

Living in UX Paradise – A UX Future Vision

Scenarios from a company at the highest level of UX maturity

Rolf Molich
DialogDesign
Stenløse, Denmark
molich@dialogdesign.dk

Natalie Woletz
Metronom GmbH
Düsseldorf, Germany
natalie.woletz@metronom.com

Dominique Winter
University of Siegen
Siegen, Germany
dominique.winter@designik.de

ABSTRACT

Implementing, integrating, and developing User Experience Design (UX) or Human-Centered Design, HCD, in organizations is associated with several challenges. On the way to a complete integration of UX or HCD, organizations go through several levels of UX maturity. While there are many UX maturity models and much advice on how to advance from low to intermediate UX maturity levels, success stories of organizations that have reached the highest UX maturity level are sparse.

This paper shows UX professionals examples of specific ambitious goals for UX maturity which they can strive for in their organization. The goals are presented as three scenarios or stories about personas from a fictitious company, Delta Market, which has reached the highest UX maturity level according to generally accepted UX maturity models.

The scenarios are written by three experienced UX professionals. To enable comparisons of the scenarios, all scenarios are based on the same description of Delta Market and a number of personas.

The scenarios show that UX should not only be anchored in processes but also in the organizational culture. This can be seen, for example, in aspects such as support from top management or the use of a UX vision.

KEYWORDS

Usability maturity model, Capability maturity model, User Experience, Usability, Organizational Development, UX Maturity

1 Introduction

The user experience (UX) of products has become an important competitive factor, because a successful UX can set functionally similar products apart from their competitors. To ensure long-term economic success, it is valuable for organizations to invest in the further development of their UX maturity.

To encourage discussions and help organizations set goals for their UX development, this paper presents three different scenarios which are based on the same parameters. The scenarios describe complementary views of a company at the highest UX maturity level. Furthermore, commonalities and differences between the scenarios are derived and discussed.

1.1 Structure of the paper

This paper is structured as follows: Section 2 presents a definition of UX maturity and examples of UX maturity models. It further presents descriptions of the highest UX maturity level provided by these models. Section 3 presents the background for the scenarios as well as the fictitious organization and the personas working there. Section 4 presents brief overviews of the three scenarios. Sections 5, 6 and 7 present the three scenarios in full. Section 8 discusses commonalities and differences between the scenarios. Section 9 contains the conclusion and suggests directions for further research.

2 UX Maturity

2.1 Definitions

In this paper, UX maturity is defined as “The level of understanding and implementation of a systematic human-centered design process within an organization or a development team” [1].

A UX maturity model is “A description of a number of UX maturity levels. Each UX maturity level is described by a number of characteristics that enable the organization and external, neutral assessors to determine if the organization or a project team has reached this UX maturity level.”

Some UX maturity models also describe what an organization that is on a certain level can do to reach the next higher level.

Examples of UX maturity models can be found in [2], [3], [4], [5]. ISO’s general process measurement framework [5] has been adapted for use in UX in [6]. Overviews of UX maturity models are provided in [7], [12].

2.2 Maturity levels in UX maturity models

In Table 1, the authors compare the UX maturity levels suggested by three frequently referenced UX Maturity Models (UXMMs). Each row represents a UX maturity level as described in the UXMMs. The top rows represent low UX maturity levels while the bottom row represents the topic of this paper, the highest UX maturity level. Empty cells indicate that the corresponding UXMM does not explicitly define this level.

ISO 33020 [5]	Nielsen [2], [3]	Spool [4]
	Hostility towards usability	
Incomplete. The process fails to achieve its process purpose	Developer-centered UX	Dark ages – No UX design
Performed. The process achieves its process purpose	Skunkworks UX	Spot UX design – Occasional UX projects with limited success
		UX design as a service – UX team serves projects on an as-needed basis
	Dedicated UX budget	Embedded UX design – Project teams get their own UX resources
Managed. The process is planned, monitored and adjusted	Managed usability	
Established. The process is capable of achieving its process outcomes.	Systematic User-Centered Design Process	
Predictable. The process operates predictively within defined limits to achieve its process outcomes	Integrated User-Centered Design	
Innovating. The process is continually improved to respond to change aligned with organizational goals	User-Driven Corporation	Infused UX design – Every project team member has fluent design skills

Table 1: A comparison of three frequently referenced UX maturity models.

2.3 The Highest UX Maturity Level

Some of the definitions of the highest maturity level are:

- **User-Driven Corporation** – User data does not just define individual projects; it determines what types of projects the company should fund. That is, the company employs user research to determine its overall direction and priorities. Also, the concept of total user experience is extended beyond the screen to other forms of customer interactions with the company (for example, service design issues like how to design the guest rooms and lobbies for a hotel chain). [3]
- **Infused UX Design** – Non-design members of the team have developed sufficient UX design expertise to, alongside the team’s UX designers, deliver market-leading user experiences [4]
- **Innovating** – The process is continually improved to respond to change aligned with organizational goals [5]

While these definitions are helpful, they fail to answer important questions that practitioners may ask: How is the user data that determines what types of projects the organization should fund collected, analyzed, assessed and used? Specifically, how does the organization employ user research to determine its overall direction and priorities? How does continually improving the process lead to a better user experience?

2.4 Life at the Summit

Some organizations have claimed that they have reached the highest UX maturity level, for example Catherine Courage at Citrix [8] and [9], as well as Kaaren Hansson [10].

To the best of our knowledge, none of these claims have been verified by neutral, independent experts.

3 The Challenge

To get answers to the above questions, the first author created a challenge for experienced UX professionals for the German MuC (Mensch und Computer) conference in September 2020. The challenge was improved and accepted by the two other authors of this paper.

The challenge was that each author should write a scenario for the fictitious company, Delta Market, which is at the highest UX maturity level. Additionally, the use of the personas Chris, the UX manager, and Mia, the CEO was prescribed. A few additional, optional personas were also described.

Each of the three authors was free to invent further personas as well as details about the personas and Delta Market.

The scenarios were to be described from Chris' perspective.

The authors developed their scenarios independently. Only minor revisions of the original scenarios have been made.

The scenarios are written by the three authors whose organizations or clients have not reached the highest level of UX maturity. The authors may well have overlooked important aspects of what life in “UX Paradise” is like.

3.1 Delta Market – The Fictitious Company

Delta Market is a chain of more than 500 medium to large US grocery stores. With more than 50,000 employees, Delta Market has a market share of approximately 20%. In many areas, Delta Market offers home delivery of the groceries ordered on their website. In addition to traditional checkouts, Delta Market also offers self-service checkouts. At present, there are no unattended stores.

3.2 Chris – The UX Manager

Chris is an experienced UX manager who works for Delta Market.

Chris is an experienced UX professional who has been working for Delta Market for more than 9 years. He is the leader of a team of about 12 UX specialists who provide guidance and support to the more than 100 people working in various UX roles in other departments. Chris and his team are also responsible for UX innovation.

3.3 Mia – The CEO

Mia is the managing director of Delta Market. She has made it clear that management believes the company is well positioned in the physical stores, but she fears that fast-moving start-ups offering full-service online purchasing and delivery will limit Delta Market's user base, particularly by adding customers with high purchasing power.

3.4 Additional Personas

For the scenario, the following optional personas are additionally available.

- Eric, the CFO (Chief Financial Officer) of Delta Market
- Susan, the Director of Support at Delta Market
- Emma and Oliver, experienced UX specialists at Delta Market, who have been with Delta Market for more than 7 years
- Tom, new UX specialist at Delta Market, who is not yet fully familiar with how Delta Market works and may inadvertently use inappropriate methods. Tom has previously worked for more than 10 years as a UX specialist for a UX consulting firm.
- Andrew, frequent customer with high purchasing power
- Claire, occasional customer with limited purchasing power

4 Overview of the scenarios

This section provides a brief overview of each of the three scenarios. The detailed scenarios are presented in section 5, 6 and 7.

The *first scenario* describes a day in the life of Chris. Through quotes and narrative text, the scenario describes how user input that can shape Delta's future is gathered, in particular from "exceptional users". It describes how Delta's UX professionals

regularly meet their users in the supermarkets and how the quality of UX work is regularly checked.

The *second scenario* describes how products and features are developed at Delta Market. The starting point for new developments is the customers and their needs. The cross-functional product team develops solution ideas together. These are validated very early in the process with customers. Using Design Thinking and other HCD methods, prototypes are created and iteratively improved. Only when a good user experience is ensured, the solution is implemented by the developers. Using UX-specific metrics, the team checks whether they have achieved their previously defined goals.

The *third scenario* focuses on the organizational culture. For this reason, the scenario is described as a narrative by Chris, who tells about his work at Delta Market. Chris reports on five fields of action for increasing organizational competence [13]: the UX competencies of employees, UX as part of the culture, the ability to perceive UX as an organization, the integration of UX in processes and the provision of resources.

5 Scenario 1 – A Day in the Life of Chris

5.1 Exceptional Users

In the morning, Chris, Emma (UX), Oliver (UX) and Stan (corporate strategist) have a two-hour discussion with five exceptional users who belong to the customer group "high purchasing power." The main subject is the users' experience as customers with a UX prototype of a presumably vastly improved full-service online purchasing and delivery facility, which they have been using for two weeks. This development project is an important part of Delta Market's business strategy.

The users have tested the full user experience of ordering, changing orders, taking delivery, returning products and complaining about unsatisfactory products, for example vegetables that were not entirely fresh.

Relevant storyboards and user journey maps are part of the discussion.

Among other things, the discussion shows that complaints and repeated orders cause problems and need to be improved. One of the users suggests that customer delivery drivers should be authorized to handle returns and complaints on the spot.

At the meeting, the users also report a number of traditional usability findings. They are reviewed by Oliver and other UX professionals and handled just like software defects by the appropriate development teams. Major accepted suggestions are integrated into user journey maps and used in strategic workshops with top management.

Chris has found that user journey maps are a helpful tool for communication with top management. User journey maps are coordinated with other departments, for example corporate strategy and the customer delivery department.

Delta Market has a panel of about 25 exceptional users who are customers, employees or suppliers. These users have been selected for their inventiveness and their clear and insightful, and sometimes humorous, comments. The exceptional users are paid

for their efforts. Of course, Delta Market also has traditional user panels and pools of potential usability research participants.

5.2 “Meet Our Users”

Mia says, “No more opinions!
Get out of the office!
Talk to users in their natural environment and find out:
“What are the real problems?” “

Later in the morning, Chris and Emma have a meeting with Tom, a new hire. He is just back from his first “meet our users” experience, which is mandatory for all UX professionals at least once every two years. Tom has been working two weeks in two of Delta Market’s stores, filling the shelves, checking out customers, answering questions from customers, and talking to customers, staff and suppliers. Tom has written the mandatory 6-page report about his experience.

5.3 Internal Quality Assurance – Personal UX Maturity Star (PUMS)

Mia says, “Delta Market invests millions of dollars based on the advice we get from customers and staff through our UX professionals. It is Chris’ and my responsibility to ensure that our UX professionals master the tools of their trade, so we reduce the risk of acting on bad or opinion-based advice.”

Chris, Emma and Tom review Tom’s Personal UX Maturity Star (PUMS). All UX professionals at Delta Market are reviewed every second year. The PUMS compares the UX professionals’ work and performance to Delta Market’s standard procedures for UX activities, for example interviews, writing and justifying user requirements and usability tests.

The PUMS shows that Tom has some bad habits from his previous employer. Chris consoles Tom and says that this is quite normal.

The PUMS were introduced three years ago. Three UX employees were so outraged by this alleged limitation of their artistic freedom in the choice and interpretation of methods that they quit.

Chris says, “Most UX work at Delta Market follows standard procedures. Inefficient activities like observing usability tests, having a separate note-taker for a usability test or an interview, and conducting eye-tracking studies require a justification. We have two standardized mandatory templates for usability test reports, a standard template and a basic template for usability tests whose results must be available within a few hours.”

Before lunch, Chris has a meeting with the external UX experts Sandra and Julie who do Quality Assurance for Delta Market.

Chris recalls that it was a problem finding experts who were truly qualified to evaluate an organization at a high maturity level.

Among other things, QA checks that standard UX procedures are followed, and that user interfaces are implemented exactly according to UX specifications.

5.4 Support – Enlisting Users

Chris has lunch with Susan, the support manager, to find out what’s trending in support.

Susan encourages feedback and advice from customers, staff and suppliers. She trains her supporters to be curious and follow up until they fully understand a customer’s problem. In order to encourage further feedback, supporters are authorized to hand out gift cards of \$25 or more for advice or complaints that are considered helpful.

Chris says, “The feedback we get from our customers is worth much more than the \$20,000 we pay annually in rewards. Other companies pay bounties for people who report security problems – we pay bounties for great ideas from our customers and staff.”

Feedback is used to focus usability tests unless the problem is obvious.

To further encourage feedback from customers, staff and suppliers, answers to questions are provided as quickly as possible. When a customer’s suggestion is implemented, the customer receives a notice and another thank you.

Each week Susan sends the most important feedback from customers to Chris.

Customers who are rewarded repeatedly or who send in exceptionally good suggestions are considered for the panel of exceptional customers. Exceptional customers are also recruited through marketing campaigns.

Delta uses slogans like, “YOU can make a difference. We listen to you. Here’s the proof (followed by a true story of how a named customer made a difference).”

Cooperation with support is two-way. Support is informed in advance of any changes that could affect the customer experience so they can have particular focus on it when customers call and provide immediate feedback to the development team.

Each UX professional spends one week per year in support, answering questions from customers and getting a better feeling for customers’ pain points.

5.5 Regular Testing of Prototypes

In the afternoon, Chris visits Delta Market’s flagship store where prototypes of major new concepts are tested with real customers, real staff and invited usability test participants.

Today, Delta Market’s design process is based mainly on observation, interviews, user requirements, development of

competing prototypes and design driven by usability testing of prototypes.

Chris observes customers who use a new self-checkout system to prepare himself for a usability inspection on the following day. He also chats with a few customers and continues the chat all the way to a customer's car to get a better impression of the total user experience.

Chris and his team spend a lot of time doing user experience tests of for example the experience of delivery, post-delivery, handling of returns and handling of complaints.

Chris says, "I need constant user feedback. I don't want to be told by top management that there's a need for a feature, such as an item locator app in a supermarket to answer questions like "Where can I find anchovies?" and "Where can I find an employee?". I want to know about it before they tell me. If it's not a good idea, I need to have data to kill it instantly."

5.6 Key Performance Indicators, KPIs

Mia says, "Chris and his people provide golden opportunities for Delta Market. But even gold can be too expensive..."

A quality team regularly measures KPIs and checks the quality of the interaction at critical touchpoints with customers, staff and suppliers, for example through mystery shopping.

Chris and Emma discuss development in a number of UX-related KPIs, such as

- The time it takes support to answer a customer's question,
- The time for the self-checkout,
- The time it takes to order a standard set of products with Delta's app
- The time for a usability test with five users

Through KPIs, Chris can justify the relevance of his employees and his department at any time and make timely, appropriate corrections.

5.7 UX Strategy

An important part of Delta's UX approach is never to outsource user research, like interviews and usability testing.

Chris says, "Outsourcing your research is like outsourcing your vacation. Sure, it gets the job done, but it's unlikely to have the desired effects."

Emma adds, "But sometimes when you go on vacation you do hire a tour guide."

At the end of the day, Chris has a chat with Emma and Oliver about the UX strategy. Delta has a UX strategy for each relevant part of the business strategy. Strategic insights are included in the appropriate product's roadmap.

The roadmaps are discussed and brainstormed at biannual workshops for the exceptional users and Delta Market's management. Usually a ton of good and crazy ideas come out of these workshops. These ideas are then tested systematically.

Mia and Chris agree, "We pay careful attention to all our user input, both strategic advice and minor usability issues, even when the advice is inconvenient to us. The path to Paradise goes through an almost impenetrable forest of inconvenient details."

6 Scenario 2

Chris, the UX Manager, is on his way to an important meeting. The product team for the mobile app will present their work of the last weeks to the management today. Chris is looking forward to the feedback from Mia, the CEO, and the other managers. On the way to the meeting room, Chris reviews the last weeks.

6.1 The Voice of the Customer

At Delta Market, regular activities are carried out to get to know the situation of the customers and their possible problems. These activities, also called Discovery, are not only performed by the UX specialists, but also by developers, product owners and subject matter experts.

During such a Discovery, UX researchers found out that customers are totally annoyed when they can't find the products they want to buy in the store. Either because they do not know where the products are located or because the products are sold out.

- "I can't find what I'm looking for and it's totally annoying!"
- "There's no more fresh yeast - what do I do now?"
- "Where is the coconut oil, in the Asian specialties or in the other oils?"

The researchers discussed these findings with the App Team. Together, they used the "How-might-we" method to work out two essential questions:

- "How-might-we enable our customers to easily find products in the market?"
- "How-might-we help customers when a product is sold out?"

6.2 Ideate

With these two "How might we", the whole product team did an ideation session. During that, the idea was born to extend the already existing mobile app with a few functions:

In the future, it should be possible to find products in the store with the help of the app, it should be possible to receive suggestions for alternative products if a desired product is not available, and it should be possible to pre-order a product and receive a notification when it is available.

6.3 Validate

Since product development at Delta Market continuously focuses on the customer, these ideas were first validated with customers.

Customers were asked about the ideas "Find products in the store" and "Product suggestions". Overall, both ideas were found to be good. During the interviews, the product team even received additional ideas and suggestions from customers, which they could take into the next phase of product development.

For the idea "pre-order products", a Painted Door Test was done in the app.

This means that instead of actually developing the function, only a fake function was designed. Thus, it only looked like you could pre-order products.

Customers who wanted to try out the function were then kindly informed that unfortunately this is not yet possible.

After a brief period of time, so many customers tapped on the function that the team was convinced that the idea would work.

6.4 Design

In the next project phase, the Design phase, the team iteratively developed UX concepts and UI designs.

First, the team decided that they wanted to work on the "Alternative Product Suggestions" feature. The team could decide this independently. The predefined project flow ensures that product ideas are always reviewed with customers. For the management it is therefore sufficient to be merely informed about the progress of the project.

The team decided to do a design sprint. During the design sprint, they developed a prototype, which was again tested with customers. By the end of the week the team had achieved good results. Some changes to the prototype still need to be made. This will be done in the next phase of the project together with the developers. So the next step would be to actually develop the solution with all the necessary tools.

Among other things the team has the intention to

- develop a proposal logic with AI
- to develop further ideas for the concrete presentation of alternative products

6.5 Objectives and Metrics

The team has set concrete goals for how they want to improve their customers' shopping experience. They have defined several metrics that will be used to measure the extent to which they have achieved their goals. For example, the team will record how often these new functions are used, what customer feedback is received, and whether the number of products per purchase is increasing. This will allow them to determine whether the new features have really achieved an improvement.

6.6 Develop

Now the team wants to move its project into the final phase of product development, the development phase. But first they will present their work to the management to get their feedback. Chris is certain that it is extremely unlikely that the project will be

stopped. The team has adhered to the standard sequence of a user-centered development process, validated its ideas with customers, and is able to specify concrete measurement criteria to verify the achievement of objectives.

In the meantime, Chris has arrived at the meeting room. Emma and Oliver, the two UX specialists, as well as the product owner and the developers of the app team are already waiting there to present their work to the management.

7 Scenario 3

I remember well that everything was different in the past and it was a long way. But let me tell you how it is with us today.

7.1 Competence of employees and participation in UX methods

We regularly train our employees. My team and I have become more like coaches and mentors. All employees are trained so that we have a uniform perception of UX and usability and the methods in the company. Everyone also regularly receives information on how our customers think, what drives them and what problems we are trying to solve with which products. They also must work in the stores so that they can develop an understanding of the customers. Even our top managers take turns in the stores. Anyway, we all must learn as much as possible about our users and know their needs. That goes all the way to our logistics experts, who do not just drive goods around, but know that their work is doing something good for our customers.

Another nice example is our entrance area in the stores. Our colleagues have thought about how customers feel when they come to us and have arranged everything in such a way that when customers enter our stores, all sorts of little things such as the presentation of flyers or a bulletin board for customers lead to an experience that suits our vision. This is important to us because every contact with the customers influences the UX, whether digital or analog.

Members of product teams participate in UX-related activities, for example usability tests. Not because they must participate, but because they have a vested interest in it. They simply enjoy expanding their own view through real user feedback.

7.2 UX as part of the culture

Our culture has also changed quite a bit. For example, we regularly have meetings, where we share stories from users, both successes, and bad experiences. We have such a meeting every two weeks on Mondays in the cafeteria. We discuss what we can learn from the stories. Stories are also shared by email and in the company-wide slack channel for UX. My team members also prepare a few highlights for all colleagues in the stores.

Fortunately, you do not have to persuade anyone to participate. Everyone has understood that UX is super relevant. Even our management shares this opinion. Mia, our CEO, often listens to the stories. She always says that without these stories and the regular UX KPIs she would not be able to judge how the

customers are doing. The stories even led our lawyer to make the privacy policy and the terms and conditions more understandable.

We have developed a UX vision in coordination with the management and together with many colleagues. Our main result was that our products and services should be perceived as 'environmentally responsible' and 'trustworthy', but also as 'modern'. Each product team then thought about how these expectations could be translated into their product visions. For example, the shopping list team envisions how the shopping list on our website enables our customers to organize their future purchases in a clear and informative way and to recognize how ecologically valuable their purchases will be or what alternatives are available. Another team that takes care of the self-pay checkouts and their operation has set itself the goal that over 99% of users can use them without assistance. This should make the shopping experience look particularly modern.

My team helps a lot in the operationalization of the UX vision and sometimes I felt more like an organizational developer than a UX professional. Today, however, everyone in the company knows how we want to be perceived by our customers through our products and each team can say how they contribute to this.

7.3 Ability to perceive UX as an Organization

We work hard to understand the needs of our customers. We survey often to get qualitative and quantitative data. Performance Indicators play an important role in management. A lot has happened here, too. In the past, we only had "hard" key performance indicators in finance. Now we also have UX KPIs for all interactive products, which are derived from the vision of the product and thus indirectly from the UX vision of our company. We mainly use the UEQ+ [11] as a questionnaire and for regular quantitative surveys, both of which are conducted every month and help us to make continuous data-based decisions. Eric, our CFO, has also included the UX KPIs in all his reports.

This helps teams to check if they are achieving their UX goals. The product owners consider the KPIs when they prioritize the items in their backlog.

We have created a platform that allows teams to conduct user research at any time. My team consists of a few user researchers who do nothing else but support the teams and work in our user lab. Sometimes as consultants, sometimes as active support, but meanwhile mostly only as coaches.

We even drive research to the point where we make entire product decisions dependent on research. I remember it felt strange when we first started to develop a product based on user research alone. We had found that users of the shopping list usually look for offers first. So, we built an offer alert that helps users to save money but still act sustainably. In the past, a lot of politics and ideas of individual managers were usually the starting point for the development because somebody wanted fame and glory. Today we look very closely at the problems of our customers and openly consider how we can make people's lives better through our expertise. Since the individual teams also do a lot of their own user research, we must make sure that the results are qualitatively appropriate and well shared. For example, my team helps with coordination of all research.

7.4 Integration of UX into Processes

Today, UX is an integral part of all processes that deal with product quality or idea generation and so on. We integrate user feedback and aspects of UX into all major processes. We have completely redesigned some of them, such as the collection of user feedback. This was necessary because we now share all the important insights and UX-related stories within the company. We want everyone to know what the UX situation is like. One of my employees summarizes user feedback from reviews, feedback surveys and so on and distributes it as an e-mail at headquarters.

We also ensure that there is sufficient room for maneuver. Each team now has access to UX expertise, either through people with expertise in the team or through support. We help people help themselves. We enable all those involved in product development to make informed decisions. Our superiors also sometimes manage with UX-related goals, whereby the exact selection of how we achieve these goals is up to the team.

7.5 Resources for UX

It is nice to work for a company whose top management has understood that UX is a super relevant issue. All steering meetings discuss how we can improve the user experience. In fact, we even considered appointing a Chief eXperience Officer (CXO), but we realized that UX must be in everyone's mind. In my role, however, I am often present at important meetings like the weekly meeting of the top managers to explain to them how to interpret data from current research or provide advice regarding the further development of the overall UX of the company. Of course, not all decisions are made solely based on UX aspects, but UX is at least as important in the decision-making process as the other aspects.

With support from the top management it is also easy for us to get resources. We can now recruit test persons for many topics at any time and carry out the most diverse user experience tests. We can test prototypes at our company as well as do remote A/B tests and so on. Of course, a platform like this also must be managed and supported. That is what my team does. In general, any time spent working on UX work is completely acceptable.

Also, today it is as easy to get external UX professionals as it is to get external software developers. In the past we always had to argue, and it was a huge discussion topic. Today, it is quite normal. As late as yesterday, we bought an external UX professional who will now support a team for half a year. If we need experts for specific UX topics, we can hire them and learn from them. For example, once a month we bring in external experts to give lectures about UX topics and enlighten us. Everyone is welcome to attend. Sometimes there are also special coaches who help us to develop better UX.

8 Discussion

The scenarios vary considerably in style and content.

The following subsections discuss a number of remarkable similarities and differences in opinion between the scenarios. We have used the abbreviations S1, S2 and S3 for the three scenarios.

8.1 Similarities Between Scenarios

8.1.1. Users are Involved Throughout Design and Development. All scenarios emphasize the importance of continuous involvement of real users throughout a project, starting from project conception. In S1, users are not just customers of Delta Market but also sales associates, store managers, external suppliers, etc.

8.1.2 Know Your Users, Tasks and Environments. S1 and S3 both say that UX professionals must work in the stores regularly where they meet the real users in the real context of use. S1 also suggests that for the same reasons UX professionals should work regularly in support.

8.1.3 The Design Process is Iterative and Driven By User-Centered Evaluation. All scenarios use prototyping and evaluation with real users.

The three similarities above reflect the ISO 9241-210 standard [14]. Our paper indicates how the advice in ISO 9241-210 can be implemented in practice.

8.1.4 Metrics. All scenarios use metrics to define goals for the user experience, for example Key Performance Indicators or KPIs, or whether a qualitative goal has been achieved. The metrics are regularly checked. S1 also defines KPIs for the performance of the UX team.

8.1.5 Standard Process. All scenarios mention standard UX processes. S1 uses the phrase, “standard procedures for UX activities,” while S2 uses the expression, “predefined project flow.” S3 says, “All employees are trained so that we have a uniform perception of UX and usability and the methods in the company.”

8.2 Differences Between Scenarios

8.2.1. User driven design. Nielsen calls the highest level of UX maturity a “user driven corporation” [3]. It’s an interesting question whether users or designers come up with ideas for new products and features. Also, are users involved in ideation?

In S2 and S3, user needs are identified by UX professionals or stakeholders based on user research. The user needs trigger the development of new products or features. Based on an ideation within the product team, the designers then design the product or feature that satisfies the user needs. During the design process the users play a decisive role. Ideas that score poorly in a usability test are improved. A product or feature can only go live when the user experience meets predefined goals.

In S1, ideas for new products and features originate from user panels rather than from experienced designers. Ideas that score poorly in early user experience tests of prototypes are discarded.

8.2.2 Quality Assurance. S1 suggests that there is a snake in Paradise. The snake is quality assurance. In a user driven corporation, the suggestions from UX will hopefully lead to massive investments. To ensure that decisions are made on a sound basis, S1 suggests independent quality assurance of UX

activities. S1 also mentions that some UX professionals may not like to be checked. S2 and S3 do not mention any kind of checks on UX activities.

In contrast, S2 assumes that there are only very well trained and highly competent UX professionals in the UX Paradise, who per se deliver high quality. Since the entire product development is iterative and intermediate results are checked again and again, explicit quality assurance is not needed.

S3 suggests, “Also, today it is as easy to get external UX professionals as it is to get external software developers.” In contrast, S1 argues, “An important part of Delta’s UX approach is never to outsource user research, like interviews and usability testing,” because there is a substantial risk that the consultants might not be at Delta’s maturity level. For reasons of space, none of the scenarios discuss the interesting question how you hire UX professionals for an organization at the highest maturity level.

8.2.3 Freedom and Cost Awareness. In S3, UX professionals have considerable freedom, for example “Members of product teams participate in UX-related activities, for example usability tests. Not because they must participate, but because they have a vested interest in it. They simply enjoy expanding their own view through real user feedback” and “With support from the top management it is also easy for us to get resources.”

In S2, the team independently decided which features it will develop next. The management is only informed about it. The team can also decide on the procedures and methods to be used, as long as they adhere to the user-centered development process defined for Delta Market.

While S1 agrees that there is no need to argue for the importance of UX at Delta, S1 has a more pessimistic view, for example “Through KPIs, Chris can justify the relevance of his employees and his department at any time and make timely, appropriate corrections.”

9 Conclusion

This paper has presented three independently developed scenarios that describe the fictitious Delta Market, which has reached “UX Paradise”, the highest UX maturity level. All scenarios are based on the same description of Delta Market and key actors. Each scenario describes how the highest level of maturity of UX is experienced in the organization.

The scenarios agree that constant user involvement is important, and that UX professionals and stakeholders need to know the users. They also agree that prototyping and regular measurements of KPIs are important. Finally, the scenarios agree that a standard UX process exists and is respected.

The scenarios differ with respect to how user involvement is done in practice, in particular if key ideas for new products originate from designers or from users. There is also some difference regarding the need for quality assurance. Finally, scenarios differ on freedom and cost awareness.

The scenarios reflect a variety of perceptions of an organization at the highest level of UX maturity. We encourage

the development of further scenarios that follow the rules laid out in section 3.

For the further development of a comprehensive understanding of organizations at the highest level of UX maturity, scenarios from the user perspective should be developed. These scenarios can show how customers and other users perceive Delta's high level of UX maturity. In other words, how does Delta's high UX maturity affect the everyday life of for example Andrew, a frequent customer with high purchasing power, and Claire, an occasional customer with limited purchasing power.

ACKNOWLEDGMENTS

We thank the participants of our presentation at the MuC conference for their valuable comments. Particular thanks to Björn Rohles for suggesting that additional scenarios from the user perspective might be helpful.

REFERENCES

- [1] UXQB (Ed.). 2020. *CPUX-F, Curriculum and Glossary, Version 3.16 EN*. https://uxqb.org/wp-content/uploads/documents/CPUX-F_EN_Curriculum-and-Glossary.pdf
- [2] Jakob Nielsen. Corporate UX Maturity: Stages 1-4. <https://www.nngroup.com/articles/ux-maturity-stages-1-4/>
- [3] Jakob Nielsen. Corporate UX Maturity: Stages 5-8. <https://www.nngroup.com/articles/ux-maturity-stages-5-8/>
- [4] Jared Spool. *Driving Product Teams to Become More Design Mature* <https://articles.uie.com/driving-product-teams-to-become-more-design-mature/>
- [5] International Standards Organization (ISO), 2015, ISO/IEC 33020:2015 - Information technology – Process assessment – Process measurement framework for assessment of process capability. ISO, Geneva, Switzerland
- [6] Rolf Molich, UX maturity – A usable UX maturity scale <https://www.dialogdesign.dk/a-ux-maturity-scale/>
- [7] Gena Drahun, *UX maturity models*. <https://www.slideshare.net/Hienadz.Drahun/ux-maturity-models>
- [8] Catherine Courage, Enterprise UX Conference 2015, The Enterprise UX Journey: Lessons learned and the journey ahead <https://www.youtube.com/watch?v=ql91dHyPaIY>
- [9] Catherine Courage, TEDx Kyoto 2012, *Igniting creativity to transform corporate culture*. <https://www.youtube.com/watch?v=01Y7qlPFpqq>
- [10] Kaaren Hansson, Enterprise UX Conference 2017, *Designed to Last* <https://www.slideshare.net/RosenfeldMedia/Designed-to-last-kaaren-hanson-at-enterprise-ux-2017>
- [11] Martin Schrepp & Jörg Thomaschewski. 2019. *Design and Validation of a Framework for the Creation of User Experience Questionnaires*. International Journal of Interactive Multimedia and Artificial Intelligence, <http://dx.doi.org/10.9781/ijimai.2019.06.006>
- [12] Thaisa C. Lacerda, Christiane Gresse von Wangenheim, 2018. *Systematic literature review of usability capability/maturity models*. Computer Standards & Interfaces 55 (2018) 95–105
- [13] Dominique Winter & Gunnar Stevens, 2020. *Maßnahmen zur Steigerung der organisationalen UX-Kompetenz*. In: Hansen, C., Nürnberger, A. & Preim, B. (Hrsg.), Mensch und Computer 2020 - Workshopband. Bonn: Gesellschaft für Informatik e.V.. DOI: 10.18420/muc2020-ws03-002
- [14] International Standards Organization (ISO), 2019, ISO ISO 9241-210:2019 - Ergonomics of human-system interaction – Part 210: Human-centred design for interactive systems. ISO, Geneva, Switzerland