FROM CUSTOMER INSIGHTS TO NEW SERVICES

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Contribution to the European Transport Conference

4th-6th of October, 2017, Barcelona

Abstract

Train Operating Companies (TOC) are keen to attract new customers. The key to success is high performance and making customers happy. As part of this NS (Netherlands Railways) strategy, the customer comes first, and passenger satisfaction is now the number one target and performance indicator. NS supports this ambition with a wealth of insights into the main drivers of passenger satisfaction. The key challenge is how to successfully convert these insights into action: meaningful innovation that drives successful business. We already know that a happy customer is a loyal customer (Van Hagen, de Bruyn & Ten Elsen, 2016). We also know that the vast majority (over 95 percent) of human thoughts are subconscious, and that customers are not very good at expressing what really makes them happy; consequently, it is crucial to tap into the subconscious mind and discover what really matters to customers. To do this we used a new research technique - ZMET (Zaltman Metaphor Eliciting Technique; Zaltman, 1995; 2003) – that consists of in-depth interviews using Photo Elicitation. This technique allows us to discover which stages in the journey matter most to customers (Van Hagen & Bron, 2014, Van Hagen & de Bruyn, 2015) and which needs are most important at those moments (Altuïtion, 2015). We discovered that customers have three main drivers or needs that they want fulfilled: the need to feel in control, to feel appreciated, and to experience a sense of freedom. Knowing the drivers of customer satisfaction, we must now convert insights into action. What must we do to satisfy those needs and make our customers happy? In order to convert insights into the innovation that drives successful business, we took the Design Thinking approach commonly used in the field of User Experience Design. We used design research to convert the core needs of our customers into a set of Design Principles - integral tools for helping to design brand touchpoints for our products and services. These principles are the foundation of our business; they are why we do what we do. The power of the Design Principles is that they articulate how customers want to feel in the form of a business strategy. The combined set of principles – three per core need (control, appreciation, freedom) – are linked to the nine stages of the customer journey that make up the company's 'Customer Experience Innovation Framework'. This framework allows for the mapping of existing initiatives and pain points, in order to check for gaps in the current experience. It is also used for creating, rating and upgrading new ideas. For each idea, a check is done to determine how it can affect and impact all stages of the journey, and how it can be used to activate each of the nine experience principles. By using the innovation framework in this manner, a portfolio of activities and initiatives is derived that ensures that for each 'moment of truth' in the customer's journey the three core needs are addressed in an orchestrated way, actively enhancing customer satisfaction.In line with the proper design & innovation methodology, new initiatives are converted into short-cycled proof of concepts and tested in a live environment among customers and partners. Based on the evidence this provides pertaining to desirability and feasibility, a proper business case is defined for the new initiatives and taken into the development roadmap, for subsequent deployment in scale and achieving the desired results in business performance and customer satisfaction. We will now convey how the process works, using examples of real cases.

Introduction

It is crucial for companies to ensure the continuity of their business operations. If a company wants to survive long term, its customers must be satisfied with the quality of the services provided, and the company must be able to manage costs. In our liberalized marketplace this also applies to railway companies like Netherlands Railways (NS).

T provide the highest quality service possible, NS puts the customer first in its mission statement and continuously conducts research into customer needs. We have learned from previous research that customers have a hierarchy of quality needs, as depicted in the customer-needs pyramid (Van Hagen, Peek & Kieft, 2000; Van Hagen, 2011). Travelers do not experience a trip as a whole, but rather perceive a trip as consisting of nine different travel stages, each with its own specific needs, experiences and emotions (Van Hagen & Bron, 2014; Van Hagen & De Bruyn, 2015). Although these insights are widely shared within NS, they nevertheless remain rather difficult to translate into concrete actions that NS personnel can undertake.

In this paper we translate the insights into a model and methodology, whereby we combine the customers' core needs and trips in a Customer Experience Innovation Framework that serves as a guide for devising the services that (even) better correspond to the customer needs that arise during the trip's various 'moments of truth'.

Unconscious needs

As outlined in the introduction, through previous research we have come understand quite well what customers want during train trips (Van Hagen, 2011; Van Hagen & De Bruyn, 2012), as well as what positive and negative emotions they experience during those trips (Van Hagen and the Bruyn, 2015). However, what we do not yet fully understand is which emotions the customers want to experience during their trips. To discover this, a qualitative in-depth research study was conducted among travellers using the ZMET method (Zaltman Metaphor Eliciting Technique; Zaltman, 1995; 2003), which is a technique that elicits both conscious and especially unconscious thoughts. The ZMET method was developed to uncover the mental models that govern people's thinking and behaviour. ZMET uses people's visual and sensory imagery in order to elicit the metaphors, constructs and mental models that their thinking and behaviour. Pictures are used to help respondents uncover deeper unconscious feelings, symbols and metaphors, with the result being that they are able to provide a more complete description of their emotions and feelings. The aim of such projective techniques is to therefore eliminate certain emotional inhibitions within the respondents while simultaneously addressing another part of human consciousness (Harper, 2002), thereby creating the opportunity to elicit crucial information that the respondents may not even be conscious of (Boddy, 2005).

Research set-up

Research conducted by the Altuïtion (2015) research agency determined what the traveller's conscious, and especially unconscious, needs are, and particularly how they want to feel during their trip. Zaltman demonstrated (Zaltman, 1995; 2003) that up to 20 respondents are required to reveal all the aspects that come into play on the conscious and unconscious levels. Consequently, 20 respondents – well represented in terms of age, gender, trip purpose and travel frequency ('lust and must travellers') – were invited to come talk about how they experienced train trips; moreover, they were asked to bring a set of photos with them that closely represented their feelings about a train trip. This method is intensive: each in-depth interview lasts for approximately two hours, with the respondent's inner-thoughts about a train journey revealed in seven predefined steps (Van Hagen, Apeldoorn & Eijsink, 2012). In an effort to keep interpretative errors to a minimum, everything the respondent says is literally transcribed (transcriptions). Based on the respondent's answers, relationships are established between the various aspects, thereby creating cohesion between all aspects, including designated overarching key words that are visualized in a mental map. During the analysis stage, the researchers devise a mental map that is based on the interview transcriptions and the 20 mental maps, with a minimum of 25% of the respondents having designated corresponding keywords (Zaltman, 1995; 2003). At a higher aggregation level, the metal map's associations result in three core needs, which are needs that lead to the desired emotional experience. Figure 1 presents the final mental map, featuring the three core needs: control, appreciation and freedom:

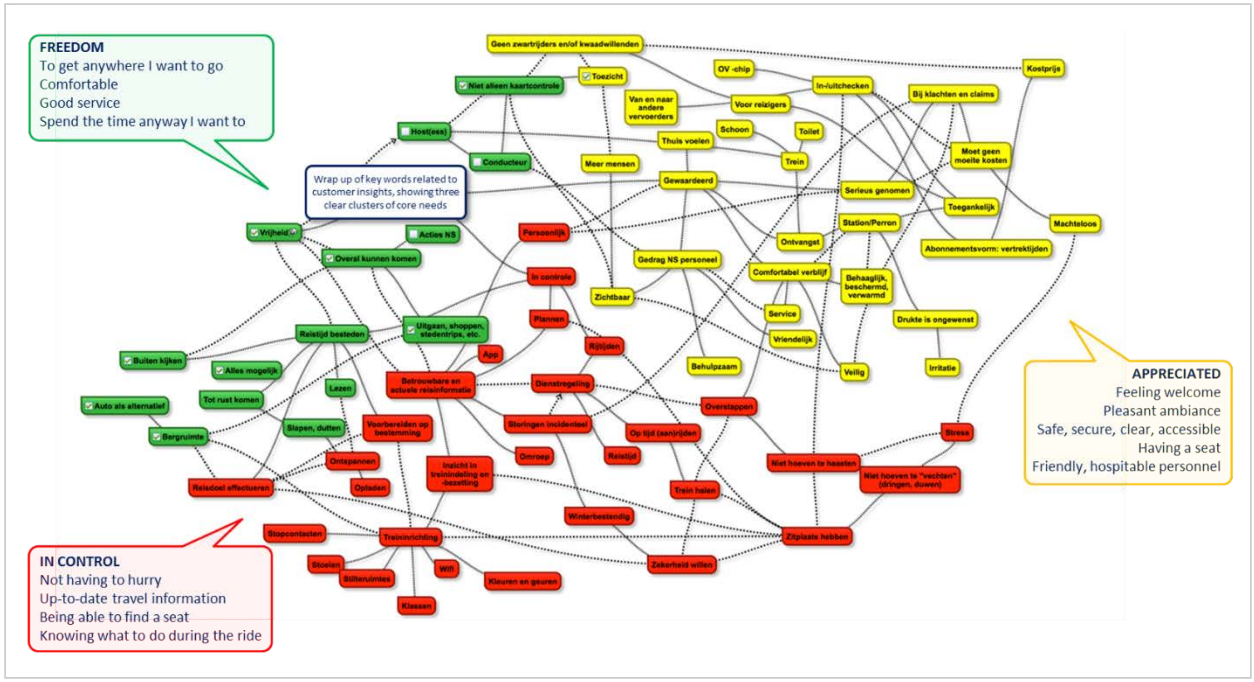

Figure 1: Mental map of client needs and core needs.

Three key core needs emerged from the research:

1. **Feeling of control**: because I have access to the necessary information and understand the prevailing situation, I'm not in a position where I feel dependent on the NS's whims, but rather I experience a feeling of control.

2. **Feeling appreciated**: If I'm welcome somewhere, I feel that I'm being taken serious in terms of my wants and needs, and I feel liked and appreciated.

3. **Feeling Freedom**: I'm able to do what I feel like, and do not have to continuously decide whether travelling via NS is actually better for what I aim to achieve. I feel free to do what I want.

Design principles

We now have insights into the three emotional core needs that our customers want to experience, and behind each core need are many aspects that culminate in these wants. In order to respond to the core needs as an organisation and arrive at focused action, our personnel must understand exactly how they can satisfy the three core needs, which is challenging, as for many people they seem too abstract, and, moreover, the underlying aspects contain too many details for providing straightforward interpretations.

We established design principles that aim to provide a concrete and action-focused approach to the three core needs. The design principles are the foundation of our business: it is the 'why' behind all that we do. Where the core needs do not directly translate into concrete actions, the design principles do; they immediately make clear what is intended and what this means for the actions of all personnel in the fulfilment of their individual duties.

To establish the design principles, we returned to the ZMET research results and conducted further analysis. In a collective effort undertaken by experts from the various business divisions, including research, strategy and operations, all the photos and opinions that the respondents had initially shared were translated into action-focused design principles.

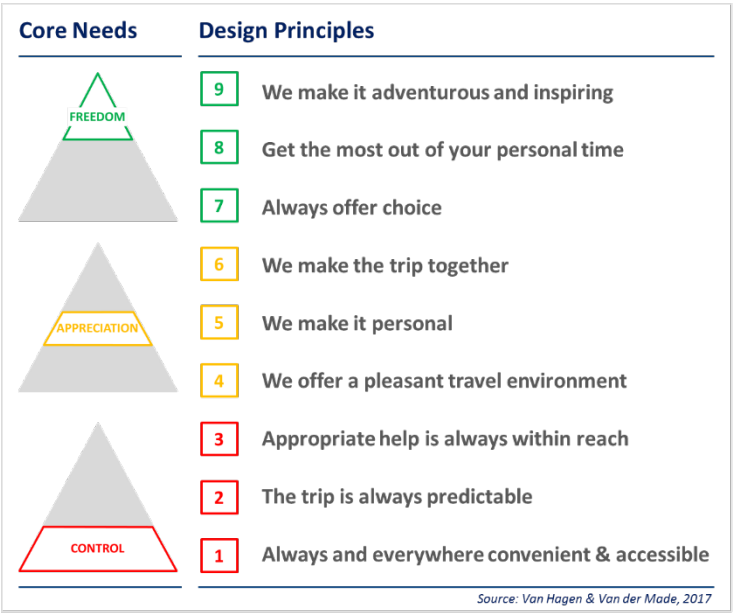

Figure 2: The three core needs translated into nine design principles

Several iterations focused on ultimately arriving at the following nine robust and sustainable design principles (three design principles per core need - see Figure 2).

Here below we explain the significance of the design principles from the customer's perspective, supported by various examples:

1. **Always and everywhere easy and accessible**
   I only feel in control when I can move around freely. Consequently, I know for sure that I can enter the station, the platform and the train by myself, with minimal mental or physical effort required.
   Examples: navigational apps, websites, layout of stations and trains; ground level train-platform crossings, escalators or ramps, clearly legible and comprehensible signage, understandable audio announcements.

2. **The trip is always predictable**
   If my expectations are met, I experience a trip as predictable. I can use the knowledge and know-how that I already possess, I experience minimal delays, and – should something go wrong – I'm informed promptly and satisfactorily.
   Examples: trains run on time and I know where to find the best seat; the shops and other facilities are open; the personnel are competent; interactions always transpire in the same manner and are consistent. And I always succeed in achieving my trip objective.

3. **The appropriate help is always within reach**
   When I need (additional) information, I can find it immediately. I can locate the desired services and my questions are immediately answerable via (digital) information boards, courteous personnel, and digital support, including the NS's online journey planner and website.
   Examples: Helpful personnel who are well-informed yet also have the resources at hand to help, website/apps geared to my specific needs that I can access always and everywhere for immediately answering my questions.

4. **We offer a pleasant travel environment**
   I feel welcome on the train and at stations. It is an inviting, clean and safe travel environment, and one radiating a high level of care. The personnel are friendly and helpful and exude a sense that they are there for us, the travellers.
   Examples: clean trains/stations, attractive and stylishly designed trains/stations, sufficient (commercial) provisions (catering services, toilets, market stalls, shops, luggage storage), shelter from the weather and wind, courteous personnel.

5. **We make it personal**
   I do not feel like just a number, but rather as customer who is taken seriously. I can quickly and easily find the information relevant for my situation, and the personnel engage with me in a personal manner. I receive the attention and courtesy I deserve as a (loyal) customer.
   Examples: the NS website's 'my NS' section, personal settings on my journey planner; personnel who recognize me and my needs; previous engagements and interaction with individual customers are used to make interactions easier and more relevant for me.

6. **We take the trip together**
   NS personnel have impacted my trip, but so too have my fellow passengers. And that is also the charm of public transportation: I feel connected to other people. My opinions matter to NS, and, together with NS personnel and my fellow travellers, we take a very pleasant journey together.
   Examples: customer ideas and feedback are input for NS management, clear procedural rules; personnel and travellers help one another, interaction with fellow travellers is encouraged.

7. **We always offer a choice**
   I have the feeling that I always have a choice when travelling by train. My door-to-door journey involves numerous connections that are sometimes tightly scheduled and must proceed promptly. To be certain, I want each service to have a backup option or choice, so that I can decide how my trip will proceed, regardless of whatever happens.
   Examples: Compiling information and buying tickets online, journey planners, ticket machines and ticket windows. Always multiple transport options, I can choose what to buy and where I want to sit in the train/station, yet also have a satisfactory overview of operations during delays.

8. **The journey time is your own time**
   When travelling, I can spend my travel time on my own thoughts. Unlike traveling by car, I need not keep my eyes on the road and instead can do whatever I want: work, read, chat, make phone calls, daydream…my journey time is my time. Consequently, I can get the most out of my trip and my day.
   Examples: comfortable facilities for eating, drinking, shopping, working and meeting at stations. Comfortable amenities on the train, including the seats, power outlets and Wi-Fi, allowing me to do whatever I want. Pleasant diversions offered, such as apps, infotainment and entertainment.

9. **We create a sense of adventure and inspiration**
   I can travel everywhere by train. I feel challenged and inspired by the journey, discovering new places and revelling in the history, nostalgia and romance of travel.

Examples: inspirational trips and travel destinations, history of the railway and the Netherlands, pleasant surprises, discoveries, puzzles and fun facts. Attention to interesting facts about the area I'm travelling through.

Figure 3 illustrates the relationship between what people want (customer-needs pyramid), the primary emotions they want to experience (core needs), and the translation into action-focused design principles.

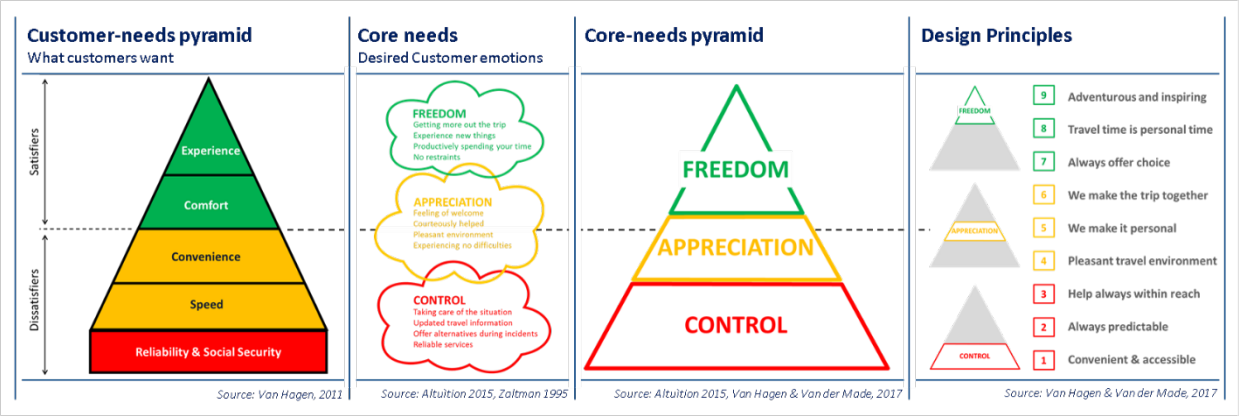

Figure 3: Relationship between the customer-needs pyramid, core needs and design principles

From Insight to Innovation

We now know what the customer's journey is like, and what 'moments of truth' occur, and we have deciphered the three core needs and firmly established them in nine foundational principles. The challenge is to convert this into action, thereby making a difference for both the traveller and the company.

Customer Experience Design lends itself exceptionally well to innovation. The greatest value is found where the three aspects converge (see Figure 4):

1. **Desirability (Customer):** is it valuable for the customer? Does it involve the core needs?
2. **(Technological) Feasibility**: can we do it? Is the technology available to achieve it?
3. **(Business) Viability**: should we also want this as a company? Can a positive business case be made?

The area where the three aspects overlap is precisely where the greatest chance for successful innovation occurs, as well as for making a real difference to customers.

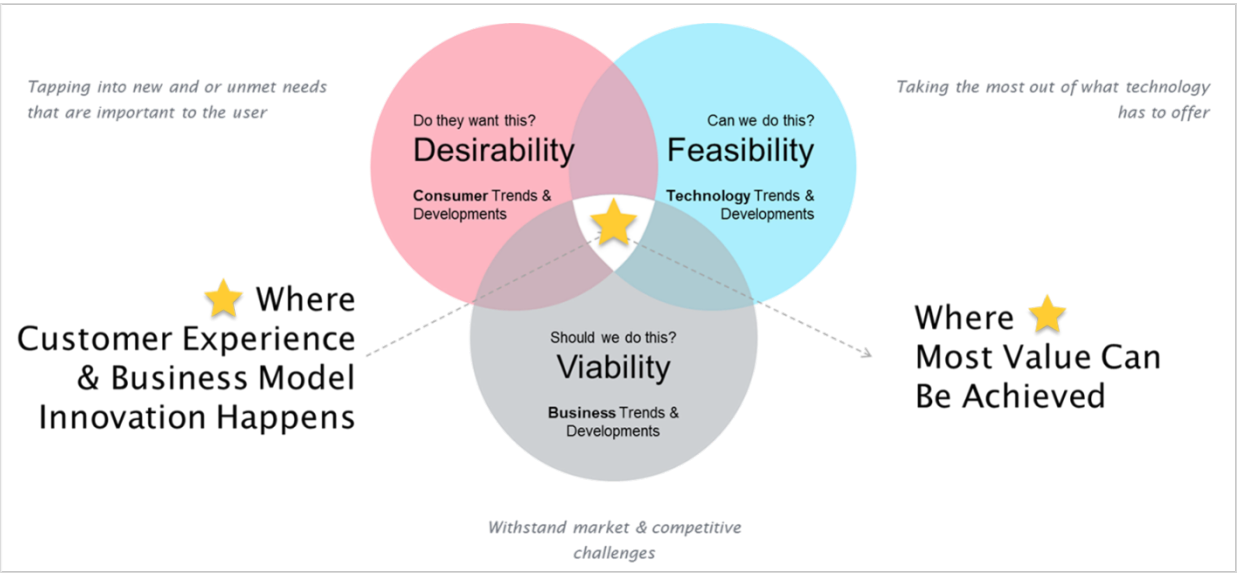

Figure 4: Relationship between desirability, feasibility and viability

The customer experience innovation framework

Now that we have translated the three core needs into action-focused design principles, we can use them in each stage of the customer's journey. As the examples presented with the principles reveal, the desired experience also plays a role in every stage of the journey. Consequently, the traveller wants to be inspired to travel to a remarkable destination while still at home, and wants to know about where he is on his way to. The traveller would be pleased to receive information about the easiest, fastest or most convenient ways to travel to and from the station, and wants to spend his time at the station enjoyably. The traveller knows in advance where he will sit and what services are available during the journey, and once on the train he can enjoy the trip and spend the travel time as he likes.

A so-called innovation framework is created by combining the design principles with the travel stages (see Figure 5). The innovation framework is a depiction of the customer's journey and the design principles, whereby the customer's journey is visualized on the X-axis, followed by the journey's chronology. The red line depicts the emotions travelers experience in a normal situation, the dotted line depicts emotions duting a service failure. The blue line shows the emotions which travelers can experience when NS enhances the service quality in the different stages. The design principles are visualized on the Y-axis, with the practical design principles situated below and the emotional design principles above. Because all of the customer needs and travel stages experienced by the customer are now identified, NS can use this innovation framework to systematically determine if all customer needs are satisfied during every stage of the journey.

The innovation framework offers a starting point for developing new services and innovations. The innovation framework is indeed an essential overview of all customer needs in all stages of the trip, thus providing a complete picture of the desired quality experience. Gaps in the

services provided during certain stages and/or in the design principles are filled in. By brainstorming with interdisciplinary teams, we can determine how certain stages and principles may garner more attention, in order to ensure customers also get what they want.

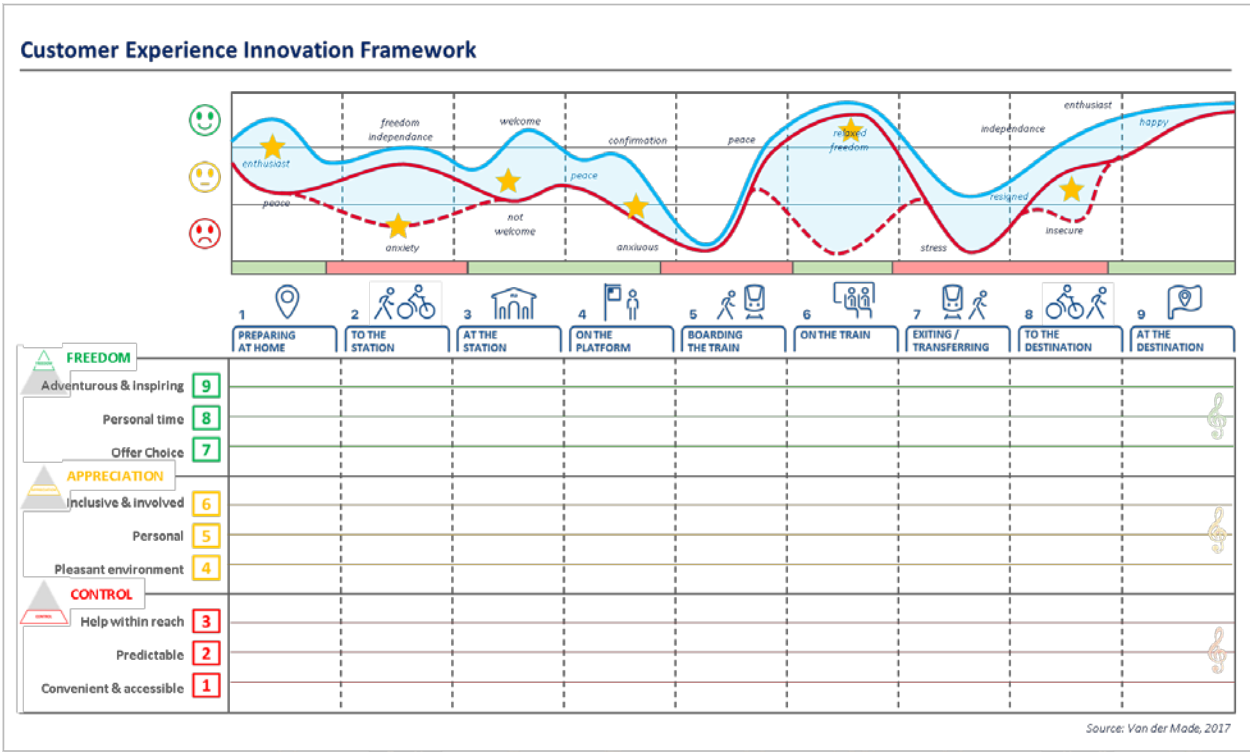

Figure 5: The innovation framework and design principles as related to the travel stages

What in fact is the problem and how do we find the right solutions?

Before we start thinking of creative solutions for purported customer needs, it is crucial to get to the core of what the actual problem is for the customer and arrive at collective agreements for proceeding. Often the tendency is to quickly shoot for solutions, while the problem is not yet clear. The result will ultimately be suboptimal solutions or worse: ideas and initiatives that do not contribute to solving the actual problem!

The following are a few rules of thumb for arriving at a good definition of the problem:

- **It's good to have problems!** When companies speak about ‘problems’, they are often viewed as the product of a negative attitude, yet major problems are also the source of ground-breaking innovative solutions. 'Necessity is the mother of all invention'. Challenges are optional…but major problems must be addressed. And that is precisely where the strength lies; therefore, go in search of problems, not as an excuse or to get stuck in, but to solve!

- **Problem blindness.** There is a sort of complacency to accept things as they are, especially here in western world. Problems both great and small are simply no longer called problems. "That's just the way it is now". This is something inherent to our high standard of living and coupled to a sense of satisfaction that stands in the way of innovation. It is only when we dare to feel deeply dissatisfied and our excuses are no longer valid and acceptable does the hunger arise to do what is needed to arrive at innovative solutions.

- **Irritating problems.** What in English is known as a 'paper cut' – getting cut by a piece of paper – hardly bleeds but can be quite painful and distracting. Metaphorically speaking, our daily lives are imbued with such 'paper cuts', which are often encountered when searching for 'work arounds' (Luke Williams, 2010). Work arounds are the 'quick fix' solutions that one finds in places where people have improvised in order to solve troublesome, everyday problems. One such example is the small pieces of tape that especially older people often stick to TV remote controls in order to help remind them of which buttons to push to operate the main functions. In paper cuts and work arounds, we find breeding grounds for successful innovation. Indeed, customers have already shown their willingness to take action. It is up to us to replace the customer's quick fix solutions with structural solutions.

- **How can we ...?** Define the problem as an action and not as an established fact. He who finds himself stuck on the roadside in a broken down car will often define his problem as, "my car is broken down". Rather than as a problem, this is formulated as an established fact. After all: broke is broke. But what exactly is the problem you want to solve, that you want to act on? A good problem statement is action-focused. By taking a "How can I ...?" or "How can we ...?" line of questioning, we kill two birds with one stone, as that line of questioning literally demands action: the answering of the question. By placing yourself or your organisation/department at the centre of the issue, you ensure that the problem definition falls within your own reach.

- **Search for the REAL problem**. Einstein once said that if he had an hour to save his own life by answering a question, he would spend 55 minutes on understanding the question, because once he understood the question, he would definitely find the correct answer in the remaining 5 minutes. The same applies to problem solving: we just learned to formulate a problem as an open question. A good way to determine what the actual problem is, is to ask yourself: "What would it be like if I had no problem? What could I do then?" In the case of the broken down car, the answer might be: "If my car wasn't broken, I could arrive at work on time." And if that was the case, what could you do then? "I could preside over the meeting of my project team". And if that transpired? "I could then show my boss that I deserve that promotion." By repeatedly asking the "why" question, you will discover where the actual problem lies. And by finding the real

problem, new solutions also come to light. If you are not mechanically-inclined, have no tools or spare parts at hand, it would be exceedingly difficult to solve the problem of the broken down car. If the problem is defined as, "how can I show my boss that my project is running well and I deserve that promotion?", a wealth of possible solutions emerge.

- **Dare to dream!** Dream the impossible - the possible has already been invented. Every innovation began as an impossible desire.... Because we in the western world often no longer see problems as problems, we also lose the ability to dream big. Deep desires are like a muscle that must be trained. Knowledge, upbringing, school…are all factors that render the unreasonable person reasonable, and in the process the 'box' is created that we then have great difficulty thinking outside of. In problem solving, a basic technique to avoiding getting bogged down in reality is to start by dreaming of the perfect end result. Wishful thinking is the technique for closing your eyes and allowing yourself to be transported to a far distant future in which, against all odds, the problem was in fact solved. Picture such a future and remember it. Open your eyes and use that picture to then determine what the situation is now. Where does the current situation diverge from that perfect picture of the future. Use the gap between perfect world and current situation, and the obstacles that must be overcome in between, as subproblems to be solved. Once again, describe them in the form of "How can I ...?" or "How can we ...?".

- **No criticism in divergent stage...but plenty in the convergent stage!** Creative problem solving is an iterative process, in which a divergent stage is routinely followed by a convergent stage. As soon as a problem is well defined, it is crucial to set aside criticism and generate as many ideas as possible. Quantity over quality. Avoid criticism. Cluster the ideas and devise representatives; develop directions for generating numerous ideas. But still do not express judgments. On the contrary, choose both the most feasible idea and the most outlandish idea for further development. Now enter the divergent phase. Compile all the possible reasons why an idea would not work, is not good, but not as a means of dismissing the idea; rather, do this in order to improve the idea in the next round. Based on the criticisms, define the subproblems in order to feature them again in the following idea-generation stage - the coming convergence stage. Continue to do this until there are no more critical points to be resolved.

Now that the problem is clearly understood and formulated, and tips have been shared about the right way of finding solutions, we can get to work on the Customer Experience Innovation framework, which can be used in three ways:

a. To incorporate ideas in the customer's journey (ideation)

b. To select promising ideas (selection) and

c. To put all projects in the innovation framework (portfolio).

These three approaches allow for comparisons to be made between the impact of various solutions and projects, with the aim being to achieve an enhanced customer experience. We look for those projects that have the greatest impact on the most travellers at an acceptable cost. The innovation framework helps us to do the right things in the eyes of the customer.

a. The ideation stage

In the ideation stage, we can generate ideas on one design principle, such as, "we always offer a choice" (see Figure 6). Additionally, we formulate a subproblem for each stage of the customer's journey. For the ‘choice’ principle, this could be: "How can we offer the traveller choices in preparing for the trip", "How can we offer traveller choices on the way to the station", etc.

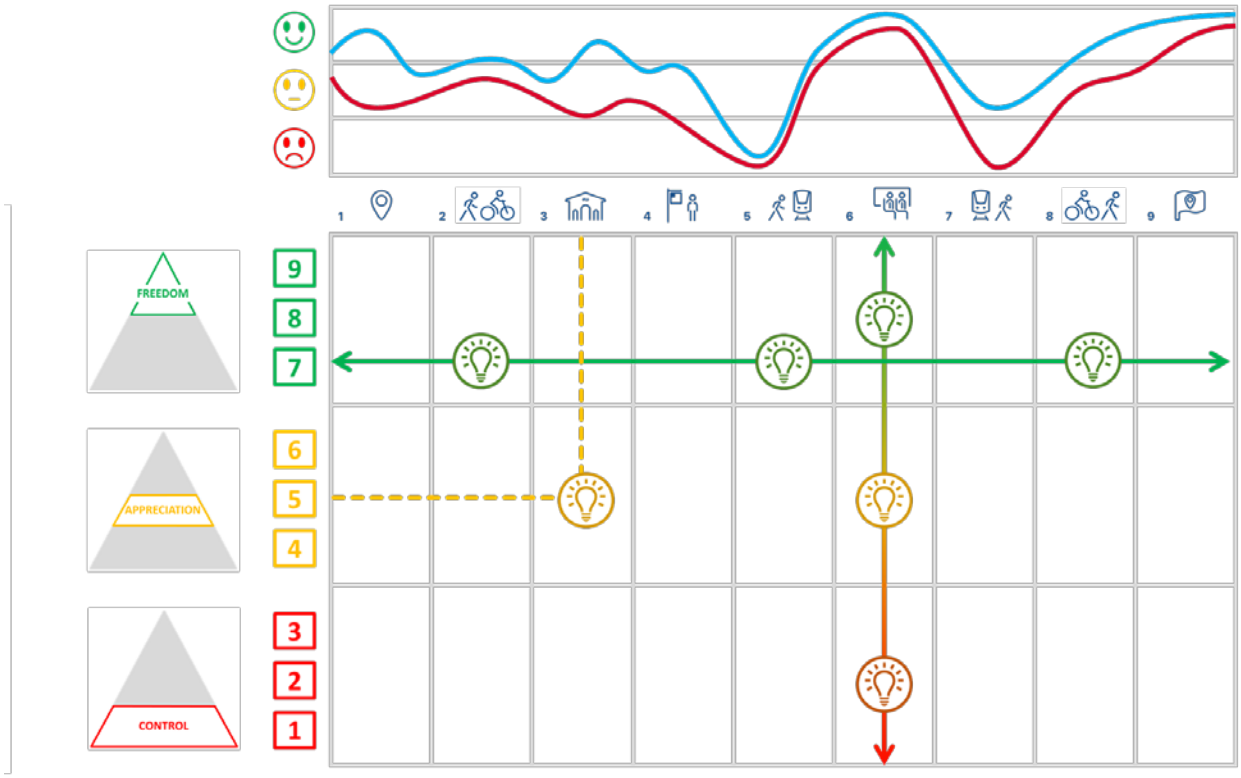

Figure 6: ideas per design principles, stage or cell

In same way ideas can be generated for improving the experience in 1 stage of customer’s journey.

Consequently, for the "on the train" stage, we can formulate a subproblem for each of the 9 principles in the form of, "How can we make the train journey adventurous and inspiring", "How can we ensure that when on the train, travellers can spend their time as they wish", etc.

However, equally well, we could focus the idea stage on 1 cell in our matrix, for example: "How can we give our travellers a personal reception at the station?"

Experience shows that in order to get a good idea flow going, little more is needed than the proper formulation of the problem in the context of the customer's journey and customer's needs.

b. Selecting and improving ideas

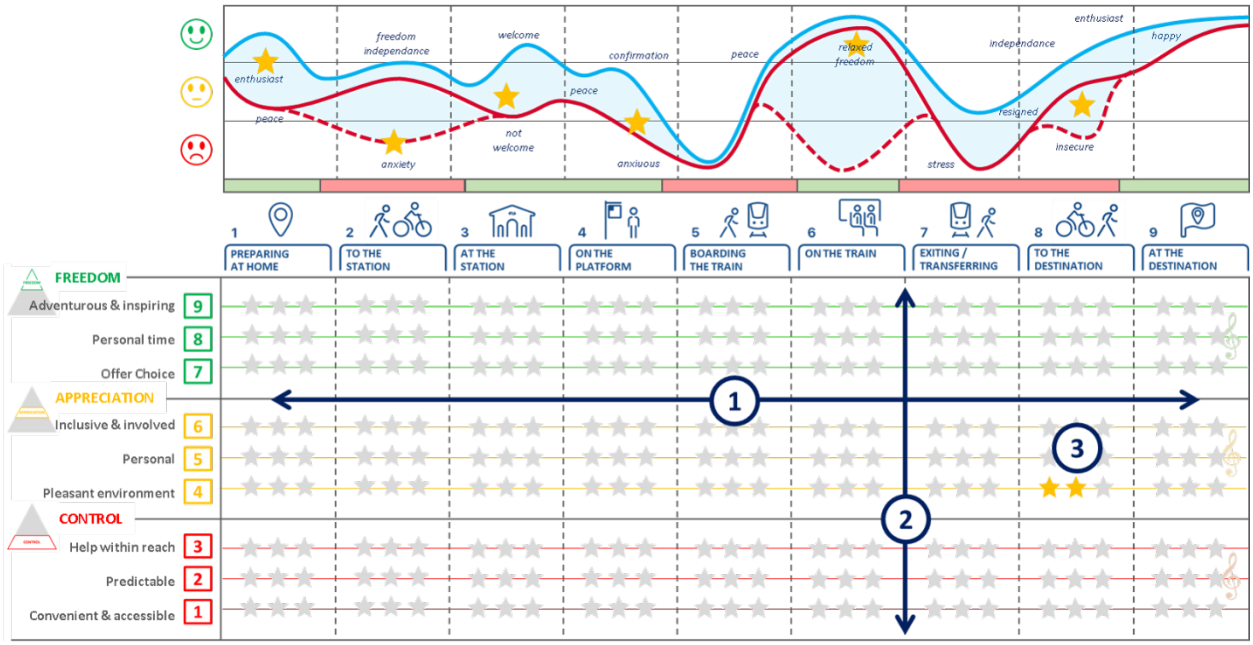

Figure 7: Selecting the most impactful ideas

Virtually no existing organization will suffer from a shortage of 'good ideas' and ongoing initiatives. However, the question is whether these ideas actually contribute to the strategic goals. In our case, the question is if and how an idea contributes to improving the travel experience. The innovation framework can be used to assess initiatives and ideas. We pose the following questions:

1. **During what stage of the customer's journey is the idea relevant / does it add value?**

The recommendation is to simultaneously pose a second question: how could the idea become relevant in other stages of the customer's journey (or even in all stages of the customer's journey)? The owner of an idea is not always aware of how his idea can have added value in multiple stages of the customer's journey; it is often the case that simple additions to his initial ideas can render it valuable at many more moments during the trip than initially thought. NS routinely creates events in the train on the way to special occasions (Van Hagen, Ten Elsen and De Bruyn, 2017). The event itself occurs on the train, but in order to allow travellers to be inspired about what will transpire on the train and at the final destination, attention is already focused on the event during the preparations at home and at the station.

2. **Per stage: Which design principle does it address?**

This is also a qualitative estimate, in which the method of reasoning is key. Does the idea contribute to a more adventurous and inspiring experience during a specific stage on the train? How? Does it render that stage more personal? How so? Here too it is important to not only appreciate the idea in its present state, but also to enhance it, for example by asking, "How can we enhance the idea so that it makes a specific stage of trip more adventurous?" Experience shows that in the creative process people unconsciously tend toward the control domain (safe), while ideas requiring little effort can also contribute to the higher principles. In order to assess an idea for its potential, it is important to render the assessment process iterative.

3. **Per stage per principle: to what extent does the idea contribute? Somewhat? Greatly?**

For the cells in the matrix that an idea has impacted, the extent of the contribution can be assessed, and this, qualitatively, provides an initial quantitative assessment. A simple scale of 1 to 3 is sufficient. Consider however that this is a relative assessment, in which one 3 could have a different weight than the 3 of another idea. What matters is gaining an initial insight into where, when and to what extent an idea will impact the customer experience. In addition, this type of rating ensures that ideas sufficiently (or properly) engage with the core needs of freedom and appreciation, as people intrinsically tend towards the core need of ‘control’.

c. Portfolio Management

By adding up the scores of all the separate ideas, the balance can be made per 'cell' in the matrix. Experience shows that organizations traditionally generate more ideas in the ‘control domain and do this less often at the top of the client pyramid; the 'freedom' domain.

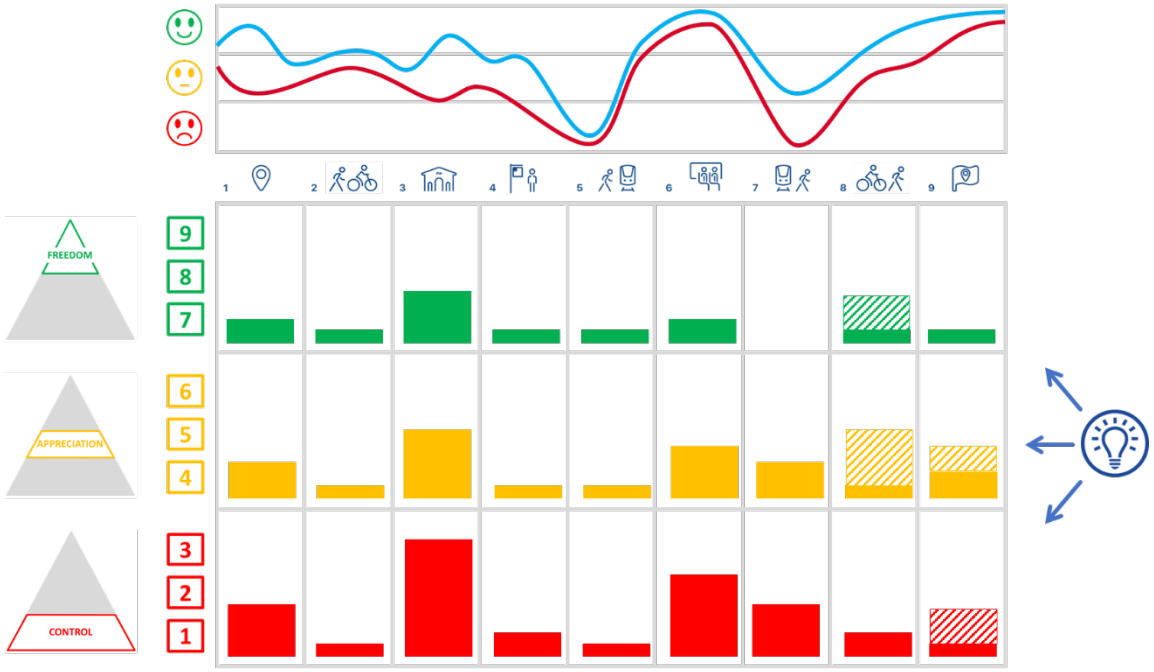

Figure 8: Forms of client needs per cell

By raising this balance, we can initiate follow-up actions. Figure 8 shows how much form is given to the customer's needs in each stage of the customer's journey. Clearly, in some cells, there are only a few impactful ideas, while more also occur in the 'red' than in the 'green'. Based on this, the framework can again be used for the targeted generation of ideas for those underexposed cells, whereby ultimately the gaps in the portfolio can be filled. The aim is to achieve the maximum score for the Moments of Truth!

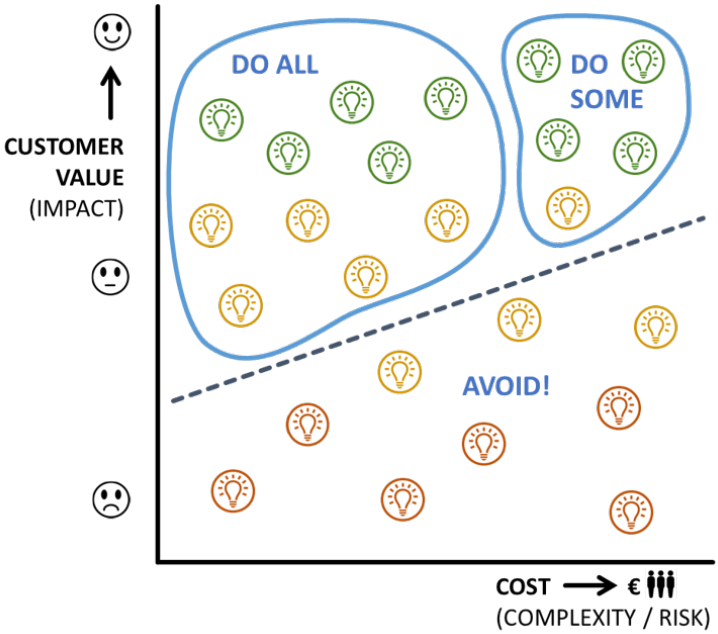

Figure 9: Impact of ideas versus costs

Idea selection for customer appreciation AND feasibility:

Figure 9 shows a second application of the customer experience score. The value for the customer is set on the vertical axis. With representatives from technology, a relative score can be given for how difficult / expensive / time-consuming it is to implement a particular idea. This 'feasibility score' can be set on the horizontal axis. The graph that is subsequently created makes it easy to choose from a large number of widely varying ideas. The ideas below the dashed line - with low values - must be avoided. The ideas in the upper left corner are the obvious ideas to implement, the ideas that we all must implement, as they have low costs and high impact. Positioned in the top right corner are the actual innovative ideas, of which some must be selected... but not all. A characteristic of innovation is that by definition it is unproven and of high risk. In a good portfolio, the proportions of various types of initiatives are balanced.

Last but not least: watch out for hobby projects!

Ideas without implementation are a hobby, as are projects whose impact for the traveller is negligible. After all, successfully proceeding from customer insight to customer-innovation is of

little value if the customer is never reached. Explicitly stated, every idea that is implemented must contribute to the customer's needs, directly or indirectly. If the customer cannot discern the consequences of the measure in any way, it is pointless/meaningless for the customer. Such a project may still be implemented, for other reasons, such as political pressure, bureaucratic demands or prestige; however, for the customer, this does not make a difference at all.

Conclusion and recommendations

Using insights derived from various research studies, we construed a customer's trip and know what customers want to experience during a trip. By translating the key emotional needs into customer-centred design principles, all NS employees can take targeted action, resulting in the customers getting what they want. Combining the customer trip with these design principles creates an innovation framework, and this framework can be used to devise new ideas for problems (ideation), to select promising ideas by specifying an impact score (selection), and to give all existing and new projects a place in the framework (portfolio), so that in but a blink of the eye it becomes immediately clear where the organisation devotes most of its attention. The framework thus provides a toolbox that allows employees to independently define problems and develop ideas for solutions, during every stage of the trip or for every design principle of the customer needs. The best way to deploy the innovation framework is by introducing it to employees in the form of a game, so that they can then playfully proceed through the innovation process. In addition, in workshops, they can collectively determine which ideas are promising and contribute to an enhanced customer experience and hence enhanced customer satisfaction.

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