PROJECT HARMONY

By Joris Raaphorst

M2.1 FMP-Proposal

2023-2024

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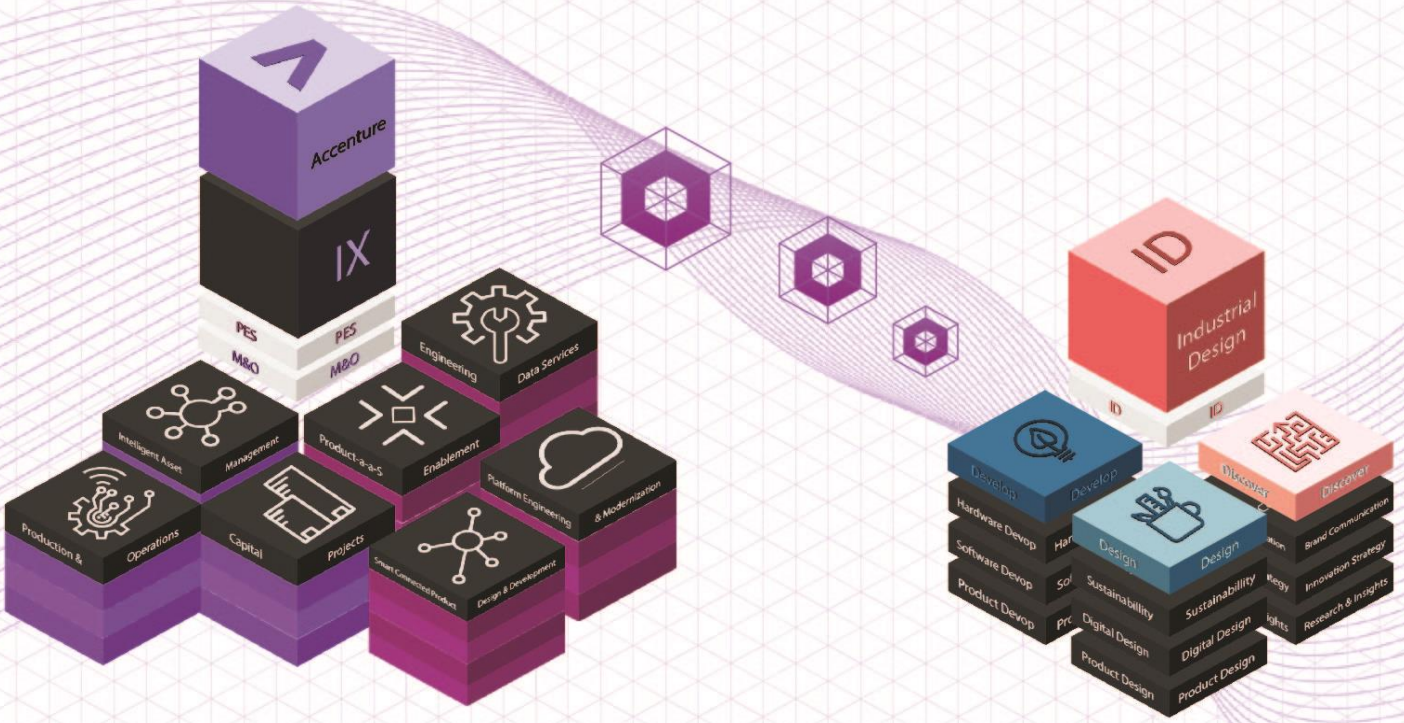

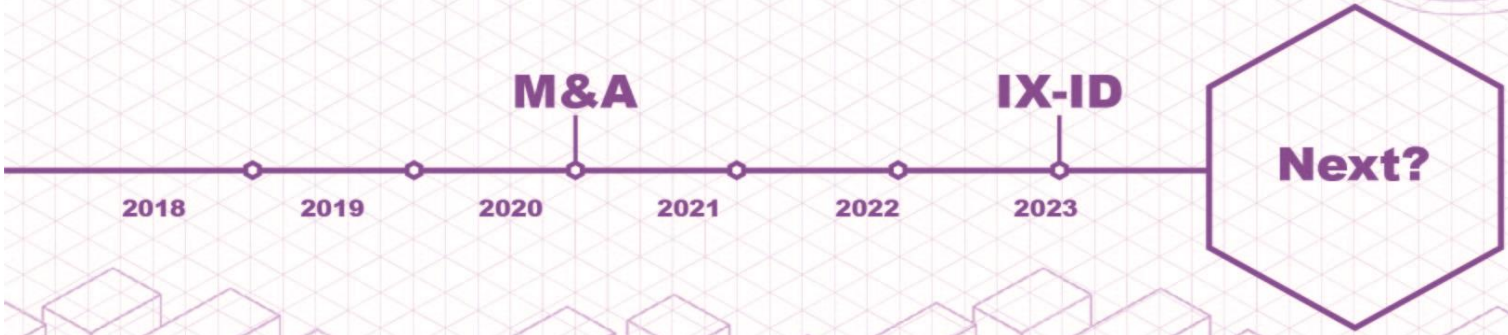

TU/e project - Under supervision of Lu Yuan

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1. About the Author

I was inspired to pursue the field of design due to a deep, intrinsic motivation to bring value to the world using my creative spirit. This path led me to graduate as an industrial designer from the University of Applied Sciences and secure a position as a Design Engineer at the Dutch Design Agency, VanBerlo.

After eight years of education and work experience in designing and engineering physical products, I increasingly wanted to expand my expertise towards the transformation of the underlying ideas behind a product, instead of the product itself.

After two years of introspection caused by the global Corona pandemic, in combination with the sudden acquisition of VanBerlo by Accenture, I decided to pursue a master's degree with a focus on the business side of innovation.

During my academic journey, I focused on Design Leadership & Entrepreneurship, complemented by Innovation Management and other business-oriented courses. A particular interest of mine was ignited by discussions on Ambidexterity (the Exploration-Exploitation continuum) (Figure 1) and its critical role in end-to-end innovation. This included the trend of large consultancies acquiring creative agencies and the notorious difficulty in merging these disparate entities—a process often ending in failure. The acquisition of VanBerlo serves as a perfect example.

Throughout my studies, I maintained contact with former colleagues, who shared insights into the complexities of merging two fundamentally different organizations. This merger presents not only an intriguing academic subject to study a rare attempt at integrating explorative activities into a large consultancy, but also an opportunity to identify challenges and devise strategies that could create synergistic value. This could benefit the organization, its people, and its culture—a culture I grew to appreciate and one that helped VanBerlo become an internationally recognized and award-winning design agency. Beyond this, I believe that this project will deepen my understanding of the balance between exploration and exploitation, a crucial element in driving impactful innovation and transforming ideas into successful businesses.

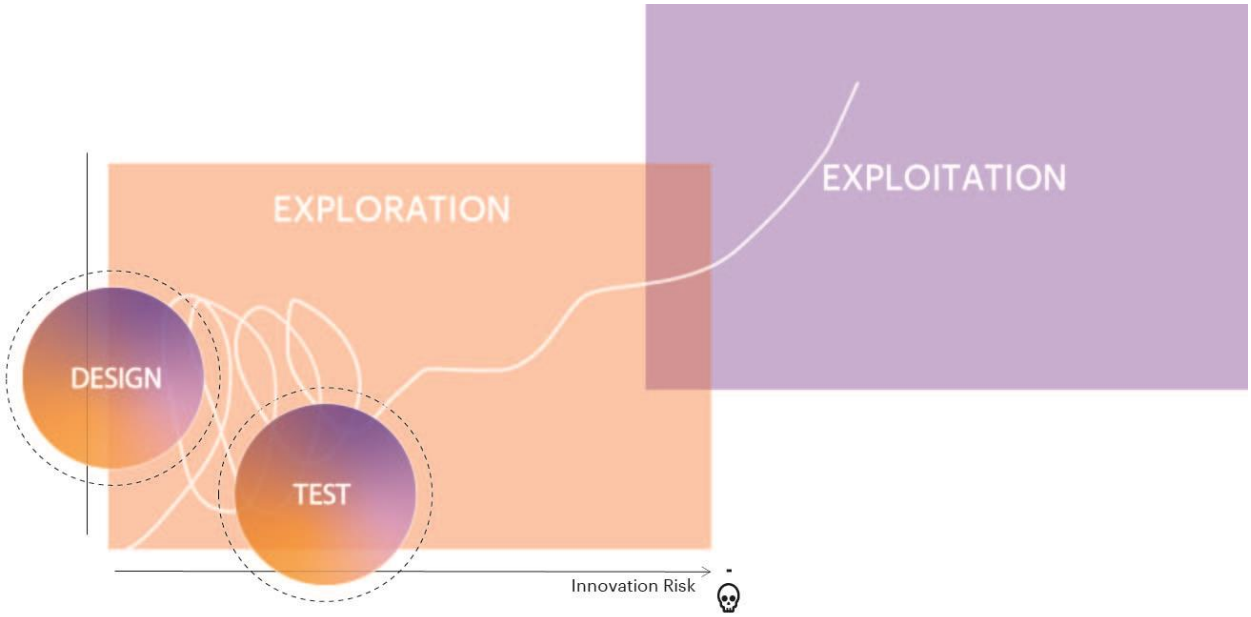

Figure 1 – Innovation Continuum (Used by VanBerlo)

2. Introduction

Nowadays design transcends the beautification of material objects (Brand, 2011). It is more than shaping physical things, digital assets, or services (Magistretti et. Al, 2020). It looks beyond functionality, desirability, or profitability (Keeley, 2013). Design has become a practice of transformation, pulling at the strings of the wicked problems that are interwoven in complexity (Martin, 2009), and define our reality, attempting to shape it into something better. With disruptive trends, like sustainability and digitalization, design practices are being deployed on an ever-wider range in the end-to-end product lifecycle, involving stakeholders across the vast ecosystems that surround products or services (Liedtka et al., 2020). In all these cases, a problem area is first challenged and defined. Proving the problem is followed by a variety of solutions which are creatively explored, tested, and evaluated, proving the solution (Hey, Joyce, & Beckman, 2007) (Appendix 1.6).

How different are the business processes of many other organizations that generally focus on delivering existing solutions, as opposed to creating new ones (Teece, Pisano, and Shuen, 1997) (Appendix 1.1). The idea of bringing the delivery of existing solutions and the designing of new solutions together into one organization has been extensively researched by academics (Figure 2). Some conclude it is a recipe for getting a sustained competitive advantage on the market (He and Wong, 2004; Jansen et al., 2006; Uotila et al., 2009, Raisch and Birkinshaw, 2008). Others find that it is exceptionally difficult to combine the differentiating business processes and cultures (Simsek et al., 2009; Stettner et. al, 2010) (Appendix 1.1 – 1.3).

Since 2015 an emerging trend has shown an attempt by several large consultancy firms to integrate design into their organizations via acquisitions (Schultz, 2019). Reports on these acquisitions however suggest that these mergers have been problematic (Weber, 2019), yielding little to no success stories (McKinsey, 2010) (Appendix 1.4).

The author of this paper was part of such an acquisition, being employed for nearly four years as a design engineer at the Dutch design agency VanBerlo, which was acquired in 2020 by the IT consultancy Accenture (Accenture Newsroom, 2020) (Appendix 1.8).

A project was initiated to investigate the acquisition and merger of VanBerlo as part of an academic master's program (at the Industrial Design department Systemic Change of the Technical University Eindhoven). This research is conducted from within Accenture - Industry X as a part of the 'Synergy' taskforce, which aims to

Figure 2 - Adapted version of the Innovation Diffusion Model, used by VanBerlo (Rogers, 2014)

create operational and cultural synergy between VanBerlo and Accenture Industry X.

The project builds upon the previous internal merger efforts of VanBerlo and Accenture (Appendix 1.9-1.10), and the work of predecessor M. de Reus (2022) who's master thesis explored "How the mutual lack of understanding between Industry X's and VanBerlo's capabilities can be bridged to facilitate the creation of synergy during business development?", which resulted in the design of a Joint Value Proposition (JVP) Workshop. This workshop analyses specific domain needs, pains and gains, jobs-to-be-done and connects these to internal capabilities in order to concretize them. The insights from this workshop are then mapped on a 'Synergy Canvas' which is used to articulate synergy problems and opportunities. This process was received well by the participants from VanBerlo and Accenture. But had not yielded any actionable results and was not continued by any of the staff. The goal of this project is therefore to design a synergy development workshop process based on literature and earlier field work that can help bridge the gap between van Berlo and Accenture.

3. Approach

The project is divided into two parts, being the preparation phase (M2.1) and the final master project (M2.2). The preparation phase consists of a (re)design process on the workshop of M. de Reus. The results of this process are then used as a starting point for the final master project.

The preparation phase was structured according to the four stages of the double diamond (Discover, Define, Develop, Deliver) (Design Council, z.d.). The first stage 'Discover', was however excluded due to the large body of available knowledge in literature, white papers and from the work of predecessor De Reus (2022), obviating the need for initial field data collection.

3.1. Define

Due to the large body of available knowledge, the choice was made to perform extensive desktop research to provide framing for both problem and solution areas. This complemented the design process of de Reus, as this was mainly based on field testing. Additionally, desktop research limits strain on the employees, and the exhaustion of potential test cases. Especially because the preferred participants for the workshop embody a certain level of seniority, as they have more decision power, but also limited availability.

Desktop research:

First, the challenge of merging a design agency with an IT consultancy was researched (Appendix 1.1 – 1.5). Then, the details of operations from both organizations were analyzed (Appendix 1.6 – 1.10). Inspired by the work of Walrave et al. (2010), the initial JVP workshop was framed using a sensemaking framework from Sterman (2000), resulting in the target of bringing elicited synergy value into practice.

3.2. Develop

Next a literature inspired design process was followed to design the first concept. This concept was then reviewed by experts with a relevant background before moving to testing.

3.3. Deliver

Then the workshop design was tested and evaluated upon with a focus on efficiency and implementation. In total three iterative cycles were completed. For each cycle a relevant context and participants were selected.

- Cycle 1: Test with two delivery leads of the most important synergy use case.
- Cycle 2: Test with juniors (2+ years of experience) involved in relevant task forces.

- Cycle 3: Test with the two Senior Managers who lead the relevant task force.

For all workshops, insights on their performance were gathered by making observations, asking for feedback, deploying a NASA TLX (Task Load Index) survey (Hart & Staveland, 1988) and by analysing audio recordings and the data collection on the Miro board.

4. Defining the State of the Art

The organizational intervention (JVP workshop) designed by De Reus (2023) consisted of 4 major steps (Figure 3):

(1) Identify domain needs – Here the needs and problems of clients are considered, Jobs-To-Be-Done are defined, which are organized in a 2x2 based on synergy potential.

(2) Uncover value creators – First client pains and gains are considered, then the pain reliever and gain creators ID-IX can offer, and finally the corresponding offerings are defined.

(3) Capture underlying capabilities – Predesigned Capabilities Card are used to spark capability discussions

(4) Concretise Offering – The resulting offering is mapped on a canvas designed to display the offering comprehensively.

Her approach continues with the advice to present the workshop findings to a domain relevant Client Account Leads to validate the offering, then to refine it to increase the chance on a successful sale.

The original workshop focuses on building a JVP towards for a specific market domain. It drives mutual understanding between IX&ID. And it considers cultural and operational elements in which IX&ID can provide complementing value. To get a deeper understanding of the impact of the workshop on the creation of mutual understanding, a sensemaking model was selected that considers the dynamics of businesses.

4.1 Business Dynamics Model

Several sensemaking models were considered, but the model from the book 'Business Dynamics – Systems thinking and Modeling for a Complex World' by Sterman (2000) was found to be best suited and most comprehensive as it combines 'double-loop learning' by Argyris

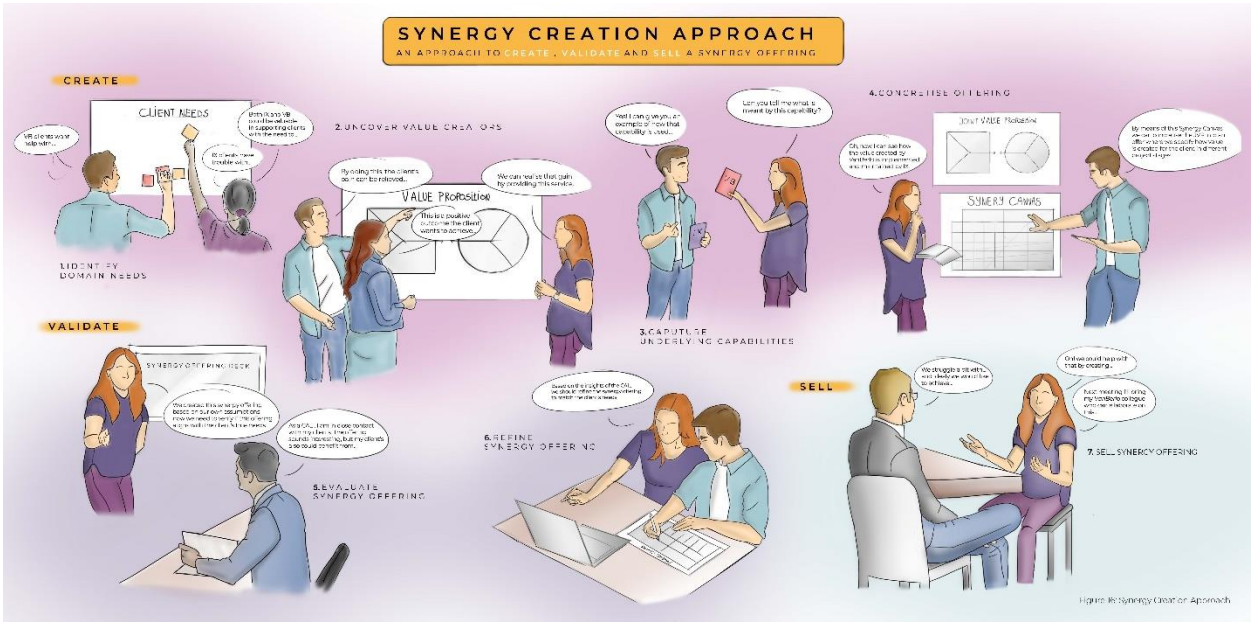

Figure 3 - Process overview of the Joint Value Proposition Workshop by De Reus (2023)

(1985) with Schön's (1983) concept of virtual worlds.

In single loop learning we interact with the real world, get information feedback, and make a new decision which is acted out. Second loop learning goes deeper, it explains that "feedback from the real world can also stimulate changes in mental models. Such learning involves new understanding or reframing of a situation and leads to new goals and new decision rules, not just new decisions". When combined with Schön's concept of virtual models, it intends to portray an idealized learning process in which the learning process is partially simulated in a non-real world to iterate faster, reduce the risk of failure, and improve the effect of real-world decisions.

Sterman continues by explaining that virtual worlds are created with 5 main activities: (1) Problem Articulation, (2) Dynamic hypothesis, (3) Formulation, (4) Testing, and (5) Policy Formulation & Evaluation, and embeds these into the Dynamic Systems Framework (Figure 4). (Appendix A2.1)

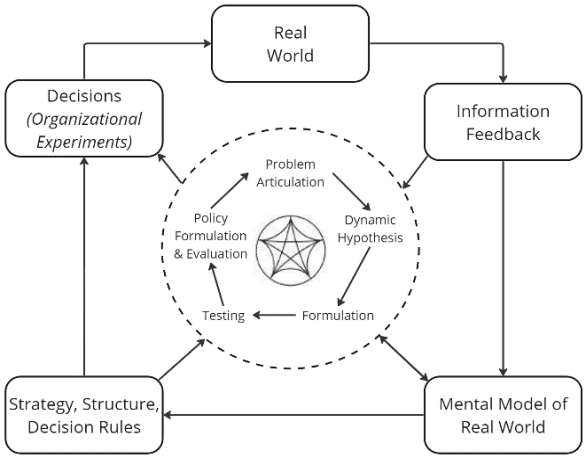

Figure 4 - Dynamic Systems Framework (Sterman, 2000)

4.3 From Opportunities to Practice

Achieving double-loop learning when harmonizing outliers on the exploration-exploitation continuum (Appendix 1.1) is important as stakeholders will be confronted with fundamental trade-offs (Appendix 1.2) that can cause tensions (Stettner et. al, 2010). The workshop design by De Reus seems to achieve a 'double-loop learning' cycle, as it triggers the comparison of existing mental models and the formulation of new strategies. The formulated Joint Value Propositions are however only hypothetical opportunities, and it can be difficult to directly bring them into practice.

Creating a Business Dynamics Model to simulate these opportunities can, according to Sterman, support the process of bringing synergy value into practice. Because hypothetical strategies can be simulated via a rapid iterative approach without real-life consequences. Sterman provides a detailed guide for Business Dynamics Modeling based on the five key activities for building a virtual world. (Appendix 2.1)

To create synergy, both IX&ID will have to let go of their existing frames and need to create a new framing of their service together. The reframing process has been extensively covered by Dorst (2015), his theory on Frame Innovation (FI) provides handles to get more grip on the reframing process. Including the FI model can help to safeguard and potentially improve the achieved double-loop learning process by De Reus (2023). (Appendix 2.2)

In conclusion, the aim of this project was to conceptualize a synergy development workshop and focus on the evaluation and feasibility of its implementation by measuring it perceived task load. This was approached by combining the three processes from: (1) the JVP workshop (De Reus, 2023), (2) Frame Innovation (Dorst, 2015) and Business Dynamics (Sterman, 2000). A general overview of each process is captured in Appendix 3.1.

5. Solution Development

Comparing the processes revealed several overlapping and complementing areas (Table 1). Together they describe four phases: (1)

Initiation, (2) Research, (3) Synthesis, (4) Pressure Cooker.

5.1. Initiation

Firstly, target areas must be defined that yield potential for synergy. An informal inquiry of Senior Management and Managing Directors resulted in the identification of 8-10 potential areas.

Secondly participants need to be sourced, FI stresses that knowledgeable participants with decision power are essential for a successful session. Representative with ownership over a target area, can identify potential candidates, ideally representing all relevant capability areas.

5.2. Research

All three processes express the need for collecting situational information, which can be a time consuming and cognitive taxing process done during the workshop. Instead, structured private interviews were conducted, in which participants were asked to fill in a Business Model Canvas (BMC) (Osterwalder & Pigneur, 2010) and a Customer Journey Map (CJM) (Bell & Zemke, 2013). The reasoning behind this approach was two-fold, firstly it allows for streamlining the data-collection, making data collection process easier for participants and researcher. Secondly, it functions as a lens, focussing the data collection (Figure 5)

Figure 5 - Data Collection Lenses

The BCM is a familiar method that can elicit the differences between IX&ID in their business model. The CJM was added to capture in more detail the operations behind the service offered to clients. Together these templates cover all the data points that originally were covered in the JVP workshop.

The data collection was hosted on the digital whiteboard platform Miro (z.d.), which provided the participants with templates that they could fill in on digital post-it notes (Appendix 3.1). An additional benefit of this approach is that participants could practice with the Miro software in a more private setting, since Miro is also used during the pressure cooker.

5.3. Data Synthesis

The researcher then tagged the collected data (to maintain the context of the template) and processed it via thematic analysis. Then a 2D visual representation of the information was designed by linking the causes and effects. This way, the participant can be provided with a representation of their collective reality at the start of the pressure cooker. The design for this visual was inspired by concepts of Giga-Mapping (Sevaldson, 2011), Business Origami (Fernandez, 2023), the Business model kit (Board of Innovation, 2023), and the Service Blueprint (Bitner et al, 2008).

5.4. Pressure Cooker

Because the DB process was not originally intended for workshops, the nine-step structure of *FI* is used as layout. The BD and the JVP principles are integrated into the process at the identified overlaps.

Firstly, the participants are provided with a visual representation of their collective reality. Reviewing the as-is-state is the *Archaeology* step, and prioritizing focus areas, then participants identify problem areas (*Paradox)* via the pains & gains template from the JVPW, followed by Problems Articulation (BD) which overlaps with the *Context, Field.* After a Dynamic Hypothesis is formulated of why the problem exists and how it works, which aligns to some extent with *Themes,* and is then captured in a Simulation Model and Tested.

After the problem is properly defined, solution *Frames* are considered by Designing new Structures and Policies (Defining the value propositions). Then, these new structures are Simulated and Tested by fostering a discussion to understand their possible effect (*Futures*). Finally, an action path is defined by determining what needs to be changed (*Transformation*) to concretize the strategy or offering and define how it should be implemented (Integration).

This rationale evolved via an outline (Appendix 3.2), into a step-by-step plan (Appendix 3.3).

5.5 Workshop Format

Initially a design for table-top tool (figure 6) was considered to facilitate a physical workshop, this was however discontinued, as the participants of the workshop are often physically separated in different locations of the firm.

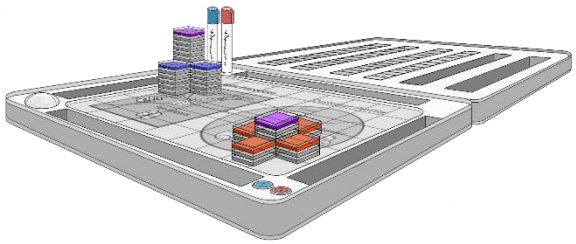

Figure 6 – Concept for physical facilitation

Instead the workshop was hosted in a digital facilitation area in the online whiteboard software Miro. This facilitation area functions as a guide for the facilitator, a means of communication for the participants and a method for recording thinking steps.

Due to its online nature, this software enables participation from multiple locations.

	FRAME INNOVATION (FI)	**BUSSINESS DYNAMICS (BD)**	**JVP WORKSHOP (JVPW)**
Initiation			
Research	(1) Archaeology		(1-3) Identify Domain Needs, JTBD, Capabilities, Client Pains & Gains
Synthesis		Preliminary Simulation Model	
Pressure Cooker			Prioritization
	(2) Paradox		Uncover IX&ID Pains & Gains
	(3) Context	(1) Problem Articulation	
	(4) Field		
	(5) Themes	(2) Dynamic Hypothesis	
		(3) Simulation Model	
		(4) Testing	
	(6) Frames	(5) Policy Design	Define Offering
		Simulate	Foster Discussion
	(7) Futures	Testing	Concretise Offering
	(8) Transformation		
	(9) Integration		

Table 1 - Identified Process Overlap

6. Expert Review

After finalizing the initial redesign, four specialists from IX & ID with an affinity for performing workshops and know-how about the challenges of IX-ID collaboration were asked to review the workshop. Based on their feedback (Appendix 4), several elements of the design of the workshop were optimized:

- Data collection template was updated for readability and understandability

- Exploration – Exploitation Continuum excluded (experimental method to elicit paradoxes)

- Business Dynamics step explanation was simplified

- Evaluation step of Diagrams was excluded (partially due to time constraints)

Additionally, the emerging need for an example case was met by running the first workshop with the delivery leads of most popular synergy use-case.

7. Testing

The workshop went through three iterative cycles. For each evaluating the efficiency and feasibility via observations, participant feedback, audio recordings, and the NASA TLX (Task Load Index) survey (Hart & Staveland, 1988).

**This chapter summarizes the key insights of these sessions; Appendix 5 provides a comprehensive overview of all the relevant observations and insights.*

7.1 Workshop 1 – Synergy Use-case

Context

This workshop targeted the first and only IX-ID synergy use-case. And only the involved delivery leads from IX & ID were available. The first participant operated mainly from the client side but had a history with both VanBerlo and Industry X. Since the second participant (VanBerlo) was only available for the pressure cooker, a double interview was conducted with the first participant, covering both ID&IX perspectives.

The diagram in Figure 6 portrays the workshop flow that was conducted.

Insights

Observations and participant feedback indicated that the structure of the interview was helpful in formulating the story from both perspectives. Performing a BCM and CJM for both perspectives within an hour however also resulted in a high task load.

The structure of the data made the creation of the blueprint simpler and revealed several causal structures.

Evaluating workshop observations and participant feedback several optimizations were identified in the workshop flow, on documenting and in formulating a diagram.

Design changes

5 main changes were made to the design to improve (1) documentation, (2) clarity, (3) flow, (4) opportunity selection and (5) the inclusion of an experimental paradox elicitation technique.

Together they resulted in the workshop structure, depicted in Figure 8 (next page).

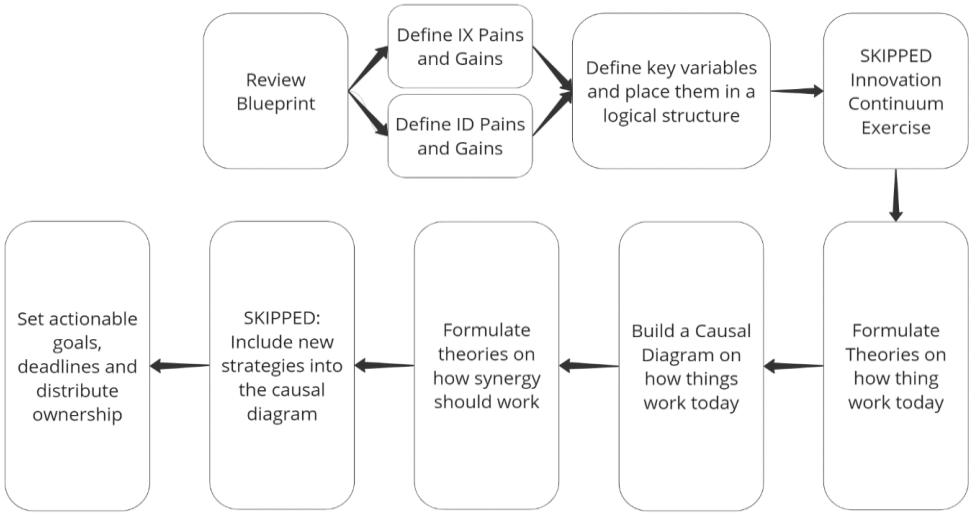

Figure 7 - First Design Workshop Structure

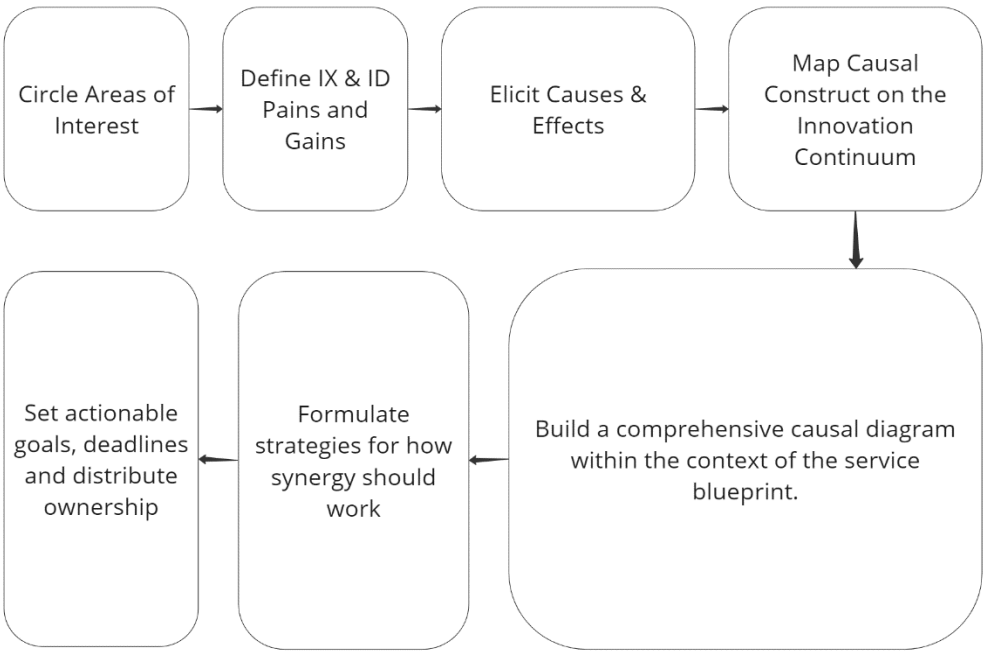

Figure 7 - Second Workshop Structure Design

7.2 Workshop 2 – Task Force Co-sponsors

Context

IX has several taskforces that focus on long-term, internal goals. One is purely focused on the inclusion of ID in IX. Another task force focuses on including dynamic capabilities in the IX portfolio. Both task forces identified an overlap. From both task forces two participants were asked to join in a workshop. The 'sponsor' (senior manager that leads the task force) and the co-sponsor (highly involved junior).

Firstly, all four participants were interviewed. The pressure cooker was conducted separately for the sponsors and co-sponsors, to test the workshop firstly with juniors before running it with the seniors. During the co-sponsor workshop an additional participant joined, to provide an extra capability perspective and to run the workshop with more than two participants.

Insights

Again, participants responded positive on the interview structure, but also a similar task load was recorded regardless of being half the work. Additionally, familiarity with the Miro tool varied among participants, sometimes requiring active facilitation.

The collected data was more detailed than previous, allowing for a more detailed mapping. Still similar overlaps and feedback loops were defined. Potentially these can support a more standardized blueprint design.

The workshop with the juniors was very different form the first session. Featured by a strong task focus, little discussion, time shortage, and hardly any integration of the blueprint. Except for mapping opportunities on the blueprint, which was well received. But building a causal diagram afterwards was too challenging. The whole workshop was reported quite taxing from a task load point of view.

Design changes

The major change was that the service blueprint was centralized in the workshop space, providing situational context in which opportunities can be identified. Hoping that the causal construct around it continuously evolves into a simulation model. Other changes focused on simplifying and clarification. Together these changes resulted in a new workshop structure (Figure 9).

7.3 Workshop 3- Task Force Sponsors

Context

The two participating task force sponsors both are senior, of which one is targeting VanBerlo's business development, and the other focuses on the capability development for the IX-PES group (product, engineering & services). For this workshop the same blueprint was used as in the prior session.

Insights

The seniors acted more like the first session, taking initiative, and driving the discussion with the blueprint as reference point. The workshop reported again high task loads and time shortage. From observation I learned that documenting takes a lot of time and blocks the conversation. Additionally, newly emerging strategies were not sufficiently covered in the data collection process. Responses indicated more time to evaluate and a stronger focus on capability development.

8. Conclusion

After evaluating the three iterations I must conclude that the workshop is not yet efficient enough for implementation. Reported feedback on the structured interviews and the resulting blueprint was positive and from observations I also evaluated the integration of the blueprint as helpful for building mutual understanding. Other feedback included however that the blueprint in its current form is too information dense to properly comprehend.

For the workshops I need to conclude that compressing the tasks defined in the initial outline in mere two hours was too ambitious.

The task loads scores and time shortage remained problematic regardless of simplifications, clarifications, and flow optimizations.

Additionally, I observed that all the attempts of causal diagram modelling during the workshop have been unsuccessful.

To give this approach a chance on success, the information density needs to be lowered, next to this, participants should be mainly focused on conversing, not documenting. As well as that more time is needed to reflect and evaluate the opportunity selection and designed strategies.

Recommendations: One solution would be to extent the time per workshop, however due to participant availability this is not feasible. As such splitting the workshop into digestible chunks would offers another option for improvement. This will allow the facilitator to synthesize information from the first session and provide more focus in the next by zooming in on a specific area. Additionally, decision-makers can select which problem areas are worth pursuing in the next workshop.

A split is considered that consists of six parts: (1) Individual Context Mapping Interviews, (2) Modelling Service Blueprint, (3) Problem Area Definition Workshop, (4) Problem Area Selection, (5) Modeling Problem Area, and (6) Synergy Strategy Workshop.

An additional benefit to this approach is that for every step the most relevant stakeholders can participate.

9. Discussion

Within consultancy firms, like in many other companies, time is one of their main commodities, making it a scarce and valuable resource. Additionally, it must be considered that the number of identified target synergy areas that can be used as a test case is quite limited (n≈8).

Therefore, a literature-inspired design process was used, and the designs were tested with smaller groups to test and optimize the process as far as possible before broad deployment.

Saving the main test cases for the following phase (M2.2).

Since finding shared availability proved troublesome, it is recommended to initiate the workshops as early as possible, because organizing pressure cookers for larger groups with more senior participants is likely to provide a significant challenge.

Time and test-case scarcity and the discovery of a potential improvement for the workshop early in the process resulted in the choice to not test the original JVP Workshop. In hindsight testing it, even with less relevant participants would have proven valuable to better understand the process.

Time and task load issues proved to be a major threshold for successful deployment. Could a workshop split have been integrated sooner into the design process? Probably, however, before looking beyond one comprehensive pressure cooker was possible, several flow issues had to be challenged to understand that it really was too ambitious.

In contrast to the Frame Innovation theory, the Business Dynamics steps were originally not intended to be performed within a co-creative setting. And creating a simulation model in such a co-creative setting is likely possible. Yet, it is not surprising that this was found highly challenging within this context.

Complementing the Frame Innovation Workshop with a simulation model did show promise and will be interesting to further explore. In addition to providing context during the workshop, a point of reference to avoid miscommunication and explain abstract concepts, it can provide a legacy model of the opportunity area. Ideally, the value that is being discussed during the workshops is captured, providing support for the integration, evaluation or further development of the opportunity areas and its new strategies.

9.1 Next Steps & Speculation

To perform future research a redesign is required, which might benefit from this project's learnings. These show that it is important to consider the user experience of the participants. But it will also be important to consider the workload of the facilitator/ researcher and if the relevance of the outcome outweighs the required time investment to make this process not only desirable but also feasible and viable for organizations that run into synergy challenges.

After a working approach established, the focus should be directed towards aligning the workshop output to the capability development of Accenture, an important tool for transforming the organizational structure. Based on earlier findings, potential could be found in integrating existing Accenture databases to provide in depth insight into different offerings, capabilities and potentially even link them to the Accenture experts that are assigned to them.

Other future research could be using this methodology to explore the intricacies of creating Organizational Ambidexterity. Additionally, the methodology could yield value in the field of Change Management and broader help support organizations to work better together. A successful combination of Frame Innovation and Business Dynamics Modelling might even be deployed to elicit other complex business processes and help to transform them. A riskier approach is the integration of data processing and Artificial Intelligence technologies. Their nature might prove highly valuable; however data privacy is currently a major threshold for pursuing this direction.

10. FMP Proposal

The conclusion, after evaluating the designed concepts in M2.1 shows that they are too ambitious, meaning that they attempt to achieve too much in too little time.

Thus, I propose a redesign of the original concept, which consisted of three main parts; (1) the Data collection interviews, (2) Data synthesis blueprint modelling and the (3) Co-creative Workshop (Table 1).

Individual Context Mapping Interview	Blueprint Creation	Synergy Modelling Workshop

Table 1 - Original Concept Structure (M2.1)

10.1. Design Objective

Primary objective:

In this project I aim to "Evaluate and refine the conceptual 'synergy creation process' to enhance user experience, generate usable results, and support mutual understanding and the creation of organizational synergy, as perceived by the organization."

10.1.1 Requirements & prioritization

This project has two prime requirements that are actively evaluated:

1. **User experience** of the participants during the sessions (US)

    - *Learning how to evaluate the facilitation of creative techniques is an important part of my learning goals in US and CA.*

2. **Perceived usability** of the sessions results for the company. (BE)

    - *The nature of the use-case and the attempt to build organizational synergy is strongly driving my learning in the BE field*

The design and deliverables will also consider two other requirements, which are not actively being evaluated. Their inclusion is based on considerations to create more value for Accenture and to be able to integrate the expertise area Technology & Realization.

3. **The creation of physical** items to support workshop facilitation*, a show model to present the workshop method (For TU/e) and potentially a show model to present the workshop output (for Accenture). (TR & CA)

    - **This is required due to an opportunity to host this workshop in physical form for a large group.*
    - *Creating physical tools to facilitate creative sessions in a corporate environment drives both my growth in TR and in CA, due to the need to meet a high aesthetical and functional standard.*

4. **Dissemination** of workshop output and method internally and potentially (only the method) externally. (BE & US)

    - *Making my workshop method and output accessible for the Accenture requires a deep understanding of their needs, which aligns both with US & with BE.*

10.2. Initial Research & Analysis

For M2.1 extensive literature reviews have been conducted to grow my BE expertise Area. In M2.2, I focus more on US & CA. In order to support the redesign, and the research protocol I will explore:

1. Creative techniques such as; participatory modelling, concept mapping, story building etc.
2. Identifying Standard User Experience tools to measure each iteration.

Table 2 - New Concept Structure (M2.2)

Individual Context Mapping Interview	Blueprint Creation	Opportunity Identification	Opportunity Selection	Opportunity Modeling Sessions	Synergy Strategy Session

10.3. Re-Design

Continuing with the recommendations of M2.1, the original 'Co-Creative Workshop' step is split into four separate sessions; Opportunity Identification; Opportunity Selection; Opportunity Modeling Sessions and a Synergy Strategy Session. This will allow for more time per topic while keeping the sessions within a manageable time frame that is deployable in a corporate context. Next to this, it allows for a more strategic incorporation of participants. For instance, juniors, seniors, and decision makers can be more efficiently distributed across the process, reducing the required resources for this process, and improving its viability.

As such for the new design, the following structure is proposed (Table 2):

Additionally, a different approach, inspired on the Modified Delphi Method (Gustafson, et. al, 1973), is taken to the Interview. And the blueprint creation process is adjusted to reduce information density.

*Please find the details of the Design Concept in Appendix 1

10.4. Evaluation method

Each of the interactive session in the conceptual intervention process will be evaluated. The study includes both post-task evaluation and post-session evaluation.

Task evaluation is based on the **Single Ease Question (SEQ)** (Sauro & Dumas, 2009; Tedesco & Tullis, 2006) and two items from the **NASA Task Load Index** (NASA, 1986). The post-task questionnaire also includes an optional open question which allows participants to explain any low scores. This evaluation is conducted for 3-6 tasks in a session allowing differentiation between the tasks.

The post-session survey combines the 5 item **NASA Task Load Index** and the 24 item **User Experience Questionnaire** (UEQ) (*Laugwitz*, 2008) to measure the user experience of the participants. Additionally, the survey includes a 4 item UEQ+ sub-scale to measure the perceived usability of the session output. Lastly 3 open questions are provided to gather some qualitative insights about the data. All standard surveys have been selected based on the nature of their sub-scales and the availability of benchmark data.

*Please find the survey design can be found in Appendix 4.

10.5. Data Processing

To improve my skills in data analysis I aim to process the data using R-studio. Which entails using code to process the data. I believe this to be valuable for the project since it helps to standardize the analysis process, which is desirable as the study includes various moments of comparison. Personally, I think it will be very educational to internalize this MDC skill into my capability's portfolio. Being able to perform data analyses for research but also in daily work and in digital prototypes can be a powerful asset.

** Please find the details of the Evaluation and the processing strategy in Appendix 3.*

10.6. Sampling & Iteration Cycles

In preparation to the M2.2 semester I have identified 5 domains that are relevant for IX-ID synergy. For each domain I have performed a participant analysis in preparation to the M2.2 semester. From these I will focus on:

- Medical Technology (Life Sciences)
- FMCG & AI-vision

If timing turns out favorable, I might have the opportunity to include an extra cycle, for which the following domains can be considered.

- Mobility
- Service Design & Service Management
- Sustainability

For each individual cycle I plan to use the same research protocol. After a cycle, I will revise the design of the sessions based on the resulting insights from evaluating the prior cycle, iteratively improving the design.

Individual Context Mapping Interviews

For each domain I will run a minimum of 4 interviews to map out the context. Depending on the available information per domain and accessibility of domain experts this might be more. Ideally each organizational perspective is represented by two or more senior participants, providing a combined expert perspective.

Modeling of the Service Blueprint

Per domain one modelling session will be conducted, which is performed by the researcher, for these sessions an extra participant can be involved to test and evaluate how well the standardized process works.

Opportunity Identification

The Opportunity Identification session is ideally hosted with a larger group to gather a large quantity of potential opportunities. The minimum is set to four participants and maximum ten to remain feasible. Multiple sessions could be conducted if a larger group of participants is available.

Opportunity Selection

For this session a 30 min. meeting is conducted involving between 2 and 5 participants that have decision power to decide which domains should be targeted. Ideally a representative of each main perspective should be involved.

10.7. Process Overview

The process of this project consists of a preparation phase in which the research protocol and design concept are developed. Then I run a pilot to test both the research protocol and the designed workshop protocol with interns and their supervisors.

After the pilot, the designs are refined and optimized for testing. Then two iterative cycles follow in which the whole process is conducted withing industry domains in several session. Each session will be evaluated according to the evaluation protocol. After each cycle the data is analyzed and compared to a benchmark. Based on the findings, the design of the process will be revised to improve its user experience and potential impact.

Thus, the following structure is used:

Preparation

1. *Literature Review*
2. *Initial Workshop Re-Design*
3. *Research Design*
4. Pilot Testing

Cycle structure

5. Initiation
6. Interview sessions (n≈4 – 8)
7. Blueprint creation session (n=1)
8. Opportunity Identification Session (n≈1-2)
9. Opportunity Selection (n=1)
10. Opportunity Modelling sessions (n≈1-2)
11. Data analysis & Design Evaluation
12. Documentation
13. Re-Design Workshop & Research strategy

*Please check Appendix 2 for a detailed overview of the intended process.

10.7.1 Planning

A hard deadline on the 7th of June (DemoDay) gives this project a 20-week timeframe, in which I will have to account for a delayed start due to a required revision of the proposal, for which the deadline is set at the 21st of February. Additionally, a fixed date needs to be considered that entails an opportunity to run an

Opportunity Identification workshop with a large group in the MedTech Domain on the 28th of March.

For each cycle a three-week window is allocated. The initiation and in part the data collection process per domain can in some cases be run in parallel.

W1	**Assessment & Focus on Retake**
W2	**Focus on Retake & Prepare for M2.2**
W3	Literature Review & Design Iteration
W4	Literature Review & Design Iteration
W5	**RETAKE DEADLINE** – Finalize initial design
W6	Test Protocol - Pilot Test
W7	Pilot Test
W8	Cycle 1 – Interviews(MEDTECH)
W9	Cycle 1 – Blueprint Modelling (MEDTECH)
W10	Cycle 1 – Opportunity Identification (MEDTECH) = **Fixed date**
W11	Analyze
W12	Re-Design
W13	Cycle 2 – Interviews(FMCG)
W14	Cycle 2 – Blueprint Modelling (FMCG)
W15	Cycle 2 – Opportunity Identification (FMCG)
W16	Analyze
W17	Re-Design
W18	Write & Build
W19	Write & Build
W20	**DemoDay**
W21	**REPORT deadline**
W22	**PORTFOLIO deadline**
W23	**ASSESMENT PRESENTATION**

Tabel 3 - Planning overview

10.8. Demonstrator Design

Since this conceptual process has no natural physical demonstrator that can be displayed, a show model will be created to present the intervention methodology.

Next to this the need for physically hosting the opportunity identification session in the first cycle requires the creation of a format that allows for physically hosting this step in the process. For this the demonstrator from M2.1 will be used as inspiration for this design.

10.9. Desirable, Feasible & Viable

At the end of M2.2 the resulting design intervention of the M2.2 project should be a process that can create desired synergy value for companies like Accenture that face challenges in streamlining different organizational groups. To make this a successful methodology, the process needs to be both user-friendly and generate usable output.

10.10 Personal Development Plan

DRP

I want to learn how to improve the designs of my creative techniques by evaluating their user experience & perceived usability. To grow this competence, I will perform a literature review on how to select and use standardized evaluation techniques to provide a more rigorous backing of my design process. My only prior experience with these kinds of measurements is from my M1.2 research semester in which I compared AI generated behavior change messages to messages from a baseline study.

In this research project I will consider various standardized surveys such as, but not limited to System Usability Scale (SUS), User Experience Questionnaire (UEQ), Task Load Index (NASA-TLX), After Scenario Questionnaire (ASQ), Perceived Usefulness and Ease of Use (TAM) and adopt the most suitable techniques to deploy them to evaluate my workshops. The selected methods are ASQ, UEQ(+) & NASA-TLX.

An important learning goal is improving the way that I interpret data to draw conclusions, as I have the tendency to be overly confident. Therefor I will carefully consider how this data is going to be interpreted. I will integrate benchmark data in the evaluation. For the UEQ a standard benchmark is provide, whereas for the TLX I will consider data from the M2.1 research in which the TLX was also used.

In M1.2 I autodidactically integrated Statistical analysis using Excell. This project I aim to integrate R, a freely accessible and dedicated data analysis software, to improve my workflow of performing data analysis.

By doing more rigorous statistical analysis on the data I hope that it will become easier to draw proper conclusions from my findings. This way I hope to integrate and internalize the academic skills that were previously unfamiliar to me.

BE

My knowledge prior to this master primarily concerned the context of the product infrastructure, and it has been one of my primary goals to expand that to an organizational level. Because innovation often requires not only product transformation, but also organizational transformation.

Therefor I want to continue my learning about how to integrate innovation/ design thinking into businesses, transform organizations and elicit organizational synergy to create consumer and company value and build a competitive advantage.

To continue my learning, the intervention will be deployed on several defined opportunity areas that cover different industry domains. The output from these workshops will be captured into a document (power point slide) to convey my findings to Accenture. These results and the observations I make during the workshop will reinforce and expand my understanding of the integration of design and innovation into other business processes.

Next to this the aim of the workshop design is to elicit and support potential synergy between people or organizations. I believe that developing this skill is highly relevant for being able to explore and create innovative in the end-to-end product life cycle and on organizational level. With every design consideration in this project, I improve this skill and get closer to becoming a connector that can navigate in complex organizations, creating value by bringing business value and user experience together.

CA

I want to improve my skills in designing and hosting workshops. Facilitating a constructive, creative process for designers and non-designers to elicit opportunities, challenge their frames in an iterative way, by utilizing the power of visualization to divergently explore and test solutions in an early conceptual phase.

This competence is naturally built, as it is the main focus of the project to design, facilitate and evaluate workshops. To further increase my learnings I will consider existing, proven creative techniques and integrate them to expand my portfolio of techniques that I have familiarity with and can offer with confidence.

From an aesthetics point of view, I will have to adhere to a high standard, since for VanBerlo, being design agency is aesthetics are a key proposition. Additionally, a highly professional output is expected from Accenture. Being an experienced Design Engineer I have been developing this skill in past years, but my focus has been more directed on the engineering part, allowing for room to improve myself.

US

Firstly, I want to design a process that can create synergy between different organizational bodies with sensitivity for operational and cultural differences. Creating a safe space in which participants build empathy towards the other. To grow this competence, I will design the intervention with attention to ethics and empathy.

Secondly, I want to improve my capabilities in designing and facilitating workshops that are

user-friendly for both the participant and the facilitator. To do this I will primarily focus on evaluating the user experience of the workshop. Using a fitting and evaluated combination of standardized questionnaires.

Lastly, I aim to build a methodology that creates joint value propositions by supporting synergy between different organizational bodies, and as result can offer more value for their clients and their customers. This is a secondary effect of the workshop and is difficult to measure. To create more understanding about this, I include an additional sub-scale about the perceived usability of the workshops output.

TR

Since a part of the first cycle (Med Tech) must be hosted in a physical form, I will explore and design physical elements to support the facilitation of the workshop. I already have a high proficiency in prototyping with 3D-printing due to my four years of experience working as a design engineer at VanBerlo. I aim to use Lasercutting, which is an accessible prototyping method that I have not yet fully mastered.

For the final demonstrator I hope to integrate more technologies to showcase the designed methodologies. It would be interesting to consider a screen which displays the digital workshop templates. By placing it flat on the table and covering it with a transparent plastic sheet or glass, it can support the explanation of each step in the methodology. Additionally, it might be a nice conversation starter for Accenture to discuss the session outputs. The development of this will not be evaluated and is outside of the scope of the project. The development of this showpiece however is supporting my efforts to create and design physical elements that I can use to facilitate and clarify complex discussions.

MDC

I have little experience with statistical analysis, the only project in which it was performed was my M1.2 project. I am starting to understand how important this can be in my work and in design projects, as it helps to support the claims that are being made. As such I aim to integrate standardized surveys into the evaluation process for which I have an available benchmark so that I can properly compare the data.

To push myself further I have decided to explore and integrate statistical analysis via R studio. Learning how code and statistics can work together will be instrumental in my understanding about the topic and will strongly increase my capacity to perform data analysis, both in research and prototyping use-cases.

A second integration of this capability could be in combination with the TR capability, as linking a screen to actuators in a way that is fitting for a Graduation level show model might require the use of a raspberry PI of an Arduino. Any inclusion of these microcontrollers I always consider a challenge, but each time after I promise myself to continue using them due to their potential in prototyping.

Lastly a consideration in this project is speculating (in the discussion) about how qualitative data can be used to create a probabilistic model as starting point for moving to a more deterministic model to create forecasts about organizational strategies. And how the emergence of Large Language Models could possibly super charge the potential of this route.

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PROPOSAL APPENDIX

A0. Summary of Changes

Based on the conditions received after assessment parts in the report, the reflection and proposal have been rewritten.

Condition 1 – Reduce report complexity and information prioritization. In the report the segments that specify the goal of the M2.1 project have been rephrased. Additionally, the result chapters (7-9) have been simplified to provide a more cohesive and concise overview of the project.

Condition 2 – The reflection on my learning activities wasn't linked to the expertise areas properly. Thus, the reflection was fully rewritten, covering my learning activities in each expertise area separately.

Condition 3 – The proposal lacked focus, throughout the past weeks detailed preparations were conducted for the M2.2 project. Effectively the whole proposal was reframed, offering a detailed overview of my intended process. The main change is shifting from focusing on 3-5 iterative cycles to 2 cycles, making the project more feasible and allowing for more space to properly conduct analysis and redesigning activities. Additionally, the proposal explains in more detail when which expertise areas is addressed and why. A new segment, the PDP chapter, explains what my learning activities are per expertise area based on my current level of expertise.

A1. Concept Details

Individual Context Mapping Interviews

To improve the user experience and reduce the required resources of the interviews, the time management and documentation strategy of these workshops will be reconsidered. For this **recordings and post-interview transcription** is added to the interactive Miro Format that is part of the current design.

To further improve quality of the data collection and the to respect the expertise of senior participants, a **modified Delphi method is integrated**. This means in practice that an involved junior or intern firstly contributes information to the form, after which a more senior expert reviews and revises the forms.

An addition to the data collection are existing and emerging joint offerings and strategies that are already in place or are being developed or considered. Insights from M2.1 show that initiatives already exist but are not recorded in the current design. By incorporating these into the data collection, we immediately address these opportunities. This way more space is given to elicit new opportunities while refining existing opportunities. Hopefully resulting in a more valuable experience (Figure 8).

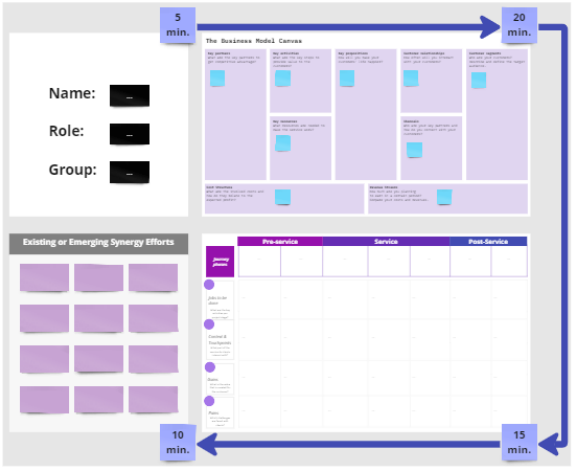

Figure 8 - Structured Interview Template Re-Design

Modeling of the Service Blueprint

For the blueprint mapping a standardized template and process is developed in which the information of the interviews is plotted on top of a simplified blueprint (Figure 9).

Tagging

Firstly, the interview data is tagged, linking it to the perspective that is being captured and to the element in the template that it refers to.

Positioning

Then all the data points are placed on the template linking it to their corresponding place.

Synthesizing

This placing serves as a structured affinity diagramming. This will allow us to summarize the entries, after which it will be simplified and optimized for visibility on the template.

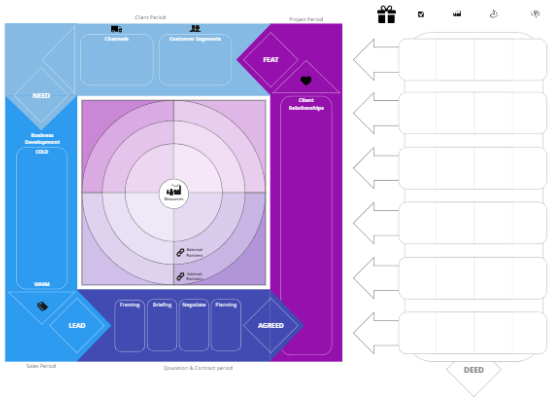

Figure 9 - Revision of simplified Service Blueprint

<u>Opportunity Identification</u>

To support the incorporation of more perspectives, this session will be designed with larger groups in mind that represent a mix of junior and senior participants. The prime focus of this session is to generate a larger quantity of identified opportunities that are properly formulated and a prioritized by the group to support the recommended Opportunity Selection after this session by decision makers.

To accommodate for a proper user experience that is both feasible and viable, the session will be designed as a one-hour workshop (Figure 10). Making it easier for participants to attend and reduce the required resources.

Figure 10 - Opportunity Identification Session Structure

Identify Areas of Interest

Firstly, participants are asked to identify areas of interest for collaboration. This can be done by placing an element on the board or by circling it with a whiteboard marker. This exercise will allow participants to familiarize themselves with the blueprint and discuss about areas of potential collaboration.

Positioning Emerging Offerings

To improve the quality of the output the session is then continues with positioning existing or emerging strategies on the blueprint. These will be provided in a placeable token on which the offering is briefly formulated. The intention is that the participants are provided with examples of offerings that have a high potential and, in the process, familiarize themselves with the blueprint. By tasking the participants to then identify new areas of interest next to the already defined opportunities, new potential might be unlocked.

Identify New Opportunities.

After positioning the existing or emerging offerings, participants are provided with empty tokens, like the ones that contain emerging offerings. Participants are tasked to formulate new opportunities that are not covered by the emerging offerings. Utilizing a larger number of participants to formulate opportunities and merging them can result in more nuanced opportunities descriptions that incorporate various perspectives.

Selection

Lastly participants are provided with thirty colored sticker dots in three colors, ten of each. Each color represents either desirable, feasible or viable, and they are asked to distribute the dots across the opportunities, and by doing so perform a hands-on evaluation of the opportunities on these factors. As such a prioritization of the opportunities can be made in which these three factors are considered. Prioritizing the opportunities makes it easier and more valuable to present this list of opportunities to decision makers.

Story Building

To make the session more valuable for the participants, the team is split into pairs of 2-3 participants and are asked to pick one of the opportunities by placing a token on it to block it. After this selection the participants are given a concept template in which they can elaborate on the opportunity. The exact format of this template is yet to be determined but might be similar to AEIOU Mapping (Activities, Environment, Interactions, Objects and Users) however other formats are currently being considered.

(Image)

Survey

At the beginning of the workshop a survey is handed out in which the participants are asked to evaluate each task they complete. After this workshop the participants are given about 10 minutes to complete the survey, which contains about 30 Likert scale items. This survey is distributed either in hard-copy of digital form. This choice is made based on pilot testing.

Opportunity Selection

For this session a 30 min. session is conducted in which firstly the opportunities are presented to the participants, afterwards a group prioritization exercise is conducted to drive discussion and generate a prioritized list of opportunities to pursue.

Opportunity System Mapping

A new session is then organized with specialists that are stakeholders in the context of a specific opportunity in a 2-hour workshop to map out a situational causal diagram. For this the standard participatory modeling workshop is used to facilitate the process.

Synergy Strategy Session

Based on the mapping leverage points are determined and actionable goals are set, this is part of the same standard structure in of the participatory modeling technique. This process might be executed in the same session as the mapping but could also be hosted separately to facilitate the inclusion of more senior participants and allow for better time management.

A2. Process details

Setting up

Firstly, a re-design of the workshop structures and the research approach is created. For this literature is consulted to support my designs and incorporate the resulting designs into this proposal.

The scope of this literature review will be:

3. Participatory Modelling Techniques.
4. Example cases of measuring organizational intervention/workshop efficiency & User Experience
5. Identifying Standard User Experience tools to measure each iteration.

Pilot Testing

Before engaging in the full iterative cycle, a set of tests will be performed to pilot both the research protocol and the new designs of the workshop sessions.

Research protocol Pilot

Firstly, the research protocol will be tested by using a set of simple tasks, such as making a cup of coffee of preparing an apple. To test this, a group (n=3-6) of accessible participants, such as students, interns or benched juniors are asked to participate. Both a digital and physical format will be tested. To evaluate this protocol pilot, the time to complete the survey will be recorded. Additionally, a semi-structured interview will be conducted post-survey to gather insights about the survey.

- *Clarity* - How did you find the overall clarity of the instructions? Was there anything you didn't understand?
- *Time perception* - Were there any moments where you felt the process was too time-consuming or rushed? Please describe.
- *Difficulty* - Were there any parts in the survey that you found particularly easy or difficult to follow? Please elaborate.
- *Overall Experience* - How would you describe your overall experience with this research protocol pilot?
- *Others* - Do you have any other comments or suggestions that haven't been covered?

When the Survey exceeds the 10 min. mark, it will be required to reduce the amount of item in the survey, as this is a maximum time frame that is non-negotiable for running the opportunity identification session of the first cycle.

Concept structure Pilot

Then new elements of the designs are pilot tested with a smaller group of easily accessible candidates. For this the team that surrounds the interns are selected for testing, this team consists of a handful interns and an equal number of supervisors. On the Friday the 23rd a gathering of this team is planned.

To test the concept structure a few interns and their supervisors will be interviewed according to the new structure. The aim of the session is to find locate collaboration areas between their fields.

Interview Pilot

Firstly, the interns will be asked to fill in the business model canvas and customer journey map based on their research direction. Additionally, they are asked to formulate potential collaboration opportunities between them and other interns. Then these resulting templates are presented to their supervisors, they are asked to adjust and complete the templates, which corresponds with the Modified Delphi Method.

Blueprint creation Pilot

A session is then planned with another intern (Ellen) who is involved in preparing for the first cycle. Together we will go through the standardized protocol for creating the blueprint. During this process we will use the research protocol to self-report and get insights in the tasks and overall process.

Opportunity Identification Pilot

The Intern Alignment is then used to run the opportunity identification session with students. For this a full hour is used, however we might reduce the time per task or exclude the story building exercise due to time limitations. The Intern Alignment meeting is scheduled for an hour but will also include other elements outside of this pilot that require time. If timing turns out to be too tight or if the Intern Alignment is not offering sufficient time to run the session an separate moment can be planned with participating interns and their supervisors.

Opportunity Selection Pilot

In a separate meeting the set-up for the opportunity selection is tested shortly after this

opportunity identification session. For this only the interns are invited, as they are the decision makers in this process.

Opportunity Modelling Pilot

The most prioritized synergy moment is then selected to run the modeling session together with the students and their supervisors. Depending on how many students are involved in the synergy opportunity, this will involve either 4-6 or maximum 8 participants.

Cycle 1

The first cycle is going to be run with the Life Sciences domain, which is being deployed in collaborating with a fellow intern (Ellen) that is organizing a physical get together with an expected turn-up of 20 domain experts. Initiation of this process has already started and a fixed date for the opportunity identification session is determined on the 28th of March.

In this domain we bring together four different organizational bodies, namely Industry X, VanBerlo, ESP and H&PS (Health and Public Services). For each perspective Ellen has preliminary filled in the Business model Canvases, Customer Journeys, and Emerging Synergies, based on her initial research efforts. They will be used as starting point in conversations with highly experienced seniors from each perspective.

The blueprint creation will be performed together with Ellen. The Opportunity Identification is expected to be hosted for 20-30 people in physical form. To keep the sessions manageable the groups are split in two and facilitated by both me and Ellen. It is thus vital that a clear facilitator guide is formulated to ensure a comparable execution.

The modeling sessions are planned based on the outcome of the opportunity selection session.

Cycle 2

The second cycle will cover the FMCG Domain and the AI-vision group, this opportunity has been lingering for quite some time, but has not yet been developed. Participant analyses has already provided sufficient potential candidates, formal initiation of this cycle will commence after this proposal is approved, in informal conversations I am are already starting to prompt initiation.

Cycle 3

If this cycle is executed and which domain will be specifically targeted for this cycle is yet to be determined, three candidate domains are currently being explored via informal talks. The domains that are being considered are: Mobility, Service Design & Service Management, and Sustainability.

Write & Build

The writing of the final documentation and the creation of the demonstrator will be a continuous process throughout the project. However, I reserved the three final weeks of this project to focus primarily on these tasks.

A3. Evaluation Details

For each overall session, the user experience of the session/output will be evaluated. For each separate task its perceived difficulty, mental demand and time pressure is being evaluated. All evaluation will be included into one questionnaire that is used during and after the session. For consistency a 7-point Likert scale is used across the complete questionnaire.

Post-Task Evaluation

To evaluated both the complete session and the individual task this research includes a questionnaire that is used post-session but also post-task, to evaluate the difficulty of individual tasks.

For this **Single Ease Question (SEQ)** (Sauro & Dumas, 2009; Tedesco & Tullis, 2006) will be used to evaluate the *difficulty* of various tasks during the interviews and workshops. This will provide insights about which tasks are being experienced as difficult.

To get some more in-depth understanding about the nature of the of the difficulty the post-task section of the questionnaire will also include two questions that have been adopted from the **NASA Task Load Index** (NASA, 1986). These questions evaluate how *mentally demanding* and *rushed or hurried* a task is being experienced by the participants.

To get insight into the reason behind the low task evaluations, the questionnaire also includes a single open question per task, asking participants 'if you have a measure below 4, please explain why?'.

Post-Session Evaluation

Session User Experience

The post session questionnaire includes the **User Experience Questionnaire** (UEQ) (*Laugwitz*, 2008) to evaluate 6 relevant user experience sub-scales, using in total 24 items (four items per scale) (Figure 11).

1. *Attractiveness:* Overall impression of the workshop/product. Do users like or dislike the workshop/product?
2. *Perspicuity:* Is it easy to get familiar with the workshop/product? Is it easy to learn how to use the workshop/ product?
3. *Efficiency:* Can users solve their tasks without unnecessary effort?
4. *Dependability:* Does the user feel in control of the interaction?
5. *Stimulation:* Is it exciting and motivating to use the workshop/product?
6. *Novelty:* Is the workshop/product innovative and creative? Does the workshop/product catch the interest of users?

The UEQ offers a benchmark which contains the data of 452 product evaluations with the UEQ (with a total of 20190 participants in all evaluations).

We will use this benchmark to compare the evaluation results of the test and base the design iteration on this. After the second test we compare the results of both tests to each other. We will however also compare it to the benchmark, using it as a baseline to interpret the results.

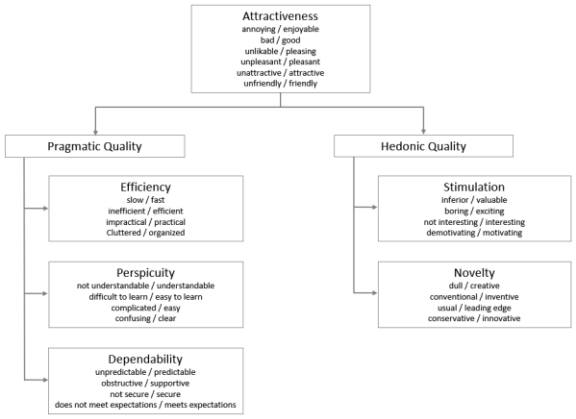

Figure 11 - Assumed scale structure of the UEQ.

Perceived Usefulness of generated output

The UEQ sub-scales cannot be used to evaluate the perceived usefulness of the generated output of a workshop. Evaluating this is however important to understand if the sessions are creating value for its participants. Therefor the participants of the 2nd (participatory modeling) and 3rd session (opportunity identification) are asked to evaluate the usefulness of the input that was provided in their session. This input is equal to the output of the prior session, meaning that the participants of the modeling session evaluate the usefulness of the interview output, and that the participants of the opportunity

identification session evaluate the usefulness of the modeling session.

Outside of the standard UEQ format an additional UEQ+ format is offered which provides a total of 27 sub-scales (including those of the basic UEQ format), each consisting of a 4-item measurement. These are intended to be mixed and matched to provide a more customizable evaluation tool. From these the Usefulness scale is adopted to measure the perceived usefulness of the sessions output. Sadly, I have, yet, not been able to identify benchmark data. Therefor this data can only be used to compare the perceived usefulness between cycle 1 and 2 and to give us an indication of the perceived usefulness. Additional exploration to locate a benchmark for the perceived usefulness is being conducted in the hope to find additional support for this evaluation measure.

Qualitative data

The questionnaire will be concluded with three open questions that allow participants to provide any additional feedback that might not have been covered in the quantitative questionnaire. These questions will contain:

- Do you have any Tips?
- Do you have any Tops?
- Other feedback?

Data Processing strategy

Individual Task Evaluation

The results of the individual task evaluation will be compared to the results of tasks in the same session to identify the most difficult tasks within a session. Additionally, these results can be compared to the same task in the follow-up iteration cycle to understand what the impact of the design change was on the difficulty of a specific task.

By measuring the difference in the mental demand and perceived time pressure, and asking to explain any scores lower than 4, the reason behind any difficulties is further elicited.

Session Overall Task Load Index

Post-session a similar evaluation structure is used to the M2.1 evaluation. By using the M2.1 results as benchmark we can evaluate to how newly designed concepts are performing per session in comparison to earlier designs.

UEQ Evaluation

After finalizing the first cycle the data is compared to the benchmark data to understand its overall performance. By zooming in on outliers and deviants' parts of the design can be reconsidered.

After the second cycle, both designs can be compared against each other in addition to the benchmark. This way we can determine to what extent sub-scales have changed due to the design changes.

UEQ+

For the Usefulness of the session output/input no benchmark is available. Thus, only a comparison among sessions and among the first and second iteration of M2.2 can be made, which is not considered to be highly valuable due to contextual differences in both session and domain. Regardless of its missing baseline and a valuable comparison, I consider this to be a first step to get an indication about the perceived usefulness of the sessions output. For its interpretation however a careful and conservative approach is essential.

Open Questions

The open questions allow participants to provide extra feedback, this feedback can be anything, ranging from the nature of the session to specifics about the workshop design. The results that are captured here can be used as inspiration for the design of the concept or as

support for the interpretation of the measured data.

Statistical analysisFor the UEQ items a standardized data processing template exists which generates automatically compares against the benchmark data using Cronbach-Alpha values.

To analyze the SEQ and Task load Index a a t-test or ANOVA will be used.

A4. Survey Design

CONSENT FORM (Page 1-2)

1. Introduction
You have been invited to take part in research project Harmony.

Participation in this research project is voluntary: the decision to take part is up to you. Before you decide to participate we would like to ask you to read the following information, so that you know what the research project is about, what we expect from you and how we deal with processing your personal data. Based on this information you can indicate via the consent declaration whether you consent to take part in this research project and the processing of your personal data.

You may of course always contact the researcher Joris Raaphorst via j.raaphorst@student.tue.nl, if you have any questions, or you can discuss this information with people you know.

2. Purpose of the research
This research project will be managed by Joris Raaphorst. The purpose of this research project is to test a synergy process and evaluate the research process which is used for this.

3. Controller in the sense of the GDPR

TU/e is responsible for processing your personal data within the scope of the research. The contact details of TU/e are:
Technische Universiteit Eindhoven De Groene Loper 3 5612 AE Eindhoven

4. What will taking part in the research project involve?
You will be part of a session that involves the exploration of synergy between you and peers or within your organization. To evaluate this session you are asked to evaluate the session by filling out this form. In this form you will be asked to evaluate various tasks, the session as a whole and the usefulness of the input that was provided. For this research standardized questionairs are used. The questionnaire is estimated to take about 10 minutes to complete, but this might differ per person.

For your participation in this research project you will not be compensated, the workshop will be conducted during payed hours.

5. Potential risks and inconveniences
Your participation in this research project does not involve any physical, legal or economic risks. You do not have to answer questions which you do not wish to answer. Your participation is voluntary. This means that you may end your participation at any moment you choose by letting the researcher know this. You do not have to explain why you decided to end your participation in the research project.

6. Withdrawing your consent and contact details
Participation in this research project is entirely voluntary. You may end your participation in the research project at any moment, or withdraw your consent to using your data for the research, without specifying any reason. Ending your participation will have no disadvantageous consequences for you.

If you decide to end your patricipation during the research, the data which you already provided up

to the moment of withdrawal of your consent will be used in the research. Do you wish to end the research, or do you have any questions and/or complaints? Then please contact the researcher Joris Raaphorst via j.raaphorst@student.tue.nl

If you have specific questions about the handling of personal data you can direct these to the data protection officer of TU/e by sending a mail to functionarisgegevensbescherming@tue. Furthermore, you have the right to file a complaint with the Dutch data protection authority: the Autoriteit Persoonsgegevens.

Finally, you have the right to request access, rectification, erasure or adaptation of your data. Submit your request via privacy@tue.nl.

CONSENT FORM (Page 2-2)

7. Legal ground for processing your personal data
The legal basis upon which we process your data is consent.

8. What personal data from you do we gather and process?
Within the framework of the research project we process the following personal data: (Contact data, Name)

Within the framework of the research project your personal data will be shared with no one expect for the main researcher. This data will be stored only on the Accenture OneDrive. The data will be collected via MS Teams, for which the Accenture domain will be used.

9. Confidentiality of data
We will do everything we can to protect your privacy as best as possible. The research results that will be published will not in any way contain confidential information or personal data from or about you through which anyone can recognize you, unless in our consent form you have explicitly given your consent for mentioning your name, for example in a quote.

The personal data that were gathered via surveys, interviews and other documents within the framework of this research project, will be stored on the Accenture OneDrive Server.

The raw and processed research data will be retained for a period of 1 years. Ultimately after expiration of this time period the data will be either deleted or anonymized so that it can no longer be connected to an individual person. The research data will, if necessary (e.g. for a check on scientific integrity) and only in anonymous form be made available to persons outside the research group.

This research project was assessed and approved on 30-10-2023 by the ethical review committee of Eindhoven University of Technology.

By signing this consent form I acknowledge the following:

1. I am sufficiently informed about the research project through a separate information sheet. I have read the information sheet and have had the opportunity to ask questions. These questions have been answered satisfactorily.

2. I take part in this research project voluntarily. There is no explicit or implicit pressure for me to take part in this research project. It is clear to me that I can end participation in this research project at any moment, without giving any reason. I do not have to answer a question if I do not wish to do so.

Furthermore, I consent to the following parts of the research project:

1. I consent to processing my personal data gathered during the research in the way described in the information sheet.

   ◯ Yes

2. I consent to making (sound/image) recordings during the interview and to processing my answers into a transcript.

   ◯ Yes

   ◯ No (Let the researcher know!)

3. I consent to using my answers for quotes in the research publications – without my name being published in these.

   ◯ Yes

   ◯ No

4. I consent to mentioning my true name in the abovementioned quotes.

   ◯ Yes

   ◯ No

This Task was...

Business Model Canvas

5. Difficult (1) - Easy (7)

1	2	3	4	5	6	7

6. Mentally demanding (1) - Not mentally demanding (7)

1	2	3	4	5	6	7

7. Hurried & rushed (1) - Not hurried and rushed (7)

1	2	3	4	5	6	7

8. If you have a measure below 4, please explain why!

This Task was...

Customer Journey

9. Difficult (1) - Easy (7)

1	2	3	4	5	6	7

10. Mentally demanding (1) - Not mentally demanding (7)

1	2	3	4	5	6	7

11. Hurried & rushed (1) - Not hurried and rushed (7)

1	2	3	4	5	6	7

12. If you have a measure below 4, please explain why!

Task Load Index

Overall Session Task Load

13. Mental Demand - How mentally demanding was the session?

0	1	2	3	4	5	6	7	8	9	10

Very Low Very High

14. Temporal Demand - How hurried or rushed was the pace of the task?

0	1	2	3	4	5	6	7	8	9	10

Very Low Very High

15. Performance - How successful were you in accomplishing what you were asked to do?

0	1	2	3	4	5	6	7	8	9	10

Very Low Very High

16. Effort - How hard did you have to work to accomplish your level of performance?

0	1	2	3	4	5	6	7	8	9	10

Very Low Very High

17. Frustration - How insecure, discouraged, irritated, stressed, and annoyed were you?

0	1	2	3	4	5	6	7	8	9	10

Very Low Very High

Workshop User Experience Evaluation

ENGLISH - For the assessment of the Workshop, please fill out the following questionnaire. The questionnaire consists of pairs of contrasting attributes that may apply to the product. The numbers between the attributes represent gradations between the opposites. You can express your agreement with the attributes by ticking the number that most closely reflects your impression.

Please decide spontaneously. Don't think too long about your decision to make sure that you convey your original impression. Sometimes you may not be completely sure about your agreement with a particular attribute or you may find that the attribute does not apply completely to the particular product. Nevertheless, please tick a circle in every line. It is your personal opinion that counts. Please remember: there is no wrong or right answer!

Please assess the workshop now, by ticking one number per line.

DUTCH *- Voor de beoordeling van het product, vragen we u de onderstaande vragenlijst in te vullen. De vragenlijst bestaat uit twee tegengestelde eigenschappen die van toepassing zijn op het product. De nummers staan voor verschillende gradaties. U kunt uw beoordeling geven door het nummer, die het meest uw indruk weerspiegelt, aan te vinken.*

Graag uw eerst ingeving invullen. Wacht niet te lang met invullen om te voorkomen dat u gaat twijfelen over uw eerste ingeving. Soms bent u misschien niet helemaal zeker van uw antwoord of u vindt de eigenschap niet volledig van toepassing, kruis dan toch een rondje aan. Het is uw mening die telt. Let op: er is geen goed of fout antwoord!

Beoordeel nu alstublieft de workshop door het aanvinken van een nummer per regel.

18. (Annoying = 1) - (Enjoyable = 7)
    onplezierig - plezierig

1	2	3	4	5	6	7

19. Not Understandable (1) - Understandable (7)
    onbegrijpelijk - begrijpelijk

1	2	3	4	5	6	7

20. Creative (1) - Dull (7)
creatief - saai

1	2	3	4	5	6	7

21. Easy to learn (1) - Difficult to learn (7)
makkelijk te leren - moeilijk te leren

1	2	3	4	5	6	7

22. Valuable (1) - Inferior (7)
waardevol - inferieur

1	2	3	4	5	6	7

23. Boring (1) - Exciting (7)
vervelend - spannend

1	2	3	4	5	6	7

24. Not Interesting (1) - Interesting (7)
oninteressant - interessant

1	2	3	4	5	6	7

25. Unpredictable (1) - Predictable (7)
onvoorspelbaar - voorspelbaar

1	2	3	4	5	6	7

26. Fast (1) - Slow (7)
snel - langzaam

1	2	3	4	5	6	7

27. Inventive (1) - Conventional (7)
orgineel - conventioneel

1	2	3	4	5	6	7

28. Obstructive (1) - Supportive (7)
belemmerend - ondersteunend

1	2	3	4	5	6	7

29. Good (1) - Bad (7)
goed - slecht

1	2	3	4	5	6	7

30. Complicated (1) - Easy (7)
complex - eenvoudig

1	2	3	4	5	6	7

31. Unlikable (1) - Pleasing (7)
afstotend- aantrekkelijk

1	2	3	4	5	6	7

32. Usual (1) - Leading Edge (7)
gebruikelijk - nieuw

1	2	3	4	5	6	7

33. Unpleasant (1) - Pleasant (7)
onaangenaam - aangenaam

1	2	3	4	5	6	7

34. Secure (1) - Not Secure (7)
vertrouwd - niet vertrouwd

1	2	3	4	5	6	7

35. Motivating (1) - Demotivating (7)
motiverend - demotiverend

1	2	3	4	5	6	7

36. Meets Expectations (1) - Does Not Meet Expectations (7)
volgens verwachtingen - niet volgens verwachtingen

1	2	3	4	5	6	7

37. Inefficient (1) - Efficient (7)
inefficiënt - efficiënt

1	2	3	4	5	6	7

38. Clear (1) - Confusing (7)
overzichtelijk - verwarrend

1	2	3	4	5	6	7

39. Impractical (1) - Practical (7)
onpraktisch - praktisch

1	2	3	4	5	6	7

40. Organized (1) - Cluttered (7)
ordelijk - rommelig

1	2	3	4	5	6	7

41. Attractive (1) - Unattractive (7)
aantrekkelijk - onaantrekkelijk

1	2	3	4	5	6	7

42. Conservative (1) - Innovative (7)
conservatief - innovatief

1	2	3	4	5	6	7

43. Friendly (1) - Unfriendly (7)
aardig - onaardig

1	2	3	4	5	6	7

SKIP THIS IF THIS IS AN INTERVIEW!

The provided input, that was generated by the previous session...

44. Usefull (1) - Useless (7)
nuttig - nutteloos

1	2	3	4	5	6	7

45. Not Helpfull (1) - Helpfull (7)
niet behulpzaam - behulpzaam

1	2	3	4	5	6	7

46. Not Beneficial (1) - Beneficial (7)
niet bevordelijk - bevordelijk

1	2	3	4	5	6	7

47. Not Rewarding(1) - Rewarding(7)
niet belonend - belonend

1	2	3	4	5	6	7

Any feedback?

Please, don't forget to submit!

48. Do you have any tips?

49. Do you have any tops?

50. Other feedback?

Appendix

Contents

A1. Framing the Challenge

A1.1. Explore-Exploit Continuum

In 1991, March introduced the *Exploration* and *Exploitation* as two broad activities through which a system adapts to its environment (March, 1991). These activities are often associated with innovation, in which innovation is defined as the successful introduction of an invention (knowledge) to the market (Roberts, 1988).

For *Exploration* organization must deploy 'dynamic capabilities', which involves risk-taking, and experimentation to achieve new forms of competitive advantage by creating new opportunities and exploring new markets (Teece, Pisano, and Shuen, 1997). This process often results in 'radical innovation', meaning that this involves developing new products or processes that significantly differ from existing ones and can lead to market or technological disruptions (O'Reilly and Tushman, 2013).

In contrast, *Exploitation* focuses more on 'ordinary capabilities' meaning that they are refining and improving existing processes, technologies, and products, ensuring that internal and external resources are most effectively utilized (Teece, Pisano, and Shuen, 1997). Optimizing existing knowledge and opportunities generally leads to more 'incremental innovation', it optimizes best practises, and maximizes profit (He and Wong, 2004; Benner and Tushman, 2003).

March suggests that both activities compete for the same scarce resources and are as such existing on both ends of a continuum. This continuum, also referred to as *Organizational* A*mbidexterity (OA)* (Simsek, 2009), is the capacity to perform exploration and exploitation either simultaneously or sequentially (Chanda et. al, 2018).

An optimal balance results in market fit and competitive conditions which positively influence financial performance making it a key competitive advantage (He and Wong, 2004; Jansen et al., 2006; Uotila et al., 2009, Raisch and Birkinshaw, 2008).

Companies, particularly management or leadership, therefore, often attempt to strategically align the resource allocation to the exploitation of current portfolios and the exploration of portfolio expansion with the market needs and the competitive environment (Helfat et al., 2007; Winter, 2000).

Firms face a dilemma in achieving OA, as the optimal balance in Exploration and Exploitation is continuously dynamic (Atuahene-Gima, 2005; He and Wong, 2004). Performing both activities at the same time demands fundamentally different and competing strategic approaches (Simsek et al., 2009).

A1.2. Trade-offs

For this balancing process a several examples are identified that often cause issues due to fundamental contradictions; Focus (searching for breakthrough vs efficiency and growth); Financial Philosophy (risk taking vs steady returns); Culture (fail-fast and pivot vs minimal failure), and in People's Nature (strong at dealing with uncertainty vs strong at planning and organizing) (Luo, 2020) And resource allocation constraints, Short term vs long-term, Present vs Future, Stabillity Vs Adapabillity (Stettner et. al, 2010).

The conflict between these activities is largely due to their difference in short and long-term nature. Exploiting existing portfolios has shown to drive *short-term* profits, whereas exploring new additions to a portfolio is a more *long-term* endeavour and allows for adaptability to a dynamic environment. (Atuahene-Gima, 2005).

Sensing or foreseeing situational disruptions in the business environment can be limited by *myopic tendencies* of leadership, preventing timely adaptation (Hannan and Freeman, 1984; Porac and Thomas, 1990; Tripsas and Gavetti, 2000; Tushman et al., 2004). A strong focus on short-term profit can increase myopic tendencies.

In general, consultancy firms are publicly held, of which, in general, most of the shares are owned by private of institutional investors (Walsh and Seward, 1990). At Accenture for example, only 0,91% of the company's shares are owned by insiders, their major investors are stock traders such as Vanguard (8,72%) and Blackrock (7,25%) (WallStreetZen, 2023). These investors typically aim to maximise their profits for a reasonable amount of risk (Berle and Means, 1932). These shareholders are a big external force and can exert a big influence on leaderships direction, when financial returns are meeting expectations, shareholders allow space for exploration next to exploitative actions (Chaganti and Damanpour, 1991). However, a negative feedback loop can occur when financial returns are lacking due to environmental instability, and they exert pressure on leadership to prioritise short-term profits which then again result in decreasing returns, resulting in again more pressure to deliver short-term profits (Judge and Zeithaml, 1992).

Timely alignment with the dynamic environment and in result rebalancing exploitation and exploration investments, have a positive effect on a firm's financial results (Gupta et al., 2006; He and Wong, 2004; Jansen et al., 2006; March, 1991; Tushman and O'Reilly III, 1999; Uotila et al., 2009).

Overinvesting in exploration reduces the speed with which offerings are improved and refined, undermining financial business successes. Underinvesting or even refraining from Exploration can however compromises the long-term viability of an organization (He and Wong, 2004). For instance, when the current portfolio becomes outdated, due to technological or geopolitical developments, which is exemplified by cases such as Kodak.

A1.3. Environmental Moderator

The optimum point for balance is for a large part determined by the environmental stability of an organization (Figure 1). Within a stable environment exploitation based on incremental innovation

(optimization & best practices) returns increased profit. In a more unstable environment, exploration based on radical innovation (re-imagining) appears more effective (Walrave et. al, 2010).

With increased environmental instability, existing products depreciate more rapidly, creating the need for new products, causing explorative actions to increasingly return greater profits, and decreases the return of exploitative actions (Jansen et al., 2006; Uotila et al., 2009). As such leadership needs to decide how to adapt to emerging environmental disruptions, and in advance foresee future disruptions (Romme et al., 2010).

The success of a company is therefor, for a large part, determined by their capability to balance their portfolio with explorative and exploitative projects based on anticipated environmental instability (Hannan and Freeman, 1984; Porac and Thomas, 1990; Tripsas and Gavetti, 2000; Tushman et al., 2004).

Since today's environment is becoming increasingly unstable for many (e.g., rapid development of disruptive technologies, the sustainability paradigm shift, increased conflicts, a recent global pandemic etc.) the focus shifts towards exploration (Campaign Asia-Pacific, 2016).

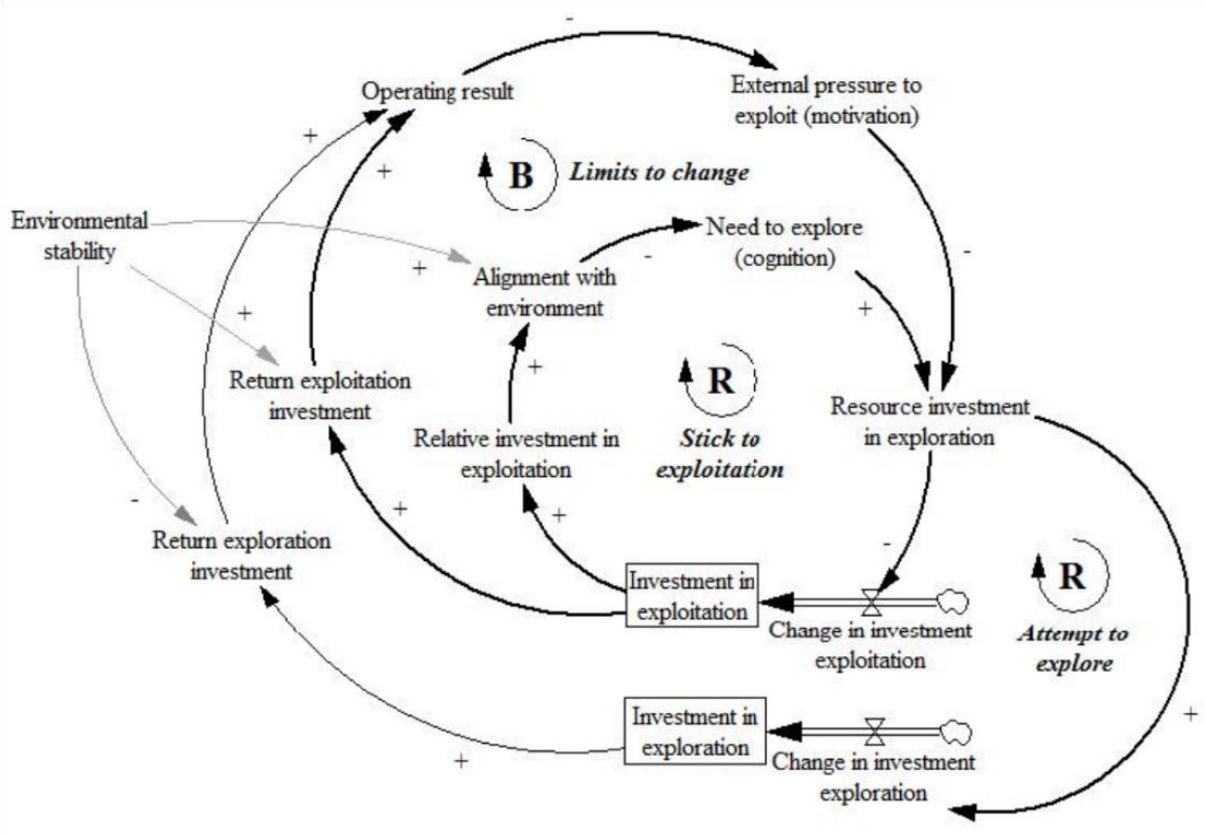

Figure 1 – Balancing Organizational Ambidexterity - Walrave et. al. 2010

A1.4. Acquisition of Dynamic (creative) Capabilities

As such the consultancy industry, traditionally focussed on large IT and business-transformation projects, has been confronted with an increasing demand for adaptability to meet rapidly evolving expectations and needs (Quinlan, 2018; Bos and Lundberg, 2019). Additionally, it appears that clients are increasingly looking for partners who offer a complete (end-to-end) service package of *business*, *technology,* and *creativity* to increase efficiency (Treichler, 2019). All together motivating consultancies to acquire creative capabilities (Gianatasio, 2017).

Since 2016, resulting from acquisition, a trend emerged of leading consultancy firms positioning themselves as the top ten providers of creative services in the world (Schultz, 2019).

This is exemplified by acquisitions from McKinsey & Company with Veryday in 2016, Deloitte with Acne Agency in 2017 and EY with Citizen in 2018. From all these global consultancies, Accenture can be considered one of the most dominant players in the creative field.

Accenture's creative capabilities stared to evolve when they, in 2009, launched the new business unit, Accenture Interactive (currently Song), which aimed to grow capabilities in providing creative solutions for digital interactions. Since 2013, due to several acquisitions of creative marketing and digital companies such as Acquitiy, Fjord, acVenta, MOBGEN and Storm Digital, they prominently positioned themselves in the market (Bos and Lundberg, 2019).

A more recent example of Accenture's growth in creative capabilities is seen in their upcoming their fast-growing portfolio of digital engineering and operational technology (DEOT) services, named Industry X (Singh & Dialani, 2022). From 2018, a notable portfolio expansion with regards to the creative capabilities is visible (Figure 2) when we consider acquisitions such as:

- Design affairs in 2018, Germany (Accenture newsroom, 2018)
- Happen in 2019, London & Amsterdam (Accenture newsroom, 2017)
- WhatIf in 2019, London (Accenture Newsroom, 2019)
- VanBerlo in 2020, Eindhoven (Accenture Newsroom, 2020)

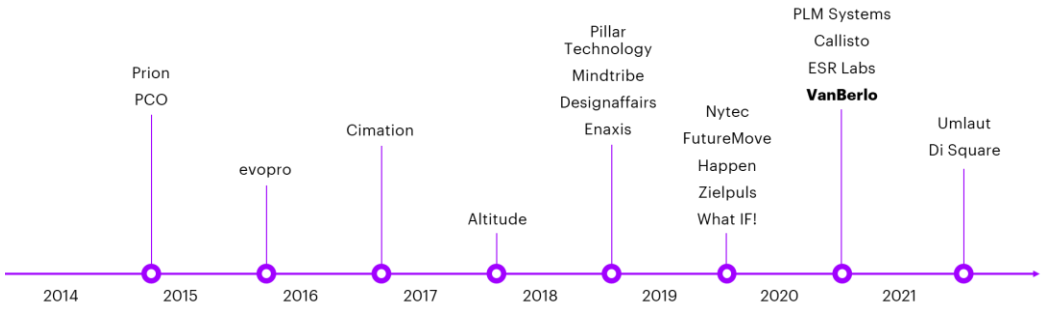

Figure 2 - Accenture Acquisitions (ACN-knowledge Exchange)

A1.5. Mergers & Acquisitions (M&A) and Synergy

Although OA is an attractive concept, and explorative and exploitative capabilities in theory complement each-other, M&A has proven challenging (Weber, 2019). McKinsey (2010) estimates that 70 percent of all mergers within the same industry fail, let alone the M&A of organizations who are on different sides of the OA-continuum. To combine capabilities and to offer a joint value proposition, both an operational and cultural synergy must be found (Stellner, 2015).

A1.6. Pre-acquisition – The VanBerlo Proposition

Before we can explore joint value propositions, it is important to understand the legacy of the company VanBerlo and how is has transformed throughout the past 40 years.

Founded in 1982 by Ad van Berlo, the Design Agency VanBerlo (VB) initially focused on traditional product design and engineering services, primarily engaging in the technical creation of artifacts (Simon, 1969), innovating on their performance and underlying systems. However, a statement on the VB website (2023) frames that *"In order to stay relevant and future-proof, every organization should adopt a process of continuous innovation"*.

This is not only true for the service they provide, but also for the way their operations have evolved over time. VB has adapted and their proposition has co-evolved together with the 'design thinking paradigm shift'. A recent definition of the profession is framed by Magistretti et al (2020) as *"Design Thinking can be conceived as a way of framing, reframing, and enacting actions to solve various problems by harmonizing user desirability, economic viability, and technological feasibility"*. This definition shows how the industrial Design profession is explorative in nature. This transition co-emerged with several economic and technological paradigms shifts on the market e.g. Industrial, Experience, Knowledge and Transformation economy (Brand, 2011).

Since innovation and adaptation are among the key services that VB provides, it is not surprising that the organization has been thriving under these dynamic paradigm shifts. Their explorative proposition evolved over time, adapting to the environmentally unstable, dynamic, and external forces which they daily deal with during their work. Throughout the decades, they have expanded their propositions, both in the material (e.g., mechanical, manufacturing, electronics and embedded), and the immaterial realm (e.g., brands, digital, services and business models) (Figure 3).

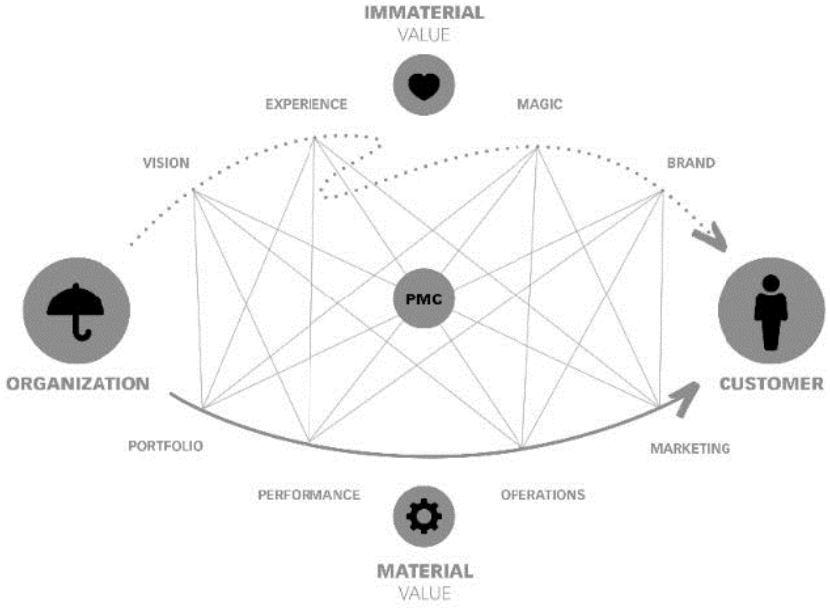

Figure 3 - Material and Immaterial value in design process (Brand, 2011)

To communicate the span of their problem-solving service to clients, they have often used the 'Ten Types of Innovation' framework (Figure 4) (Keeley, 2013). This shows how the original service proposition of 'Product Performance' and 'Product Systems' innovation has expanded. Right before the acquisition, VB projects has been challenging problems to innovate on all ten types of innovation.

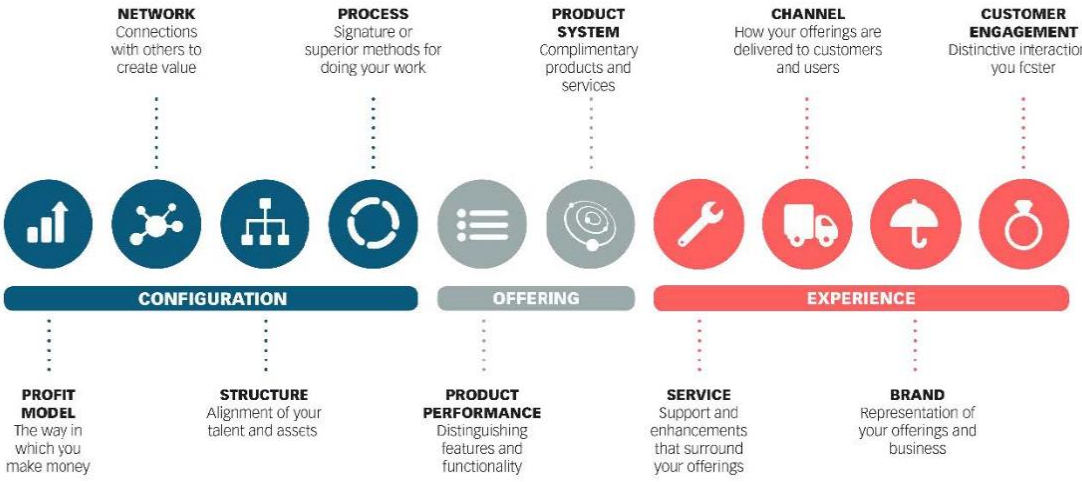

Figure 4 - Ten types of Innovation (Keeley, 2013)

By continuously adapting to technologic and economic shifts, it has not only acquired capabilities to bridge the gap between the physical and digital realms. But they consider the whole product ecosystem, including the perspectives of all stakeholders, regardless of market or technology.

A1.7. The Accenture Proposition

Today's Accenture originates from a consultancy department of Arthur Anderson, which split in the year 2000, rebranding as Accenture (Inspired on 'Accent on the future').

In the annual report of 2023, Accenture reported the employment of 733.000 people in 52 countries, and a 64.11 billion revenue, of which 47% ($30,3B) in North America, 33% ($21,3B) in Europe and 20% ($12,5B) in Growth Markets.

The overall Accenture service aims to offer what they call '360° value' for clients, which they describe as the aim to create a comprehensive value that encompasses nurturing diverse talent, fostering employee well-being, committing to environmental sustainability, and positively impacting communities, thereby offering a holistic approach that benefits their people, the planet, and the communities they serve.

Figure 5 - Industry IX offering structure

A1.7.1 Accenture's organizational structure

The size of Accenture and the span of their offerings make it difficult to provide a comprehensive overview of the organization. It is best explained via their five overarching departments. (1) *Strategy & Consulting*: Helps C-suite executives and organizations reinvent their enterprises for growth and

sustainability using deep industry expertise, technology, and analytics. (2) *Technology***:** Offers innovative solutions in cloud, systems integration, security, and emerging technologies like AI and blockchain, fostering technological advancement and enterprise reinvention. (3) *Operations***:** Manages and transforms key enterprise functions through intelligent operations, leveraging data, automation, and AI on its SynOps platform. (4) *Song***:** Accelerates client growth across industries by focusing on customer relevance and integrating emerging technologies and channels into marketing and business strategies.

VanBerlo however has become part of (5) *Industry X.* This department is split in two groups; Manufacturing and Operations (M&O) (~65% of IX Revenue). *M&O* is organized through three pillars: (1) Intelligent Asset Management, (2) Capital Projects, (3) Production & Operations. As group they design, produce, and assemble bespoke advanced automation machinery, robotics, and other specialized industrial equipment to bolster its clients' operational capabilities.

The second department is Product Engineering Services (PES) (~35% of IX Revenue) of which VanBerlo is part. Within *PES* four pillars are defined: (1) Engineering Data Services, (2) Product-as-a-service Enablement, (3) Platform Engineering & Modernization, and (4) Smart Connected Product Design & Development (VanBerlo is positioned here). (Table 1) Together they engage in close partnerships with primarily platform and software allies to facilitate its clients in achieving rapid transformations, revolutionizing the way their products are conceptualized, developed, tested, procured, distributed, manufactured, maintained, and eventually recycled or upgraded, providing end-to-end product solutions.

For each pillar, several clusters with offerings are defined (Table 2).

PES				
Pillar	**Offerings**			
Engineering Data Services	Engineering and R&D Strategy	Digital Thread & Twin	Engineering Data Services	
Product-as-a-service Enablement	After market & Service Operations Enablement	Platform Operations & Support	Product as-a-Service Transformation	
Platform Engineering & Modernization	Modern Platform Engineering	Platform Engineering Tools & Methodology	Platform Engineering Organization Design	
Smart Connected Product Design & Development	Product Design & Engineering	R&D Transformation	Product Strategy	Product Portfolio Innovation
M&O				
Pillars	**Offerings**			
Intelligent Asset Management	Intelligent Asset Management Strategy & Op Model	Intelligent Asset Management Systems	Smart Connected Asset Management	
Capital Projects	Capital Projects Strategy & Op Model	Smart Connected Project Execution	Intelligent Planning & Design	
Production & Operations	Manufacturing Strategy & Op Model	Manufacturing Operation Systems	Smart Connected Production	

Table 1

Smart Connected Product Design & Development					
Product Design & Engineering	**R&D Transformation**	**Product Strategy**	**Product Portfolio Innovation**	**Product & Org Transformation**	**Engineering Services**
Holistic Product Design	R&D Organization Blueprint	Growth and Sustainability Strategy	Innovation-as-a-Service	R&D Operating Model Design	Concept/Service Design & Management
In-field Support, Run and Operate	Technology and Architecture	Product Innovation	Innovation Culture and Capability Building	Dev Process Re-engineering	Hardware Engineering Services
Managed Security Services	Trial Setup and Run	Product Portfolio Strategy	Research by Experience Lab	Technology & Architecture	Software Engineering Services
Product Engineering Services	R&D Process Redesign	R&D Maturity Assessment		Culture, Talent & Upskilling	Design & Engineering Studios
				Toolchain Modernization & Transformation	Product Operations

Table 2

In summary, the offering of Accenture is primarily, but not exclusively, focused on implementing and maintaining software solutions that support the operations of other organizations. These solutions attempt to provide a 360° value for clients and can involve all sorts of client assets. This wide perspective provided the need for more expertise on material solutions and explorative or creative services.

A1.8. The Acquisition Event

Acquisitions require due diligence (Angwin, 2012), as post-merger integration is the most challenging aspects of M&A, requiring both operational and cultural synergy (Haspeslagh and Jemison, 1991). Strategic alignment is as such very important (Cartwright and Schoenberg, 2006), but also challenging as synergy potential is easily overestimated (Sirower, 1997).

As author I have been part of the acquisition. The Corona lock-down measures were temporarily lifted, and all employees had been called to the office. The acquisition was introduced, a surprise to all. A dynamic period followed, in which many questions initially remained unanswered, and our perspective on the future was clouded. Meanwhile a new lockdown had been reinforced, preventing face to face introductions to our new colleagues. Messages of leaving colleagues started to appear in our inbox. Accenture was poorly understood by many due to its size, and the position of VanBerlo within Accenture was not strongly defined. With new software systems unrolled constantly, and the focus of VanBerlo shifted inwards. Clients started to take some more distance, due to unclarity and daunting, complicated administrative requirements that were poorly understood. Project work from our clients started to diminish. Soon, so was the expectation, we would be provided with work from Accenture. Up to the moment of writing this, little to no work has been given from Accenture to VanBerlo. Today, VanBerlo still appears to struggle with chargeability.

A thematic analysis of open interviews (n=16), two years post-acquisition, by De Reus (2022) details six major obstacles and opportunities that still affect the synergy between Accenture and VanBerlo. Namely: (1) A lack of holistic overview in each other's business and design practice. (2) Having a hesitant

attitude. (3) Dissonance during synergy business development. (4) Administrative differences & operative mismatches. (5) Not understanding each other's professional language. (6) Expertise & knowledge differences in capabilities.

According to literature, proper internal and external communication is vital for a successful integration process to prevent uncertainty, dissatisfaction, and a loss of trust (Schweiger and Lippert, 2005). Strong cultural differences can however aggravate communication and employee dissatisfaction (Weber and Tarba, 2012). Additionally, operations and communication can be easily disrupted when new IT systems are integrated (Mehta and Hirschheim, 2007).

As such we can conclude that, due to the impact of Covid measures, and the organizational differences in size and explorative/ exploitative nature, it has been a challenging M&A. And since talent (Kusstatscher and Cooper, 2005) and customer retention (Homburg and Bucerius, 2005), is a common risk in M&A's, it is not surprising that this has been observed by the author.

A1.9. Combining Industry X and VanBerlo

With the M&A occurring three years prior to this project, significant efforts to position VanBerlo into Accenture have been taken. The VanBerlo brand was sunset in August of 2023, followed by the sunrise of the Industry X - Industrial Design brand, which was formally presented during the Dutch Design Week at the end of October 2023.

The rebranding is remarkable, as it appears uncommon to deviate from the standard organizational structure. This rebranding appears to position VanBerlo as a new pillar among the Industry X offerings in the PES (Product, Engineering & Services) domain.

To communicate clearly in this paper the following definitions are used:

VanBerlo (VB)	Pre-acquisition VanBerlo
Industry X – Industrial Design (IX-ID)	VanBerlo in its current state, being part of Industry X
Industry X (IX)	Accenture Service separate from VanBerlo's Propositions
Industrial Design (ID)	Current state of VanBerlo, separate from Accenture
Industry X & Industrial Design (IX&ID)	Contrasting Industry X & Industrial Design against each other.

A1.10. The IX-ID Proposition

The repositioned IX-ID proposition is communicated internally via four project stages (Figure X). The size of the boxes communicates the expected revenue size per stage.

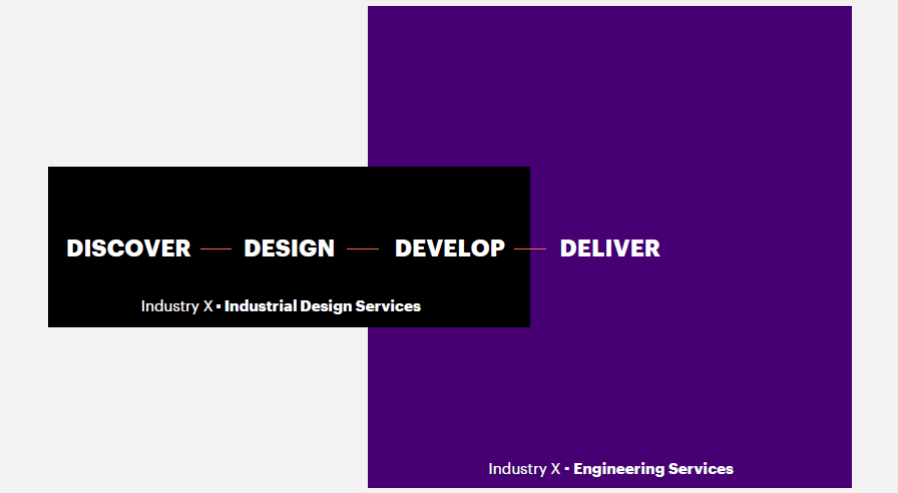

Figure 5 - IX-ID proposition

In the (1) **Discover** stage, the focus is on understanding the interplay between people, technology, and business. This involves exploring what is desirable, technologically feasible, and viable for business. The goal is to uncover insights that shape the approach to designing and developing solutions. By comprehensively understanding client and customer needs, this stage aids in reinventing customer value and ensures that strategies are aligned with real-world demands, driving actionable innovation.

In the (2) **Design** stage, the focus is on creating physical products for the digital age through a multidisciplinary and iterative approach. This phase emphasizes a holistic and inclusive design process that integrates both physical and digital elements. The goal is to develop innovative solutions that seamlessly blend the physical and digital realms, catering to the evolving needs of the modern world.

In the (3) **Develop** stage, the focus is on creating proof of concepts to ensure confidence and scalability. This stage involves prototyping to iterate and refine ideas, leading to scalable solutions that bolster decision-making confidence. It encompasses mechanical design engineering and full-stack software development, culminating in reference designs or Minimum Viable Products (MVPs) that are primed for scaling.

In the (4) **Deliver** stage, the emphasis is on creating new revenue streams by leveraging scale-up and growth opportunities across Accenture. This phase is dedicated to implementing and expanding the developed solutions, aiming to maximize their impact and financial return by tapping into diverse markets and sectors within the Accenture ecosystem.

A1.10.1 Drivers of Changes – IX-ID Offering

A second frame used to communicate the expertise of ID to IX is their 'Drivers of Change', which is utilizes a Venn Diagram to communicate the three key areas of value that ID creates and aligns with IX. These are (1) Sustainability, which targets the transition towards circularity, by considering multistakeholder value chains and life cycles; (2) Smart & Connected, IoT driven product and service combinations with a focus on seamless User Experience (UX); And (3) Servetization, which means building ecosystems and service models beyond digital by identifying as-a-service opportunities, harmonizing physical/digital UX and creating robust Product & Service Strategies.

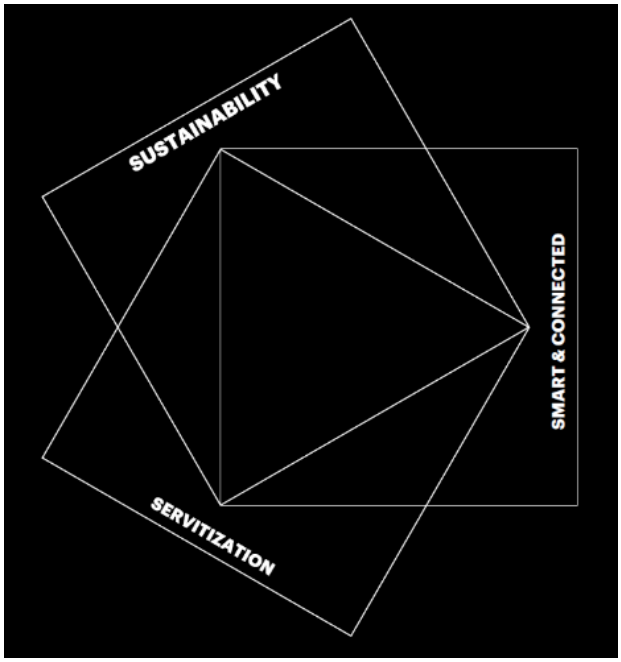

Figure 6 - Driver of Change - IX-ID offering

Together they presented as an area of opportunity for innovation, growth value and societal impact. Aiming to align with the growing need for responsible business practices. It also seems to represent the areas in which ID and IX strongly align and aim to create synergy.

A1.11 Business Development

**This chapter provides some hypotheses about theoretical synergy areas. However interesting, these were not used for the M2.1 project, they might be interesting to reflect on the findings in the M2.2 project.*

The nature of building joint value propositions is closely related to the practice of business development. The development of new strategies for collaborative propositions results in the initiation of new projects in which both the explorative and exploitative services collaborate.
Every product (material or immaterial) has a lifecycle with multiple stages. This cycle contains two inherently explorative cycles.

New product (offer) development

The first is during the Start-up phase, a conceptual product is explored, driven by either a market pull or a market push. This can occur as an external (entrepreneurship) of internal (intrapreneurship) venture.

And is associated with the *valley of death*, meaning it requires investments with no ensured or immediate returns. Making it as an uncertain period which require investments in time, money, and capabilities. These new initiatives have a large likelihood to fail (Source), but also promise high returns when successful. Aiming for new product development has the interest of many since it offers value for people, planet, and profit. Even though it is volatile, when properly executed it can have a viable business model. And can even be considered an important asset for a sustainable business model. A successful product launch can generate high revenues for all parties involved, paving the way for new pipelines which can be exploited.

Revival by reframing

The second moment occurs when regardless of exploitative efforts, due to market saturation or other environmental moderators, sales continuously declining. In this situation, shifting back to exploration can provide opportunities to adapt to the destabilizing environmental moderators and revive the product or offering.

Innovation diffusion

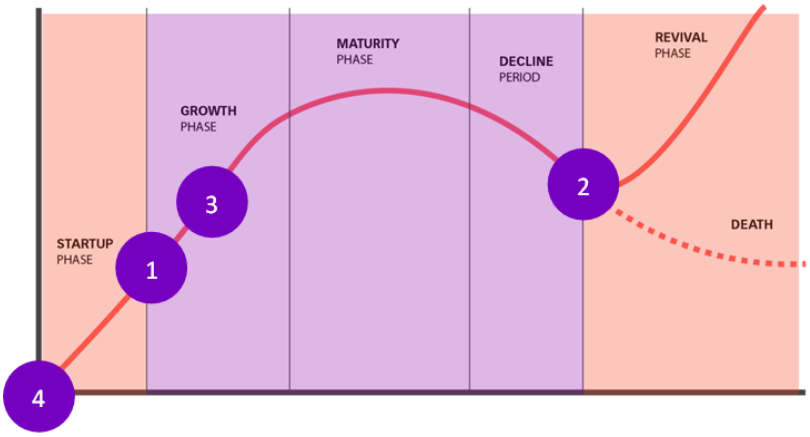

Figure 7 - Adjusted from Rogers Innovation Diffusion

Based on these analyses I identify a few hypothetical opportunities for the creation of synergy value.

1. **ID – Start-up Pull to Maturity -** An exploration project of ID is successfully launched at a client, after which IX services to support implementation and exploitation are provided.
2. **IX - Decline to Revival -** Introducing a client, struggling with declining sales to the Explorative Industrial Design service, supporting the reframing of their product or business.
3. **IX – Market fit competitive IP -** Introducing ACN clients who have explored or developed competitive knowledge or technology to ID to support an IP to market push.
4. **IX-ID – Push to Start-up to Maturity** - Combined IX-ID exploration of technology & market fits, aligning business development with ACN in-house matured expertise & technology, pushing clients to initiate Start-ups.

ID – Start-up Pull to Maturity

This approach is, considered to be, the most likely scenario for synergy, a good example of this is the Damen Project, for who VB pre-acquisition had performed an explorative project improving the interface of towing boat cockpits, incorporating a large digital component. Today, a large team of Accenture is involved in the delivery of the designed solution. The delivery of this solution is already generating revenue, ten-fold of the revenue generated during the exploration. And might continue to keep generating revenue in the future, offering support and operation innovation. The project serves as a perfect example of how ID can spark growth for IX.

IX - Decline to Revival

Almost all clients at Accenture have an offering which includes products, however, currently the Accenture offering might not be directly involved (e.g., support in supply lines, manufacturing, or utilities). Since everything is connected, it might be the case that someone at Accenture learns about declining returns despite of optimization efforts. In this scenario, explorative actions could provide a more constructive solution then squeezing out more operation innovation or cutting costs. However, no evidence of examples has been found, which is not surprising, as it is not a common thought process for these business units. But what if these opportunities would be flagged and ID would be involved to investigate if explorative actions would be appropriate?

IX – Market fit competitive IP

During the growth phase, exploration, and exploitation overlap each other. Clients for who Accenture is providing development and implementation might become in need of revisiting explorative actions. An example for this might be technology driven product, which have proven successful and are intents to grow to maturity, but has not taken market, customer or user fit into consideration. Another example might be the support in creating hi-fi prototypes which are not only aiming to proof a concept, but also help to convince investors or leadership. No precedents have been established yet, however initiatives are actively being explored.

IX-ID – Push to Start-up to Maturity

ID's current approach to business development is via North Star projects. These projects serve to prove capability of the studio in fields which have not precedented projects. Their newest North Star project is Bliss, which showcases a holistic approach to sustainable design in the form of a baby monitor. They have openly shared the documentation on this project and present their design efforts on the Dutch Design Week. In this project however no evidence of direct alignment with the IX capabilities has been discovered. A promising strategy however could be that a Joint Value Proposition is put into practice as a North Star project. It would not only serve to generate new business for ID but could also result in new promising projects for IX. Collaboration could be found with 'Innovation Taskforce' in which they aim to drive start-ups from within Accenture.

BD Process

Before a project starts, the funder (clients or internal problem owner) needs to be certain that they are making a reliable investment decision (Zwikael, 2019), so they generally meet with directors or managers to initiate the project. During this initiation 'phase' many of the project elements are considered. Like the context and scope (idea, need or problem), risks, conditions, goals, milestones, timelines, budget and human (or other) resources. Depending on the size of investment or risk of the project, a separate 'planning phase' could follow to further crystalize the plans for dealing with roles & responsibilities, requirements, schedule, change, risks, issues, quality, outsourcing, business implementation and communications. (European Commission, 2021) (Project Management Institute, 2021).

A problem owner will express their framed intent for the project on a spectrum of detailed to fuzzy, in the form of writing, verbally or both. After which the problem owner and the solution provider need to develop a mutual understanding about the vision of the project. During this briefing, both solution provider and problem owner will have to reframe their preliminary appreciation of the situation and create a shared vision on the project. Ideally this vision contains a desired end state or goal; prioritization and selection of relevant features; problem scope, solution scope; resource constraints; and projected value (Hey, Joyce, & Beckman, 2007).

A2. Solution Frameworks

A2.1 Dynamic Business Modeling

Sterman's theory of System Dynamics (SD) provides a detailed guide for Business Dynamics Modeling. Based on a 5-step modeling process (Problem Articulation → Formulation of dynamic hypothesis → Formulation of a simulation model → Testing → Policy Design & Evaluation).

The theory behind the five steps of creating virtual worlds is synthesized by considering methods for planned organizational change and group interventions (Argyris and Schön, 1996; Beckhard and Harris, 1987; Dyer, 1994; Micheal, 1997; Schein, 1987-1988).

This theory supports the creation of a simulation model of business dynamics, which will allow for testing hypothetical JVP's within a 'virtual' world. Allowing for an iterative co-creative process in which hypotheses can be explored and tested without real-life consequences.

For this we distinguish *deterministic models*, based on closed systems giving us a certain outcome, and *probabilistic models* which support strategies that iteratively can be tested (Sterman, 2000), of which the latter is what this project aims to utilize.

Business Dynamics Modeling is an effective and proven tool to tackle dynamic and non-linear challenges (e.g. Davis et al., 2007; Romme, 2004; Romme, Zollo and Berends, 2010; Sterman, 2000). Making such a model creates a simplified version of reality, supporting the processing of the information feedback, providing a basis for management to ground decision making (Porac and Thomas, 1990; Tripsas and Gavetti, 2000; Winter, 2000).

To formally model a mental construct, we can create a cognitive map, which serves as an external representation. It visualizes a conceptual structure in which the organization of knowledge and information is stored. Due to the complexity of both reality and the human mind, it is not feasible to create a comprehensive map of reality, as a human brain can only comprehend about 20 things at the same time (Doyle and Ford, 1998).

For the design of the tool, we will attempt to refrain from the temptation of creating a cartography of the whole organization. But instead, will attempt to develop a tool which targets a specific situational use-case which has already shown potential synergy value.

A2.2 Frame Innovation for Synergy Tensions

Achieving double-loop learning when harmonizing outliers on the exploration-exploitation continuum (Appendix 1.1) is important as stakeholders will be confronted with fundamental trade-offs that can cause tensions (Stettner et. al, 2010). To create synergy, both IX&ID will have to let go of their existing frames and need to create a new framing of their service together.

The reframing process has been extensively covered by Dorst (2015), his theory on Frame Innovation (FI) provides handles to get more grip on the reframing process. Including the FI model can help to safeguard and potentially improve the achieved double-loop learning process by De Reus (2023).

FI is based on many (n≈100) example cases. It defines three fundamental barriers for reframing: (1) Seeing – "The perception of the world being organized by solutions rather than problems"; (2) Thinking - "The world is used to a static notion of 'rationality', irrationality is not culturally accepted" and (3) Doing - "The world has set ways (best practice) of dealing with novelty and innovation in order to ensure efficiency".

Following these barriers, it will likely be harder to achieve Frame Innovations within Accenture than Within Industrial Design, since the process of reframing is deeply imbedded into ID because they perform the design thinking process (Magistretti et al, 2020). In contrast, Accenture is primarily focused on the implementation of existing solutions, driven by hard rational data, according to best practices.

To challenge these barriers, the Frame Innovation model provides a nine-step process: (1) Archaeology, (2) Paradox, (3) Context, (4) Field, (5) Themes, (6) Frames, (7) Futures, (8) Transformation, (9) Integration. Dorst however points out that the model looks "deceptively linear" and suggests ten deeper principles to keep in mind (Table 4).

General principles	Quality	Applying in broader context
(1) Attack the context	(5) Search for patterns	(8) Be prepared
(2) Suspend Judgement	(6) Deepen the Themes	(9) Create the moment
(3) Embrace Complexity	(7) Sharpen the frames	(10) Follow Through
(4) Zoom out, expand and concentrate		

Table 3: 10 golden rules of Frame Innovation

Naturally the JVP workshop shows clear signs of the inclusion of most of these rules (4-10). An opportunity however lies in giving more attention to (1) Attacking the context, (2) Suspending Judgement, (3) Embracing Complexity.

Next to this a seven-step guide is offered to help bring the theory into practice.

Research → Initiation → (9 steps) Frame Creation Workshop → Design & Business Exploration → Path to Action → Hand-over → Evaluation

A3. Initial Redesign

A3.1. FI, BD, JVPW Process overview

FRAME INNOVATION (FI)	**BUSSINESS DYNAMICS (BD)**	**JVP WORKSHOP (JVPW)**
Research	(1) Problem Articulation	Identify domain needs
Initiation	• Theme selection	• Identify domain needs
Frame Creation Workshop	• Key Variables	• Identify JTBD
(1) Archaeology	• Time Horizon	• Prioritize JTBD
(2) Paradox	• Dynamic Problem Definition	Uncover value creators
(3) Context	(2) Dynamic Hypothesis Formulation	• Client Pains & Gains
(4) Field	• Hypothesis Generation	• Pain Reliver & Gain Creators
(5) Themes	• Endogenous Focus	• Define Offering
(6) Frames	• Mapping	Capture Capabilities
(7) Futures	(3) Formulation of Simulation Model	• Identify Capabilities
(8) Transformation	• Specification	• Foster Discussion
(9) Integration	• Estimation	Concretise Offering
Design & Business Exploration	(4) Testing	• Map on Synergy Canvas
Path to Action	• Comparison to Reference	• Present to CAL
Handover	• Robustness under extremes	• Refine Offering
Evaluate	• Sensitivity	• Attempt to Sell
	(5) Policy Design & Evaluation	
	• Scenario Specification	
	• Policy Design	
	• What if analysis	
	• Sensitivity Analysis	
	• Interactions of Policies	

Table 4 - FI, BD, JVPW Process overview

A.3.2. Workshop Outline - Version 1

STAGE	WHO	IX	ID
1.0 Research	Domain leads	Stakeholder Map	Stakeholder Map
		Context & Field	
1.1 Modified Delphi	Internal Stakeholders representing IX/ID offerings	Business Model Canvas + Customer Journey Map	Business Model Canvas + Customer Journey Map
1.2 Synthesize	Researcher	Value Dynamics Map	Value Dynamics Map
2. Initiate	Key Internal Stakeholders	Invite for Workshop – Top-Down push	
3. Frame Creation Workshop	Key Internal Stakeholders	**Archaeology**	
		Review IX Blueprint	Review ID Blueprint
		Paradox	
		Pains & Gains What is the problem to achieve synergy, why is it a problem? What are the key variables? (list) ~~How did the variables behave in the past?~~	
		~~Map on Innovation Continuum~~ ~~Where do the variables fit on the innovation continuum?~~	
		Themes	
		Formulate dynamic situational hypothesis. What are theories about the problems regarding synergy?	
		Simulation model Formulate a hypothetical consequential feedback structure of the problem. Map this feedback structure in a causal diagram. Testing Is the model reproducing the problem behaviour? How does it perform under extreme conditions? Which variables are highly uncertain?	
4. Design & Business Exploration	Key Internal Stakeholders	**Frames & Futures**	
		Design & Evaluation ~~What environmental disruptions might arise?~~ What new structure or strategy could be tried in the real world? What would be the effect of this changes?	
5. Action Path	Key Internal Stakeholders	**Transformation & Integration**	
		Discuss implementation into the organization. Define actions to take. Set long-term, mid-term and short-term goals. Distribute owner ship	
6. Handover	New Proposition Owners	Results are handed over to new owners for implementation	
7. Evaluation	Proposition Owners	Evaluation of set goals are evaluated	

Table 5 - Initial Workshop Outline

A3.3. Workshop Design – Step-by-Step

*Note that all images represent the state of the workshop after adjustments had been made based on the expert reviews.

Archaeology

(5m) Firstly, the teams are split in IX and ID, each are presented with the service blueprint which has been prepared by the researcher. The teams will be asked if they believe the blueprint is representative for their service, changes are welcomed, but time is limited.

Paradox

(5m) Then teams are asked to present their blueprint to each other. Allowing them to formulate the perception of their service in their own words.

(20m) The whole team is then asked to discuss what in their opinion are the problems for achieving synergy, and what opportunities they see in achieving synergy. To support this process the teams are asked to map their topics on a pains and gains template.

(20m) Teams are tasked to select or formulate the key variables which cause the pains and gains.
(5m) A short explanation is given about the Innovation Continuum, expressing the difference between exploration and exploitation.

(10m) The group then maps the variables on the continuum, placing them in order of explorative.
(5m) Break

Themes & Frames

Simulation

(10-20m) After the break the team is asked to formulate theories about the challenges and opportunities of synergy. During this process the mapped variables and pains and gains on the continuum are to be used as support for these theories.

*The formulation of this theory is essential to progress, as such some support and more time might be required to ensure the formulation of a solid theory.

(10-20m) If it is not occurring naturally, the team is nudged and instructed to formulate a hypothetical causal diagram based on the theory and the pains, gains and key variables. New ones may be formulated.
*It is hard to estimate how naturally this task will be and it might differ per group, support by the facilitator in structuring the causal diagram might be required, and will only have very limited effect on the outcome.

Testing (Evaluate model)

(15m) The group is now asked to evaluate the model, is it correctly reproducing the pains and gains, how might extreme conditions effect this model, and which variables yield the most uncertainty. The team is free to adjust the model accordingly.

Futures & Transformation

(20m) The current state of the model should bow represent the current state of the interaction between IX & ID. After a copy of the model is made, the team is asked to discuss strategies or new structures to optimize the synergy between IX & ID.

*Each strategy is noted down by the facilitator, each time a new strategy is formulated, the facilitator asks the group what the effect of this change will have on not only IX&ID but also on the rest of the organization and on clients.

Integration

(30m) The team is then tasked to discuss the implementation of each favorable strategy. Per strategy a short-, mid- and long-term goal should be formulated. Then for the short term goal actions need to be determined, and finally ownership should be appointed among the participants.

Conclusion

The team is asked to look back on the workshop, and to conclude what the joint value propositions are between ID-IX in this domain. Additionally, they are asked what time frame they envision to evaluate activities for the short-term goals (which will result in a follow-up meeting in their agenda)

Feedback

Then to finalize the workshop, the group is asked to leave three tips and tops per person about the workshop.

A4. Expert Feedback

1. Data collection
- Pay attention to the readability of the templates
- Specify what the elements in the BMC mean within the context.
- Avoid juniors, they have little contact with clients

2. Blueprint (no initial comments)

3. Causal Diagram
- What are worries and barriers we can expect?
- Isn't it a speculative approach to define the causes and affects this way.

4. Exploration – Exploitation continuum
- Might be unnecessary, worried that it does not add enough value.
- Exploitation might be a term that has a bad connotation to it.

5. How do things work today?
- This might be difficult; it would be helpful to have some examples of other use-cases here.
- It can be quite tricky to find good examples, since there are very few of them.

6. Evaluating the diagram
- Thinking of barriers on the spot can be difficult
- Maybe some barriers from Melanie's work could be utilized?
- This evaluation might not add to much value to the session

General comments
- First Half of workshop is feasible, second half is way to theoretical

A5. Testing

A5.1. Iteration 1 – Synergy Use-case

For the first workshop an often referred to use-case was targeted. Due to resignations, it was only possible to run this workshop with the delivery leads from IX & ID.

From these two leads, one had been part of both VanBerlo and Industry X (operating mainly from the client). Since the other participating delivery lead (VanBerlo representative) was only available for the pressure cooker, a double interview was conducted, covering both the ID and IX side, which influences the insights gathered from this session.

5.1.1. Data Collection

Observations: Within an hour the participant was able to populate a BMC and CJM for both ID & IX. Creating the suggestion covering only the ID or IX perspective should be quite feasible, it was however not surprising that the participant feedback included the need for more time. Feedback also explained that the BMC and CJM were received as being helpful for shaping the story. Based on observations, some explanations were formulated slightly different. Additionally, the emotion graph was excluded from the CJM, as it appeared to yield little relevance and was quite complicated to adjust in Miro.

Conclusion: Filling in the BMC and CJM for both ID & IX went smoothly, however, feedback indicated a need for more time, other feedback included that the BMC and CJM were helpful tools for shaping the story. The emotion graph yielded little relevance and was removed from the CJM.

5.1.2. Data Syntheses

Using causal diagraming on the data, it started to show that the post-service of ID overlapped the pre-service of IX. Additionally, a feedback loop became visible, as both ID&IX repeatedly aligned with the client, who approved the continuation and direction of any next steps. Based on these insights a general structure was built to capture the interview data the visual representation, the ‘service blueprint’.

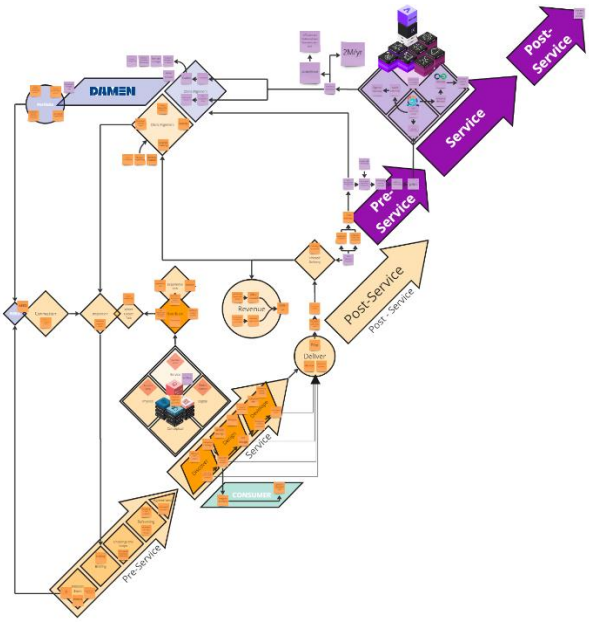

Figure 8 - Visualized causal diagram (Service Blueprint)

5.1.3. Pressure Cooker

A 5-minute explainer of the blueprint sparked a lot of discussion, directly engaging the participants and providing focus. The blueprint was referred to as ‘an alternate reality which represents a simplified version of the story, it showed part of the system that occurred, it is however not yet a strategy, but it could be’.

Moving to the Joint Value Proposition Canvas resulted in a long conversation from which Pains & Gains were noted down by the facilitator, this was however hard for the facilitator due to the speed and complexity of the conversation. Then participants were asked to formulate the key variables per Pain and Gain. A flaw in the design was that they continued with the formulation of the facilitator, which was not a perfect reflection of their previous discussion and was influenced by biases from the facilitator. An insight here was that circling areas of interest on the blueprint would improve this process, as it would require participants to properly formulate the pain or gain afterwards.

Based on the key variables, the participants then formulated a narrative/ theory about a specific Pain & Gain structure. This step relies on intuitive prioritization and the theory was written down in one sentence. The next involved the creation of one comprehensive story and map this out in a causal structure. Participants however responded that this was inconvenient, as they had just combined multiple factors in one sentence. As such the key variables from the previous exercise were included to provide elements which could be used to build the diagram. The takeaway from this insight was that and more structured elaboration and story creation could help the process.

The participants now created a quite chaotic structure on the board, this process could be supported if they would build the story on top of the blueprint, providing some structure and potentially additional insights.

Due to time constraints, the participants did not update the diagram with the new formulated strategies. Concretizing the selected strategies was however performed, this proved helpful, as it forced the participants to consider not only the preferred state, but also the path towards it, resulting in actionable goals and even a calendar entry to schedule next steps. One interesting strategy which was considered, was the positioning as ID as partner in portfolio management. This role also occurred in literature about the role of exploration in ambidextrous organizations.

5.1.4. Reflection:

Based on this first session the nine-steps of FI seemed to be provide an effective outline for the workshop that resulted in a systematic analysis of the as-is-state the existing frames and the creation of new frames from which collaboration could be approached.

The Business Dynamics steps appeared to be more challenging, the problem articulation and dynamic hypothesis steps proceeded well, but the creation of the simulation model was considered hard. Additionally, the simulation model was not really tested or used to test new strategies. The, by participants, created simulation model did however seem to provide fuel and inspiration for the formulation of strategies. Based on the observations of the workshop and feedback from the participants, it seems that the creation of an simulation model might have added some value to the formulation of effective strategies. The procces however contained several flaws and the simulation process wasn’t perfectly executed.

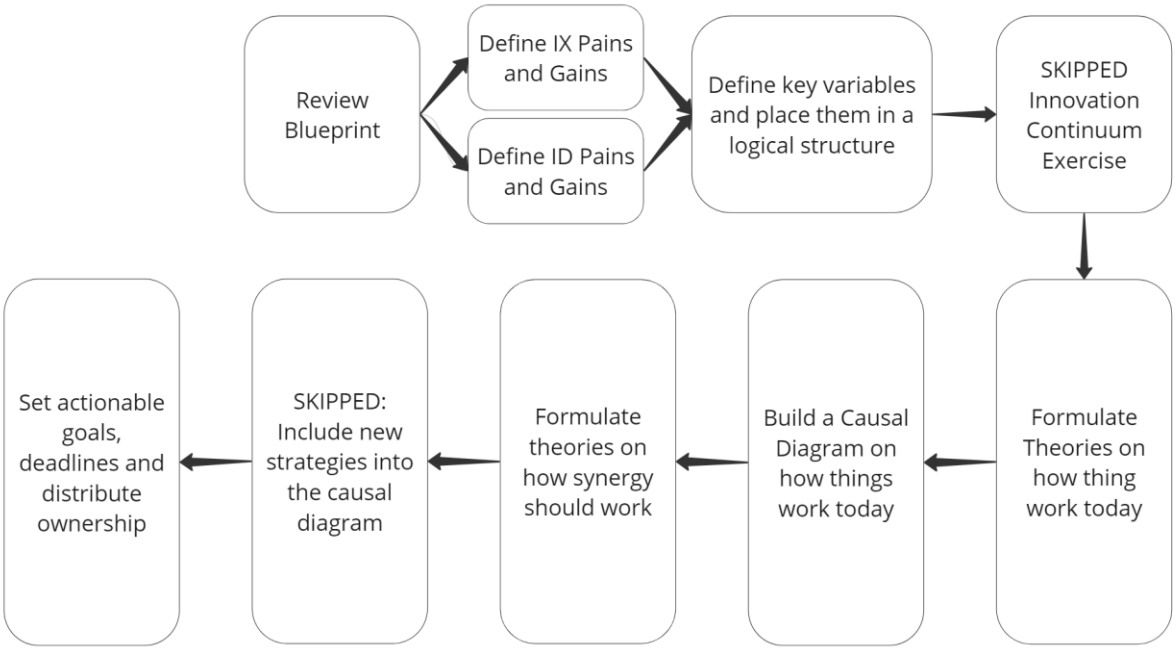

Figure 9 - First Design Workshop Structure

A5.2. Iteration 2 & 3– Synergy Taskforces

Within IX several taskforces exist which focus on long-term, internal goals. One of these taskforces is purely focused on inclusion of ID in IX, by focusing on topics such as the rebranding. A second taskforce had been focusing on including dynamic capabilities in the capability portfolio of Industry X. Since the one taskforce was looking from ID towards IX and the other from IX towards ID, these were selected as the next target for testing the workshop.

From both taskforces two participants were asked to join, representing the 'sponsor' (senior manager that leads the taskforce) and the co-sponsor (highly involved junior). For the data collection all four participants were interviewed. For the sponsors and co-sponsors the pressure cooker was however conducted separately, to test the workshop firstly with juniors before running it with the seniors.

5.2.1. Data Collection:

For the interview an hour was used, and no major changes were made to the format. The Task load Index during this session scored quite comparable to the first session, surprising, since only half of the workload was being offered. The feedback on this session also covered time constraints, additionally a measure for confidence was suggested, as some elements might be quite speculative. One observation was that not all participants were sufficiently familiar with the Miro environment, resulting in the need to support a participant in creating template entries. Overall, the structure of this session was appreciated, and strong changes to this format will not be likely to be required.

5.2.2. Data Synthesis:

Again, the overlap of the ID post-service and IX pre-service was expressed, as well as the feedback mechanism to the client for each phase. Additional to the previous model the sales path was consistently mentioned, followed by the contracting phase which was suggested to bear strong similarities. Next to

this several services were mentioned which are connected to processes such as Design Thinking, Lean, Agile and DevOps. After each phase is appears, the client had to be convinced to continue by providing some form of proof (Problem, Solution, Value, Market, Sustainability). For every entry in the interview a location was created on the blueprint. By linking these locations to the interview templates the synthesis process made easier.

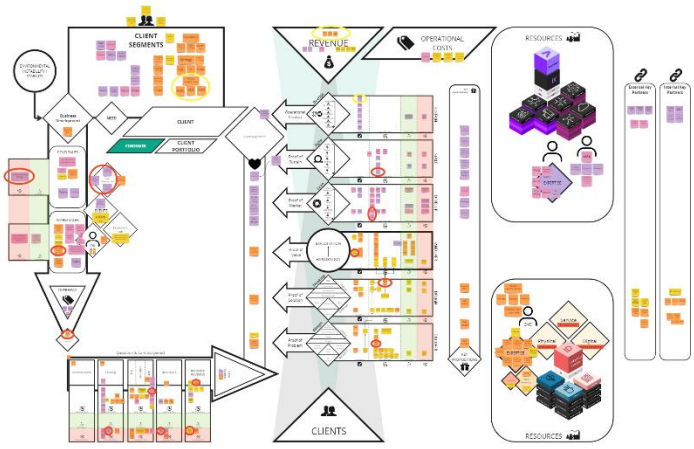

Figure 10 - Visualized Diagram (Service Blueprint)

5.2.3. Design Changes to the pressure cooker (iteration 1)

Based on feedback from the previous pressure cooker, and some technical difficulties that were experienced during the interview, the pressure cooker was revised. The primary design changes were:

- Circling areas of interest
- Replacement of the Value Proposition Canvas, as only part of it was used. (Figure 1)
- Pre-setting post-it's for defining the causes and effects of the Paing and Gains. (Figure 2)
- Including the Innovation Continuum Exercise (which was an experimental exercise to create better understanding of the gap that needed to be bridged)
- Directly move to mapping out the theory on the blueprint, instead of writing out the theory on a post-it.
- Adding power dotting to select interesting strategies.

Together they formed the following workshop structure (Figure 21)

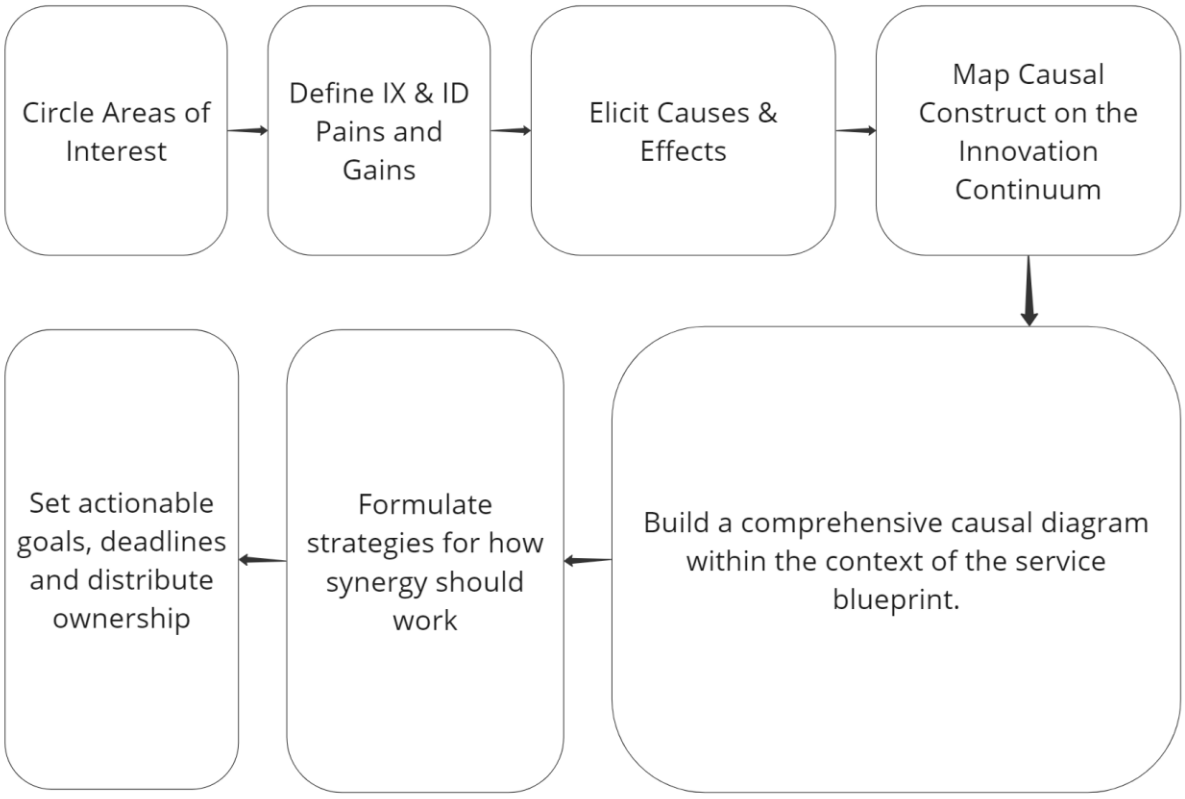

Figure 11 - Second Design Workshop Structure

5.2.4. Pressure Cooker:

For the revised pressure cooker with juniors a third participant from M&O was asked to join, which mainly was mainly to understand how the workshop performed with more than two participants, but also to add an extra perspective from the M&O side, since both other participants are strongly involved in the PES domain.

After the introduction, in contrast to the previous sessions, no discussion was sparked, participants circled specific post-it's on the blueprint in silence. Then the participants define the pains and gains, for ID and IX. The pains and gains from the interview sessions were copied next to the template to support this work-out. This turned out to not only be a support but had become the sole focus point of the exercise, which was also executed without much discussion. An important observation was that the blueprint was not being utilized during the exercise.

The discussion only started when they were prompted to discuss and select the twelve most important pains and gains. This process proceeded well, however the previous exercises only seemed to indirectly influence the discussion. The main feedback after the workshop was also that it was not always clear why certain steps or exercises were performed. Defining the causes and effects of the pains and gains went surprisingly fast, the answers were however quite singular, meaning that no other variables were considered.

The innovation continuum exercise was well performed but was considered a bit irrelevant by the participants. Since time is scarce, the exercise will be excluded.

The cause-and-effect constructs were then mapped on a Blueprint without post-its, this was very positively received, as it placed the abstract construct into context. Then the team was asked to see how things on the board related and map out the theory or story that they had built. Most of the constructs consisted of three or four post-its which covered the cause, issue or opportunity and effect in a few sentences. Participants reported that they had trouble extracting keywords from these sentences, making it an exhausting exercise. This raised the question, what if the blueprint wasn't empty? Would it be easier to build a comprehensive causal diagram when it was built on top of blueprint, with a semi-transparent layer and all the post-it's in it?

The strategy creation exercise seemed to run smoothly, but more value could have been elicited is more time would be available, leaving more time for articulation and discussion.

During the last step the team struggled, which very likely was due to their junior position. Setting actionable goals proved hard due to a lack of decision power. On the other hand, the strategies which they had formulated stood out, as they had the potential for a bottom-up implementation.

5.2.5. Reflection:

The Archeology step went poorly, which was likely due to unclarity of the links between steps and exercises. Regardless the team appeared able to formulate relevant problem areas, which might be because they are intuitively clear, or because of an indirect effect of the previous exercises. The creation of an overarching hypothesis corresponding simulation model however was very challenging. Decomposing the created causal constructs and linking them appeared to be very challenging. After their attempt to do so however, the team had little trouble with formulating change strategies.

5.2.6. Design Changes to Workshop

The objective of this workshop is to elicit Joint Value Propositions which can be easily put into practice and have a high chance of success. The prior session showed poor cohesion between the exercises, little usage of the blueprint and explication issues with the building the simulation model.

As such the pressure cooker was revised in an effort to resolve these challenges. The main approach to the design was to place the Blueprint in the center of the exercise. As such was the hope, would the blueprint be used as a playground which provides situational context from which problems emerge and in which causal constructs can be placed to better understand its context.

Next to this the:

- The first exercise was changed to support discussion about opportunity or challenge areas.

- The cause-and-effect definition exercise was adjusted to facilitate for more variables.

- The Innovation Continuum exercise was excluded

- The instructions for creating the simulation model were changed.

As such the final workshop was structured according to the diagram (Figure 22)

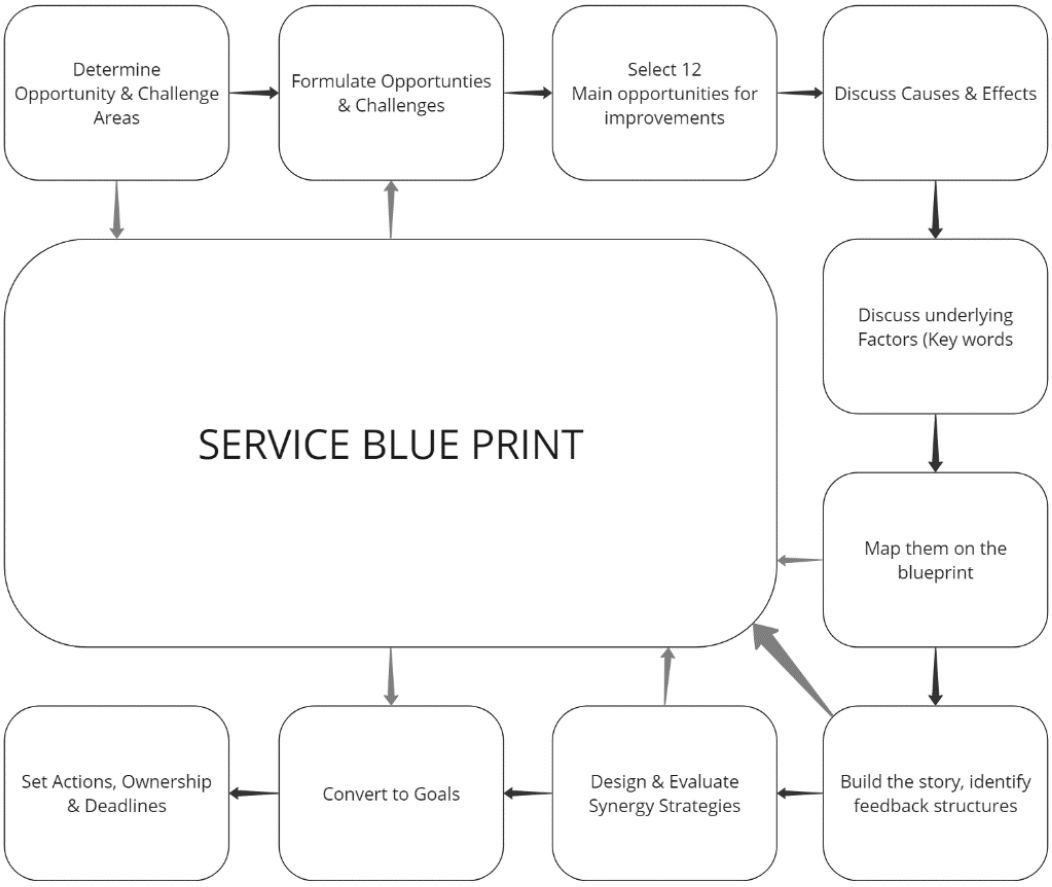

Figure 12 - Third iteration - workshop process overview

5.2.7. Pressure Cooker:

The third pressure cooker was conducted with two senior managers, of which one represented ID and the other IX. Both were leads of the taskforces that are involve themselves with the integration of the capabilities from either ID or IX.

After the Blueprint was presented, the participants started to review and explain what parts were and which parts weren't a proper representation of how things work. During this conversation the circles were provided so the participants could define opportunity or challenge areas. One comment was that these opportunities and challenges are the same thing. After providing the rings the discussion stopped as participants started to add text to the rings, which in retrospect, could have been prevented. On the other hand, it allowed the participants to exhaust their top-of-mind areas of interest.

During the formulation of the opportunity/challenge areas the participants also remained silent, it seems to be either writing or discussing. The discussion started when prompted by the facilitator to select which areas are the most important.

After the selection, the causes and effects were elicited, the conversation stopped again, ending with a strong focus on writing and formulating. This was also provided as feedback, that they had made steps, but hardly reflected upon it.

The discussion restarted again when the constructs were placed on top of the blueprint. Which also elicited previously unfamiliar topics. During this step existing frames were presented towards each-other, which allowed for the reframing of the existing mental model.

The following task asked the participants to link the frames with each other and other variables, the participants replied that this was too big of a task, since so many factors relate to each other. It seems that, because the task is quite difficult, the participants stopped communicating again.

Therefor the facilitator deviated from the original plan and asked the participants to pitch or explain the opportunity area to each other, allowing for the inclusion more factors as speech might be easier than by writing. The facilitator attempted to write down the insights, which proved difficult due to the speed and complexity of the conversation.

This conversation was very targeted and constructive, it appeared that the prior exercises helped with discovering and prioritizing target areas and had provided fuel to the discussion to support the conversation, in which the blueprint appeared to provide a visual on which abstract constructs were pointed out. In the allocated time however, only two topics were discussed, leaving much work and value untouched.

During the formulation of synergy strategies, the facilitator explicitly mentioned that the strategies should be about new structures or tactics. A reply however was that there were already interesting things in progress, which needed to be brought into practice. These were adopted, but due to time constraints very little time was used for creating new strategies.

Pitching the strategies to each other showed however promise, as some ideas were initially received with doubt. The short discussion that followed allowed for providing further explanation, which shifted the perception, additionally tips and potential approaches were exchanged.

The goals that were defined were already ongoing practices, and due to time constraints, no further actions were defined based on this exercise.

5.2.8. Reflection:

Is seems that the workshop has a few fundamental issues, one of them is that there is too little time to do both a problem and solution definition exercise within two hours. Additionally, this is challenged by the fact that writing down insights and discussing them cannot occur simultaneously. Next to this a, too wide context is considered, next to the fact that the blueprint it to detailed, resulting in an information overload.

Other insights are that Juniors and Seniors have a very different way of working, which means that it's probably better to target the workshop towards a more specific participant. That strategies which are not deployed but that are in development are not covered right now. And there is too much attention on the definition of various problem areas, but there is little to no space to reflect on the problems and to evaluate is they are worth pursuing, causing many areas to be defined and worked-out but not covered during the solution creation, which is a waste of time.

Considering these existing challenges, it is potentially better to split the workshop into parts:

(1) Session: Data Collection
    i. Gather wide situational and contextual information via the interview process.
(2) Facilitator: Synthesis
    i. Build blueprint.
    ii. define potential problem areas.
    iii. offer this as starting point for the workshop.
(3) Session: Problem Definition
    i. Discuss blueprint.
    ii. Offer the challenges as starting point.
    iii. Complement and refine.
    iv. Build cause and effect structures.
    v. Test, reflect and prioritize.
(4) Facilitator: Synthesis
    i. Build comprehensive causal structures per opportunity.
    ii. Plan new workshops with relevant participants.
(5) Session: Solution Definition
    i. what are potential solutions strategies? (discussion)
    ii. Formulate personal strategies.
    iii. Test & evaluate strategies.
    iv. Formulate combined strategy.

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F. Table of Figures

F1. Figures from second Workshop

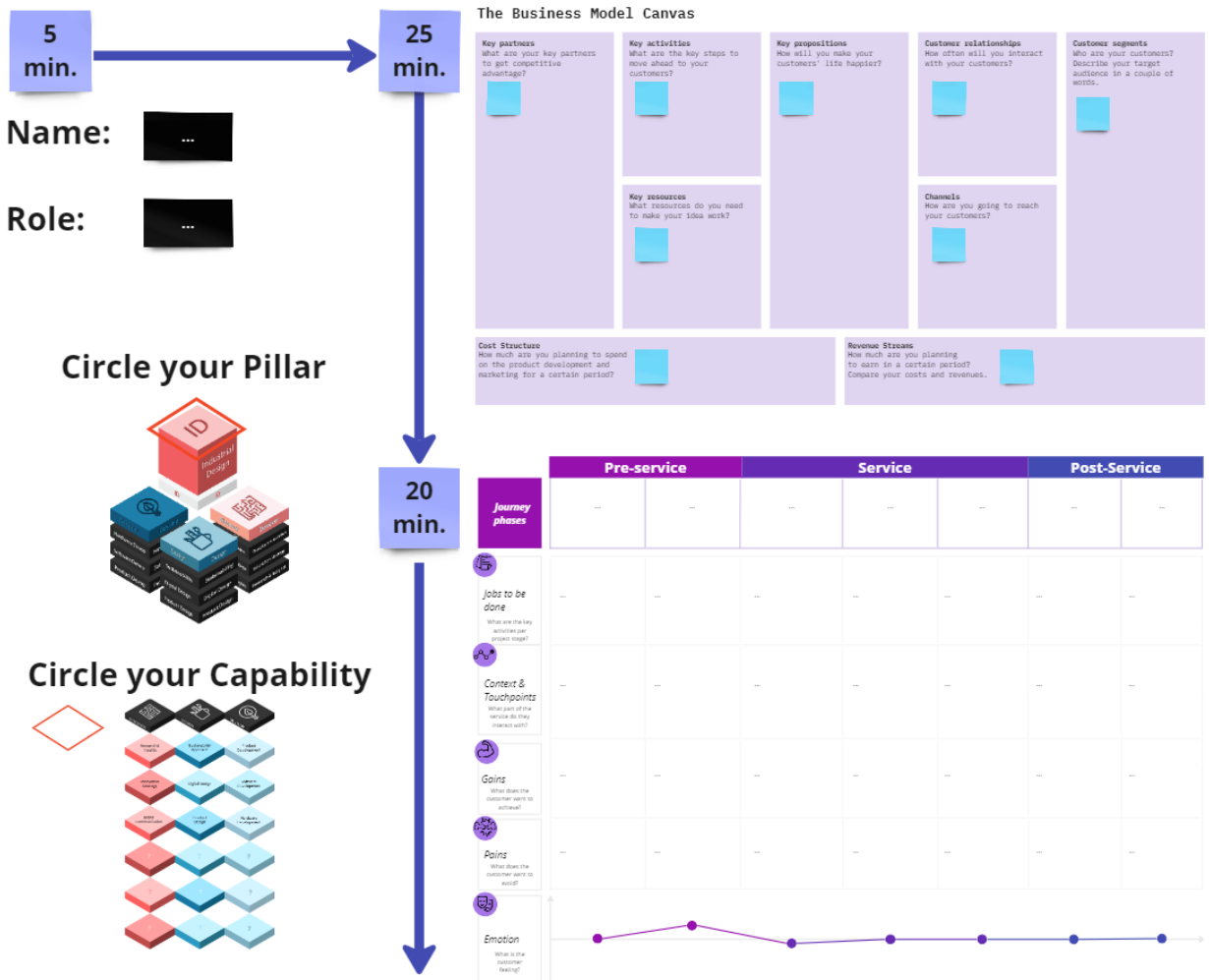

Figure 13 – W1 Data collection template

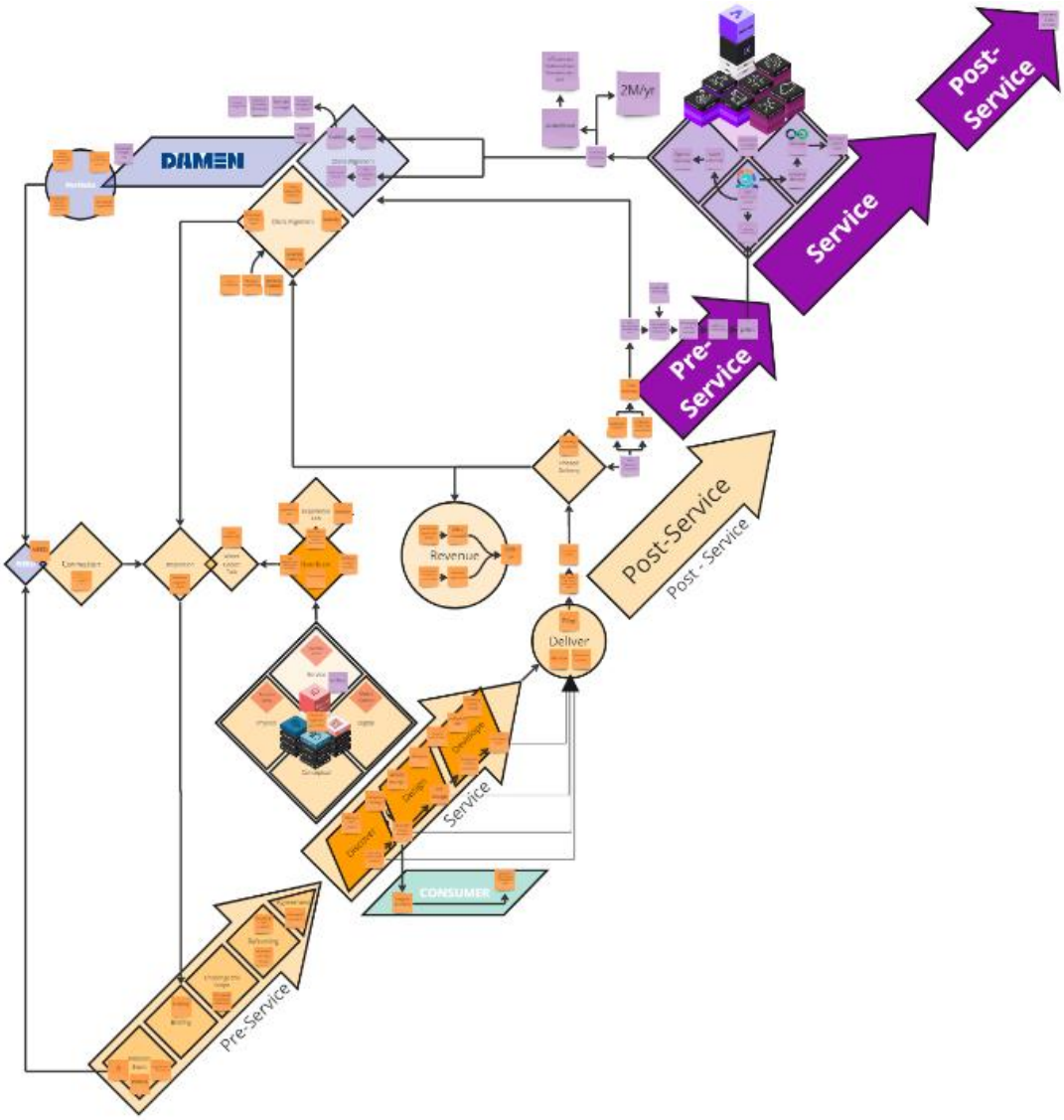

Figure 14 – W1 Visualized causal diagram (Service Blueprint)

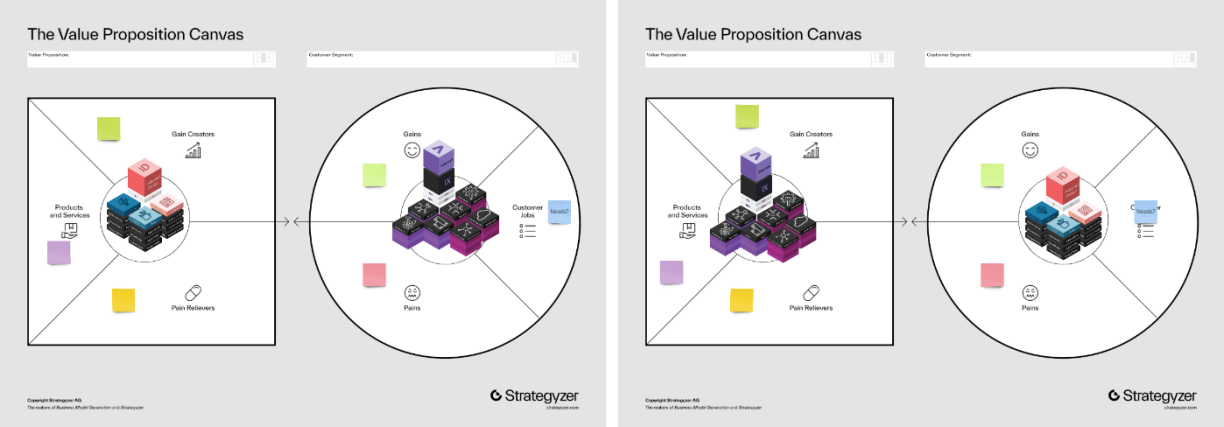

Figure 15 - W1 Value Proposition Canvas

Link the Pains & Gains to their causes, effects and other key variables to show the dynamics surrounding a potential value.

Figure 16 - W1 Causal Diagramming Area

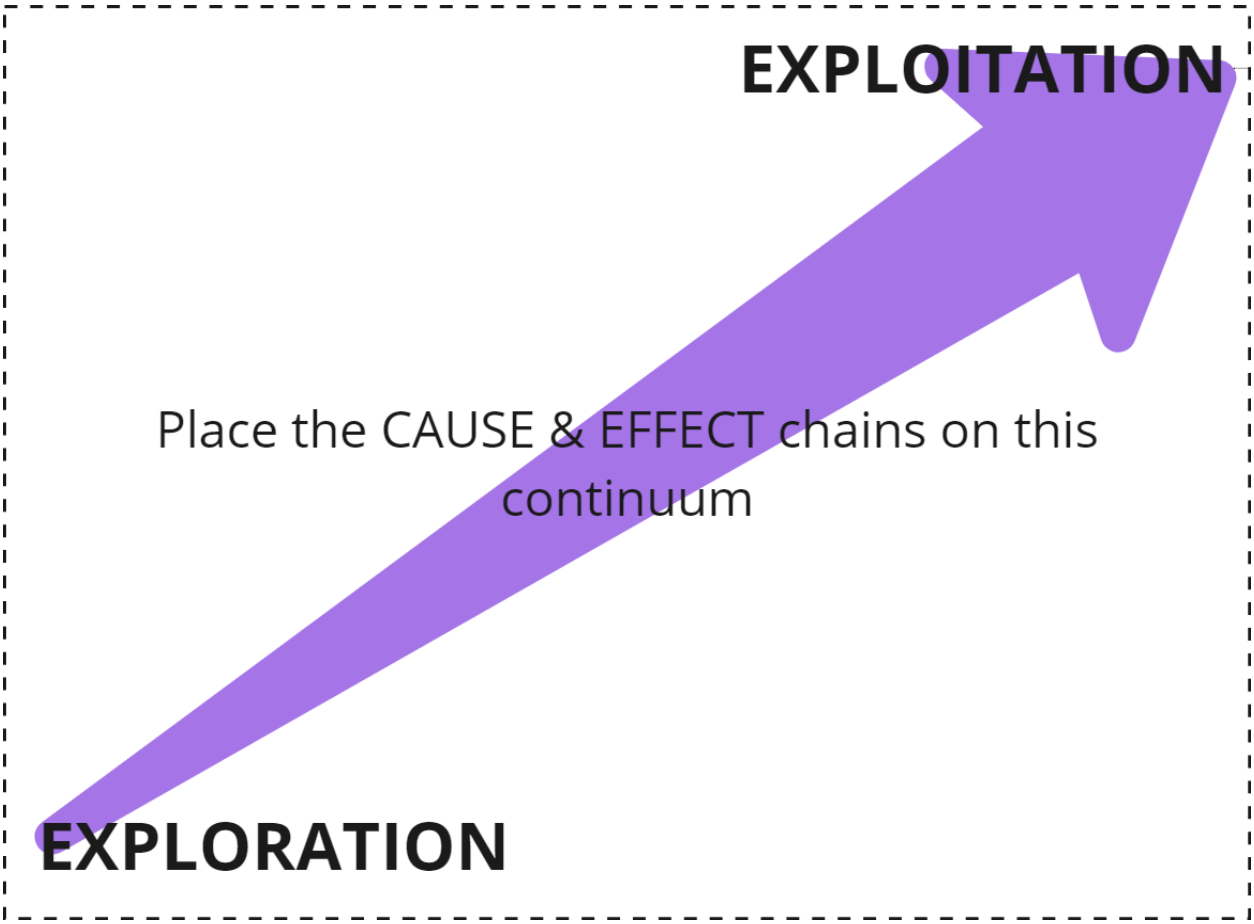

Figure 17 - W1 Innovation Continuum Exercise (Not used)

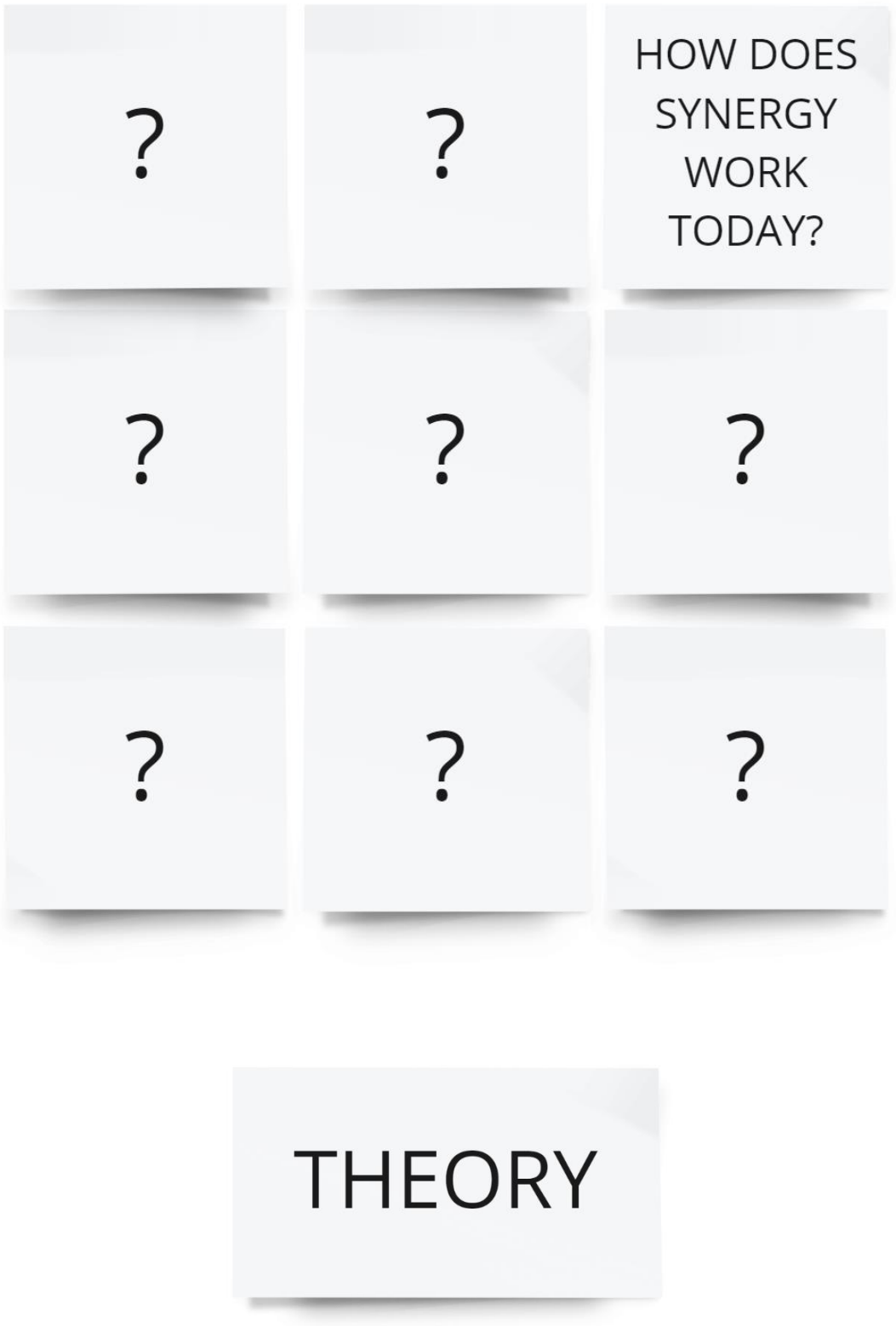

Figure 18 - W1 Theory formulation

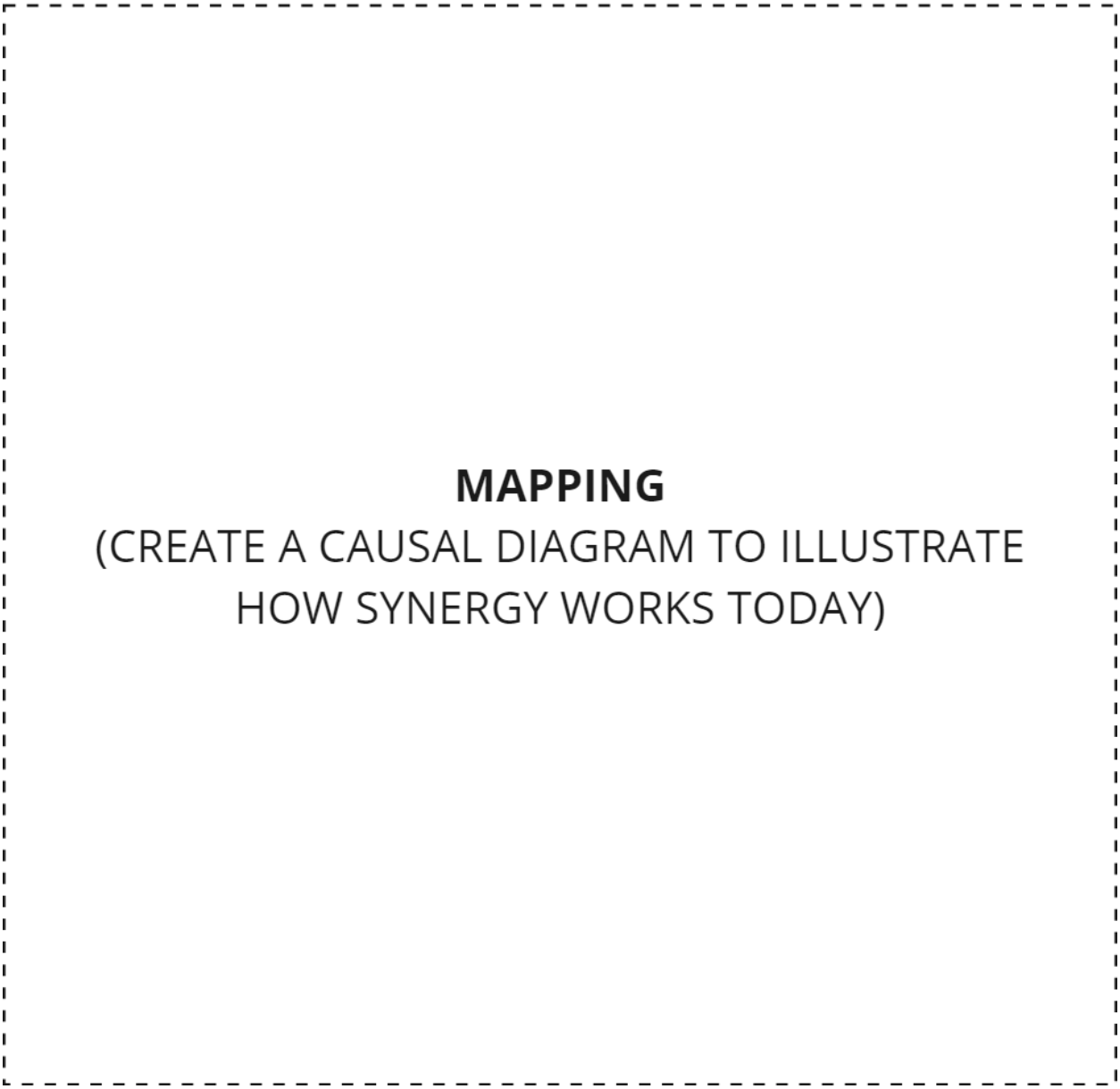

Figure 19 - W1 Evaluation Area

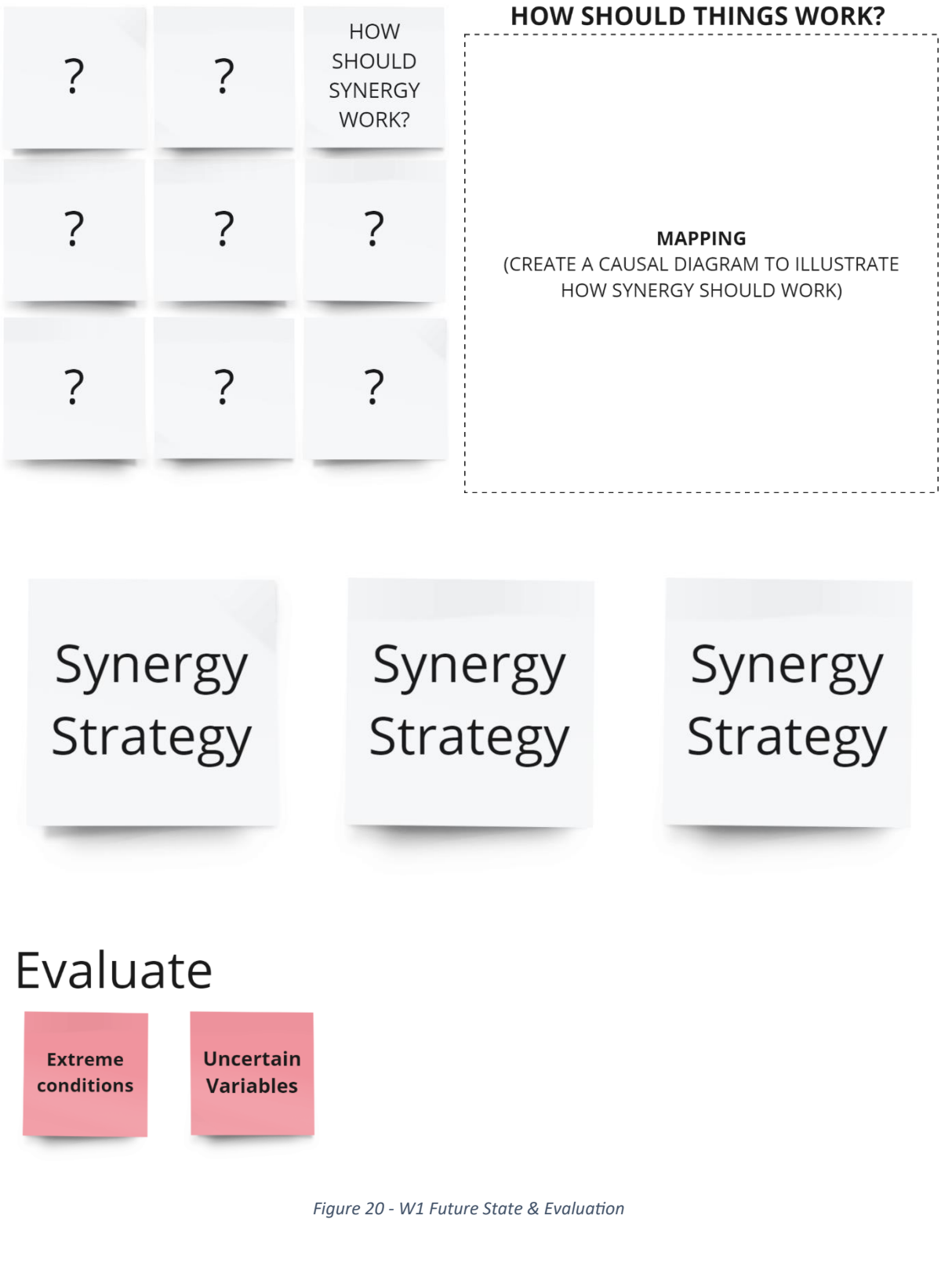

Figure 20 - W1 Future State & Evaluation

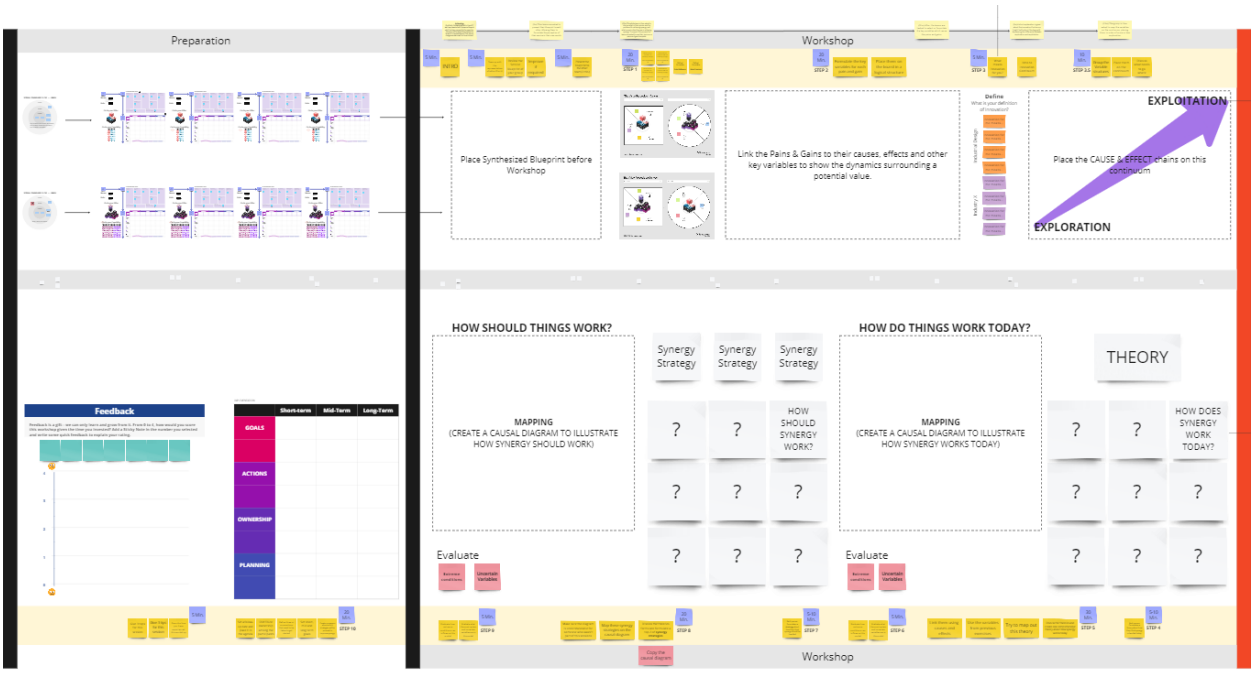

Figure 21 - Complete overview of Initial Workshop Space

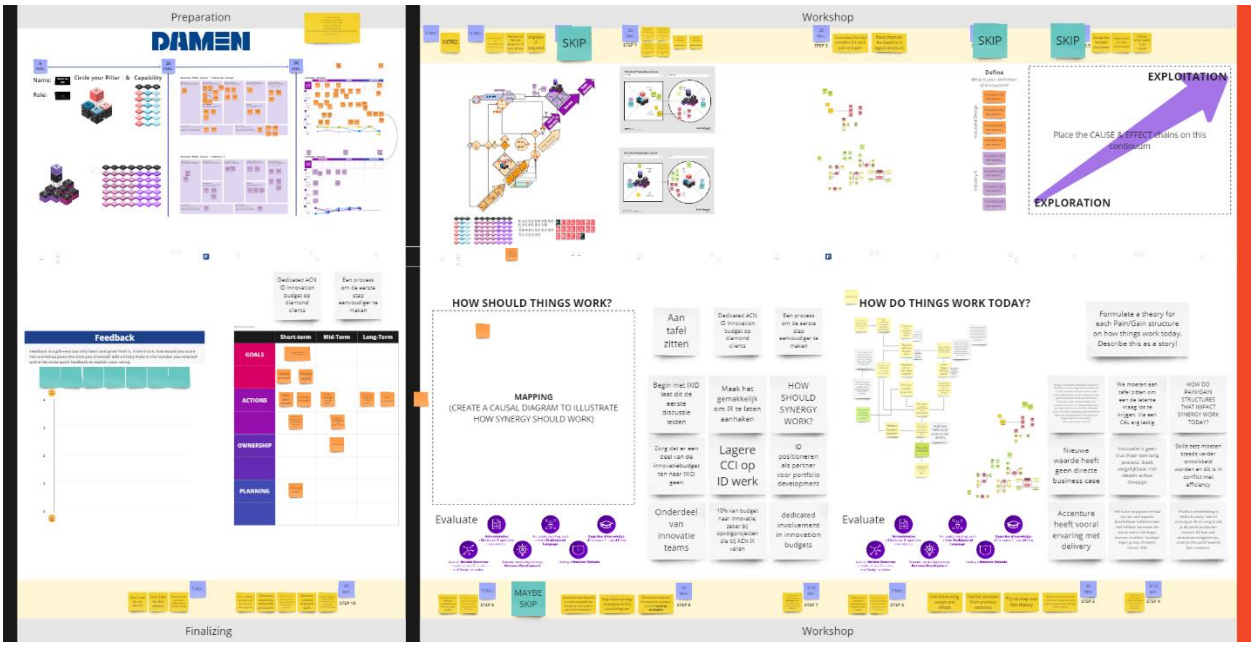

Figure 22 - W1 Populated workshop space

	Short-term	Mid-Term	Long-Term
GOALS			
ACTIONS			
OWNERSHIP			
PLANNING			

Figure 23 - W1 Concretizing by goal setting

F2. Figures from second Workshop

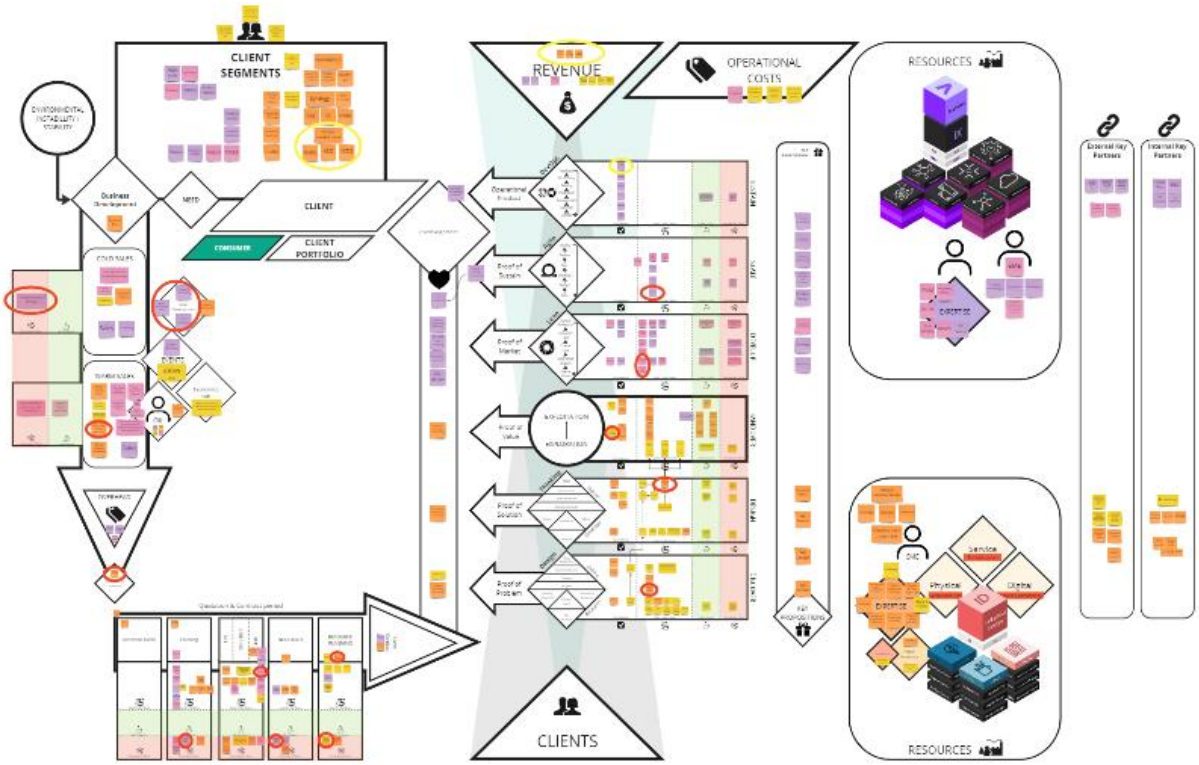

Figure 24 - W2 Identifying Areas of Interest & Visualized Diagram (Service Blueprint)

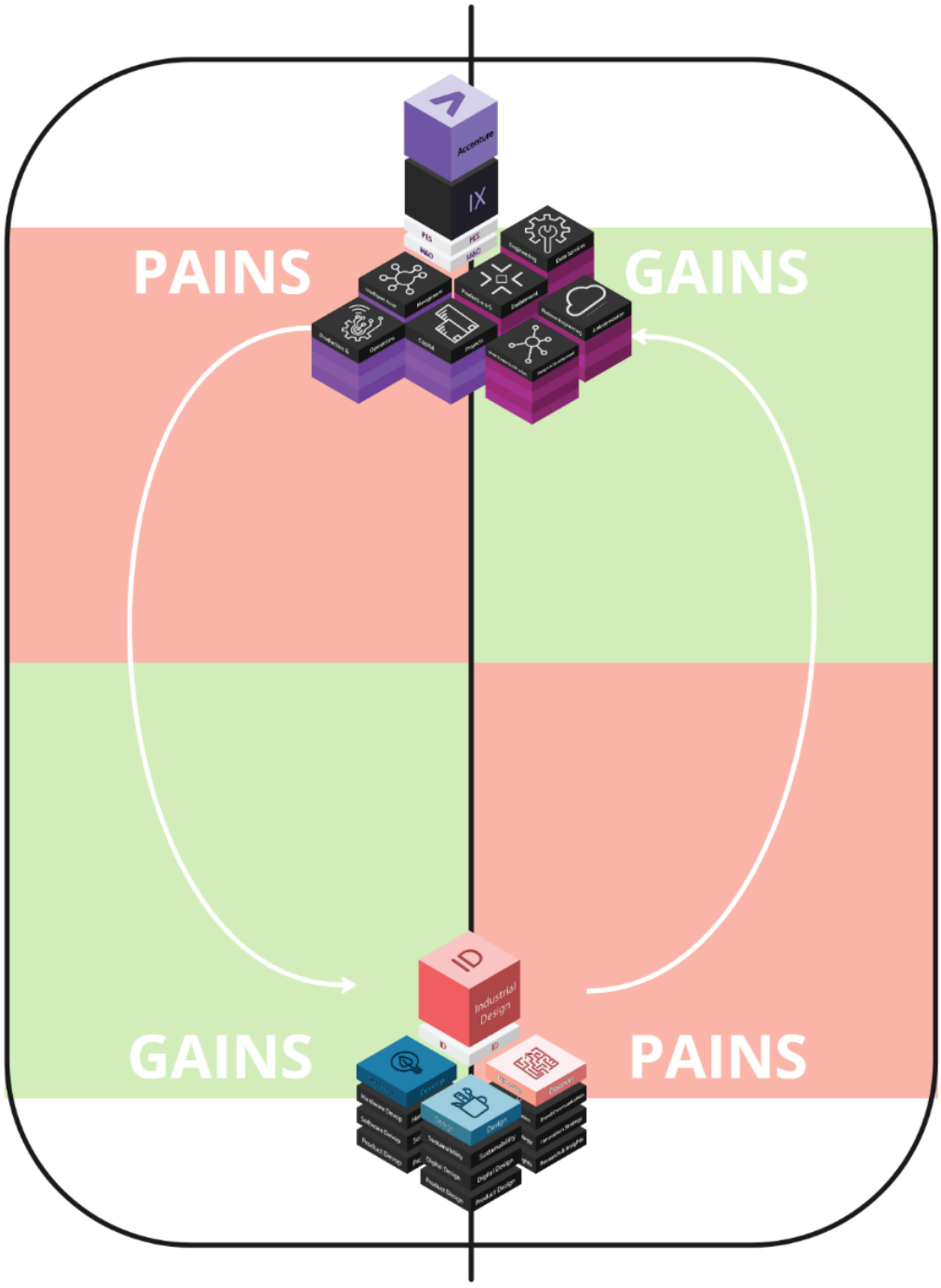

Figure 25 - W2 Replacement of the Value Proposition Canvas

Figure 26 - W2 Pre-set post-its for Cause & Effect elicitation

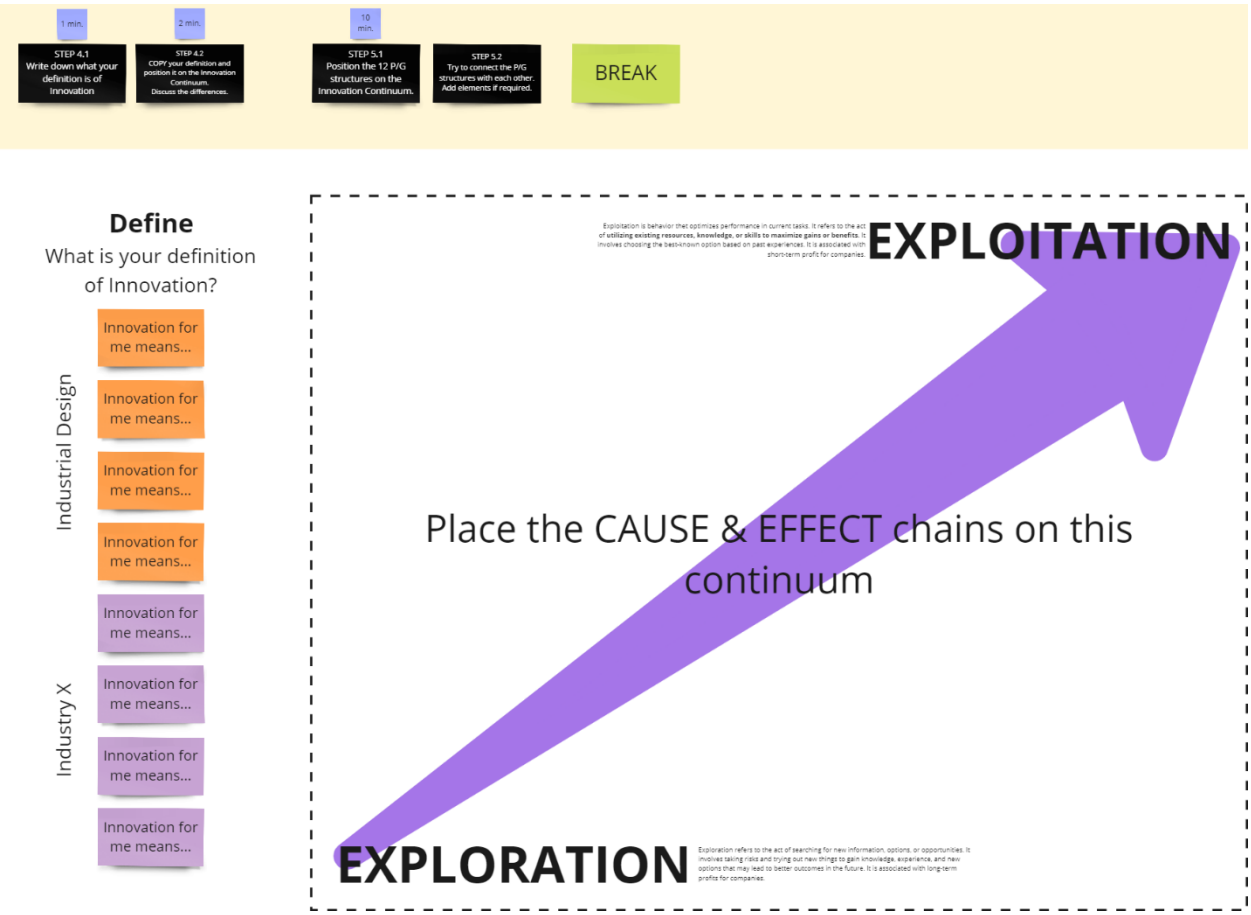

Figure 27 - W2 Innovation Continuum Exercise

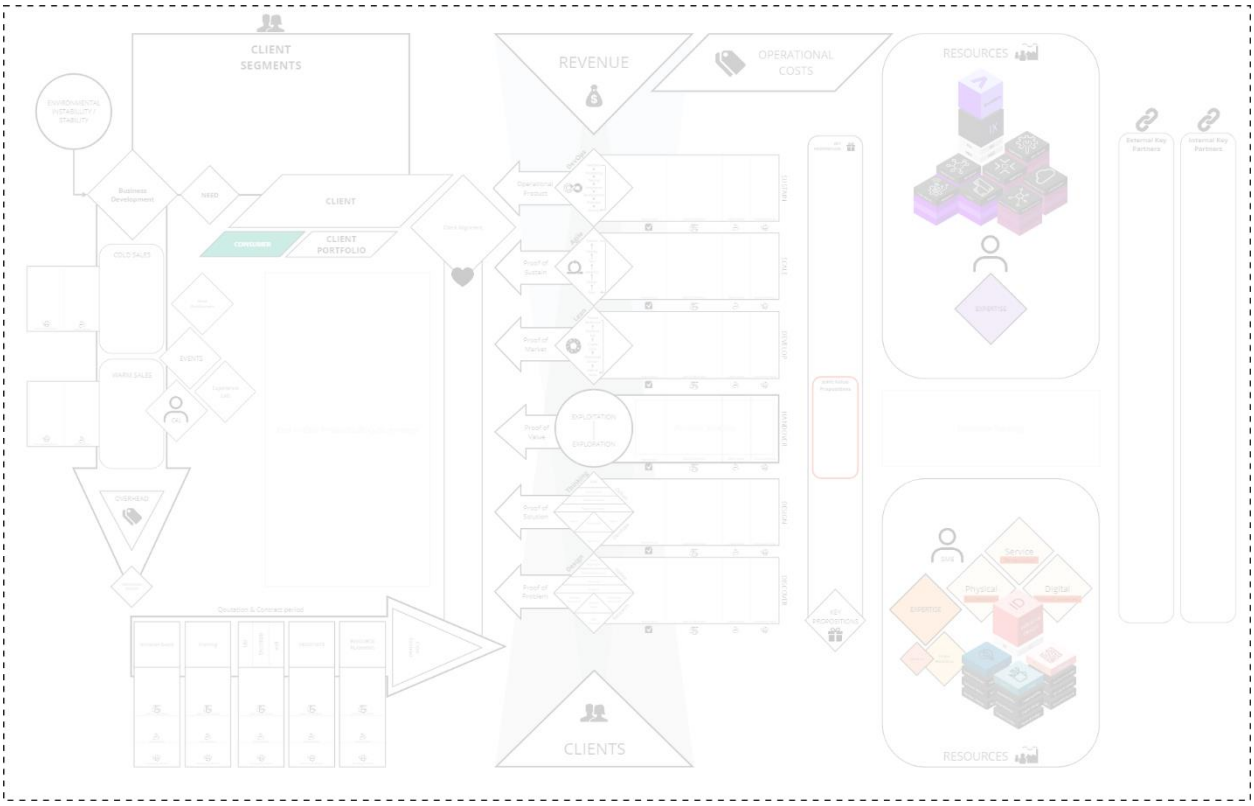

Figure 28 - W2 Mapping Area for Causal Diagramming within context

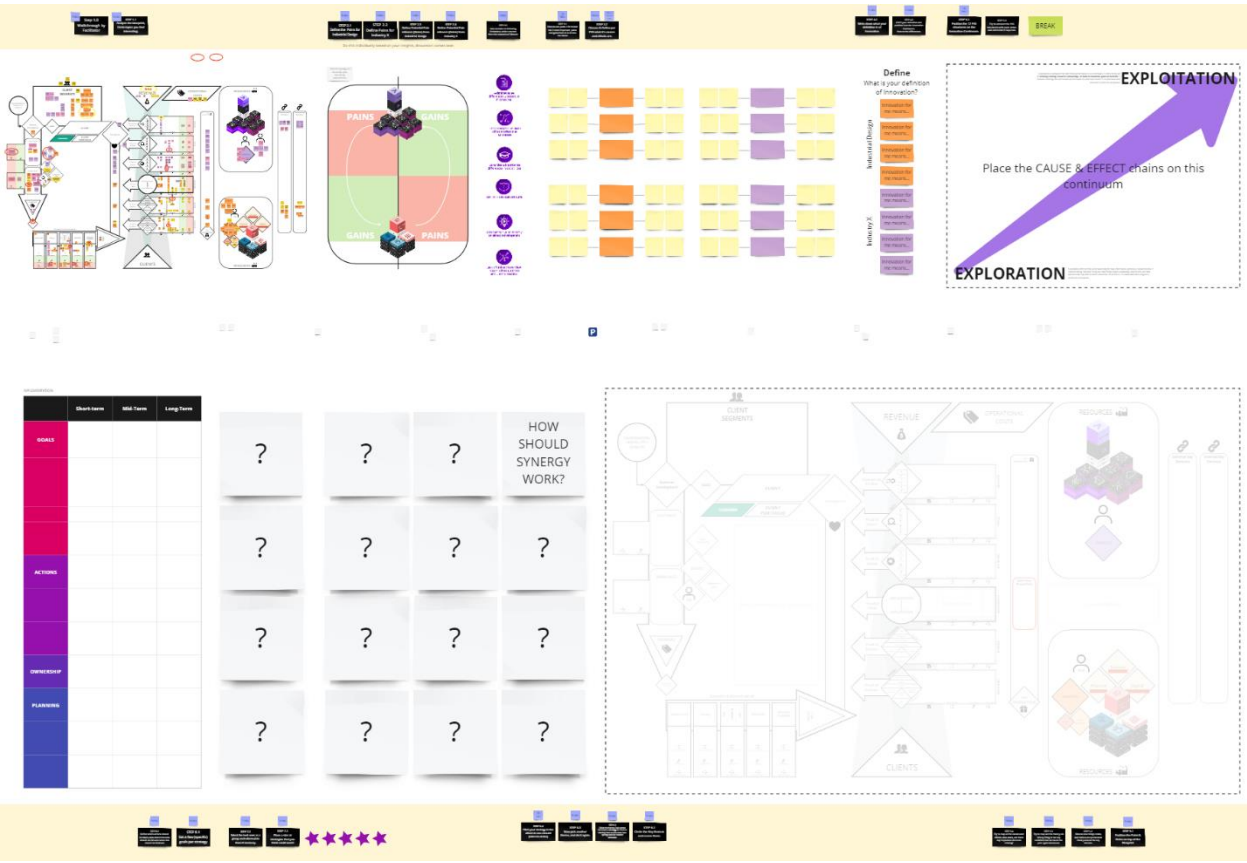

Figure 29 - W2 Overview of second iteration Workshop Space

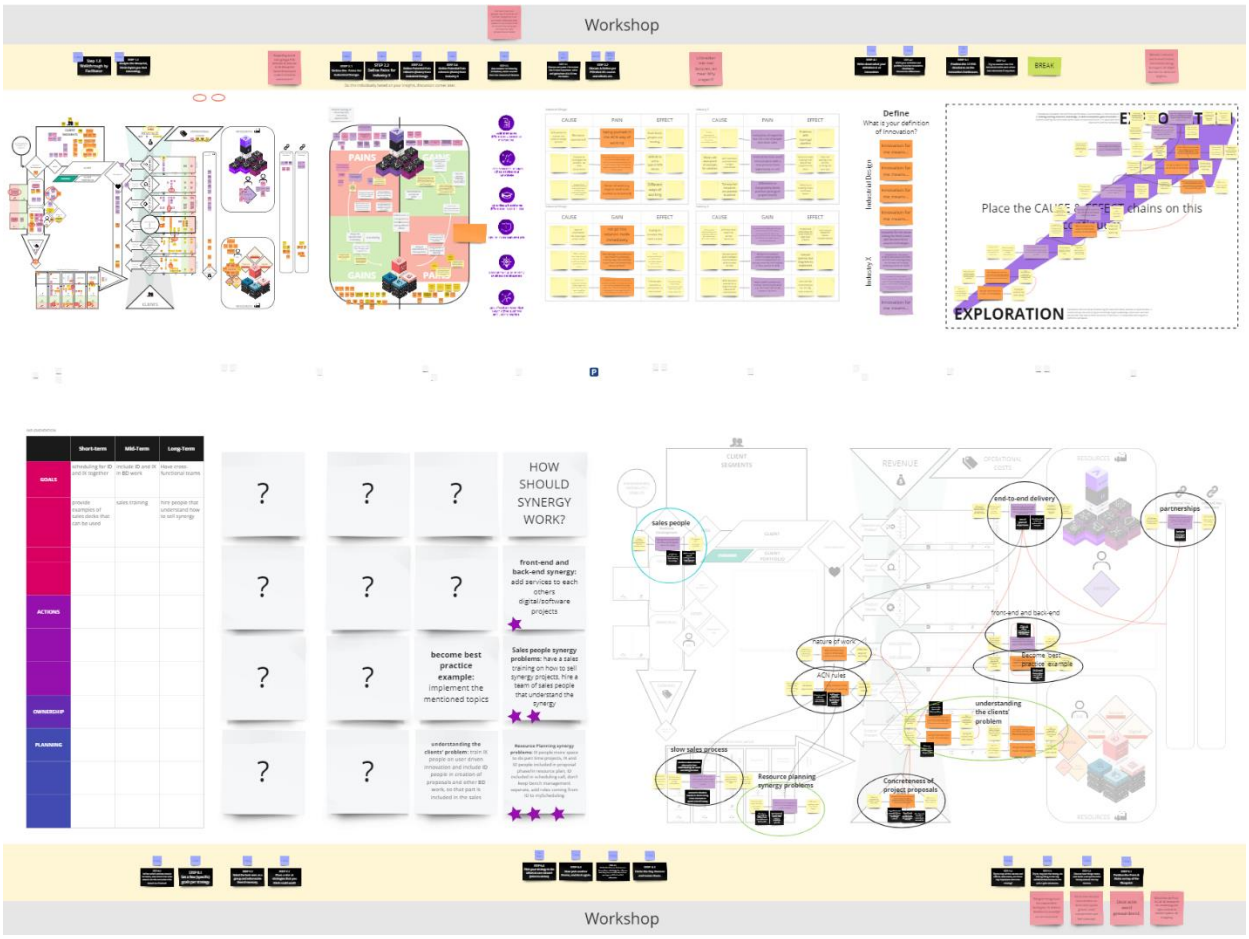

Figure 30 – W2 Populated Workshop Space

F3. Figures from third Workshop

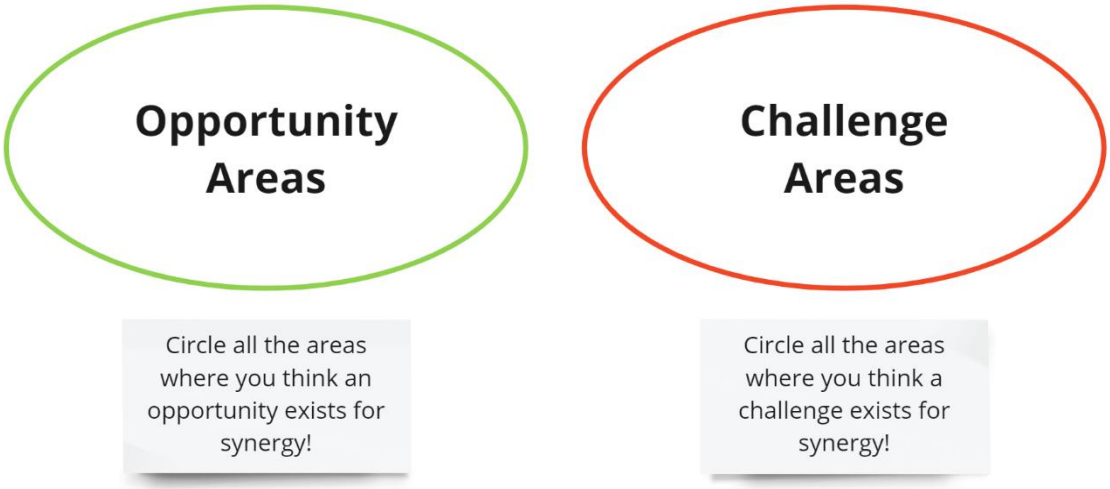

Figure 31 - W3 Revised Opportunity Area Identification

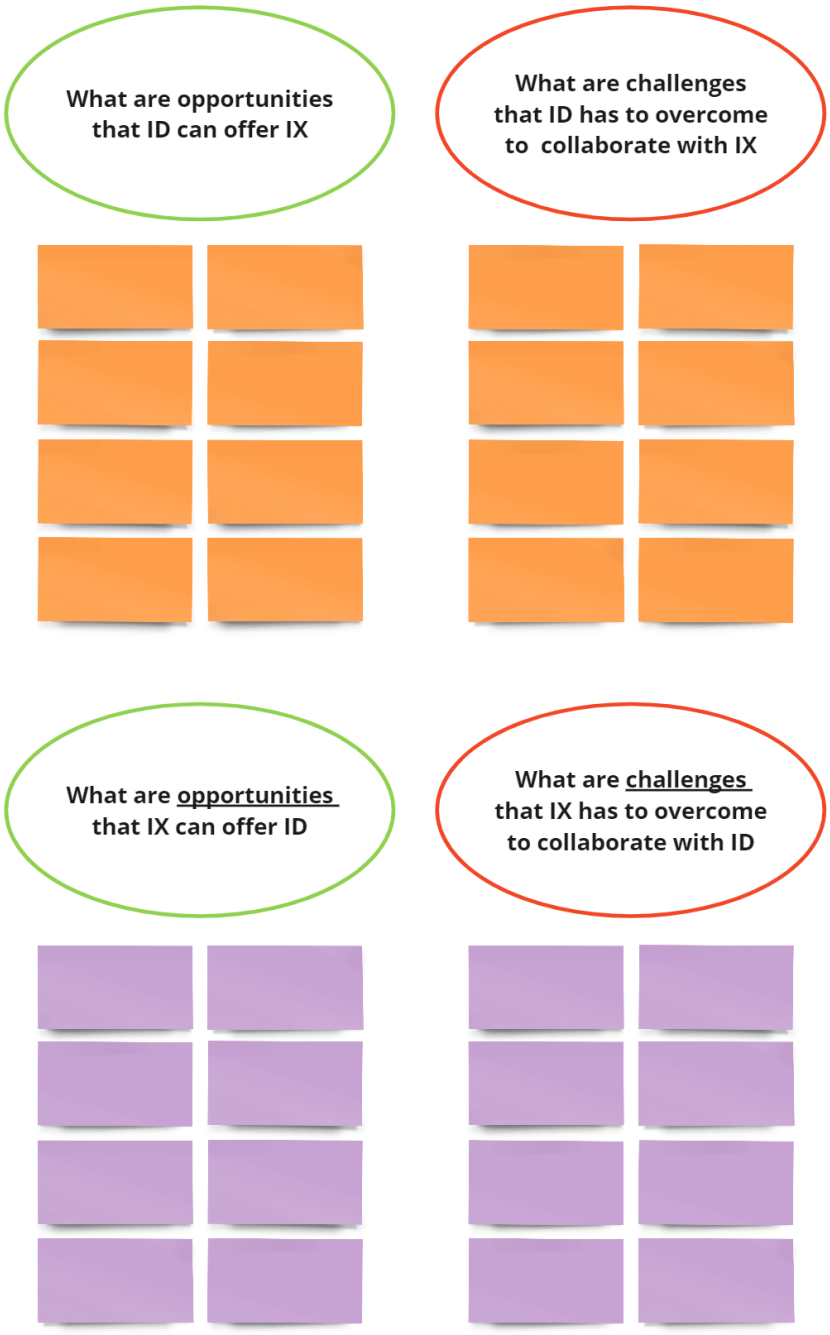

Figure 32 - W3 Opportunity & Challenge Definition

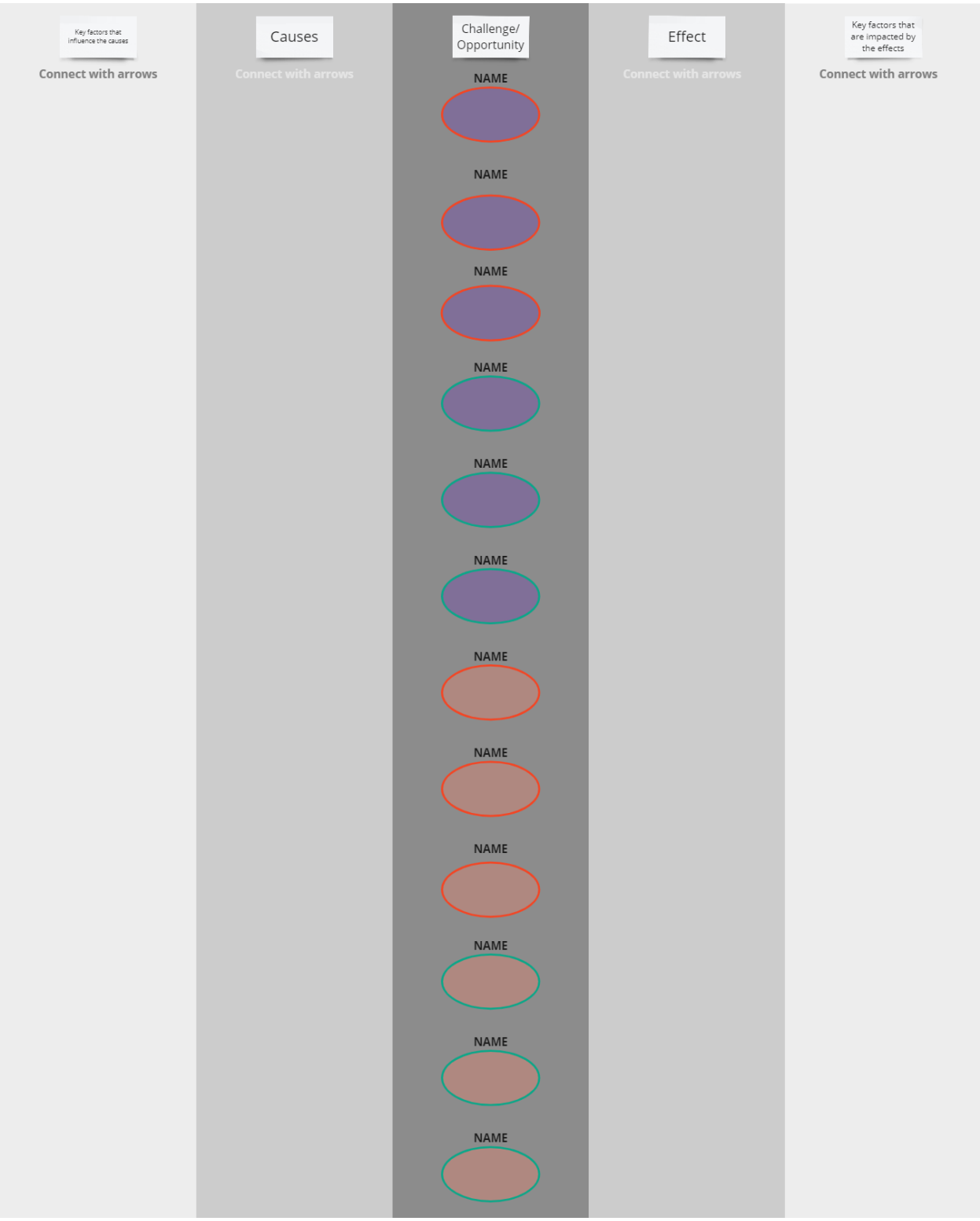

Figure 33 - W3 Cause & Effect Elicitation

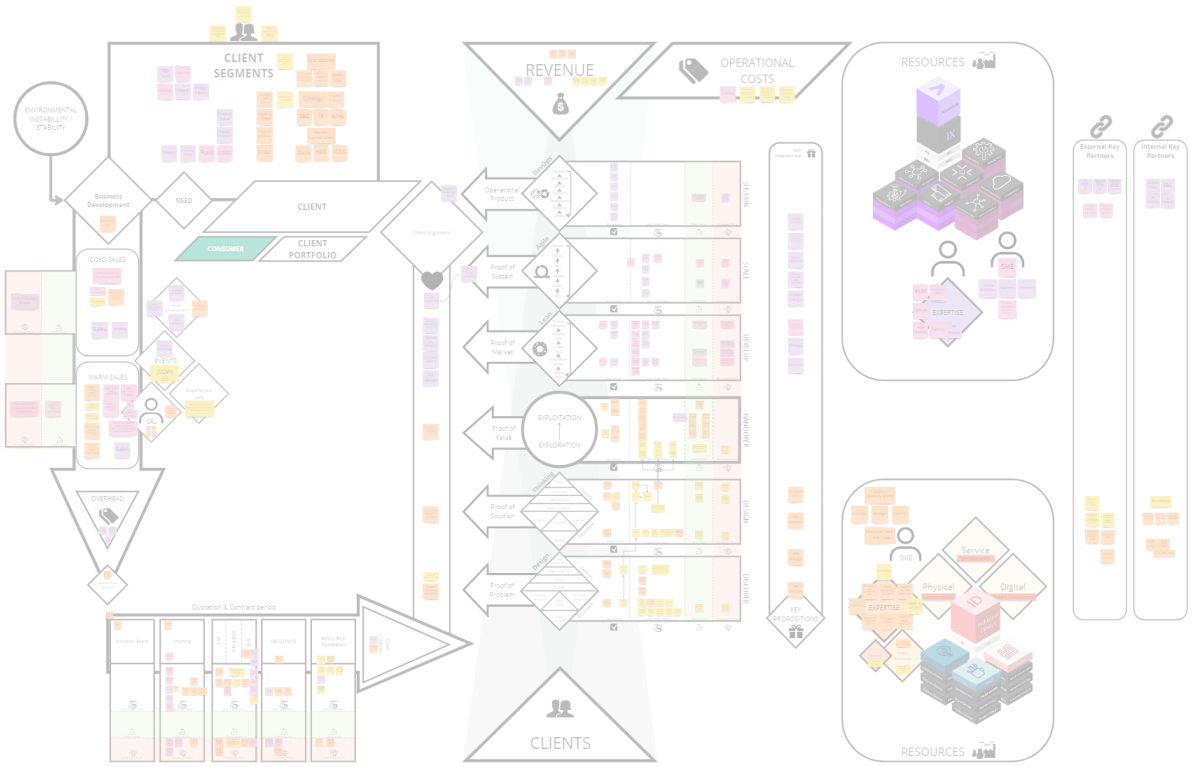

Figure 34 - W3 Causal Diagram Mapping

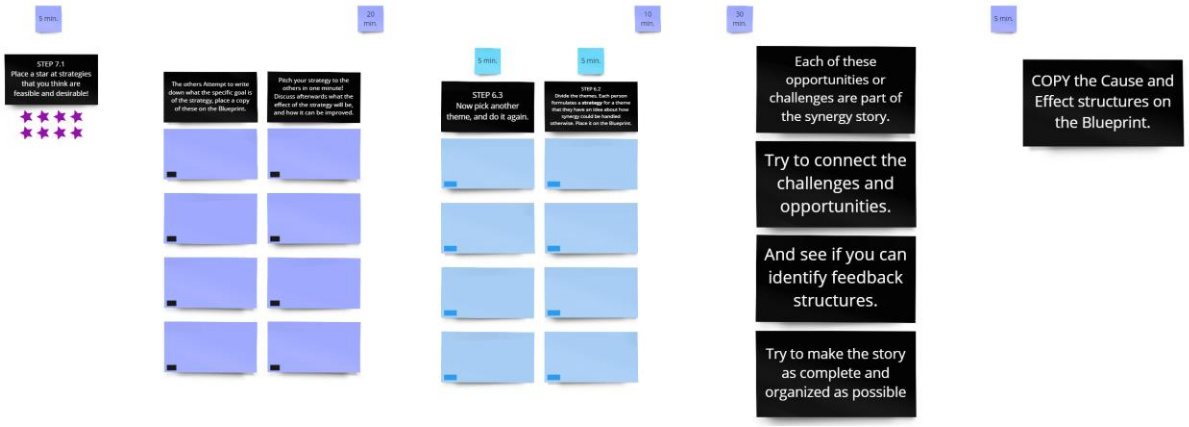

Figure 35 - W3 Causal Diagramming Steps

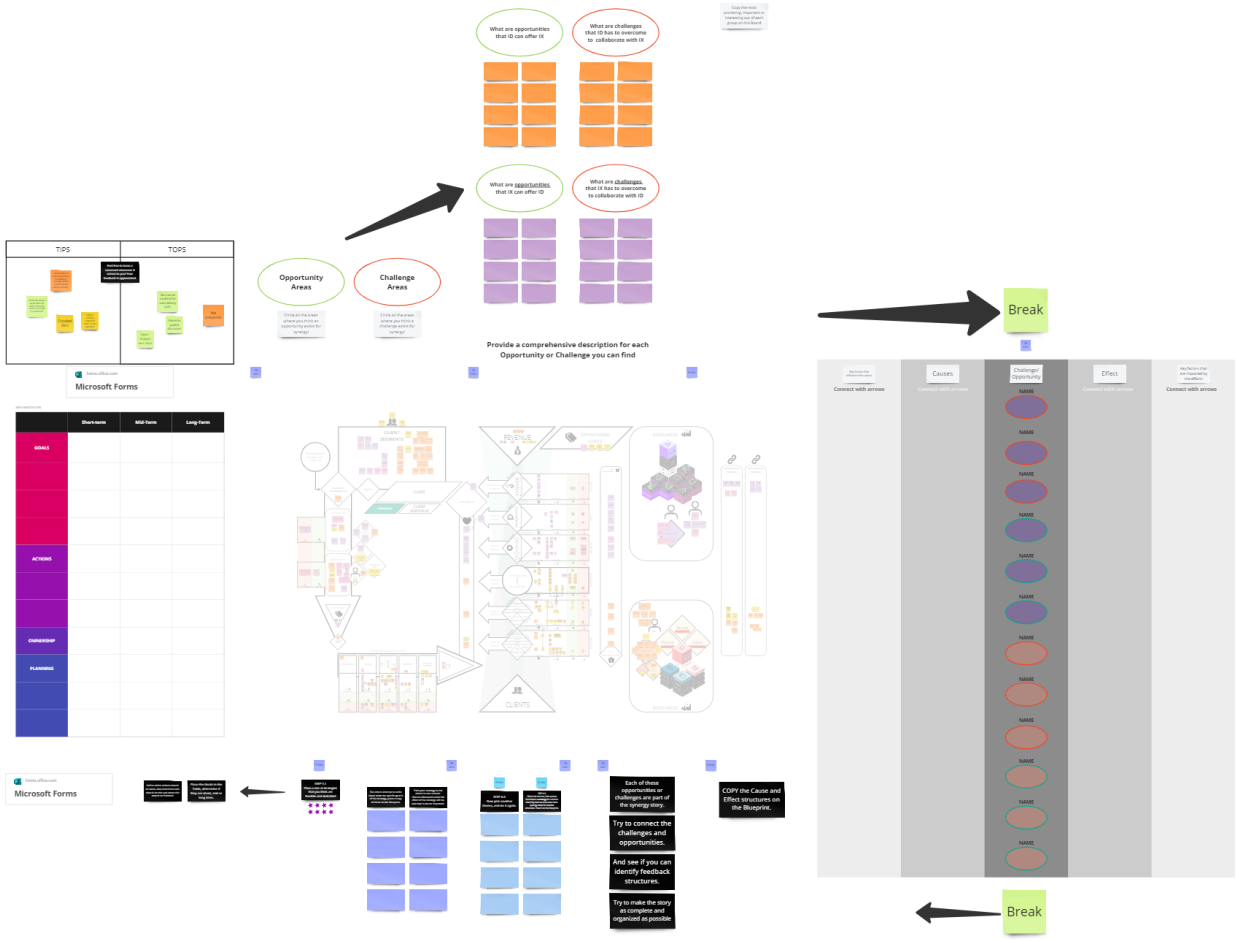

Figure 36 - W3 Workshop Space

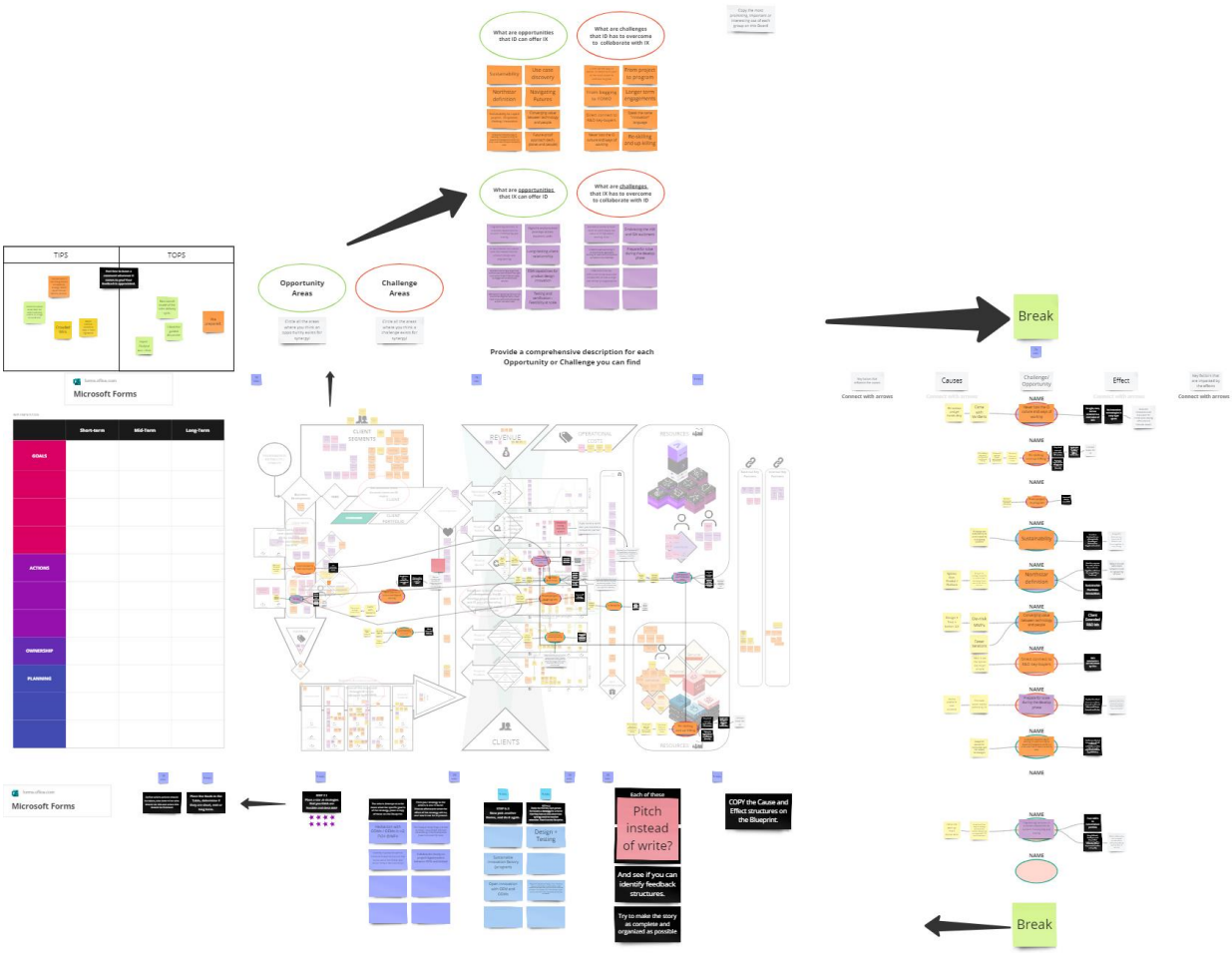

Figure 37 - W3 Populated Workshop Space