UNIVERSIDAD DE VALLADOLID

ESCUELA DE INGENIERIAS INDUSTRIALES

Grado en Ingeniería Electrónica Industrial y Automática

EMERGING TECHNOLOGIES PLAYGROUND

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TFG REALIZADO EN PROGRAMA DE INTERCAMBIO

TÍTULO:	Emerging Technologies Playground
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RESUMEN, PALABRAS CLAVE.

Español:

Este proyecto ha sido creado para la empresa BIC Institute. BIC es una empresa que se dedica al estudio interno de otras compañías. Esto lo hace mediante encuestas que son rellenadas por los trabajadores, la directiva y los clientes de la compañía. BIC Institute se encarga de estudiar los resultados de esta encuesta y crear un informe que dará a la compañía.

El problema a solucionar era que el informe final era un PDF demasiado estático por lo que los clientes tenían que buscar la información que precisaban en ese PDF. Mi solución ha sido crear una plataforma online en la que los clientes de BIC puedan acceder y en ella poder crear su propio informe con la información que ellos deseen a partir del estudio hecho por BIC. De esta manera pueden crear distintos informes en base a la información que precisen en ese momento.

Palabras clave: ID-Scan, BIC, informe, plataforma online, empresas

Inglés:

This project has been created for BIC Institute. BIC is a company which made intern studies about other companies (BIC's partners). This is made by ID-Sacan. ID-Scan is a kind of survey which is sent to the management, the employees and the clients of the company. BIC Institute study the results of this survey, analyse the data and make a report about the company.

The problem that we found in this company was that the report was too static so the partners had to search for the information they want in this PDF report. My solution has been creating an Online Platform in which BIC's partners can create his own report with the information they want based on the study made by BIC. On this way, the can create different reports for different clients.

Key words: ID-Sacan, BIC, report, Online Platform, Partners

Project report

BIC Partner Dashboard

June 2022

A collaboration between Avans Hogeschool (Minor ETP) and BIC Institute

Educational Institution
Avans Hogeschool
Minor: Emerging Technology Playgrounds
Onderwijsboulevaard 215 te Den Bosch

Client
BIC Institute
Contact person: Frank Cuijpers

Students (who's main focus was BIC assignment)
Appelmans, Dèveny
Beljaars, Robin
Dewnarain, Akshay
Sanz, Marta
Tezel, Stephan
Other students from the minor joined for feedback, advise and other information

1 Index

2 INTRODUCTION

This project report was created to provide insights into the process of the project. The project was issued by the company BIC institute. Furthermore, this report is also one of the required deliverables for the client.

First, the project's problem description will be introduced, given by the client, BIC institute. Furthermore, a detailed workflow on how BIC institute works is described later in this chapter.

In the next chapter both the scope and end goal are described. In detail, there will be talked about the underlying problems that were identified in BIC institute. With the use of the identified problems an end goal has been defined.

Next there is an introduction to all the stakeholders that are involved in the project. With each stakeholder having a short introduction to how they are involved in the project.

Following the stakeholder introduction there will be a chapter dedicated to the success criteria of this project. In this chapter a few success criteria are defined to give better insight into when a goal is considered achieved.

Furthermore, a chapter about how the project process came to be realized is described in detail in the form of a workflow. There is also talk about how brainstorming influenced the prototype and how the different prototypes came into existence.

In the last chapter an evaluation of the project's results is put together. Results include the prototype, the video for the prototype, the handover, the project report and the success criteria.

3 PROBLEM ANALYSIS

3.1 GIVEN PROJECT DESCRIPTION

The client assigned the minor to investigate a 'Proof of Concept' about how the existing data of the client's partner can be made accessible (online). With as goal to implement this PoC (Proof of Concept) into the BIC institute workflow, after the completion of the minor. The client currently uses Power BI to display data and is looking for a way to provide this data, for example, into an azure environment, to its own customers. With as goal to display data in separate ways, compare and even benchmark them. In an environment that yet needs to be realized, the client's partner must be able to perform certain actions. For example, be able to find their way based on the available data, manage their own data and use the available tools. Furthermore, there is a need for a control center. This is used by the clients of BIC, where they can manage the available tools.

The first phase of this project is focused on further defining the scope of the project regarding the demands of the client, the coach and where necessary, experts. The collaboration between the project group and the client will be put in an official contract. To achieve this, the standard contract from the Digital Workshop will be used. Through the means of a Plan of Approach, the working methods and the definition of the final assignment will be described and documented. Subsequently and where possible, research will be done into the technical and functional aspects of this project will be made. Additionally, a user requirement list will be made as well. These subjects will be covered through research, in coordination with the client and where possible, validated with the end-users of the system. Both the technical aspects and the interfacing and interaction side of the system will have to be considered. Furthermore, the linking of the existing platform should be considered as well.

The insights from research into these three aspects (technical aspects, functional- and user needs) are necessary for further refinement of the assignment. And they provide directions for the proof of concept to be delivered. The advice should be delivered based on (preliminary) research during the minor, a final product, as well as an implementation plan that the entrepreneur (for example through a graduate and expert company) can continue with.

Frank Cuijpers BIC Institute 06 30 84 86 92 mail@bic-institute.com

3.2 ID-SCAN PROCESS

What is an ID-Scan?

The ID-Scan is the main service that is provided by BIC Institute. The ID-scan is a baseline measurement based on the Business Identity Canvas (BIC). The scan consists of a set of questions which are answered by the owner of the company, the employees and by external relations (e.g., customers and suppliers). With these answers a report is generated automatically. Through this report companies can find out what their pains and gains are and create a stable basis from which they can correct their pains and enhance their gains.

How can the ID-Scan help partners of BIC Institute?

The ID-Scan is used by partners of BIC Institute. These companies are mostly management and consulting firms with different clients. The ID-Scan provides partners with insights into the companies of their clients. Partners, which are mostly consultant firms, consult or advise their own clients through the means of the BIC software tool. With the BIC software, partners can consult their own clients based on the several aspects which are defined in the BIC canvas (Figure 1.1). The identity canvas is the base for companies to implement strategic decisions. With the results of the ID-scan, companies are provided with important insights into their companies.

What can ID-Scan be used for?

The ID-Scan can be widely used for, amongother things:

- Acquiring insight into strategy and policy making
- Guiding cultural changes within organizations
- Insights into leadership trajectories
- Developing strategies for structural growth
- Determining a brand identity and/or positioning
- Realizing image improvements
- Developing creative concepts (including interior)
- Developing a sustainability strategy
- As a basis for employer branding
- As a basis for merger and acquisition processes

For whom is the ID-Scan intended?

The ID-scan is intended to be used by consultants, advisors, strategists or creative minds who want to achieve some advice for their clients. Based on solid insights provided by the identity canvas (Figure 1.1).

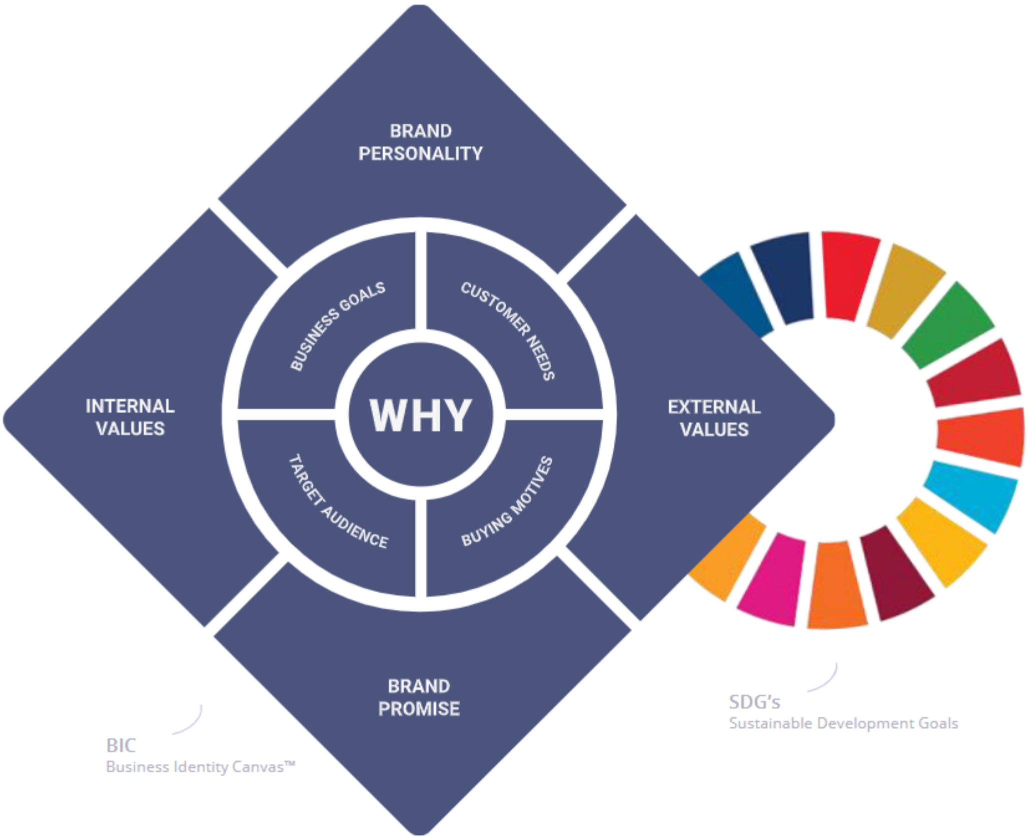


Figure 1.1

Business Identity Canvas (BIC) and Sustainable Development Goals (SDG's)

The ID-scan is a baseline measure based on the Business Identity Canvas (BIC). This method contains all the required components to be able to generate high quality ID-scans. Additionally, BIC also utilizes Sustainable Development Goals (SDGs). Using SDGs, clarity is provided regarding priorities in the field of development.

3.2.1 Technical workflow of creating the report

3.2.1.1.1 Current technology used by BIC

formdesk

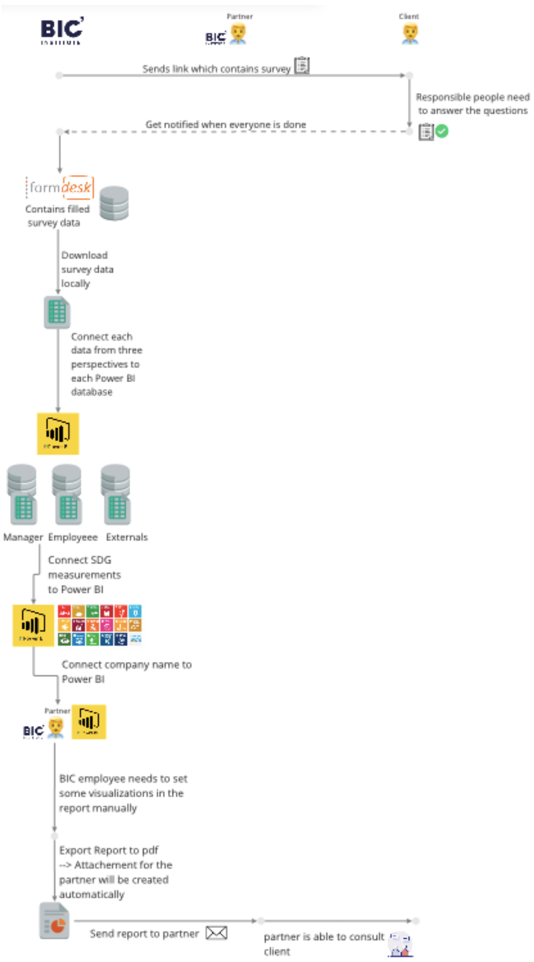
formdesk is a platform which is specially designed for creating surveys and saving the outcome data of the survey. The surveys for the ID-Scan are created with formdesk. BIC uses formdesk to send out the surveys for the three perspectives of a partner's client. The answers can be downloaded in formdesk as a .csv file.

Microsoft Power BI

Power BI is an interactive data visualization software developed by Microsoft with the primary focus on business intelligence. BIC uses Power BI to display the data retrieved from the surveys into graphs. Furthermore, for each perspective a manual connection to the database must be made with Power BI. As a result, a lot of time is consumed.

BIC institute was improving their workflow by automating some of their process during this project. This means that some parts of the report are based on their old workflow and the other parts on the new workflow. This report will contain the old and new workflow to show what was changed.

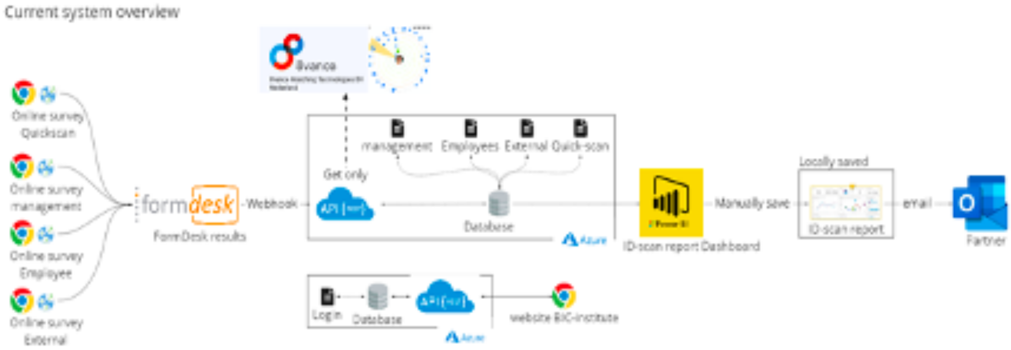
Old technical workflow



In the old technical workflow above you can see that a lot of manual work needs to be done by BIC Institute to generate a report for ID-Scan of the partner's client.

As mentioned, the process during the project has been more automated and improved. In the following section the reader will be informed about the currently used technical workflow.

Current technical workflow



This image shows the current technical workflow. Instead of downloading the survey data manually from formdesk and uploading it to Power BI to generate an ID-Scan report, the data will be automatically pushed and updated from formdesk into Power BI. A webhook will relay these results to the azure environment from BIC institute. Power BI loads these results inside the dashboard which will be manually saved by an employee inside a report. This report is than send towards the partners.

4 PROJECT SCOPE

After researching additional information from BIC Institute it is possible to define two different problems.

With the first problem being that the client is unable to compare and create their own reports. This is due to the clients receiving only a static pdf report which cannot be used to create their own concepts. This problem will be the focus of this project.

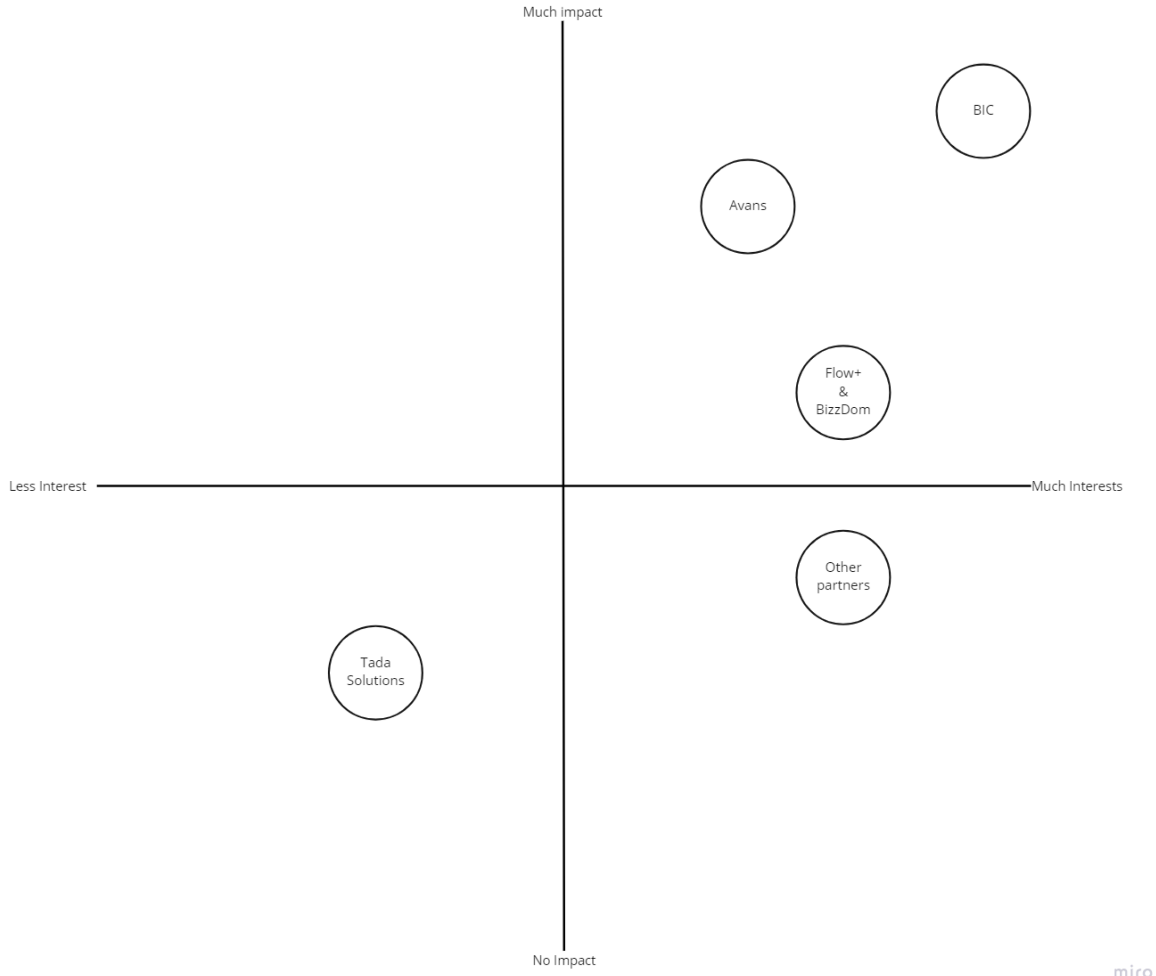
The second problem is that there is a lot of manual work involved for BIC institute when creating a report for the partners. This is due to BIC separating the reports by stakeholders and languages. The ETP minor students will not focus on this problem due to it being worked on by Tada Solutions.

In short, this project will work on solving the problem "How can the result process from the ID (quick)scan be improved so that the partners of BIC Institute are able to manage and use the results for specific client use cases?"

This problem is still too big to solve inside the minor period, but this project will only provide a Proof of Concept for the problem. The implementation of the solution will be handed over to the next person. To set a border on where this project will end it is important to set an end goal.

The end goal of this project was to create a clickable and testable prototype for partners. The focus was to make the ID-Scan report more accessible for the partners. This was achieved by the creation of an own ID-Scan report for the partner's clients. With testing, the concept of the prototype should be approved. Based on that, the project group should deliver a "handover report" to give insights and instructions for implementing the prototype to the next group which will work further on this project. The estimated next group to work further on this might be a technical working student for his final thesis.

5 STAKEHOLDERS



Name	Contact Person
Avans University of Applied Sciences	Bertus Rosier Rik Meijer Luc Claessens
BIC institute	Frank Cuijpers
Tada Solutions	Jos Cup
Flow+	Jeroen Beckers
BizzDom	Jan-Paul Urlings
BIC partners	

5.1 AVANS UNIVERSITY OF APPLIED SCIENCES

Avans is the university that provides the Emerging Technologies Playground (ETP) minor. ETP is a minor in which students from different studies work together on different projects scouted by the minor management. These projects can be internal or external projects in cooperation with real companies. With the goal to provide the students with experience in startup projects.

In the following section, the three different stakeholders within Avans University will be introduced.

Bertus Rosier is responsible for all the Avans projects in cooperation with companies. It is in his interest to ensure high quality projects with a long-term focus for students and the companies. Important decisions within the BIC project have been approved by him. An example of a decision, which got changed by Bertus, was the approvement of our focus on the project. The students of BIC analyzed many problems, and they concluded to focus on a prototype to create an own report as a partner.

Rik Meijer is mostly teaching and advising the ETP minor students regarding the project process. He gives feedback on processes, stakeholder management, teamwork and achieved results. Lastly, he is responsible for grading the students based on a given grading criteria.

Luc is responsible for the organization of the ETP minor. He also takes part in giving feedback but not as much compared to Rik. In the end, he is also grading the students with Rik.

The stakeholders were differently approached into the project progress. Bertus was involved in multiple important decisions with meetings. After two weeks of work, which is the timeline for an iteration, an expo happens to present the progress and results. In the expos all three stakeholders from Avans were mostly present. During an iteration evaluation the students had the chance to evaluate the iteration with Rik based on the grading criteria.

5.2 BIC INSTITUTE

BIC institute, the owner of this project, is a company which provides tools to their partners to assist in determining the identity of their clients. One of those tools is the ID-Scan. BIC institute notices that some of the partners have the wish to create their own reports from the ID-Scan. Another wish is the ability to compare previous reports with each other. Unfortunately, these functions are not yet inside their solution. They gave the ETP minor the assignment to produce a proof of concept to support these features.

There are multiple agreed ways to contact Frank Cuijpers. The first is by email. Another way to contact Frank was by the WhatsApp group "BIC/Avans". From here questions can be asked about the project. Within the group it is decided that a message can only be sent when the group agrees to it.

Frank also gives the opportunity to work at the location of BIC institute. This will be on Tuesday. Every week on Tuesday morning at 10 o´clock there will be a weekly update with Frank. Frank gave an additional contact person to work with. This is the (Avans) student worker Liza who did some research on the subject.

5.3 TADA SOLUTIONS

Tada solutions is the company that provides technical support to the tools from BIC Institute. They develop the tools and manage the database from BIC Institute. Since the solution will be an extension of the existing system it is important to know which limitations exist on the implementation of the solution.

For the communication with Tada Solutions there will be a meeting with Jos Cup where the project group will be informed about the structure and limitations of the system. Jos Cup assigned his employee Niels Deckers to attend the meeting. Niels is responsible for the development of BIC's IT-Infrastructure. As a result of this meeting, he showed the current workflow with the Azure Database. Based on that, the project group was able to get a better understanding of the current system and to create a system overview. The system overview was helpful to indicate, how the prototype can be integrated into the current system.

5.4 BIC PARTNERS – GENERAL

BIC has multiple partners which they work for. This group will be the users of our solution. Due to this, it is important to integrate the partners in our development process to get feedback on the solution. The partners consist of multiple professions like business coach, consultant, advisers, strategist etc.

It is not allowed to contact the partners of BIC institute without permission from Frank. To find more out about issues and wishes the partners of BIC have, the project group analyzed interview reports with partners from past working students of BIC. Frank from BIC Institute advised the project group to focus on those assignments first, before the direct contact with BIC partners.

As mentioned, it is not allowed to directly contact the partners without the permission of Frank. In the last iterations of the minor, he gave the permission to contact Flow+ and BizzDom to do some user tests to confirm the assumptions in the prototype. These two partners volunteered for the user tests and provided valuable insights in the processes of the partners.

5.5 FLOW+

Flow+ is one of the partners of BIC that participated in the user tests of the prototype. Flow+ gives their clients insights in entrepreneurship on the personal and business levels. As one of the partners they will eventually use a refined version of the solution. They can give feedback on the prototype and suggest additional feature ideas which can be found in the appendix (appendix number) of this document.

5.6 BIZZDOM

BizzDom is the other partner that participated in the user tests of our prototype. BizzDom helps entrepreneurs with managing their company in a smarter way. As one of the partners they will eventually use a refined version of our solution. They can give feedback on the prototype and suggest additional feature ideas which can be found in the appendix of this document.

6 SUCCESS CRITERIA

During the project multiple prototypes and concepts are developed. To help with evaluating the different solutions it was required to set up some success criteria that our solution should have.

Success criteria are statements that describe which goals the solution should meet to be considered successful. They are used to measure if the team has reached their predefined goals and to prove that the project has been a success.

<table>
<tr><th colspan="2">SC1: Knowledge sharing partners</th></tr>
<tr><td>Description:
Partners can share knowledge so they can give advice to their clients outside their field of expertise.</td><td rowspan="2">Measurements:
To measure these criteria the first thing that will be done is scaling the possibilities of sharing knowledge. This gives the option to evaluate the approaches with user tests which provides key insights.</td></tr>
<tr><td>Reason:
Some of the partners have difficulty explaining the ID-scan report to their clients.</td></tr>
</table>

<table>
<tr><th colspan="2">SC2: User-friendly interface</th></tr>
<tr><td>Description:
Partners want a user-friendly interface so they can quickly see the information they need.</td><td rowspan="2">Measurements:
The amount of end user feedback on interface and interaction

Positive feedback
Some key points to keep in mind.
What does user friendly mean?
When is it user friendly for our partners?</td></tr>
<tr><td>Reason:
More users are inclined to use the solution if the interface is user-friendly
Some of the partners have difficulty explaining the ID-scan report to their clients.

The users would not need an explanation or introduction if the user interface is set up correctly.</td></tr>
</table>

<table>
<tr><th colspan="2">SC3: Raw data access</th></tr>
<tr><td>Description:
Partners can access the raw data (but not modify) so they can make their own insights.</td><td rowspan="2">Measurements:
Testing in user tests if the end user really wants to use the raw data.
Checking what they will do with the raw data.</td></tr>
<tr><td>Reason:
Some partners want to use the visualizations of the report in their own concepts and go into more depth on certain subjects</td></tr>
</table>

SC4: Valuable for partner	
Description: Partners want to use our solution because it delivers added value for their businesses.	Measurements: Receiving feedback from the partners in the user tests.
Reason: If the partners do not use the solution provided, it would mean that the project was not successful. Using our solution could create new business opportunities for the partners. Profit for the clients due to the partners being able to work better with the results.	

SC5: Report customization	
Description: Partners want to generate their own ID-Scan report for their clients because they want to focus just on some parts.	Measurements: Give partners the opportunity to generate their own ID-Scan report. Evaluate the different solutions with user tests.
Reason: They want to advise their clients on specific parts of the ID-Scan. They cannot work with some parts of the report in their field of expertise. It would not make sense to have those parts included in the report. The partners want some independence from BIC when generating a report. Saves time for the partners and BIC.	

7 PROJECT PROCESS

Use Case

At the beginning of the project, the focus was on understanding BIC Institute and defining what they expect from the project group. To achieve this there was research on the documentation provided. There were also multiple meetings with Frank Cuijpers, the Manager of BIC Institute, to gain insights on these topics.

The problem

With a clear understanding of how BIC Institute works, the project description was analyzed. Three different problems were found in three different aspects: With the first problem being about the technical problems they encountered when creating reports. In general, it takes too much time and manual work. The other two problems are connected, with them being about the pdf file received by the partners of BIC containing the results of the ID-scan. The received report is too static, and the partners only have access to the pdf file. This results in them being unable to contribute and access the result of the data.

Problem analysis

After discovering the different problems, it was decided to focus on the problem that the partners BIC had with the PDF report. The problem was analyzed with the help of a project canvas. With the help of the analysis, the problem was clearly defined, and some success criteria were established for the solution.

Brainstorm session

After the establishment of the success criteria there will be a brainstorm to create ideas for the first prototypes. The brainstorm's team consisted of: Frank, Tom (worker from BIC), two working students and the Avans project group from the ETP minor.

First prototypes

Because of the results and ideas gathered during the brainstorm session, the project group was able to think and create several prototypes. In the brainstorm session each member created a primitive prototype for the final solution. These prototypes were: BIC box, Deep-fake video, Online platform and Customizable Report.

Choose Online Platform

After explaining all the primitive prototypes, the prototypes were checked to see if they achieved our success criteria and requirements. It was decided to work further on the Online Platform prototype since our group determined that it was the most feasible, desirable and viable solution from the primitive prototypes.

Wireframe session (content Online Platform)

The Online Platform prototype was expanded with additional content based on the success criteria, the assumptions on the wishes of the partner and the solution requirements. For that the team had a wireframe session where the content was discussed, and the designing of the solution started.

Creating

After deciding the content of the platform, a start was made for creating the prototype in Figma. Feedback was received on this prototype by doing some user tests with other students, employees from BIC and some partners. The feedback was evaluated and integrated this feedback inside the final prototype.

Usertest

Evaluating feedback

With the feedback gained from students and BIC employees, the prototype was improved and changed. In the end the project group tested the prototype with two partners of BIC. It is important to involve the end users in the agile process. Due to time limits, suggestions from partners are not integrated into the final prototype. In general, the PoC has been approved by the partners. Future topics and ideas are defined in the Handover document.

Final prototype

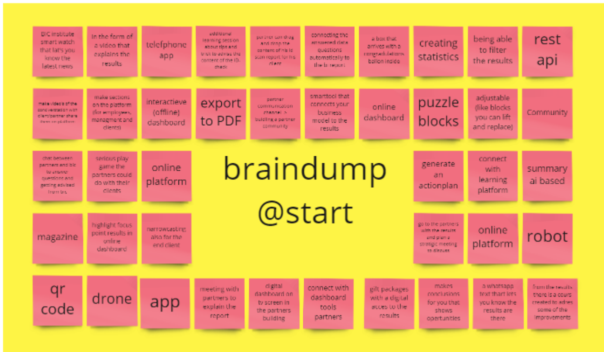
7.1 BRAINSTORM SESSION

The brainstorm session is the first activity highlighted in this chapter. This is due to it being the basis for our main prototype. The brainstorm session consisted of two parts. Creating ideas and creating concepts. The explanation will start with creating the ideas. The brainstorm session was done in person and the results were also written in digital form to make them better accessible.

Multiple canvases were used during the idea creation of the brainstorm session. The participants have 10 minutes for each canvas to write down their ideas on postits.

Braindump: Generating ideas

The first of the canvasses can be seen above. This canvas was used to collect general ideas for the solution, this could be any idea from the participants. In the second topic the participants wrote the ideas they have for the way that the report will be shown to the partners.

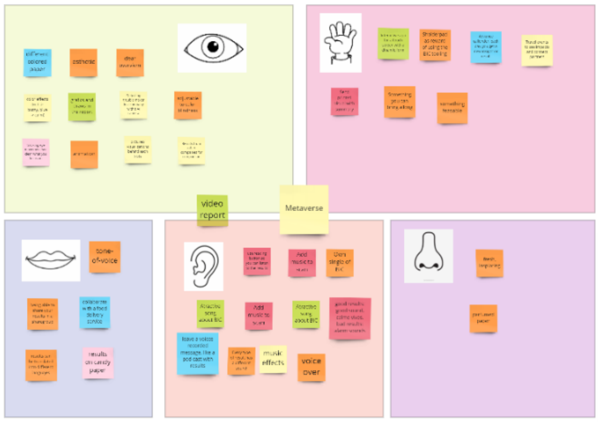


Braindump: Ways to show the report.

The second canvas focuses on the way the report will be shown to the partners. This can be animations, diagrams or any idea from the participants.

5 senses Technique.

The third canvas focuses on the senses of the partner. On other words what will the client see, feel, taste, hear and smell in the solution. It might be odd to think about the five senses when creating ideas for the solution, but the following examples might help with understanding it. Color blindness support (see), report printed on paper (touch), chocolate to stimulate the mind when reading report (taste), putting on music during the scan (hearing) and perfumed report paper (smell).



Time technique

The last canvas is based on time. Basically, the participants will look back in how the problem would be solved in the past (1990) and how it would be solved in the future (2050).

Once we finish the brainstorm each participant took some of the post-its from all the topics and create a concept idea with them. Then the prototypes were presented which are discussed in the paragraph “First concepts”.

7.2 FIRST CONCEPTS

In this chapter there will be multiple concepts worked out that added value towards developing the solution for BIC. The first concepts are focused on the way the report is delivered. These concepts are the "BIC-box" and the "deep fake report explanation". The later concepts will focus towards improving the current report by adding new features. Examples of these concepts are the customizable report and the Online platform. Each of the concepts will be explained in their own paragraphs with the insights gained from these concepts.

7.2.1 BIC-box

The BIC-box is a collection of items the partner will receive when an ID-scan is delivered. Inside the box there will be food to improve the focus when reading the report, the report itself (Results are uploaded digitally as a pdf file and a visual aid), an infographic about the BIC-canvas and an invitation to the next BIC event where the report will be explained.

The most valuable insights for this project would be the use of the infographic and the invitation to a BIC-event where the partners will learn how to use the report. Even though the BIC-box is a nice idea it would go against the project goal of improving the report itself and it would only be welcome on the first report.

7.2.2 Deep fake report

The deep fake will be a video walking the partner through the report. The video can be in different languages and the partner can navigate to different parts in the report. The presenter in the video will then explain the results and give tips on how to use the results.

The most important insights for the deep fake report are how the report is explained. In the deep fake the results are explained inside a video where they also give tips on how to use it. This can be helpful for the solution since it will be a possibility to give the partners explanations on some parts by the way of videos.

The deep fake can make the report easier to understand, but there is a reason we did not develop any prototypes for this concept. This has to do with one of the two goals of this proof of concept, one of the goals of this project is to allow the partners to excess the results from outside the report. One thing that will be kept in mind from this concept is the explanation by a video which could still be used inside the end solution.

7.2.3 Online platform

The online platform is a concept which moves the report to the internet. This concept will allow the partner to enable and disable certain parts of the report. This will reduce the amount of noise received from the report. There will also be different communication channels for the partners to ask questions. Examples are community chat, private chat towards other partners and a chat to a BIC-advisor. The website will also contain a help section where the frequently asked questions will be placed.

The most valuable parts for the project are the communication and the ability to customize the report, but during the fourth iteration the client asked to move our focus towards the report side. This is because BIC-institute is working on setting up a way of communication in a separate project. So, the focus of this concept will be moved closer towards the customization of the report.

7.2.4 Customizable report

The customizable report concept is comparable to the online platform concept with some key differences. One of these differences is what you can customize inside the report. While the online platform focuses on selecting categories like the SDG's the customizable goes towards the details like selecting which perspectives to use. So, the customizable report will focus on the smaller details and make those customizable.

During the fourth iteration the client mentioned that the partners should not be able to fake the result from the report. In other words, leave certain answers from one topic out from the report. Some aspects to focus on for the solution are customization on the lowest levels, switching perspectives and adding the ability to compare different perspectives with each other or comparing different reports within a company.

7.3 WIREFRAME SESSION ABOUT THE CONTENT OF OUR ONLINE PLATFORM

After showing our Online Platform prototype to our client, it was decided to focus on the part of "Create your own report" and not in the rest (Chat, forum…). With this new objective, the team had a wireframe session in which the content of the platform was decided.

In this session the following needs were set:

- The prototype needs to be more interactive
    - The user sees the timeline of the reports
    - The process needs a traffic light UI (User Interface)
- The onboarding reports need to be added
- The saving process of the report is defined
- The selection process of the report is defined.

And with these topics, the work was divided, and the implementation was started using Figma.

8 RESULTS AND EVALUATION

For the final part of the report the end results will be discussed. The results of this project are the testable prototype, an explanation video about that prototype, a handover document to BIC Institute to explain further steps and this document to give all insights the project team has made.

The prototype itself will be introduced in a separate video, so the focus is mainly on the goals reached in this project. Before going on to the main section it is important to note that two partners were involved in user tests. These partners confirmed that the idea is something the partners would like to have.

The first success criteria set up during the project was “knowledge sharing between partners”. The intent of this criteria was to enable partners to communicate with each other. This goal was dropped during this project. The stakeholder from BIC wanted to focus more on the report creation aspect because they had a separate project going on to enable this communication.

The second criteria was “user-friendly interface”. This was to ensure that the partners were able to use the new solution when it is released. The result of two user tests with partners was that they could easily understand the user interface, but the two tests are not sufficient to determine that the criteria were reached. In other words, this success criteria are semi-confirmed to be reached. The prototype needs to be more test and evaluated by the end users.

The next criteria was “Raw data access”. This success criteria is one of the most important criteria for the project since it relates to the end goal. In this goal the partners get READ (view only) access to the ID-Scan results. The delivered prototype is built around the concept of customizing the report which is one of the main reasons this goal was reached. There was also an idea for the prototype to include an export feature for excel, but this was not added to the final version.

The fourth criteria was “valuable for partner”. This was to make sure that the partners want to have this solution and they would gain value with using the environment. This criteria is confirmed in two ways, through the research of the innovation assignment from Lise van Asseldonk and the user tests with the two partners. Both ways indicate that the partners want to have an online workspace to customize the report.

The last success criteria for this project was “Report customization”. This criteria confirms that the partner will customize their reports when given the chance. From the user tests with the partners, it is confirmed that the partner will customize their reports. The partner from BizzDom even reinforced this confirmation by saying that he already did this in a more difficult way. One positive side effect from this success criteria is that the partners will be less dependent on BIC Institute, since partners create the report.

To sum up by having a look at the project goal, it can be said that the goal was achieved. A clickable and testable prototype for partners was built. To be able to understand the future potential and insights of this online environment, a handover document was created for the BIC Institute. The next project group will be able to continue that project.

9 APPENDIX 1: ORIGINAL ASSIGNMENT DESCRIPTION

Opdrachtgever legt bij de minor de opdracht neer om in een 'Proof of Concept' te onderzoeken op welke andere wijze de bestaande data van dit bedrijf (online) valt te ontsluiten. Met de intentie van de opdrachtgever om dit PoC na afloop van de minor te laten implementeren in de bedrijfsvoering.

Opdrachtgever maakt op dit moment gebruik van PowerBI systeem en heeft de behoefte om de bestaande data (in Azure-omgeving) van dit bedrijf (online) voor de eigen opdrachtgevers te ontsluiten, de data op andere wijzen te tonen, te vergelijken en te benchmarken. Deze data betreft softskills-zaken van de klanten van de opdrachtgever.

In de te realiseren omgeving moeten de partners van de opdrachtgever bijvoorbeeld kunnen " de weg kunnen vinden op basis van de beschikbare data" en 'de eigen data kunnen beheren', `de beschikbare tools kunnen inzetten` Er is behoefte aan een 'controle centrum' waar het beheer van de tools door de opdrachtgever zelf kan plaatsvinden.

In de eerste fase van deze opdracht zal door de projectgroep een verdere afbakening van de opdracht moeten plaatsvinden op basis van afstemming met de opdrachtgever, de coach en waar nodig experts. De opzet van de samenwerking tussen projectgroep en opdrachtgever zal worden vastgelegd in een contract. Hiervoor hanteren we een standaardcontract vanuit de Digitale Werkplaats. De werkwijze van de projectgroep en afbakening van de uiteindelijke opdracht zal worden beschreven in een plan van aanpak (PvA). Vervolgens (en waar mogelijk tegelijkertijd) zal er gestart worden met onderzoek naar zowel de technische aspecten als ook de functionele behoeften en gebruikersbehoeften. Er ligt dus geen set met uitgewerkte functionele specs klaar; deze zullen voortkomen uit het onderzoek, in afstemming met opdrachtgever en waar mogelijk vanuit - en gevalideerd bij- uiteindelijke gebruikers van het systeem. Er zal zowel moeten worden nagedacht over de technische aspecten, maar ook over de interfacing en interactiekant van dit systeem en manieren van koppelen met bestaande systemen en platformen.

De inzichten uit onderzoek naar deze drie aspecten (technische aspecten, functionele behoeften en gebruikersbehoeften) zijn noodzakelijk voor verdere aanscherping op de opdracht. En geven richting aan het op te leveren proof of concept. Er zal zowel een advies moeten worden opgeleverd op basis van (voor)onderzoek tijdens de minorperiode, een eindproduct, als ook een implementatieplan waarmee de ondernemer (bijvoorbeeld via een afstudeerder en expertbedrijf) mee verder kan.

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10 APPENDIX 2: PARTNER FEEDBACK FLOW+

Overview page

He understood the overview page quickly and likes the progress bar because it shows how many people are supposed to fill in the scan and how many have filled it in.

Suggestion:
The partner suggested to add a button with which he can easily send an email to the client to inform about the number of participants that filled in the Scan and how many are missing.

Another suggestion placed by the partner is to have a platform with login for the client in which the client will be able to see which participant filled in the scan. This will make it easier for the client to remind the specific participants to fill in the scan.

We asked the partner what his opinion is of adding an end date to the scan. He told us that he prefers to call the client and ask if someone still needs to fill in the scan. If this is not the case than he will proceed to create the report.

Selected client page

He likes the idea of having a page for each client with all the reports he made for this client, but he noted that it would be rare having that many reports.

Suggestion:
The client remarked that he was missing columns (Date of the scan, type of scan...) in the table of reports to show of which scan the report is.

The second suggestion that the partner gave about the selected client page is that he would like to group the clients based on the interests of each client (Sustainability, the brand…)

Create report

Would you like use all the elements of the report of just specific parts of them?

It depends on the need of the clients. Sometimes you don't know what the problem is of the client, and you analyze all the report, but other times you know what is going wrong so you can focus in one the specific part.

The partner has mention that he personally uses the whole report, but he knows some partners that are just interested in one specific part, so our idea is in his opinion good.

The partner sees a commercial aspect in the idea of creating different reports. Depending on what the report will show it is possible to charge different amounts of money.

The partner quickly understood how the report creation process works and showed interest in the ability to comment on the report. Personally, the partner was noting down comments on paper and with this idea he will be able to do that digitally. He specifically mentioned that he wants to select if the client can see a specific comment or not.

When creating the report, specifically on the open questions, he has said that is interesting you can choose the 3 answers you want and make a summary of the principal idea with the comments button.

The partner told us that he liked the idea of changing the view of the graphics (e.g., pie chart instead of line chart)

Suggestion:
The partner suggested that the partner can select the questions on the theme you want in the ID-scan instead of selecting which parts to use in the report. In other words, send the client just the questions from the scan that the partner is interested in.

Templates

The partner likes the idea of using templates, but at first, he thought that the templates made for the way to present it and not for the content. For example, he sometimes uses the report as an input for starting the model canvas, so he wants a different structure in the report for doing this.

Preview

Suggestion:
The partner wants to have the client logo, his logo and his contact details inside the preview page. To help with this he suggested to add this to the solution.

Reports comparator

The partner has the opinion that the report comparator idea is interesting. He likes to compare the report especially the open questions and archetypes.

Suggestion:
The partner suggested to add statistics of the report and general statics to make comparing reports easier. An example provided by the partner for a general statistic would be "10% of the companies have the same issue".

General

In general, the partner likes our idea for improving the ID-scan for the following reasons it is easy to do, you can add comments and personalize the report in the way you want. He does this anyway but in a more difficult way.

11 APPENDIX 3: PARTNER FEEDBACK BIZZDOM

Introduction

Jean-Paul from BizzDom develops strategies for his clients. He is using an online strategy environment and is offering an online academy for his clients. What he noticed during his work: The management of his client often has a different view of things working in the company. Often the employees have a different opinion than the manager, but the manager thinks everything is working well.

Therefore Jean-Paul is working with BIC together, because he wants to get better insights with the focus of the three perspectives in a company.

General feedback regarding the ID-Scan and the cooperation with BIC (That is more for the business topic, it needs to be discussed with Frank) Not our focus now.

- Was not satisfied with the Why / How / What
- He didn't like the process of seeing how many people have filled in the current ID-Scan process (For each perspective he needs to click on a link, and he needs to log in)
- He would like to have raw data as excel because he created own visualizations with that data (pivot tables)

Prototype feedback

General

- A general back button to the main menu would be nice
- A **back button** in the prototype would be nice. We were assuming our environment will be accessible in the browser. People could use the back button from the web browser.
- He was technically fit and understood the user interface. It was easy to create a report for him.
- Be **aware not to provide too much flexibility** because people can try very much out and maybe they can mess up something
- For him it is important to **still have a paper version** of the report. Many of his clients are not that technically and "Old school"

Dashboard

- He **liked** the overview page in general: Especially the **progress bar** where he can follow the **current progress** of the ID-Scan from **each perspective**
- He likes to finish the report / stop the question process

Define-Content-Screen

- He understood the selection of the three perspectives well
- He likes the idea to change the visualization type
- He likes the idea of the comments
- After clicking on "NEXT", he was confused that the content that he chooses disappeared, he didn't notice that he switched to the next content area

- He suggested to make the **BIC Canvas Icon bigger and add some text to the "Next" button.** The "Next" button should show the next content area. For example: Next to.... Not only "NEXT" that the user can immediately see that he switched to a specific content.
- The **BIC Canvas icon alone was not enough** to see that the area has changed with "NEXT"

Finish-and-Safe-Report-Screen

- After creating the report, he switched with the Home Button back to dashboard. He **didn't safe the report.**
  - Show a **pop up** and tell the user that the report **hasn't been saved**
  - Or show that it will be automatically saved

Managed Templates

- He was thinking with templates you can define more the layout or a color scheme of the report

Create report with templates

- He liked the templates, and he understood the difference between BASIC – and CUSTOM templates on his own

HIS IDEAS BEHIND THE BUTTON "Start new ID-Scan process"

- For him some progress topics in the ID-Scan process have room to improve
  - For example: Every person needs a link to the mail and that cause a lot of work for the client
  - Every person who is answering the ID-Scan needs to enter the name of the company. People are answering that differently.

- The partner should be able to start a new ID-Scan process on his own
  - The partner should be able to fill in the name of the company and all the mails with the perspectives. It should include the text (next bullet point mentioned)
  - The system should automatically send the mails for filling the ID-Scan
  - The system should automatically send a reminder to a person if the person didn't do it
  - He said that entrepreneurs are too busy to send mails with the correct links to every person
- He suggested that the client will receive a specific text about the ID-Scan explanation to each of the perspectives

Compare Reports

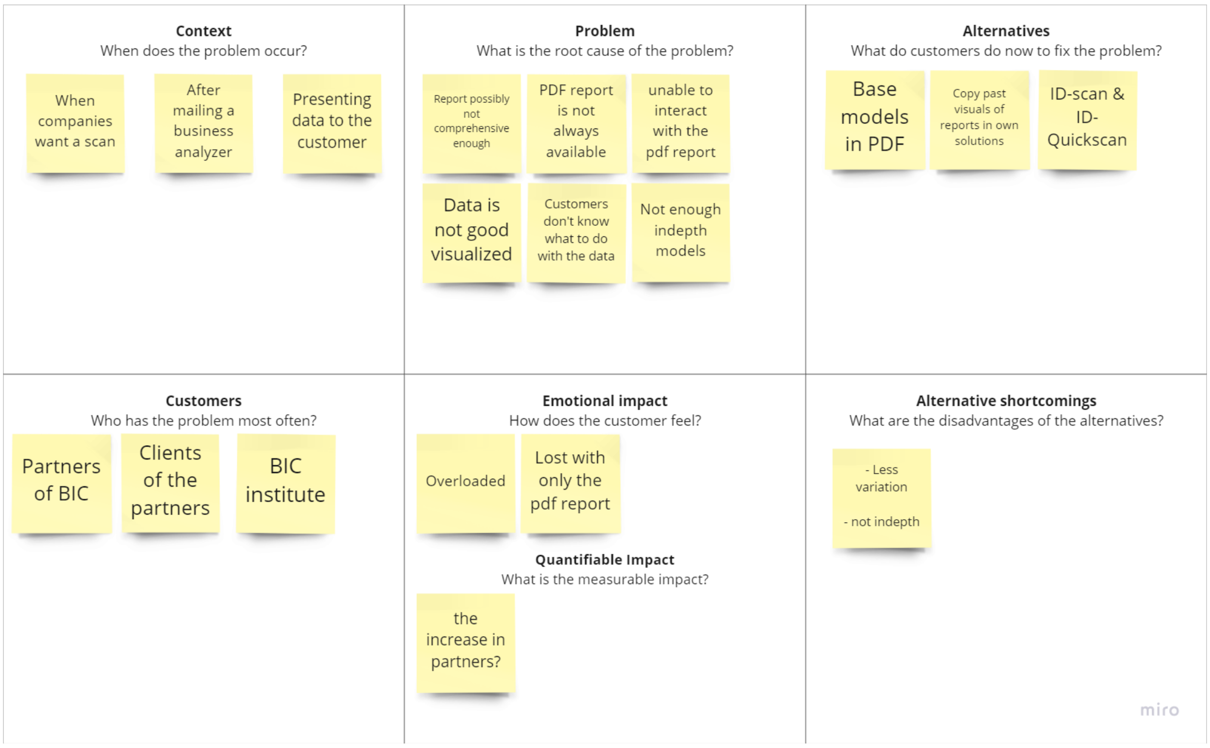
- He likes the basic idea
- He would prefer a comparison within the same company but with different Scans
- He was not sure about comparing the Scans between different companies.

12 APPENDIX 4: DESIGN THINKING

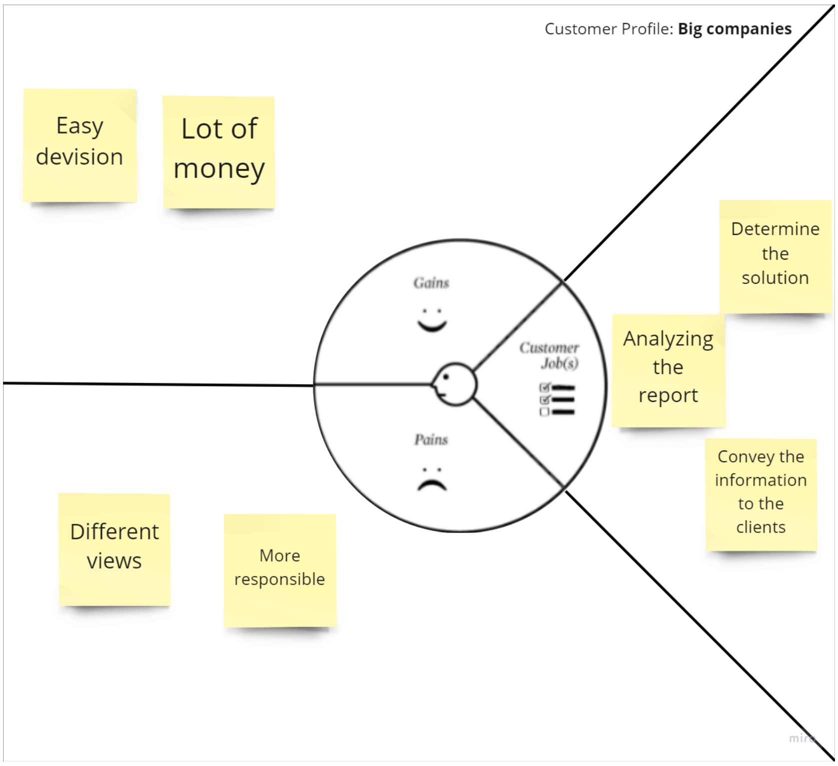
12.1 PROJECT CANVAS

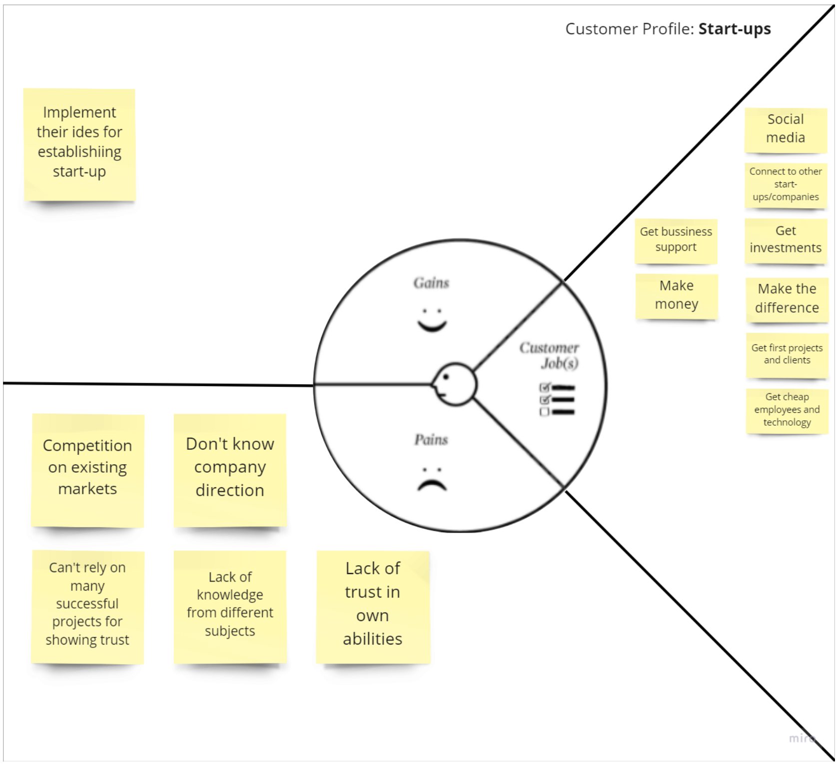
BIC		
Context: When does the problem occur? When companies want a company scan. After mailing a business analyzer. Presenting data to customers.	Problem: What is the root cause of the problem? Power BI possibly not comprehensive enough. It is not everywhere available (assumption). Data more efficiently understandable. PDF is not interactive as much as liked. Data is not good visualized. Customers don't know what to do with the data. Not enough "in debt" models.	Alternatives: What do customers do now to fix the problem? Base models of PDF ID-scan & ID-quickscan Power BI (does it need replacing?)
Customers: Who has the problem most often? Customers & BIC Companies & BIC Customers of customers of BIC Clients of BIC who want an ID-Check	Emotional impact: How does the customer feel? Overloaded - Being alone with only the provided PDF What is the communication Between BIC and the end users like? Quantifiable Impact: What is the measurable impact (include units)? More clients	Alternative shortcomings: What are the disadvantages of the alternatives? Not in dept Less variety

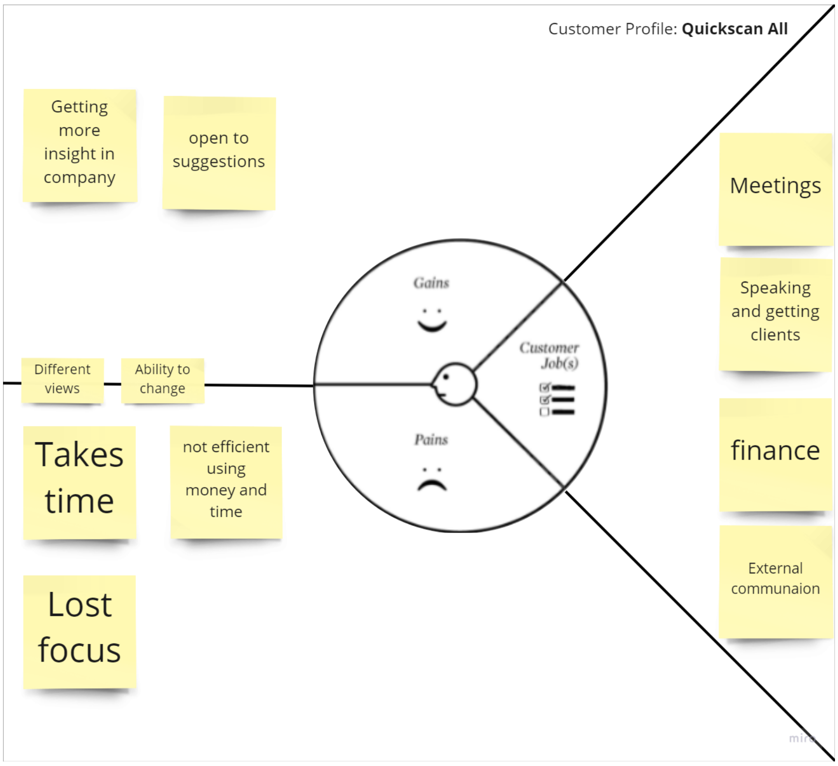
12.2 DESIGN THINKING CANVAS



12.3 CUSTOMER PROFILES




Customer Profile: **Start-ups**
Implement their ides for establishiing start-up
Gains
Customer Job(s)
Pains
Get bussiness support
Make money
Social media
Connect to other start-ups/companies
Get investments
Make the difference
Get first projects and clients
Get cheap employees and technology
Competition on existing markets
Don't know company direction
Can't rely on many successful projects for showing trust
Lack of knowledge from different subjects
Lack of trust in own abilities


Customer Profile: **Quickscan All**
Getting more insight in company
open to suggestions
Gains
Customer Job(s)
Pains
Meetings
Speaking and getting clients
finance
External communaion
Different views
Ability to change
Takes time
not efficient using money and time
Lost focus