# Appendix

General

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Graduation Project

MSc. Strategic Product Design

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# **Appendix A: Interview** Set-up

Apart from desk research and informal conversation, interviews are essential for gaining a deeper understanding of Exacts culture, it's practises and the problems that employees face. The main goal of these interviews was to understand the "why" behind current practises, to gain insight into the underlying problems and to assess the relation between departments. What moves people to do what they do? Why is there a focus on Customer Journey Management (CJM)? How is it understood within Exact?

These interviews were set-up in a semi-structured way in order to be able to both compare results and give room for natural flow of conversation. Participants were selected based on position, area of influence and experience within Exact as seen in Figure 23.

Firstly, the aim was to interview people from within the customer success department directly involved with Customer Journey Management. The goal was to understand their

vision on Customer Journey Management and the problems they face. Secondly, high level employees from other departments were selected to gain insight into the cross-departmental view on the Customer Journey Management initiative.

In order to enable participants to speak freely and critically, all participants responses were anonymised. For the interview stranscripts please refer to Appendix F (only available to the company, due to confidentiality).

Interviewee	Role	Department
#1	Principal	CS
#2	CJO	CS
#3	CJO	CS
#4	CJO	CS
#5	Manager	CS
#6	Director	PS
#7	Director	CS
#8	Chief Officer	Marketing
#9	Director	Sales

Figure 43: Interview table

#### Interview script

Hi, thank you for being here. My name is William. This interview is set-up to gain insight into Exact and the way you work. In order to do so I have formulated some questions that I would like to ask you. In order to analyse these interviews I would like to record audio which is strictly confidential and will not be heard by anyone else than me. Your name will not be included if you are quoted in my report. Are you okay with me recording audio? (yes/no)

Please understand that there are no wrong answers to give. Let me first start with you and your role here.

#### General (personal):

- What do you do here at exact?
- What is your (study) background?
- In what team?
- With who?
- How is your effort measured? (drivers?)
- How long have you been here?
- What departments have you worked at?
- What has changed since you came here?
- Why did you choose to work at exact?
- What do you like the most?
- What are you most critical about?
- What do you think is most difficult about your job?
- Where would you like to be in 2-5 years from now?

#### General (company)

- What is Exact's purpose, in your opinion?
- What are Exact's values? (Empowerment, customer centricity, innovation)
- Do you think Exact meets these values?
- Which value is executed best/least?
- · Where do you think Exact is headed in the next 2-5 years?
- · What do you think can be improved at Exact?

#### Innovation (For C|O's / managers)

- What is innovation in your opinion?
- How does Exact innovate?
- What methods are applied?
- What process do you usually use to come up with new ideas?
- Could you give me an example of a typical innovation project from start to finish?
- How do you select what should be done?
- What are your KPI's?
- How is innovation measured?
- NPS?
- Churn?
- Does the customer play a role in your innovation process?
- How?
- Too much? Too little?

#### NPS, Churn (for NPS expert)

- Could you briefly describe NPS for me?
- How is it measured?
- How is it used?
- What are it's benefits?
- What are it's limitations?
- Could you briefly describe Churn?
- How is it measured?
- How is it used?
- What are it's benefits?
- What are it's limitations?
- Why did NPS and churn become so important within Exact?
- Do you know any alternatives to measure customer satisfaction?
- Should NPS and Churn be KPI's?

#### **Customer Journey Management**

- Could you define what a customer journey means in your words?
- What is customer journey management?
- What role do you think it should play?
- Who should be involved?
- Should it only be applied within customer success?
- Does it add to customer centricity?
- Why do you think there is a focus on customer journey management within exact?
- How does customer journey management connect with Exact values?
- What does the ideal future of customer journey management look like?

#### **Final question**

• If you were appointed CEO today, what would be the first thing you would change?

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# **Appendix B: Company** analysis

Before investigating Exacts current practices and problems regarding customer journey management, a general understanding of Exact as a company is necessary. This section aims to create this understanding by touching shortly on it's strategy, it's organisation, it's products and it's customers. The research for this section was mostly done through desk research and informal conversation.

## **History**

Exact has grown into a market leader for financial and business software in the Benelux, since it was founded by six students in 1984 (Exact, 2020). Serving both internationally operating businesses with enterprise solutions as well as Small to Medium enterprises (SME's) with Exact Online, they aim to help entrepreneurs and accountants manage their numbers and run their day-to-day businesses. Over the years Exact has adapted different strategies towards obtaining and maintaining their market position.

Before focusing solely on the Benelux market, Exact tried to expand it's reach in the nineties by going abroad. In 2012, with the appointment of Onno Krap and Erik van der Meijder, Exact was split up into two business units (Business and Cloud). This split led to business success until in 2016 the playing field had changed again. They then made the decision to focus on diversification (adding additional services to improve customer experience) and scalability (to achieve exponential growth).

This strategy is still largely in place today even after the appointment of CEO Phil Robinson in 2017. He has however, reverted back to a focus on the Benelux instead of looking further abroad to "operate from a position of strength". Although sales strategies remain central, user centricity is specifically mentioned in the new strategy. He also puts special focus on their core customers: SME's and accountants. Exacts

"In tomorrow's connected world, Exact is a frontrunner in business software. Our people passionately serve SME's and accountants by continuously delivering innovative solutions, that make a difference for their business every day." (Exact, 2020)

current vision (quote in red) also shows this strategy and is carried by the company values: Empowerment, Customer Centricity and Innovation. Since February 2019, Exact has come into ownership of the global investment firm KKR which has claimed to have invested in Exact for the long run. With KKR, Exact has set the goal of doubling in revenue in the next 5 years from 250 million to 500 million.

#### Previous research

Over the years this thesis is not the only one issued by Exact. In 2016, J. Garcia Mateo proposed a new user-centred prioritization method for evaluating user value of backlog topics at Exact. She showed that user impact was not yet part of the decision making process. Through introducing this method she tried to make Exact's development process more user centred and fact-based.

In early 2018, E. Daanen focussed on implementing Design Thinking at Exact. In order to stay competitive in the future she showed that innovation through Design Thinking practises was necessary. She argued that there was an increased need for design leaders and proposed an implementation strategy of Design Thinking for project teams at Exact. Unfortunately after the appointment of Phil during the course of this thesis, the UX teams that were going to implement this strategy were disbanded.

Both theses show that Exact has been struggling over the years to put the user at the centre of their processes and development practises and that there is a shortage of employees and managers with a design thinking mindset.

#### **Organisation**

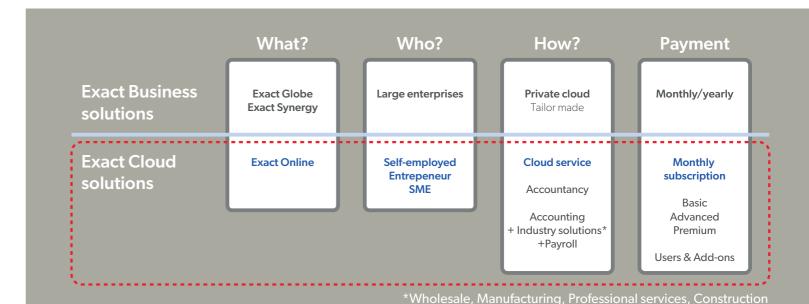


Figure 44: Organisation overview

Exact is organised into two business units: Business Solutions and Cloud Solutions as seen in Figure 24. They are both supported by a mutual corporate structure providing legal and financial structure. There used to be a hard division between these two business units, created in 2012, but this is slowly disappearing as Exact is trying to become "one Exact" since the appointment of CEO Phil Robinson. This thesis takes place within the Cloud Solutions business unit responsible for Exact online.

#### **Departments**

Exact Cloud Solutions is divided into the following departments (Figure 25):

- Marketing
- Sales
- Customer Success (where this project is issued)
- Product strategy
- Technology

#### Marketing

It all starts with Marketing generating interest for the solutions that Exact sells. Through many channels such as online advertising, sponsorships and fairs Exact tries to build and keep up their brand reputation. Apart from the responsibility of Exact's brand reputation Marketings main goal is to provide leads for the sales teams. These leads need to be of high quality (the likely hood of the lead being interested in acquiring an Exact solution) in order for them to be useful to Sales. At the moment about 50% of the leads provided by marketing are being converted into customers for Exact Online.

Marketings success is measured based on their ROI which is calculated through a CAC/LTV ratio (Customer acquisition cost/ Lifetime Value) analysis. This illustrates the cost it takes for a customer to be acquired divided by the average total revenue that a customer will generate over it's subscription lifetime.

#### Sales

Once the lead is passed on to sales their work starts. Sales then has to try and convert these leads into customers. This means that sales is also the department that is involved most closely with the (potential) customer. They also have a vital role in keeping up the brand image created by marketing. Sales used to be considered "aggressive" but this is slowly changing. Nowadays, sales is responsible not only for the sale but also for the revenue of the first six months after the sale. This means that there is an increased motivation to make sure that the client stays with Exact and that the sale is not just for short term profit. Sales success is mainly measured in Add MRR (acquiring of new revenue) and churn (retention of existing revenue).

#### **Customer Success**

If sales managed to turn a lead into a new customer the work of Customer Success (CS) starts. CS is responsible for the post-sales process (after the product/service has been purchased). This includes the on-boarding phase (getting to know the software), which usually entails the first 6 months of use, the usage phase, IPM's (in product messaging), training programmes and support. They need to make sure that the customers wishes and needs are accounted for and that they support them in their learning curve and usage phase with any problems they might encounter. CS is still a relatively new department, founded about two years ago with the purpose to reduce churn, mainly during the onboarding phase. The success of CS is measured mainly based on Churn (hard financial measure) and NPS (softer survey based measure) which will be explained in more detail further on.

#### **Product strategy**

All client feedback from CS (and sales and marketing) is then communicated with Product Strategy (PS). They are responsible for deciding

on what needs to be developed and when, and also to come up with new business models and possible acquisitions. They communicate this to other departments through roadmaps and based on those, backlogs are made that serve as a to-do list for Technology. The primary driver for success within PS is creating new or improved revenue streams and overall company performance. They are not being judged on amount or level of innovation (directly).

Since 1st of March changes have come into play. Since then there are dedicated Product Line Managers. They are responsible for one specific product line giving them increased focus on one segment.

#### **Technology**

When new features need to be developed or existing need to be adjusted Technology is responsible for the creation of them. These are being included in the backlog which is the guideline for development within Technology. This is also where the majority of UX is situated. In the past they were more embedded in the whole company but this has been reverted since a little while back. They are less focussed on research and more on creating content. Technology is now also involved in the changes since March and are being divided into the Product Lines. Technology is also responsible for researching new technology and innovation although the main focus is on maintenance and improvement.

Exact is still mostly organised in silo's, with each department having its own culture, values and performance indicators. Over the years Exact is trying to change towards a more modern structure, trying to adapt to changing markets. In general there is an open mindset to change and improve the way Exact is organised. These changes might even happen too quickly in succession where a previous change did not get the chance to show its potential.



Figure 45: Information flow

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#### **Customer journey management**

Since the start of 2020, the Customer Journey Management team was founded within the Customer Success department by the Director of Customer Success. This team includes:

- Customer Success Director
- Digital Engagement Manager (new)
- 3 Customer Journey Owners

The new Digital Engagement Manager was hired with experience in customer journey mapping practises to oversee the Customer Journey Owners. The Customer Journey Owners were made responsible for the journey of a specific product: Accountancy & Payroll, Industry Solutions and Accounting. Together they try to agree on a horizontal alignment of the journeys. They have also started the initiative of customer journey mapping practises within Exact for each of their respective product journeys.

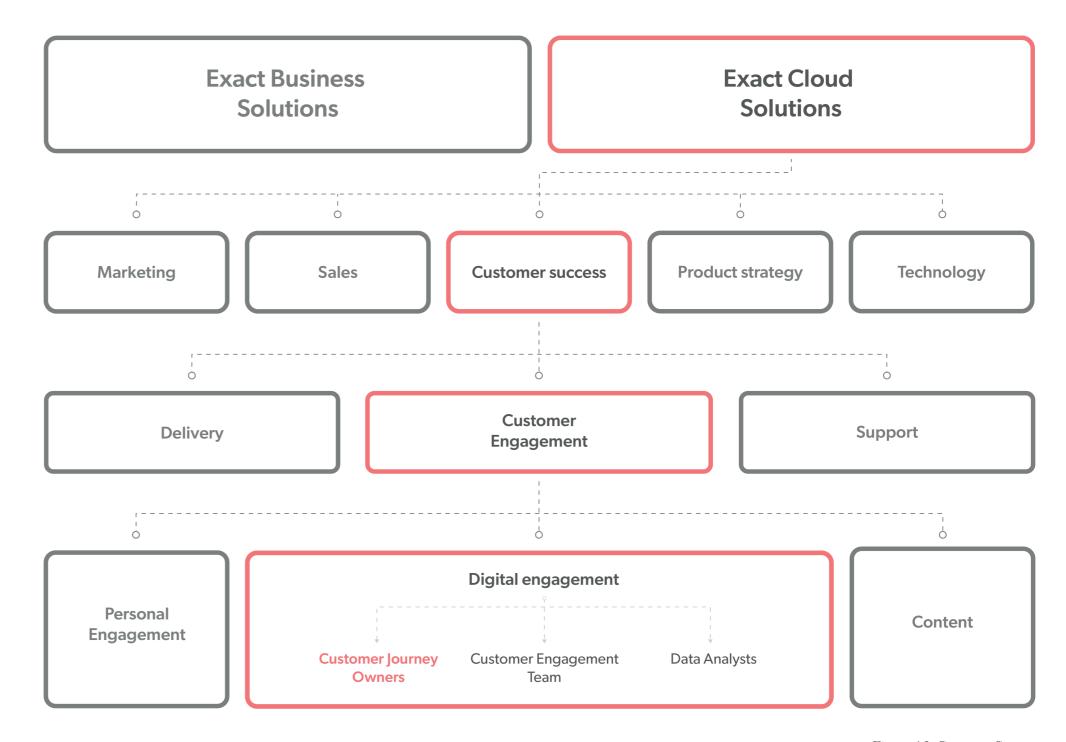


Figure 46: Customer Success

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#### **Company Strategy**

Many initiatives within a company are based on a common understanding of where the company should be headed. The company strategy decides the course and the departments each have there own manifestation in helping the company get to that common goal. What is the common goal that Exact has? What purpose does it serve?

#### V2MOM

Currently Exact uses the V2MOM method to express their company strategy and this is also adopted by departments and sub departments as a template to think about their part in the larger whole, to create alignment. This was template was developed by salesforce.com and is adopted within Exact since it's CEO and several other employees have a background there. V2MOM stands for: Vision, Values, Method, Obstacles and Measures. These V2MOM statements were analysed along with interviews to gain insight into the company strategy.

#### Vision

When inspecting Exact's company vision a couple of things stand out.

'In tomorrow's connected world, Exact is a frontrunner in business software. Our people passionately serve SME's and accountants by continuously delivering innovative solutions, that make a difference for their business every day." (Exact, 2020)

Exact believes that the future is a connected and integrated whole through the power of technology. It also strives to be a frontrunner in that future which is aided by continuously delivering innovative solutions and in doing so being able to passionately serve the customer. This vision implicates that Exact will need to invest heavily in new technologies and research in order to continuously innovate. If this is achieved, Exact will be seen as a frontrunner in business software. The interesting notion here is that it is not limited to specific software as long as its helps their customer do their every day business.

All in all this vision seems to be very ambitious and can serve as a good guideline for the future of Exact. It does, however, still have to show whether this is followed up with investments in the right places and will result in the fostering of the right culture to achieve these goals.

#### Values

The three values that serve as a guideline for Exact employees are:

#### **Empowerment**

- Take ownership and be a role model.
- Envision your future. we are all responsible for our own career path and development.

#### **Customer Centricity**

- Better understand your customers needs.
- Engage with and delight your customers.

#### Innovation

- Breakthrough innovation: think every day about what we/ you could do better. Make bold moves.
- Outside-in thinking: know the market product and trends.

When analysing the V2MOM's per department and during interviews it became apparent that the understanding and belief in these values differed greatly but also that these values were not always carried through and thus sometimes are still only words. One interviewee stated that Customer centricity is primarily a mindset and should be carried through to the veins of the company, which was not yet the case.

It does seem that the values are believed in by people but that a culture shift still needs to happen in order to truly embed them into the company. Two things stand out from the interviews: the fact that Innovation is mostly a buzzword, meaning that true innovation culture is not yet nurtured and also that the potential of a lot of employees is not yet unlocked. These factors are influenced by the culture within Exact, which is mostly sales-driven and with a short-term, quarterly or yearly focus. An interviewwee stated that this could be due to the fact that Exact has to live up to it's investors (KKR) expectations. Changing this of course is a process of years and requires the right people in order to come to fruit. The recent focus on Customer Centricity might explain the invention of Customer Journey Management within Exact. CJM practises, such as journey mapping and prioritizing decision making based on user values (based of the previous research of Garcia Mateo (2016)), can help Exact become more Customer Centric.

The most important thing is to align these values between departments and to make sure that the understanding of them is equal in basis. Of course every department has to adapt them in their own way but a general horizontal agreement should be made. For this project Customer Centricity is a key value as this serves as the basis for a good Customer Experience. In order to be customer centric, the customer needs to be at the centre of the innovation process. This way Exact can create

opportunities to engage and delight customers. Customer Journey Management is one of the ways to full fill these goals, if done right. It will help embed customer centricity in the veins of

#### **Product leadership**

Exacts competitive strategy is primarily based on retaining Product Leadership (from the Treacy & Wiersema model of value disciplines, 1993). This model suggests that a company has to focus on one of three strategies: Product leadership, Customer intimacy or Operational Excellence. This is also confirmed by one of the interviewees stating that Exact is a product leadership based company from its origin. If we look at Exact's history, the initial product was innovative and revolutionary for it's time and has transformed the accounting business. This strategy of product leadership has brought Exact to its market leading position of today. The question is whether this strategy is still applied effectively and can still differentiate Exact over its competitors based on product leadership.

Especially in the SaaS market of Exact Online, the game seems to have changed. A deloitte report on "the future of B2B sales" from 2019 states: "Customers are shifting from being product and solution-focused to seeking valueladen experiences from start to finish." In order to accommodate to this shift companies should not only strive a great product but also build up close relationships with their customers, building brand loyalty through customer intimacy. This shift can already be seen within Exact as it is trying to improve on customer intimacy through the company value of customer centricity, which in turn was one of the reasons Customer success and Customer Journey Management were founded. This value can still be greatly improved, however, as it should be a mindset over "just a value" as stated by 3 interviewees.

#### **Departmental drivers**

Since Exact has been around for over 40 years and is a company with over 1500 employees company culture drives the way that business is being done. It is something that has slowly formed over the years and is hard to change. What is the DNA of Exact? Why do people do what they do and how has this evolved over the years?

Exact has built it's success on numbers. It is what it is best at, creating an understanding of numbers to drive business growth for every business, being large or small. This is also reflected in internal company drivers where measurements for success are key in telling a convincing story. These KPI's are the main driver for what is being done, the decisions being made and the strategies being executed.

#### KPI's

Especially since the launch of EOL, statistics and data form the backbone of company decision making. Since numbers are the entity the business is built upon, this does not come as a surprise. Terms like MRR, NPS and Churn are used to measure the success of different departments and thus commonly serve as Key Performance Indicators (KPI's) for many within Exact. Therefore, gaining a deeper understanding of these terms and how they are used, interpreted and applied will give a better insight into Exact and the way they operate.

These terms are seen as key figures for SaaS businesses around the world (Web Summit, 2018). These differ from traditional KPI's since SaaS businesses gain revenue from monthly subscription fees (MRR) instead of gaining revenue from single transactions. This also means that customers constantly have the power to show their voice by cancelling their subscription (Churn). That it why it is common to ask customers about their satisfaction through NPS surveys to gain understanding of customer sentiment.

#### **MRR**

Monthly recurring revenue, usually referred to as MRR, is one of the main indicators of business growth for SaaS businesses. MRR states the total of recurring revenue generated by the subscriptions offered. It is the SaaS alternative to sales revenue generated over a period.

#### **NPS**

In 2003, in an article in Harvard Business Review called "The one number you need to grow", Frederick Reichheld claimed that the one number businesses need to grow is their NPS. Since then NPS has grown into an important measurement for customer improvement and retention programs and for Customer Experience Management (Figure 27).

Especially in SaaS it is very common to use NPS as an indicator for customer satisfaction and is used by managers as an important KPI. This is also the case for Exact, where NPS has a major influence on company decision making. Especially so for the customer success department which is judged mainly on maintaining and improving NPS. It was introduced a couple of years back to get a grip on customer satisfaction. A loyal customer means better retention rates which in turn reduces Churn.

NPS seems to be the magical indicator of a business' success. However, what does it really say and maybe more importantly what doesn't it say? Reichheld (2003) claims that NPS is the only number you need to improve in order to create business growth. Thus its usage has been adopted by many companies around the world. The idea behind management using indicators of customer loyalty as a critical measurement for business success makes good sense (Akasoy, 2013). It is proven that word of mouth, both positive and negative, have a big impact on how a company thrives (Grisaffe, 2007). A strong focus on creating and maintaining customer loyalty is imperative for any firm's long term success (Rust et al., 2004)

Although NPS can be a great indicator for customer satisfaction it should not be the sole basis for company decision making (Fisher & Kordupleski, 2019). More recent literature shows criticism on the use of NPS and the claim that is the "one" value that says it all (Grisaffe, 2007; Kristensen & Eskildsen, 2014; Zaki et al., 2016; Fisher & Kordupleski, 2019). Since NPS is the result of only that single "likely to recommend" question, it's implicated value seems too good to be true. It does give insight into customer willingness to recommend and can indicate possible problems. It does not, however, say anything about customer loyalty or retention (Zaki et al., 2016) nor does it give any data on the "why" of what actually needs to be done in order to improve (Fisher & Kordupleski, 2019). Companies should instead adopt a more nuanced multidimensional approach in order to predict customer behaviour.

For Exact this means that using NPS as a KPI is not necessarily a bad decision. It should, however, be used with caution and should not be the only indicator of customer loyalty that is used for company decision making.

#### How does it work?

email. Based on this answer, participants

#### Promotors (9-10)

#### Passives (7-8)

#### **Detractors (0-6)**

Dissatisfied customers that are at risk for most. Biggest risk for brand damage.



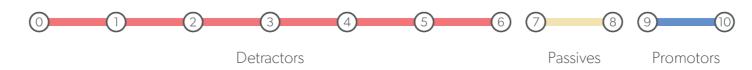


Figure 47: NPS

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#### **Products**

Exact Online is a SaaS (software as a service) solution provided mainly to small to medium enterprises (SME's) within the Benelux. Since it was founded, it has expanded it's product portfolio over the years from basic accounting software to more complex payroll, HRM (human resource management) and industry specific software. Exact Online software is divided into the following categories:

- Accounting
- Payroll
- Industry Solutions
- Accountancy

These products each have a Basic, Advanced or Premium subscription package, including different features, with associated monthly fees.

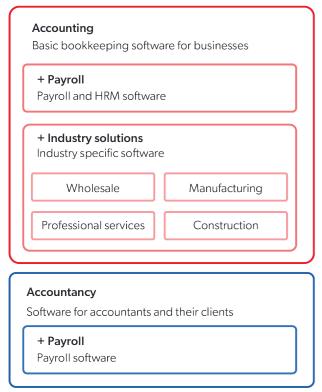


Figure 48: Exact Online Products

In Figure 28 the product hierarchy shows a division between Accounting and Accountancy. On top of these two main solutions, customers have the option to add functionality based on their type of business and requirements.

#### Accounting

Accounting is the basis of most Exact products. It is the basic bookkeeping software that started Exact. On top of this software, customers can add Payroll, HRM and Industry specific software. Within each of these software packages many different product features and options are available based on the subscription packages that a customer chooses.

#### Pavroll

Payroll software is used for managing and making payments to employees. It automates witholding taxes and calculating and depositing payments

#### **Industry solutions**

Industry solutions software is a group of products that include wholesale, manufacturing, construction and professional services (such as project management) software. For example, if you are a business that sells products in bulk to smaller retailers, you will most likely buy an accounting solution, and add wholesale software to manage your inventory.

No matter what business, Exact's accounting software is always the basis. The way the customer journey owners responsibilities are divided is also based on these categories. This means that the journey owner of accounting has to work closely together with the journey owner of Industry solutions since his/ her decisions also have an impact on the others journey(s).

#### Accountancy

An expanded version of Exacts bookkeeping software is available to accountants who not only deal with their own administration but also manage that of other businesses. It is essentially the same as accounting but with added functionalities and client packages.

#### Customers

As stated before Exact provides B2B software. This means that Exacts customers are other businesses of varying type and size. As seen in Figure 29, Exacts customer base can be divided into 4 categories:

- Large Businesses
- Medium Business
- · Small business
- Accountants

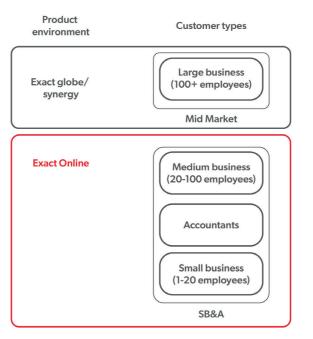


Figure 49: Customer Types

#### Large businesses

Companies with 100+ employees are categorized as large businesses. These companies usually fall outside the scope of Exact Online. They will instead work with the product environment of Exact globe and synergy. They will thus be served by the Business solutions unit (also referred to as Mid Market) and have a capital advantage, enabling them to demand customized solutions. Therefore they will often also have an account manager specifically assigned to them, to cater to their needs and wishes. This person is also the single contact person for questions and support.

#### **Medium Businesses**

Companies with 20-100 employees are usually categorized as Medium businesses. These types of businesses are the ones that are usually on the high-end of the Exact online product spectrum, with multiple solutions on top of their standard accounting package such as industry solutions. They generate the largest part of the revenue for Exact Online. These are also the businesses that have many different stakeholders within the company such as the business owner, the floor manager, the bookkeeper and the actual user on the company floor. Each of these stakeholders have different needs and drivers for using Exact Online. Whilst the user and the bookkeeper might work with Exact software everyday, the business owner and the manager only use it to get an overview of business results once a month.

#### **Small Businesses**

Companies with 1-20 employees are categorized as Small Businesses. They make up for the bulk of Exact Online customers but they do not generate a lot of revenue for Exact. These companies or self-employed usually make use of the standard solutions of Exact online. Most of the time they are not experts when it comes to bookkeeping and just "have" to do it. If they had the choice they would rather go back to do what they do best: carpentry, painting or running their cafe.

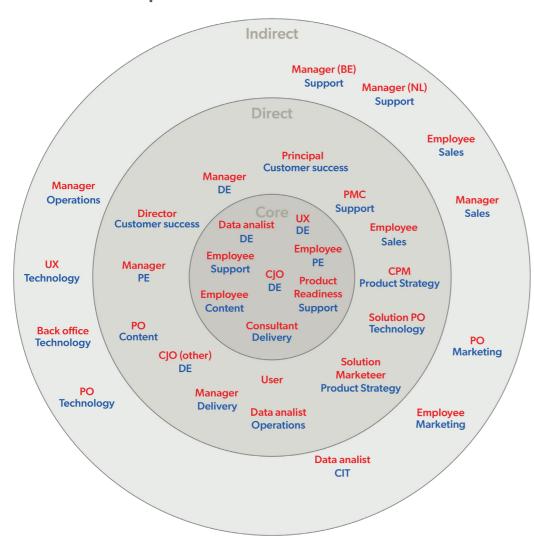
#### **Accountants**

Since accountants have a business doing companies' bookkeeping, they fall into a separate category. They make use of Exact Online's Accountancy offering. They vary from self-employed accountants to large accountancy firms. These both do have one thing in common: they work with Exact Online every day. This means that they are very critical of the software since it impacts their day-to-day very heavily.

# Appendix C: Stakeholder mapping

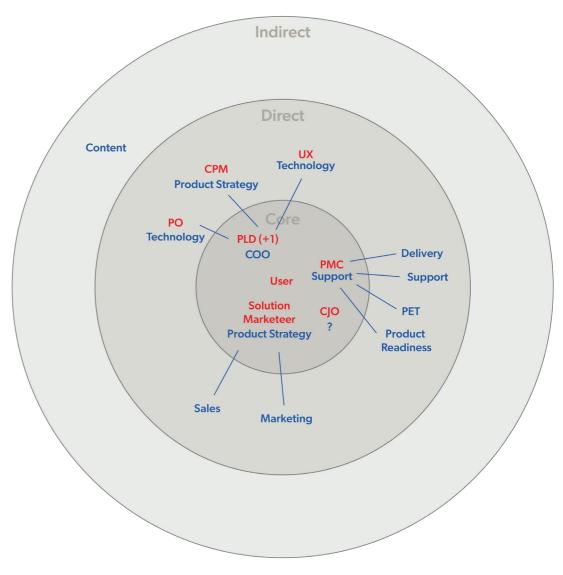
In order to better understand the area of influence that Cutsomer Journey Management has, a stakeholder session was organised to map the current and the ideal situation. This was done in two sessions of 1 hour while using a Onion Model template: Core (Solution Team), Direct stakeholders (stakeholders directly influenced by team), Indirect stakeholders (stakeholders indirectly influenced by team)

#### **Current Stakeholder map**



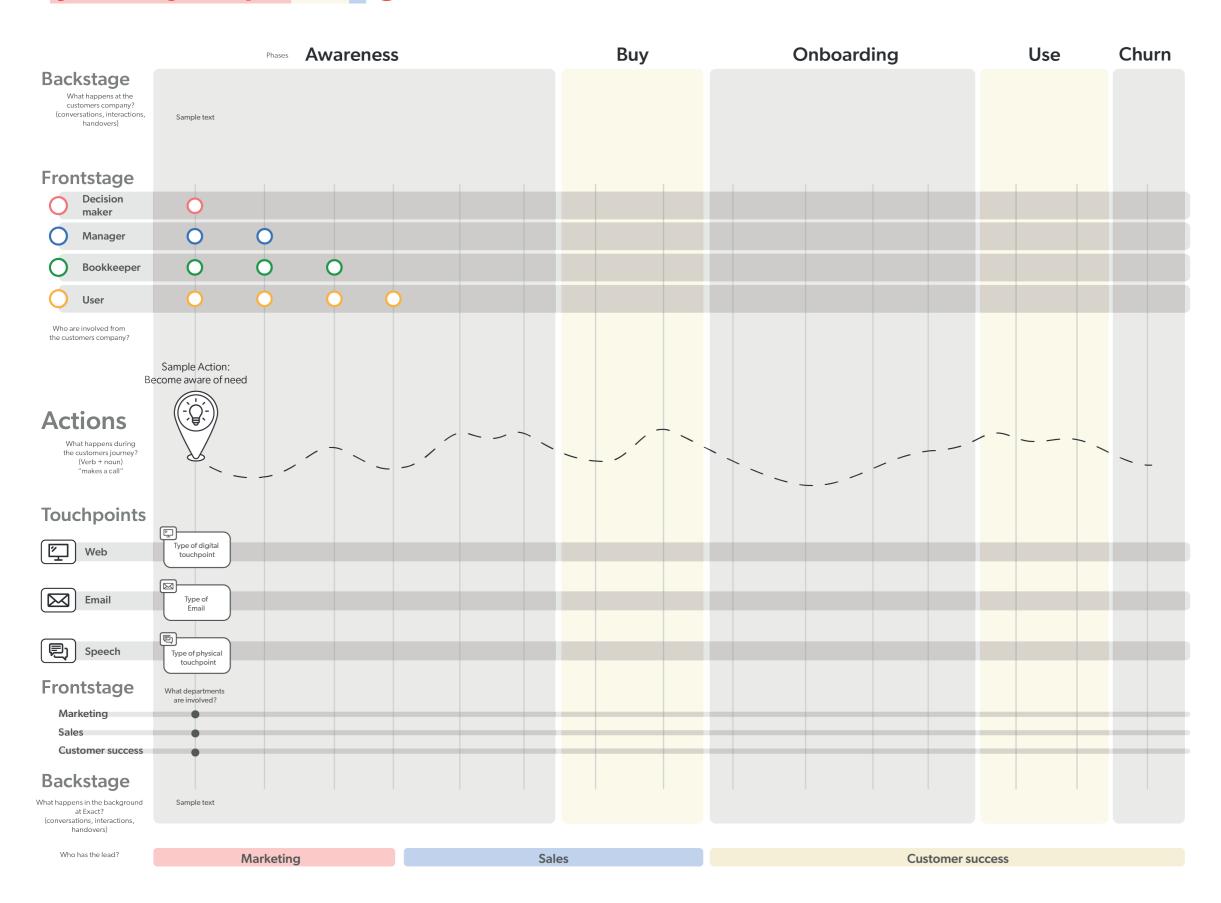
As can been seen in the current stakeholder map, the core mostly consists of Customer Success employees, whilst employees and especially managers from other departments take up the direct or even indirect layer. In the desired dstakeholder map this is turned around where the preference is shown for a small core team with high level department managers that have greater influence over the whole solution journey.

#### **Desired Stakeholder map**



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# Appendix D: Customer journey map redesign



#### **Assets**

#### **Icons**







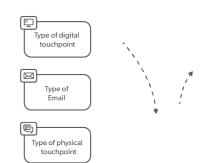


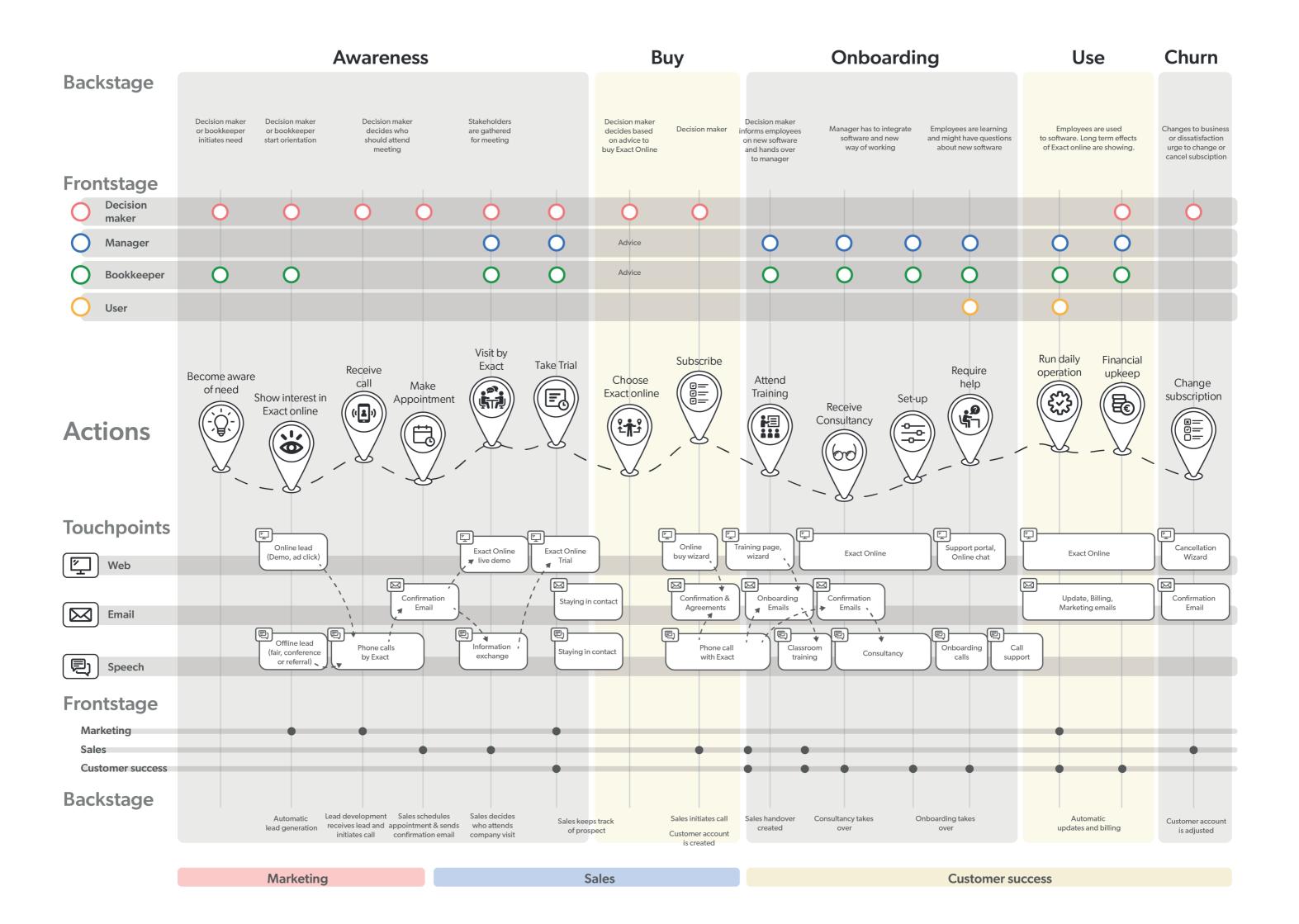


#### **Actions**



#### **Touchpoints**





# Appendix E: Mindmaps

		Competition	Turns	Dice	Live action roleplay
	Tutorial	Vid	leo games	Board-games	тогергау
Music	Concert	emo Software	e Gan		aying game
Person	aSound			Play	Undercover
Narrative	Video	Sim	ulate	Role-p	lay
Animation	vR		Caga atua	Acting	g Movie
Но	logram	AR	Case stud	Scenario	Day-in the
	Glasses	Glasses	Storytellin		life of
			Shadowing	Internship	

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Screen Face-to-face Eyes Seeing Hands Running Touching Face Walking Hate Feet Experience Feeling Secure Flying Smelling Love Hearing Perfume Headphones Music **Talking** 

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# Appendix F: Accountancy game

#### Rules

The accountancy game is played with 6 people. Each person plays a role: accountant (2x) or client (4x) which have their own objective(s) and conditions. The game is played in 12 turns as seen on the right.

#### Accountants

As an accountant you will be doing the bookkeeping of your clients. There are two types of accountants. One accountant has a pay per hour business model, the other a pay per month. Each accountant gets access to an excel sheet (their administration) and the product list. Their goal is to get payed by clients to do their administration.

You have to throw the dice 1 time each turn

5% of your clients base income is the amount of hours spent by you on their administration

#### Clients

As a client you have a business which generates income. You will need to hire an accountant to do your bookkeeping. You may choose one of the two accountants during the first turn. Later you will have the opportunity to switch if you are not satisfied!

You have to throw the dice 1 time each turn

5% of your base income is the amount of hours spent by your accountant on your administration



- At the beginning of each turn (except the first turn), every player throws the dice once.
- During the first turn (before throwing the dice) clients have to decide what accountant to team up with. Halfway (6th turn) the accountants are allowed to adjust their pricing and can negotiate with clients. Clients are allowed to switch accountants if they want.
- Each blue turn Evaluation will take place

#### **Evaluation (client)**

Why did you choose this accountant?

Do you prefer paying per hour or per month?

Did you switch accountant? Why? Why not?

What would make your life easier?

#### **Evaluation (accountant)**

How did you come to your pricing?

How do you compare to your competition?

Would you prefer a different business model?

Would you prefer different products?

What would make your life easier?

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## Roles

# Accountants (2x)

#### Accountant A

Objective: Make the most profit

Employee cost (per hour): €3,-Business model: pay per hour

#### Accountant B

Objective: Make the most profit

Employee cost (per hour): €3,-Business model: pay per month

# Clients (4x)

#### Client A

Objective: make profit

Income: 200 euros

Need:

20 entry proposals

5 users sales invoicing

#### Client B

Objective: make profit

Income: 50 euros

Need:

#### Client C

Objective: make profit

Income: 100 euros

Need: 2 users sales invoicing

# **Products**

Product A: Standard

€4,50

Product B: No Hands

10 entry proposals 1 MyFirm User

€8,50

Product C: No Hands Premium

166 entry proposals

1 MyFirm User

Client D

Objective: make profit

Income: 150 euros

15 entry proposals

Need:

€15,50

+ Sales invoicing

+€3

+€10

+ Extra MyFirm User

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# **Events**

#### Clients



You got a better deal with your supplier, +€50 this month



Your shop needs repairs, -€50 this month



You have cut down on staff costs: base income +€20



A new fruitshop opened: base income -€10



Economic bloom, all client incomes +€20



Economic downturn, all client incomes -€10

#### Accountants



A storm damaged your office, -€50 extra income this month



You have sold old hardware, +€50 extra income this month



Your employees received a raise, +€1 employee fees



You have cut emloyee costs, -€0.50 employee fees



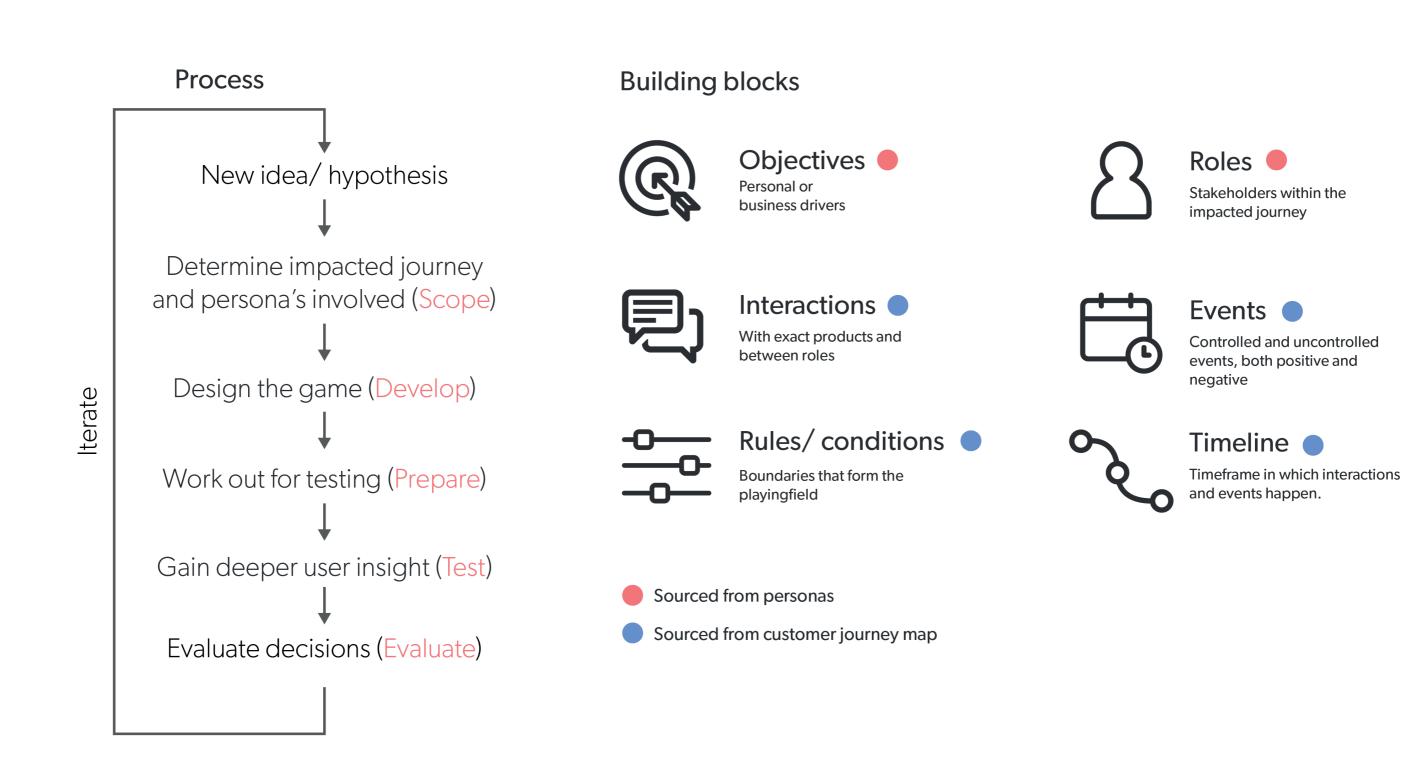
Product price is increased, +€1 product fee



Product price is reduced, -€0.50 product fee

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# **Appendix G: Game** design guide protoype



# How to develop the game

# 1. Scope

#### Five w's

Start with determining the scope of the game: For what hypothesis, product, feature, event or journey do you want to gain deeper customer understanding? Who are involved? Where, When, Why does it take place?

Fill in: What, who, where, when, why.

# 2. Develop

# Game Design Canvas

Once the scope is set, the game can be developed based on the answers from the Five W's:

What is the timeframe? What is the goal of the game? Which roles should be represented? What interactions, events & rules will play a role?

#### Fill in:

- 1. Timeline
- 2. Objectives
- 3. Roles (persona's, stakeholders)
- 4. Interactions (between roles)
- 5. Events (events, positive and negative)
- 6. Rules / Conditions

# 3. Prepare

#### Build

Once the basis of the game is determined, preparations for testing can begin:

- 1. How can the game be executed? Is the game played physically or online (or both)?
- 2. What do we already have? What needs to be acquired/ made/ simulated? Do we need more information?
- 3. Which people/stakeholders do we need? Do we use employees or also customers?
- 4. How can we best capture and evaluate the customer insights gained? Is there an observer?

# How to develop the game

# 4. Test

# Generate customer insight

Once the test has been prepared, the first preliminary testing can begin. It might be useful to shortly play the game with the developers so you know whether the game is playable and works as intended. If so, proceed to testing with employees/ customers. Make sure to seperate game feedback, and "customer" feedback before going into evaluation. Based on testing the game can be refined, for future playing.

# 5. Evaluate

# Transfer gained knowledge into action

Once testing has been successful, evaluation is necessary in order to translate the gained insights and knowledge into action for the future. What insights were gained? which were new? What effect does it have on the journey, product and/or customer?

# Five W's (Scope)

What?	Who?	Where?
When?	Why?	

# Game Design Canvas (Develop)



# Objective

What journey do you want to investigate?
What is the goal of the journey?
When is the journey completed?



## Roles

Who do you want to investigate? What stakeholders are involved? What is their role in this scenario? What do they know? What do they not know?



## **Events**

What events take place? What should happen (positive)? What could happen (negative)?



# Rules & conditions

What laws, rules or conditions play a role? What are the influences that are outside of the control of the roles defined?



## Interactions

What interactions take place between roles?
Which roles can interact? Which cannot?
What are desired interactions?
What are undesired interactions?
What types of interaction are they (digital, physical, phone, chat etc.)?



# Timeline

What journey do you want to investigate? What is the timeframe of the scenario? Does this take place in a day, a month a year?

# Appendix H: User testing

#### Welkom!

Bedankt voor jullie aanwezigheid. Vandaag willen we jullie vragen om in de schoenen te gaan staan van een van de klanten van Exact, in dit geval van een salaris administrateur. Als salaris administrateur zullen jullie een aantal opdrachten in Exact Online moeten voltooien die bij deze rol aan bod komen.

Zoals hieronder te zien is, zal deze sessie als volgt verlopen:



Totaal = 2 uur (120 minuten)

We spelen 3 opdrachten, met na elke opdracht een kort evaluatie moment. en zullen de Salaris adminitrateurs spelen en en zullen observeren.

Tijdens het uitvoeren van de opdrachten kan het ongetwijfeld gebeuren dat jullie tegen een of meerdere problemen aanlopen. In dat geval is het mogelijk om hulp te zoeken. Dit kan op twee manieren: door zelf online hulp te zoeken, of door contact te hebben met Exact.

vertegenwoordigd hierbij Exact, en kan helpen als jullie een vraag hebben.
Zodoende willen wij jullie aansporen om de opdrachten binnen de tijd te voltooien.

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# **Instructies**

Bedankt voor je tijd! Vandaag willen we je vragen in de schoenen te gaan staan van een salaris administrateur. Je bent verantwoordelijk voor het verwerken en versturen van de salarissen binnen je bedrijf. Hierbij is het belangrijk dat dit goed en secuur gebeurd, om klachten en vragen van de werknemers te voorkomen. Daarom heeft jouw baas recentelijk besloten om met Exact Online de salaris verwerkingen te gaan doen. Hierbij ben jij gevraagd om de opzet en uitvoering op je te nemen. Om dit voor elkaar te krijgen zal je de volgende taken moeten gaan uitvoeren, waarvoor je elk 15 minuten hebt:

- 1. Eerste keer verlonen
- 2. Bruto vergoeding uitkeren
- 3. Verlof inrichten

#### **Inlog gegevens Exact Online**

Gebruikersnaam: xxx Wachtwoord: xxx

#### Eerste keer verlonen (1)

De inrichting is al gedaan door een consultant, de medewerker en stamgegevens staan al in de administratie. Je gaat nu een salaris strook uitdraaien voor de maand mei. Zorg dat je de berekening van de eerste salarisstrook voltooid en kijk of de gegevens kloppen op de strook.

#### Bruto vergoeding uitkeren (2)

Je medewerker krijgt een bonus, voeg de bonus toe via componenten en keer deze uit via de variabele mutaties. Kijk of de bonus met de juiste benaming en bedrag op de loonstrook staat.

#### Verlof inrichten (3)

Je medewerker neemt 30 uur historisch verlof mee van voorgaand jaar. Voeg dit toe aan de medewerker via het verlof & verzuim gedeelte. En kijk of je deze gegevens ook op de strook kunt terugvinden.

**Evaluatie:** Om beter inzicht te krijgen in de problemen die je ondervind tijdens het uitvoeren van deze opdrachten willen we je vragen om na elke opdracht een evaluatie in te vullen. Deze evaluaties kun je vinden op de volgende pagina's in dit document.

**Hulp:** Mocht je er tijdens het maken van de opdracht niet uitkomen, zoek dan hulp, ofwel door online te zoeken ofwel door de medewerker (xxx) van Exact om hulp te vragen.

#### **Planning**



# **Evaluatie**

Had je eerdere ervaring met het uitvoeren van deze opdracht? (Ja/ Nee)
Is het gelukt om de opdracht binnen de tijd uit te voeren? (Ja/ Nee)
Zo niet, waarom niet?
Tegen welke problemen liep je aan?
Harris State and Harris Language Addition 2
Hoe zou je deze problemen kunnen verhelpen?
Von is gemakkeliik huln vinden ele is nychlemen andenvend? (is/nee)
Kon je gemakkelijk hulp vinden als je problemen ondervond? (ja/nee) Waarom wel/ niet?
waarom wely mee:
Naar wat voor soort huln (Online of telefonisch) heb ie gezocht?
Naar wat voor soort hulp (Online of telefonisch) heb je gezocht?  Waarom?
Naar wat voor soort hulp (Online of telefonisch) heb je gezocht?  Waarom?
Waarom?
Waarom?

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# Appendix I: Game Development Guide

# Game Development Guide

An improved approach to gaining deep customer understanding at Exact

William Hagen | July 2020

Graduation Project MSc. Strategic Product Design Delft University of Technology

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Process	4
1. Prepare	6
2. Understand	8
3. Develop	10
4. Prototype	12
5. Play	14
Toolkit	16

# Introduction

#### Why?

The Game Development Guide was developed as a result of the graduation project of William Hagen in collaboration with Exact. It aims to facilitate gaining deeper customer understanding by Exact employees, enabling them to bring Customer Journey Management to the next level through the development of an interactive game. It should result in additional understanding of the customer outside of the traditional (mostly quantitative) methods that are used for customer research at Exact. It is an addition to customer journey mapping practises as it puts the customers experience into practise, by stimulating participatory learning within Exact. This can lead to new deep customer insights and can help transfer knowledge between employees more effectively. This guide provides the tools and procedures necessary to reach this goal.

#### How?

Through the use of a short design sprint process, adapted from the process as described by Banfield et al. (2015), a game that generates deep user insight among Exact employees is developed. This process will first be described before diving deeper into each step of the process. Each step is made up of three elements:

- The Goal
- The Tools\*\*
- The Procedure

#### When?

The game development guide can be used in two stages of the innovation process as seen in Figure 1 below. The main focus is, however, on the first stage (target group exploration) as this is where the first exploration towards deep user insight should be done. Once the game has been developed in this stage, it can be re-used/adapted as part of the prototype & refinement stage.

#### Who?

This guide was designed specifically for the Customer Journey Management team but can be used by other employees with an interest in generating Deep Customer Insights (with their project teams) aswell. The development process is designed to stimulate collaboration with different stakeholders, so working together is key for the success of the game! (Having some experience with facilitating creative sessions might be useful, if you choose to lead the development process)

\*Banfield, R., Lombardo, C. T., & Wax, T. (2015). Design sprint: A practical guidebook for building great digital products. "O'Reilly Media, Inc.".

\*\*All tools can be found at the end of the guide

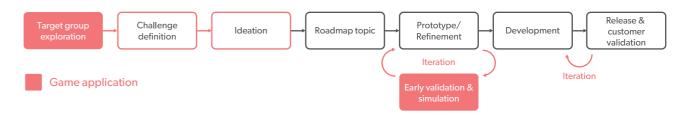


Figure 50: Innovation process

# **Process**

In order to guide the development of the design of the game, a small design sprint process with the following steps is recommended, as seen below:

- 1. Prepare
- 2. Understand
- 3. Develop
- 4. Prototype
- 5. Play

As seen in figure 2, the process can be seen as an iterative process, where learning is followed by quick prototyping and vice versa. It might be so that after playing the game additional understanding of the customer is necessary and adjustments to the game have to be made. In the end the goal is to gain deep customer insight that can serve as the basis for the rest of the innovation process. The set-up of this process is so that it can be executed relatively quickly (as seen on the right).

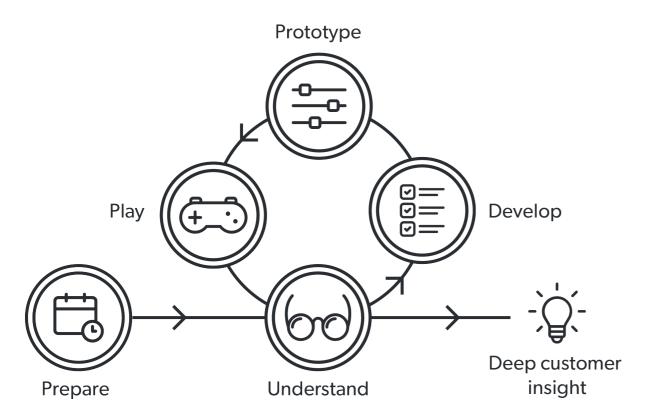
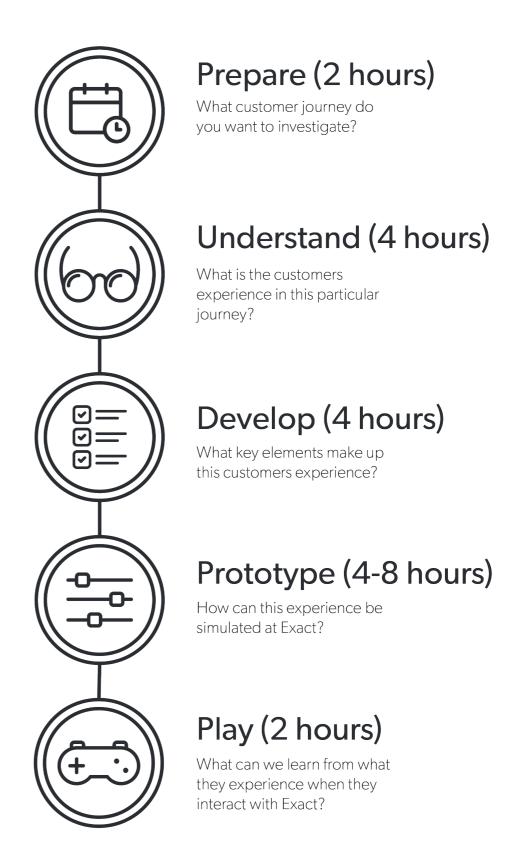


Figure 51: Game development process



#### 1. Prepare

#### Goal

The goal of this step is to determine what part of the customer journey you want to investigate, narrowing down the scope, the people involved and the timeframe for the development of the game.



#### **Tools**

#### Customer journey map

Use your customer journey map to identify points of interest for the scope of your game development. It can also help identify the stakeholders that are involved in this particular part of the journey.

#### Five W's

This tool can be used for further determining the scope of your game development. You have to answer the five questions: What? Who? Where? When? Why?

#### Development plan

This tool can be used for determining the schedule of the development and the things that need to be done.



#### Procedure

This step can be broken down into the three steps as seen on the right:

- Scope
- Team-up
- Schedule

#### Scope

Determine what customer journey you want to investigate. What customers do you focus on? Which journey is relevant for your project/ team? What do you know about this journey already? If you already have a customer journey map, use this to guide you. Fill in the "Five W's".

#### Team-up

Determine what people you need to be involved in your process. What customers do you want to speak/ visit? Which experts? Which Exact employees should be involved in this project? Who can help you develop the game?

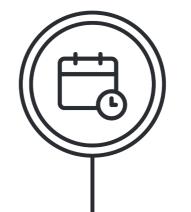
#### Schedule

Since often time is scarce and peoples schedules are overflowing, so it is almost always a good idea to plan ahead. Think about the necessary steps you will have to take and the stakeholders you want to involve in each step. Contact them to see whether they would be interested to help. Plan visits to customers. Plan your creative sessions and book meeting rooms. Most importantly: set a date for the game to be played! Fill in the development plan.

#### Deliverables:

Scope description (Five W's) and filled-in development plan.





# Prepare (2 hours)

What part of the customer journey do you want to investigate?



Determine what customer journey you want to investigate. What customer(s) do you focus on?

# Team-up

Determine what people need to be involved in your process. Team members, experts, customers.

# Schedule

Determine a schedule for your design sprint, plan customer visits, meetings and creative sessions.
Set a deadline for playing the game.



#### 2. Understand

#### Goal

The goal of this step is to gain deeper understanding of the customers experience, not only through what they say and do, but also what they feel and think. This will enable you to recreate this experience at Exact later.

#### **Tools**

#### Storyboard/ scenario

This tool can be used to visualise/record a day in the life of the customer. You could first make one based on your own assumptions before checking them with the customer to find differences in perception. Make sure to include their feelings and thoughts in this process.

#### Diary study

This tool can be used to gain better insight of the context that customers operate in and the influence it has on their experience. This is better suited for an online setting if visiting a customer is difficult.

#### Contextual inquiry

This tool has very similar results to a diary study but it requires you to study the person in their natural environment thus requiring a visit to a customers workplace.

#### 5 Why's

To get to underlying factors that influence people, the 5 why's are often used during interviews. It forces them to think deeper about why they do things



#### **Procedure**

This step can be broken down into the three steps as seen on the right:

- What?
- How?
- Why?

#### What?

Firstly, determine what understanding of the customer and their experience you already think you have. Speak with experts within Exact and look for existing data and customer journey maps. Write out a short Storyboard/scenario of the experience with some supporting images. Is there information missing? What don't you know? What are you unsure about?

#### How?

Determine how you would like to test your assumptions. This could for example be done through a diary study or a contextual inquiry. It depends whether you have the means to visit the customer, which tools is best.

#### Why

Determine why customers experience what they experience during your creative session. Compare their narrative with your assumptions to see differences and start a conversation. During this session the 5 Why's could help you get to the underlying factors that influence their routines, behaviour and emotions.

#### Deliverable:

Diary study/ contextual inquiry outcomes and refined Storyboard/ scenario.





# **Understand (4 hours)**

What is the customers experience in this particular journey?



Determine what understanding of the customer experience you already (think you) have and what might be missing.

# How?

Determine how you want to test your assumptions and gain better understanding of the customer experience.

# Why?

Determine why customers experience what they experience, get to the underlying factors that influence their routines, behaviours and emotions.



#### 3. Develop

#### Goal

The goal of this step is to determine what key elements of the experience that you have investigated so far you want to incorporate into the game.



#### **Tools**

#### Empathy map

This tool helps with synthesizing the insights from the understand phase into an overview of the customer through their thoughts, feelings, pains and gains and so on. It can help greatly when creating personas.

#### Persona

This tool helps in creating archetypes of the customer. Data from the understand phase and the Empathy Map can serve as input for this tool.

#### Game Design Canvas

Inspired by the business model canvas, the Game Design Canvas was designed for this process specifically. It highlights the components of the customer experience that can serve as input for the game.



#### Procedure

This step can be broken down into the three steps as seen on the right:

- Focus
- Fill-in
- Discuss

#### Focus

Firstly, make an empathy map and/or persona based on the outcomes of the understand phase for your customer(s). This will help you in the development of the game and will serve as an information source for your players later on.

Determine what element(s) of the customer experience you want to investigate further. What experience do you focus on? Use your storyboard and persona for inspiration.

#### Fill-in

Determine the factors that make up this experience by filling in the game design canvas. Which roles are important? Which interactions do they have? What are the goals of each role?

#### Discuss

Discuss whether the experience that you worked out can be simulated through a prototype. If not, adjust or narrow the scope of your game.

#### Deliverable:

Empathy map & persona, Game Design Canvas



# Develop (4 hours)

What key elements make up this customers experience?

# Focus

Determine what element of the customer experience you want to investigate further. What experience do you focus on?

# Fill-in

Determine the factors that make up this experience by filling in the Game Design Canvas.

# Discuss

Determine whether the experience that you worked out can be simulated through a prototype. If not, adjust or narrow the scope.



#### 4. Prototype

#### Goal

The goal of this step is to determine how the selected experience can be simulated at Exact. The details will be worked out into a prototype that is ready to play.



#### **Tools**

#### How might we?

How can you's are often used to split up a big problem into smaller problems: how can you simulate an email? How can you mimic a lazy colleague?

#### Game elements checklist

This tool provides a short checklist for possible game elements that you need to work out still or might not have thought of.



#### Procedure

This step can be broken down into the three steps as seen on the right:

- Simulate
- Work-out
- Plan

#### Simulate

Determine how the selected experience could be simulated. What part of the experience needs to be simulated and how can that be done? What roles should be played by who? What do they need to get into the role of the customer? Get creative!

#### Work-out

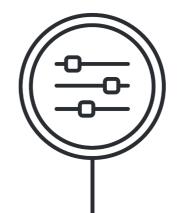
Collect and work out all the necessary components that you determined in the Game Design Canvas. Work out the practicalities aswell: Will you only be facilitating or also participating? Do you need extra observers? Maybe try to do short test runs if possible to test whether your game works as intended. Use the checklist to check whether you have everything you need.

#### Plan

Make a planning for your game, how long will it take? How long will each round, objective, etc. take? How will you encourage evaluation in the players? Determine whether players have to read up on homework before they participate in the game. This way they might have time to prepare for their "role". Costumes and props can help a great deal in detailing the experience aswell.

Deliverables: Game Prototype, Evaluation tools(s)





# Prototype (4-8 hours)

How can this experience be simulated at Exact?



Determine how the selected experience can be simulated. What roles should be played by who?

# Work out

Collect and work out all the necessary components of the game. Do some preliminary testing.

# Plan

Determine a schedule for your game, send the necessary "homework" to the players.



#### Goal

The goal of this step is to finally play the game! This is done in order for players to gain deeper understanding of the customer, so that they are able to deliver improved user-centered design solutions.



#### **Tools**

#### Observations

During the game, Observations can greatly help in gaining and documenting extra insights. Having an extra observant next to the facilitator/ designer of the game can support making objective observations.

#### Questionnaire

Having participants fill in a short questionnaire during and/or after the game can help document and collect insights and activate people to reflect on their actions.

#### PrEmo

This tool helps determining the emotions people feel when performing certain tasks or activities. As often emotions are hard to put into words this tool can help to capture them instead.



#### **Procedure**

This step can be broken down into the three steps as seen on the right:

- Experience
- Evaluate
- Share

#### Experience

Start playing the game! Experience what your customer experiences. Make sure that everyone knows what their role is and what is asked of them. Inform them on the schedule and the tasks that they need to perform. People should be encouraged to take distance from their own point of view and step into the shoes of the customer they represent. Make sure the game is not a product test, but that the experience as a whole is studied and that you observe the players interactions closely.

#### **Evaluate**

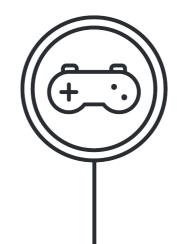
All participants should evaluate their actions, feelings and thoughts during the game. Why do they make these decisions? What do they feel? When is it a positive or negative experience? Why? This can be achieved by asking them questions during the game or by having them fill in short questionnaires or use the PrEmo tool.

#### Share

Share your experiences with other team members/ employees, talk about what you have learned. Look back at the tools that you have used. Is your customer journey map still correct? Are your personas and empathy maps still accurate? Update and share your results with the participants.

Deliverables: Evaluations, Updated tools





# Play (2 hours)

What can we learn from what they experience when they interact with Exact?



Start playing the game and experience what your customer experiences!

# **Evaluate**

All participants should evaluate their actions during the game. Why do you make these decisions? What do you feel?

# Share

Share your experiences with other team members/employees, talk about what you have learned.



# Toolkit



# Prepare

- Customer journey map
- Five W's
- Development plan



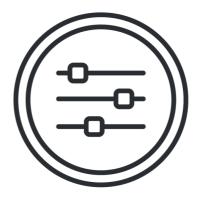
**Understand** 

- Storyboard/ scenario
- Diary study
- Contextual inquiry
- 5 Why's



Develop

- Empathy map
- Personas
- Game Design Canvas



Prototype

- How might we?
- Game elements checklist



Play

- Observations
- Questionnaire
- PrEmo

#### **Customer journey map**

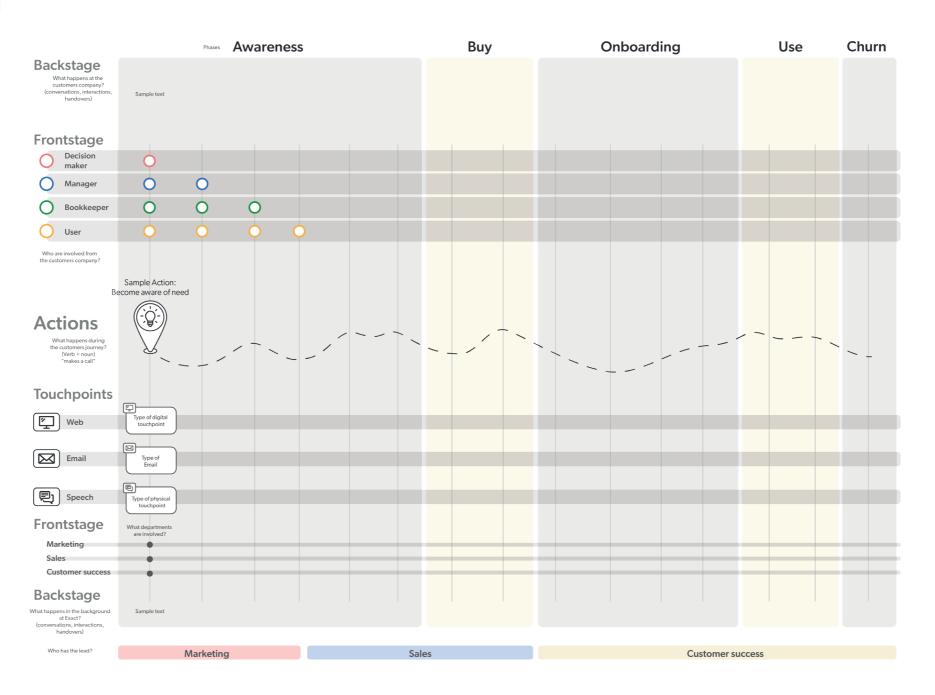
A customer journey map can be great way to visualize and understand the customers experience when interacting with your company/ product. It maps the journey that they experience over time. Use this tool in the "Prepare" phase to identify the journey you want to investigate.

#### Customer Journey Map (new)

The first tool is a customer journey map type that creates an overview by combining a customer journey map with a service blueprint. This template was specifically designed for Exact showing the combination of the stakeholders involved on each side of the customer journey. The template for this tool can be found in the zip-file "tool Templates"

#### Customer journey map (classic)

When diving deeper into the journey of a specific customer the second tool can be used. This is the set-up that is commonly used by Exact already.



# Assets Icons Icons

#### **Touchpoints**

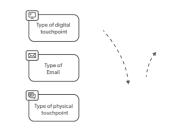


Figure 52: New



Figure 53: Classic



# Five W's

The five W's method is often used in journalism to ensure that all factors that make up the story are covered. In this case it can be applied to document the scope of the game development process effectively. The template for this tool can be found in the zip-file "tool Templates".





Figure 54: Five W's

# **Development plan**

This template will help form the schedule for the development of the game at the end of the Prepare phase. The template for this tool can be found in the zip-file "tool Templates".

# Development plan



# **Understand**

What needs to happen?
When, and where?
How? (what tools will be used?)
Who should be invited/ contacted?



# Develop

What needs to happen?
When, and where?
How? (what tools will be used?)
Who should be invited/ contacted?



# Prototype

What needs to happen?
When, and where?
How? (what tools will be used?)
Who should be invited/ contacted?



# Play

What needs to happen?
When, and where?
How? (what tools will be used?)
Who should be invited/ contacted?



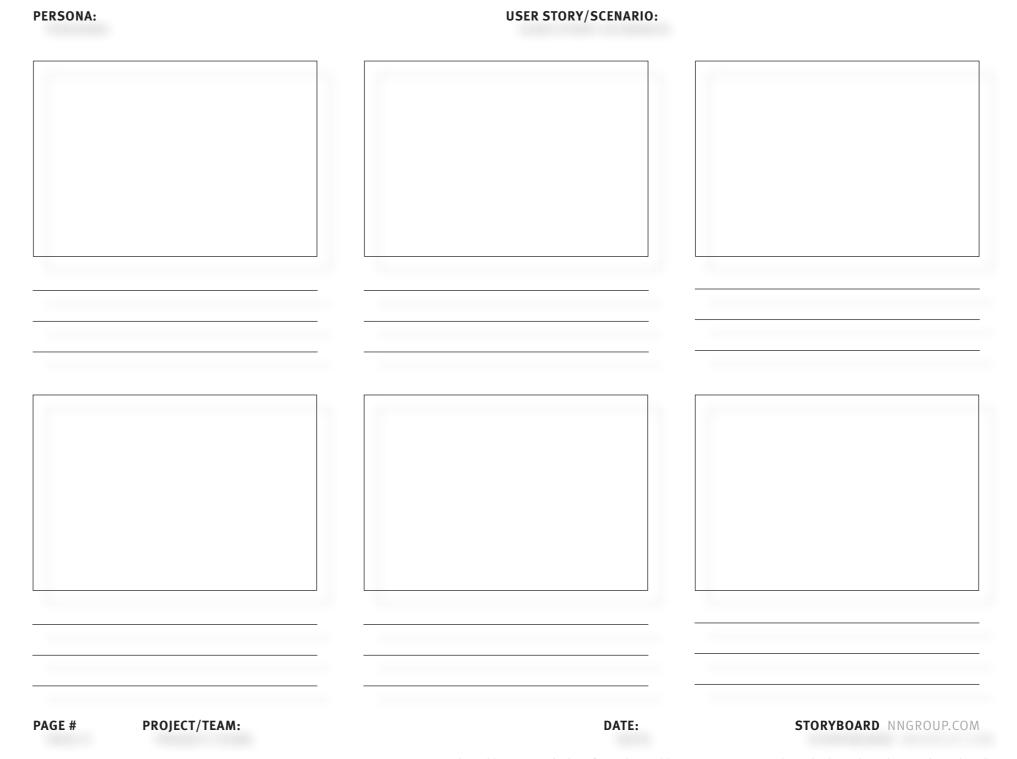
Figure 55: Development plan

# Storyboard/scenario

This tool can be used to visualise/ record a day in the life of the customer. You could first make one based on your own assumptions before checking them with the customer to find differences in perception. Try to include their feelings and thoughts in this process. The template for this tool can be found in the zip-file "tool Templates".

For more information on storyboards/ scenarios please click here.

(https://www.nngroup.com/articles/ storyboards-visualize-ideas/)







#### **Diary study**

This method can be used to gain better insight of the context that customers operate in and the influence it has on their experience. It starts with sensitizing the customer, by having them keep-up a diary for a few days to track what their day-to-day looks like. Then when they are invited to a creative session, to discuss their experiences, they have been actively recording their activities already. This can lead to enhanced engagement and deeper insights. This method can be applied to a live setting or can be done remotely. For more information on diary studies please click here.

(https://uxknowledgebase.com/diary-studies-51f58f1d1bd7)

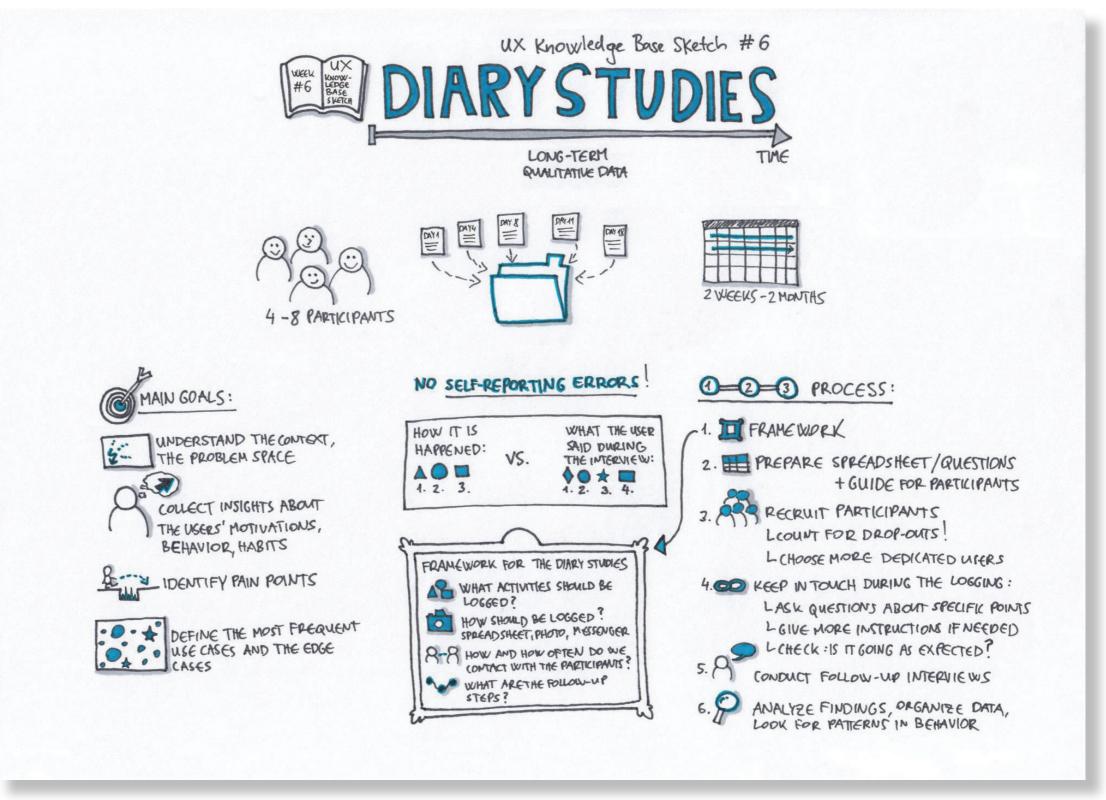


Figure 57: Diary studies (taken from: <a href="https://uxknowledgebase.com/diary-studies-51f58f1d1bd7">https://uxknowledgebase.com/diary-studies-51f58f1d1bd7</a>)



#### **Contextual inquiry**

This method can be used to gain better insight of the context that customers operate in and the influence it has on their experience. It starts with visiting a customer and observing them in their natural environment. During and after doing these observations you will ask question to clarify what you have observed. It will help you validate assumptions, find possible issues and create more realistic personas, scenarios and so on. As opposed to the Diary study, this method cannot be applied remotely. For more information on Contextual inquiries please <u>click</u> here.

(https://uxknowledgebase.com/contextualinquiry-815eaa94b909)





CONTEXTUAL: THE PARTICIPANT IN HER/HIS NORMAL ENVIRONMENT, CONTEXT.



INQUIRY: YOU ASK QUESTIONS TO CLARIFY WHAT YOU'VE OBSERVED

-> TO BETTER UNDERSTAND THE TASKS

# CONTEXTUAL

UX Knowledge Base Sketch #51

DURING THE CONTEXTUAL



ALSO CALLED: SITE VISIT



YOU CAN GET INSPIRATION FROM ETHNOGRAPHIC RESEARCH



ADDITIONAL METHOD: SHADOWING



TO LEARN ABOUT

PAIN POINTS,

GOAL: IN-DEPTH UNDERSTANDING OF THE

LACTIVITIES, TASKS WHILE IT IS IMPORTANT

LCONTEXT

GPAIN POINTS, ISSUES, PRUSTRATIONS L BEHAVIOR LA PROCESS, ROLES, INPUTS & OUTPUTS

YOU SHOULD GO FOR A BALANCED SESSION: YOU ARE THERE TO UNDERSTAND HOW TASKS ARE ACCOMPLISHED (AND WHAT ISSUES OCCUR DURING COMPLETION)



KEEP THE SESSION BALANCED



#### PREPARATION

- > SCHEDULING : PLANNING TRAVEL (TIME & COST)
- > BASIC UNDERSTANDING OF THE DOMAIN (E.G. FROM STAVEHOLDERS, DOMAIN EXPERTS)
- > YOUR FOCUS IDEALLY, YOU'LL OBSERVE MANY UNEXPECTED THINGS, BUT IF YOU NEED TO OBSERVE TASKS THAT RAPELY OCCUR : EXPLICITLY ASK PARTICIPANTS TO PERFORM THEM
- > LISTING OUT YOUR ASSUMPTIONS
- > CONSENT FORMS
- > INTERVIEW SCRIPTS (E.G. FOR MULTIPLE SHORT ONES)
- > TESTING ! PREPARING RECORDING EQUIPMENT
- > EXPLAINING THE ESSENCE OF THE METHOD: PARTICIPANTS SHOULD KNOW WHAT TO EXPECT



AFTER THE CONTEXTUAL INQUIRY: ANALYZE DATA E.G. WITH AFFINITY DIAGRAMMING -LOOK FOR PATTERNS!



WILL HELP TO MAKE INFORMED DESIGN DECISIONS



THIS UNDERSTANDING



CONDUCTING A CONTEXTUAL INQUIRY HELPS

- · (IN) VALIDATING YOUR ASSUMPTIONS (E.G. IS THAT USER NEED EXIST?)
- . FINDING CLUES, SIGNALS IN THE ENVIRONMENT TO POSSIBLE ISSUES (E.G. CHEAT SHEETS ON A STICKY NOTE) => POTENTIAL AREAS FOR IMPROVEMENT!
- · DISCOVERING ARTIFACTS & ACTORS YOU'VE NOT THOUGHT ABOUT
- · CREATING MORE REALISTIC PERSONAS, SCENARIOS, FOURNEY MAPS ETC.



INQUIRY BE A FLY ON THE WALL OBSERVE, CAPTURE

CEVERYTHING - AT THIS POINT YOU DON'T KNOW WHAT THINGS ARE RELEVANT!)



CONDUCT UTRADITIONAL SHORT INTERVIEW(S) >GET AN OVERVIEW OF THE ACTIVITY

> BUILDING RAPPORT WITH THE PARTICIPANT



MASTER - APPRENTICE" RELATIONSHIP

ASK FOR DEMONSTRATION INSTEAD OF EXPLANATION NAIVE QUESTIONS ARE GREAT!

· AGREE ON THE RULES" OF INTERRUPTION BEFOREHAND



DOCUMENTATION! -NOTES & SLETCHES

- PHOTOS -RECORDINGS (IF ALLOWED)



SUM UP WHAT YOU'VE OBSERVED. ASK WHETHER YOUR UNDERSTANDING IS VALID OR NOT

⇒ THE DIFFERENCE BETWEEN WHAT YOU SAW & HOW THE PARTICIPANT INTERPRETS THAT IS A VALUABLE INSIGHT!



A TOO BIG GROUP CAN DISTURB THE PARTICIPANT, HOWEVER, A TEAMMATE CAN HELPYON CAPTURE MORE, AND YOU CAN DISCUSS YOUR IMPRESSIONS LATER.



MAIN ADVICE: GO WITH THE FLOW, YOU MIGHT GET UNEXPECTED INSIGHTS! E.G. NEW USER NEEDS



SOME CHALLENGES:

- → MOTIVATING THE PARTICIPANT > IT CAN BE HARD FOR THE TO SHOW EACH RELEVANT STEPS ( VS. RUSHING THROUGH)
- > PRIORITIZING WHAT YOU PLAN TO OBSERVE (SO YOU DON'TRUN OUT OF TIME)
- > EXPLAINING WHAT THE METHOD IS ABOUT & WHAT YOU ASK THEM TO DO
- PARTICIPANTS TO SWITCH FROM A MORE PASSIVE POSITION TAKEN DURING THE INITIAL IMTERVIEW TO AN ACTIVE ROLE OF PERFORMING TASKS
- > MINIMIZING THE NUMBER of observers

Figure 58: Contextual inquiry (taken from: https://uxknowledgebase.com/contextual-inquiry-815eaa94b909)

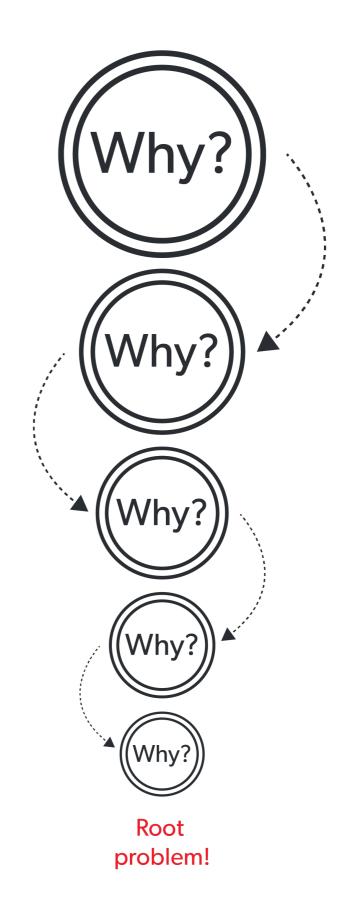
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# 5 Why's

The 5 why's is a technique for finding the root cause of a problem or frustration. By asking why multiple times, often the real underlying cause will surface. Finding this root cause can help solving the real problem, instead of solving the symptoms. It is often applied when conducting interviews or used during creative sessions.

Video explanation: Click here





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#### **Empathy map**

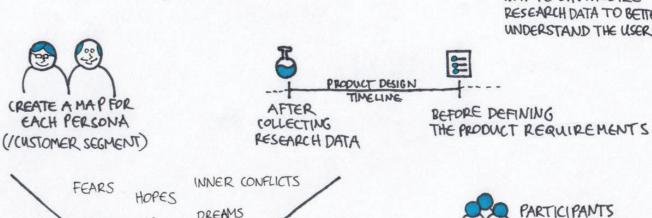
This method can be used to synthesize insights gained from the contextual inquiries, diary studies and storyboard/ scenarios as discussed in the creative sessions with the customer. It serves as a great tool for generating input for personas. The template for this tool can be found in the zip-file "tool Templates".

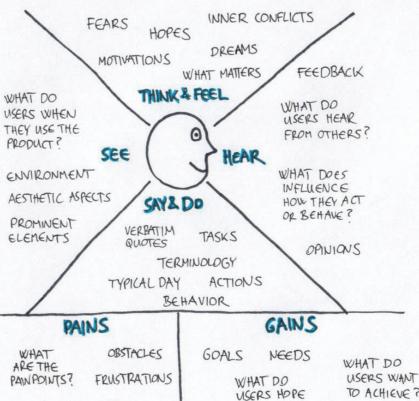
For more information on Empathy mapping please click here.

(https://uxknowledgebase.com/empathy-mapca037e7686b6)









TO GAIN?

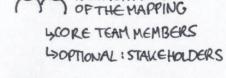
WHAT IS

success?

TO ACHIEVE? HOW SUCCESS IS MEASURED?

WAY TO SYNTHESIZE RESEARCH DATA TO BETTER UNDERSTAND THE USERS







L> WHITEBOARD OR PRINTED OUT MAPS LO STICKY NOTES & PENS (MARKERS

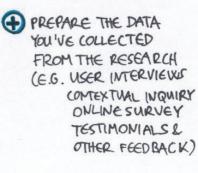




Figure 59: Empathy map (taken from: https://uxknowledgebase.com/empathy-map-ca037e7686b6)

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PROBLEMS

CHALLENGES

DOUBTS

#### **Personas**

Making personas can be a great way for people to empathize with a certain user/ customer. With input from the understand phase and the empathy map a comprehensive Persona should be developed. A persona is a representation of a group of users, that reflects patterns based on their behaviour, goals, needs, challenges and so on. It is a live document that needs to be updated and iterated in order to stay relevant. The template for this tool can be found in the zip-file "tool Templates".

Another great (online) template tool that can help to quickly generate Personas can be found at: <a href="https://www.hubspot.com/make-my-persona">https://www.hubspot.com/make-my-persona</a>



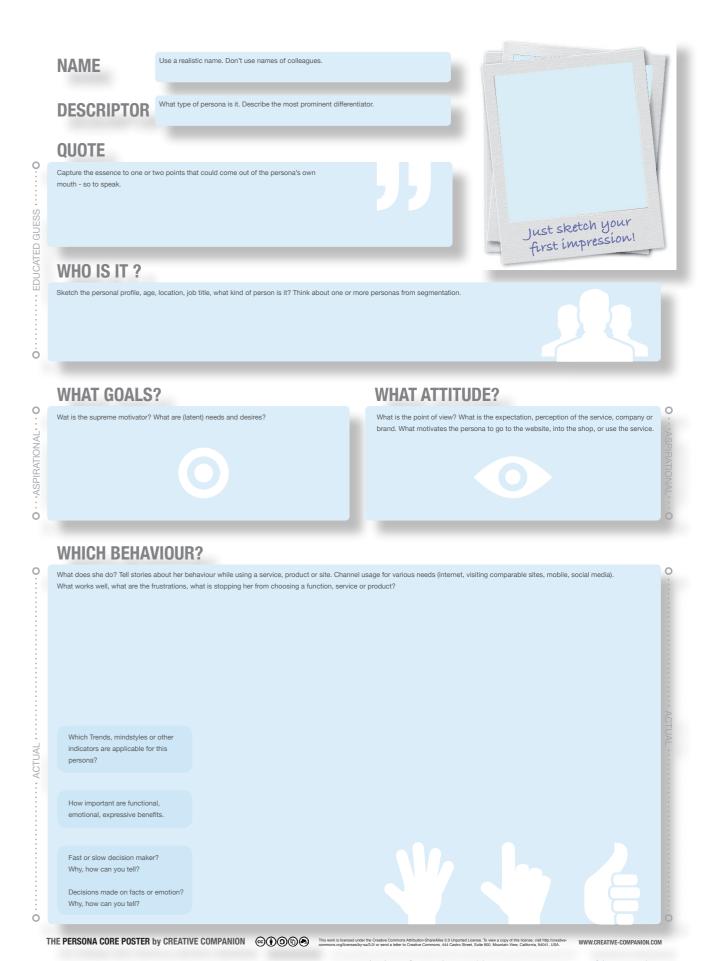


Figure 60: Persona (taken from: <a href="https://creativecompanion.files.wordpress.com/2011/05/persona-core-poster\_creative-companion1.pdf">https://creativecompanion.files.wordpress.com/2011/05/persona-core-poster\_creative-companion1.pdf</a>)

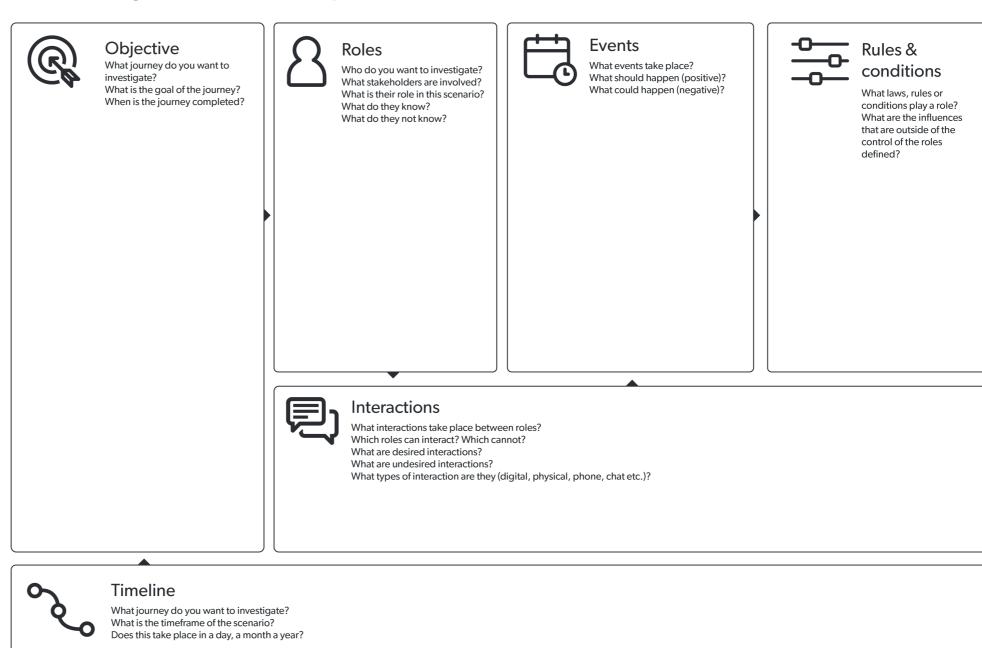
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## Game design canvas

This tool has been based off the famous business model canvas and has been adapted specifically for game design at Exact. Fill in each section based on the experience you want to simulate. This canvas will be the basis for developing your prototype.

The template for this tool can be found in the zip-file "tool Templates".

# Game Design Canvas (Develop)





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## How might we?

When trying to solve a large problem like designing a game, often times breaking down a large question into smaller ones can help solve the problem easier. When designing the game it can therefore help to formulate a couple of "how might we..?" sub questions. When these sub questions are formed, write each question on a large piece of blank paper and start a small brainstorm session with your team. Each person starts with one sheet and has 1-2 minutes to write and/or draw as many solutions as possible. After time has passed, each paper is given to the next person on their right. This process continues until the papers have made a full round and are back where they started. Afterwards, discuss your ideas and select the interesting ones!

For more information visit: <a href="https://www.designkit.org/methods/how-might-we">https://www.designkit.org/methods/how-might-we</a>



Figure 61: HMW (taken from: <a href="http://crowdresearch.stanford.">http://crowdresearch.stanford.</a>
<a href="edu/w/img\_auth.php/f/ff/How\_might\_we.pdf">edu/w/img\_auth.php/f/ff/How\_might\_we.pdf</a>

#### Game elements checklist

When working out the game, a checklist can help you define parts or elements of your that you might have overlooked or want to include:

- Game
- Manual/ Instructions
- Roles
- Role descriptions/ instructions
- Instruction sheets (per role)
- Software (Licences, test accounts)
- Hardware (Cards, dice, tokens etc.)
- Planning
- Schedule
- Objective length
- Round length
- Evaluation moments
- Coffee breaks
- Evaluation
- Questionnaire
- Question cards
- Observers instructions
- Video recording device
- Audio recording device
- Other
- Room/ space
- Tools (markers, pens, paper, post-it's)
- Props (outfits, decoration)

The template for this tool can be found in the zip-file "tool Templates".



Prototype

Prototype

#### **Observations**

Observations can be used to gain extra insights during your game. As simple as observing might seem, you do want to keep some things in mind:

- An extra observer is never a bad idea, as they might spot different things and details you might not. They can be a good source of reference to discuss notes with afterwards.
- Do not draw conclusions just yet, as you might interpret behaviour differently than your other observer(s). Try to stay objective!
- If you are also the facilitator, make sure you let people struggle as they perform tasks, although it might be difficult to restrain yourself from helping them a bit.
- Prepare an Observation Framework such as: Activities, interactions, environments, objects and users.

For more information please refer to:

 $\frac{h\ t\ t\ p\ s\ :\ /\ w\ w\ w\ .\ u\ x\ m\ a\ t\ t\ e\ r\ s\ .\ c\ o\ m\ /\ m\ t\ /}{archives/2018/09/the-role-of-observation-inuser-research.php}$ 

A great online for observing what your participants (or customers) perform can be found here: <a href="https://lookback.io/">https://lookback.io/</a>



Play

#### Questionnaire

Having participants fill in a short questionnaire during and/or after the game can help document and collect insights and activate people to reflect on their actions. Asking the right questions is the key to gaining the necessary feedback and insights. It should, however, not break the experience of the game as it can ruin the continuity of the gameplay.

The three elements that should be reflected in the questionnaire are:

- Past (what is your past experience, what did you expect?)
- Present (What happened? How did you feel?)
- Future (what would you like to happen? How do you want to feel?)

Make sure to incorporate questions about feeling and experience and whether this changed over the course of the game.



Play

## **PrEmo**

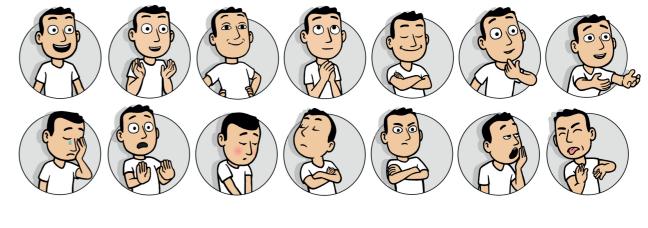
The PrEmo (Emotion Measurement Instrument) is a tool that helps people communicate the emotions they experience. As emotion are often hard to put into words, these cartoon cards can help people express their feelings.

For more information please refer to: https://diopd.org/premo/



Figure 62: PrEmo (taken from: https://diopd.org/premo/)





# **PrEme**





















The feeling when there inothing interesting or engaging to door expereince.



PrEmo www.premotool.com www.diopd.org/premo

2017 Pieter M.A. Desmet

Delft University of Technology Faculty of Industrial Design Engineering Delft Institute of Positive Design

Emotion Studio Rotterdam





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#### Reference

In communication, please refer to the PrEmo characters as follows: Laurans, G. & Desmet, P.M.A. (2017). Developing 14 animated characters for non-verbal self-report of categorical emotions. Journal of Design Research, 15 (3/4), 214–233.

#### More Information

https://diopd.org/premo/