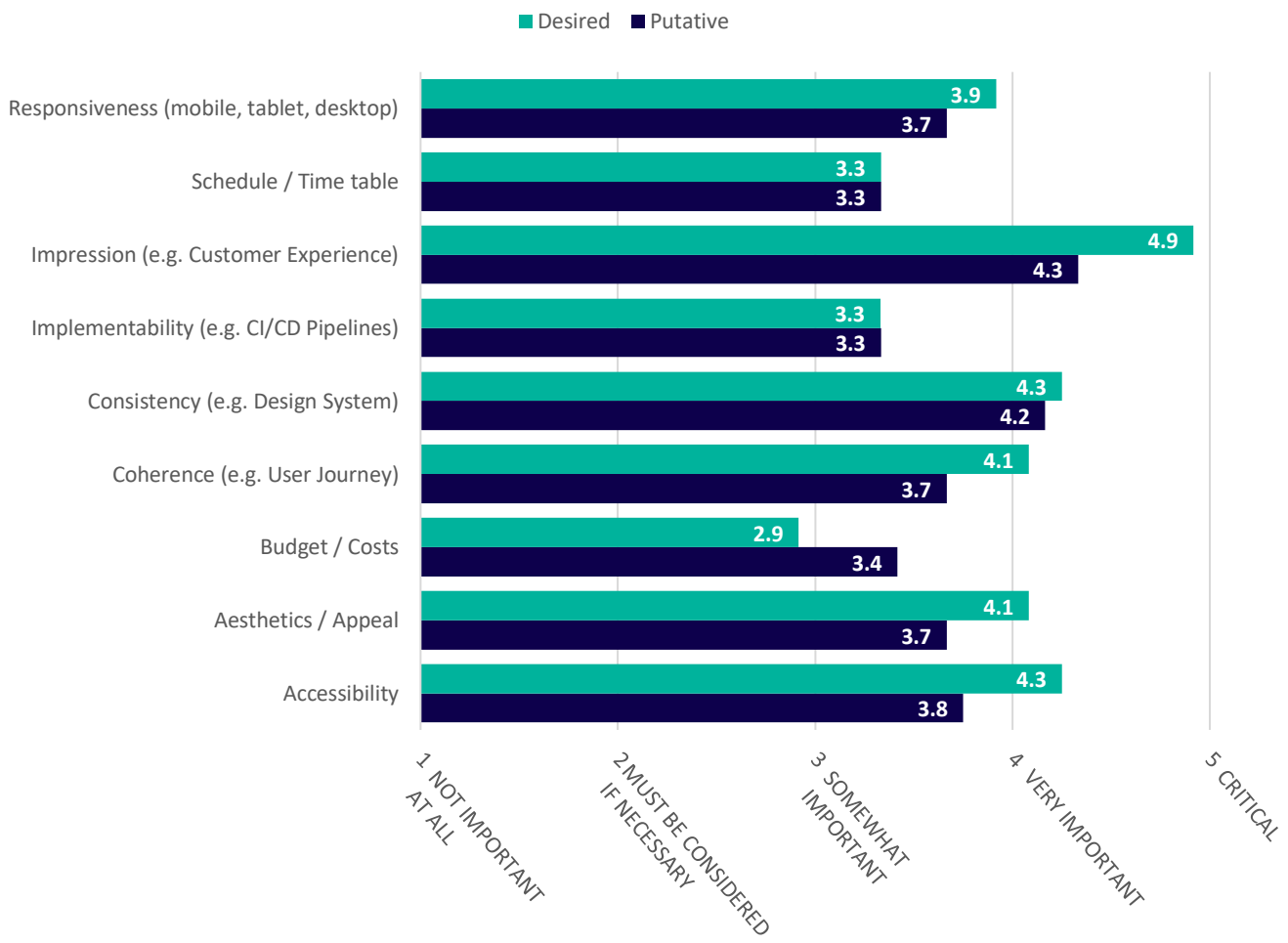


**Figure 22**: Ranking of the matters according to design responsibilities.

## 4.4 Design Incentives

**Figure 23** is another comparison chart consolidating the responses given to the questions “Do you currently have any requisites or necessities to utilize for example some of the following?” and “Would you be interested in utilizing some of the following?” The average of the answers to the first question is indicated by the label "Necessitated," and for the second question, the label used is "Interested." Visual Collaboration Tool and Project Tracking Tool are gathering the highest percentages as necessities yet the last mentioned does not attain even nearly as much of an interest as Visual Collaboration Tool does. Artificial Intelligence, on the other hand, is considered a necessity by a single correspondent only, yet it succeeds in gathering as much interest as the Visual Collaboration Tool. Content Management Systems and Social Media Platforms are sharing the percentages between labels. Customer Insight Platform has a notable percentage as a necessity, and it also receives a prominent amount of interest. Noone has considered a Marketing Automation Platform as a necessity, but there seems to be an opportune interest in it. A single respondent has expressed an interest in some other subject out of the scope of the given matters.

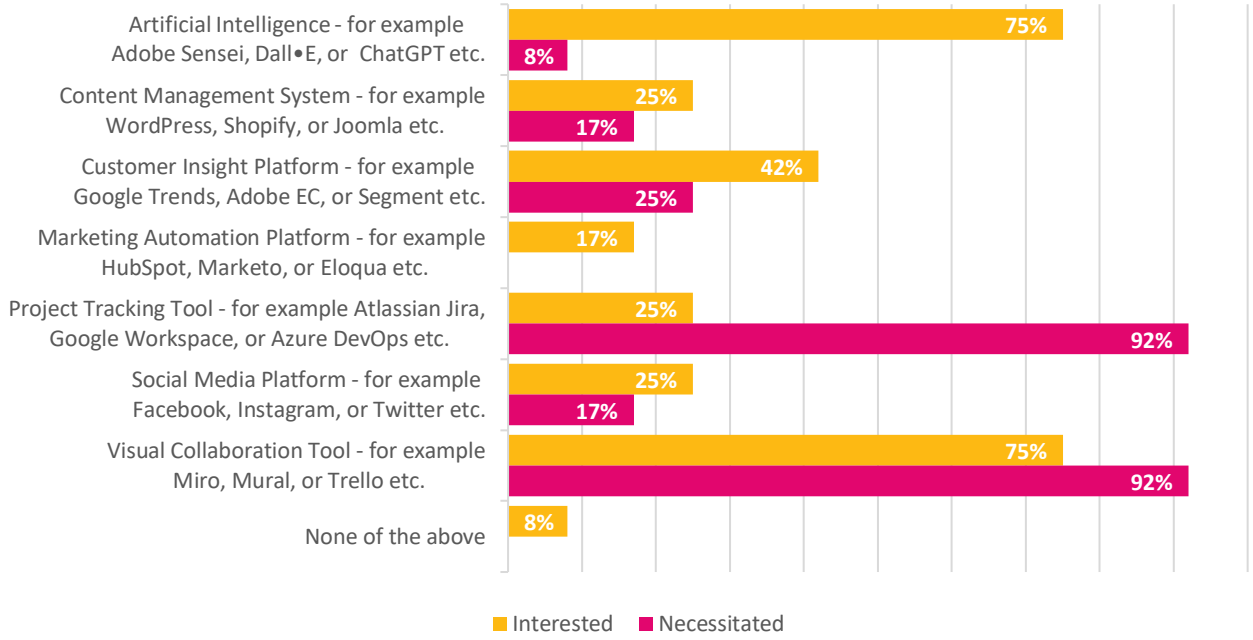


**Figure 23**: Interests vs. necessities regarding the prescribed matters.

**Figure 24** is our final comparison chart consolidating the responses given to the questions “Does your current scope of design responsibilities require either skills or knowledge of some of the

following?" and "Would you be interested in learning about some of the following?" The average percentages of the answers to the first question are indicated by the label "Required," and for the second question, the label used is "Interested." User Interface Design Tool gathers the largest percentages, which was to be expected because of the overrepresentation of UX/UI Designer type. Front-End Development Framework and .html, .css, .js, .php, or .py in general are scoring equally as requisites, yet the first mentioned achieves slightly more interest. Cloud Computing Platforms reserve as much interest as Front End Development Networks, however, it is not among the most required. Both labeled values of the Mobile App Development Network are generated by a single respondent. Also, requisites and interests out of the scope of given matters were pointed out, however only a single respondent had described Lottie JSON Animate as a requisite, and other entries of interest were completely unspecified.

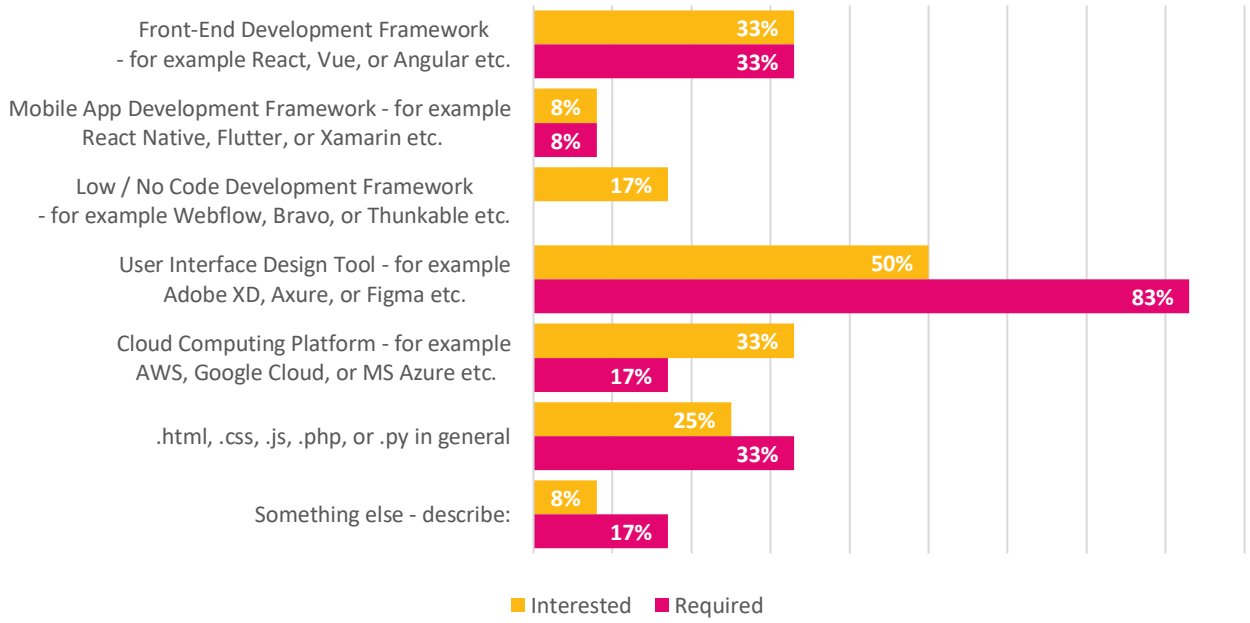


**Figure 24**: Interests vs. requirements regarding the prescribed matters.

**Figure 25** illustrates the distribution of preferences among the presented learning options by compiling the given responses to the question "Which of the following do you prefer when learning new skills, methods, and concepts? Check three (3) options at the most." Free tutorials distributed through social media are the most popular alternative with a percentage of 83 and prearranged education with 75 percentage comes second. Subject-specific workshops with a percentage of 67 take the third place and the Online Course Marketplace offering comes fourth

with 58 percent. Studies enabled by a trade union, guild, or network achieve 25 percent when institutionalized education alternatives optionally leading to a degree do not gather more than 8 percent. There was yet a single respondent entry described as “Study possibilities provided by employer”, which either challenges or doubts the relevancy of that second most popular option. It is also possible that the respondent has inadvertently checked and described the option.

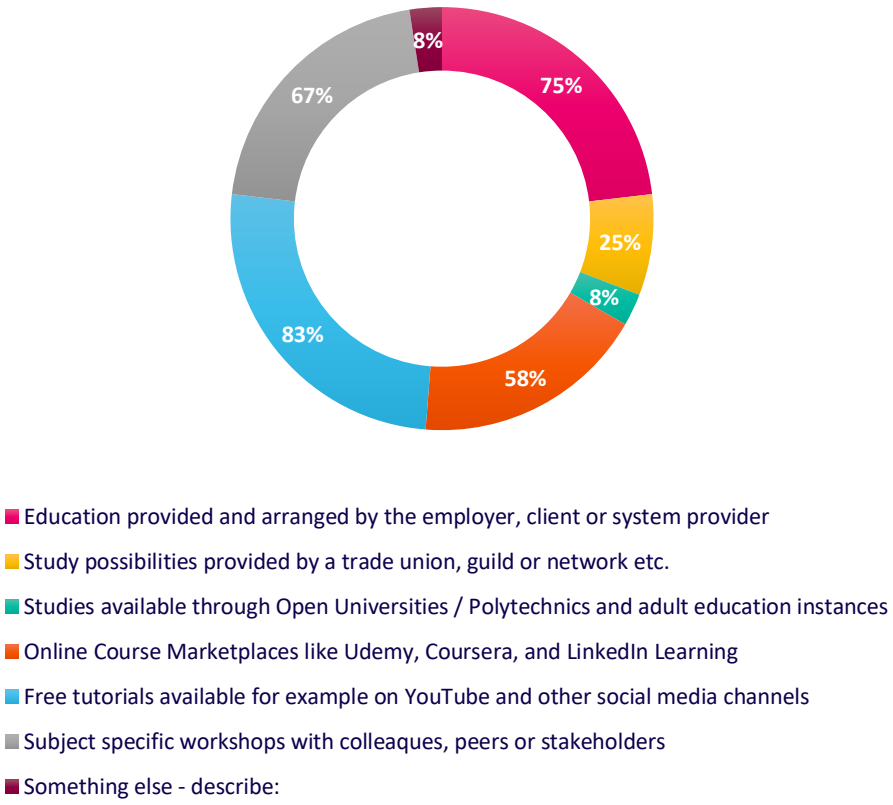


**Figure 25**: Distribution between preferred methods for learning new things.

## 4.5 General Feedback from The Survey

The final blank question “Here's your chance to provide for example some additional info related to certain question(s) or mere feedback over the survey and/or research in general” returned the following entries:

> *“Some questions were not very clear so I tried to answer as accurately as I could, but I'm worried it might not be interpreted in the correct way.”*

*“One confusing question was about the number of current vacancies. I wasn't sure for a moment whether it's only about current ones or jobs until now.”*

*“Another question had only an option for UX/UI. I consider myself UX Designer but not UI designer so that was also hard to answer.“*

*“The current job description involves developing leadership, so it may not really align with the target group at the moment.”*

*“Well-executed and functional survey, even on the phone! Compact and easy to fill out.”*

*“Most of the terms were mostly new; possibly, a brief explanation of the terms would have affected how I assessed my feelings about the subject.”*

*“I am a UX designer with front-end aspirations.”*

# 5 Thematic Analysis

Thematic analysis with a deductive approach has been conducted by reflecting nascent codes to the frame of references constructed from the ground of the concepts covered within the literary review in chapter 2. Kunrath’s observations and outlines of Personal Attributes and Design Skills are at the core of dissecting a designer’s identity. The integration of the previously prescribed quantitative results with the qualitative findings extracted by this analysis has been compiled within the last section of this main chapter.

OpenAI ChatGPT version 3.5 has been sequentially utilized according to Doctor Jarek Kriukow’s instructions during the making of the analysis. Kriukow inculcates, that the current potential of AI suffices only to support data analysis and the usage of a specifically designed data analysis software is still necessary (Kriukow, 2023a). Due to Kriukow’s recommendation, MAXQDA Analytics Pro 22 was used as a platform throughout the entire analysis. The prompts used to instruct ChatGPT for each phase of the analysis are included as figures and as a textual attachment under the appendices section.

The framework for thematic analysis is based on the guideline formulated by PhD David Byrne, following the generally acclaimed approach of Brown and Clarke (Byrne, 2022). A six-phase process identified by the above-mentioned authors is a well-defined approach to conducting thematic analysis. However, it is important to understand, that even though the six phases are arranged in a logical sequence, the analysis process does not progress linearly but moves forward across the phases. The analysis requires the researcher to navigate bidirectionally through the phases recursively and iteratively (Brown & Clarke, 2020, as cited in Byrne, 2022).

## 5.1 Familiarization with The Data

Initially, Teams generated interview transcript was sanitized by removing redundant words and time code-specific blank comments, that became captured probably because of a pause within dialog or delay caused by a connection interference, etc. The first phase of sanitation was conducted manually by using Word after which the transcript was imported into MAXQDA. The first cycle in familiarizing with the data was made simply by reading through the text once again and highlighting observable details for contextual immersion. **Figure 26** visualizes how selective highlighting has been indicated within MAXQDA's interface.

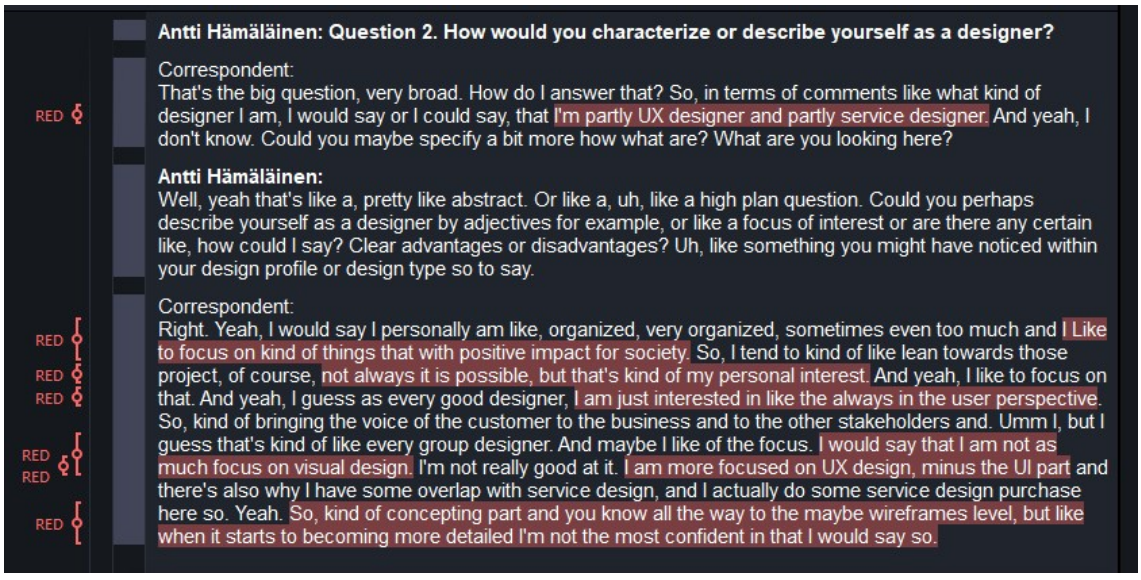


**Figure 26:** Fragment of a manually sanitized transcript with highlighted details in MAXQDA.

Highlighted details of each response were condensed into bullet-listed sentences for construing a correspondent-specific memo document into MAXQDA. The second phase of sanitation was

conducted by utilizing ChatGPT according to Kriukow's examples. A manually sanitized transcript was copied from MAXQDA and pasted to ChatGPT with a preceding assignment description contrived by Kriukow (2023a). The assignment demonstrated by **Figure 27** instructed AI to put itself in the position of a researcher and the prompt included a rule to remove redundant words once more just in case because most likely few of such had been missed during the first manual phase.

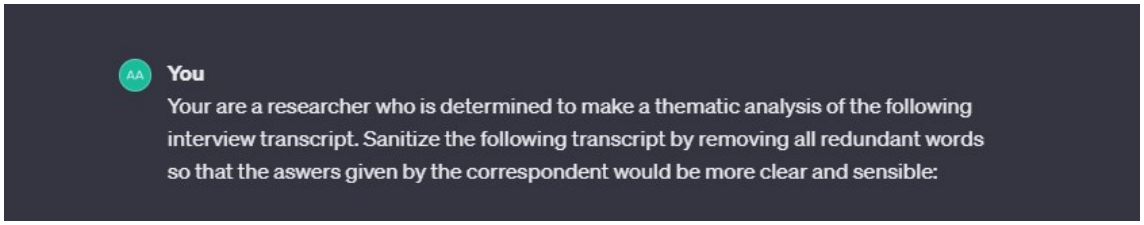


**Figure 27:** Assignment description (Prompt 1) given to Chat GPT for processing the transcript.

The content that ChatGPT composed according to the given assignment was included in each of the questions into the correspondent-specific memo document in MAXQDA. As **Figure 28** demonstrates, manual bullet listing and abbreviation produced by ChatGPT indicated in yellow are quite similar in terms of itemization.

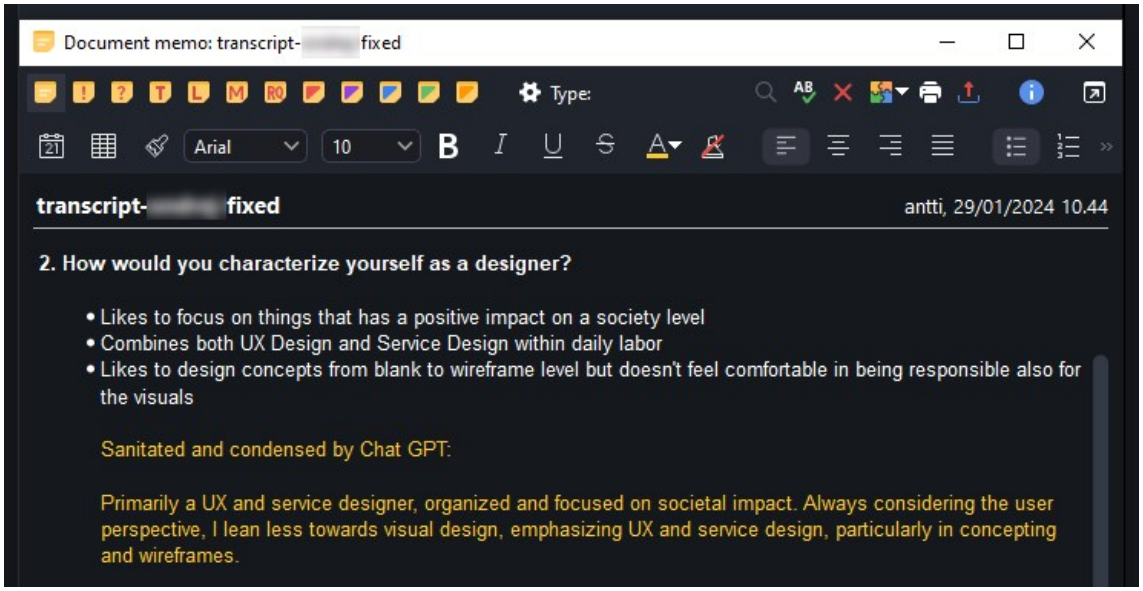


**Figure 28:** Fragment of a correspondent-specific memo document.

Repetition of certain phrases within the content generated by ChatGPT could not be completely avoided, however, several supplementing details in relation to the bullets manually listed appeared also. Therefore, a notion presented by Kriukow (2023a) about reading time being saved, feels justified per se. All the prescribed steps of familiarization were performed on each interview transcription one by one. Eventually, when the comprehension of the data was broadened, manually listed bullets and the replicative sentences generated by Chat GPT were manually combined in terms of details to rephrase each of the question-specific responses as logical and succinct yet inclusive. **Figure 29** below demonstrates a sample of the manual combination.

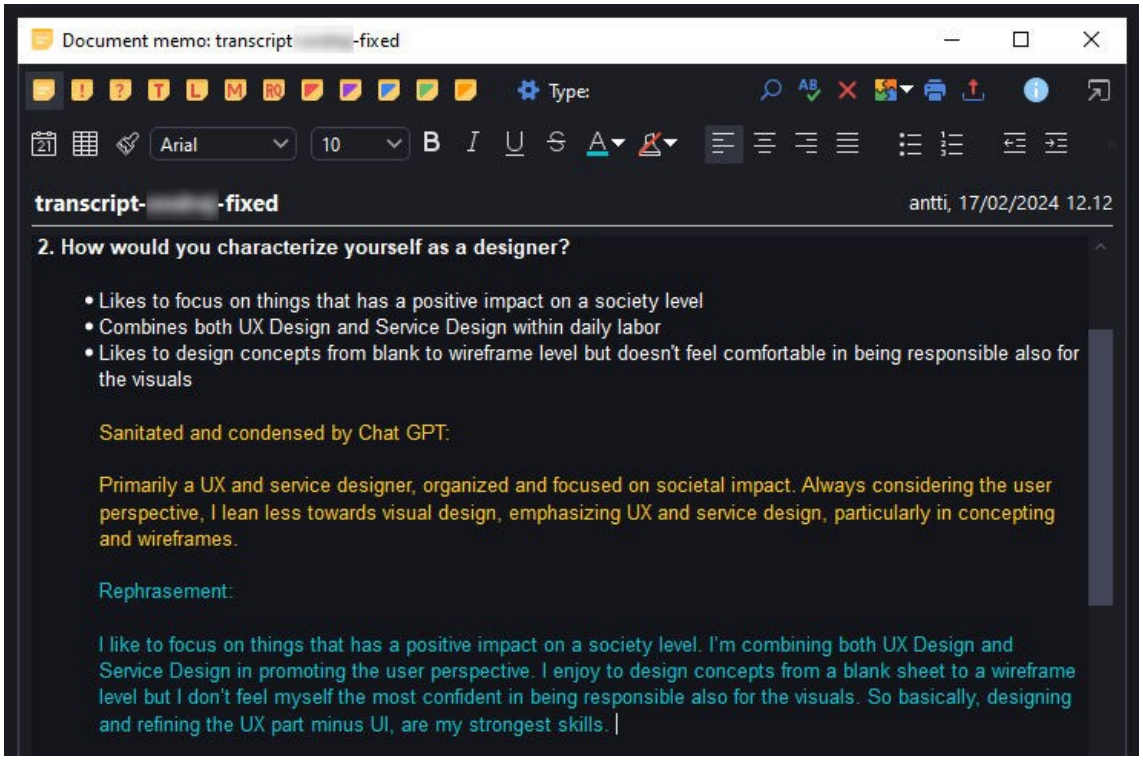


**Figure 29:** Fragment supplemented with manually combined rephrasing**.**

As described under sub-heading 3.3.2 two interviews out of twelve were conducted in English, so during the familiarization process the sanitated transcripts originally recorded in Finnish were translated to English by using Chat GTP so that the entire material quota would be linguistically as coherent as possible. The interview recordings themselves were not returned to nor otherwise reviewed within the context of the research. Braun's and Clarke's directive is, that the researcher should always watch/listen/read all the materials if such are recorded/documented by some other party than the researcher oneself (Brown & Clarke, 2006, as cited in Byrne, 2022). Therefore, being the actual researcher myself, I decided not to inspect the recordings to allocate time to the

actual coding phase. The inventory process of combining manual bullet listing and automated sanitation results was executed to verify the possession of all notable matters and details relevant to the analysis. This task turned out to be important since AI was able to recognize several noteworthy matters, that were not accredited during the manual listing.

## 5.2 Generation of Codes

Brown and Clarke are qualifying codes as integral components for building up themes which takes place once after all the relevant pieces in terms of the research questions have been signified as codes. The codes should be concise however contain enough detail also to inform of the commonality among the data items. The commonality should be connected to the research subject and the codes should also be able to stand by themselves (Braun & Clarke, 2012, Braun et al. 2016, as cited in Byrne, 2022).

### Initial Coding

Processed transcripts enriched and harmonized by rephrasing the responses were fed to ChatGPT one by one and a prompt demonstrated in **Figure 30** was given to the AI prior to a transcript to generate initial codes. This second prompt contrived by Kriukow (2023a) instructs AI once again to put itself into the position of a researcher for generating initial codes that are attached to quotes pinpointed out of the transcripts. Kriukow stresses, that for the time being ChatGPT should be prompted, instructed, and informed by using plain language - kind of like telling a child what to do next (Kriukow, 2023a).

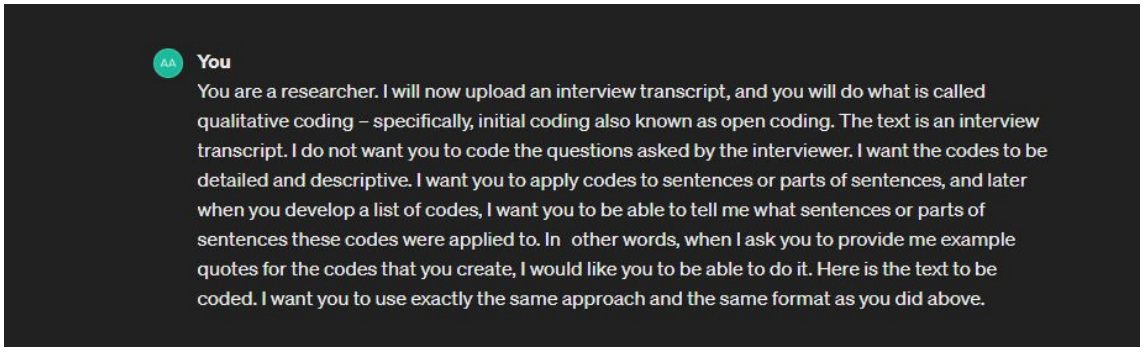


**Figure 30:** Assignment description (Prompt 2) given to Chat GPT for generating initial codes.

Brown and Clarke consider any data item worthy of coding if it seems useful in addressing the research questions. The researcher eventually decides which of the codes are conniving theme buildup and which are to be rejected (Braun & Clarke, 2014, as cited in Byrne, 2022). **Figure 31** presents a single code along with a binding description that ChatGPT has generated by applying the transcript to appoint considerable data items.

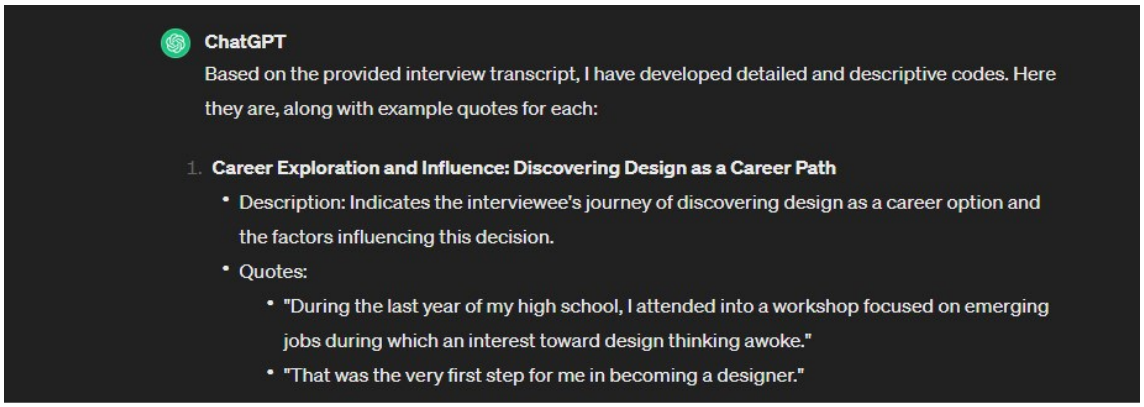


**Figure 31:** Fragment of a response given by ChatGPT to the assignment to generate initial codes.

Occasionally ChatGTP got somehow interfered with or otherwise confused when generating responses according to the given assignment, so within such cases, Kriukow (2023a) reaffirms the second prompt with an additive command presented by **Figure 32** for ChatGpt to either continue from where generating was interrupted or supplement already generated response.

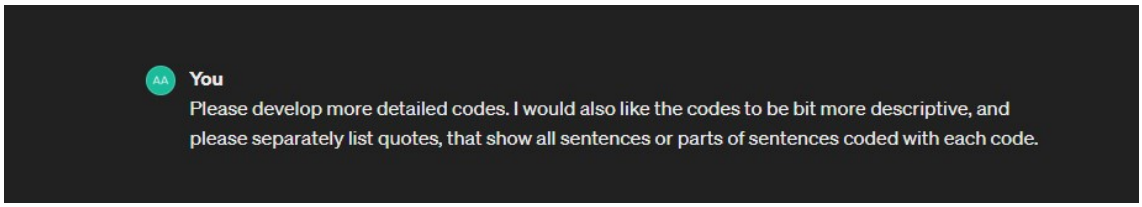


**Figure 32:** Addition related to previous assignment (Prompt 2) in case of disrupted query.

A total of 231 initial codes were selected out of approximately 250 generated by Chat GPT. The exact amount cannot be precisely determined since there were several duplicates and similarities concerning the quotes attached. In addition, ChatGPT seemed to repeat some of the codes, particularly on the ground of the latter part of a transcription so most likely the capacity of AI to

process the feed ran out somehow. This however seemed to happen only after the additive command was given.

**Grouping of Codes**

According to Kriukow, it is easier to clarify the topics for constructing themes when the codes are sorted under suggested groups. This should be considered unavoidable in terms of thoroughly understanding the data. Groups are to be titled by reflecting the research questions (Kriukow, 2023b). **Figure 33** demonstrates a prompt for grouping the codes according to the following titles that were prescribed by abiding Kriukows approach:

- Technical Detachment
- Professional Identity
- Sensibleness and Significance of Daily Labor
- Career Signposts
- Identity Converting
- Purpose of Design
- Other

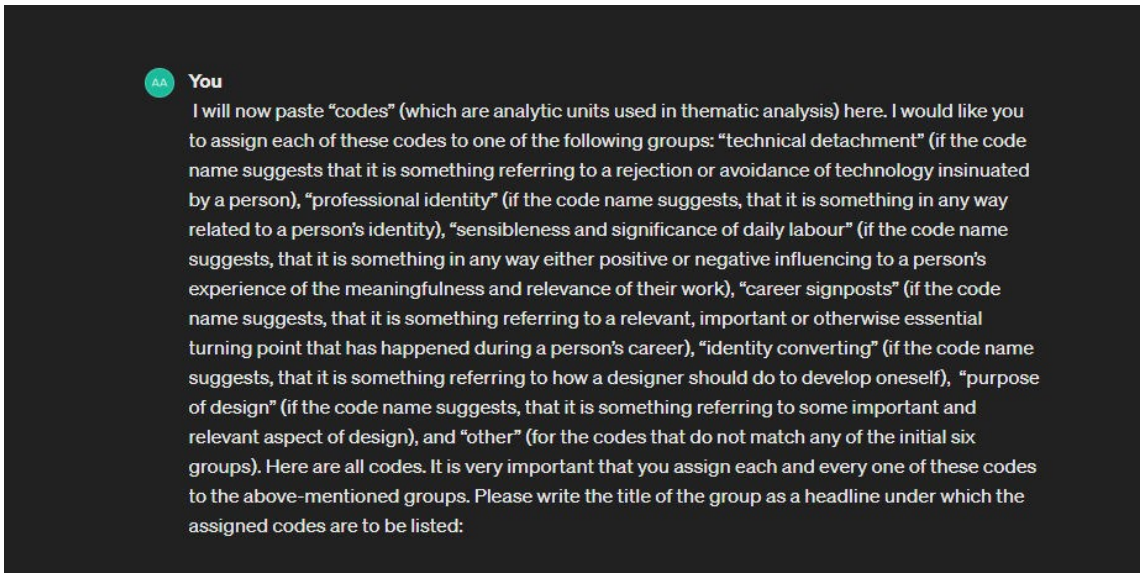


**Figure 33:** Assignment description (Prompt 3) given to ChatGPT for grouping initial codes.

During this interphase, the redundant codes that randomly emerged were filtered out form the quota. Similarly, some codes were exchanged between the groups simply by observing whether

they displayed themselves as rational when referring either to the group title or addressing the research question. None of the codes were combined nor rephrased within this context, although Kriukow (2023b) suggests, that the construction of themes initiates already during the grouping.

## 5.3 Generation of Themes

After all significant data items have been coded the emphasis turns from analyzing individual data points within the dataset to understanding the collective significance and meaningful patterns across the entire dataset. The researcher needs to actively interpret the relationships between the codes and explore how these relationships contribute to the overall narrative of a specific theme. What truly matters is that the compilation of codes and data items enunciates relevant insights that lead to addressing the research questions (Braun & Clarke, 2012, 2014, as cited in Byrne, 2022). Kriukow has an AI-assisted procedure also for theme generation purposes, however, he clearly states that he would not use it in his research since themes are something to be decided by the data responsible researcher (Kriukow, 2023c). Byrne's approach is to collect relevant codes into candidate themes, based on which an initial thematic map can be constructed (Byrne, 2022). Through consenting with the precept of Kriukow and by following Byrne's example an initial thematic map demonstrated by **Figure 34** was constructed.

**Initial Themes**

All the initial themes consist of 3 relative sub-themes that encompass their topic-specific narratives. The first initial theme "Career Whereabouts" is built on experiences of sensibleness and significance of work, balance between work and personal life, autonomy enabled by work, and the flexibility required by it. Sustaining a reasonable work-life balance and maintaining an appropriate ratio between teamwork and independent work have similar kinds of features. The second initial theme "Personal vs. Professional Identity" gathers both personal and professional conversion preferences and combines them with the distinction between endogenous and exogenous design factors. Perceptions over identity seem to reflect and correlate with the current stage of a career. The third initial theme "Continuous Learning" includes the impact of social stimuli for learning, stance with enthusiasm for learning, and perseverance in learning. Learning abilities are linked to the scope of options within career development. The fourth initial theme "Future of Design" comprises the cultural and linguistic context of design, apparent as well as obscure changes in design facilities and the recent emergence of AI. The fifth initial theme

"Technological Complexity" associates the emerging application areas of design, the fluctuation of design trends, and the recognition of the fact that technology impacts pretty much everything. Therefore, it has an evident significance from the perspective of the future of design.

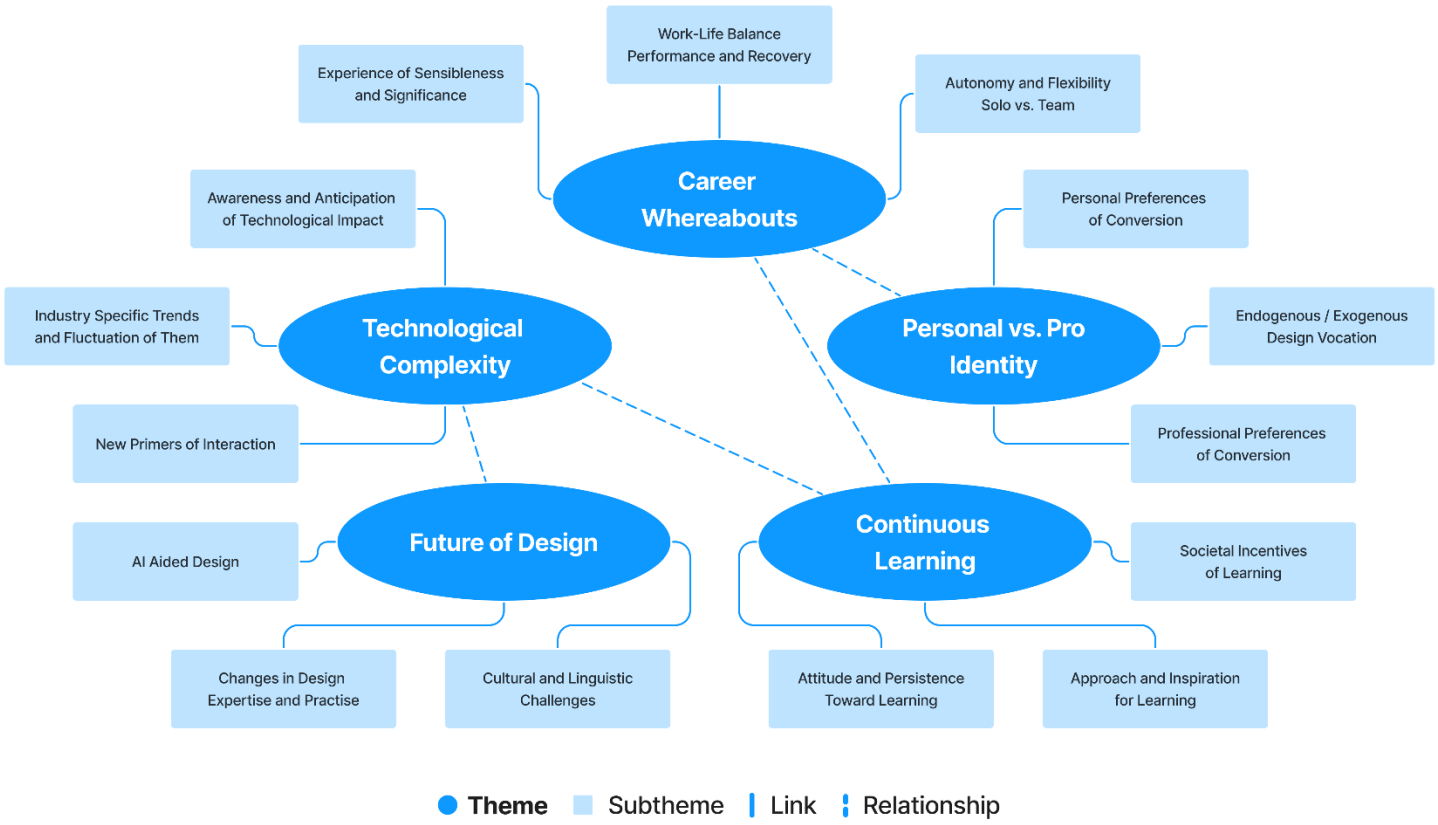


**Figure 34:** Initial Thematic Map.

The process of compiling the initial theme map was conducted without an AI by comparing the grouped codes as well as their ingested quotes and creating the interlinks between them in MAXQDA. Basically, when the codes were generated by using ChatGPT this phase seemed redundant at first glance, however, Byrne's (2022) notion about the initial theme's probable requirements for further refinement gave the effort a cogent justification. In addition, the researcher must discard such codes and even draft themes that are not suitable in terms of the analysis (Braun & Clarke, 2012, as cited in Byrne, 2022). This served as a boundary condition for scrutinizing the analysis from an editorial viewpoint. **Figure 35** indicates how the links between codes and corresponding quotes were indicated in MAXQDA.

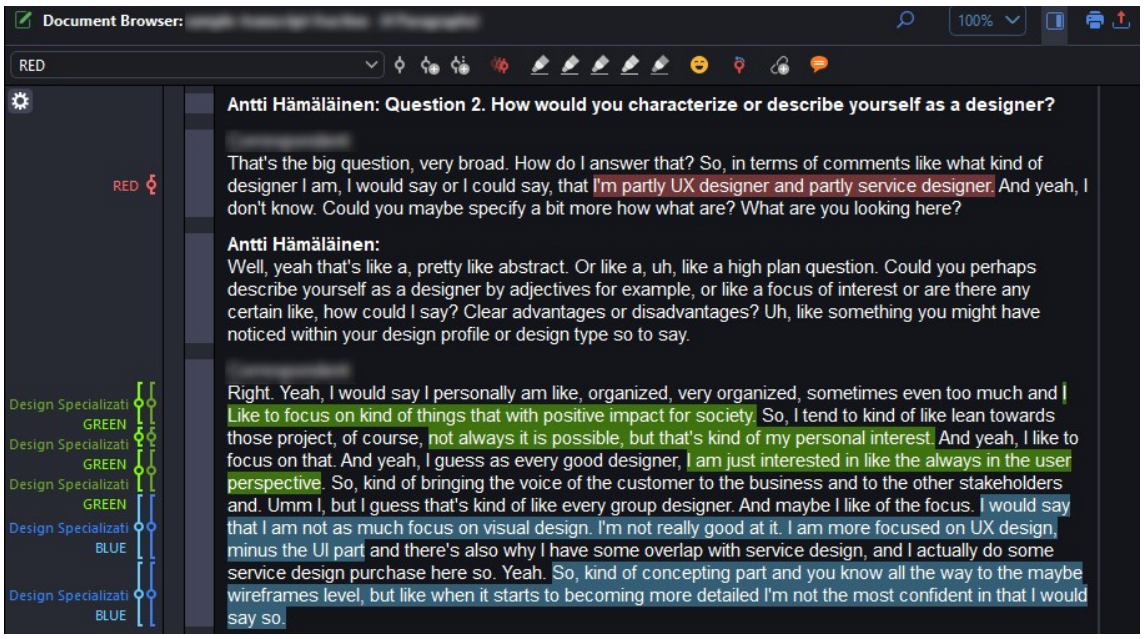


**Figure 35:** Fragment of a coded transcript in MAXQDA.

## 5.4 Reviewing The Themes

During the review phase, the researcher conducts an exhaustive and iterative examination of the drafted themes in connection with the codes generated and the entire set of data (Braun & Clarke, 2012, 2020, as cited in Byrne, 2022). Byrne concludes, that during the review it is not exceptional to notice that some themes do not successfully reflect the data or fail to address the research questions adequately (Byrne, 2022). The following key questions proposed by Braun and Clarke were self-addressed during the review (Braun & Clarke, 2012, p. 65, as cited in Byrne, 2022).

- Is this a theme?
- If it is a theme, what is the quality of this theme?
- What are the boundaries of this theme?
- Are there enough data to support this theme?
- Are the data too diverse and wide-ranging?

The purpose of these questions is to oblige the researcher to reconsider for example the difference between a theme and a code, the perimeter of a theme in terms of what is included and excluded, and the density of a theme by evaluating whether a sufficient amount of meaningful data is present to support a theme.

**Finalizing Themes**

During the review, it began to appear that all the initial themes along with their sub-themes were too rigid and yet at the same time dogmatic when reflected in the research questions. Byrne (2022) describes the outcome of the review phase to be usually reconstructive - practically some of the themes along with their sub-themes might require alterations, such as adding or removing codes, or even introducing changes to themes or sub-themes themselves.

The sub-themes under “Career Whereabouts” were redefined by combining the narratives focused on experiences of sensibleness and significance with the narratives focused on autonomy and flexibility. The codes also suggested that these themes include similar features, so the combination was entitled “Navigating Through Flexibility and Adaptability”. New codes were allocated under “Work-Life Balance / Performance and Recovery” and most of the original codes were relocated so the second sub-theme was entitled “Quest for and Perception of Adventitious Opportunities”. From the ground of the refinements executed the main theme was retitled “Contemplation of Career Trajectory”.

The context of the second initial theme “Personal vs. Professional Identity” was rearranged by merging the sub-themes of personal and professional preferences of conversion to a new sub-theme entitled “Social, Cultural, and Educational Preferences”. This felt preferable since the codes alluded to the aspiration of pervasive identity through an omniscient circle of influence. The remaining “Endogenous / Exogenous Design Vocation” was retitled “Design Indigeneity and Personal Background”. Finally, the main theme retaining its relationship with the first theme was retitled “Responsivity of Identity”.

The third initial theme “Continuous learning” was re-evaluated not only because of its relationship to technology but also for reconsidering its density. The trio of its sub-themes appeared somewhat separate without any cohesive factor. The codes attached were analyzed again and new themes entitled “Pertaining the Spontaneity of Learning” and “ Resilience in Sustaining the Autonomy of Learning” were established to replace the initial three. The main theme was also retitled “Perpetuity of Learning” and the relationships with the first and fifth themes were retained.

The ensemble of the fourth initial theme “Future of Design” practically deprecated concurrently with the accumulating insight derived from the reconstruction of the previous themes. The codes were implicating that the theme ought to focus on abiding intention rather than on something that presumably lies ahead so the initial three sub-themes were disassembled, and new sub-themes “Mediator on Enlightened Anthropocentrism” and “Interpretative Combination of Art and Engineering” were introduced as replacements. The main theme with the existing relationship to the fifth theme was retitled “Purpose of Design”.

The fifth and final initial theme “Technological Complexity” delineated around punctual sub-themes that did not address the research questions with proper versatility. Once more these sub-themes were scattered and replaced with new ones entitled “Challenges Posed by New Technologies and “Constant Adoption of New Technologies”. The retitled main theme “Ascendancy of Technology” underlines the comprehensiveness of the sub-theme ingested codes by attaching research-specific subjects to a pervading general phenomena.

Exactly like Byrne (2022) implied, it was necessary during the finalization to revisit phases two and three to conduct a recap of the codes and evaluate certain choices again. The initial sampling of the map did not consider sufficiently enough codes permeating the different sub-themes and some of the sub-themes were presenting themselves as flagrantly confrontative. **Figure 36** demonstrates the finalized structurization of themes.

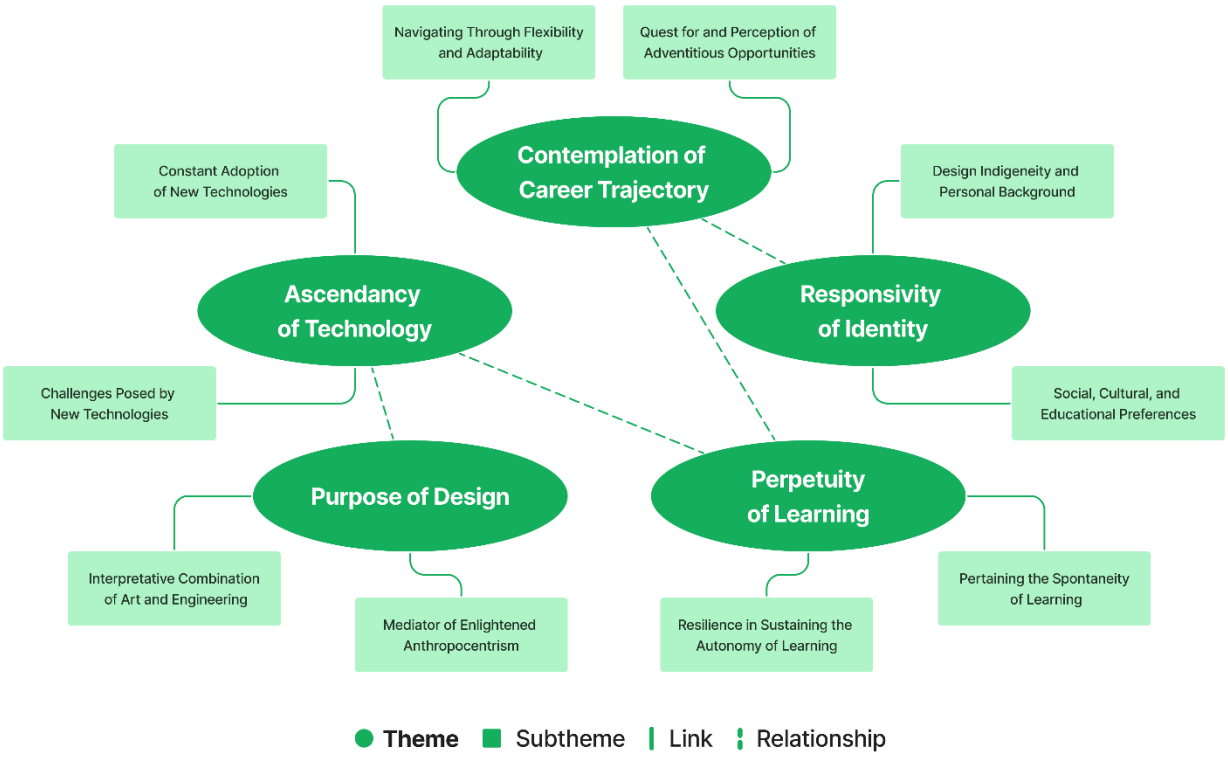


**Figure 36:** Finalized Thematic Map.

## 5.5 Definition of The Themes

During this phase, the researcher is obliged to conduct a thorough examination of the thematic structure by articulating each of the themes in a way that aligns with the dataset and the research questions. All themes must offer a distinct and coherent interpretation of the data, separate from the narratives of other themes. However, when combined, all themes ought to weave together into a consistent story that is in harmony with the dataset's material and reflects the research questions (Byrne, 2022). Next, the finalized themes along with their sub-themes are defined and explained in relation to the research questions described in Chapter 1.

### Contemplation of Career Trajectory

Diverse quiddities of the career chronicles that emerged in the context of the research strongly suggested that it is not favorable for a designer at any point to remain stagnant when the demands of change are projected from the outside world. Still, it must be noted that perceiving

eloquent coping mechanisms under the intricated circumstances of perplexing reality is not easy let alone obvious. Conforming to the yarn of compassionate amelioration seems to be a question of stimulation tolerance rather than constantly being aware of and standing by for a turn of events manifested itself at any given time. Research data shows that the capabilities to adjust, revert, and orientate oneself according to the transpiring changes are the very core of internalizing and deliberating career whereabouts. The first sub-theme “Navigating Through Flexibility and Adaptability” underwrites these occurrences extracted out of the observations made and estimations concluded by both seasoned and burgeoning designers. The second sub-theme “Quest for and Perception of Adventitious Opportunities” stands for the phenomena of unimaginable outward reaches to which designers ought to sensitize themselves.

Some unexpectedly occurring initiatives that might appear precarious just might be the next step in growing as an expert. The experienced level of labor sensibleness and significance reflects these prescribed matters in such a way that being recognized as a designer, having an appropriate authority over design-related matters, and getting either support or insight from superior designers incites to explore the available possibilities in becoming better as a designer. Also, the consequents of experienced sensibility and significance are triggering factors when career moves are being tentatively planned and refined further. Milestones on a career roadmap, however, appear to be extremely challenging to erect beforehand, although a retrospective discovery of them somehow emanates professional satisfaction. Themes are addressing RQ3, RQ4, and RQ5.

**Responsivity of Identity**

The data presents that some individuals possess a natural inclination and sense of aesthetics as well as creative capabilities toward design. Another observed proclivity is that attraction, orientation, and internal compulsion to design have inflicted a necessity to cultivate introspection not only from a professional perspective but also on a private side of life. Although the purpose of the research is not to verify these matters as facts, the findings sure have gravity within the context of the designer’s identity. The first sub-theme “Design Indigeneity and Personal Background” wraps up projections of desires, expectations, assents, and concerns over the subsistence of the selected craft and unites them with the endogenous and exogenous inducements for design practices. The second sub-theme “Social, Cultural, and Educational Preferences” covers aspects of communal rearing by the momentum of which an individual

formulates perceptions of oneself in relation to the surrounding ambiance. Heritage, upbringing and either the support or disregard of our closest ones have a surreptitious impact on the entire spectrum of our inclinations. Themes are addressing RQ1 and RQ2.

**Perpetuity of Learning**

According to the data, the right to as well as the investments for learning commitments were considered integral for a designer to be able to dedicatedly improve and augment the frame of professional expertise. Any particularly beneficial or otherwise unparalleled learning routine was not recognized, although consensus advocates the attraction of learning by observing and examining the deeds of more experienced colleagues. “Pertaining the Spontaneity of Learning” subsumes the motivational basis for gravitating to the various sources of self-cultivation and morale of subtle sophistication.

To absorb both the debts and fortunes of knowledge, the chores for earning them must be volitional or at least amenable. “Resilience in Sustaining the Autonomy of Learning” fathoms the diligence in keeping up the discovered and self-proven customs for individual learning. The path for inventing one’s own methods, arrangements, and orderliness of learning may appear as meandering and not only requiring resistance to adversities but also courage and even a healthy glimpse of egoism to endure and overcome the challenges in maintaining the belief in one’s own disciplines of learning. Themes are addressing RQ2 and RQ5.

**Purpose of Design**

As suggested by the study design actualizes itself as a framework of and for engaging individuals as well as bringing them together to detect and explore gradually coalescing sensations which eventually mature from exogenously evoked stimuli into uniquely concentrated experiences. The key value within conceiving, evaluating, and refining design is empathy interlinked with the ability to both accommodate and influence creative contribution. “Interpretative Combination of Art and Engineering” draws focus around the process of instrumentalizing the creations of design by delivering a feasible outcome for accomplishing a sustainable calculated efficiency. Quite frequently the manifestation of this process is something that cannot be instantly rationalized or concretized as quantifiable. “Mediator of Enlightened Anthropocentrism” scopes the remedies for considering prevalent questions and solving universal problems by integrating the essence of

design into the domain of gathered intelligence. For setting the basis of this idea it is justifiable to recognize and further examine design as a historical, cultural, and societal phenomenon of renewal. Themes are addressing RQ6.

**Ascendancy of Technology**

The perceptions of and suppositions about technology particularly over the ever-evolving proclivity of it outline the subject as an omnipresent driving force that cannot be ideologically questioned in terms of authenticity and validity. Dealing with it, relating to it, and discerning the possibilities provided by it appears to be a practical question of simply keeping up with the progression of it. Getting consciously preoccupied by the complexity of technology is something that a designer must avoid, however, this does not mean that technologies applied to implement design do not either deserve or require a designer's attention at all. On the contrary. "Challenges Posed by New Technologies" labels collectively the notions raised, ideas provoked, and concerns awakened by the obligating importance of maintaining technological expertise.

The inevitable prevalence of technology tends to captivate automation on to the very surface of design-specific technical discussion. Yet recognizing the right variables for adjusting the automation is considered as crucial part of a man-made design work. "Constant Adoption of New Technologies" clusters the delivered presumptions and opinions about the precepts in self-commissioning new design tools and ancillaries. Themes are addressing RQ1, RQ3, and RQ4.

## 5.6 Reporting The Findings

By following Byrne's paradigm this final phase of the analysis could be regarded as the closure that unfolds its content form through repetitive treatments of report writing. The content may also undergo further iterations as the codes and themes are revisited during the cycles taken for compiling the report. It may turn out that the conventional way of report writing does not match with the way thematic analysis should be written, specifically, when both the analyses and data are attempted to be presented in detail (Byrne, 2022). As prescribed in the very beginning of this chapter the following content shall integrate the data of quantitative results with the extracted qualitative findings by consolidating the consistency of defined themes compared to the research questions addressed. The actual conclusions or rather the answers sought after, so to speak, are

presented within the final chapter of the thesis. The reporting has been compiled by parsing each of the research questions separately.

RQ 1. As the requisites of design continue to evolve, how a designer (either freshman or veteran) could re-invent oneself without losing his/her professional identity?

As indicated under section 4.1 three quarters of the research participants represent the seasoned extent of design expertise and the remaining quarter positions to the nascent range of expertise. Kunrath's personal attributes and design skills of professional identity prescribed under section 2.10 seem to intertwine into a salient contour of personal identity as experience and the stance over design maturity as well as design in praxis increases. Selected quotes extracted from the replies by the experienced, like "A culture slavishly adoring consensus is not a desirable working environment for a designer." "Group working skills and communication skills of a designer are generally underrated." and "Influencing capability is sometimes the most relevant design skill of all." clearly speak for the noticeable awareness of and an assertive trust in self-confidence, social abilities, cognitive abilities, and interpersonal as well as personal communication skills.

From the personal identity point of view replies of the experienced, like "Being a designer is an inseparable part of my identity and for me, it is something to be proud of." "Being a designer has changed professionalism from holistic to specific - I wasn't detail-oriented at all until I became a designer." and "Only just recently I've finally unlocked all the possibilities to utilize my personal potential." are exemplary insights of mental growth and remarks for elucidating Fearon's definition of identity as a socially categorizing and distinguishing feature. Extracted quotes of the emergent ones, like "The field of design can be a bit uncertain." "From the ground of my experience, I consider myself being an interpreter between engineering and the end user." "Mindsets that are coming with design, as well as education and practicing design, are quite beneficial for personal growth, I think." and "Sometimes I wonder that a designer is simply a jack-of-all-trades without deep and specific expertise of anything." incorporate the consideration of margins, in the demarcation of which the range of designer's latitude exists.

Naturally, economical questions particularly under the current worldwide circumstances, fluctuation of the labor market, and the dubiousness of a designer's livelihood in general are causing headaches to young people on the verge of their ascending careers. These matters of

venerable gravity radiating from the societal environment can be oppressive particularly, if those become excessively emphasized by a friend, parent, spouse, or some other closely recognized influencer, etc. On the other hand, emerging designers are about to begin to augment their self-identification as well as professional perception and professional recognition, or at least have not been practicing that very long quite yet, so their outlook for vocational decisions simply cannot be at the same time as permissive and as resolute than outlooks adopted by experienced designers.

A couple of the respondents had experienced some degree of belittling, skepticism, and sheer incomprehension over their vocational decisions during the early years of their design-specific studies, like the quote “Me becoming a designer was a somewhat difficult matter for my parents to digest.” and “Low level of understanding over design has prevailed among my relatives” are referring to, however, these apparently had no decisively debilitating effect on to their determination. Respectively, those respondents whose close circle of friends or family included a designer were encouraged and nourished in various ways to progress with their craft of choice like the quote “My father was both an author and an illustrator, so parts out of his integrity was obtained already during my youth.” “My other parent is an architect, so a designer’s vision over added value generation and way of thinking have become familiar.” and “My spouse as an architect has similar areas of interest and also a professionally supportive mindset.” are elucidating.

As indicated under section 4.3 characteristic tasks of the job descriptions included in the different design roles overlap incontrovertibly, although considering the research sampling, the indication cannot be seamlessly generalized to all design-specific roles. The phenomenon, however, reaches an echo through the conclusions drawn from the interviews. Quotes like “Design roles have distinguished radically within a decade or so but my opinion is, that in the future only these kind of full-stack designers exists.” “Demands of design expertise have broadened quite significantly within a relatively short period of time.” and “The range of different design software tools along with the necessary skillset will scatter and diminish and increasing number of designers must be willing to start all over again.” are evincing, that the accelerating gait of transition inevitably collides separate design career paths with each other and new contingencies as well as novel possibilities emerge as a result. Within this perspective, the outlooks of both seasoned and emergent ones are surprisingly similar. Despite that, only the experienced ones seemed to be moderately suspicious about the future as quotes like “In any case, I do not consider the continuity

of the current vacancy as realistic.” “Most likely I won't be a designer for the rest of my career.” and “I’m pretty convinced about not being able to succeed as a designer for the rest of my career.” are referring to. The **willingness, temper, and aptitudes to engage with new technologies** are propensities that have a plausible emphasis on specializing in design competence. Accompanied by a healthy amount of ego, the endeavors for discovering, establishing, and maintaining the idiosyncrasy of design vigor are ameliorating the condition of occupational disposition which could be consecrated as the spirit of professional reinvention.

Selected quote from an experienced “I’ve always enjoyed drawing ever since my childhood and I studied HTML already during my teen years when making websites for my friends’ parents’ small businesses.” and another from an emergent “I demonstrated illustrative capabilities already during the early childhood.” are descriptive in terms of affirming high potential for creativity covered in section 2.13. Collective quotes from both experienced and emergent "I’m comfort and routine-oriented rather than innovative and vibrant." "I’m an excitable and quick generalist with fair people skills." "Pragmatism with a high emphasis on procedures, consistency, instructions, and facilitating reproducibility through guidelines are the most of me." "I’m a pragmatic experimenter with a rather harsh impostor syndrome." "I am medium-free and interested in a human-oriented approach emphasizing common sense and reasoning." and "Despite having an engineering degree, which doesn't exactly comply with the current job description, I decided to focus on developing myself as a designer." are descriptive in terms of outlining the identity of a designer.

As discussed in chapter 2, to avoid being juxtaposed with artists a **designer consistently orientates oneself to solution productivity** and simultaneously augments professional recognition through dependable and coherent behavior along with a satisfactory level of performance. Pragmatism emerging from this basis depicts a mentality that recognizes the existence of certain boundary conditions that are to be complied with for devising, verifying, and eventually instrumentalizing the solution enabled by design.

A selected quote from an experienced designer "Interests in design have pushed me closer to my kind of people and apparently, I’ve somehow managed to appeal to other like-minded people also." and another one from an emergent designer "I thought about choosing my expertise purely for money, yet the choice made to pursue a designer’s career has been the right one and it has improved the quality of my life." are giving indications about the identity of a designer being a

reciprocal fusion of compelling internal diacritics and social peer-reflected response to them. Personal attributes and design skills of professional identity stand as a bilateral array of optima under the influence of which this fusion propagates. Considering all the above, it is very difficult to imagine professional identity being entirely lost without the designer's own voluntary involvement to do so. Challenges continue to arise, adversities will occur, and conviction is undermined but if a designer is willing to **keep on communicating, lucubrating, and being exposed to unfamiliar things** a fulfillment in terms of professional certitude will not cease to follow.

RQ 2. As the requisites of design continue to evolve, how a designer (either freshman or veteran) could adapt and convert oneself according to the turn of events generated by this evolution?

Attention to the awareness of selected concepts was drawn under section 4.3. Design Thinking and Design Systems are the most familiar whereas Design Maturity and Design Automation are the least familiar. Although the Design System is an instance of Design Automation the main concept has remained somewhat ulterior for the time being since the concept verges in between the thresholds of productization and integration. The topic in general inchoately approached by quotes like "The whole design thinking process can be applied to almost anything in life." "I think that design focus will be extended from user or customer perspective to global perspective." and "Demand of an attention to business perspective challenges user-centric approach conventional for designers." calls for a gradual increase within the mutual understanding and reverence of the parties representing the branches of activities involved in the design work.

In addition to searching, examining, and understanding the motives and mechanisms for optimizing end-user-experience-improving design, other jointly responsible qualifications within different stages of a design process are also coming along. Not all the colliding perspectives, intersecting opinions, and differing impressions are to be curbed by appealing to the current level of design maturity, however, an experienced quote "Organization must recognize the authority of designers for making not necessarily better decisions but at least more reasonable compromises." and "Current employer has succeeded to establish a surprisingly high level of design maturity, which practically shows up as an emphasis on how designers and their roles are valued." are stating, that certain confidence among designers within an organization, for example, must prevail to establish a credible stronghold of the excellence. Within this sense **fortification of ego by**

**expanding the awareness of the choices available at any given moment** supports the prevalence and non-negligence of design function.

Design responsibilities quantitively evaluated under section 4.3 condense impression, coherence, aesthetics, and accessibility as the most undermined matters in relation to their putative liability. On the other hand, budget and costs are not considered as important as those are moderately obliged. The research does not clarify any possible reasons why the expenses do not arouse greater interest. As suggested by the Design to Cost framework covered in section 2.8 the attention as well as interest over the expense-specific matters affiliated with design throughout the entire project lifecycle might be inceptively productive in terms of determining and dispersing design resources intermittently instead of charging and capitalizing them all during the initial phase. By following such logic, a designer with a transferable skill set could contribute to multiple stages within a project lifecycle and accumulate knowledge over the current worth and demand of each skill in particular. Through a grand perspective also the value of design in general within the organization would be easier for designers to selectively itemize. This of course would require openly shared information about the quotas, wages, and hourly charges. The interest to stress the importance of the undermined matters mentioned above is probably somewhat elevated by the promotion of design maturity integration although personal perspectives, motives, and beliefs apply also.

Design incentives quantitatively evaluated under section 4.4 show that AI is the most interesting matter in relation to its current level of necessitated usage. Project tracking tools, however, are comprehensively necessitated, yet the interest in them is downright minimal. Once again, the research does not clarify any possible reason, yet a straightforward cause might be that conducting the transactions and documentation simply takes too much time out of the actual design workload. Front-end development frameworks and cloud computing platforms are considered equally interesting right after user interface design tools, which are indubitably the most required based on the research sampling.

Picked quotes, like “AI will probably have an impact over the design expertise in general, so maybe we have to change a bit how we work or how we continue to design.” “AI most likely steals a major part of a designer's work since recognition of the right variables is a big part of design job.” “AI most likely sweeps certain design tasks, like brand identities and graphic guidelines completely

away from human designers." and "Definitely have to be awake about AI, because the future appears at the same time both interesting and frightening to me." are underlining the considerations of AI's apparent omnipotence within the industry of design. Although the phenomenon, in general, is relatively new on a practical level, it seemingly presents itself as the most revolutionary wave of change that the industry in question has ever faced so far. Some subdivisions of design expertise are already jeopardized by the expanding capacity of AI to produce desirable adaptations or resemblances of the outcome characteristic for that design type. This, however, does not have anything to do with the design experts' cognitive abilities i.e. the capacity to think "designerly".

Some replies of the experienced ones, like "Relaxation may eventually be the key to finding the solution and nowadays I know how to dose the work and also take time off when necessary." "Discovering the differences between rash performance and careful predetermination was a major realization for me - I believe it changed my attitude toward design completely." and "A designer has knowledge of how things should be done and the ability to get things done despite the client's own starting points." are propounding, that design in terms of the degree of its quality, cohesion, and success is a scope within which certain affairs are not and most likely cannot ever be subjects of indefatigably automatized replication.

Although AI shall overtake most of the repetitive chores handled by a human designer a capability to genuinely grasp the abstract of a creative aberrance does not pertain to it. At least not for the time being so the excellence of a human designer is respectively postulated to the intelligence to discover, cultivate, and promote the potency of an auspicious anomaly. An idea of a such can include different benefit-driven aspects, that are rationalizing a conceivable design concept by default. These aspects can be for example aesthetically, experientially, and economically advantageous over a certain period of time, and consideration of them usually requires extensive cross-stakeholder evaluation with review cycles.

Data-supported and inferring-based decision-making ensures a fact-oriented and anomaly-repelling continuum for which an AI is an ideal servant. **Promoting intuition as an alternative to reasoning and pragmatism** transmits organicity to the design process and this is something that a human designer can respectively augment along with the utilization of AI. As discussed briefly in section 2.11 struggles for setting up the banisters for clambering up the staircase of design

professionalism are compulsive in terms of revamping one's professional identity and technical expertise. The practicing of intuition sure has its place right beside it.

Implementation-related skill searching is not prioritized conversion-wise since the following quotes "In addition to UX I'm deeply interested in coding plus technical challenges as well." "Coding is most likely the next useful skill for a designer to learn." and "During the bachelor studies coding and software development felt interesting because of the job possibilities and practicality of it." are the only ones affiliated with the improvement of operational dexterity. Design incentives in section 4.4 show, that interest in some of the most common coding languages is not even on the same level as the necessitation of them. On the other hand, low / no code development frameworks, that are not necessitated at all, are gathering some interest, and cloud computing platforms arouse interest significantly more than being currently necessitated. Three of the most preferred alternatives for learning were the capitalization of free tutorials available online, contribution within subject-specific workshops, and commitment to pre-provided educative arrangements.

Quotes of the seasoned, like "Everything will work eventually as long as you are ready to spend some time in learning it properly to which I need a hands-on perspective with enough room for making my own trials and errors." "I'm not rather determined or consciously convinced about what to learn next – I trust in inspiration and intuition within learning new things and I like to be inspired through lectures and speeches." "I trust my intuition in finding sources of inspiration and I'm also keen to help other people in finding out suitable learning path" and "I'm not actively seeking new things to learn. I'm more like enjoying having a design-specific conversation with fellow designers just to get inspired by the subject." draw attention to a sentiment that a stimulus for learning must ripen to a certain point until turning into a crave and the interaction within social circumference is apt to facilitate this becoming. In other words, dictation, or other kind of imperative postulation of the blanks for learning does not support the sustenance of autonomy and neither the acceptance of the fact that learning takes its time. Likewise, the quotes of the emergent ones "I still think that learning from others, particularly from more experienced people, is the most efficient way for me." "Definitely the best way to learn is to absorb new things from peers and colleagues since practical examples presented by a fellow designer provides a better frame of reference than watching tutorials on YouTube." and "The first couple of years of the

studies were completely capitalized in comprehending what design and its versatility are.” are backing up this judgment.

Quotes stating “Learning shouldn’t be oppressive. It should inspire and make to crave more.” “I’m trying persistently to learn and to comprehend new things by myself through practice.” and “I don't have much patience to observe a lecture or approach subjects through a theoretical framework.” advocate attention to the idea of distinguishing an aptitude from an interest considered in section 2.12. An aptitude with a firm existence can intersect certain interests in such a way, that cultivating that particular interest may require trials of alternative approaches until any progress learning-wise begins to occur. From the basis of these matters, **transferable skills, enthusiasm of versatility, and curiosity to comply with reform by following proprietary instinct** are being emphasized instead of the acquisition and polishment of singular abilities.

RQ 3. Why might a designer experience a decrease in the sensibleness of his/her daily labor?

As indicated under section 4.2 clear majority of the participants acknowledge the daily work as considerably sensible. A quarter of them consider it absolutely sensible and the minority as somewhat sensible. Perspectives of examining the experience of sensibleness are diverse. Quotes like “Projects contributing one way or the other to some good thing in the world is clearly making any job sensible.” “Having a consistent team-level common goal for which everyone works together is sensible for me.” and “I find having the opportunities and possibilities to work in stimulating projects and design for a vast group of users very pleasing.” do not attach the experience to some specific or distinct matter. Rather the interpretation could refer to the confederacy of various social aspects invigorating the work in general.

Quotes such as “Sustenance of progress - the feeling, that you're moving on, is important for me.” “I like to work on projects that have clear roadmaps and solid life cycles.” “As a consultant, you can decide for yourself when the project will end, and at the moment I am satisfied.” “I’m happy about my current situation as an in-house designer because of the long-term ownership and mostly regular office hours.” and “Currently, the balance between routines and learning is ideal, however gaining more confidence and having a slightly clearer description of tasks would increase the experience to the maximum for sure.” direct attention to the successive, productive, and performative dimensions of design work.

Experience decreasing factors reflect features and conditions of the laboring perimeter as quotes “I’m probably not patient enough to work several years within a culture of high bureaucracy.” and “Within a big corporate environment, the design department seems to be more or less siloed.” are suggesting. Conventions for communicating and collaborating within the working perimeter can also deteriorate like quotes “Sometimes it is hard to allocate the actual design work because of the interlacing team-level and stakeholder-level meetings.” and “Sometimes system level legacy dept and Teams-related chaos with too many stakeholder parties makes me frustrated, but those are simply a must to endure.” are disclosing. Slightly more detailed quotes “Strategic issues particularly are sometimes so difficult to solve, that it is very hard to maintain motivation.” “Sometimes the complexity and simultaneous consideration of interdependent matters make the work exhaustive.” and “Improvements, that could be made are evident, however, there are no chances to implement them.” open the dilemmas ranging through timeline, constraints, and available resources. When summarizing the above mentioned under some collective topic the pertinent terms for describing it would be **urgency, complexity, and ambivalence**. This might have something to do with a discordant design methodology or a somehow mismatching combination of design and agile methodologies for example. Also, contradictions between stakeholders performing on different levels of design maturity may stall or otherwise interfere with the design process.

A concept of design management, that has not been covered within this research, most likely would provide additional references about experience decreasing factors. Design management capabilities are one extent of Kunrath’s design skills described under section 2.10 however an extensive inquest of managerial intervention and the advantageousness of it over design praxes would be a subject of a separate study. At the end of the day, all these kinds of hypothetical root causes are reflections of the work culture that the experts have put up together and they are hopefully also able to change it together.

The refinable transformability consisting of technologies being assembled, design methodologies applied, and implemental payloads deployed can present itself as excruciatingly confusing particularly when the actual availing results of design labor must be somehow prognosticated as well as vindicated for approval. It might simply be practically impossible for a designer to fully perceive the entire spectrum of the matters affecting and conflicting with the design process so the expectations for design-specific results may be equally unrealistic. Naturally, validating the

evolving design on a regular basis to substantiate the direction in terms of clarity improves the status of all participating contributors. Yet the actual validating impact for design may remain only nominal since other criteria might have imperceptibly surpassed the instituted design specifications and tasks conducted by a designer have become diluted rather than iterated further.

RQ 4. Why might a designer experience a decrease in the significance of his/her daily labor?

The considerable significance of daily work acknowledged by half of the participants is also indicated in section 4.2. A quarter considers the work somewhat significant and absolute significance is experienced by the remaining except one participant with barely significant experience. Perspectives of examining the experience of significance are slightly more unequivocal when comparing them to the perspectives taken to examine the experience of sensibleness. Quotes like “My experience of significance is attached to personal values committed with work in general.” “Significance is related to who we work for and what kind of projects we choose.” “Significance comes from values and what is done as an impact on the rest of the world. The fact that being a part of making something better or more fluent for a vast group of people is fundamentally significant.” “It is wonderful to work with something I fully comply with, believe in, and what is close to my heart.” and “Bringing up joy and excitement through a design outcome peaks the significance of my chores.” enclose significance around optionality, purposefulness, and appreciation projecting from the ground of antecedent selections and successes. The matters described also reflect the ideas that emerged from the ground of RQ6.

Experience decreasing factors once again reflect conditions within the laboring perimeter and culture as quotes “Design is being conceived into storage rather than put into practice.” “A lack of resources and delayed customer feedback diminishes the experienced significance.” “Significance could be clearly better if the big picture with all relative root causes could be seen because a designer does not necessarily have any means to figure out the actual reasons behind verbal excuses.” “Transparency, impartiality, and liberality have a major impact on job satisfaction and sense of security.” “Validation of design ought to be considered as a critical phase of the product life cycle although some companies may have an opinion about this being futile.” and “Perhaps an opportunity to work as an entrepreneur would upgrade the experience of significance to top 5.” are implying.

The sense that for one reason or another, **you are not able to do your job well enough** for instance according to your standards or in terms of the team's objectives applies generally to the quotes mentioned above. As discussed in section 2.10 designers represent a profession with high ethics and morale so their ambition within the endeavors to accomplish finesse is obliged in a certain way. A single quote "Obviously working as a designer is not clearly as significant as working as a teacher, a lifesaver, or a doctor. My work won't influence people's lives whatsoever." inversely explains the nobility of this obligation. Nobody's life, health, or well-being is a designer's immediate responsibility, but the work is always carried out with a similar sense of responsibility involving trustworthiness and a stance of being professionally recognized. The devotional ownership and perspective of the work in practice are colliding on an ideological level and the balance of significance to be discovered lies somewhere in between. This matter also reflects the ideas that emerged from the ground of RQ6.

Another single quote "Occasionally I consider myself being the boring one establishing the blunted facts according to which the actual implementation is going to be made, since sometimes it feels that no one is actually considering them during the concept phase." is comparing the work specific design liabilities to duties typical for an expertise of a different design role. By setting it up like so the challenging abstractionism of a designer's work exposes itself for further examination. When something improved, insightful, and unique is to be conceived a designer does not necessarily want to follow any existing boundary conditions or guidelines that might constrain the essence of a creative output. On a case-by-case basis, this might be necessitated however at some point during the design process the realities along with the responsibilities of the next expert in line are coming along. Pleading to abstraction or promotion of subjective opinions over some creative idea for that matter should not be considered as justification for surpassing the preparations of ensuring operative feasibility. Responsibility as one of Kunrath's personal attributes and as a cornerstone of design in general does not only comprise the deeds, outcomes, and consequences. It must cover the long-term scope of sequential liabilities within the making as well.

RQ 5. What kind of career signposts a newly appointed junior designer and a seasoned senior designer could follow?

As indicated under section 4.1 roughly 5 years of design-specific studies is a median educative timespan, and a track record covers around six vacancies on average. The first career-launching

juncture for both emerging and experienced designers is the discovery of and engagement with design-specific studies. Quotes of the seasoned “I became familiar with design through a field-specific high school after which I spent many years in odd jobs figuring out what to do or what to become professionally. I discovered graphic design studies in a polytechnic and decided to apply because it seemed reasonable for me.” “When I moved to Finland due to marriage I needed a new career, because as an immigrant my previous studies were not eligible. I decided to apply to the interactive technology master’s degree program at university because it sounded interesting.” “There was a communication degree program at the University of Applied Sciences. I studied there for a couple of years after which I applied to Helsinki, and that’s how my design journey began.” and “It was a decision between different study possibilities - emotionally justified although reason suggested otherwise.” “After high school, I studied communication at polytechnic and became a designer rather early on, but maybe not quite consciously.” as well as quotes of the emergent “Polytechnic design studies took place after folk high school, however, the decision to become a designer was not premeditated.” “Different fields and concepts of design subsequently unfolded during the study years and education was definitely necessary in fully comprehending what design and planning actually are on a practical level.” “During the last year of high school, I attended a workshop focused on emerging jobs during which an interest in design thinking awoke. That was the very first step for me in becoming a designer.” and “I studied literature at the university and completing my degree of a visual subject probably strengthened the idea of having a design work.” allow us to retrospectively infer that even if the senses and perceptions about having a design inclined identity would be fundamentally solid a variety of external inducements have one way or the other pushed to gravitate the proper direction. In other words, an adamant vocational conviction already in youth is not a must for becoming a designer in the first place nor later in working and succeeding as a designer. **Experience of some adjacent expertise and knowledge of parallel studies** for example are extremely useful in developing both intuition and motivation for entering and navigating in the field of design.

Further milestones appear to be linked and designated according to some transition or interchange as quotes of the experienced “The most recent landmark of my career is this UX stuff, into which I originally began to concentrate by working in a small startup company.” “Later on, I applied to study industrial design after work-related adversities and eventually I got acquainted with service design during the time when I was working as an industrial designer.” “An internship as an Art Director’s assistant in an advertising agency launched my career and eventually

relocating to Helsinki region was the key for career advancement.” and “One milestone for sure is the change from in-house to agency side, because working as a consultant provides you with freedom and support by the help of which I can take design to places where it hasn’t existed before.” are suggesting. Such turning points require decision-making, within the framework of which certain options are inevitably excluded from the equation.

Even practices of unlearning may seem like a proper way to cope with the change although the consideration as well as the acceptance of obsolete or otherwise unnecessary proportions of one’s expertise can be hard. Still, the **options to give up certain for achieve something new instead** are ever-relevant ideas and can be approached from the value perspective for example. Maximizing income as a component of motivation forces a designer to think about which types of design expertise are and continue to be worthy of funding. What kind of design do companies and organizations want to pay for, to put it roughly and would the engagement with such kinds be pleasant by default? Alternatively, maximizing the impact as a component of motivation turns the attention to the advantages engendered. What kind of design is highly beneficial to the experiencers of it? In some cases, plain unprocessed information for example can be a remunerating payload of design although it would not ever concretize as a productive outcome of some sort on its own.

Almost every one of the participants has at least semi-seriously considered changing professions at some point. Lingering conclusions belatedly risen to consciousness have commonly preceded these thoughts. Enveloping quotes like “Solving conflicts between outlooks in a musty office is sometimes exhausting, but I suppose I wouldn’t change my expertise anyhow. I’ve also experienced a work-related exhaustion, which was another turning point and after that, I have been more determined about what I want, what I need, and what I’m ready to do to achieve them.” “I haven't ever seriously considered changing, although a front-end developer’s career interests me greatly but for the time being not ready to make that decision quite yet. I know people who have changed their profession and ended up changing back to the original one because a new career was hard, or it did not meet the expectations.” “I actually had to change it from my dream profession to the current one because cultural conventions, societal comprehension, and language prerequisites narrowed down the possibilities to practically nonexistent.” and “This comes to mind from time to time particularly when considering the visibility of a modern designer's work through a certain timespan.” are standpoints of experienced

ones. Quotes of the emergent ones “Sometimes I’ve felt desires to broaden creativity by doing more visual design on the side but so far, I haven’t had any serious considerations.” “Some of the study peers within the same faculty had some other area of expertise at the side, which seemed to have an effect on the general competence of them.” “During my bachelor studies coding and software development felt interesting because of the job possibilities and practicality of it. However, I haven’t seriously considered it, but it just might be a second option that I could think of switching to.” and “Despite having an engineering degree, which doesn't exactly comply with the current job description, I’ve decided to focus on developing myself as a designer.” can be considered as experimentally more tolerant however not necessary as experientially awakened.

Disentanglement of arduous complexity as an outcome of design validation and implementation demands perseverance sometimes beyond obtainable capacity and within the back cycle phase of the design process, during which the diagnosed matters are to be respecified for iteration, the expanse of resupplied or otherwise post-delivered items can be stultifying. As described in section 2.3 our scope of design does not grasp anything tangible. Besides stamping pen-filled post-its and supplementing sketchbook notes nothing is practically being cut, milled, routed, or cast. Since there are not any kind of material or refinement procedures the definition of being finished is always open to interpretation and the options to withdraw and revert are constantly present.

The mayhem of identified deficiencies, considerable variables, and intricated corner cases may not include any kind of presumption of a ready-made entity and that alone can make chores of design so mind breaking, that an idea of changing profession begins to feel attractive. Therefore, it would be a good thing for designers to **regularly reassess their approach to the material they are dealing with in their work** as featureless as it might ever be in practice. As information is the primer and already existing knowledge is the groundwork of a design the materials for framing, aligning, leveling, and validating design cannot be determined by any other than the designers themselves.

RQ 6. What are to be characterized as the most significant matters in a design according to designers?

To crystallize only the essential from the basis of the following quotes “Empathy, because design skills, software, and technology are merely keys to enable the continuity of it.” “The most

important thing in design is to recognize the moments during which different devices, user interfaces, services or products can be involved with people and empathy is a key element in this context.” “Design focuses on empathy, clarifying the purpose, why we're doing it, and critically assessing the brief to understand its origins.” “The goal of design is to bring about a change in behavior through communication.” “Purpose of design is to be a guide within situations on which any forced or fraudulent interaction is prone to cause frustration or distress.” “Empathy and the measurement of its supportive outcomes by complying with some other standard than computational efficiency.” “The most important thing is the purpose of use and suitability for it.” and “The humanity of it is critical - I hope empathy expands towards all living things.” are pointing out, that **empathy** is a transcending concept between beings, instruments, and techniques that vessels the gathering of the understanding by the help of which the purpose, suitability, and prevention of negative experiences are crafted.

The meaning in the background of the quotes mentioned above reflects similarities with a certain hereditary ideology, that Encyclopedia Britannica specifies as enlightened anthropocentrism. This alleges, that while humans as the most ultimate and dominating species in the universe have ethical responsibilities toward the environment, these obligations can also be rationalized in the context of their duties toward fellow humans. Although anthropocentricity is, according to some intellects, considered a masculine outlook, it refers to all humans and their moral responsibilities to secure biodiversity (Boslaugh, 2022). So, design as a combination of art and engineering could manifest itself also as a **remedy for contemplating global-scale quandaries**. Examples of such must admittedly exist already, although those might be somewhat challenging to point out and explain exhaustively. Perhaps our perspective of, approach to, and relationship with design in general, is mediocrely so immediate gain seeking, that its potentiality for resolving prolonged uttermost questions does not reach our finite frame of thinking. Or then we are simply so preoccupied by the occurrences within our common sphere of attention, that matters extending beyond are disappearing from the radar. Nevertheless, examining design in this context would be the subject of a separate study.

# 6 Discussion

Our hypothesis within section 3.2 presented a possibility of designers becoming willfully somewhat detached from technologies. After the analysis, we can validate, that this is not the

case. One challenge for sure is the acquirement of the necessary abilities to utilize for example implementation technologies in a creative fashion. Another challenge most likely would be an operationalized establishment of reasonable tolerances and thresholds between examination, conception, validation, and implementation of the design.

A compact development team with clear objectives, a handful of inventive and resourceful people, an optimal amount of stakeholder parties, and little to no responsibilities with legacy systems shall find their methods as well as ways to conceive and instantiate contemporary design efficiently. Vague targets, an exorbitant number of stakeholders, uncongenial methods, and accumulated technical debt are inflicting dubious circumstances for conceiving, facilitating, and validating a novel design. Particularly the last of the mentioned - disintegrated, unmanaged, or otherwise sidelined technology - is something that a designer might be extremely hard to reconcile with let alone respond to, since merely fixing liquidated things up does not equal an outcome of fresh design. Since the utilization of necessary technologies cannot be avoided, bypassed, or refused for that matter an evasive orientation could simply be a coping mechanism adopted under intractable circumstances.

## 6.1 Technostress in Design

Pallavi Upadhyaya's and Acharya Vrinda's research about the impact of so-called technostress underlines, that regardless of the common impression of the younger generation being versed with technology, a significant occurrence of technostress occurs also among young people even with their prominent experience of information communications technology (ICT). Technostress emerges when an individual interprets one's own processing of technology as a "threat" because of negative experiences and undesirable outcomes (Upadhyaya & Vrinda, 2021).

Technostress, from a practical point of view, probably does not make any difference between legacy and new technologies nor between young and matured experts for that matter, although dealing with contemporary technologies accumulates competence by improving longer-term know-how. Another research examining the impact of technostress indicates, that the complexity of ICT is prominently associated with job insecurity, work-related exhaustion, and negative affective well-being in general (Umar, Conboy & Whelan, 2023). Designers incessantly working at

the many intersections of theory and practice, applying technological means, are unquestionably prone to experiencing technostress and its consequences.

## 6.2 Implications for Design Theory and Practice

The history of design is extensive and therefore methodologies for conceiving, frame of references for evaluating, and technologies for testing, implementing, and actualizing design are many. The process of design in practice is usually complex, often indefinite, and quite seldom straightforward. It involves dissenting opinions, perspectives, and expectations in the hurrying crossfire of which a designer must gradually devise valid elements for construing an appropriate consistency. Every now and then a concept with desirable relevancy might return to the drawing board and the work starts all over again.

When for instance a developer focuses one’s own attention on optimization and accessibility, a product owner on implementability and productivity, and a system architect on feasibility and compatibility a designer may easily be obliged to take all the prescribed matters into account when outlining the clarity with profitable characteristics out of chaos. Generally speaking, the outcome of the design process is virtually without an exception a compromise of some sort aiming to maximize or at the very least substantiate the value of a customer experience. Designer extracts fragments out of one’s own ever-developing unique identity to both explain and deliver this compromise so that all stakeholders can agree upon the matters it synthesizes.

# 7 Conclusions

As presented in section 1.1 and referred to in section 5.6 the unearthed corollaries have now addressed how a designer or a creative can approach the improvement of one's own potential without losing identity and the inspiring complacencies of a chosen profession. Despite its diction and articulation, the following content is not intended as a directive, pastoral counseling, nor a checklist but more like a domain of collective reserves to which the current whereabouts of and the desired objectives for design professionalism can be reflected at any time.

## 7.1 Professional Reinvention

Ponder your ego to question what you already know, what you do not need to know, and what there are to be familiarized with. The peculiarities discovered are entirely free from any sort of prejudice or presuppositions and they do not have to make an instant sense in terms of your design vigor. The trust in your disposition helps you to decide what of those inducements are merely impulsive and what of them are the actual blanks of professional re-invention. Seek discreet ways to push the envelope of your current job description even if it would seem impossible because of prevailing conventions and circumstances, however, keep in mind, that you are not an artist – ensure that you carry on contributing to some solution-specific concerted cause for being recognized according to your efforts and accomplishments. Pay attention to the potentiality of transferable skills within the alternating work market and learn to pinpoint intriguing opportunities that emerge.

**Nurture Your Social Sphere of Influence**

Communicate to, discuss with, and be interested in the profession of other experts besides your design peers. Listen to their opinions, perspectives, and particularly misinterpretations over design so that you might be able to both clarify and evaluate the concept of design with them. Be a channel for the distribution of sincerity and authenticity but acknowledge that some are not ready to do the same. Use and strengthen your confidence in exposing yourself to unfamiliar and even dubious matters yet complying with the ethics and morale distinctive for design professionals. Do not determine your professional sense of self-worth according to the views, opinions, and resolutions established by laymen or other experts in different fields of industries, since every genuinely innovative design indispensability is fundamentally unique.

## 7.2 Self-conversion

Sensitize yourself to signals about how the mutual understanding and reverence between the participants of design work being processed could be progressively increased. Contribute to the augmentation of design maturity by earning the trust of your team and stakeholders. Accept the fact that AI along with automation redefines design and our relationship to it but it will not compromise designers' cognitive abilities or their design capacity. Do not reject your intuition nor the intuition of others as one design conceiving ingredient right next to data, pragmatic reasoning,

and the feedback gathered. An atmosphere of rigid regulations and solid procedures obscures the potentiality of anomalies so always try to gravitate yourself to environments and circumstances legitimately receptive to reform. Adaptation to and execution of certain routines are still equally important with creative enthusiasm, however, the safety and comfort of repetitive chores is not something that a designer ought to get used to.

**Commit Yourself to Re-educative Activities**

Keep on striving to both discover and retain your preferred ways of learning by recognizing the difference between your distinctive aptitudes and various interests. Acknowledge and recall that learning takes time, demands certain sacrifices, and may require numerous experiments until any progress occurs. Your inclination for engaging with new technologies has a substantial impact on specializing your design competence so align your time consumption according to your learning intentions and stay as consistent as possible with it. Never cease acquiring knowledge nor searching current information about the matters you consider important in terms of design. Although aesthetics, composition, or narrative for example would not be the most critical things within your current roster of design responsibilities it does not mean that those are not constitutive aspects of design. Aim to consider potential employers and vacancies by examining their policies for learning and education as well as their occupied seniority and management in terms of design.

## 7.3 Experiences of Sensibleness and Significance

Explore and analyze your desires for an ideal working culture from a social perspective. Are the tasks themselves, technologies applied, atmosphere in general, or people in particular the immersing factor or do you simply enjoy the location independence of remote working the most? Clarity, predictability, and consistency within a designer's work are relative concepts however mainly regular hours, reasonable schedules, and honest deadlines are worth seeking. The client-side has its share of responsibilities too. Simply try to (re)locate yourself in a culture that not only demands but also enables periodical punctuality in terms of decision-making, execution, and feedback. Especially, if you are an emerging young talent, a dependable flow of notable successes supports your early professional development. Avoid getting bogged down in projects with fragmented lead time because of constantly postponing reviews and deadlines or contradictory setting of priorities. Do not use your time any more than what is absolutely necessary to tangle

with bureaucracy and red tape, particularly, if such things are not affiliated with the accessibility, documentation, or management requirements of your design. Aim to consider potential employers and vacancies by examining the current level of their design maturity but do not rank them solely because of that.

**Responsibility in Design**

A principle presented by Jon Postel “Be liberal in what you accept, and conservative in what you send” for specifying the Transmission Control Protocol (TCP) serves also as a reminder for the promotion and nurturing of collaboration (Yablonski, 2020). Be responsible, not only for the sake of the end user, customer, or some other party influenced by your design, but also for the sake of your peers, colleagues, and stakeholders. Cultivate your devotion but maintain a suitable distance between the internal criteria of it and the outcome of your team’s practices. If you feel not being able to do your job properly enough, do something else instead just for yourself but do not project your perspectives of purposefulness and appreciation only to tame the equivalents of them away from others. Educate your ego to be transparent and open-minded but not invisible and lavish. Be responsible also for yourself by delivering courtesy and setting off whenever holding a place is coming to the end of it.

## 7.4 Career Contemplation

Take an interest in distinguishing the current worth and demand between different design skills for itemizing the value of design types. Do not be afraid to give up on developing or practicing some of your skills that are not beneficial for you at that moment and focus on exercising the worthwhile instead. Spend a fraction of your time examining some interesting subject on the side of your day job. Such a thing nourishing your intuition and motivation does not have to be a work-related or design-related matter at all. Never get stuck on some certain way, method, or scheme of co-working and getting your tasks done. Trending facilitation mechanisms and productivity philosophies will come and go. Keep yourself constantly reminded about who is the one that your design is supposed to serve and spare no efforts in ensuring that this happens by improving your ability to influence. Do not limit yourself because of the possible threshold, silos, and obstacles suffused within the working perimeter.

**Predetermination Is Not a Must**

Do not hesitate to maneuver sideways if perpendicular advancement opportunities are not in sight when otherwise the time and life situation for a career alteration is favorable. Consider for example changing from in-house to agency side or vice versa, if such experience has not been yet acquired. Consider taking a backstep even if it appears as an entrance to a more intriguing future. Feel free to try different kinds of design job descriptions but avoid getting too comfortable in any of them. There is always a certain amount of pain within self-development. At some turning point in your career, an idea of changing the profession will probably emerge and that is, at the latest, an excellent opportunity to reassess your approach and outlook to the material aspect of your work. In any case, do not appraise the amount of compensation over the power of your mental growth as a career-driving factor.

## 7.5 Afterwords

The timespan of composing this thesis turned out to be significantly longer than originally anticipated. Although conducting a research-based report was originally a plan B the interest and commitment taken in it were fortified along the way, particularly, when the comprehension of the gathered information from the ground of the survey, interviews, and thematic analysis began and continued to expand. The more spontaneous realizations based on the content were experienced, the more a sense of being obliged to the groundwork of academic research was grown also.

The research has its deficiencies and constraints for sure yet the production process of it has enabled an incorporation of a more inclusive understanding of the profession as well as design in general. The concept of and outcomes of design carry on evolving as the instruments and orchestrations for conceiving it continue to become abidingly more sophisticated. In this sense, technology has paved the way for the expanding possibilities of design. Premonitions revealed by the study about the future of design are deeply referring to the humane aspects and virtues of it. The former rather nonchalant attitude toward investigative industriousity was replaced with a humble acceptance of the facts that the anatomy of design process and the innermost of designer’s identity cannot ever be utterly nor exhaustively explained. Perhaps the most precious matter that design has and what its subsistence is to deliver is the spontaneous drive of unceasing compassion between the ones who are comparing their experiences of observable reality simply to pass them forward through history.

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# Appendices

## Appendix 1. Data Management Plan 1 (2)

### 1. General description of data

Research data in general is collected through a survey and set of interviews. Both prescribed collection methods are conducted by the author only. Existing research findings, considerations, and outcomes may be utilized to emphasize certain details within the theoretical frame of reference, however any extensive samples, quota, or partitions of existing research data will not be treated, processed, or managed further. Ensemble of data consists of:

- Data gathered for enabling the attendance of a correspondent
- Data gathered through the survey and data recorded during the interview sessions
- Survey related data will be exported from Webropol in spreadsheet format (.xlsx / .csv) to Excel for further processing. Interviews are to be recorded (.mp4) and transcribed into a text document (.doc / .txt)

Survey data remains in Webropol system until all attendance related transactions along with the analysis have been done after which the necessary backups are taken. Interview recordings and transcripts are saved locally and back upped on to the cloud. In case of a device malfunction, malware infection, and/or file corruption etc. cloud backup will be the most approximate reprise of the saved data**.**

### 2. Personal data, ethical principles, and legal compliance

Required items interpreted as personal data are name, e-mail address, age group, and the recorded voice of each correspondent. Age group is an essential research variable and e-mail address is needed for triggering the survey as well as providing the set of questions presented during the interview session. Name and e-mail address are also serving as a key that unites the survey response and interview transcript together. Names and e-mail addresses of correspondents are tabulated into a spreadsheet for tracking valid survey responses. A file of an interview recording is to be named after the correspondent in question. The recordings are not manipulated or converted afterwards, however playback speed of a recording might be altered to clarify the transcription if necessary.

A privacy statement and a disclaimer concerning these items is to be prepared for provision. The statement is provided via e-mail once after a correspondent has decided to attend. The disclaimer is embedded into the survey and a correspondent is practically able to initiate the survey only by approving the disclaimer.

### 3. Documentation and metadata

Documentation of the survey related information is done either with word processing (.docx) or plain text editor (.txt / .md). Documentation related to the interviews is done with word processing (.docx) by supplementing the actual transcribed dictum with comments. The comment feature in specific will be used to compile the codes for identifying the research method pertinent themes.

The author intends to type all notes and remarks with a computer, however also traditional analog pen and paper media can be used as a temporal form of storage within this perspective. 2 (2)

All data in general is not to be stored for further processing nor other form of utilization outside the context of the author's thesis. Such necessities are not evident and can not been seen beforehand at the moment.

## 4. Storage and backup during the thesis project

All data pertaining to the thesis is stored by using local folder structure C:\Users\antti\OneDrive - JAMK\MA Thesis\.. as a primary deposit. This enables the synchronization of the data from local hard drive on to the cloud. An auxiliary backup of all thesis related assets, that are collectively regarded as data, is an absolute necessity. An external physical flash drive will be used for this purpose. Also personal home directory (H drive) on Jamk's server can be used for backup purposes.

The data pertaining to the thesis does not presumably contain sensitive details or classified information in particular. In case such matters shall present themselves one way or the other, then the author ensures proper anonymization and/or pseudonymization of all related items based on the assumption, that those are or can be to some extent regarded as relevant for the research in the first place.

The author of the thesis is the only person who can access and handle the data per se. The only exception may occur whether if technical support is needed with Webropol system. In that case content or fragments of the survey data might be exposed to a third party, although the potential operative most likely will not have any reason to exploit or misuse the data.

## 5. Archiving and opening, destroying, or storing the data after the thesis project

In addition to archiving the data by the author and for the author there is no apparent need to store it separately for prospective re-use. Therefore, it can be also stated that the data will not be openly accessibly at any extent. During the thesis project the data will be stored according to the details given in the previous section. Once after the thesis is finished and the project is over the data will be erased for good by the author. Jamk user account of the author will be removed eventually when the study right period ends, and no backups are taken within this context.

## 6. Data management responsibilities and resources

The author is responsible for the entire life cycle of the thesis related data. Transactions such as generating, storing, processing, downloading, uploading, documenting, securing, backing up, archiving, and erasing the data are on the author's responsibility only. Any external resources and/or computing capacity beyond Jamk's ICT framework will not be used to process or store the data. All necessary stages of the thesis project as well as phases of the research are to be executed with PC setup and existing software license policy.

Plan prepared (Järvenpää, Finland / 2023-01-15)

## Appendix 2. Research Proposal



## Study about how to convert a designer for the future days to come

I am a seasoned designer presently working on a field of UX and concurrently compiling a thesis related to my studies of Full Stack Software Development at Jamk University of Applied Sciences. My thesis focuses on analyzing the present state of digital product/service design in general as well as resolving contemporary circumstances for design as practice in order to come up alternatives about how a designer could orientate oneself for converting expertise without losing professional identity and sensibleness of daily labour.

Giving attention to your track record I would regard you as an ideal sample for closer examination. You have practically transferred from certain field of design to a whole new one and therefore kind of like converted your expertise already during your career. I believe you to obtain a level of experience in foreseeing some of the matters significant for professional endurance. I also believe the role of a designer to be changed quite dramatically within the upcoming years and therefore feel the need to take an effort in shedding some light over the sustainability of our profession.

## Participation and stages of the research

Attendance requires both willingness and patience to ponder and even question perspectives and opinions over design expertise. If you choose to participate, and I genuinely hope that you will, just send an informal approval via email by using the attached address at the end of this document. Through this initiation I am able to launch the first phase of the research by sending a survey to your email.

Stage 1 – Survey

The questionnaire contains quantitative query for finding out common profession related variables such as age range, years of design specific experience, and extent of design specific studies accomplished. Survey is concise and takes approximately x minutes to respond. Once after the survey has been responded to date and time for the second stage needs to be scheduled.

Stage 2 – Interview

During the interview session a set of qualitative questions are to be replied. The questions have a detailed approach for outlining selfhood and personality of each correspondent. Questions will be sent beforehand right after the meeting itself has been scheduled. The interview takes no longer than 1 hour at maximum, and it will be conducted via Teams, Zoom, Slack or other equivalent. The interview will be recorded for transcript.

Ideally the interview would take place within a couple of days after the survey response but practically this might be extremely challenging to arrange. It would be desirable to accomplish both stages within a two-week period. The correspondent has the initiative in proposing date and time for the interview. Evening hours between 4pm and 8pm (Finnish

Time) are preferred. Forenoon and afternoon hours however can be settled according to agreement. 

## Privacy and terms

Contact detail (email address) of a correspondent is used only for research specific transactions prescribed above and it is not mediated to Jamk nor any third party. The author will not collect data out of the scope of this research. Details such as name, phone number, location of residence and details related to either current or previous employment relationship, such as position, business phone number, business address and branch of industry, are not enquired at any stage of the research. Contact detail (email address) along with the name are tabulated for progress tracking purposes and these will remain classified. Interview recording of a correspondent will not be edited, altered, or manipulated and it is only used for compiling a transcript. A correspondent reserves the right to opt out at any point of the research without being obligated to make amends
or to meet consequences etc.

Data equals as quantitative survey response and qualitative interview recording plus transcript. Data collected during the research will be processed, stored, and backed up by using Office 365 Cloud environment of Jamk. The author shall archive the research data locally, however the interview recording will not be included. Data will be erased entirely from Office 365 Cloud of Jamk once after the necessary processing has been conducted and the results have been analysed and documented.

The research in particular and the thesis in general are not affiliated with any commissioner, client or stakeholder. The subject, plan, and implementation are thoroughly brought about and conducted by the author and approved by the representative of the study programme at Jamk.

I hope to be contacted in case of questions, concerns, or possible obscurities etc.

Sincerely and respectfully,

Antti Hämäläinen
+358 40 593 4784
aa8636@student.jamk.fi

**Appendix 3. Webropol Survey Template**



jamk | Jyväskylän ammattikorkeakoulu University of Applied Sciences

# Converting Designer's Identity

**- Observations for Revising Competence**

This survey is the first stage of a research included into Master's Thesis of Full Stack Software Development study programme at Jamk. Author of the thesis and conductor of the research is Antti Hämäläinen (aa8636@student.jamk.fi).

Responses to the upcoming questions will be used for research purposes only. Although your email address has been acquired to send the survey, your specific responses will not be connected to you in any way whatsoever either during the analysis of your responses or presentation of the final results. After your responses have been merged into final research quota, your email address will be deleted from all records upheld for backing up the data during the implementation of the research. Your e-mail address and your individual responses will not be given to any third party whatsoever. In addition, you will not be added to any mailing lists as a result of taking this survey.

Proceeding to the survey implies that you understand and agree to provisions prescribed in the disclaimer above. *

◯ I agree and want to proceed with the survey

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Specify you age range *

◯ 18 – 25
◯ 26 - 34
◯ 35 - 44
◯ 45 - 54
◯ 55 ->

Current years of design specific work experience *

◯ 1 – 6
◯ 7 - 12
◯ 13 - 18
◯ 19 - 24
◯ 25 ->

Total number of years exerted on your current design expertise specific studies? *

*This refers to for example design expertise specific degree or vocational qualification, furher studies related to certain field of design expertise, design role, or design specific job description and/or possible design specific supplemental education, transition training or adult education.*

Round if necessary and fill in full digits

Current amount of design specific vacancies *

*This refers to employment relationships with different employers and different job descriptions or positions of a certain employer.*

Fill in full digits

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Which of of the following designer types / designer titles is the closest or equivalent with your current job description? *

- ◯ Business / Strategic Designer
- ◯ Concept Designer
- ◯ Content Designer / Producer
- ◯ Service Designer
- ◯ UX / UI Designer
- ◯ Visual Designer

Which one of the following is the closest or equivalent with your current employment status? *

- ◯ Employee / In-house Designer
- ◯ Employee / Agency side Designer
- ◯ Self-employed / Freelancer, Consultant etc.
- ◯ Entrepreneur or subcontractor
- ◯ Charity or voluntary work

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What is your current experience of **sensibleness** within your daily labour? *

- ◯ 5 - Absolutely sensible
- ◯ 4 - Considerably sensible
- ◯ 3 - Somewhat sensible
- ◯ 2 - Barely sensible
- ◯ 1 - Not sensible at all

What is your current experience of **significance** within your daily labour? *

- ◯ 5 - Absolutely significant
- ◯ 4 - Considerably significant
- ◯ 3 - Somewhat significant
- ◯ 2 - Barely significant
- ◯ 1 - Not significant at all

A statement can be made that different types of design expertise are blending with each other when for example new concepts are drafted or existing implementations are developed or otherwise refined further. How would you perceive the tasks related to these different kind of types to be prioritized within your current scope of design responsibilities? * 3 (7)

*For example the responsibilities of a visual designer shoud focus on prioritizing **Visual Design** expertise and Content Design expertise for instance could be secondary.*

| | |
|---|---|
| 1st – Priority | Select ˅ |
| 2nd – Secondary | Select ˅ |
| 3rd – Tertiary | Select ˅ |

Are you particularly familiar with or generally abreast over some of the following concepts? *

5 = Comprises on a daily/weekly basis
4 = Comprised when necessary
3 = I know the basics
2 = I've heard/read about it
1 = Yet to be discovered

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Design Automation | ◯ | ◯ | ◯ | ◯ | ◯ |
| Design Maturity | ◯ | ◯ | ◯ | ◯ | ◯ |
| Design Sprint | ◯ | ◯ | ◯ | ◯ | ◯ |
| Design Strategy | ◯ | ◯ | ◯ | ◯ | ◯ |
| Design System | ◯ | ◯ | ◯ | ◯ | ◯ |
| Design Thinking | ◯ | ◯ | ◯ | ◯ | ◯ |

How are the following matters ranked within your current scope of design resposibilities? * 4 (7)

5 = Critical
4 = Very important
3 = Somewhat important
2 = Must be considered if necessary
1 = Not important at all

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Accessibility | ◯ | ◯ | ◯ | ◯ | ◯ |
| Aesthetics / Appeal | ◯ | ◯ | ◯ | ◯ | ◯ |
| Budget / Costs | ◯ | ◯ | ◯ | ◯ | ◯ |
| Coherence (e.g. User Journey) | ◯ | ◯ | ◯ | ◯ | ◯ |
| Consistency (e.g. Design System) | ◯ | ◯ | ◯ | ◯ | ◯ |
| Implementability (e.g. CI/CD Pipelines) | ◯ | ◯ | ◯ | ◯ | ◯ |
| Impression (e.g. Customer Experience) | ◯ | ◯ | ◯ | ◯ | ◯ |
| Schedule / Time table | ◯ | ◯ | ◯ | ◯ | ◯ |
| Responsiveness (mobile, tablet, desktop) | ◯ | ◯ | ◯ | ◯ | ◯ |

How would you decide the following matters to be ranked within your scope of design resposibilities? *

5 = Critical
4 = Very important
3 = Somewhat important
2 = Must be considered if necessary
1 = Not important at all

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Accessibility | ◯ | ◯ | ◯ | ◯ | ◯ |
| Aesthetics / Appeal | ◯ | ◯ | ◯ | ◯ | ◯ |

| | | | | | |
|---|---|---|---|---|---|
| Budget / Costs | ◯ | ◯ | ◯ | ◯ | ◯ |
| Coherence (e.g. User Journey) | ◯ | ◯ | ◯ | ◯ | ◯ |
| Consistency (e.g. Design System) | ◯ | ◯ | ◯ | ◯ | ◯ |
| Implementability (e.g. CI/CD Pipelines) | ◯ | ◯ | ◯ | ◯ | ◯ |
| Impression (e.g. Customer Experience) | ◯ | ◯ | ◯ | ◯ | ◯ |
| Schedule / Time table | ◯ | ◯ | ◯ | ◯ | ◯ |
| Responsiveness (mobile, tablet, desktop) | ◯ | ◯ | ◯ | ◯ | ◯ |

Do you currently have any requisites or necessities to utilize for example some of the following? *

- [ ] Artificial Intelligence - for example Adobe Sensei, Dall•E, or ChatGPT etc.
- [ ] Content Management System - for example WordPress, Shopify, or Joomla etc.
- [ ] Customer Insight Platform - for example Google Trends, Adobe EC, or Segment etc.
- [ ] Marketing Automation Platform - for example HubSpot, Marketo, or Eloqua etc.
- [ ] Project Tracking Tool - for example Atlassian Jira, Google Workspace, or Azure DevOps etc.
- [ ] Social Media Platform - for example Facebook, Instagram, or Twitter etc.
- [ ] Visual Collaboration Tool - for example Miro, Mural, or Trello etc.
- [ ] None of the above

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Would you be interested in utilizing some of the following? *

- [ ] Artificial Intelligence - for example Adobe Sensei, Dall•E, or ChatGPT etc.
- [ ] Content Management System - for example WordPress, Shopify, or Joomla etc.
- [ ] Customer Insight Platform - for example Google Trends, Adobe EC, or Segment etc.
- [ ] Marketing Automation Platform - for example HubSpot, Marketo, or Eloqua etc.
- [ ] Project Tracking Tool - for example Atlassian Jira, Google Workspace, or Azure DevOps etc.
- [ ] Social Media Platform - for example Facebook, Instagram, or Twitter etc.
- [ ] Visual Collaboration Tool - for example Miro, Mural, or Trello etc.
- [ ] None of the above

Does your current scope of design responsibilities require either skills or knowledge of some of the following? * 6 (7)

- [ ] Front-End Development Framework - for example React, Vue, or Angular etc.
- [ ] Mobile App Development Framework - for example React Native, Flutter, or Xamarin etc.
- [ ] Low / No Code Development Framework - for example Webflow, Bravo, or Thunkable etc.
- [ ] User Interface Design Tool - for example Adobe XD, Axure, or Figma etc.
- [ ] Cloud Computing Platform - for example AWS, Google Cloud, or MS Azure etc.
- [ ] .html, .css, .js, .php, or .py in general.
- [ ] Something else - describe: _____

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Would you be interested in learning about some of the following? *

- [ ] Front-End Development Framework - for example React, Vue, or Angular etc.
- [ ] Mobile App Development Framework - for example React Native, Flutter, or Xamarin etc.
- [ ] Low / No Code Development Framework - for example Webflow, Bravo, or Thunkable etc.
- [ ] User Interface Design Tool - for example Adobe XD, Axure, or Figma etc.
- [ ] Cloud Computing Platform - for example AWS, Google Cloud, or MS Azure etc.
- [ ] .html, .css, .js, .php, or .py in general.
- [ ] Something else - describe: _____

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Which of the following do you prefer when learning new skills, methods, and concepts? Check three (3) options at the most. *

- [ ] Education provided and arranged by the employer, client or system provider
- [ ] Study possibilities provided by a trade union, guild, or network etc.
- [ ] Studies available through Open Universities / Polytechnics and adult education instances
- [ ] Online Course Marketplaces like Udemy, Coursera, and LinkedIn Learning
- [ ] Free tutorials available for example on YouTube and other social media channels
- [ ] Subject specific workshops with colleagues, peers or stakeholder
- [ ] Something else - describe: _____

Here's your chance to provide for example some additional info related to certain question(s) or mere feedback over the survey and/or research in general. 7 (7)

## Appendix 4. Interview Question Set



## Converting Designer's Identity - Observations for Revising Competence

**Question set to be forwarded to a correspondent prior to the scheduled interview session.**

**1. How you ended up to be a designer?**

- Was it or has it been a premeditated decision?
- Any external motives? (turn of event / consequence of something)
- Always felt in being a designer or gradually grown to be one?

**2. How would you characterize yourself as a designer?**

- Adjectives / focus of interest / pros & cons?

**3. How being a designer has affected into your life in general?**

- Are there certain sacrifices or relinquishments made accordingly etc.?
- Any severe difficulties or adversities experienced because of vocational decision?
- Has it affected on relationships with family members, close relatives, friends etc.?

**4. Have you ever considered in changing profession / expertise?**

- For what reasons if such?

**5. Can you identify any type of passed milestone(s) or landmark(s) on your career?**

- Something because of which you have begun to work, think, or perform divergently?
- An occasion, opportunity, or incident after which your motives were empowered?
- Certain closure, completion, or outcome because of which your interests have changed?

**6. You rated ”#” over sensibleness of your daily labor. Can you elaborate your response further?**

- Any idea how the experienced level could be better or somehow otherwise more satisfying etc.?
- What are three of the most impactful matters that elevate your experience of sensibleness?

**7. You rated ”#” over significance of your daily labor. Can you elaborate your response further?**

- Any idea how the experienced level could be better or somehow otherwise more satisfying etc.?
- What are three of the most impactful matters that elevate your experience of significance?

**8. How would you describe / characterize yourself as a learner?**

- Which areas are the most fruitful when examining the potential to develop further?

**9. How do you see the expertise of a designer to be changed from now on?**

- Have you thought about the matter on a practical / speculative / imaginative level?
- Does the question cause sense like excitement, uncertainty, suspicion, or concern even?
- What a designer could do to prevail pro-wise?

**10. What is the most significant aspect of design according to your standpoint?**

- One specific single matter or a number of pinnacle matters?

## Appendix 5. ChatGTP Prompts



**Prompt 1 - Data familiarization**

You are a researcher who is determined to make a thematic analysis of the following interview transcript. Sanitize the following transcript by removing all redundant words so that the answers given by the correspondent would be more clear and sensible:

**Prompt 2 - Initial coding**

You are a researcher. I will now upload an interview transcript, and you will do what is called qualitative coding – specifically, initial coding also known as open coding. The text is an interview transcript. I do not want you to code the questions asked by the interviewer. I want the codes to be detailed and descriptive. I want you to apply codes to sentences or parts of sentences, and later when you develop a list of codes, I want you to be able to tell me what sentences or parts of sentences these codes were applied to. In other words, when I ask you to provide me example quotes for the codes that you create, I would like you to be able to do it. Here is the text to be coded. I want you to use exactly the same approach and the same format as you did above.

**Prompt 2 - Supplemented**

Please develop more detailed codes. I would also like the codes to be bit more descriptive, and please separately list quotes, that show all sentences or parts of sentences coded with each code.

**Prompt 3 – Grouping of Codes**

I will now paste “codes” (which are analytic units used in thematic analysis) here. I would like you to assign each of these codes to one of the following groups: “technical detachment” (if the code name suggests that it is something referring to a rejection or avoidance of technology insinuated by a person), “professional identity” (if the code name suggests, that it is something in any way related to a person’s identity), “sensibleness and significance of daily labour” (if the code name suggests, that it is something in any way either positive or negative influencing to a person’s experience of the meaningfulness and relevance of their work), “career signposts” (if the code name suggests, that it is something referring to a relevant, important or otherwise essential turning point that has happened during a person’s career), “identity converting” (if the code name suggests, that it is something referring to how a designer should do to develop oneself), “purpose of design” (if the code name suggests, that it is something referring to some important and relevant aspect of design), and “other” (for the codes that do not match any of the initial six groups). Here are all codes. It is very important that you assign each and every one of these codes to the above-mentioned groups. Please write the title of the group as a headline under which the assigned codes are to be listed:

**Prompt 4 – Creation of Glossary**

Please create a glossary of the following terms and their abbreviations. Write a brief definition for each term by using some exisiting online reference and make an APA approved reference list out of the references.