The ‘MERK MONITOR’: A data-driven approach towards capturing Brand Experience.

Master Thesis
Strategic Product Design

by
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The ‘Merk Monitor’: A data-driven approach towards capturing Brand Experience

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The mystery of the human mind, by Robert Flud.
You are about to read the thesis of my graduation project for the master Strategic Product Design at the Delft University of Technology.

For the last 6 months I bravely explored the multidimensional topic of Brand Experience. This thesis is the result of unravelling my intertwined thoughts of the complex construct into a linear story. As always: the end is here too soon. I met a lot of interesting people at GuiltyPeople and during this project, to which I would like to express my appreciation.

At first, I want to thank God for blessing me with the amazing opportunities I got and the people I met during my studies.

Furthermore I want to thank all the people who made this project possible and for letting me contribute to an actual project. Also to all the people who made time for me and the purpose of this thesis. There are a few ones I like to highlight:

Anne, thank you for helping me improve my academic writing and for sharing your expertise on experiences. You also showed me when and where I should rely on my own choices, which was helpful.

Erik-Jan, thank you for reminding me that I am a (strategic) designer by heart. This advise gave me guidance through the whole project.

I also want to thank my friends and family who supported me, even though I was busy writing this thesis. I especially want to thank my fiancée for supporting me every day. Listening to my stories and pointing out my communication flaws was extremely valuable to me.

I truly wish readers will gain some new insights from reading this thesis.

Sincerely,

Peter de Jong
Executive summary

During the 1980s the ‘experiential view’ of a consumers buying process was proposed in literature. Since then, the experience a consumer has when interacting with a brand (Brand Experience) has been a frequently discussed topic in research and practise. Different disciplines propose measurement scales to capture this brand experience (BE). However literature does not agree on one generally accepted method. The marketing practise extensively utilises simple evaluative surveys such as the NetPromotorScore (NPS) and CustomerSatisfaction (CSat) to evaluate the BE of a consumer.

As the world is becoming more and more digital oriented, consumers leave digital behavioural traces. This brings new measurement possibilities.

Accordingly, this thesis proposes a data-driven method for measuring BE. The method is manifested through the design of a digital tool. This resulted in the MerkMonitor, a digital dashboard which analyses the experiences consumers have when interacting with a brand.

Originating back to psychology, literature identifies that this brand experience consists of Sensorial, Affective, Cognitive and Behavioural responses. Literature shows a call for new types of measurement to capture these dimensions.

The design process proposes a set of variables (measurements) to give insight in the four dimensions. Each dimension is made up of three attributes, which can be measured either with observant variables or surveying variables. Measurements are mostly done at digital touch points, such as social media, the website of the brand or through surveys via for example e-mails. As different attributes are valuable for different clients of GP, a selection toolkit is made.

When a selection of fitting variables is decided upon, they form the metrics of the dashboard together. The thesis proposes a dashboard containing ten variables as starting point. When the dashboard is implemented and used right, both GP and the client will be able to analyse the BE and anticipate on this analysis.

The launch of the dashboard will make GP able to monitor BE through real-time measurement. This contributes to GP being an expert in BE.

Finally, the Merk Monitor was evaluated through six sessions with Strategists, Technology experts and clients. Also a MVP was developed and a prototype was explored to ensure feasibility. This led to recommendations for further developing and implementations of the product.
The thesis is made up of five parts, each containing several chapters. On the left, the purpose of every part is explained. Each chapter starts with a short introduction which explains the content. Most chapters are concluded by a short conclusion on the content in the chapter.

I. Conceptual Framework
Understanding the construct of brand experience through conducting a literature study.

II. Exploration
Deepening the academic knowledge on BE by studying the field of practise. Focussing on the business, human and technology domains, insights are deduced to a design brief.

III. Ideation
Creating possible solutions answering the design brief.

IV. Conceptualisation
Delivering the final concept which answers the design brief and the framed problem.

V. Conclusion
Evaluation of the deliverables and recommendations for future research and development.
# Table of Contents

## PROJECT BACKGROUND

1. The republic of GuiltyPeople..........................................................................................10  
2. Problem and assignment.............................................................................................12

## I. CONCEPTUAL FRAMEWORK

3. The Brand Experience framework................................................................................16  
4. Dimensions of Brand Experience...............................................................................19  
5. Measuring Brand Experience....................................................................................22

## II. EXPLORATION

6. Trend research.............................................................................................................24  
7. Technology scouting....................................................................................................26  
8. Market research...........................................................................................................28  
9. Consumer understanding............................................................................................30  
10. Window of Opportunities.........................................................................................32  
11. Design brief................................................................................................................33

## III. IDEATION

12. Data visualisation.......................................................................................................38  
13. Design process and design directions......................................................................40

## IV. CONCEPTUALISATION

14. The ‘Merk Monitor’: Form and Content.................................................................44  
15. The ‘Merk Monitor’: Set-up and Proposal...............................................................48  
16. The ‘Merk Monitor’: Monitoring BE.........................................................................51

## IV. CONCLUSIONS

17. Product Evaluation.....................................................................................................53  
18. Recommendations.....................................................................................................56  
19. Project Conclusion.....................................................................................................60  
20. Limitations and future research................................................................................61  
21. Personal reflection.....................................................................................................62

## BIBLIOGRAPHY

.........................................................................................................................63

## APPENDICES

............................................................................................................................66
Project Background

This Graduation topic is initiated by GuiltyPeople (GP), “A human centred creative agency.” The thesis focuses on measurement of Brand Experience (BE). GP is expanding their method (Research, Create, Implement) with a new phase: ‘Measure’ (Figure 1) and the aim of this thesis is to provide them the insights needed for measuring BE.

As the world is becoming more and more digital oriented, this brings new measurement possibilities for BE. Designing for BE measurement will contribute to the practical application of brand experience literature.

RESEARCH CREATE IMPLEMENT MEASURE

Find opportunities Brand-worthy solutions Improve Brand Experience Analyse and guide

Figure 1. GuiltyPeople’s version of the Fuzzy Front End model by Sanders and Stapper (2008).
1. The republic of GuiltyPeople

To understand the motivation behind this thesis, first the initiator (GP) is introduced. This chapter will discuss the history of GuiltyPeople and highlight its current incentives.

**ISM E-GROUP**

GP is part of the ISM eGroup, containing GuiltyPeople (creative agency), ISM e-company (e-commerce) and SANA (commerce) (Fig. 2). GP has its origin as design department of ISM e-company, being of service through designing e-commerce websites. ISM e-company aims at maximising e-commerce success for retailers. With expertises in strategy, web-shop development, web-shop design and online marketing, they work on improving the (online) customer journey of their clients. Especially, ISM e-company shows useful overlap with this thesis. Their focus on the customer journey, accompanied experiences and their development of dashboard solutions will be used as inspiration and expert input.

**GUILTYPEOPLE**

In 2006 GP became an independent company accompanied by their own positioning. Nowadays GP is a team of 25 creative people, among which are strategists, creatives, designers, developers and support employees. They deliver creative solutions along the complete customer journey of their clients. GP’s work is mostly manifested in developing online platforms, advertising, creative campaigns and digital concepts (Fig. 3). They concentrate their clients in the cultural and leisure industry.

GP’s working method is based on the Fuzzy Front End model. Originally having the core strength in creating creative solutions, GP has capabilities to base their creations on thorough research into end-consumers.
(Fig. 1). To fulfil the implementation phase, GP has employees located in Sri Lanka, specialised in development and hosting (Fig. 2).

**Mission**
Placing abundant emphasis on being ‘human centred’, GP focusses on the end-consumer. This results in letting the end-consumer experience the brand of GP’s clients to the fullest. (Fig. 4, old scenario) Hence, they call themselves ‘brand amplifiers’: “Making end-consumers happy and turn them into ambassadors by providing brand relevancy”.

**Vision**
GuiltyPeople wants to be the expert on BE for the culture and leisure sector in the Netherlands.¹
To get there, they are exploring the concept of quantitatively or qualitatively validating the experiences provided by GP’s clients. Therefore GP plans on expanding their method with a measurement phase. (Fig. 1) This measurement will lead to better understanding of BE and create lasting relationships with clients.

In 2018 GP started exploring the measurement of brand experiences over the complete customer journey. In contrast to designing based on intuition and gut-feeling, they questioned: Could the added value of our solutions be determined and validated through BE measurement? (Fig. 4, new scenario) This evaluative thinking was normally executed by the client, either being satisfied with GP’s work or not. Providing measurement-based insights could overcome friction in fulfilling the evaluative need of GP’s client. As more and more consumers leave digital traces of their online behaviour, this data could provide valuable insights.

GP realised that the world of measuring experiences is complex and saturated with different perspectives on the construct. Accordingly this led to the problem addressed by this thesis.

1. GuiltyPeople (2019, March 19) General GP slide. [internal presentation]
2. Problem and assignment

This chapter presents the problem of the thesis. The research question is introduced. The scope is explained to provide focus in answering this question.

PROBLEM

Brand or customer experiences are widely studied and practiced over the last three decades, due to their competitive advantage over services and products. Still, the content of the BE construct itself seems to be a ‘black box’, as literature provides multiple views on its components. There is a need for more (empirical) studies on the construct, providing better management and anticipation on consumer behaviour. Literature already provides measurement scales for capturing the BE construct, yet these scales are merely question based.

Conducting intensive interviews or surveys for capturing experiences takes time and frustrates many consumers. Therefore GP is also in search of new methods which capture the perceived experience in a more efficient way. This results in the following research question:

To answer this question, existing frameworks for the measurement of BE are studied. It is key how these measurements can be translated into an understandable service.

To provide focus in this study, a clear scope will be set by isolating BE from other constructs (Fig. 5).

Project focus

An experience occurs when a consumer interacts with a brand. Multiple input stimuli (antecedents of BE) will cause the experience in the head of the consumer. Due to having this experience, multiple consequences will follow.

Literature seems to lack consensus in what BE antecedents and consequences are. Concluding from an overview of constructs (Appendix A) antecedents are environmental, brand or consumer related. Consequences are mostly named Loyalty, Satisfaction and Attitude.

The marketing profession extensively studied and utilised the consequences of BE. They are predominantly expressed through sales, equity and conversion metrics. (value realisation for brand)

However due to their evaluative nature, these metrics lack the insight in how exactly consumers perceive an experience. As the consumer is the one who finally assesses the value of the BE, this thesis focusses on the consumer perspective to measure the actual perceived experience.

Diving into the black box of this ‘consumer-perceived-BE’ is attempted by only a handful of studies. Through connecting different literature streams on BE, this thesis takes BE theory into practice by designing a novel method and tool for measuring BE. Translating literature into a convenient concept will especially be beneficial for creatives and brand practitioners.

How can GuiltyPeople measure Brand Experience, perceived by consumers through different ways of data collection at touch points across the customer journey?

References


6. Ibid., 1
Practical relevance
In practice, BE measurement will help to understand interactions with a brand. This understanding will result in better designed solutions concerning consumer needs.

Quantitative verification of creative concepts will show clients the successfullness of branded content. Measuring this realtime will improve timing for adapting brand strategy. New brand strategies will create new business opportunities for GP. A subscription model for using the method could provide continuing cash flows and long-term relationships for GP.

For clients in the cultural sector, metrics could provide justification for receiving subsidy in reaction to BE investments.

ASSIGNMENT
The main deliverable is a novel designed and validated method to capture BE. (Fig. 6) This measurement method should be applicable for each client. Key questions for the method will be: ‘What framework is suitable for measuring experience?’, ‘What are the important touch points?’ and ‘In which ways can data be collected?’. The question ‘How can results be communicated clearly?’ is answered through designing a digital tool, accompanied by a basic operating MVP. The tool provides a set-up of how data is displayed and integrated.

Following the philosophy of IDE, the designed tool should be presentable to clients (human), provide GP with insights in BE (business) and is technological feasible (technology).

Figure 5. The main challenge of the thesis: capturing perceived BE (in green)

Figure 6. The main deliverables of the graduation project.
PROJECT APPROACH

This thesis follows the approach of the ‘double diamond’ model, pictured in Figure 7.

Conceptual framework
The thesis opens with a literature study, to fundamentally discover the domains of BE. The search for a practical experience measurement scale will be the main focus.

Exploration
The exploration phase will expand literary knowledge to the field of practise. Through individual desk research and internal/external interviews, practical insights will be defined to answer the problem. All these insights will be combined in the design brief, providing requirements for the design halfway in the thesis.

Ideation
The ideation phase will show the answer to the design brief through designing the method and tool to capture BE. Deliverables are developed through validation with the cultural clients (practical validation) and discussion with data experts (technological validation).

Conceptualisation
The final proposed dashboard is delivered in the Conceptualisation phase. This is accompanied by an implementation plan and recommendations for future development.

Figure 7. Approach, based on the Double Diamond method.
Part I.
Conceptual Framework

To answer the research question: ‘How can GuiltyPeople measure Brand Experience, perceived by consumers through different ways of data collection at touch points across the customer journey?’ it is important to fully understand the construct of Brand Experience. This part of the thesis provides a strong fundament by studying academic research. This will especially be useful for a topic exposed to so much different perspectives.
3. The Brand Experience Framework

This chapter will shed light on the widespread academic topic of brand experiences. Prior to understanding the measurement of brand experience, the construct itself needs to be clear. First BE will be defined and accordingly the framework will be discussed.

Academic research proposes multiple reviews and agendas in the topic of customer and brand experience. After decades of studies on consumer behaviour, literature proposes a new experiential view on consumer behaviour around the 1980s. Holbrook and Hirschman (1982) are mostly credited as first to present the ‘experience’ construct, which they call consumer experience. Since then this construct appears with different terminology, such as experiential marketing, customer experience, brand experience, service experience, etc. These studies are spread across different disciplines (e.g., brand, marketing, psychology, management) and lack consensus in defining the construct.

Although perspectives can differ slightly, for the sake of clarification this thesis regards all different terms as describing the same construct. Academic scholars mostly agree that the BE construct involves sensorial, affective, cognitive and behavioural attributes. (p. 19) However in practice, we see that companies mainly utilise evaluative attributes to measure BE. Frequently occuring examples are Net Promotor Score and Customer Satisfaction.

The thesis follows the work of Brakus et al. (2009) and Lemon and Verhoef (2016) by sticking to the term ‘Brand Experience’ (BE), defining it as ‘subjective internal consumer responses (sensations, feelings and cognition) and behavioural responses evoked to a brand’s offerings during the entire customer journey.’

Designing and selling experiences (around products) will deliver additional economic value to extracting commodities, making goods and delivering services. (Fig. 8) This results in competitive advantage for companies in markets where products and services lack to deliver this competitive advantage. Through the right combination of services and goods, a memorable event where experiences occur is created. These experiences provide certain value for consumers and therefore for companies. (Fig. 5, p.13) For example, an experience could be successful when it leads the consumer to purchase behaviour.

Plenty of studies already have recognised this importance of brand or customer experience, both in practice and research.

Figure 8, The progression of economic value. (Pine and Gilmore 1999)
This definition can be explained in two parts:
1. The brand experiences itself: subjective responses emerging in the mind of the consumers when interacting with a brand over time
2. The framework around BE: multiple interactions with the brand along the complete customer journey.

To understand this definition of experience, first the framework around it is explained. Then we dive into the experience itself by defining the dimensions it is made up from.

EXPERIENCES DURING THE CUSTOMER JOURNEY

**Touch points**

BE can be conceptualised as a journey with a firm over time, called the ‘customer journey’. This journey contains multiple touch points. These touch points are defined as points where the customer interacts in any way with a company or the brand. Companies are encouraged to optimise these different touch points continually.

Figure 9 shows an integrated framework proposal, based on existing frameworks. The customer journey can be divided into three phases: the phase where purchase happens, phases prior to purchase and phases following purchase. The touch points along the customer journey can be categorised into four groups. Brand-owned touch points, which are in control by the brand itself. (e.g. their website) Partner-owned touch points (e.g., a payment platform), which are in control by other (partnering) companies. Customer-owned touch points, which are in control of the customer itself. (e.g., word of mouth) Social/external touch points are controlled by all others, such as peers, other customers, other environments (e.g., newspapers).

Lemon and Verhoef (2016) ask explicitly for research on how these different types of touch points contribute to the experience or how dimensions of experience contribute to these touch points.

As improving brand-owned touch points is GPs core business, this thesis has it’s focus on brand-owned touch points. However, companies should also try to manage the different-owned touch points affecting BE. Delivering and consulting towards all touch points could be of relevance for GP’s future strategy.
As for GP’s clients and due to the necessity of context specific measurement, the customer journey in this thesis will focus on the cultural sector. This topic will be elaborated in Chapter 8 (p.28), where this journey is identified.

**Time**

Interacting at each touch point creates a ‘static’ experience, at one moment in time. Encountering multiple touch points over time creates a ‘dynamic’ experience. BE spans multiple static experiences, as a consumers’ interaction with a brand is in general not limited to one specific experience. Additionally, a dynamic approach potentially embraces a consumers’ changing behaviour over time. Numerous studies advice BE management through the whole lifespan of a consumer. Measurements at static moments combined could provide insight into the dynamic experience. Especially because consumers tend to communicate their overall experiences with a brand, although asked at specific moments in time.

Having defined the framework around BE, the remaining question is: What exactly defines this experience in the mind of the consumer? To define this the interaction at a touch point needs to be examined closely.

**SUBJECTIVE RESPONSES TO OFFERINGS**

An ‘experiential view’ is an enlarged view of traditional consumer purchase decisions. The experiential view is phenomenological in spirit. In this view, based on inputs from the environment and the consumer itself, an internal responsive system in the human mind will create an experience with a brand, see Figure 10. This experience construct should encompass cognitive, affective and behavioural intentions, which makes it superior to constructs such as customer satisfaction and service quality.

Accordingly Brakus et al. (2009) propose a scale, capturing BE in four dimensions: Sensorial, Affective, Cognitive and Behavioural. They extensively researched the BE construct among different disciplines and draw on mind modularity and experience categorisation to settle on the four dimensions. Brand experiences vary in intensity, valence, and strength. Some are more intense, are more positive or even negative and some last longer.

The next chapter further unfolds the black box of BE by future investigating the scale by Brakus et al. (2009).
4. Dimensions of Brand Experience

This chapter discusses proposed perspectives on BE. The four dimensions by Brakus et al. (2009) are selected to be the fundament of brand experience measurement. Each dimension will be explained accordingly.

Although multiple attempts to dimension an experience are done, they differ. Appendix C shows an elaborative study of multiple scales and attempts.

The psychology and social discipline divide the human mind in affective, cognitive and behavioural (or conative) dimensions. (Fig. II) This was also the starting point of BE literature. Schmit (1999) added a sensorial and relational dimension. Later the relational dimension was left out and together they are called Brand Experience.

**BRAND EXPERIENCE AND DIMENSIONS**

Following the work by Brakus et al. (2009), BE will be captured through the proposed dimensions. This perspective provides a holistic brand focus which is aligned with GP’s vision. Flattening the origination of an experience, the human mind reacts in a certain order to stimuli (Fig. II). Present stimuli evoke sensation through the human senses. The resulting perception will vary per individual. Again another individual filter is passed as perception is processed into certain affective and cognitive responses. Each

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46. Ibid., 16
individual will decide and react differently to these internal responses, resulting in different behaviour, memories and attitudes.

The BE scale contains four dimensions, which are determined by three question items. These sensory, affective, cognitive and behavioural dimensions will be explained separately (Table 1).

**Sensory dimension**
The sensory dimension captures everything what is experienced in relation to your senses; sight, sound, touch, taste, smell, temperature and pain. Multiple studies are already done on multi-sensory marketing, differentiating the effect of (varying) sensation stimulation in advertisement. For example, sight enables aesthetics to evoke an experience. As GP mainly delivers services related to sight, this thesis regards the sensory dimension as visual dimension.

**Affective dimension**
The affective responses in the human brain relate to all different types of emotions and sentiments, felt by the consumer. For example a TV advertisement can create a relatable sentiment of feeling belonged. Derived from the relational dimension, affective commitment is also part of the affective dimension. (Appendix C)

**Cognitive dimension**
Cognitive responses cover the thinking processes in the brain. Creativity, problem solving and analytics are all part of your cognition. Possible marketing examples are a campaign which lets you think about the environment or politically designed campaigns.

<table>
<thead>
<tr>
<th>Dimensions of BE</th>
<th>Content</th>
<th>Items by Brakus et al. (2009) and Evanschitzky et al. (2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory</td>
<td>senses, sensations</td>
<td>This brand makes a strong impression on my visual sense or other senses. I find this brand interesting in a sensory way. This brand does not appeal to my senses.</td>
</tr>
<tr>
<td>Affective (includes Relational)</td>
<td>feelings, sentiments emotions relationships, belonging and affective Commitment</td>
<td>This brand induces feelings and sentiments. I do not have strong emotions for this brand. This brand is an emotional brand. I feel that I can trust the brand I identify with the brand I feel emotionally attached to the brand</td>
</tr>
<tr>
<td>Cognitive</td>
<td>analytical and imaginative thoughts, curiosity, thinking, problem solving</td>
<td>I engage in a lot of thinking when I encounter this brand. This brand does not make me think. This brand stimulates my curiosity and problem solving.</td>
</tr>
<tr>
<td>Behavioural</td>
<td>physical and bodily actions, go and do, the urge to do</td>
<td>I engage in physical actions and behaviors when I use this brand. This brand results in bodily experiences. This brand is not action oriented.</td>
</tr>
</tbody>
</table>

*Table 1. The four dimensions of BE, their content and accompanied items.*
**Behavioural dimension**

This dimension stresses if a brand stimulates to act accordingly. It applies during an experience, resulting in change of consumer behaviour. This could be a change in lifestyle, for example inspired by role models. On a smaller level this could be to buy something. Behaviour can be seen as result of the internal response system, yet is regarded as part of the experience. Actual behaviour brings the most possibilities for measurement. Especially digital behaviour, could be easily expressed in numbers. For this dimension the challenge lies in selecting what is exactly relevant to measure.

Altogether these four dimensions holistically make up a BE. Continuing to answer the research question, literature already provides multiple criteria for measuring this construct. The next chapter will dive into this measurement of BE.
5. Measuring Brand Experience

In addition to explaining the BE construct, this chapter discusses measurement of the BE construct. Different requirements for measuring BE are found in literature. These will help in setting up guidelines for the design brief.

Metrics are necessary for performance measurement and therefore essential to the success of a companies’ strategy. Resonating with the scales in literature (Appendix C), the measurement of BE is frequently discussed across literature. The complexity of the construct forms multiple challenges. Relevant encountered challenges are discussed.

**Measurement criteria**

First of all, each static experience depends on certain context specific stimuli. **BE measurements should account for the context.**

Secondly, measuring the degree to which a consumer has an experience towards the brand is not sufficient to explain experience in a static moment. Instead, for example specific emotions need to be measured for the affective dimension.

Thirdly, as consumers differ in emotional state over time, measuring regularly is advised. This can be done by measuring across different touchpoints over the customer journey. When analysing these measurements, non-linearity is required. This means that multiple static moments don’t add up linear towards the dynamic BE. This will distinguish BE measurement from evaluative marketing metrics, being often linear in nature. Most of these proposed metrics emphasise on quantitative measurements.

Additionally, many researchers account for qualitative techniques, or even a combination of the two. When quantitative (closed) questions are used, they should be short and include a bipolar answering scale. Existing scales are entirely questionnaire based. These questionnaires may lack measuring affective components over time. Nysveen et al. (2013) even argue that self-reported experiences may not be valid measurements at all.

**In conclusion, capturing BE requires multiple measurements methods.** To design a novel set of methods, all requirements encountered during the exploratory phases are recorded and can be found in Appendix D. Combining multiple methods is in line with most BE researchers, who additionally advocate for new additional measurement sources.

**New measurement ideas**

Measurements done post experience are more outcome oriented, whereas an experience is something that happens in the moment. Observing in the moment or questioning quickly afterwards is suggested. Measurements are preferably done by using existing metrics. Discovering big data opportunities are repeatedly encouraged as solution. Appendix C shows an overview of new data collection ideas, proposed in literature.

In conclusion, literature provided a clear call for new measurement of BE. Especially through the use of new measurement methods. Prior to ideation on how GP could capture each dimension through novel methods, an exploration phase will be conducted to identify new possibilities for data collection.
Part II. Exploration

This exploration phase will be centred around analysing data collection for measurement of BE. Following the framework derived from literature, technological data innovations will be explored. Relevant trends and new available technologies need to be known in order to design an innovative solution. The digital revolution is expanding rapidly and GP wants to stay informed. Through trend analysis, technology scouting, market research and consumer understanding, opportunities and insights are identified. These methods are used to explore the topic of BE in the field of practise. In conclusion, a summary manifested by a SWOT analysis bridges GP’s expertise and available opportunities. Together with the conceptual framework this will be the foundation for the design brief, providing the requirements for the design of the method and tool capturing BE.
6. Trend Research

Designing a solution using new data collection methods will require some understanding of data collection. This chapter will discuss trends around the topic of data. Understanding why and how to utilise data streams will help in designing a fitting solution for GuiltyPeople. Due to the focus on a real-time solution, this chapter revolves around data which could be collected over time or

TRENDS

Data processing

Consumers are getting used to measure and analyse their personal data. Think for example of activity trackers like the Fitbit (Fig. 13). This trend, based on a consumers’ belief in data, is known as ‘the quantified self’[71]. All this data needs to be processed properly in order to analyse it.

Nowadays, these technologies are becoming more affordable and therefore available for the majority of (smaller) companies (Fig. 14).

Crucial to data integration availability was the arrival of the cloud, a virtual space which could be rented for data storage and processing. A third party hosts the required hardware. Companies only have to pay per use and yet endless expanding possibilities are possible[76, 77, 78].

To ensure digital data processing, all kinds of imaginable sensors to capture (analogous) phenomena are invented. Connecting data streams and these sensors together is known as the Internet Of Things (IoT)[79, 80].

Stored data can be analysed. Through using Artificial Intelligence and Machine learning technology, analytics get expanded into ‘Augmented analytics’. These analytics do not only display results but also think in advance, proposing or carrying through decisions. The aim of GP is to develop a tool only delivering insights. Using augmented analytics could be the first step towards a smart system which proposes brand decisions.

When working with digital analytics it is important to constantly reevaluate and question your assumptions[81, 82].

To make the analysis of data possible, it requires the data be structured. To ensure a neat translation of data from one place to another an Application Program Interface (API) is used. APIs act as primary connection
for data algorithms and decision services. Millions of APIs exist (a concise overview can be found in Appendix E). Availability of APIs is crucial for this project, as it will make data integration easier. However, using first-party data is advised to create stronger relations with consumers\textsuperscript{83, 84}. To connect with consumers, it is important to understand their behaviour and trends.

**Consumer web trends**

Already decades ago, the online part of the customer journey was as important as its offline counterpart. Trends in web behaviour will be beneficial for identifying important touch points to capture BE. Making up already 80% of all consumer internet traffic, video content is unmissable these days. Videos analytics become crucial to understand their influence on the brand. Regarding the origin of traffic, search engines generate the highest amount of website traffic, outperforming social media\textsuperscript{85}. Looking at social media platforms, Facebook still dominates the social landscape. For the younger generation Youtube, Instagram and Snapchat seem more popular\textsuperscript{86}.

**THREATS**

Collecting data may seem like an easy-to-fulfil task, nevertheless, the majority of challenges will arise afterwards. Having unlimited possibilities of data to analyse, most companies lack human capabilities and expertise to process the data correctly. (Hippold, 2018; Misser, 2018) (Fig. 15) This lack makes data integration expensive and extensive to implement.

**General Data Production Regulation**

One of the bigger challenges, also exposed to a lot of public attention over the last years, is ensuring safe storage and processing of data. The goal of data security is preventing a breach, which is developed in the General Data Production Regulation (GDPR), set up in 2018 for European countries. Appendix F provides more information on GDPR. GuiltyPeople is already practising the GDPR and uses a Data Processing Agreement. For creating a tool capturing BE, GP has to find a legal basis to collect data (Fig. 16).

To store collected data, it is crucial that data cannot point to a specific person\textsuperscript{89}. Therefore data has to be aggregated (made absolute) or anonymised. One of the most clear objectives of the GDPR, relevant to this project, is: ‘What is the minimum amount of data needed, to achieve our goal?’

**RELEVANCE**

The data trends confirm how the data driven approach towards BE is becoming more accessible, also for SMEs. With technological innovations such as augmented analytics in mind, a future proof solution can be designed for GP. Online web behaviour trends will be of guidance in selecting where to measure. All criteria regarding data security are included in the List of Requirements. (Appendix D)

To deepen the understanding of data collection, it is important to know the complete spectrum of availabilities for data collection. Therefore, technology scouting is done, which will be explained in the following chapter.

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85. Ibe, K. (2019, February 26) 7 Crucial Data-Driven Marketing Trends (For 2019 and Beyond). *
87. Ibid., 72
88. Ibid., 75
This chapter explores a variety of possibilities for data collection. The focus is on new and digital methods which are capable of realtime data tracking. The majority is discovered through desk research, however additional experts and interviews (see next chapter) close the gate on obtained knowledge.

**DATA COLLECTION METHODS**

To get a complete yet in-depth overview of existing and emerging technologies for data collection, different methods are drawn upon. A combination of Source-based Scouting and mind-mapping provided a starting point. The identified methods are categorised by a perceptual map. (Fig. 17) The vertical axis represents the complexity to process collected data and the horizontal axis divides methods by the effort it requires from the researcher and participant. After identifying an overview of data collection methods (Fig. 21), in-depth scouting is done to understand these methods. A system ‘teardown’, revealing ground components of the technology, could be used. This is for example done for Google Analytics. Appendix G shows the complete overview of scouted methods. The overview informs on characteristics of each method, (types of data, pros and cons, costs) which need to be known prior to designing a solution. A distinction is made into passive, semi-passive and active methods, based on the effort GuiltyPeople has to put in conducting them. The possibility of realtime measurement is essentially the fundament for this separation.

**Active methods**

Active methods (Fig. 18) are the more traditional research techniques, which require constant involvement of researchers. Also, experiments need to be designed upfront, by the researcher. (GP) Ethnographic will be the most extreme example, as it requires full days of work from the researcher. A little less active are interviews and observations. Interesting opportunities lie in (observative) neuromarketing techniques, such as Electroencephalography and Galvanic Skin Response. However, nowadays they still require active participation of both researcher and consumer. They also can be expensive.
Semi methods
Semi-passive methods (Fig. 19) require some preparation from the researcher to design the experiment. However, afterwards these methods are able to operate autonomous. Participants actively need to report on their experience. Most of these methods basically come down to a (interactive) questionnaire. However voice interactions and conversational AI become more popular.

Passive methods
Passive methods (Fig. 20) are able to operate and collect data without GP’s active contribution. They only require an implementation, which will cost minimal effort once GP has become expert in the research method. All methods include observations which are mostly done online, such as click-behaviour, buying behaviour and social media activity. These methods are the most promising as they are automatically producing real-time data.

RELEVANCE AND IMPACT
Concluding on all different methods, they can be divided into two main categories for collection data:

1. Collecting data through asking consumers about their experience. (subjective measurement)
2. Collecting data through observations of consumer behaviour. (objective measurement)

Connecting to the method of capturing BE, each dimension could be expressed through both subjective and objective measurements. Completing the literature studies and desk research on BE, the next chapter will explore the field of practise through interviews and sessions.

Figure 19, Conversational AI, web-survey and e-mail survey methods.
Figure 20, Heatmaps and Google Analytics observant methods
Figure 21, Overview of scouted data collection methods.
8. Market Research

One of the drivers of this thesis is the translation of academic knowledge into practice. This chapter provides insights encountered in the field which are especially valuable for designing a understandable tool.

UITAGENDA CASE
Parallel to interviews, meetings and talks, a case is done throughout the project. GP already started implementing and creating a simple MVP. This is done with one of their clients: UITAgenda Rotterdam, to already start validating the project. UITAgenda is a cultural platform, showing the cultural agenda in Rotterdam and stimulating consumers to visit culture. (Fig. 22) UITagenda is also interested in monitoring their brand over time. Together with GP they are exploring measurement possibilities applied at brand-owned touch points. UITagenda provides an interesting perspective on BE because there is no focus on purchase in the use of their platform.

INSIGHTS
To learn from other industries a diverse variety of people is interviewed. Marketing strategists, data analysts and directors were involved. This was done in both informal (mostly within ISM E-group) and formal settings. Transcripts of formal interviews can be found in Appendix H. Insights from the field led to requirements, recorded in the List of Requirements, see Appendix D.

All different experts provided key insights to capture brand experience through a digital solution. These will be discussed in the following paragraphs.

BE as differentiator
The director of a BE-agency said: “I’m really happy that the business clients are embracing BE nowadays and also really getting the understanding that BE is one of the key differentiators.”

Although sales still appear to be the main driver for business decisions, BE is getting a stronger vote in the board room. NPS is mostly used as main communication metric, however NPS measurements mostly do not outweigh sales in an argument. Deeper insights in BE are needed to convince other departments, which is mostly done through explanatory reports nowadays.92

The proposed solution in this thesis could fill this gap.
Qualitative BE

BE is mostly measured through a strong single metric. (NPS, CES, etc.) They ask consumer feedback through closed questions. These questions are always followed by an (open) explanation question. Interviewed BE-experts shared that the answers to these open questions provide the most surprising insights93, 94.

BE over the customer journey

Instead of focussing at touch points, small and specific customer journeys are identified. These journeys are then evaluated with scores as NPS. Accordingly, the effort consumers have to do, is improved throughout these journeys. This perspective provides a more focused and less holistic view towards brand experiences. ‘Look where you make and break the journey’, to identify important touch points95, 96.

BE expectation

As consumer expectations are hard to account for, company values are mostly used as measuring rod. Consumer metrics are compared with the company values, to see if the company actually kept its promise. As these company values are different for each company, comparable dashboard solutions are mass customised.

Relevance and impact

The market research validated the need for BE measurement as decision driver next to sales. Although still (thin) evaluative metrics are used, qualitative answers of consumers provide the in-depth insights. Therefore, subjective questions for measuring BE could both be asked open and closed. Existing experience measurement tools focus at improving specific parts of the customer journey. This project could gain its differentiating advantage by measuring BE holistically, aiming to convert consumers in overall brand ambassadors. This contributes to GP’s brand focus and expertise.

The final solution should capture BE experienced by the end-consumer. To better understand this consumer, the next chapter deepens the cultural customer journey.
GuiltyPeople’s clients are focused in the cultural sector. A better understanding of the end-consumers behind these cultural brands is beneficial for properly capturing their experience. This chapter discusses the insights from the conducted customer journey mapping session.

Together with four participants, familiar with cultural activities, a sessions was hosted by the author. Their customer journey for a specific cultural activity was explored. Needs, touch points and sentiment were discussed plenary. The guide used for conducting the customer journey mapping session can be found in Appendix I. Due to limited time and resources, a form of ‘convenience sampling’ was conducted. The session was organized with a group of students from the technical university of Delft. To ensure participants being cultural interested, they were scouted according to a persona. (Fig. 23). A validation question was asked during the session with how many cultural activities they visited the last year. All participants scored higher than 9 with an average of 15 cultural activities.

CUSTOMER JOURNEY PHASES
Fitting cultural activities, the phases of Awareness, Consider, Purchase, Consumption and Retention were used for the customer journey. (Fig. 24) An explanation of these phases was provided. During the session, the example of visiting a movie house or cinema was chosen. It provides insight in how cultural consumers view their customer journey when going to the movies.

RELEVANCE AND INSIGHTS
Multiple needs for each journey phase were discovered. Surprising needs were escapism, human contact and last-minute availability. All identified needs were used during the design process to come up with measurements. The majority of useful touch points appear to be brand or partner-owned. However, the journey identified the relevance for external/social-owned touch points such as ‘review institutions’. Also non-digital touch points such as employees or buying at the cashier were noticeable. The touch points functioned as inspiration for ideation on different measurement possibilities. (p. 40)

### Maria

**Demographics**
- **Age:** 22
- **Occupation:** Student
- **Martial Status:** In a relationship
- **Location:** Delft
- **Education:** TU Delft

**Tech savvyness**
- **Activities**
  - Making music
  - Reading literature
  - Having drinks with friends
  - Visiting cultural activities with partner

**Personality**
- **Narrative**
  Maria lives and studies in Delft. She wants to develop herself outside of her study through studying the purpose of life. She is interested in different cultures and has visited many countries, mostly in Europe. After her study is finished she is planning on living with her partner and getting a baby.

**Social Media Activity**
- Instagram
- Pinterest

---

**Figure 23.** The Persona of Maria according to which participants were sampled.

**Figure 24.** The customer journey for visiting a moviehouse, as result of the session. The two alternative routes for the sentiment apply when no satisfactory level is reached during consideration or consumption phases.

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<table>
<thead>
<tr>
<th>phases</th>
<th>AWARENESS</th>
<th>CONSIDERATION</th>
<th>PURCHASE</th>
<th>CONSUMPTION</th>
<th>RETENTION</th>
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</thead>
<tbody>
<tr>
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<td>Bringing inspiration</td>
<td>Comparing on - Venue - Availability - Quality of offer</td>
<td>Getting tickets in time</td>
<td>Occupying/experim</td>
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<tr>
<td>CONSUMER</td>
<td></td>
<td></td>
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</table>

**comments or sentiment**
- neutral
  
- really positive
  
- really negative

10. Window of Opportunities

To bridge GP’s internal capabilities with external opportunities, this chapter summarises the exploration phase through a SWOT matrix. The complete SWOT can be found in Appendix J.

Figure 25 shows the opportunity for GP’s to expand its brand expertise by measuring brand experience. Focussing on brand experiences will help GP in differentiating their approach from the abundance of other experience measurement attempts. To fuel becoming a data-driven brand expert, GP should expand their human capabilities with data analysts.

All other opportunities and threats are included in the design guidelines. The next chapter discusses these guidelines through proposing a design brief.
11. Design Brief

The previous chapters all led to a thorough understanding of BE in the cultural sector. Throughout the process, all gathered knowledge was translated to demands and wishes (appendix D) for designing a novel method to capture BE. This chapter highlights the goal of the deliverable, formulates the specific design challenge and illustrates this with a selection of design guidelines. The design brief will act as compass during the ideation process.

**Goal of deliverable**
GP wants to be able to analyse their clients’ brand performance. This will be done through capturing the dynamic BE of consumers. The method to capture BE consists of a specific set of variables and how to measure those. A tool should be designed to combine method results.

This results in the following design challenge for this project:

**Design a novel, data-driven method and accompanied tool to capture BE through the four dimensions of sensory, affective, cognitive and behavioural.**

After implementation, GP should be able to use the tool together with their client, resulting in strategic brand decisions. The method therefore identifies new business.

**Content of method**

**Demands**

5. The method captures the BE perceived by consumers.
6. The tool only visualises data to give insights in brand-related variables.
7. The tool is understandable for GP/ connects to GP’s expertise and knowledge.
8. The tool is understandable for GP’s clients.

**Wishes**

9. The content (metrics) should be extendible or editable over time. Connecting to present needs of the client.
10. The content focusses on/is relevant to the cultural sector.

As the method only shows measurements directly related to the consumer, it should not take strategic decisions for the company. These will either be done by GP or the client. Focussing on the cultural sector narrows down contextual factors and makes the method more applicable to the clients of GP.

**Dimensions**

**Demands**

12. BE should be captured through a combination of attributes.
13. BE measurement should be non-linear.
As different measurement don’t add up linear, no score will be calculated by the tool. Attributes should give explicit insight in the dimensions, for example for the affective dimension the specific emotion can be measured.

Demands
18. The method contains both observant methods and self-reported methods.
19. The method combines qualitative and quantitative measurement methods.
20. The method measures through more data sources than only survey questions.
21. The measurements using questions include bipolar scales.
22. The method proposes future measurement possibilities.

Measurement
The questions can be open (qualitative answers) or closed (quantitative answers). Closed questions should use bipolar scales. As qualitative reports give a more in-depth insight they should get more visual attention. Connecting to trends, future possibilities will be advised. This prepares GP for expanding the method with innovative measurement methods.

Wishes
23. Questions should be as short as possible.
24. The method utilises existing methods, tools or api’s as much as possible.

Time and place
Demands
26. The method captures dynamic experience over complete customer journey.
27. The method measures both during the experience and post experience.
28. The method measures realtime (at least each day).
29. The method takes other points besides brand owned touch points into account.

Most metrics will be located at brand owned touch points. However through use of API’s, also partner or external owned touch points could be subtracted.

Data
Demands
30. The consumer is able to ask for, edit and delete personal data.
31. As minimal personal data to achieve the goal is collected.
32. When possible, the collected data is stored at the client.
33. Collected personal data is anonymised or aggregated as a.s.a.p.
34. Data should be stored hashed and encrypted.
35. Changes to personal data need to be logged.

The tool is the front-end of the place where all measured data will come together. As minimal data as needed to achieve the goal should be collected. Data should be collected as much as possible at the client. As collection of personal data needs to be prevented, this data is aggregated.
IDEATION PROCESS

In conclusion, BE needs to be captured through variables which span the four dimensions, including context, and are divided in subjective and objective measurements. To approach the design brief in a structured way, an ideation plan was made. Ideation was mostly based on answering ‘How to ...’-questions. (Fig. 26) For each dimension, a template was made to answer ‘How to’s accordingly. (Fig. 27) This provided the starting point for the next part of the thesis.

Figure 26, Structured ‘How to’s as basis of the ideation process.

Figure 27, Template used for ideation per dimension.
Part III.
Ideation

Answering the design brief, this part of the thesis unwraps the solution space. The previous parts containing the Conceptual Framework and Exploration provided a thorough understanding of the BE construct. Enlightened with this knowledge, the problem will be tackled through a designer’s approach. The complicated nature of BE together with endless possibilities to design a dashboard resulted in a challenging journey towards the final solution. Therefore a chapter is devoted to unfolding the iterative design process. Being a designer, the ideation process started with examining existing dashboard designs for inspiration. The design process produced several concepts which are discussed in this part of the thesis. This all resulted into the final concept design, which will be shown in the next part of the thesis.
12. Data Visualisation

This chapter reveals the inspiration which fed the design process. The internet is saturated with working and non working designs of digital metric solutions, mostly known as dashboards. Prior to ideation, different ways of visualising data are examined. In addition to Chapter 8 (p.28), which focused more on the back-end of metric solutions, this chapter has the focus on the front-end side.

To feed and inspire the creative process a collage was made, Figure 28. Different types of data visualisation and arrangements are combined to give an overview of possibilities. Multiple sources consult on the rules and guidelines for designing such a solution. Key insights derived from these rules:

Starting with the most important point: the goal of the design. For a dashboard this goal is to clearly provide insights. The insights should inspire future (brand) discussions.

The main idea of a dashboard is that the majority of insights should be captured in one overview. This rule complements literature as all attributes together add to the total BE.

To give meaning to data, clear context filters should be present. Otherwise interpreting data would be challenging. Although more metrics may seem like giving a richer overview, they could easily confuse. Especially when everything needs to be in one overview: 'Less is more', is the motto. This is also important regarding GDPR rules to only use minimal needed data. (p.25)

Not only the amount of metrics, but also the arrangement of components should make sense. Therefore think of: in which sequence the user will read the overview. When designing this lay-out, always keep mobile users in your head.

As each client has different analytical needs, there should be room for customisation. The design should resemble this.

You can make or break the analytical power of the design by choosing the right visualisation for each metric. Also use highlights meaningful. Wisely use colour and leave out unnecessary decoration, all to emphasise the right components.

These insights provided inspiration during the design process, which will be explained in the next chapter.

100. Desmyttere, P. (2019, May 3). In 7 stappen naar een Marketing KPI-dashboard. *

* Web sources of references can be found in the complete reference list.
Figure 28, Collage of different data visualization types.
13. Design Process and design directions

This chapter enfolds the design process. Due to the numerous decisions needed to be made, the multi-layered process is explained. The process spanned multiple phases of the project. It resulted in several design directions, which are discussed in this chapter.

Form and Method
Prior to explaining the design process, a clear difference between the form and content needs to be made. The design of the form contains the narrative, dimensions of BE and the arrangement of attributes (Fig. 29). The form is mostly manifested in the front-end.

The design of the content holds all decisions regarding the right metrics for measuring BE. (variables) This includes where these variables will be measured. The content is both front and back-end focused.

Of course, the design of the final solution is an iterative process between form and content.

Why a dashboard
Different communication formats were scouted. However, requirements such as: updating data real time and flexible components quickly led to a digital solution. This digital solution, called a ‘dashboard’, should provide an ‘overview summarising various metrics’.

This overview could be manifested through different mediums, such as different types of screens or Virtual Reality (VR) technology. A digital dashboard could contain flexible components, could be improved over time and could be manifested through different forms. This all results in a future proof communication tool for GP.

The manifestation of the product is regarded as the ‘interaction design’ and will be discussed in Chapter 18. This thesis proposes the form of the dashboard (structure and narrative), along with a method for the content. (attributes and variables)
DESIGN PROCESS
Figure 30 explains the multi-layered design process. The process started by completing the template for structuring different variables for each dimension. Variables were already scouted in the exploration phase. After having a sufficient amount of variable sets, the ideation process moved to the form. Through the design of different dashboards, ideation on variables for the method was done parallel to designing the form. Sixteen different ideas were led to five distinct design directions for the form. (Fig. 31)
After deciding on a design direction, the focus went back on the content of the dashboard. The next chapter manifests this part of the process. Variables were clustered into attributes to create a method for capturing BE. Attributes together with the selected design direction formed the first dashboard concept.

DASHBOARD DIRECTIONS
Figure 31 and Appendix K show the different design directions. Direction 1 (Board) and Direction 2 (Security) are more traditional dashboards, which focus at a clear presentation of data. Direction 3 (Tiles) has its focus on flexible and loud metrics. Direction 4 and 5 provide the dashboard with a metaphor, whereas Direction 5 is the more traditional one of the two. Direction 4 is aimed at gamification.

Together with GP the directions were discussed and evaluated. Appendix L shows the complete selection process. The selection session resulted in a combination of Direction 2 and 5, due to the clear arrangement of Direction 2 and the metaphor of Direction 5. This final concept will be presented in the next chapter.

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Figure 31, Five design directions, direction 2 and 5 were chosen for the final concept.
Part IV.
Conceptualisation

This part presents the final proposed method and tool for GP, a dashboard called Merk Monitor. First, the form of the dashboard explains its narrative: measuring BE across the four dimensions through an accompanying set of attributes. Then specific variables for measurement are presented together with a selection tool to select variables from.

Next, the process of implementing the product is discussed. This leads into a proposal for the dashboard version 1.0. The Conceptualisation part ends with an explanation how to use this dashboard.
This chapter introduces the composition of the dashboard. First the form is explained through the humanisation of BE. Four dimensions of the human BE (organs) are explained, accompanied by a set of attributes. Different measurement possibilities (variables) for the attributes make up the content of the dashboard. The form and chosen content together embody the designed method for capturing BE.

**HUMANISING THE DASHBOARD**

For capturing BE, the end-consumer is examined. Therefore the dashboard places the human in the centre, in line with GP being ‘human centred’. (Fig. 32) **As a BE consists of sensory, affective, cognitive and behavioural dimensions (p.19), these dimensions define the main arrangement of the dashboard.** From a human perspective they are translated to corresponding organs. The sensory dimension is narrowed down to only the sense of sight, located in the Eyes of the human. This choice is based on the work GP delivers (p.11) Affective responses are associated with the heart, whereas cognitive thoughts are associated with the brain. Behavioural responses manifest themselves through muscle movement. For pragmatic reasons, the hands are chosen as a fitting embodiment.

A contextual layer provides a (time)filter and insights in contextual factors influencing the experience.

The personification gets prominent visual attention in the dashboard. This has an ambiguous purpose: on the one side it highlights the human focus of BE measurement. On the other side the vitality of the organs functions as an identification layer, updating on the condition of each dimension.

In resemblance with a heart monitor the product will be called ‘Merk Monitor’ (Dutch for: Brand Monitor).

The vitality of each dimension is determined through a specific set of measurements.

**Dimension Attributes**

The ideation sessions proposed three attributes for each dimension, all together making up the perceived BE by a consumer. The attributes are derived from available scouted variables, aiming to provide a holistic view of BE. (Fig. 30, p.40) **The combination of these attributes will be the method for capturing BE through different data sources.** Attributes will be discussed one-by-one.
To capture the sensorial part of an experience, the method focuses on what consumers see. When a consumer senses a brand's offering, at first their attention will be captured. Attention encompasses what is viewed, how long something is viewed, etc. Giving priority to points of attention reveals a sequence of what points first get attention and what later. Zooming in on these points, there is a reason why a consumer looks at something first. Evaluation is done by retrieving what the consumer thinks of the appearance of certain points. After consumers sense certain brand stimuli, the brain will translate it into affective and cognitive responses.

To capture the affective part of an experience, the method focuses on what consumers feel. When a consumer encounters a brand they feel a positive or negative sentiment towards it. Zooming in on this specific feeling, the consumer feels a certain emotion. Feeling certain emotions over a period of time results in relational aspects. These are manifested by consumers' identification towards a brand. Parallel to affective response, the consumer will also have cognitive responses.

To capture the context around an experience, all data collected should be timestamped. In this way the data can be analysed in certain timeframes. Next to time, contextual factors, originating from the consumer and environment, will affect the experience.
VARIABLES
Each attribute can be measured subjectively through asking questions (open or closed) or objectively through observing. Individual ideation provided a wide variety of variables. Almost all variables are present in the overview in Figure 33, being categorised by the attributes.

Selection of Variables
Ideally the dashboard should contain measurement points for each attribute to give an holistic insight in BE. However, if this is executed, the dashboard would have the following flaws:
• It is hard to find its essence.
• It loose usability.
• It doesn’t use as less collect data for the goal.
• Not all attributes are useful for each client.
Therefore a client chooses which attributes are useful for them. Each attribute can also be measured in different ways. Due to the complexity and overload of all these variables, a simple toolkit was made for GP.

Selection Toolkit
Figure 34 shows an overview of the selection toolkit, containing three levels to explain. First an overview layer explains the attributes. The next layer proposes variables to measure each attribute. The bottom layer shows how and where each variable can be measured. The full menu can be found in Appendix M.

The overview in Figure 33 is the middle, front-end layer. The marked variables differ per client. For example a specific cognitive brand value like ‘transparency’. The same holds for which contextual factors are of influence, or how brand needs to appear. (cheap/premium, ugly/sexy, old/modern) Therefore, to implement a running dashboard, making decisions together with the client is required.

Decision making
Next to client-specific variables, touch points to conduct questions have to be selected with the client. Also for observations, specific touch points need to be selected, for example which social platforms are analysed. To structure this decision process, an implementation plan is needed. The next topic will discuss the strategy among implementing and using the dashboard.

Figure 34. Overview of the selection toolkit, showing examples in Dutch.

Toolkit

Example

Explanation

Why
Attributes

How
Variables

What
Implement

Exploration of the attribute.

Indicator for observation or question method.

Visualisation of data.

Implementation choice: what touch points will be analysed?

Possible touch points

Input: Content analysis tool

Social Posts

Facebook reactions

Instagram reactions

Tweets

Reviews

Facebook reviews

Google reviews

Open Vragen
15. The ‘Merk Monitor’: Set-up and proposal

This chapter discusses the steps which are needed to get to an up-and-running dashboard. The steps are made up of client decisions, legal requirements, and implementation steps. In conclusion a proposal for the dashboard is done as starting point.

To discuss and select the content of the dashboard, a session needs to be planned between GP and the client. This will take a minimum two hours. This session will also be used to arrange all legal requirements for data regulations. Afterwards the technicalities need to be implemented by developers. (Fig. 35)

**DECISION SESSION**

**Variable selection**
First the client has to choose relevant attributes. A first version dashboard will be the starting point. The selection toolkit is used to explore additional measurement possibilities. When marked variables are chosen they need to be specified. When deciding on questions to ask, the specific question could be altered to the tone of voice of the brand. GP can consult on this.

**Set Points**
Next to deciding which variables are relevant, also needs to be decided where these are measured, because each brand has different touch points. The back-end of the selection toolkit provides generic options which can be altered. For surveys these measurement points could be:
- During web visit.
- Using a local tablet, after consumption.
- E-mail or chat message after consumption.

For observations some selections need to be made, for example which social media platforms will be analysed. Or which page or clicks are exactly measured. GP could consult in this, by asking: What makes or breaks your customer journey? When variables and measurement points are decided upon, the next step will be defining when they will succeed.

**Set attribute goal**
Each variable should get a goal to keep track of performance in BE. For example:

![Figure 35, Required steps for the set-up of the Merk Monitor](image-url)
‘the sentiment for the BRAND should be positive’, ‘the most associated word should be ‘Culture’ or ‘we want views to stay at an average level’. The next chapter will elaborate on the use of this goal.

Legalities
After the decision session is finished, legal formalities need to be arranged before implementation can happen properly. As GP’s dashboard is going to collect data, a data agreement has to be signed. Because consumer data will be collected and analysed the client needs to update their Privacy Statement.

During the decision session, all external platforms (social, Google, APIs) are recorded by GP, so they can be made ready for implementation.

IMPLEMENTATION

Get access
All external platforms need to be accessible for GP’s developers. Therefore the client has to share or authorise GP to use it. Sometimes new platforms could be decided upon, for example, a new social media platform or an unknown CMS, etc. If this is the case, GP has to do additional research on the following topics:
- Legal: can data be used?
- API: is connecting possible?

When GP is authorised, the implementation of measurements can begin.

Set Measurements
Questions, as decided in the session, can now be implemented. When the client updates the Privacy Statement and GP is authorised, questions can be asked online.

This will be implemented by developers. To show observations, specific events like clicks need to be recorded. This can be done by placing a code (script) on the specific page, tracking web behaviour.

When questions are asked at a local venue (with an iPad) the client needs to implement this themselves.

Connect to APIs
When all questions are implemented, the final step for filing up the dashboard is connecting all APIs. When APIs are not available, data exports need to be used. However, this is not preferable. After all these steps are finished, the dashboard should be operational.

PROPOSAL
The decision process and implementation could get really elaborated, when each variable is discussed. To make this process comprehensible for GP, a first proposal is done. Figure 36 presents a proposal of carefully arranged variables. The arrangement is based on the validation sessions. (p.53.) It functions as first product, which could be offered to a client as a sample. When clients are interested they could enter the session with GP and specify it to their needs.

Table 2 shows the variables present in the first concept and where they are measured.

When the decision and implementation processes are finished the dashboard should be up-and-running. To ensure that the dashboard fulfils its purpose, the next chapter discusses how it should be used best.

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</table>

Table 2, Proposed attributes and variables for the Merk Monitor 1.0
Figure 36. Merk Monitor 1.0, containing a starting set of variables and attributes.
16. The ‘Merk Monitor’: Monitoring BE

This chapter explains how the results provided by the dashboard can lead to insights which affect the brand strategy. In this way the goal of the dashboard can be met: providing brands guidance and steering in how to improve the experience their consumers have.

The dashboard is designed to provide insights in BE by displaying measurement results. After sale, the decision session and the implementation, these results will be visible in the dashboards (Fig. 37). When enough data is collected the dashboard is ready for analysis.

**Analysis and Goal tracking**

The selected set of variables gives insight in the four aspects of BE. Conclusions can be drawn (manually) by GP or the client.

To help evaluate the BE, the desired goal (p.48) is tracked through a simple yes/no script. Each dimension sums these yesses and no's and concludes on this through a three level indicator (Fig. 36). The functionality of the dashboard does not stop at analysis, but it can be used to provide brand guidance and more.

**DASHBOARD FOR GUIDANCE AND STEERING**

**Brand Strategy**

A client or GP could conclude on the brand strategy themselves. For example: if the affective part of a brand experience is lacking, a reaction could be to launch a campaign or commercial anticipating on emotions. A more specific example could be: if the cognitive dimension associates the brand with a poor working website, improvement of the website will be a logical conclusion. When the sensorial dimension shows a negative appearance, new material could be designed.

On a more abstract level, a client could validate their brand values with the dashboard. If it would affect the marketing strategy, GP could consult ISM E-company for assistance.

**Improve Measurement**

Next to changes affecting brand and marketing strategy, also the measurement itself could be improved. First, when certain variables seem unsuccessful, other variables could be chosen from the selection toolkit, or new ones could be invented.

Secondly, the success of the variables could be improved by rewriting questions or asking them at a better time, etc. Refining the measurement method is useful for the client (results) but also for GP, as it shapes their method.

In conclusion, the dashboard should provide promising insights. To provide validation, the next part will evaluate the Merk Monitor and its measurement method.
Part V.
Conclusions

This last part of the thesis discusses essential steps for launching the Merk Monitor successfully. First, the product will be evaluated through the conducted validation sessions. Multiple recommendations are derived from these sessions, and additionally from the creation of a MVP and Prototype. These chapters aim to provide insights and recommendations for development of a feasible, desirable and viable solution.

The chapter Conclusions will connect back to the goal of this project and conclude on the deliverables. Also the limitations of the project and approach are discussed, leading into future research possibilities. The graduation project will end with a personal reflection.
This chapter contains the last part of the design process: validation. The aim of validating is to ensure the feasibility, desirability and viability of the dashboard. Therefore Strategists, Technology experts and Clients are consulted. Also a MVP and Prototype were developed to learn fast from practical limitations.

**Technical Evaluation**

As feasibility is one of the main deciders for GP, a MVP and a Prototype are developed for evaluation. The MVP is made together with Uitagenda (Case p.28) and developed by GP’s developers in Sri Lanka. (Fig. 40). The prototype was made by the author of the thesis.

By translating the concept to practise multiple unexpected problems were encountered. However, the MVP, Prototype, Strategists and Technical experts all together showed that most connections, API’s and dashboard functions will be feasible. The most valuable lessons and challenges encountered will be discussed.

**Survey Questions**

Using external tools for conducting survey questions brought some limitations, mostly in the design and arrangement of the questions. One of the used tools, Hotjar, has no available API, so data needs to be exported manually. The questions which are implemented for the MVP showed significantly low response results. One of the reasons could be that questions on the website are only shown when consent is given (accepted cookies). Therefore, contributing time to carefully design the survey questions is suggested.

As questions are straightforward to develop, GP’s technology expert advised to eventually embed a self-made survey function in the dashboard.

**Analysis**

Some variables already preform an analysis, like Sentiment and Share of Voice. GP is not able to develop this complicated tool themselves. Therefore an external party should be used for these steps. The prototype tested sentiment analysis for tweets regarding the ‘London Palladium’ theatre as example. It identified multiple mistakes and how sentiment is not related to the theatre itself (Fig. 39).
Figure 40. First version of the MVP, by GP’s developers. The next iteration will rearrange the variables into the four dimensional categories. The MVP contains open questions, closed questions and observations, spread across the dimensions.

Data knowledge
Implementation of measurements required a lot of knowledge into code and platforms such as Google Analytics. ISM e-company and GP developers in Sri Lanka both have the expertises needed. However, the MVP development contributed a lot of time to project management for simple implementations. Contracting a local data analyst could overcome this hurdle.

Legal Evaluation
To ensure the legal feasibility of the product, a data security expert was consulted again.

All conducted questions are permitted, if the client makes sure to update their privacy statement with the notion that data will be analysed. Most observations are also permitted, because consumers gave consent to be tracked. (accepted cookies) For online contributions, such as posts, comments and reviews, the legal agreements between that (social) platform and the consumer or client need to be examined. Social posts and comments need to be anonymised. All future variable ideas regarding neuromarketing are only possible when given explicit consent, and are therefore more useful for research. In conclusion, most selected dashboard variables are compliant with GDPR, regarding the goal of improving the brand.

Next to being technically and legally feasible, the product should also be desirable according to the client.

Usability Evaluation
Although most clients initially showed feasibility doubts, they were interested in the product. They saw the added value in addition to, for example, Google Analytics.

“This [product] gives a human face to the data, in contrast to Google Analytics dry numbers.”

Both observations and questions were preferred by clients, so both need to be part of the dashboard. Strategists clearly vowed for observant and analytic variables, due to their viability. “Dashboards are mostly not used after implementation”, explained one of the strategist.

The purpose of the product was clear and promising to clients. One stated that: “This dashboard could replace our 2 year research report.”
Functionality Evaluation
A frequent occurring wish was the ability to select two metrics from the dashboard for detailed comparison. (Fig. 41) In this way the data could be analysed even better. “I see this as a creative tool ... it forces you into delivering quality.” This was said by one of GP's clients after suggesting the ability to compare variables. Comparing variables with Conversion was especially desired, to enrich analysis.

Clients asked for a filter option for target group/consumer classification. This could be incorporated in the dashboard by filtering all data on a specific consumer group. However this can not be done for specific variables, as they will not be comparable anymore.

Another reoccurring point of feedback by clients was the need for an indication or score on their BE. As a successful BE is defined differently for each brand, a generic formula to rate BE is too complicated to develop. To meet the clients request, the condition function for each dimension was implemented in the product, based on the goals set by the client.

In conclusion, the product is technical feasible when limited to only displaying data. For analysis functions, such as sentiment, external parties are needed to make this feasible for GP. When data does not contain personal information and privacy statements are updated as advised, the product will be GDPR compliant. Despite of some technical hesitations, the two clients were very interested in future development of the product as for the promising results.

To deliver on the promise, the next chapter stresses further recommendations to ensure the viability of the product.
18. Recommendations

This chapter provides recommendations for the development of the dashboard. These are supported by advise on collaborations. Also the business case around the product is discussed.

**PRODUCT DEVELOPMENT**

To successfully launch the dashboard, GP still has a to intensively contribute to the project. If the MVP is developed successfully it will lead towards the first functional dashboard (version 1.0). Accordingly, new versions can be released in horizons.

**Mvp**

An implementation plan for developing the MVP step by step is proposed in Table 3. The first versions where already developed during this project. The majority of work lies in the third MVP, were an analysis function needs to be implemented.

**Dashboard**

After the launch of the version 1.0, the service can be expanded. Table 4 shows the horizons. The dashboard can best be sold as Software as a Service (SaaS). In this case the client will pay for the use via subscription and GP is able to quickly release updated versions. When for example new variables are needed to implement for one particular client, all clients will benefit.

**Future Variables**

Launching the dashboard across different clients will likely identify more variables. In this way GP could expand their menu choices. Also, by learning over the years, the menu could be shaped to showing frequently chosen variables.

Technological innovations will also pave the way for new variable measurements. The promising neuromarketing techniques (p.26) may become useful if an innovative way of asking consent to consumers is designed. GP needs to make sure that when new measurement opportunities arise, they are checked on GDPR compliance. Promising techniques lie in depersonalised measurements, such as heat-tracking sensors or heartbeat measurements. For this IoT approach, it will be best to partner with an expert in this field. Partnering the right way will be essential for the success of this project.

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**Table 3. Iterations for development of the MVP.**

<table>
<thead>
<tr>
<th>General</th>
<th>MVP 1</th>
<th>MVP 2</th>
<th>MVP 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVP launch</td>
<td></td>
<td>Rearrangement to 4 dimensions</td>
<td>Final mvp stage</td>
</tr>
<tr>
<td>Implement</td>
<td></td>
<td>Add e-mail question from Typeform</td>
<td>Develop goal function</td>
</tr>
<tr>
<td>3 hotjar questions</td>
<td></td>
<td>Add most used search terms</td>
<td>Develop content analysis</td>
</tr>
<tr>
<td>2 click through rates</td>
<td></td>
<td>Connect Google Analytics Api</td>
<td>Implement Views</td>
</tr>
<tr>
<td>External party</td>
<td></td>
<td>Decide on tool</td>
<td>Implement questions: Emotion and Recommendation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check legal agreements for APIs</td>
<td>Implement analysis</td>
</tr>
</tbody>
</table>

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Peter de Jong
EMPLOYEES AND COLLABORATIONS

ISM E-group already houses a lot of knowledge and expertise regarding data analysis and dashboard development. However, important arrangements need to be done to make full use of this knowledge. Development located in Sri Lanka requires a lot of (online) briefing for every iteration on the dashboard. As alternative for getting an internal data expert, GP could contract a percentage of hours from a data analyst at ISM. In this way long waiting times for small iterations are prevented. Another major part affecting employees is technical support of sold dashboards. GP has one support employee in the Netherlands. However, when multiple clients will operate a dashboard, probably a lot more support issues need to be solved. Anticipating on this in time will prevent that all dashboard support issues will end up at one person.

Recommendations on product development and on collaborations were discussed. However the product also needs to be sellable. The next paragraphs give insights into the business case around the product.

<table>
<thead>
<tr>
<th>time horizon</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVP</td>
<td></td>
<td>Merk Monitor 1.0</td>
<td>Merk Monitor 2.0</td>
<td>Merk Monitor 3.0</td>
</tr>
<tr>
<td>goal</td>
<td>Create</td>
<td>Learn</td>
<td>Sell</td>
<td>Expand</td>
</tr>
<tr>
<td>description</td>
<td>Create the MVP and recruit test clients</td>
<td>Learn from clients on desired variables and on support</td>
<td>Publicly brand, promote and sell the Merk Monitor</td>
<td>Expand functionality and sales.</td>
</tr>
<tr>
<td>GP actions</td>
<td>Manage Sri Lanka development</td>
<td>Hire data scientist</td>
<td>Brand and promote Dashboard</td>
<td>Scale up sales</td>
</tr>
<tr>
<td>development</td>
<td>Iterate on MVP till arrived on proposed dashboard</td>
<td>Implement new variables</td>
<td>Development of different variants. Develop own survey tool. Add comparison function</td>
<td>Implementation of augmented analytics</td>
</tr>
<tr>
<td>pricing</td>
<td>Only charge implementation hours</td>
<td>Only charge implementation hours</td>
<td>Subscription model for SaaS</td>
<td>New Pricing analytics function</td>
</tr>
</tbody>
</table>
BUSINESS CASE

Although performing a business case was not the focus of this thesis, the project still brought some valuable advice on the business case..

Sales pitch

To make a fruitful business out of the Merk Monitor, it first needs to be sold. The aim of GP is to convert consumers into brand ambassadors. GP could strengthen this message with their novel developed dashboard for monitoring BE. The monitor provides:

- Rich quantitative and qualitative insights in how a brand is experienced.
- Insights which help in steering and guiding brand and marketing strategies.
- Recorded validation for creative investments.

Additionally, results from successful test cases should help in gaining a clients trust. This could be for example: “Together with Uitagenda we raised their emotional experience from ‘mainly frustrated’ to ‘excited’.” Or “We changed Uitagenda’s brand association from ‘useful’ to ‘expert’.”

When clients are persuaded to use the dashboard, it is important that the solution fits their budget.

GP Menukaart

GP operates according to a menu where they provide their services split up in three ascending levels: Gold, Silver and Bronze. (Fig. 44) Connecting to this menu, the Merk Monitor could be marketed with a limited amount of variables, depending on the chosen package. The Bronze package could be limited to the initial dashboard proposal (p. 50) and promoted as free sample. In the Gold package, the client could discuss variables with GP and adapt them to their needs. (Table 5)

<table>
<thead>
<tr>
<th>package</th>
<th>Bronze</th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>content</td>
<td>Only the Merk Monitor 1.0</td>
<td>+ 1 extra variable per dimension + social platforms of choice</td>
<td>unlimited variables and measurements.</td>
</tr>
<tr>
<td>pricing</td>
<td>free</td>
<td>€50-100 per month</td>
<td>€200+ per month</td>
</tr>
</tbody>
</table>

Table 5, Proposal for the three packages in which the Merk Monitor can be sold.

Pricing

To consult on the price range for each package, comparable dashboard solutions were scouted. There are plenty of dashboard tools on the market, however most Dutch tools don’t publish their pricing publicly. Figure 43 shows a concise study of similar tools with available pricing. All shown products are focussed at data integration. Not all products are as relevant or comparable with the Merk Monitor. Based on their functionality and which platforms they integrate, a ranking is made. As Cyfe, Klipfolio and Coosto are able to perform similar measurements as the Merk Monitor. Therefore, the Silver package pricing is estimated at approximately €50-100 a month. The Gold package can be priced above €200 a month, however, all products publish the prices at request for packages with similar functions.

Costs

Next to employee fees, implementation costs and support hours, the costs of the Merk Monitor are limited to the use of external platforms. Mostly all API’s are free in use, as GP’s clients are mostly SMEs and therefore do not gather millions of responses. When this usage is exceeded: an upgrade, for example a Sentiment analysis by Google, costs one dollar per month.
Whitelabel Dashboard
As most of the cost will lie in development, the author advises not to ‘reinvent the wheel’. When partnering with an expert in dashboard solutions the Merk Monitor could be developed by them. This could result in lower development costs. It is important to choose a fitting partner who is able to implement new measurements. The three marked products will provide a good starting point for GP to discover external partners. (Fig. 43)
This master thesis contributed to academics by translating BE measurement frameworks to practise. This is done through approaching BE measurement holistically and data-driven. It answers the call for a more accurate measurement of BE, by capturing consumer perceptions across multiple touch points through different types of measurement. The proposed method will be useful for creatives, marketeers and brand strategists to get a better grip on their consumers’ brand perception.

The literature study, exploratory research and design process all led to delivering a dashboard tool which embodies the answer to the initial research question: How can GuiltyPeople measure Brand Experience, perceived by consumers, through different ways of data collection at touchpoints across the customer journey?

The research pointed out that BE is a multidimensional construct and therefore needs to be approach holistically. The created framework around BE showed that a consumers’ BE develops over time. This BE is made up of a sensory, affective, cognitive and behaviour dimension. Literature and market research showed that to adequately capture these dimensions, both objective and subjective measurements need to be combined.

These insights led to the proposal of a dashboard, which houses the four dimensions of an experience. The four dimensions are defined by multiple attributes which evoke the experience. The combination of attributes provides insight in how BE is perceived by the consumer. Preferable attributes, retrieved through client validation, were selected for a final dashboard concept.

This graduation project contributed to GP by providing them the academic founded concept for measuring BE. In addition to the dashboard proposal, a MVP was made to ensure feasibility. Future development of the MVP, together with insights from this theses should provide all needed knowledge to successfully launch the dashboard.

Fit with design requirements
All demands from the design brief are met. Most importantly, the Merk Monitor focusses on brand-owned touch points, however also uses different owned touch points. It is extremely flexible due to the variable selection process. The proposal uses multiple different data sources and types of data collection.

To successfully launch the Merk Monitor the author believes that GP has to put extensive effort in developing the MVP further. Contracting a data analyst will be essential if GP wants to meet the timing of the roadmap (p.57). Also, a radically shift towards outsourcing the dashboard development could contribute to a timely launch.

This thesis and its deliverables provide a starting point for GP to enter a time of iterative learning.

I am confident that with enough contribution to the project, GP is able to launch a functioning product, answering the research question.
20. Limitations and Future Research

This chapter discusses limitations of the graduation project and its approach. These will be translated to future research possibilities.

LIMITATIONS

Actual or approximated BE
The method answering the research question is based on approximating BE. It could not be proven (yet) that the designed solution captures an average of the actual BE consumers have with a brand. Knowing this beforehand, this project was executed as starting point towards approximating BE. No empirical studies were done to prove that the combination of attributes provides insight in BE, due to time constrains.

In addition to this, there is a discrepancy between observing executed behaviour and surveying behavioural intentions. Objective observations measure actual behaviour (clicks, placed comments, views etc.) , whereas questions measure subjective intentions of consumers. (answers they give)

Context measurement
The addition of context measurements is useful to enrich the analysis of BE. However, accounting for consumer factors (e.g., expectation) properly is challenging. Ideally these factors are captured together with every other measurement. For observations this will be too complicated to execute. The dashboard attempts to fix this problem through asking contextual questions together with questions such as Emotion, Need fulfilment and Recommendation.

Significance
As found out in the case with Uitagenda and through developing the MVP, the percentage of consumers responding to surveys is mostly lower than 10%. This thesis does not adress if this data is significant enough to say something about BE.

FUTURE RESEARCH

Future research could be done in validating the proposed attributes which make up BE. A possible way for validation could be done by comparing dashboard data with a conduct study using the BE scale of Brakus et. al (2009).

Also, future research could be done in innovative ways to observe consumer behaviour. The major challenge lies in doing this GDPR compliant, by not storing personal data. For example heat cameras or infrared sensors could be a starting point. This could provide a solution to the limitation of capturing context measurements properly.

Finally, future research could be done on how to implement a significance indication. This could be shown in the dashboard itself, for example by an icon of a flag.
Looking back on the whole process, I am thankful for the great freedom I got in approaching this assignment. Next to this freedom, I also got a lot of people's time and resources. GP made sure I got what I needed to deliver a desirable solution.

Personally I enjoyed connecting new measurement methods to the perception of brand experience. Looking back, it was an opportunistic approach but I truly believe this project provides a great start. It contributed to my strive to translate fuzzy problems into practical projects.

I was able to execute the project on my own. However I found out I definitely missed the support of teammembers. Personally I need to discuss regularly to take away doubts and uncertainties about my work. Luckily Arne was a great mentor, always in for a quick chat.

The first half of the project I spend a lot of time on exploration and gathering knowledge. If I had the chance to do it again I would start earlier with managing the development of the MVP. Measurements could already been implemented at the start of the project, however, not knowing what the attributed value was, hold me back.

I am happy to reflect on my personal ambitions which were formulated prior to the project:

On the topic of (brand) experience, I gained a deeper understanding of what consumers experience while interacting with a brand. Knowledge from the field of Psychology contributed to this.

For measuring BE I acquired a lot of practical knowledge on data collection methods. Next to learning new methods, I also gained practical knowledge on possibilities and limitations of tools like Google Analytics, Social API's and Hotjar.

Discovering the purpose and rules of the GDPR contributed to my strive towards facilitating an ethically accepted method.

Continuing on previous projects I executed at organisations, again, I had the possibility to execute a strategic problem through development of a digital tool. Translating the complex problem into an understandable briefing for developers was really encouraging to me. I am happy that I could use literature studies as guidance this time, instead of only functioning as inspiration.

Finally seeing the first MVP gave the fulfilment of being able to translate this fuzzy problem into a usable tool.

In my belief, this conceptual embodiment of a strategy is what makes us strategic designers unique in our profession.
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Appendices

A - Antecedents and consequences of BE
B - Dimensions of Experience
C - Measurement scales and dimensions
D - List of requirements and wishes
E - The API landscape
F - 1 Data and GDPR, 2 Data expert Interview
G - 1 Active Methods, 2 Semi-Active Methods, 3 Passive Methods
H - 1 In-house Company Interview, 2 Agency Company Interview
I - Customer Journey mapping session Guide
J - SWOT analysis
K - Design Directions: 1 Board, 2 Security, 3 Tiles, 4 Town, 5 Human
L - Concept Selection Guide
M - Selection Toolkit