A New Policy Compass: Re-Evaluated

Design Innovation Methods Report

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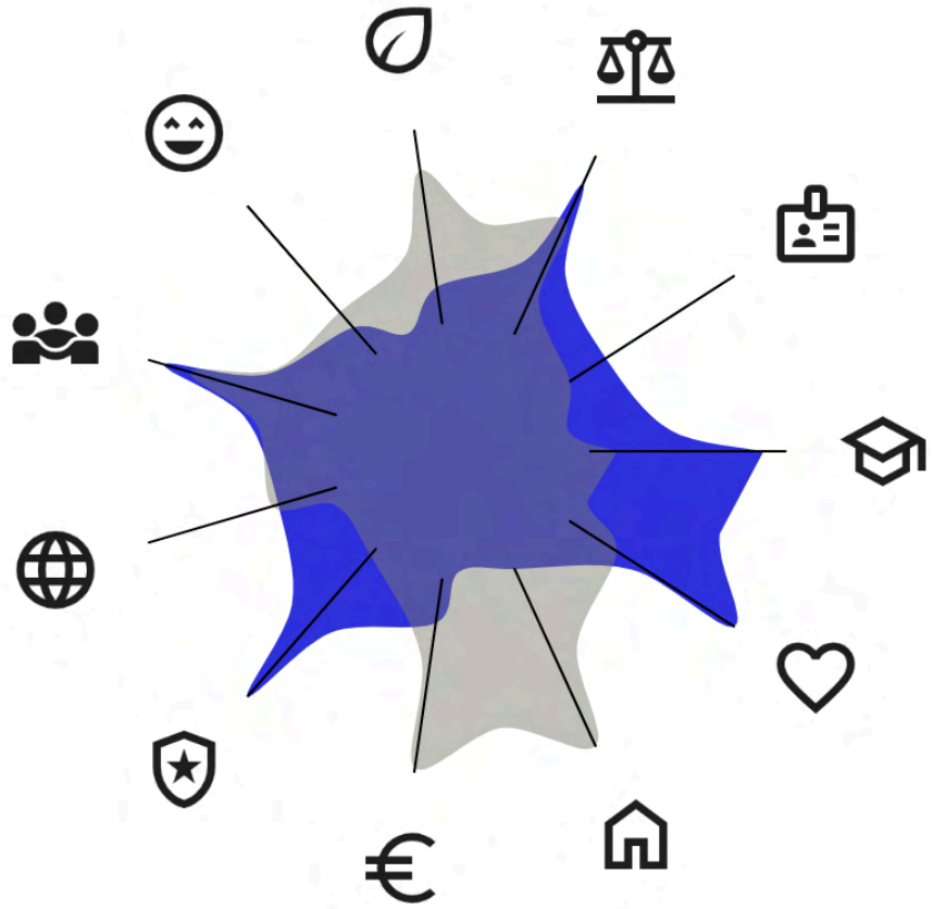


Content

3 Introduction
5 User and Market
7 Technology and IP
9 Creating Innovation
12 Design and Prototyping
16 Organization and Finance
21 Appendix

Introduction

This report takes a product-service system under development in Jort Wiersma's Final Bachelor Project as well as the related business model and aims to provide both a detailed analysis of the current business proposal and an iteration on this business model as well as the required changes to the product itself to make this work.

The current product-service system is a physical-digital collaborative tool that helps project groups within (governmental) organizations to better analyze situations and project proposals from a **Broad Prosperity** perspective. Broad Prosperity is the literal translation of the Dutch term Brede Welvaart, which generally encompasses everything that people value in society, but is increasingly used as a framework to understand the broadness of projects and policies, and to think socially, beyond GDP or financial gain in decision-making [10, 11, 12, 13]. The proposed product was designed in collaboration with the **Netherlands Court of Audit**, and will be an adaptive physical handheld device that can be used as a discussion probe to analyze stakeholders and situations in a visual and physical way. The Netherlands Court of Audit wants the government, organizations, and civilians to change their way of thinking to a broader all-encompassing view that goes beyond **silo-thinking**, which limits organizations and managers in achieving impact [2].

The main goal of the organization is to achieve the most impact possible with the product in order to move towards a cultural transformation of thinking in terms of Broad Prosperity. In order to achieve that, a strong business model is required to keep the organization standing and to reach as many users as possible. The organization's vision is in line with the **post-growth entrepreneurship** approach, which "re-envisions business as a vehicle for pure impact" [3]. Please find the original business model on the next page, which will be used as a basis for analysis. In order to properly analyze the proposed business model, it was deemed instrumental to use a variety of analytical models to entirely understand and improve on the current situation, which the following pages will describe in-depth in order to drive sales and impact.

Business Model Canvas

Key partners
- Netherlands Court of Audit
- Governmental organizations
- Social conferences
- Social design studios

Key activities
- Promote the product-service system
- Update software
- Monitor production
- Give promotional workshops

Key resources
- Software engineers
- Social designers
- Materials for production
- Reliable servers

Value proposition
- A new way to collaborate, share perspectives, bridge differences, experience broad prosperity, and evaluate projects.

Customer relationships
- Communities
- Personal workshops
- Personal assistance
- Guide booklet

Channels
- Joining tenders
- Public Website
- Lobbying
- Conferences

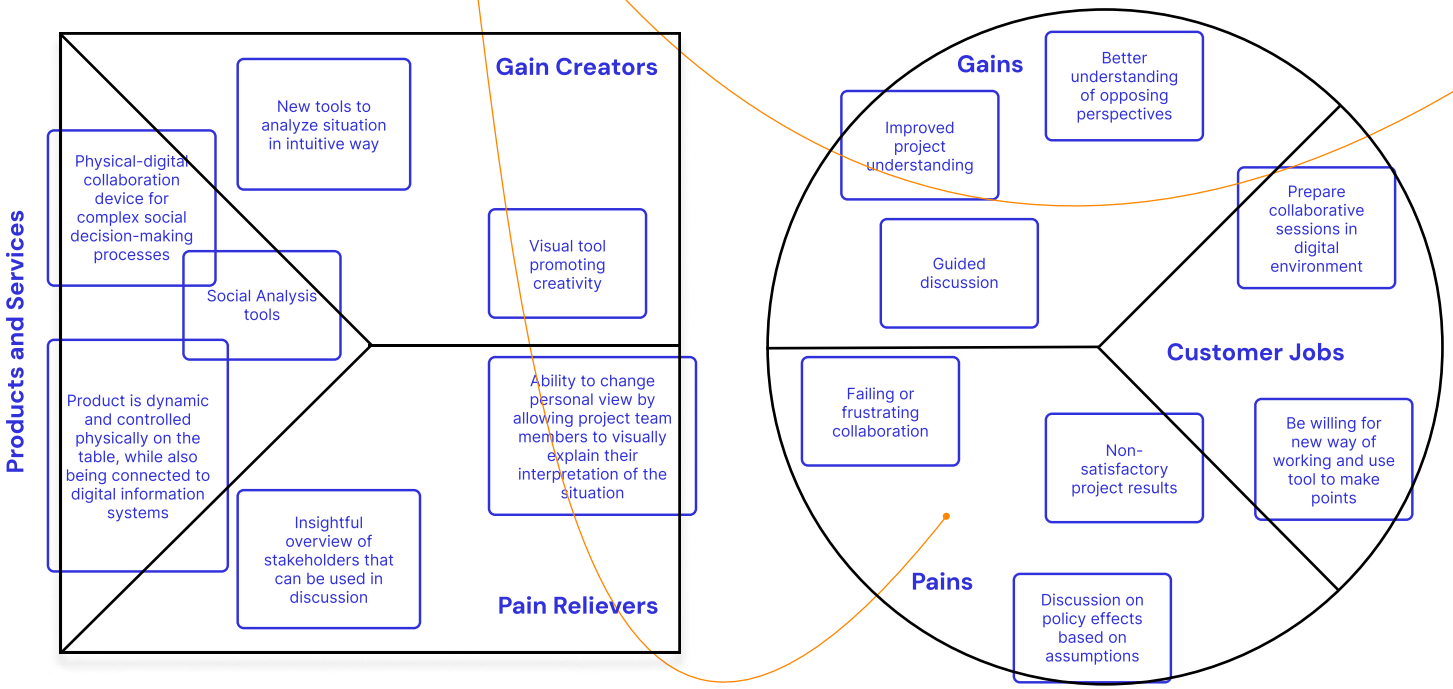
Customer segments
- Governmental organizations
- NGOs
- Commercial companies that work on complex social projects

Cost structure
- Server costs
- Transport
- Employees
- Material costs

Revenue streams
- Purchases of physical device
- Renting digital information system

User and Market

In order to understand if the company is targeting the right people and providing the right value for them, we must carefully analyze our user. Following the Value Proposition Canvas and Persona (see Appendix A) analyses, it is clear that not all target customers experience the problem of lacking insights and impact on broader scales outside of their expertise. This problem is, however, crucial to address for all stakeholders as well as the country, as it is promoted by various parts of the Dutch government [11, 12, 13]. Therefore, there seems to be a slight mismatch between experienced customer pains and proposed gain creators. We are assuming a Blue Ocean Strategy [5], which is validated by governmental support, but will be more difficult to sell compared to a product that solves a clearly experienced problem. Simply put, it seems that the values for the targeted user and market segmentation are correct, but not delivered correctly. In the upcoming section Creating Innovation product changes that address this are recommended, but without those changes it would be important to market towards early adopters within forward-thinking companies [14]. Regarding the external environment the proposed product would exist in, please find the PESTEL analysis in Appendix B. Generally, the environment is deemed accepting and most areas of consideration are advantageous to company growth. We would like to highlight specifically the legal issues that should be averted: it is essential to adhere to GDPR regulations as the product will be active in a European market where this is required [15]. Moreover, careful IP research must be conducted in order to understand both conflicting and possible patenting.



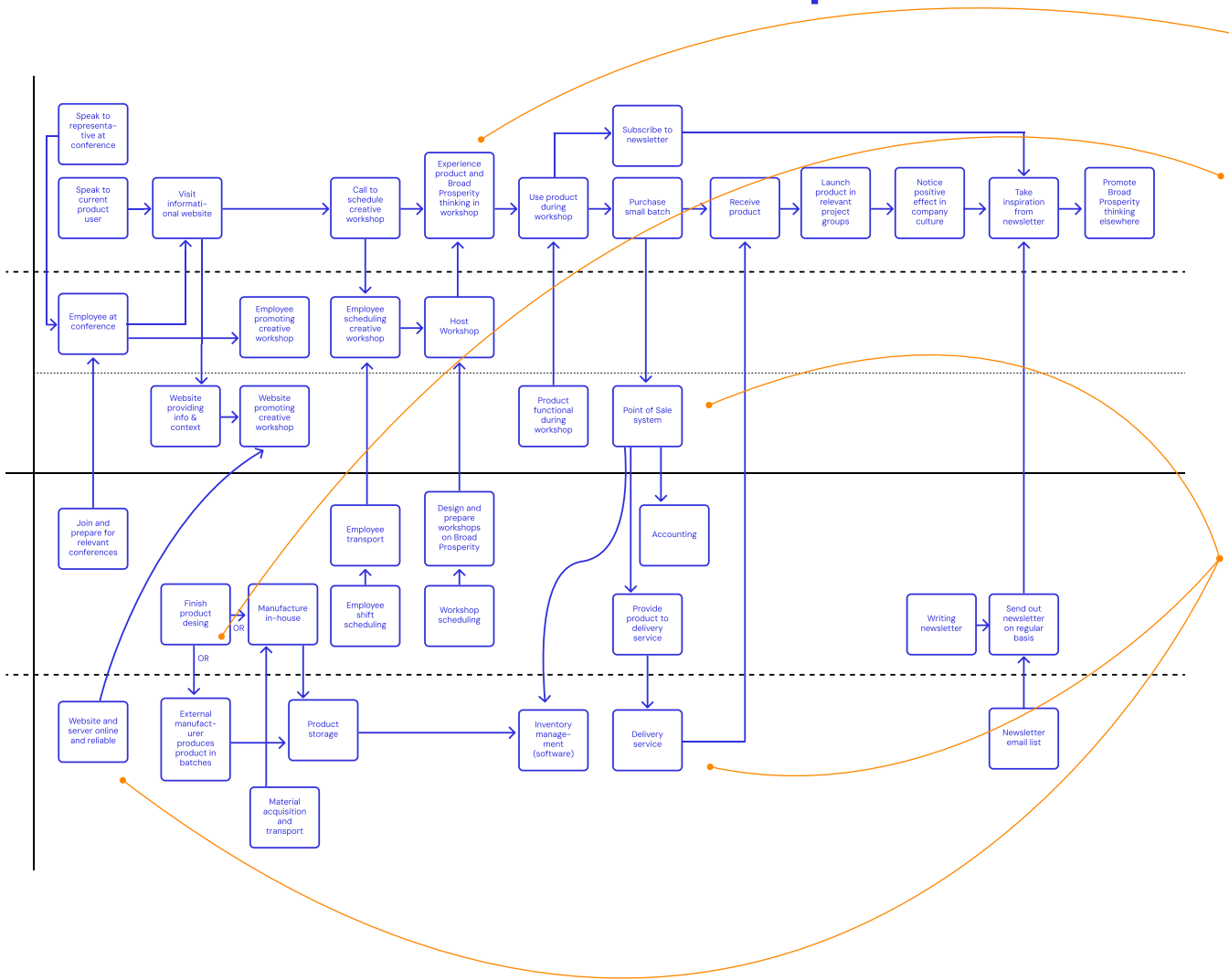
Key insights in the customer journey of our persona André:

- Convincing André there are opportunities in a more creative, collaborative, and socially considerate way of working
- Educating André on the possibilities and teaching to use the tool
- Supporting André in effectively using the tool with his team

Value Proposition Canvas & Persona Insights

Technology and IP

Customer Service Blueprint



The proposed business model is rather unique and situated, and the development is advised upon by the Netherlands Court of Audit. Therefore, we see no direct competitors in the business of designing for Broad Prosperity perspective change in organizations, which allows for Blue Ocean Positioning [5]. However, it is essential to have a clear understanding of the required technologies and processes to make the business model functional. Taking note of the Customer Service Blueprint analysis it can be concluded that the technological and systematic workings of the proposed business model are more complex than the original business model assumed. The customer journey is fairly straight but dependent on a deep understanding of Broad Prosperity, which is currently achieved through hosting workshops. This could work but will be very costly. In addition, there is a decision to be made between manufacturing in-house or outsourcing production. Following the post-growth entrepreneurship philosophy it cannot be expected to have the capital to invest in a dedicated in-house production facility. Still, producing in-house remains an option, as this does fit into the values of a learning organization. More learning experiences will be better for the company. Therefore, if the budget allows it, producing in-house would make sense from both a Broad Prosperity perspective and a post-growth entrepreneurship perspective. On the other hand, if the budget is not (yet) there, outsourcing production is a necessity. As a final point regarding the analysis, it must be noted that the business model will be dependent on a fairly large number of external organizations: web server hosting, manufacturing, delivery, social conferences, and a point-of-sale provider. This can be accepted, but is not ideal. Regarding IP rights, we do not expect the product idea to be patentable, as it is already partially disclosed, and does not include completely novel technologies [4]. As stated before, careful IPR research must be conducted in order to prevent infringing the patents of other companies. In addition, there are possibilities for design patents and brand trademarks. The next section explains how these insights contribute to new value creation for the proposed business model.

Creating Innovation

Based on the previously provided analyses, we have selected the objective option to make a range of adjustments to the product and business model strategy in order to reach more customers and reduce manufacturing costs. Firstly, although the physical product will be pleasant to use, the costs of producing the product do not outweigh the benefits of having a physical product compared to a digital product. Leaving the product digital allows for much lower manufacturing costs, quicker distribution, subscription pricing models, easy beta testing and life-long updates. In addition, it can be more easily integrated into digital marketing, which has been proven to be very effective in increasing sales with a range of advantages for small to medium sized companies [6, 7]. Also, the subscription model that can be used if the product remains digital has been proved to be highly effective in driving sales [8]. The product can be expanded with supportive analytical models that can be used by the same users for slightly different use-cases. Another change to the product we propose based on the previous analyses is adding more of these use-cases to the product range. In the current state, the product is used as a discussion tool for project groups. It could also be a way to interview stakeholders and users, or become part of a survey to send out. This way, the product is not only intended for internal use, but also for external use and as a qualitative data-gathering method. The proposed product changes will reduce costs, increase sales, and create further competitive advantages such as a larger market segment and greater access to this segment.

Please find an updated Business Model Canvas on the next page (changes in orange).

Fully digital analysis tool specific to Broad Prosperity analyses

One of multiple possible versions that can be continuously updated and added to

Business Model Canvas

Key partners
- Netherlands Court of Audit
- Governmental organizations
- Social conferences
- Social design studios

Key activities
- Promote the product-service system
- Update software
- ~~Monitor production~~
- ~~Give promotional workshops~~
- Design additional or improved analysis instruments

Key resources
- Software engineers
- Social designers
- ~~Materials for production~~
- Reliable servers

Value proposition
- A new way to collaborate, share perspectives, bridge differences, experience broad prosperity, and evaluate projects.

Customer relationships
- Communities
- ~~Personal workshops~~
- Personal assistance
- Guide booklet

Channels
- Joining tenders
- Public Website
- Lobbying
- Conferences
- Product software itself

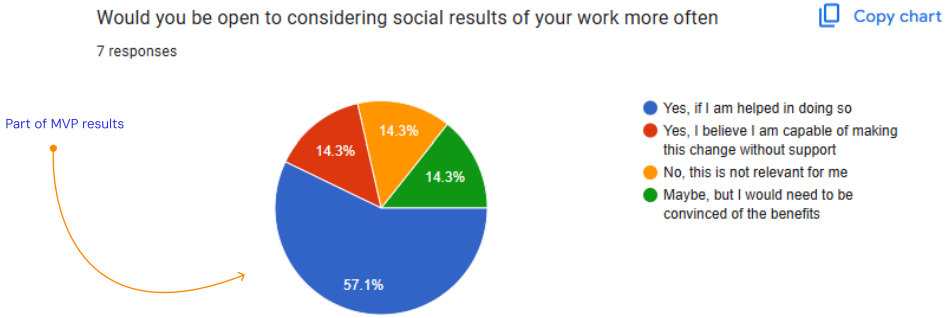
Customer segments
- Governmental organizations
- NGOs
- Commercial companies that work on complex social projects
- Commercial companies wanting a visual way to analyze complex situations

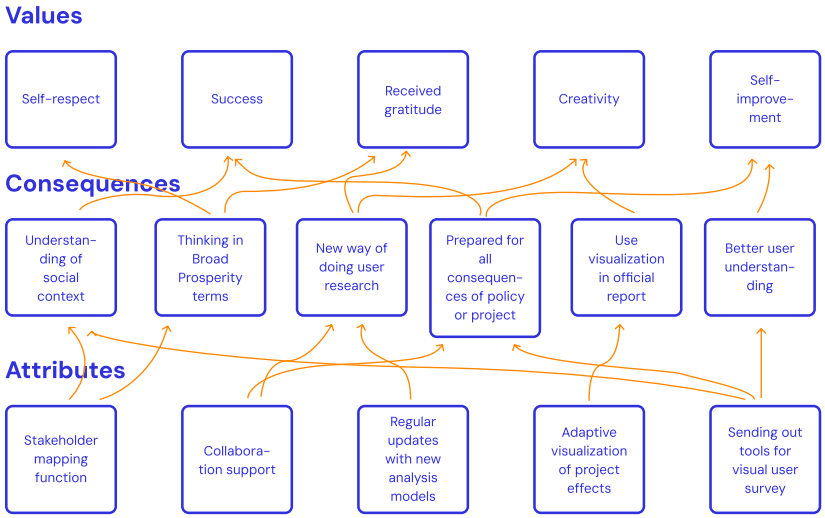
Cost structure
- Server costs
- ~~Transport~~
- Employees
- ~~Material costs~~
- Continuous software development costs

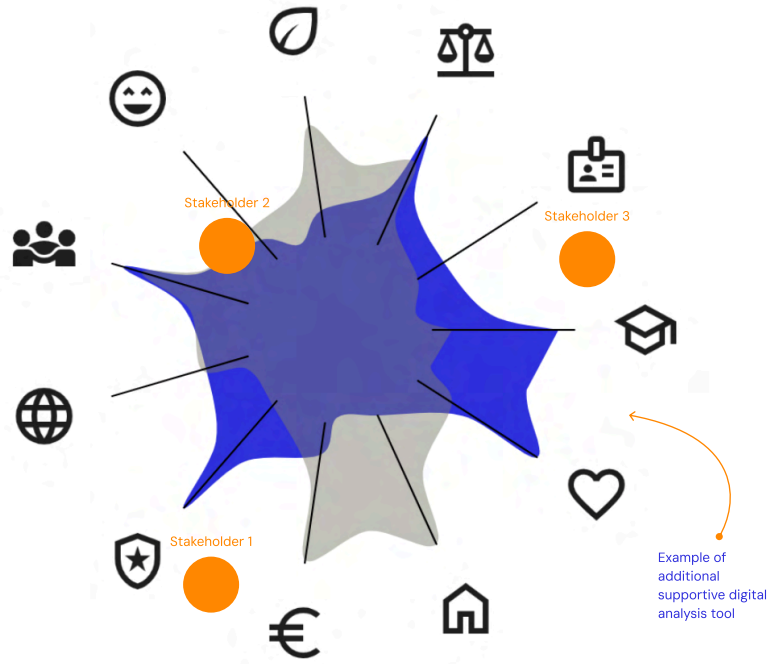
Revenue streams
- ~~Purchases of physical device~~
- Renting digital information system → Subscription model

Design and Prototyping

Having changed the proposed business model to an improved one, it is important to analyze the effects of the changes made. For this, we have created a multi-step plan (see next page) to test the product as three consecutive minimum viable products (MVP). These are a survey as the first MVP, followed by a user interaction study with a digital prototype (development time can be accepted as affordable loss [9]) as MVP, and finalized by a 4-week in-the-wild study where participants use a higher fidelity prototype for further testing. The latter two tests are for later in the development process, but the results of the survey have already been rather insightful. Please find the survey questions and detailed results in Appendix C. The most relevant insights that follow from this are that most prospective target users do not regularly consider social perspectives in their work, while they would generally be open to doing this more. Some of them believe they do not need help in taking such a social perspective, while others would need help but are not entirely convinced of the benefits the product provides. Still, considering that the predetermined success metric of at least 5% of participants saying they would pay for this tool (if the price is right and the features are of sufficient quality) has been surpassed, we can conclude that the design and development of the current proposed product should continue. Whether the values presented in the value laddering are achieved should still be determined, but the lack of this information is not deemed a problem to the continuation of this business model. The assumed values mostly focus on the user's improved feelings toward themselves, which will be strengthened when the user achieves better results and increased gratification as the result of using the proposed new product innovation.







MVP Canvas

Customer engagement

- Survey
- User interaction study
- Interviews
- In-the-wild study

Customer segment

- Local government officials
- Commercial company's project leaders

Value proposition

- Helping government think in Broad Prosperity terms
- Helping companies analyze new products in creative, social, and visual way

Channels

- Digital contact (surveys) via LinkedIn or email
- Physical meeting at their location for interaction study

Riskiest assumptions

- The product is able to change the way of thinking of professionals with years of experience
- Government and organizations are open to a new way of approaching their products
- The values presented in the value laddering are achieved

Experiment format

- In early stages of development, surveys are sent out to get an understanding of the problem and if people would be open to this
- When the prototype is fine-tuned to the specific needs, a user interaction study is conducted, similar to a workshop around social thinking
- During the workshop, participants interact with the product. Afterwards, they give feedback during an interview
- When the product is in its final stages of development, a few versions are provided to companies. They will use the product in their own project and give feedback

Experiment workflow

- The survey asks participants questions on their daily work, project results, what they consider in their own analyses, and their opinion on the proposed product
- During the interaction study, a focus group will use a prototype as they would use it on their real projects, while a researcher is observing their behavior
- During the in-the-wild study, project groups will use the product whenever they feel it makes sense to use it in their real-life projects. After a month they report on it

Metrics

- Survey: Expected use percentage, current social consideration rate in projects, openness rates towards new way of thinking
- Interaction study: Qualitative metrics that look at flow of conversation, new insights gained by participants, and missed features
- In-the-wild study: Qualitative metrics that mostly look at missing features and general feedback to optimize the product in late stages of development

Success criteria

- At least 5 percent of participants say they would pay to use the tool
- At least 2 of the 5 values mentioned in the value laddering are achieved

Results

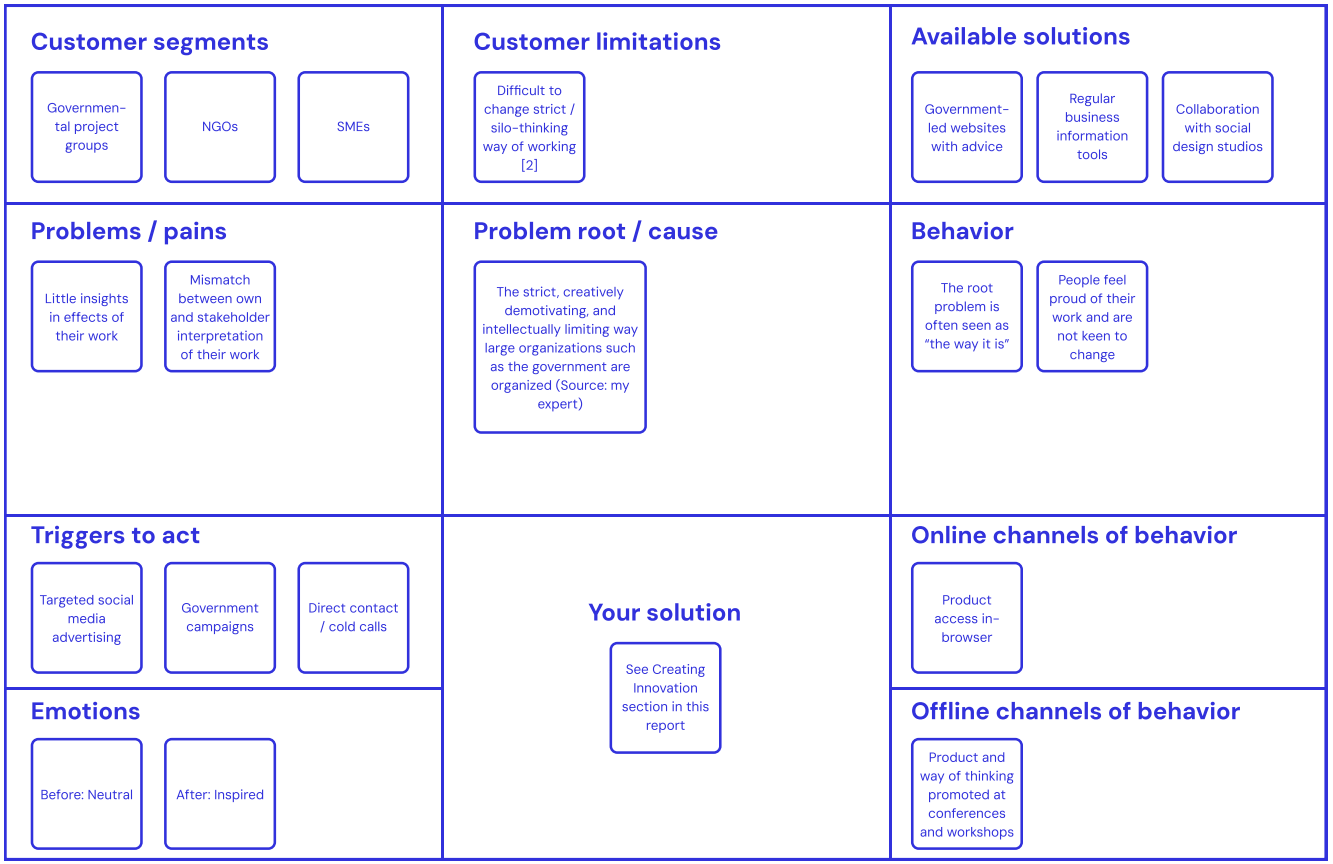
- Most prospective target users do not regularly consider social perspectives in their work, while they would generally be open to doing this more
- Most participants that are open to taking social perspectives more often and believe they need assistance in doing so would pay for the tool

Learning and insights

- The survey should also have asked participants how the tool would make them feel to test the values in the value laddering
- The development of the product should continue, but it is important to not forget that it is not always clear to people why they should take a social perspective

Next steps

- Continue development, then build prototype and do user interaction study, then build final version and conduct an in-the-wild study for validation

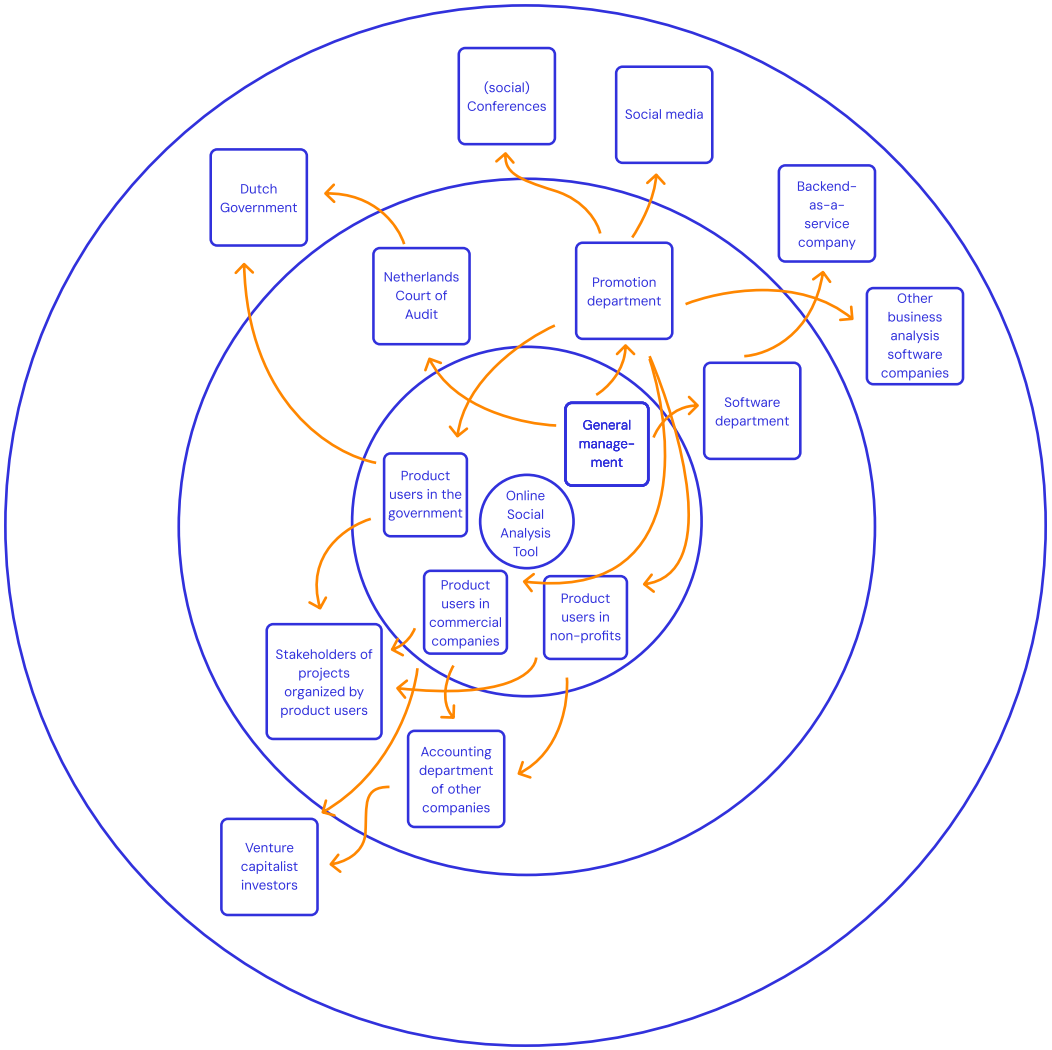


Problem-Solution Fit Canvas

Regarding the Problem-Solution Fit Canvas, it can be concluded that the new product option not only tackles the root problem (which the original product did as well), but also addresses the customer pains, which the original product did not. Therefore, while the original business model led to a sufficient problem-solution fit, the new product option also achieves product-market fit, as the new product directly leads to better insights and stakeholder interaction as the tool can be sent out to stakeholders as a data collection method, rather than only being available physically during meetings of the project team.

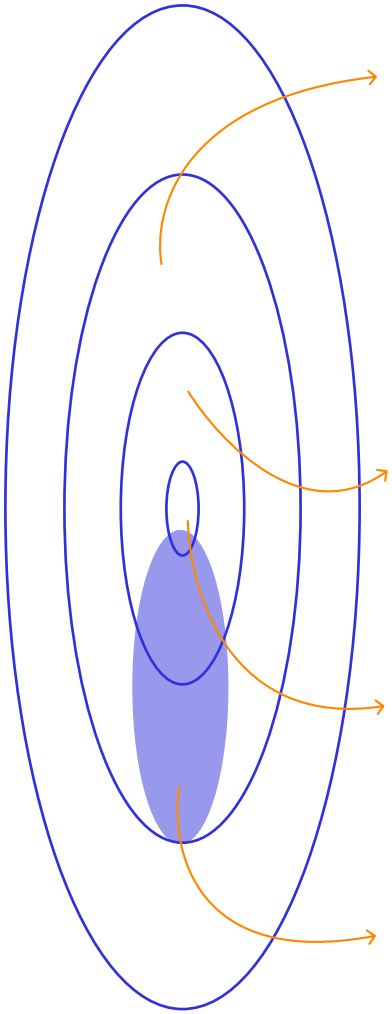
Organization and Finance

Stakeholder Onion Map and Open Innovation Analysis



In the previous few sections we have conducted careful analysis of the market and proposed innovation, so we can conclude the product is ready for further development. However, in order for the product to succeed in the real world, we must also consider the broader real-world environment the product will act in. Since we take a post-growth entrepreneurship approach, we are already using open innovation practices to contribute to product development, such as working with users openly and collaborating with the Netherlands Court of Audit and their expertise in Broad Prosperity, policy-making and analysis [16, 17]. The onion stakeholder analysis led to the important insights that although the original business model did not have any serious competitors, the newly proposed business model does have competitors. The innovation option takes a very different approach, but it is a digital business information analysis tool. Therefore, although we do not believe this is a large threat, the organization is advised to regularly take note of future changes in the competitive field.

Futures Cone and Financial Development Timeline



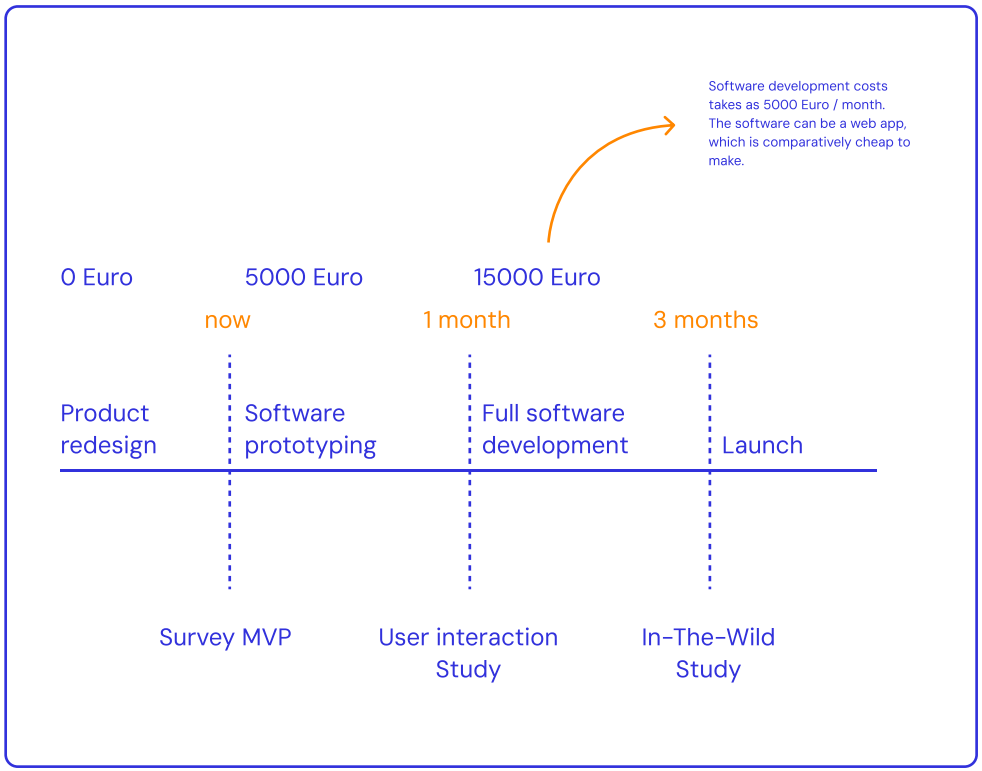
Possible futures
- The product is an enormous success and becomes part of nearly every team's regular toolbox
- The product owners lose an enormous amount of money due to incorrect financial forecasting

Plausible futures
- The product is used by a range of organizations to help them better understand their customers, and speak with them on a regular basis
- The product will not reach any customers due to a lack of funding for marketing
- The product does not reach enough customers because the accompanying workshops do not support sales
- The company goes bankrupt due to incorrect financial forecasting
- The silo-thinking structure of large organizations is too rigid for the product to succeed [2]

Probable futures
- The product slowly reaches more customers and is regularly used by a slowly increasing number of people
- The product generally gets positive responses
- The product ensures enough cash-flow for the company to survive

Preferable futures
- The company growths steadily without the growth itself becoming a burden to the company and employees
- The product gets adopted by a large amount of organizations
- Customers and their own stakeholders notice improvement in quality of results

Regarding the Futures Cone analysis, we do not see direct issues with this business model, but we do advise to regularly reflect on intermediary results during development and compare them to the provided Futures Cone to stay on the right track. Finally, highlighting the financial forecasting, it seems the proposed new innovation has an enormously positive effect on the costs as the product is now purely physical. The main development costs are currently found in software development and a backend-as-a-service, for which the costs are disregardable [18].



Conclusion

Taking all things analyzes into consideration, it seems that the new business model and new innovation option are bound to succeed. The financial requirements are low, the environment is supportive, use are open to the innovation, and a problem-market fit can be established. We look forward to seeing the results of this project in the future.

Acknowledgements

I would like to thank the Netherlands Court of Audit for bringing in their expertise and inviting me to visit them in The Hague. In addition, I would like to thank Ines Sanguessuga Ascensão, Carlijn Valk, and Kevin Pfeil for teaching me throughout this course.

Statement of AI use

No AI has been used to write or improve the writing of this report. In the literature research stage supporting this report, Consensus was used to speed up and improve the quality of literature review. Consensus is available at https://consensus.app/search/

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Appendix

Appendix A: Persona

André is a Dutch official with an expertise in infrastructure. He leads project groups in realizing changes to the Eindhoven road network. He feels he is deeply knowledgeable and designs his projects together with his subordinates based on safety and financial feasibility. He does not see need to change his way of working, but does see the need for a lot of changes to the road network. Sometimes he notices protests against his plans, which slightly saddens him. A big frustration in his work are the unexpected budget issues, which he has to explain to his boss.

Goals: smooth infrastructure projects with little struggles or opposition
Needs: a way to analyze project effects outside of his expertise
Opportunities: changing Andrés mind to let him take more stakeholders, perspectives, and side-effects in consideration for his projects.
Observations: André is generally open-minded and he hopes to have a positive effect on society through his projects. He believes his insights in safety saves lives.
Tasks: selecting the right projects for the municipality to tackle first, ensuring safety in the road network, and staying within budget as well as making budget proposals
Barriers: he does not see a direct need for change in his way of working. Telling him he is not doing a good job is both incorrect and counterproductive.

Key points in the journey:

- convincing André there are opportunities in a more creative, collaborative, and socially considerate way of working
- educating André on the possibilities and teaching to use the tool
- supporting André in effectively using the tool with his team

Appendix B: PESTEL

Political
Although the project itself is highly political, there does not seem to be a significant political risk for the business model to be successful. It is, however, essential that the product takes measures to not be inherently biased, and also to prevent users from abusing the visualizations and analyses to influence political decisions. That would oppose the goal of connecting and collaborating. Based on the continued developments of broad prosperity in politics and the expertise from the Netherlands Court of Audit, it can be concluded that the political landscape and officials would generally be open to using a social analysis tool in their work [11, 13].

Economic
A good economic state of the country would be beneficial to the success of the business model, as this is expected to lead to more openness towards social perspectives and development. This is important to consider that the economic situation might change for better or worse. Now, however, the situation is not deemed to be a high risk, as we are not in a large economical crisis, unemployment is low, and salaries are increasing [1].

Social
As seen in the increase of focus on broad prosperity, the social state of the country is open to the proposed business model [11, 13]. The product itself also aims to change this social environment, further improving the situation for the success of this business model.

Technological
The business model is expected to improve as the product will likely benefit from expected future technological developments. AI can relatively easily be integrated in the product as low-cost local and/or specialized AI models improve. Changes in energy production are not expected to be of importance.

Environmental
A broad range of environmental projects are going on that could benefit from a broad prosperity perspective. Therefore, an environmental emphasis is expected to be beneficial to the product, but not a dependency. No other ethical considerations are expected to significantly influence the business model.

Legal
The most important issue to consider is GDPR regulations. The product must subject to these. In addition, careful IP research must be conducted to understand both conflicting and possible patenting [15].

Appendix C: MVP Results & Questions

Broad Prosperity Analysis Tool Prospective User Survey

Thank you for participating in this short survey. The following text first describes the context of the study, and then gives information on the study itself in order for the participart to be able to agree to informed concent.

Context:
Please **take the role** of one of the following two options:
- You are a government official with an expertise of your choice, such as policy, infrastructure, ecology
- You are a project leader in a commercial company that sells products or services of your choice

You will be asked questions on **new digital product** that allows project members to think in a more social way, such as considering more stakeholders, interviewing more people, taking into account new perspectives. The tool will give you information on the topic, advice on how to approach your specific situation, and will help your project group to collaboratively discuss potential positive and negative effects of the project you are working on. The tool is visual and adaptive, and different versions exist for different situations. It is assumed that the tool sparks creativity and helps you focus on other things than you are used to.

Additional information on the shape of the study:
All data of this study is anonymized, and all collected data will be removed within 7 days after completion of the study. You will be asked non-intrusive questions where you will take the role of somebody else. You may stop and revoke your participation in this study at any time.

This is an example of what the tool **could** look like. Please be imaginative in your impression of what this tool could do. The colorful areas in this specific example tool are used to collaboratively rate whether the project you are working on has a large or small effect on areas such as happiness, nature, work-life balance, education, health, etc.

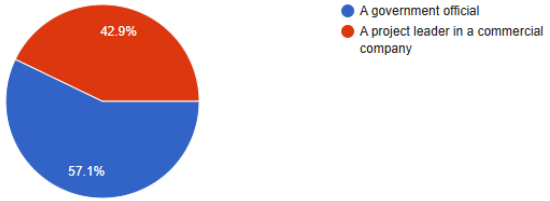
Appendix C: MVP Results & Questions

I agree that I am sufficiently informed and freely participate in this study: Copy chart

7 responses

You are Copy chart

7 responses



Your area of expertise is in: *

Your answer

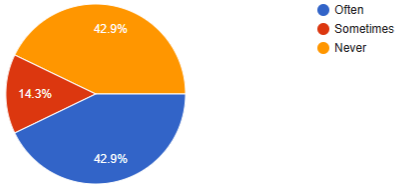
Answers not shown for privacy reasons

Please shortly explain what your activities are when you are working on a project of yours: *

Your answer

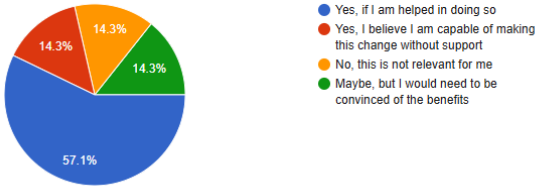
Do you often consider the social results of your work, e.g. the effects on elderly and children, but also health of yourself or others, nature, or living environment Copy chart

7 responses



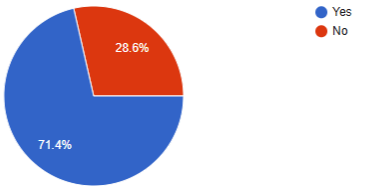
Would you be open to considering social results of your work more often Copy chart

7 responses



Would you pay money to use this tool, or ask your boss to pay money for you to be able to use this tool?

Remember that the tool helps you taking a more social approach to your current projects, and is a new way to interview your stakeholders.

Assume the price is fair. Copy chart

7 responses