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BACHELOR

THESIS

THE CONCEPTUALIZATION FRAMEWORK

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Bachelor Thesis
The Conceptualization Framework

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Link to Interaction Prototype:

<https://xd.adobe.com/view/b0b48c16-8056-4918-8866-3c9576b4a006-e5e7/?hints=off>

Link to Prototype V1.1:

<https://xd.adobe.com/view/0d5dad22-f2f2-4f06-ad0c-91089a83a4f5-580e/?hints=off>

Link to Prototype V1.2 (newest version):

<https://xd.adobe.com/view/ebbcf43c-4e00-432f-af97-2fa262cd1c8f-beef/?hints=off>

Illustrations created and interpreted by Daniell I. F. Skourup

ABSTRACT

It can often be overwhelming to maintain an overview of tools and theories used in Concept Development, due to the vastness and complexity of this topic. This bachelor thesis seeks to explore and conceptualize on how tools and theories used in Concept Development can be made accessible and operational in a digital product, with the aim of enabling users to gain overview, understand and use these tools and theories.

The project is based on a partnership with the creator of Laws of UX and Humane By Design, Jon Yablonski, with the intention of the project's solution to be an addition to Yablonski's existing series of design frameworks on a theoretical level. The solution will however also be an independent product on its own.

Design Thinking is a central theory in the project, used to structure the exploration and analysis of needs and opportunities based on two target groups - Concept Developers and Start-up Businesses. This subsequently leads to a conceptualization on how tools and theories used in Concept Development can be categorized in six conceptualization aspects.

Based on this interpretation of conceptualization, a concept is created and analyzed through multiple design methods. The concept is then made into a product Prototype, which is later tested and improved upon, laying a foundation for the creation of a finalized product.

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INTRODUCTION

PROBLEM

Concept Development is a vast and complex topic, consisting of various aspects in the process from identifying a problem to implementing a solution. Many tools and theories can be associated with conceptualization, and it can therefore be a challenge in itself to maintain an overview of what Concept Development encapsulates.

In this thesis I will explore the topic of Concept Development, seeking to identify and describe how tools and theories associated with Concept Development can be represented through a set of conceptualization aspects. The goal of the bachelor project is to create a digital product that can make these tools and theories accessible and operational.

PROBLEM STATEMENT

How can tools and theories used in Concept Development be made accessible and operational in a digital product?

SCOPE

This thesis focuses on the creation of a digital product (Prototype) as a collection of relevant tools and theories used in Concept Development. The project will be based on Design Thinking's five phases; Discovery, Interpretation, Ideation, Experimentation, and Evolution. Data collection will be conducted based on research and analysis on relevant target groups. Subsequently, an exploration on aspects of conceptualization will be performed. This data, supported by additional research, will be used in the development of a conceptual solution to the thesis' Problem Statement. From the conceptual solution, multiple prototyping processes will be performed, resulting in a functional Prototype. This Prototype will then be tested and concluded upon.

The project will be based on a partnership with freelancer, Jon Yablonski, on a theoretical level. The product solution of the project will thus be made with the intention of being an addition to Yablonski's series of design frameworks - Laws of UX and Humane By Design - but will at the same time be an independent product. The product solution described in this thesis will however be a Prototype, and not a fully developed product.

The concept will be focused on the following target groups:

- ▶ Primary: Concept Developers
- ▶ Secondary: Start-up Businesses
- ▶ Tertiary: Others (designers, content creators etc.)

The main focus will be on the primary and secondary target group, as the concept hence will be applicable to the tertiary target group.

This project will not include an analysis of which tools and theories should be included in the digital product, as this project's focus is on conceptualizing a solution on how to make tools and theories accessible and operational, and not on determining what to be included. The tools and theories included in the Prototype will thus be used to reflect some of the tools and theories used in Concept Development, but not all.

PARTNER DESCRIPTION

Jon Yablonski is a senior UX designer, product designer, author and freelancer. As stated on his portfolio website, his passion is to design digital tools that empower people and augment their abilities in order to achieve their goals (Yablonski, n.d.).

During his career he has worked with a variety of products such as e-commerce platforms, mobile apps and others. Besides this is Yablonski the author of the book, *Laws of UX*, which he has also made into a website - aimed at collecting the best practices that designers can consider when building user interfaces (Yablonski, 2022). Additionally, he is the creator of *Humane By Design* - a resource with the goal of providing guidance for designing ethical digital products through patterns focused on user well-being (Yablonski, n.d.).



THEORY & METHODOLOGY

● Research Pentagon

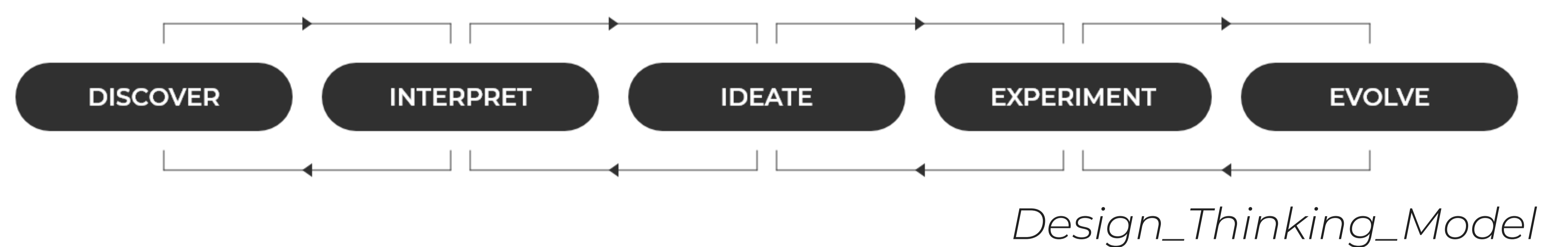
The Research Pentagon can be described as being central to understanding research writing and for guiding the writing process (Rienecker & Jørgensen, 2018, p. 32). The model consists of five cornerstones of research; Question, Purpose, Data, Tools, and Design. These five aspects represent:

1. The problem statement being examined (Question).
2. The motivation for why the topic is being explored (Purpose).
3. The data and material being employed (Data).
4. The theories and methodologies being used (Tools).
5. The ideal work process (Design).

This model has been used to direct the research of the project.

● Design Thinking

Design Thinking has been used as a central basis of the project. This non-linear, iterative process was first presented by Tim Brown and aims at addressing user understanding, challenging assumptions, redefining problems and creating innovative solutions (IxDF, n.d.). The process includes the five phases; Discovery, Interpretation, Ideation, Experimentation, and Evolution (IDEO, 2012). Design Thinking focuses on a solution based and human-centered approach, and refers to a framework and a mindset, rather than a step-by-step process (Baxter, Courage & Caine, 2015, p. 11). The Design Thinking framework has been used as a structural guide in the process of solving the Problem Statement explored in this thesis.



● Kanban Board

A Kanban Board is an agile project management tool, used to structure projects and tasks (Rehkopf, n.d.). I used the Kanban Board as an external method, built on Trello, to maintain a dynamic and customizable overview of my project tasks and their status. This board consisted of several columns, all relating to a specific category, with tasks associated to the category located in a cluster underneath. Color codes were used to identify the state of each task. This resulted in a structured overview while managing the project (see appendix A).

● **Survey**

A Survey can be used to identify current needs and opportunities that could be fulfilled by a product or service (IIBA, 2015, p. 350-353). The survey was based on the principles of the Structured Interview type, and has been conducted on Concept Development students (the primary target group) in an attempt to pinpoint their frustrations, needs and opportunities regarding tools and theories used in conceptualization.

● **Interviews**

The Semi-Structured Interview uses a blend of qualitative and quantitative data collection by basing the interview on a predefined set of questions, with the opportunity to follow up with additional questions (Baxter, Courage & Caine, 2015, p. 222-223). Semi-Structured Interviews have been conducted via Google Meet to collect data from respondents with first hand experience in creating a start-up business (the secondary target group), with the aim of gaining understanding and identifying pain points which might occur during this process.

● **Affinity Diagrams**

Affinity Diagramming was used in an analysis of the conducted Survey and Interviews. This method was employed to group respondents' answers, based on their characteristics, in an attempt to identify themes and trends in the data during the user research analysis (Baxter, Courage & Caine, 2015, p. 363-368).

● **Desk Research**

User Experience strategist, David Travis, describes Desk Research as another name for Secondary Research (Travis, 2016). This research type has been conducted continuously throughout multiple phases of this project. Desk Research was used to explore the Problem Statement and gather supplementary knowledge to inspire the Ideation process of the project's solution. Along with this, has the research method been used in knowledge gathering from books and online articles relevant to the project.

● **Value Proposition Canvas**

The Value Proposition Canvas was developed by business theorist, Alexander Osterwalder, as a framework to describe the fit between product and market. The framework illustrates the Customer Segment and the Value Map, and how they relate to each other (Osterwalder et al., 2014, p. 8-39). The Value Proposition Canvas was used to describe how the project solution is intended to provide gains and relieve pains for the user.

● **Mind Map**

Mind Mapping is a great technique of generating creative ideas and solutions in the process of creative problem solving. Tony Buzan, the inventor of the Mind Map, argues that a Mind Map is a natural thinking tool that draws upon the inspiration and effectiveness of the natural world (Buzan, 2006). Mind Mapping has been used two times during the project; to conceptualize on categorization of aspects of conceptualization, and to structure requirements and ideate on the conceptual solution to the thesis' Problem Statement.

● **SWOT Analysis & Matrix**

A SWOT Analysis is a method used to systematically analyze the strategic position of a company's business in relation to the market, with the aim of directing product development. The analysis can be used to guide what innovations might fit a company's core competencies and thus increase the chance of success (Van Boeijen et al., 2017, p. 72-73). This method has been used to analyze the concept solution in relation to its market position.

● **ARCS Model**

John Keller's ARCS Model is a problem solving approach to designing motivational aspects of learning environments. The model concerns itself with four components of motivation, which subsequently leads to a systematic design process aimed at the enhancement of the learning experience for the target group (Keller, 2016). The model has been used as an approach on how the product solution can be applied to the target groups, in an attempt to ensure an engaging and meaningful user experience.

● **Customer Journey Map**

Customer Journey Maps are used to outline how users experience the interaction process with a product or service across multiple stages. This can be done either as a current-state or future-state map, based on a research-first or an assumption-first approach (Kaplan, 2020). In this project, the future-state Customer Journey Map has been used with an assumption-first approach to illustrate the ideal user interaction with the concept solution, as guidance to the construction of the product Prototype. This was done as this project creates a new product, and thus an entirely new journey.

● **Service Blueprint**

A Service Blueprint is a diagram used to visualize the relationship between different components in a service, directly tied to specific touchpoints in a user journey. The diagram can thus be an asset in understanding the underlying resources and processes associated with each service touchpoint (Gibbons, 2017). The Service Blueprint has been used during this project to address frontstage actions, backstage actions, and support processes on multiple layers of the user's intended journey.

● **Laws of UX**

The Laws of UX is a collection of heuristic methods, principles, laws, and cognitive biases relevant to User Experience (UX) Design (Yablonski, 2022). This methodology was used during the ideation and prototyping of the product solution, with the goal of creating an intuitive and human-centered product. A particular emphasis has been put on the use of:

- ▶ The Aesthetic-Usability Effect (Heuristic method)
- ▶ Jakob's Law (Heuristic method)
- ▶ The Law of Common Region (Gestalt Law)
- ▶ The Law of Proximity (Gestalt Law)
- ▶ The Law of Uniform Connectedness (Gestalt Law)

● **Wireframe**

Wireframes are structural outlines of possible design solutions, aimed at reflecting user and business needs, establishing a flow, and structuring content (IxDF, n.d.). Wireframes are used in this project to structure the product in the early stages of the prototyping process.

● **Mockup**

A Mockup is a low-fidelity manifestation of a prototype, used in aiding the solution design by providing feedback on functionality, usability and understanding of the basic design idea through testing (IxDF, n.d.). The Mockup has been used in combination with an implemented design interface, in an attempt to test the graphic aspect of the project's solution.

● **Color Theory**

Color Theory is a way of communicating based on optical abilities, psychology, culture etc. (IxDF, n.d.). This project uses Color Theory associated with the Color Wheel, invented by Sir Isaac Newton. The Color Theory will be based on Monochromatic, Complementary and Hexadic color schemes, used throughout the project. The symbolic interpretation of colors has not been taken into consideration.

● **Prototype**

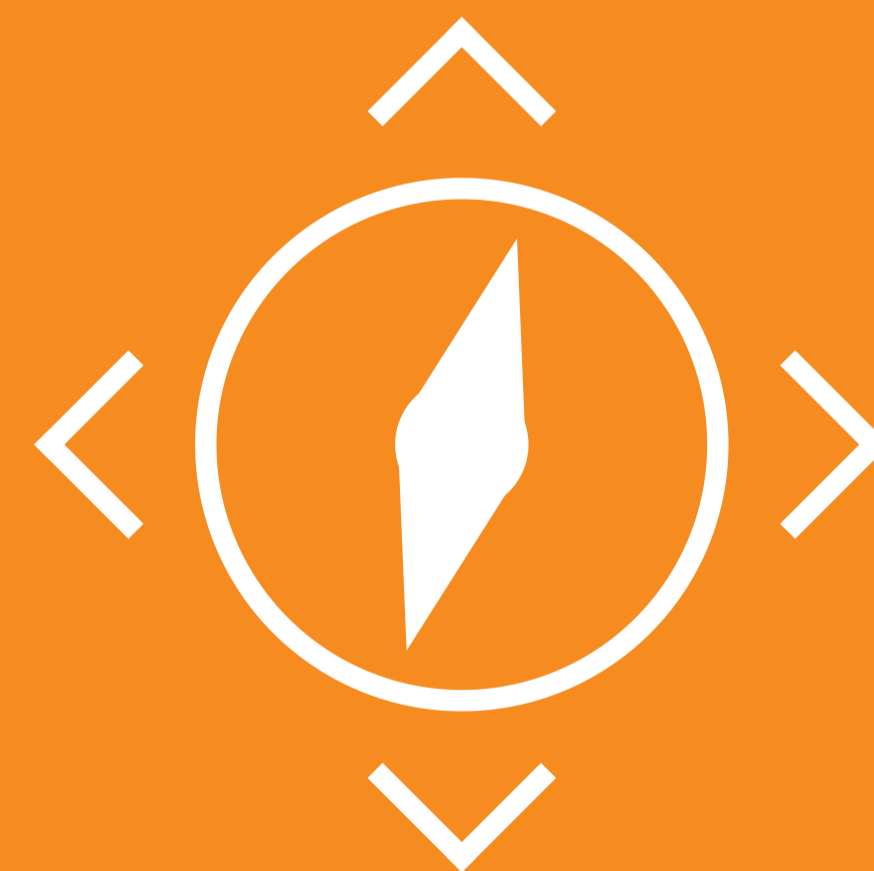
Prototypes are manifestations of design concepts, aimed at communicating and testing design ideas. It can furthermore be used to gain feedback and function as a foundation from which to iterate towards improvements (IxDF, n.d.). The Prototype thus too encapsulates the Interaction Design (IxD) and Information Architecture (IA) of the designed product. Subsequently to the creation of Wireframes and Mockups, an Interaction Prototype and three High-Fidelity Prototype iterations were created (V1.0, V1.1 and V1.2). The Prototype is used as an experience design oriented product solution to the thesis' Problem Statement.

● **Usability Test**

Usability Testing is used to examine if a user is able to locate the information they are seeking and solve the problems the product was made to solve. The test can however also be used to gain insight into the thoughts and experience of the user during their interaction with the product. Usability Tests are often conducted based on the 'think aloud' method (Gregersen & Wisler-Poulsen, 2017, p. 96-114). Usability Testing has been used during this project to examine the Prototype and how well it solves the goal of making conceptualization tools and theories accessible and operational to users.

● **Accessibility Test**

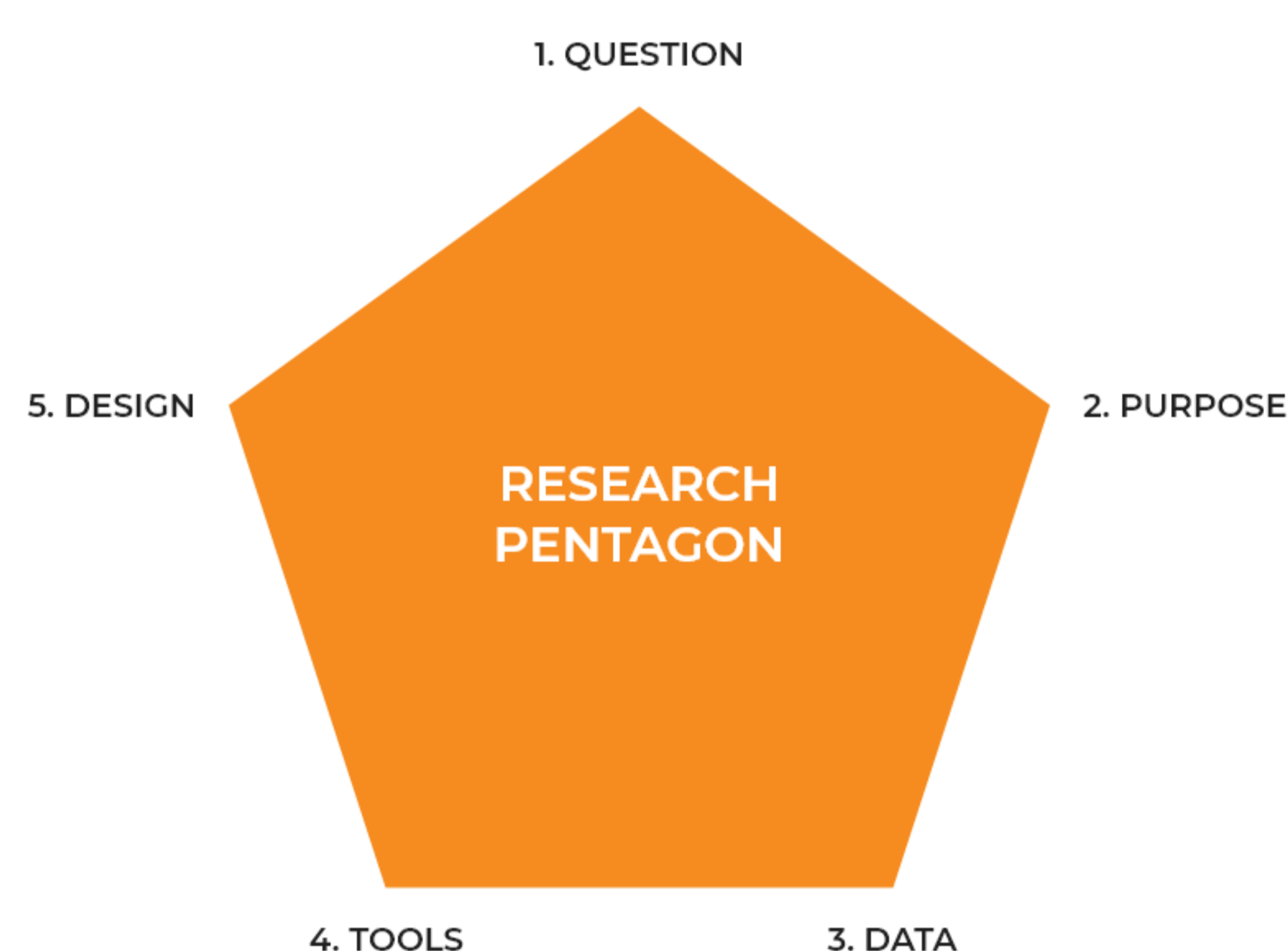
Accessibility means easily understandable, manageable and user friendly. Hence it is not solely focused on users with disabilities, but rather focused on making a product usable for all types of users (Gregersen & Wisler-Poulsen, 2017, p. 116-120). Accessibility Testing has been used to examine the complexity, experience, interface and structure of the Prototype.



DISCOVERY

RESEARCH PENTAGON

The Research Pentagon has been used as a foundation for this thesis. The model has been used to define the purpose of the thesis and project, along with establishing a foundation for how data will be collected and how theory and methodology will be used. Lastly has the model been used to describe the ideal progression of this project, and hence functioned as a process guide.



Research_Pentagon_Model

1. Question

“How can tools and theories used in Concept Development be made accessible and operational in a digital product?”

2. Purpose

Maintaining an overview of tools and theories of Concept Development can be a challenge. The Problem Statement seeks to make these tools and theories more accessible and operational in a digital product, aimed at being supportive and usable to user’s conceptualization processes.

3. Data

The Problem Statement was formulated inspired by personal experiences during previous conceptualization processes. The project will therefore contain some insider knowledge of tools and theories used in Concept Development. Data will be collected on a qualitative and quantitative basis, based on the target groups. Additionally, Desk Research will supplement the collected data.

4. Tools

Theory

- ▶ Design Thinking
- ▶ Laws of UX

Methods

- ▶ Survey
- ▶ Interviews
- ▶ Affinity Diagrams
- ▶ Desk Research
- ▶ Value Proposition Canvas
- ▶ Mind Maps
- ▶ SWOT Analysis & Matrix
- ▶ ARCS Model
- ▶ Customer Journey Map
- ▶ Service Blueprint
- ▶ Wireframe
- ▶ Mockup
- ▶ Color Theory
- ▶ Prototype
- ▶ Usability Test
- ▶ Accessibility Test

5. Design

The project is structured based on the five phases of Design Thinking; Discovery, Interpretation, Ideation, Experimentation, and Evolution. The **Discovery** phase is initiated by personally experienced challenges in conceptualization processes. Subsequently, qualitative and quantitative empirical data on the topic will be collected through Interviews and a Survey. Additionally, Desk Research will be conducted as supplementary data. The collected data will then be analyzed during the **Interpretation** phase. The **Ideation** phase will be used in creating the conceptual solution, which will then be developed and visualized into a Prototype during the **Experimentation** phase. In closing, the Prototype will be examined and improved upon through the **Evolution** phase.

INITIATION

Through the Digital Concept Development programme at Zealand Academy of Business and Technology, I have been introduced to a variety of tools and theories associated with Concept Development. But with this multitude of tools and theories related to Concept Development, how does one keep an overview of them all? This is the question that initiated my curiosity and led me on the path of this thesis.

I thus initiated a mail correspondence with Jon Yablonski, the creator of the two online design frameworks, Laws of UX and Humane By Design. In my mail I described the Problem Statement of the thesis, whereas he responded with interest. However, due to limited time he would not be able to participate in an in-depth collaboration. Nonetheless it was agreed that it would be interesting to conceptualize on creating an online collection of tools and theories used in Concept Development, to make it more accessible and operational to others.

It was furthermore agreed that the product solution of this project would be intended as an addition to Yablonski's already existing design frameworks, on a theoretical level, and at the same time be an independent product.

SURVEY

To get a more thorough understanding of the use of Concept Development in everyday life, a Survey was conducted on the primary target group (Concept Developers), to uncover if others with a similar background as I, had experienced similar challenges in maintaining overview of conceptualization tools and theories. In addition, this was done to expand the empirical standpoint and enable for a more diverse understanding of the topic of Concept Development (IIBA, 2015, p. 350-353).

The Survey was built based on a Structured Interview type. The Survey was hence constructed of nine predefined questions. The purpose of conducting the Survey was to collect both qualitative and quantitative data to be used in an Affinity Diagram analysis (see page 17).

Since this Survey was aimed at the target group of Concept Developers, it was shared among a selection of students in their final semester of education, and the entirety of the first semester students at Zealand Academy of Business and Technology. A short descriptive introduction was included in the Survey, explaining the purpose of the bachelor thesis and that responses would be used for analysis. For more insight into the Survey responses, see appendix B, C, D and E.

INTERVIEWS

Interviews were conducted on the secondary target group (Start-up Businesses), aimed at gaining greater insight into the process and potential pain points of creating a concept from zero, without having a background in Concept Development or similar studies. The Interviews were based on a Semi-Structured type with a predefined set of questions, with the option of allowing the interview to divert depending on the conversation (Baxter, Courage & Caine, 2015, p. 222-223).

The purpose of conducting these Semi-Structured Interviews was to collect qualitative data from the secondary target group, to be used in an Affinity Diagram analysis (see page 17).

Two respondents from the secondary target group were selected based on their experience with creating their own Start-up Business. The respondents were informed of the purpose of the bachelor thesis and that the interviews would be used in an attempt to create a digital product, aimed at collecting tools and theories used in Concept Development, aimed at making them more accessible and operational. The table below is an overview of the general information on the two respondents. For more insight into the Interviews, see appendix F and G.

	Title & Company	Company Description	Professional Role
<i>Respondent #1</i>	CEO and Co-Founder of My True Value	My True Value is a company focused on improving self-worth and confidence with women all over the planet.	Product developer and content creator. Background as Web Content Coordinator, Project Manager, CPO, CCO, Marketing Consultant, and Product Manager.
<i>Respondent #2</i>	Founder of The Heart Journey	The Heart Journey is a start-up company providing online yoga and meditation classes.	Content creator on website and social media. Yoga and meditation instructor. Background as English Teacher, and Support & Learning Operations Coordinator.

Interview_Respondent_Information

AFFINITY DIAGRAMS

In an analysis of the conducted Survey and Interviews, two Affinity Diagrams were constructed - one for each of the two target groups questioned. This was chosen because of its advantage in organizing large amounts of data, but also to enable examination of individual pieces of data (Baxter, Courage & Caine, 2015, p. 363-368). Each response was written on a digital note, and thereafter organized into categories based on the theme of their content. A unique color for each respondent was chosen, to gain better insight and overview in the distribution of responses.

Primary Target Group

The Affinity Diagram based on the Concept Developers, was established on responses from six Digital Concept Development students. Three who are ending their final semester of education, and three who are in their first semester. The main takeaways of the diagram will be stated below, focused on the common denominators of the respondents.



Affinity_Diagram_Target_Group_1
(For larger sized image, see appendix H)

Deduced from this Affinity Diagram was that half of the respondents claimed to have a decent overview of tools and theories used in Concept Development, whereas the other half responded that maintaining an overview could be challenging.

Likewise did the respondents express challenges in picking the 'right' methods in their conceptualizing processes, based on what would have the most beneficial impact. Along with this was the challenge of making relevant and valuable solutions.

All respondents agreed that having a team of varied personality types, considering different aspects of the conceptualization process, would be beneficial to the end result. Furthermore, did some respondents state that this is crucial to the success of the solution.

Furthermore, did all respondents express that a collection of tools and theories used in Concept Development could be useful to them, both in terms of gathering information in an easy and manageable way, but also in terms of gaining additional knowledge about tools and theories. Moreover did all but one respondent state that basing a framework on the setup of the Laws of UX could make the product additionally useful.

Based on this, I concluded that a collection of tools and theories relevant to Concept Development should first and foremost include a wide array of tools and theories relevant to different aspects of the conceptualization process. Additionally, but equally as important, should the tools and theories be displayed in an easily understandable way.

Secondary Target Group

A Second Affinity Diagram based on the Interviews conducted on the Start-up Business owners was later made. This analysis was focused on gaining insight into the process of making a concept into a business. The main takeaways from the diagram will be disclosed below.



Affinity_Diagram_Target_Group_2
(For larger sized image, see appendix I)

One of the two respondents had taken advantage of a 'mastermind' course during her conceptualization process. This course was however limited to the very basics of creating a concept, and primarily focused on communication, text composition and sales methods. The other respondent did not use any guide in the development of her concept, but relied on personal experience.

Both respondents stated that they in the beginning of their process did have a clear understanding of the problem they were trying to solve, but did not know what the solution would look like. It was thus expressed that the specific details on what the concept would look like did not matter, as long as it was a viable business.

Additionally, did both respondents remark that one of the primary tools they used in developing their concept was their knowledge of their topic of interest. Their personal experiences thus laid the foundation of the concept, which was later improved upon through user data. It was moreover expressed that their conceptualization processes were heavily based on building, testing and learning, and from that refining the concept. This required an emphasis on balance between collecting data and planning, and actually doing.

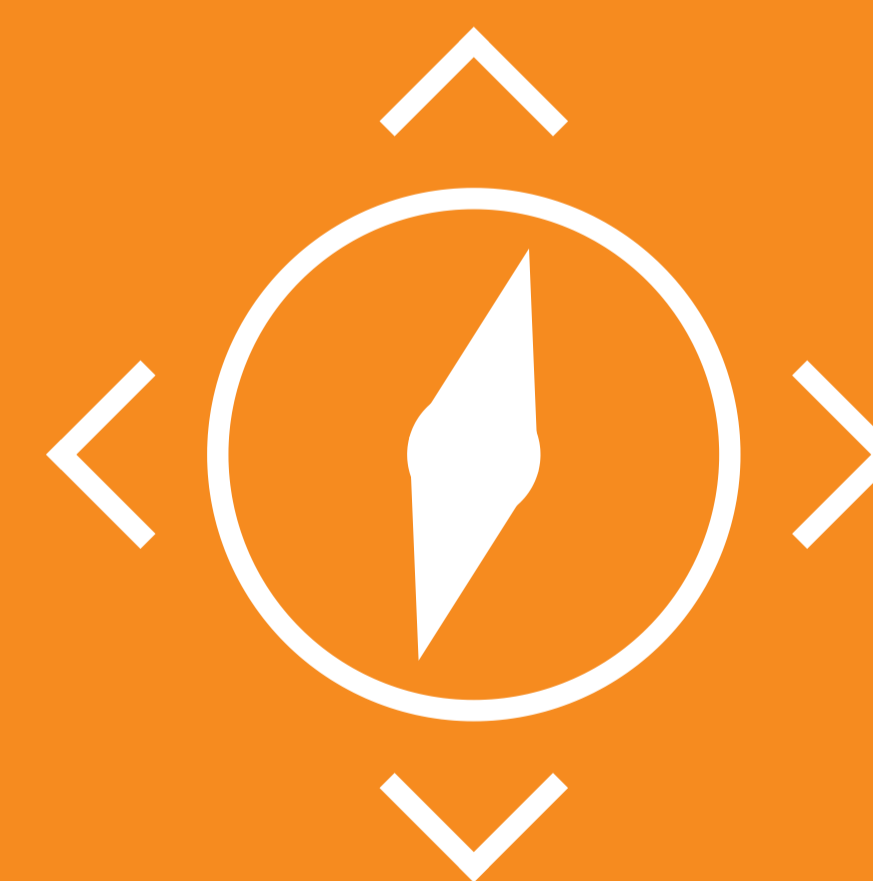
From this, I deduced that a collection of tools and theories relevant to conceptualization could have been useful to both respondents; not necessarily as a step-by-step guidance, but as a source of inspiration. It was however also clear that the respondents found the business viability as the most important aspect of the concept. The collection of tools and theories would therefore have to provide information on business related topics, in addition to information on topics such as design and innovation, aimed at giving an edge over competitors.

SUB-CONCLUSION

From the analysis of the Survey and Interviews, it can be concluded that there are indeed needs and opportunities that could be fulfilled by a concept that collects tools and theories used in Concept Development. Based on the analysis it can be deduced that a collection of tools and theories can have relevance for both target groups examined. It is however surmised that a concept like this would likely be of more benefit to Concept Developers than to Start-up Businesses, based on the differences of these two groups. As an example, it is the job of a Concept Developer to be able to use these tools and theories, whereas being able to use these is more of an advantage, and not a necessity, to the creator of a start-up business.

Additionally, it can be concluded that for a concept like this to be useful to the target groups, it must provide a wide array of tools and theories relevant to different aspects of the conceptualization process. Furthermore, the utility of every tool and theory should be addressed to enable the user to understand how it can be relevant to them. Lastly, it must be easy to understand; it should be a beneficial tool to the user, and under no circumstance be an obstacle for them.

However, before being able to conceptualize concrete design solutions, it was first needed to examine the aspects of conceptualization, and what tools and theories relate to each of them.



INTERPRETATION

CATEGORIZING THE ASPECTS OF CONCEPTUALIZATION

As a result of the identification of the needs of the target groups, a question became apparent. This question was, 'how can tools and theories used in Concept Development be associated with different aspects of conceptualization?'. A brainstorm was therefore used to initiate a thought process on how these tools and theories could be categorized in different aspects of conceptualization, which later evolved into a Mind Map to better visualize the connectedness of each topic (IIBA, 2015, p. 299-302).

A brainstorm was therefore used to initiate a thought process on how these tools and theories could be categorized in different aspects of conceptualization, which later evolved into a Mind Map to better visualize the connectedness of each topic (IIBA, 2015, p. 299-302).



Mind_Map_Of_Conceptualization_Aspects
(For larger sized image, see appendix J)

The Mind Map focused on the main question 'What are the aspects of conceptualization?'. Thereafter began the thought process of considering the main aspects related to conceptualization.

These aspects were formulated as:

- ▶ Understanding the problem
- ▶ Designing the solution
- ▶ Thinking creatively
- ▶ Managing the process
- ▶ Planning the strategy
- ▶ Values and Laws

From this it became apparent that the three aspects, located on the top of the Mind Map, were primarily focused on topics directly related to the creation of solutions, whereas the three bottom aspects focused more on cognitive processes and business.

Now that I had an understanding of how to categorize the tools and theories used in Concept Development, it was time to define each of the six conceptualization aspects, in an attempt to make them more understandable and operational for when it should be implemented into a product solution.

THE SIX ASPECTS OF CONCEPTUALIZATION

Based on the categorization of the aspects of conceptualization, were each of the aspects interpreted and assigned a title based on a personality type. This was done to reflect different personalities in a team, in an attempt to make them more accessible and understandable, but also to put emphasis on the importance of considering more than one point of view when developing a concept.

The six aspects of conceptualization therefore became:

Understanding the problem	Researcher
Designing the solution	Designer
Thinking creatively	Innovator
Managing the process	Process Manager
Planning the strategy	Business Strategist
Values and laws	Project Regulator

In the following sections, each of the six aspects of conceptualization will be explained, focused on what their role encapsulates.

● **Researcher**

This aspect's main goal is to explore and identify user's problems and needs. This aspect is thus closely related to the first two phases of Design Thinking; Discovery and Interpretation. The Researcher is hence essential to the conceptualization process for understanding the problem that should be solved. Additionally can this aspect also be used to analyze the user journey and identify pain points that can be solved in an already existing product or service.

● **Designer**

This aspect is closely related to the two final phases of Design Thinking; Experimentation and Evolution. Hence can the Designer be seen as the creator of the solution. The Designer considers the functionality of the solution, and aims at creating the best possible experience for the user. Thus does the Designer have a human-centered approach to their work.

● **Innovator**

This aspect is focused on challenging the way things are, in an attempt to find new and better solutions. The Innovator is thus closely related to the third phase of Design Thinking; Ideation. The Innovator is important to the process of generating creative ideas, both in the initial creation of a solution, but also in the improvement of existing products.

● **Process Manager**

This aspect's main goal is to structure the conceptualization process. The Process Manager does however also consider other processes, like what actions are needed in order for the user interaction process to be as intended, or how certain tasks need to be completed before others can be initiated. In other words does the Process Manager organize the resources to ensure that every task is completed.

● **Business Strategist**

This aspect is centered on business viability. This means understanding the business structure and the product's position on the market; which includes having an overview of competition. The Business Strategist's understanding of their product's position on the market, thus make them an essential asset to the other conceptualization aspects.

● **Project Regulator**

This aspect's main function is to judge the value set of all that is being created during the conceptualization, both in terms of what is ethically right and what is lawfully right. This aspect thus ensures that the products and processes related to the conceptualization are compliant to rules and regulations, but also considers the business philosophy. The Project Regulator is therefore not directly related to the creation of the product, but has a huge influence on the product creators, which indirectly impacts the product.

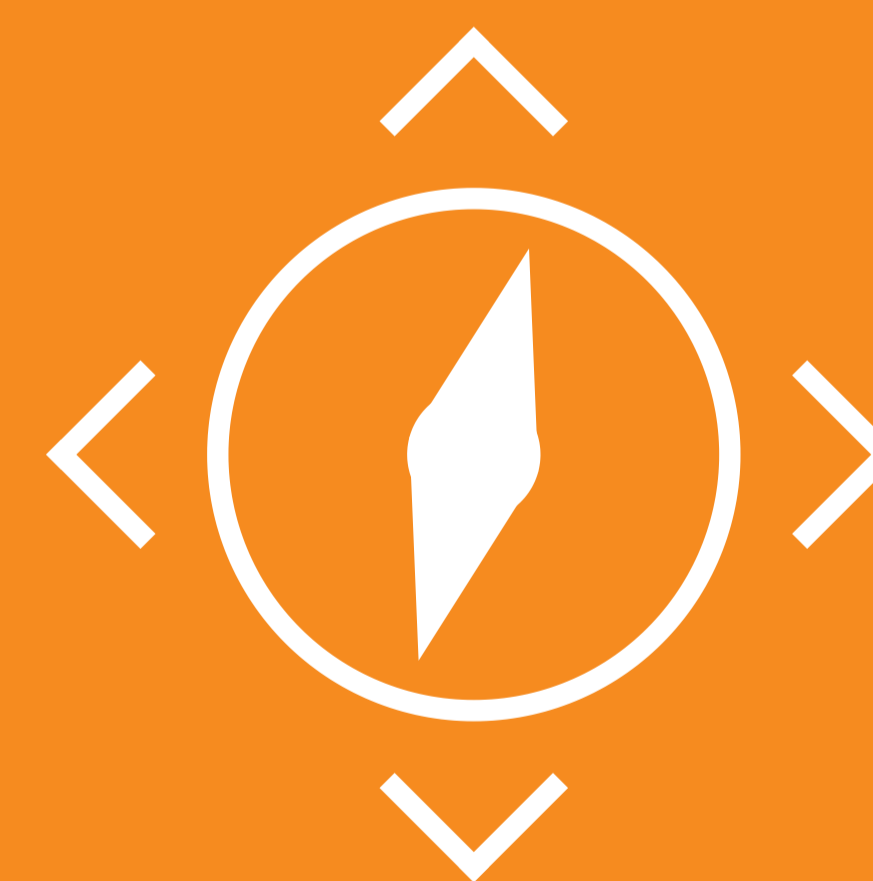
SUB-CONCLUSION

Based on the categorization of tools and theories used in Concept Development, can conceptualization be interpreted in six main aspects. By interpreting these six aspects as personality types, they can potentially be made more accessible and understandable to a wider audience based on the three target groups; Concept Developers, Start-up Businesses, and others. The personality types are thus based on the tools and theories they use.

Thus can it be concluded, based on this interpretation, that the six aspects of conceptualization are:

- ▶ Research
- ▶ Design
- ▶ Innovation
- ▶ Process Management
- ▶ Business Strategy
- ▶ Project Regulation

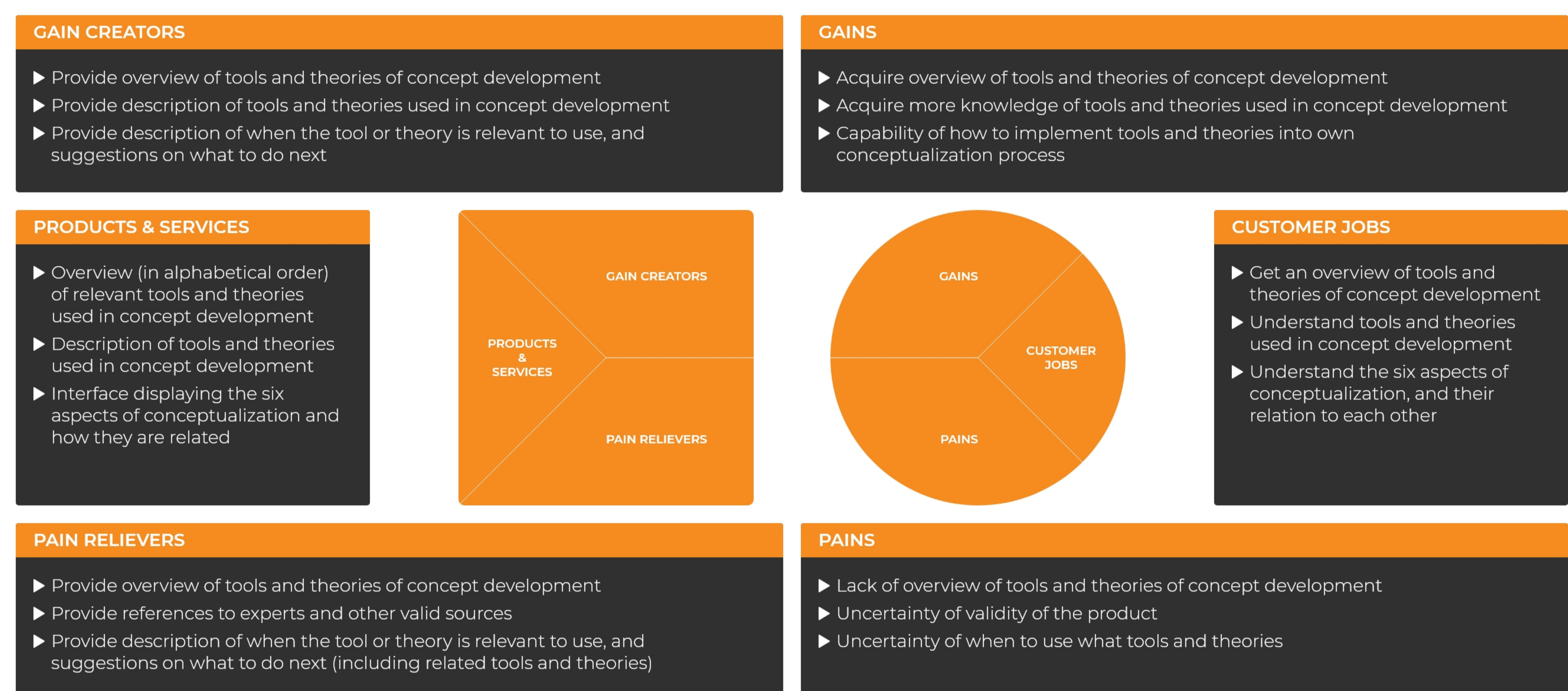
From this understanding of the six aspects of conceptualization, it is possible to begin the conceptualization on how tools and theories relevant to Concept Development can be collected in an operational digital product.



IDEATION

VALUE PROPOSITION CANVAS

To initiate the Ideation phase, a Value Proposition Canvas was created, based on the interpretation of data from the previous two phases. The canvas has firstly been applied with the goal of identifying Gains, Pains, and Customer Jobs in the **Customer Segment** (Osterwalder et al., 2014, p. 12-25). Secondly it has been used to ideate on how to provide Gain Creators, Pain Relievers, and Products & Services in the **Value Map** (Osterwalder et al., 2014, p. 28-39).



Value_Proposition_Canvas
(For larger sized image, see appendix K)

The Customer Segment was first used to identify the **Customer Jobs**, i.e. the problems the user is trying to solve. Derived from the Affinity Diagrams the three main Customer Jobs are, first of all to get an overview of tools and theories used in Concept Development, and secondly to understand these tools and theories. Lastly, the user needs to understand how the aspects of conceptualization relate to each other.

In the **Products & Services** these three Customer Jobs are solved by providing an overview of the tools and theories, to make them more accessible and manageable to the user. Overview is additionally created by adding a description to each tool and theory. Moreover, can the user get a better understanding of the conceptualization aspects by having them displayed in an interface that showcases how they are related.

Thereafter the **Pains** were pinpointed in order to describe potential risks that could affect the Customer Jobs. Specifically, an uncertainty of the validity of the product can be an issue that could lead to users not using the product. Likewise can an uncertainty of when to use what tools and theories lead to a Customer Job being done poorly.

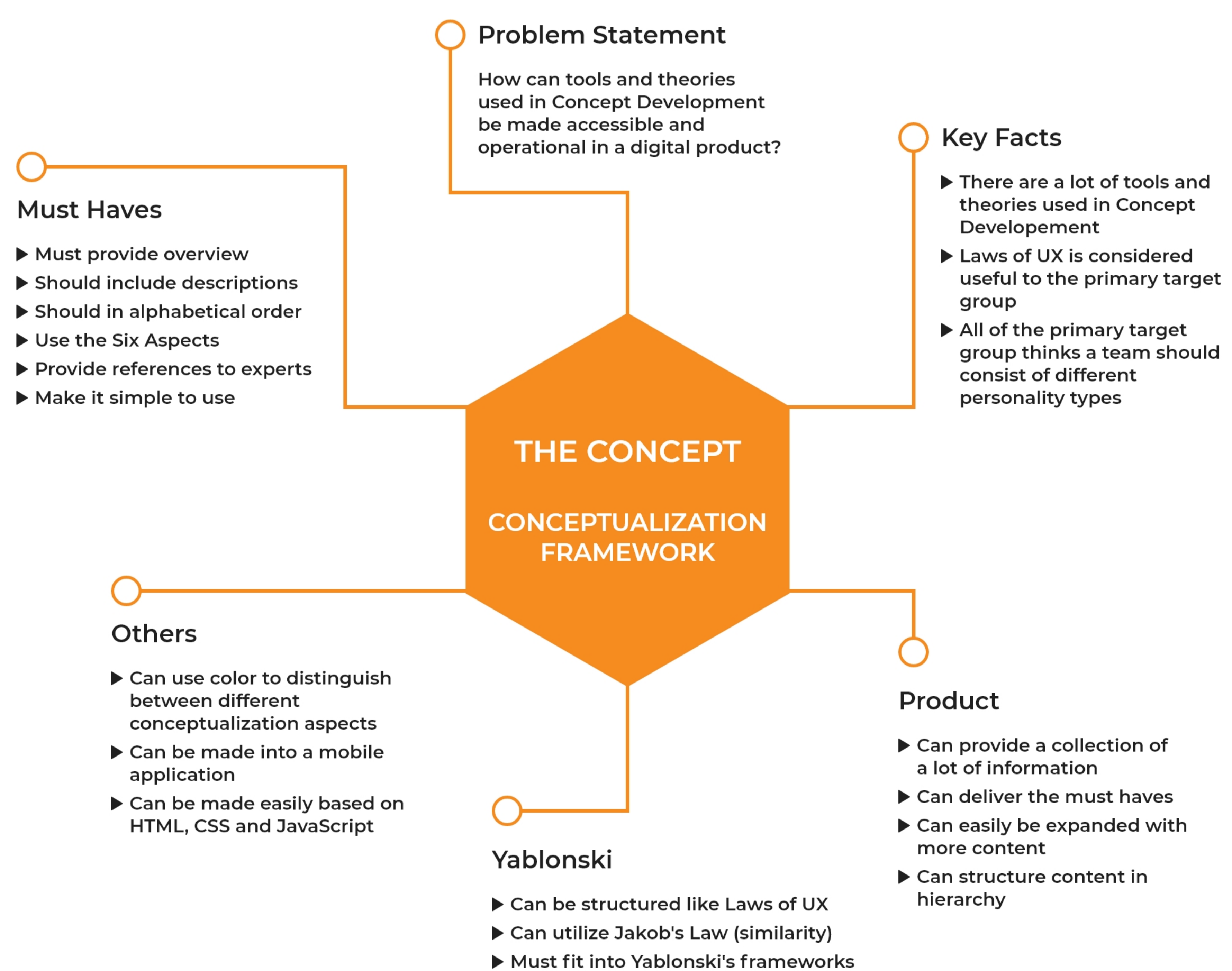
Pain Relievers were therefore considered in an attempt to eliminate the Pains. Thus, by providing references to experts and other valid sources, the risk of being perceived as invalid can be lessened, if not avoided entirely. Additionally, by implementing suggestions on when to use certain tools and theories in the conceptualization process, the plausibility of a Customer Job being done well could be increased.

The identified **Gains** of acquiring overview and knowledge about tools and theories used in Concept Development are closely related to the Customer Jobs, and are hence required for the success of the product. However, another gain that can be acquired by the user is the capability of being able to implement these tools and theories into their own conceptualization process.

The **Gain Creators** should therefore first and foremost focus on providing an overview and description of the tools and theories, in order to make them more accessible and operational to the user. Additionally could a suggestion on which tool or theory to use next in the process be a beneficial service to the user.

MAPPING THE CONCEPT

The conceptual solution to the thesis' Problem Statement is the culmination of the discovered and interpreted data, and the starting point for the manifestation of the product solution. A Mind Map has been used to capture information on different parameters of what the concept must include, how it relates to the Problem Statement, key facts discovered during the user research, benefits of the product, its connection to Yablonski's design frameworks, and other opportunities related to the concept (IIBA, 2015, p. 299-302).



Mind_Map_Of_Concept
(For larger sized image, see appendix L)

As the concept should be reminiscent of Yablonski's Laws of UX and Humane By Design, and be easily accessible by anyone, there are two fitting product options; a website or an application.

The website has the clear advantage over the mobile application, since it can easily be shared via link, whereas a mobile application is required to be downloaded on the device. Furthermore, is it possible to visit websites on both desktop and mobile, whereas a mobile application can not be visited on desktop. Thus will a website be accessible to more users than an application would be able to.

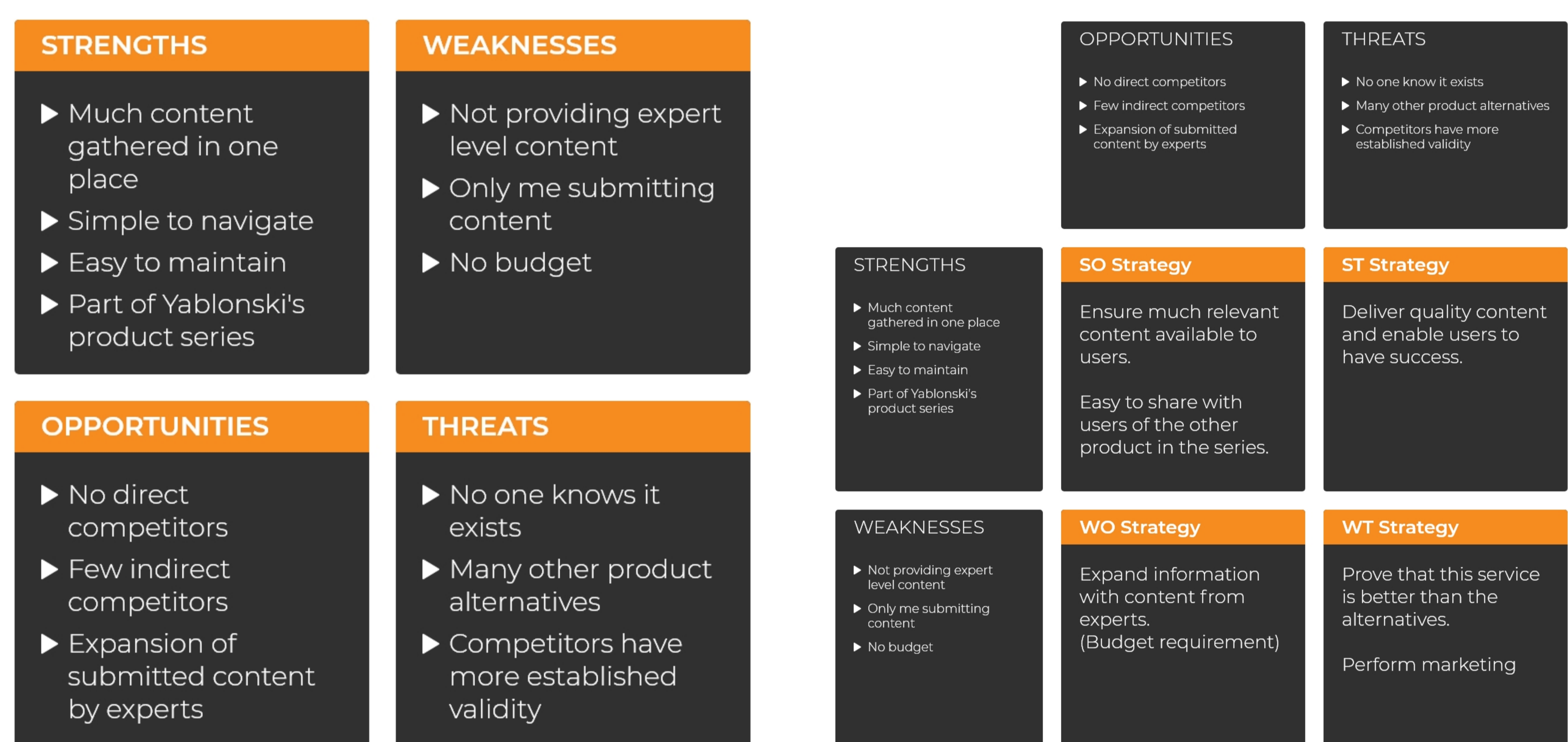
CONCEPT DESCRIPTION

The concept is a digital framework (website) intended to facilitate tools and theories used in concept development, with the objective of making these both accessible and operational to the user. The ambition is to give the user an overview of these tools and theories through six aspects of conceptualization - each containing tools and theories relevant to that specific aspect.

The goal is to enable the user to make intentional decisions on the use of tools and theories in their conceptualization process; and thereby eliminate the risk of decisions being made indirectly by the user, as a result of lack of knowledge about tools and theories used in Concept Development.

SWOT ANALYSIS & MATRIX

In an attempt to analyze the concept's strategic position in relation to the market, and thereby argue the viability of the concept, a SWOT Analysis has been applied. This analysis considers internal and external factors, formulated in four key areas; Strengths, Weaknesses, Opportunities, and Threats. The first two being the internal factors, and the latter two being the external. This analysis has thereafter been used in a SWOT Matrix, describing four strategic propositions on how to enhance the concept (IIBA, 2015, p. 353-355). The strategies examine: Strengths/Opportunities (SO), Strengths/Threats (ST), Weaknesses/Opportunities (WO) and Weaknesses/Threats (WT).



SWOT_Analysis & SWOT_Matrix
(For larger sized image, see appendix M and N)

The **Strengths** identified in the concept is first and foremost that it has much information gathered in one place. Along with this, it is possible to make the product solution easy to navigate through its Information Architecture and easy to maintain (update). Additionally, because of the cooperation with Yablonski, it would be possible to link to this product from his pre-existing websites, thus easier reaching his already established user base.

When considering **Weaknesses** it can be a shortcoming that the content will only be submitted by one person (in its current state). This leads to a potential risk of not providing expert level content. Lastly, there is no budget for expanding the concept in its current state.

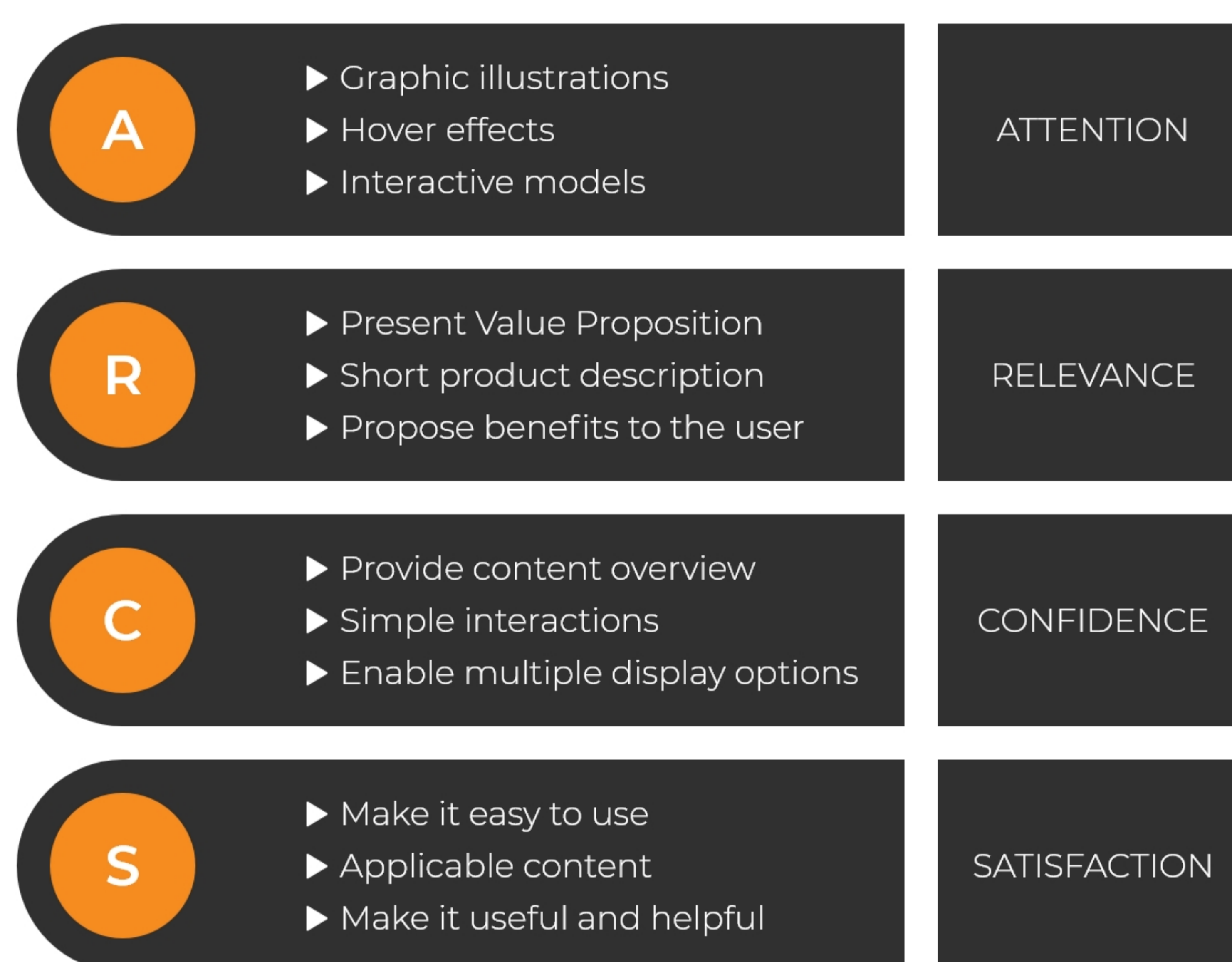
Looking into **Opportunities** a clear advantage of this concept is that there is little to no direct competition, and only few indirect competitors. Furthermore, could an opportunity be to expand the product with content submitted by experts (which however would likely require a budget).

Likely the most critical of the **Threats** is that no one knows the concept exists. Secondly, there are many alternatives to gathering this information; such as education, Google searches, and business and design organizations. Moreover, do the competitors also have more established validity on the market.

A way of exploiting a potential **SO Strategy** is by ensuring a vast amount of relevant content available to the users. Additionally, would it also be easy to link to the product from Yablonski's already existing design framework series. This strategy could be backed up by a **ST Strategy** focused on delivering high quality content and enabling users to succeed by using the product. In addition, the approach of a **WO Strategy** could be to expand the product with expert submitted content; this would however likely require a budget. A **WT Strategy** could focus on implementation of marketing, with the purpose of attracting more users. Subsequently could this strategy also target proving that the product is better than the alternatives.

ARCS MODEL

As the intention of this project is to make tools and theories of Concept Development more accessible and operational, the ARCS Model has been applied, due to its focus on motivational design. The model is composed of four key areas; Attention, Relevance, Confidence and Satisfaction (Keller, 2016).



ARCS_Model

(For larger sized image, see appendix O)

The motivational area of **Attention** is aimed at avoiding a monotone learning experience. Thus, can the implementation of visual communication through illustrations and hover effects be particularly beneficial in this product. Likewise could the use of interactive gimmicks, such as interactive models, be used to maintain the interest of the user.

In an attempt to address the **Relevance** of the solution, the value of the product should be presented. This can be done by implementation of a short description of what the product offers, and enable users to determine if and how it could be beneficial to them.

Providing an easily accessible overview of what the product offers, can help create **Confidence** in the user's ability to succeed in being able to learn about and use these tools and theories themselves. By limiting the performance requirements to simple tasks, the success opportunities can potentially be increased. Likewise, by providing multiple structural product layouts of the available content, can the user's personal control be increased.

In the effort to create **Satisfaction** with the solution, the intrinsic and extrinsic value of the product should be noticeable. This can be done by ensuring the applicability, relevance, and usefulness of the content provided. The experience of the user should be that the product is useful and helpful.

CUSTOMER JOURNEY MAP

A future-state Customer Journey Map was created in an attempt to structure the interaction process with the product. The map was used with an assumption-first approach, influenced by an understanding of product requirements and user needs, to visualize the ideal interaction process before the creation of the product (Kaplan, 2020). The map addresses seven stages of interaction; Awareness, Consideration, Purchase, Experience, Service, Loyalty and Advocacy. Each stage is addressed through its touchpoint with the product, and the user's actions (doing), thoughts (thinking) and emotions (feeling).

STAGES	AWARENESS	CONSIDERATION	PURCHASE	EXPERIENCE	SERVICE	LOYALTY	ADVOCACY
TOUCH-POINTS	Google search Laws of UX or Humane By Design	Product description on website	Free	Operational framework	Overview Guidance Knowledge	Usefulness	Sharing
DOING	Visiting website Seeing link on Yablonski's other websites	Accessing website and evaluating	N/A	Using product	Using product	Finding the product useful	Word of mouth Link sharing
THINKING	"This looks interesting"	"This seems like a relevant product"	"I have good expectations about this"	"This is useful to me"	"This helps me to develop my product"	"I have success with my product"	"I want to share this with others"
FEELING	⊕ ⊖						

Customer_Journey_Map
(For larger sized image, see appendix P)

The **Awareness** stage involves the arrival to the website, either from a Google search or from a link on either the Laws of UX or Humane By Design. Ideally the user should think that the product looks interesting, which leads them to proceed to the Consideration stage.

The **Consideration** stage should thus provide a product description which the user can read and evaluate after accessing the website. The goal of this stage is to have the user think that the product is relevant to them.

As the product is intended to be free to use, the **Purchase** stage has been left empty. It would however be an additional benefit if the user had a good experience with the product being free of charge.

The **Experience** stage involves the actual product solution - a framework that makes tools and theories used in Concept Development more accessible and operational. The stage is therefore heavily reliant on the actual product. The ultimate goal in this stage is to have the user feel the product is useful to them.

The Experience is closely tied to the **Service** stage, which includes providing overview, guidance and knowledge of the tools and theories included in the product. The service of the product is after all to make these tools and theories more accessible and operational.

The **Loyalty** stage involves the usefulness of the product. Hence, if the product is useful and enables the user to have success, the loyalty towards the product will be increased, which influences the Advocacy.

The **Advocacy** stage is thus tied to the previous stages, and through the fulfillment of these stages should the Advocacy ideally involve users sharing the product with others, either through 'word of mouth' or link sharing.

SERVICE BLUEPRINT

Subsequent to the creation of the Customer Journey Map, a Service Blueprint was created. This blueprint was based on the interactions throughout the intended user journey, however with a focus on the user journey within the product. The blueprint was thus made as a guidance to the creation of the product Prototype.

The Service Blueprint visualizes the relationship between different components of the product, and is structured based on the Evidence for each interaction, where Customer Actions, Frontstage Actions, Backstage Actions and Support Processes are described for each presented Evidence (Gibbons, 2017).



Service_Blueprint

(For larger sized image, see appendix Q)

The first Evidence is the **Website**, where the user arrives on the index page (home page) of the product and initiates the user journey. This is supported by research, analysis and design used in the development of the product. The Website thus encompasses the entirety of the product and its layers, and can hence be seen as the sum of all Frontstage Actions, Backstage Actions, and Support Processes.

On the index page of the Website is the second Evidence - a **Product Description**. This description should introduce the service which the product provides to the user, and thus assist the user to understand what the product is about, and how to operate the product.

Also located on the index page is the third Evidence, **Aspects Overview**, where the Six Aspects of Conceptualization should be displayed. This Evidence is therefore heavily reliant on experience and interface design, in order to display these six aspects in an understandable format. However, by the aforementioned Product Description, the likelihood of users not knowing how to operate the product should be decreased.

By clicking on one of the conceptualization aspects in the Aspects Overview, the user goes to a **Topics Overview**. This overview is the collection of the tools and theories (topics) related to that specific aspect, hence will each of these pages contain different content from one another. The Frontstage action should here be to provide a short description under each of the topics, to enable the user to get an understanding of the topic.

If the user is interested in more information on the topic, they can click on it and go to the **Topic Specific Page**. On this page will information on the specific topic be displayed. This includes a Description, Key Takeaways, Additional Reading, and Related Topics.

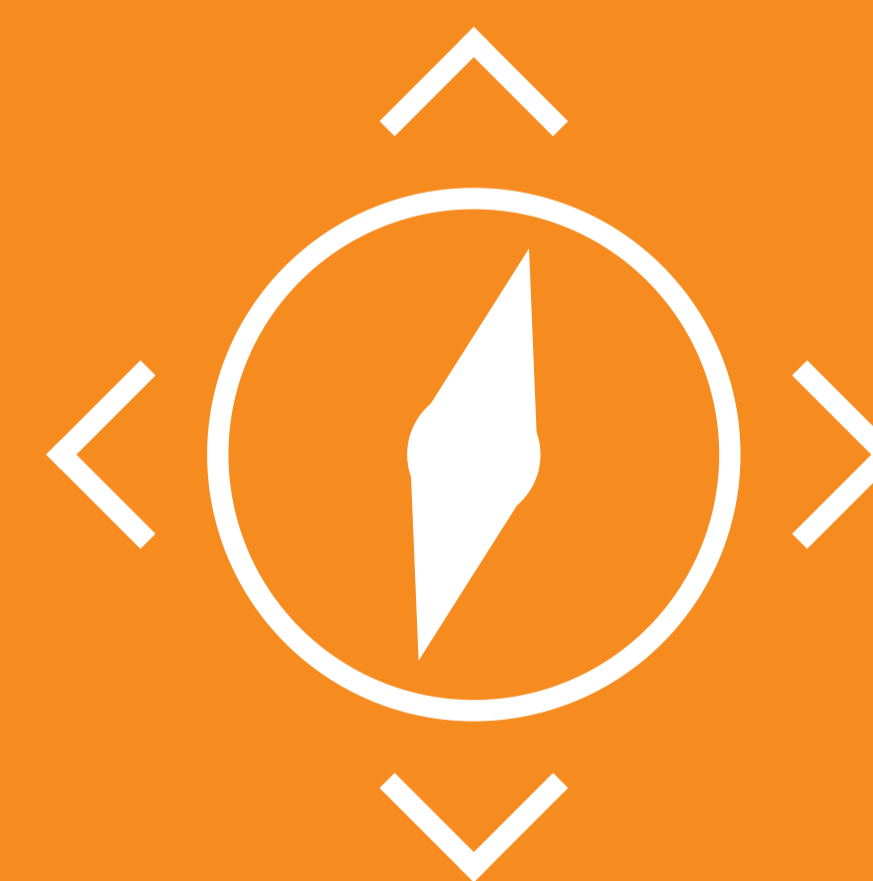
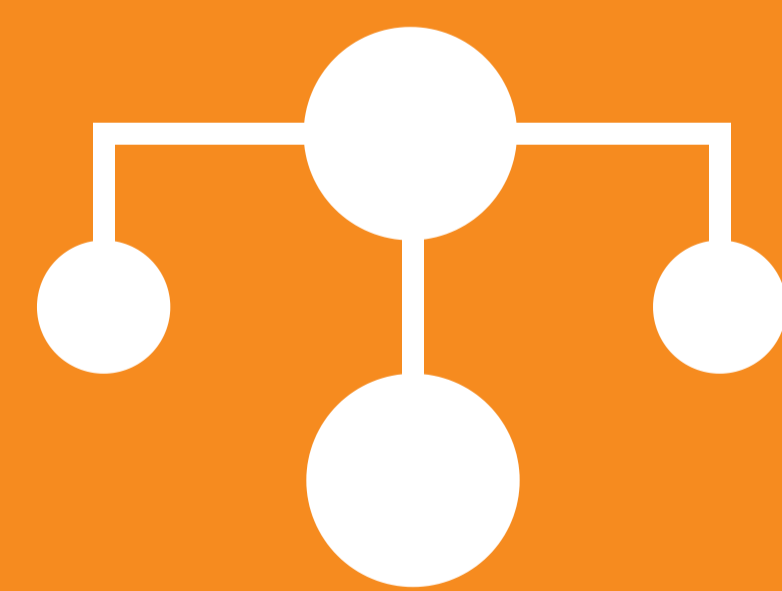
The **Description** and **Key Takeaways** are closely related, as the Key Takeaways refer to information disclosed in the Description. The Description should include three main points; what is the topic about, how to use the topic, and when the topic could be used in a conceptualization process. From this are the Key Takeaways formulated, in order to provide the user with a quick overview on the topic.

The Evidence section about **Additional Reading** is focused on providing the user with additional sources on the topic, and should thus be based on articles from experts and other valid sources. This Evidence will therefore require some source assessment, in order to include relevant article links.

Finally, is the Evidence of **Related Topics**, located on the Topic Specific Page. It should provide the user with a display of related topics to the one the selected topic is about, and thus requires an understanding of the Information Architecture and what content is available on the product.

SUB-CONCLUSION

It can be concluded that a Conceptualization Framework built as an online website can indeed solve the needs of the target groups, and be used to make tools and theories related to Concept Development more accessible and operational. Additionally does this concept fit in with Yablonski's Laws of UX and Humane By Design, and thus fulfills the intention of being an addition to this series of design frameworks.



EXPERIMENTATION

YABLONSKI'S LAWS OF UX

As Jon Yablonski is the partner of this project, and since the project's product solution was intended to supplement Yablonski's design frameworks, was it important to conceptualize a product that would fit with the visual design and structure of these pre-existing frameworks. Especially was the Laws of UX an inspirational source, and was thus analyzed to address structural elements and components to be used in the product Prototype.

The Laws of UX includes a short description of the product, to enable the user to understand what the product is about. Underneath the description, does Yablonski use a grid interface, displaying his collection of Heuristic methods, Principles, Gestalt Law, and Cognitive Biases, in an alphabetical order. Each of the topics are distinguished by color, and are separated into different boxes. Via a sticky menu is it possible to filter the content from viewing all topics, to viewing the content related to one of the four categories (Yablonski, 2022).

Additionally are two of the Heuristic methods and three of the Gestalt Laws used as central components in the Prototype. These are:

● **Jakob's Law**

The most prominent of the Laws of UX used in the Prototype is the Heuristic method, Jakob's Law, which considers that users prefer products that look and work similar to other products they already know. This means that users tend to transfer expectations of how products work onto other products that appear similar. Thereby can user experiences be enhanced by introducing features that users already know how to operate, rather than developing entirely new models (Yablonski, 2022).

● **Aesthetic-Usability Effect**

This Heuristic method describes that users perceive aesthetically pleasing designs as more usable. When a design is aesthetically pleasing it creates a positive response in people's brains, and leads them to believe the design actually works better. Additionally do people tend to be more tolerant of minor usability issues when the design is aesthetically pleasing (Yablonski, 2022).

- **Law of Common Region**

This Gestalt Law states that elements tend to be perceived into groups if they are sharing an area that is clearly defined by a boundary. Thus can this law be used to create a clear structure of content, and help users quickly and effectively gain overview of content (Yablonski, 2022).

- **Law of Proximity**

This Gestalt Law states that objects that are in proximity to each other tend to be perceived in the same group. This law can therefore help to establish the relationship between nearby objects, and consequently reflect what objects are not part of this group. Thus can the Law of Proximity be used to help users understand and organize information faster and more efficiently (Yablonski, 2022).

- **Law of Uniform Connectedness**

This Gestalt Law states that elements that are visually connected are perceived as more related than elements with no visual connection. This means that groups that are visually connected by color, lines, frames, or other shapes are perceived as being related to each other. Thus can uniform connectedness be used to show context and emphasize the relationship between similar items (Yablonski, 2022).

INITIATING PROTOTYPING

The Prototype is the manifestation of how to make tools and theories used in Concept Development accessible and operational to the target groups through a digital product.

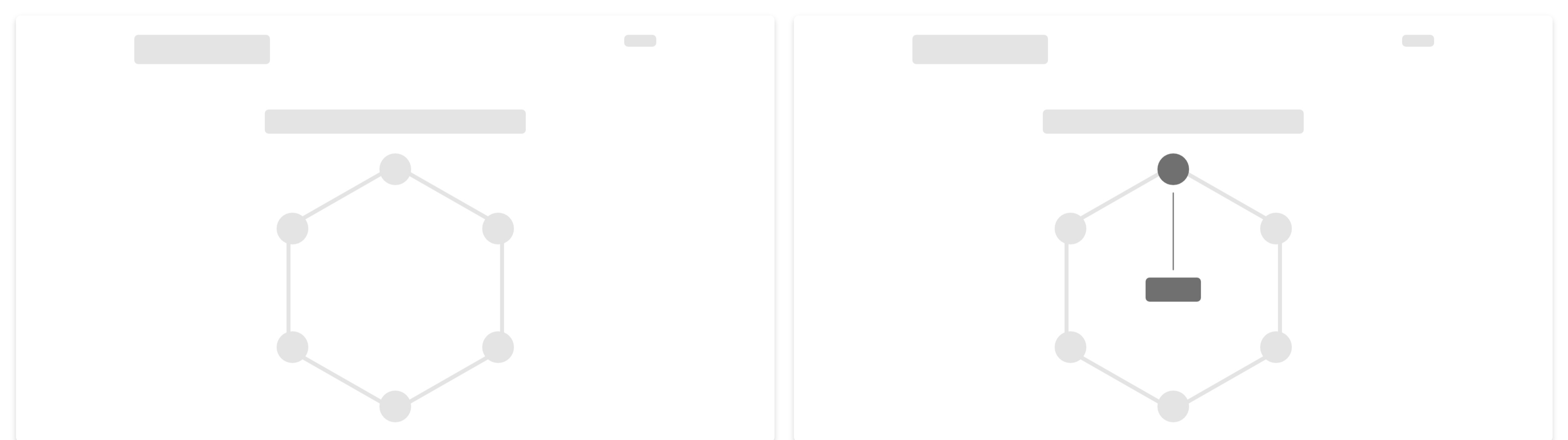
The Prototype is thus based on the interpretation of the Six Aspects of Conceptualization, and inspired by Jon Yablonski's Laws of UX. The Value Map part of the Value Proposition Canvas has thus also been used during this process, to address must haves in the Prototype. The four motivational design areas of the ARCS Model have additionally been used as an inspirational source in the prototyping process.

Additionally has the Customer Journey Map and Service Blueprint been used as guidance in the construction of the Prototype. This was specifically focused on the Consideration, Experience, and Service phase of the Customer Journey Map, and the Frontstage Actions of the Service Blueprint.

Furthermore, are principles of website structure used in the creation of the Prototype. Specifically the Information Architecture is considered, in terms of structuring the hierarchical order of the content (see appendix R). The idea with the structure is to enable the user to navigate the product associative. This too includes the principles of global navigation; ensuring consistency of navigation elements on each page (Busch et al., 2015, p. 170-179).

WIREFRAME

The first wireframe displays the Aspects Overview as a hexagon, with each point symbolizing one of the six conceptualization aspects. The vision is to allow for the user to select which aspect they would like to delve deeper into. The premise of the design revolves around a hover effect; where the title of the specific aspect will be displayed once the mouse is hovered on the hexagon point linked to the aspect. Additionally, was the hexagon display selected in order to introduce an element of gamification, with the aim of improving the user experience as part of the Attention aspect of the ARCS Model.



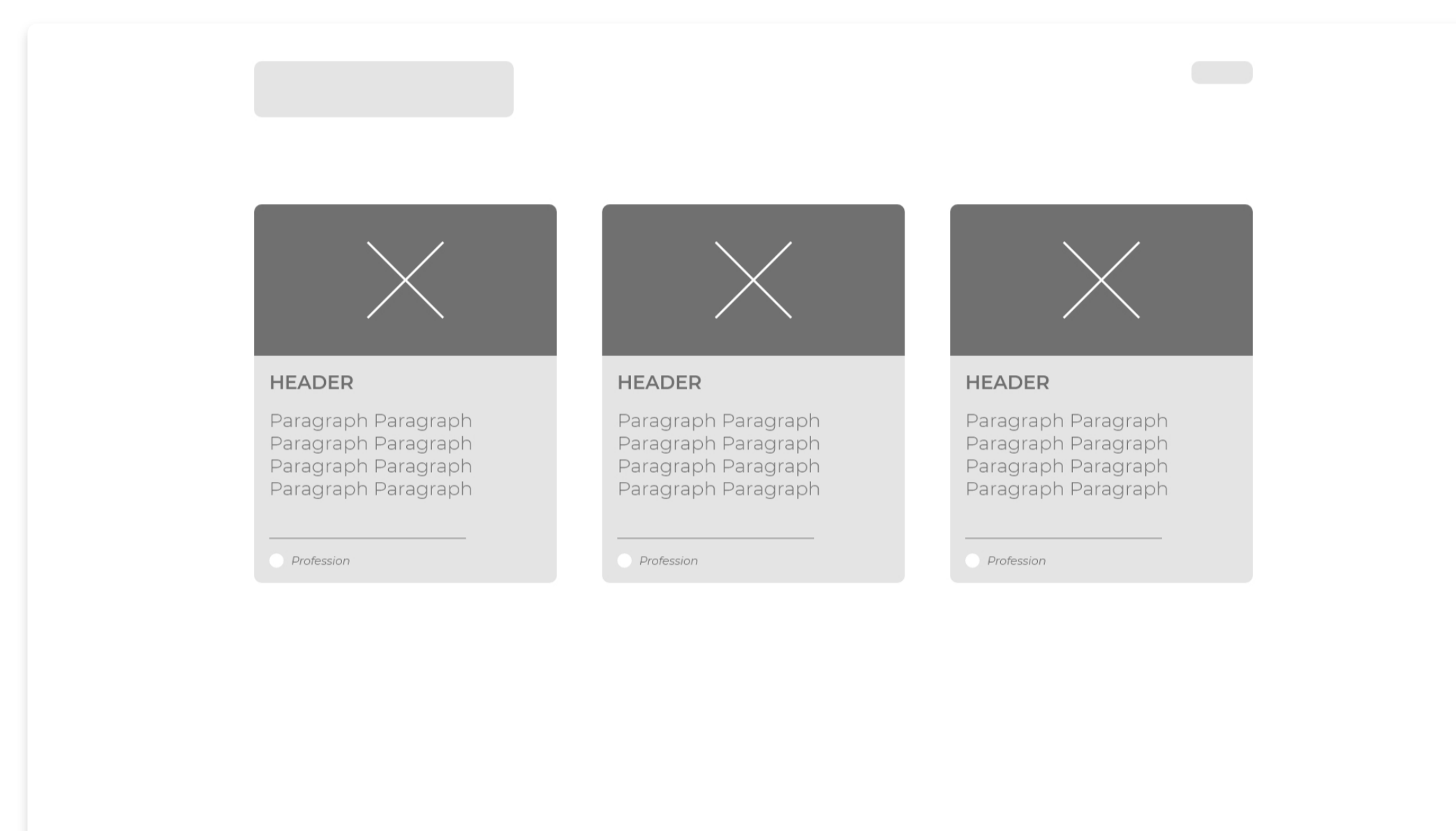
Wireframe1-1 & Wireframe1-2

After this an Interactive Wireframe was created in order to test the intuitive functionality of the interface. However, in order to allow for a more understandable version of the Wireframe, some text elements were included into the interface. From this mini-test it was concluded that the hexagon interface functioned as intended. An interesting observation was however that in order to make the six 'buttons' more noticeable, they needed to be a different color than the hexagon shape located behind them - the 'buttons' were therefore changed from light grey into a darker grey, in order to better visualize the interactiveness through color contrast. In addition was a unique color implemented for when the hover effect was active, to distinguish between the two states (active/inactive).



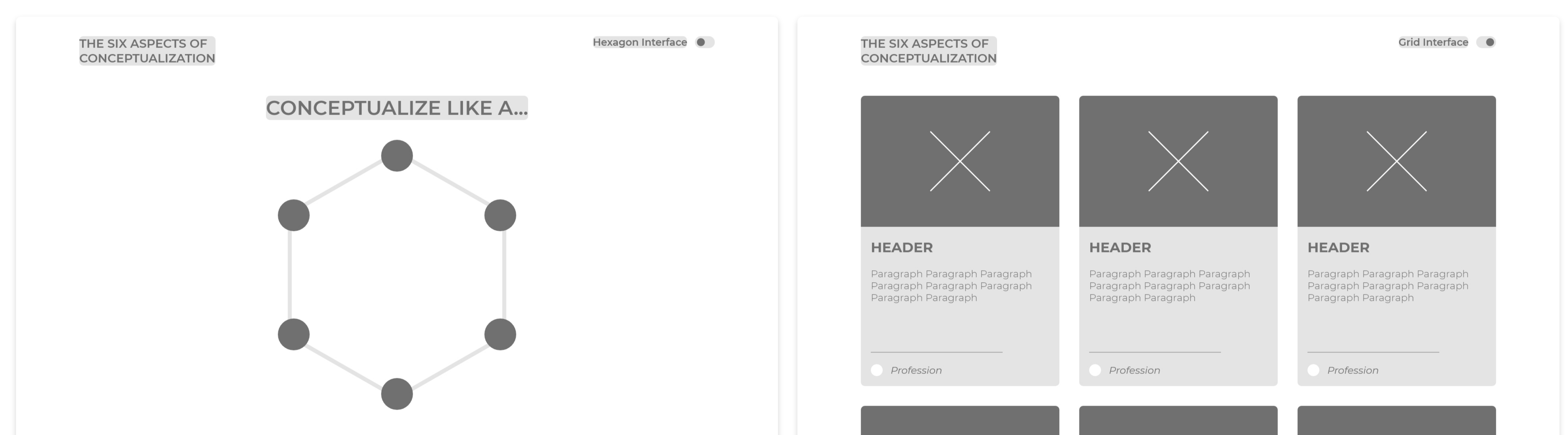
Interactive_Wireframe1-1 & Interactive_Wireframe1-2

In another iteration, the idea of having all the tools and theories collected in one place was explored. The idea in this case was to have all tools and theories displayed in a grid interface - utilizing the Law of Common Region in each of the 'boxes'. Based on the Relevance and Confidence aspects of the ARCS Model, the idea of allowing the user to switch between these two interfaces was explored - ultimately enabling the user to select how they want the content to be presented.



Wireframe2-1

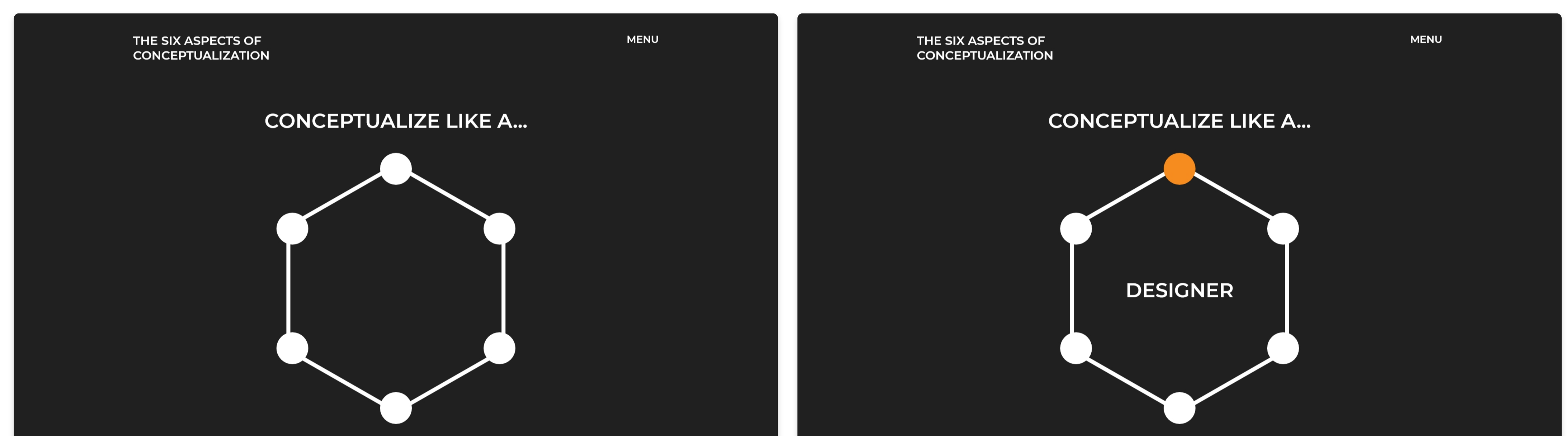
To visualize the switch from one interface to another, a toggle-switch was added into the layout. The toggle-switch was chosen over a regular menu option because of the fact that the switch: 1) should only switch between two options, and 2) is more reminiscent of functions seen in mobile applications, therefore allowing for the user to already be familiar with how to use it - adhering to Jakob's Law.



Interactive_Wireframe3-1 & Interactive_Wireframe3-2

MOCKUP

As part of the development of the Prototype, a Mockup was created. Colors were added to the Interactive Wireframe layout, based on the principles of Color Theory, in order to get a better understanding of how a finalized product could look like. The colors 'eerie black' and 'pure white' were chosen as neutral colors - with the added benefit of being in stark contrast to each other, allowing for 'unique' colors to be more prominent (IxDF, n.d.).



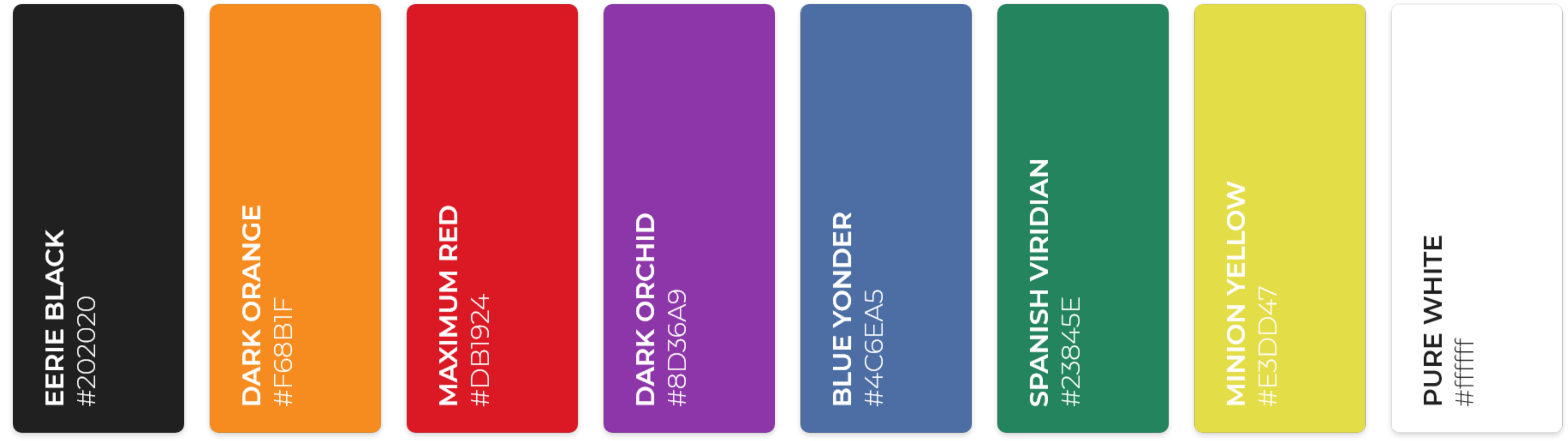
Mockup_1 & Mockup_2

From this, a unique color for each of the six conceptualization aspects were chosen. The six colors took inspiration from the color wheel, and was based on a hexadic color scheme; meaning that the colors scheme uses three pairs of opposite colors (IxDF, n.d.).



Color_Wheel_Integrated_Into_Hexagon

This also meant that each topic related to each of the Six Aspects of Conceptualization would use the Law of Uniform Connectedness, as they would share the same color as the conceptualization aspect they are related to.

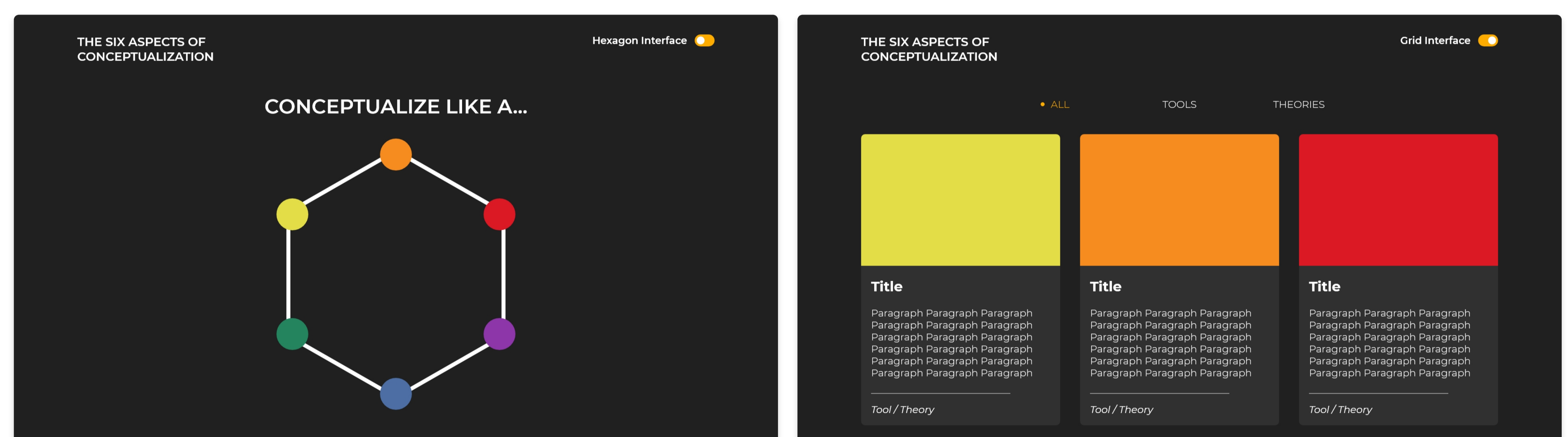


Color_Scheme

INTERACTION PROTOTYPE

After the creation of both the Interactive Wireframe and the Mockup, an Interaction Prototype was created. This Prototype used the layout foundation from the Wireframe, and applied the visual design of the Mockup in its interface. The Prototype's main focus was to allow for functionality testing of the interaction and relation between different artboards (pages). The Information Architecture of the product was thus also considered, in terms of always allowing for a user to navigate back and forth between the main pages (Gregersen and Wisler-Poulsen, 2017, p. 66-67).

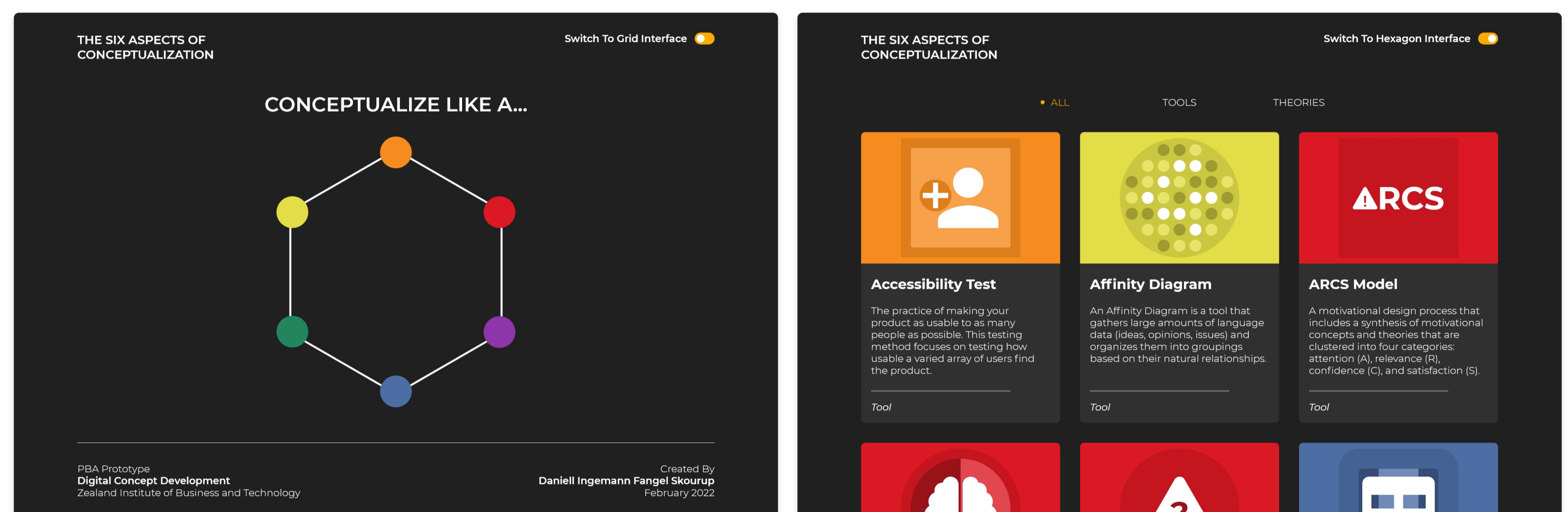
Furthermore, a navigation bar was implemented to the grid interface to enable users to filter the content into the category of either tools or theories - as opposed to seeing all topics collected in one grid.



Interaction_Prototype_Hexagon & Interaction_Prototype_Grid_All

PROTOTYPE V1.0

Subsequent to the Interaction Prototype, the first High-Fidelity Prototype was created. This Prototype collected the knowledge, design and layout from the previously explored Wireframes, Mockup and Interaction Prototype. What distinguishes this Prototype from the aforementioned Interaction Prototype is that it includes content, to better reflect a finalized product. Prototype V1.0 was thus a testable product that can allow for users to interact with the product as if it was an online website.



PrototypeV1.0_Hexagon & PrototypeV1.0_Grid_All

The grid interface of Prototype V1.0 displays a list of all topics. The list has deliberately been chosen to be in alphabetical order to: 1) allow for an easier overview, and 2) not favor some topics' importance over others. Likewise, are all topics implemented with a monochromatic color scheme relating to the color of the conceptualization aspect it is associated with. Additionally, every tool and theory has its own unique illustration related to the topic it describes; with the purpose of further enabling understanding of the content.

SUB-CONCLUSION

It can be concluded that the interface of this Prototype can be used to address the Six Aspects of Conceptualization, and thus structure the tools and theories used in Concept Development. It can furthermore be deduced that the implementation of a grid interface with all topics collected in one alphabetical list can make it easier to locate a specific topic, or filter the content into either tools or theories.

Before being able to conclude the full spectrum of this solution, however, is it necessary to test the Prototype. A test will thus give opportunity for adjustments and improvements, aimed at enhancing the concept and product.

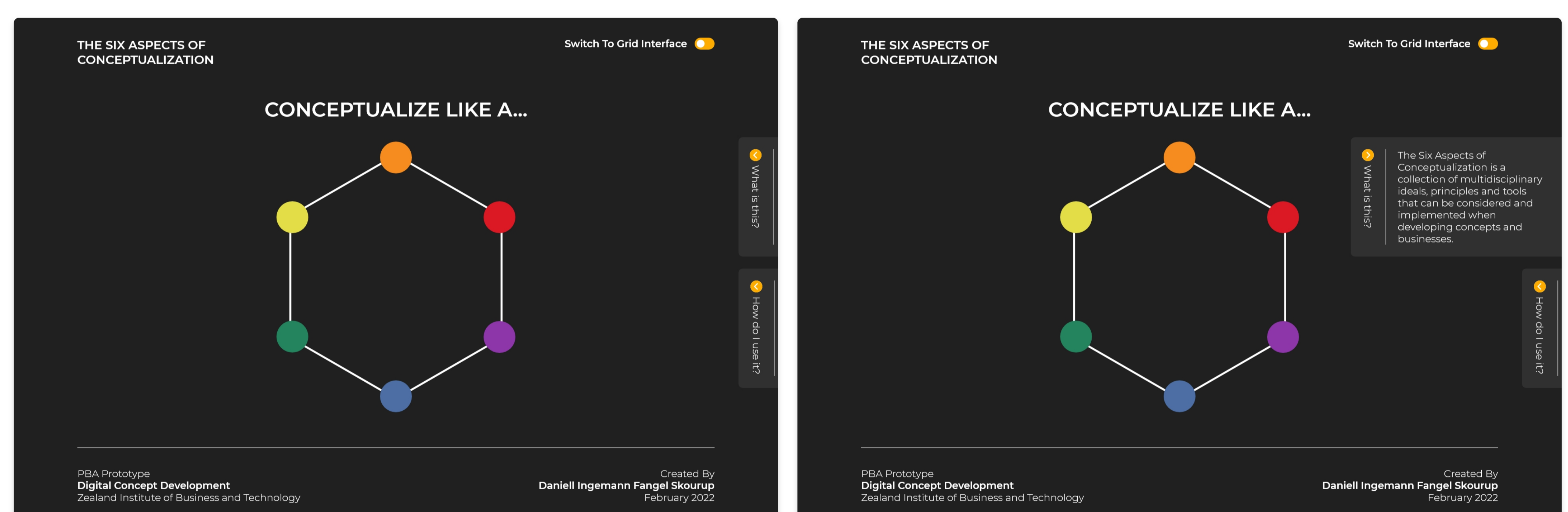


EVOLUTION

PROTOTYPE V1.1

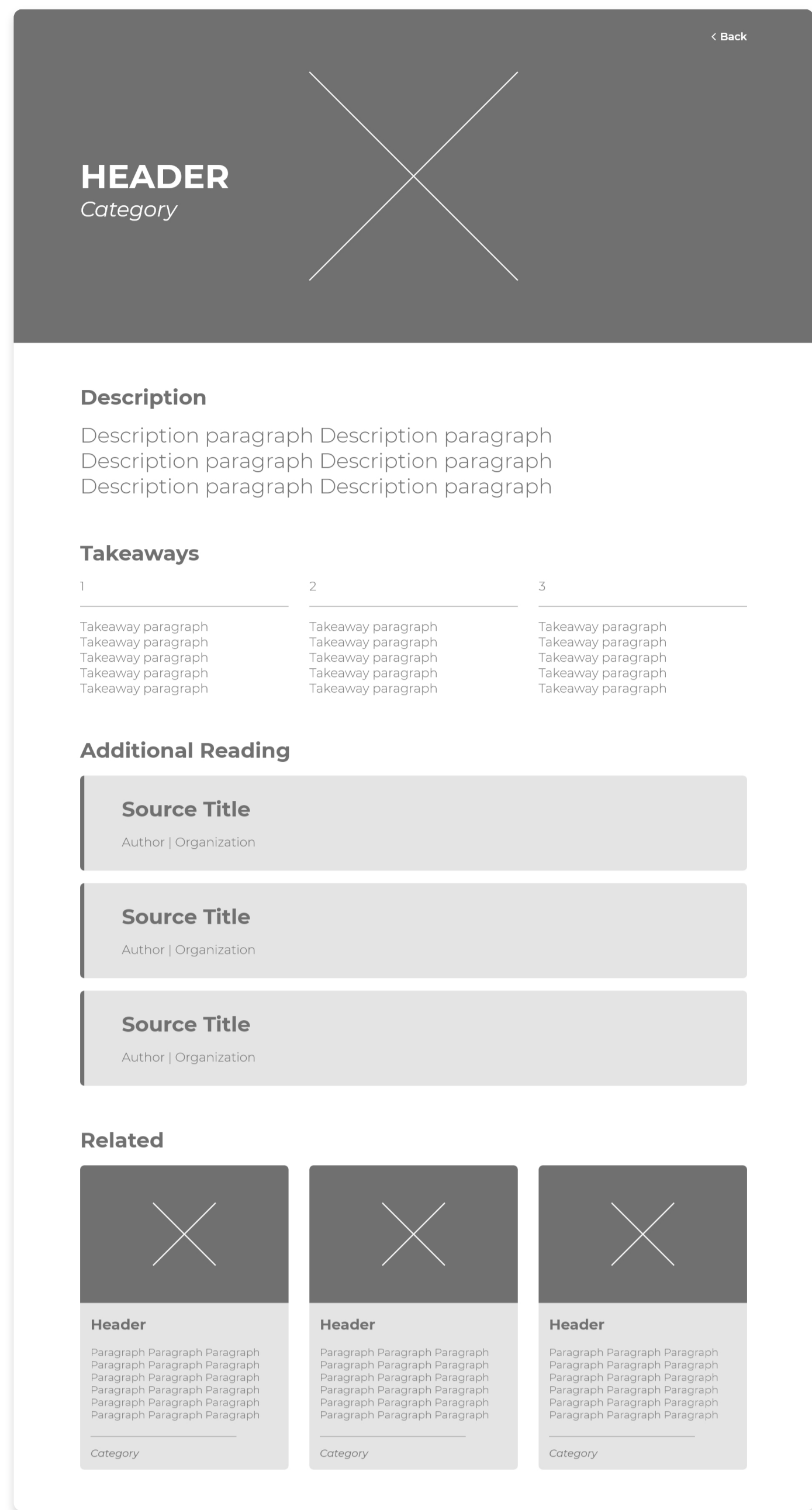
Before testing Prototype V1.0, it was updated with additional content and features, and thus became Prototype V1.1, to reflect a more finalized product.

Based on the Relevance aspect of the ARCS Model, were two 'pop-out' info text boxes introduced into the design. The intention was to create a better understanding of purpose and function of the product; with one describing what the product is, and the other describing how to use it. To avoid clashes with the main interface of the hexagon, however, were the two info texts placed as extendable elements, located to the right of the page. This would enable first time users to gain additional information, and allow for recurring users to not be bothered by it.



PrototypeV1.1_Hexagon & PrototypeV1.1_Hexagon_What

Furthermore, was a design on the Topic Specific Page implemented into the Prototype. This was done to structure the components of Description, Takeaways, Additional Reading and Related Topics. Additionally, was this also done to enable a more thorough testing of the Prototype, allowing for users to interact with all levels of the Prototype. Topic Specific Pages were however not included for all topics, only for the ARCS Model and Customer Journey Map, to showcase the general idea of how a finalized product would look like.



Wireframe_Topic_Page, Mockup_Topic_Page & Prototype_Topic_Page

ACCESSIBILITY & USABILITY

Subsequently to the creation of Prototype V1.1 were three tests conducted with respondents from the Survey and Interviews; two from the primary target group (Concept Developers) and one from the secondary target group (Start-up Businesses). These tests were focused on a blend of Usability and Accessibility Testing, and thus first presented the test users with three tasks to solve, and thereafter a series of questions on the Prototype in general. For the complete test results, see appendix W, X and Y.

The main takeaway from these tests were that the users had difficulties understanding the concrete purpose of the product initially, and consequently found the product challenging. This resulted in an average usability score of 4,5/10 before they understood how to use the product. However, after interacting with the product and figuring out how to use it, the average usability score was increased to 8,6/10.

Common for all three users was that they found the Prototype extremely easy to use, but that they simply needed to understand the exact purpose of what the product offers, and that this was their biggest struggle.

Interestingly, the two test users from the Concept Developer target group had an easier time using the hexagon interface, than the user from the Start-up Business target group. This could potentially be attributed to differences in general technical expertise. Additionally, did one of the Concept Developer test users only use the hexagon interface to solve the three tasks, and thus only interacted with the grid interface thereafter. All users did however easily understand the grid interface and how to use it, once discovered.

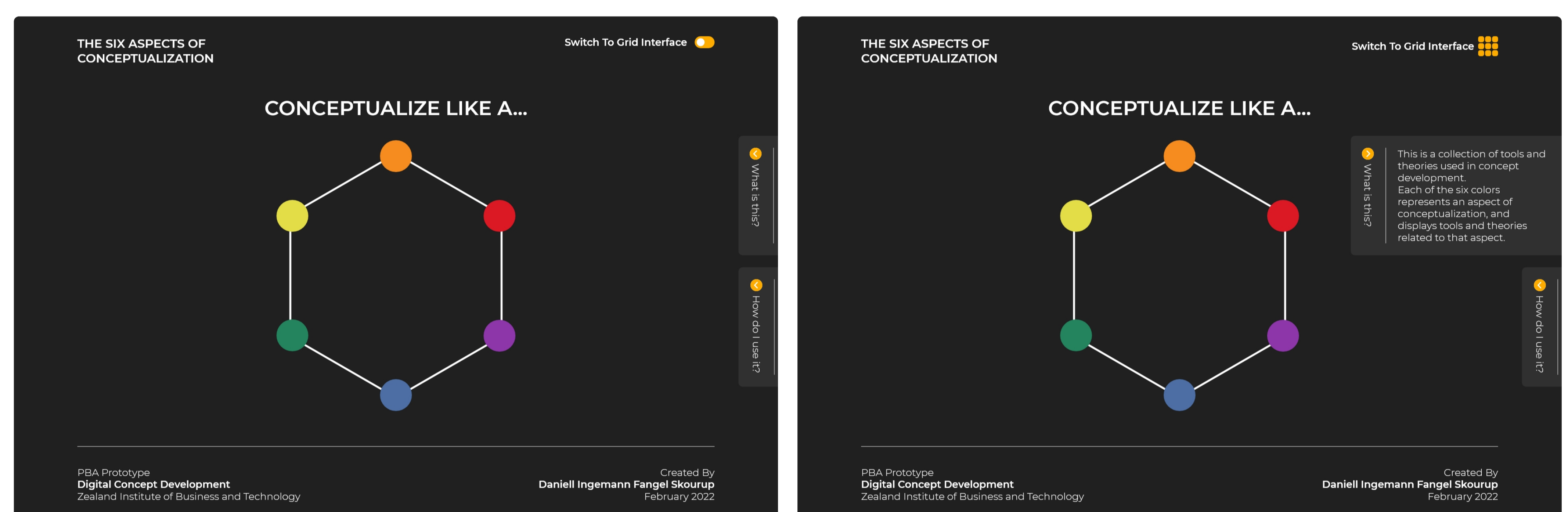
All three test users understood the use of colors, and how they related to each other. One user did however express that she would have liked if the topic boxes in addition to using color, also had written which conceptualization aspect it belonged to.

Additionally was it suggested by one of the test users to implement a table of contents to enable for better overview and easier search for a specific tool or theory. Finally, it was noted by two of the test users that the text on the Topic Specific Pages could be made smaller in font size, as the text took up much space.

PROTOTYPE V1.2

Based on the discoveries from the user tests, were the text in the two pop-out info boxes changed, aimed at making it easier to understand the purpose of the product. Moreover was it made so that the first of these boxes would be open when arriving at the index page (home page).

Additionally, was the text on the Topic Specific Pages made smaller, and the switch between the hexagon and grid interface redesigned. The toggle-switch was substituted with a grid icon (on the hexagon page) and a hexagon icon (on the grid page). The new icons were furthermore made in the same orange color as other buttons on the Prototype, to indicate that they can be interacted with.



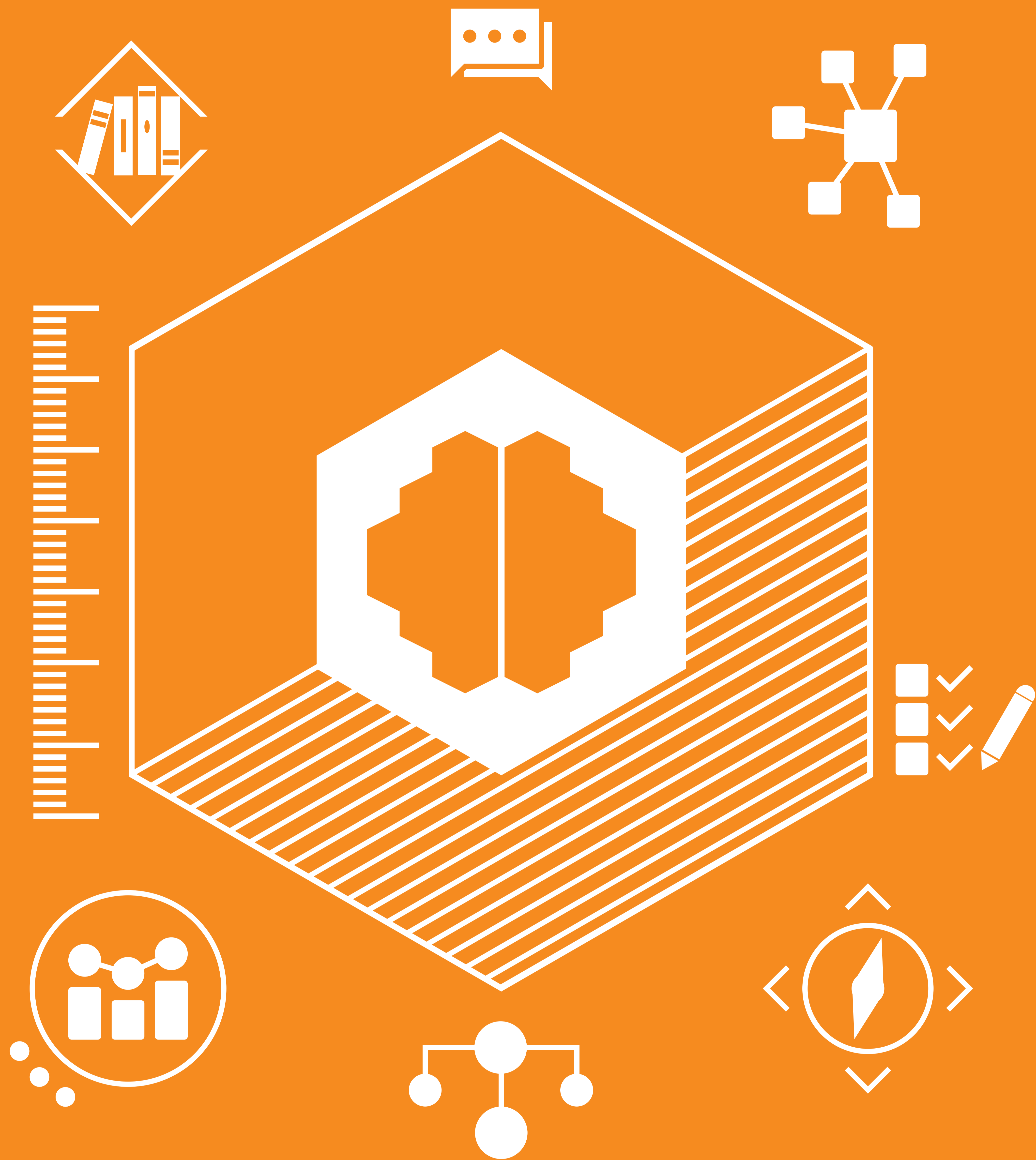
PrototypeV1.1_Hexagon & PrototypeV1.2_Hexagon_What

As only one of the test users mentioned the implementation of a table of contents and adding conceptualization aspect titles to each of the topic boxes, were these not implemented. It would however be interesting to examine whether other users would also find this relevant, and on a later basis possibly implement such features.

SUB-CONCLUSION

It can be concluded that the Prototype is functional and works as intended. Based on the user tests it is deduced that the Prototype design is understandable, manageable and user friendly, but however was in need of a few minor improvements. Furthermore, can it be concluded that the test users found the Prototype accessible and that it could be used to gain a better overview of tools and theories used in Concept Development.

Thus tools and theories became more accessible in two factors; the first one being that they were collected in one product, and the second one being that the categorization of the conceptualization aspects made it easier for the users to understand how tools and theories were related to each other and the conceptualization process. This in turn made the tools and theories more operational, since the users understood when the tools and theories could be relevant to use.



DISCUSSION

CONCEPTUALIZING ON CONCEPTUALIZATION

An interesting, but challenging, aspect of this project has been to use my knowledge of Concept Development to develop a concept on how to collect tools and theories used in conceptualization. I have thus used multiple of the tools and theories, included as content in the Prototype, in my conceptualization process during the project. This was done in an attempt to explore and create the best possible solution and coherence between the thesis' Problem Statement, the development of the concept and the content of the Prototype.

INTERVIEWS & SURVEY

One of the things that could have been done differently during the project was that voice recording was not used during the Interviews. The Interviews were conducted online via Google Meet, and a Google Document was used to take notes on what was said by the respondents. The issue with this is that some words and formulations may be lost during the process of writing notes, and that there generally is a higher risk of biased notation.

It can however be argued that the main points of the respondents were noted, and that their specific wording might not be essential for identifying their experienced pain points.

Additionally could it have been beneficial to conduct the Surveys as Interviews, as this would increase the chance of respondents being able to share information not included in the Survey questions. The Survey platform was chosen in an attempt to gain information from multiple respondents by sharing it with multiple Concept Development students from both 1st and 3rd semester at Zealand Academy of Business and Technology. Only six people responded however, and thus could the user research potentially lack more quantitative data, compared to qualitative data.

CATEGORIZATION OF THE CONCEPTUALIZATION ASPECTS

As stated in the introduction of this thesis, Concept Development is a vast and complex topic. It can therefore be a challenge in itself to categorize conceptualization tools and theories. This begs the question if they even should be categorized into different aspects, and if it is even possible. Many of these tools and theories span multiple aspects of conceptualization, and thus can often be related to more than one aspect, depending on one's point of view.

My conceptualization on categorizing the topics of conceptualization is thus not the definitive answer of how to categorize these tools and theories, but rather one way of describing this.

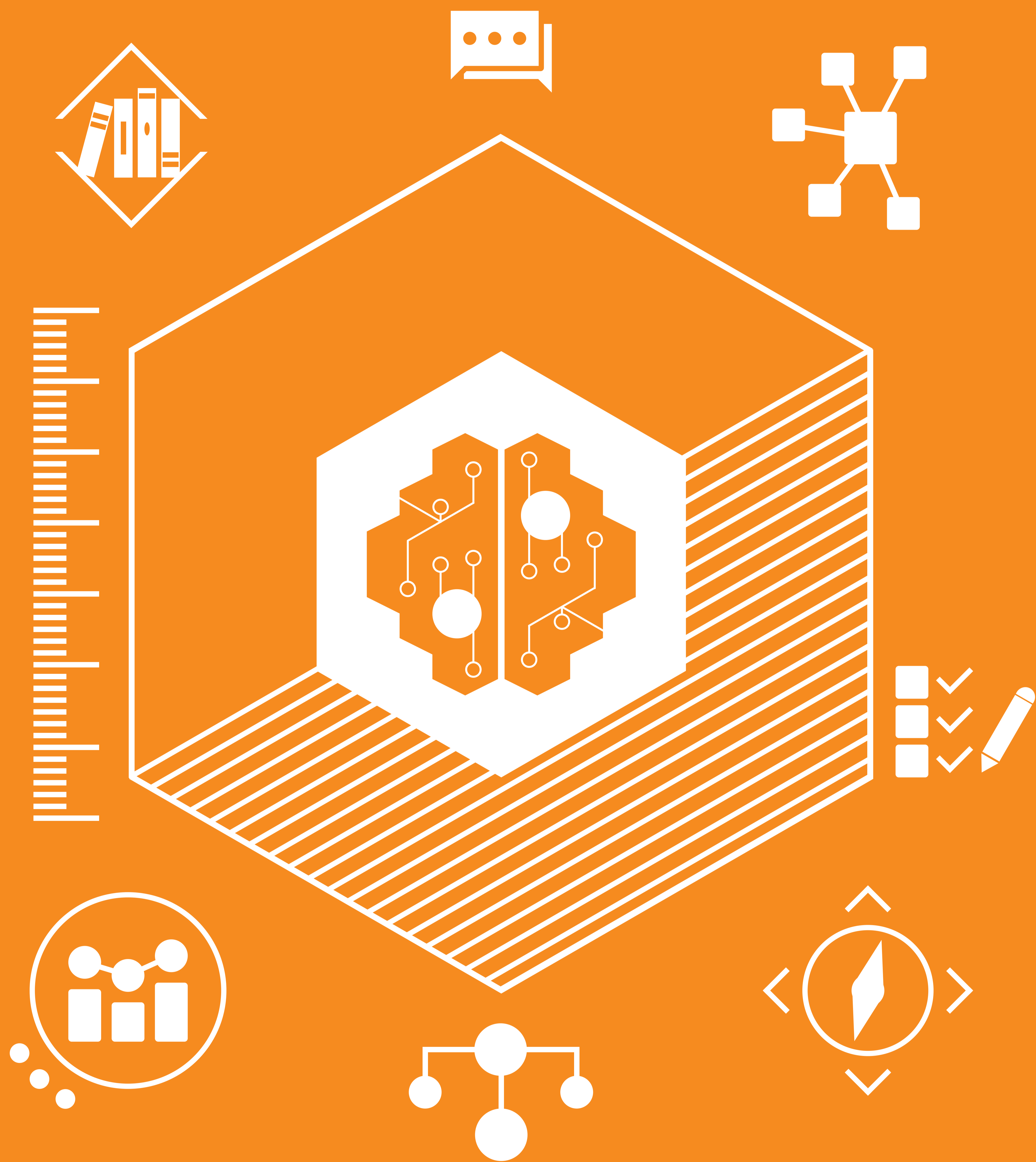
FURTHER DEVELOPMENT

When considering further development of the collection of tools and theories used in Concept Development, there are plenty of opportunities. For one could it be a possibility to include 'principles' of conceptualization, like 'Content is King' or 'Keep It Simple Stupid' - things that are good to keep in mind, but that are not necessarily associated with a tool or theory.

Furthermore could an addition of links to other online tools be an extra service to the users of this Conceptualization Framework. These tools could for instance be:

- ▶ Logolab (a logo test application)
- ▶ Coolers (a website for making color schemes)
- ▶ Word Webs (a website for brainstorming)
- ▶ Color Designer (a website for blending colors)

Additionally could the implementation of a search function make it even easier to locate a specific tool or theory, Adobe XD (the tool used to create the Prototype) is however limited in this sense, and thus can such a feature not be tested via this program.



CONCLUSION

Through this project I have found that it is possible to make tools and theories used in Concept Development accessible and operational through an online framework (website).

The Six Aspects of Conceptualization can be used to describe and categorize tools and theories used in Concept Development, and thus make it more accessible for users to understand how they are related to their own category, and other conceptualization aspects. By the use of a unique color for each of the aspects it is furthermore made easy to understand which conceptualization aspect each given topic is related to.

The grid interface is another way of making these tools and theories accessible and operational. By providing a list of all tools and theories collected in the product, it gives the user another way to obtain an overview of the content. Subsequently, as this is in alphabetical order, it enables users to better locate a specific tool or theory they may be searching for.

It is thus possible with this concept to provide users with an overview of tools and theories used in Concept Development, as well as making the product usable and supportive of their conceptualization process. This is for instance done on the Topic Specific Pages, which includes a Description - and a model of the tool or theory if applicable. Additionally, does the inclusion of main Takeaways on the topic make it easier for users to understand how to use the product in their own conceptualization processes, thus making the tool or theory more operational to use.

It can furthermore be concluded based on the analysis of the two target groups (Concept Developers and Start-up Businesses), that there are needs and opportunities that can be fulfilled by this concept. Additionally, through the use of multiple methods, has the fit between the concept and the market been described and conceptualized upon, which led to the creation of the Prototype, as a combination of data, methods and design theory.

Subsequently can it be noted that many of the tools and theories included as content in the Prototype have been used during this project to develop the conceptual solution itself.

Consequently can it be concluded that this concept is simply one way of making these tools and theories accessible and operational in a digital product. There may thus be other alternatives to solving the same Problem Statement.

In closing, does this project and thesis result in a Prototype and not a finalized product. The creation of a finalized product would thus require development of an actual website, along with a separate process of identifying, researching and writing about each of the tools and theories to be included in the product.

The thesis and Prototype thus lay the foundation for the development of a finalized product to be implemented into Yablonski's series of design frameworks.

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APPENDIX LIST

It can be challenging to read the information on various images in this thesis, due to the size and amount of content, therefore content heavy images have been added as appendices.

The following appendices can be found in supplementary .pdf-files.

[A] **Kanban Board:** *Kanban_Board.pdf*

[B] **Survey Response - Julia:** *Survey_Julia.pdf*

[C] **Survey Response - Rikke:** *Survey_Rikke.pdf*

[D] **Survey Response - Sandra:** *Survey_Sandra.pdf*

[E] **Survey Response - Google Forms:** *Survey_Google_Forms.pdf*

[F] **Interview with Marijke:** *Interview_Marijke.pdf*

[G] **Interview with Trine:** *Interview_Trine.pdf*

[H] **Affinity Diagram Target Group 1:** *Affinity_Diagram_Target_1.pdf*

[I] **Affinity Diagram Target Group 2:** *Affinity_Diagram_Target_2.pdf*

[J] **Mind Map of Conceptualization Aspects:** *Mind_Map_Aspects.pdf*

[K] **Value Proposition Canvas:** *Value_Proposition_Canvas.pdf*

[L] **Mind Map of Concept:** *Mind_Map_Concept.pdf*

[M] **SWOT Analysis:** *SWOT_Analysis.pdf*

[N] **SWOT Matrix:** *SWOT_Matrix.pdf*

[O] **ARCS Model:** *ARCS_Model.pdf*

[P] **Customer Journey Map:** *Customer_Journey_Map.pdf*

[Q] **Service Blueprint:** *Service_Blueprint.pdf*

[R] Content Hierarchy: *Content_Hierarchy.pdf*

[S] Wireframes: *Wireframes.pdf*

[T] Mockup: *Mockup.pdf*

[U] Interaction Prototype: *Interaction_Prototype.pdf*

[V] Prototype V1.1: *PrototypeV1.1.pdf*

[W] User Test - Rikke: *User_Test_Rikke.pdf*

[X] User Test - Sandra: *User_Test_Sandra.pdf*

[Y] User Test - Trine: *User_Test_Trine.pdf*

[Z] Prototype V1.2: *PrototypeV1.2.pdf*