Creating a Toolkit for an Internal Design Studio to Impact Organizational Design Maturity
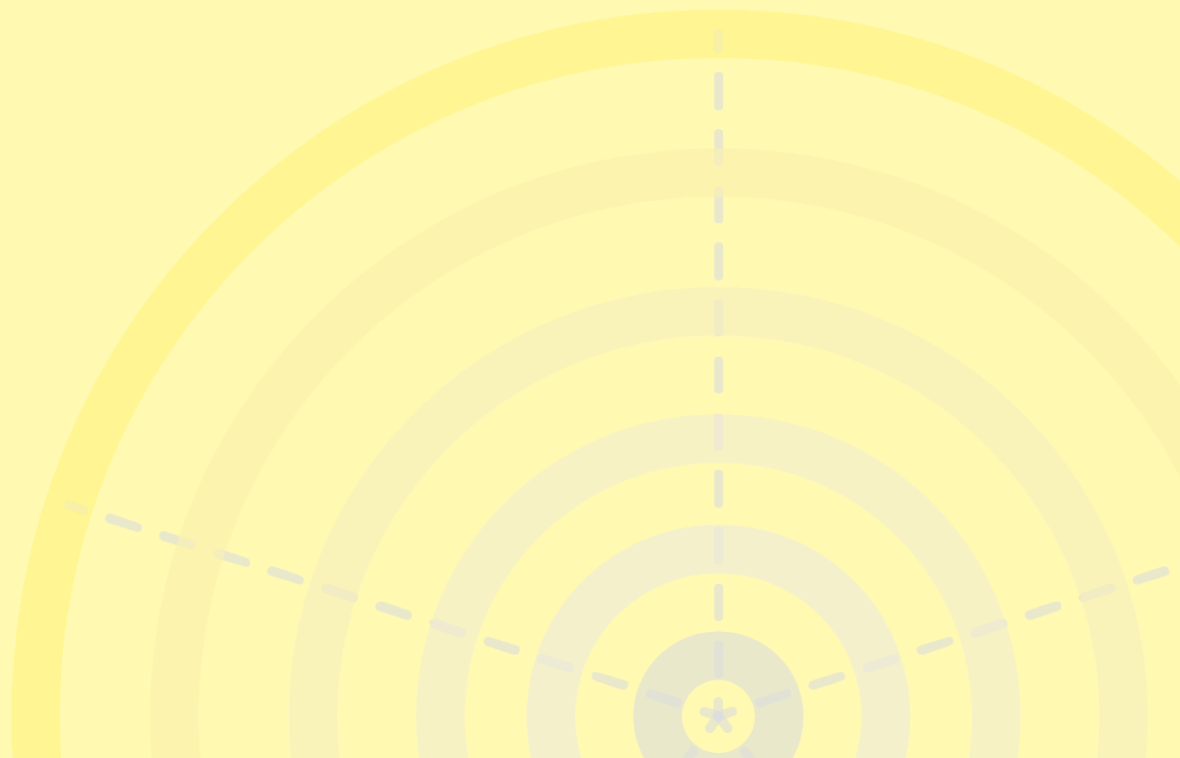
**Creating a Toolkit for an Internal Design Studio
to Impact Organizational Design Maturity**

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Executive Summary

Academic research and professional practices have proven the value of organizational design maturity. Design practice is becoming more and more valuable in facilitating innovation within organizations (Calabretta & Kleinsmann, 2017) and has helped the business adapt through connecting stakeholders and interdisciplinary communication.

Shell Agile Hub is a global software engineering studio within Shell. It is an experimental team that brings in new ways of working and thinking. Agile Hub communicates the value of design through delivering digital products. They also want to create a network where design can be mature and thrive.

Initial assignment

The initial research question for this study is **"How can an internal actor help the organization proceed on the road towards design maturity?"**. The initial assignment is to design a strategy for Shell - and Shell Agile Hub as an internal strategic partner - to help the organization gain and retain the momentum towards design maturity.

Reframed assignment

After exploring the context of Agile Hub and literature around design maturity, the researcher tended to connect the two dots.

Regarding the context of Agile Hub, its leadership is pursuing a higher level of design maturity. At the same time, **the designers face challenges in their daily operations with different product situations while interact-** ing with similar groups of audiences and stakeholders**.

On the literature side, existing maturity models share five indicators, three of which strongly focus on the operational level. Moreover, **understanding and communicating visions with the designers at the operational level is a crucial step for mid-level managers to orchestrate transformation**.

Therefore, the assignment is reframed two-fold:

Assignment 1: To create an assessment framework of design maturity for individual designers from different product teams that generate shared visions.

Assignment 2: To enable different product teams to apply specific strategies in their daily operation towards a shared vision.

Figure 1 An operational-focused design maturity framework

An operational-focused design maturity framework (Figure 1):

The researcher concluded five overlapping indicators from multiple existing maturity models and found similar focuses between the design operation models and three design maturity model indicators. The researcher proposed a design maturity framework with an operational focus.

A two-part toolkit to empower designers (Figure 2):

After reframing the assignment, the researcher developed and tested a toolkit with designers in Agile Hub to provide them an opportunity to reflect on their operations with minimal effort and empower them to create initiatives toward a shared disciplinary success.

The first part of the toolkit is a self-assessment questionnaire. The form of a questionnaire makes sure low effort and high honesty. This part enables the designers to understand design maturity through an operational lens while triggering some discussions for actions.

The second part of the toolkit is an action-enabling workshop. The form of a workshop ensures high-level engagement and ownership of the actions generated during the session. This part enables designers to understand design maturity further and to create shared visions and actions.
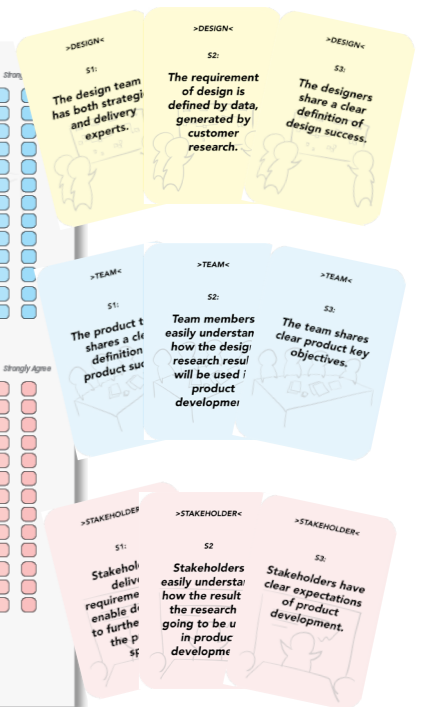

Figure 2 A two-part toolkit to empower designers

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01

Chapter 01:
Project Introduction

In this chapter, you will find the initial setup and assignment of the project, the involved stakeholders and the approach structure

1.1 Project brief

Academic research and professional practices have proven the value of organizational design maturity. Design practice is becoming more and more valuable in facilitating innovation within organizations (Calabretta & Kleinsmann, 2017) and has helped the business adapt through connecting stakeholders and interdisciplinary communication. Major consultancies, from large ones like McKinsey (Sheppard et al., 2021b) to more expert ones like Koos (Twize B.V., 2022) and InVision (The New Design Frontier by InVision, 2019), also conducted research or generated supporting models to contribute to the related area.

Furthermore, an addition to the academic side, IBM is one of the first implementors of design training for all employees, allowing them to pick up a human-centered mindset that values the consumer end. The IBM practice showed excellent business success and made it possible to adapt to the fast-changing market (Clark & Smith, 2008).

Shell Agile Hub is a global software engineering studio within Shell. It is an experimental team that brings in new ways of working and thinking. It is a complex problem-solving team as a part of the Information Technology department, providing design, product management, and engineering services for other business units from Shell or Shell's business portfolio. The Agile Hub communicates the value of design through delivering digital products. They also want to create a network where design can be mature and thrive.

However, considering that in Shell, most businesses have a linear process that ends with design, the team is experiencing challenges like the misinterpretation of task distribution and capabilities. As the name Agile Hub suggests, it is considered to mainly provide services for agile development and lean innovation, which is only a tiny part of what Shell Agile Hub is capable of.

The value of implementing a human-centered mindset within an organization and gaining design maturity has been proven. However, the majority argued from either a top-down or a third-party perspective. There are limited studies on how an internal strategic partner can help the organization gain and retain the momentum toward design maturity. Many organizations already have an internal design force like Shell. Studying the case of Agile Hub is an excellent opportunity to explore this unique perspective from inside an organization. By emerging into the context, the researcher plans to understand the barrier and how designers can communicate design values more effortlessly and efficiently to help an organization proceed on the road of design maturity, especially from an internal context.

Initial project assignment

The initial research question for this study is "How can an internal actor help the organization proceed on the road towards design maturity?". The initial assignment is to design a strategy for Shell - and Shell Agile Hub as an internal strategic partner - to help the organization gain and retain the momentum towards design maturity. This would concern three points:

1) an aligned future vision of design maturity,
2) a starting point demonstrating the value of design, and
3) a road map including tangible steps towards the shared vision.

Stakeholders

This project concerns several stakeholders. The basic division of stakeholders is two-fold: the primary stakeholders from Shell Agile Hub and the stakeholders from TUDelft.

The major stakeholder from Shell Agile Hub is Tom Greenwood, who is the Design Lead of Agile Hub NL and the supervisor of this project. Tom has carried out design promotion initiatives in Agile Hub NL and is very interested in the topic of design maturity, therefore functioning as the problem owner of this project. Besides, there are Stuart Blyde (Global Manager of Agile Hub), Anish Joshi (Strategic Design Consultant) involved in the key decision-making and overseeing the project direction. Multiple product designers and service designers are also involved in the project, mostly in the more latter phase of the project where "user" testing is conducted and feedback collected.

From TUDelft, Giulia Calabretta (Chair) and Katrina Heijne (Mentor) form the supervisory team of this project.

1.2 Project Approach

The researcher implemented a double diamond approach in general (Figure 1.1):

The researcher starts with a discovery phase. By exploring the company context by collecting existing documents and carrying out semi-structured interviews, the researcher gained knowledge of the purpose and business model of Shell Agile Hub, and the audiences of the design value through day-to-day operations. Meanwhile, literature research is carried out to support the context exploration and identify the project's scope. Taking that Agile Hub is operating with a business model of an internal service provider, most of the design work or value is communicated through product teams. The researcher wants to find out possible overlapping focuses between major design maturity models and some characteristics of Agile Hub, hence proposing a direction of the bottom-up approach to change orchestration.

From that, the initial problem statement and assignment are reframed in the define phase. The direction of solution is two-fold, first to help designers in different product teams self-assess their maturity level and then understand the purpose of design maturity assessment while gaining ownership of actionable steps towards a visionary future.

After that, the process enters the developing phase. For the first direction, a framework of design maturity measurement is generated from existing maturity models. It is tested with designers from multiple product teams in a form of a questionnaire. For the second direction, the researcher designed a workshop where designers can discuss and co-create with each other from different product teams to engage in the process of maturing design.

To deliver the toolkit, a amual for the questionnaire and workshop is created, along with a manual stating the focuses during each intervention. Besides, a design maturity framework is created specifically for the context in Shell Agile Hub, and some milestones to further develop the toolkit in the future.
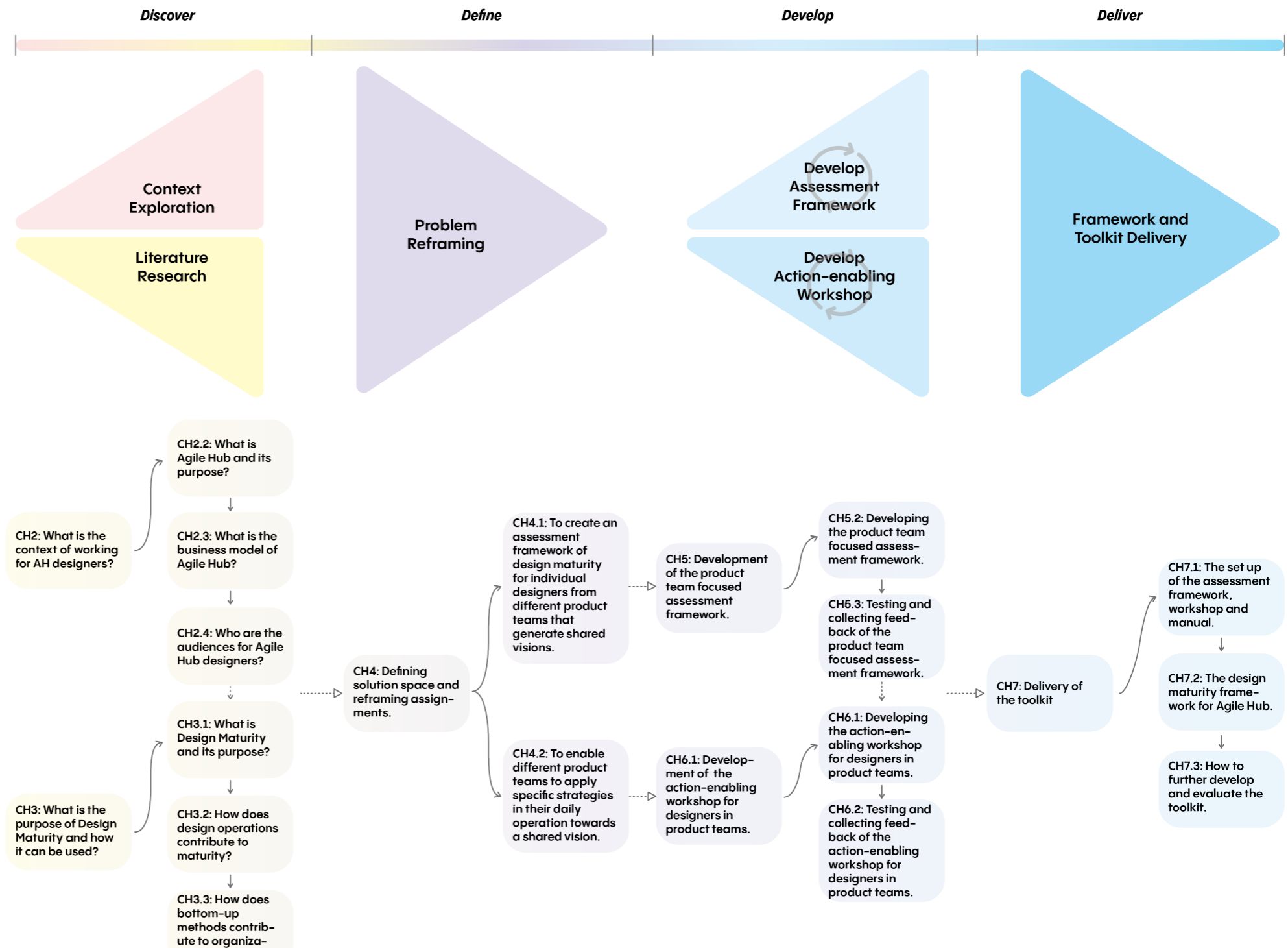

Figure 1.1 Double-diamond project approach

Chapter 02:
Context Exploration

In this chapter, you will find the first round of context exploration in Shell Agile Hub. The researcher outlined the definition, purpose, and business model of Agile Hub, and the three group of audiences of the value of design.

2.1 Approach: semi-structured interview

To gain a deeper understanding of the context, The researcher carried out a round of semi-structured interviews with the key stakeholders from Shell Agile Hub mentioned in the former chapter, along with some individuals from the leadership team, including the product management lead and engineering lead. The interviews are coded and some characteristics are concluded (Table 2.1), and help the researcher to further understand the context.

The semi-structured interview guide and raw interview data can be found in the appendices.

Reference	Definition	Characteristics
"(Agile Hub) introduced more modern ways of thinking."; "Agile Hub is an instrument od change."; "…overall might be contributing a new way of thinking, not about design, but about product management and customers.";	Aglie Hub brings in new ways of thinking and working.	
"…the ultimate goal is to digitally transform Shell."; "Agile Hub has the capability of leading digital transformation."; "(Agile Hub) should penetrate the agile model into Shell, at least into IT.";	Agile Hub should lead digital transformation.	Agile Hub is a change angent.
"(Agile Hub) is a platform for Shell to explore innovation."; "Agile Hub is challenging the mindsets of management people.";	Agile Hub is an Innovation platform.	
"(The products are) demonstrating the value of design."; "Agile Hub transparently demonstrate the value of how digital product should been built."; "Agile Hub is like a stage, showing what designers can do for business.";	Agile Hub is broadcasting value of design/digital.	
"Business still see themselves as order-givers, while Agile Hub wants to became an equal partner."; "Agile Hub aims to become the strategy body working alongside the business.";	Aim for a strategic partner than an internal consultancy.	Agile Hub aims at becoming a strategic partner.

Reference	Definition	Characteristics
"(Leardership team are) directing and managing the design process."; "Design is all about negotiation, do the best job and within the budget."; "Meetings upfront (with stakeholders) to demonstrate how Agile Hub works, and what is different.";	Agile Hub is managing communication with stakeholders.	
"(Druing products) making compromises to start in the middle but still needs to trace back a little."; "(Products) start with investigating the problem space."; "(Product teams) stick to always running research by Agile Hub even the business doesn't want it.";	Research is key to product creation in Agile Hub.	Agile Hub thrives in digital service providing.
"Agile Hub designers needs to deliver quickly to show business value."; "(Product teams) stick to always running research by AH even the client doesn't want it.";	Designers are in delimma.	
"Close relationship of the three principle is the uniqueness (for Agile Hub)."; "At the bottom what motivate people might be different for designers/engineers and product managers."; "Different disciplines have different understandings about contribution, but overall contributing to the same image.";	Communication among disciplines is important for Agile Hub.	Frictions happen in communications.
"Close relation with business is crucial to projects."; "A good compromise is as important as fighting for success., right?"; "Product owners are the spokesman of businesses (in product teams)."; "Different clients hold different expectations for projects.";	Communication with clients determines the nature of product.	

Table 2.1 Coding of the semi-structured interviews

2.2 Shell Agile Hub: definition and purpose

Learning from the interviews, Shell Agile Hub is an internal innovation studio, providing digital solutions for other business units or portfolio requirements while showcasing the value of human-centered design. To quote the definition from the global manager, Agile Hub is "a one-stop product incubator that is able to get things done quickly from problems all the way through to potentially, software".

There are three disciplines forming the structure of Agile Hub, which are product, design, and engineering. The purpose to set up three disciplines is to be able to quickly form a team of capable individuals to carry out agile development of products. This structure helps the portfolio owners in Shell a faster way to ideate and create new products, instead of gathering a team of product managers, designers, and engineers across Shell by themselves.

Being established four years, Agile Hub has been an experimental capability that continuously brings in relatively new ways of working to the organization. Specifically, the product discipline is taking in a product management mindset, challenging the traditional project-oriented way in Shell.

"we are getting groups in Shell to think of problem first, instead of solutions."
--Product Lead, Agile Hub NL.

Regarding the engineering discipline, the team is bringing in new technology stacks like cloud-based coding platforms, and getting Shell involves more into open-source projects.

"it's about taking the right stance to be respected in these communities that is not only for branding, but also taking actions, right?"
--Engineering Lead, Agile Hub NL.

Finally, the design discipline is advocating a human-centered design mindset in the organization. By keep recruiting designers with digital product experiences, the team demonstrates the value of human-centered design by integrating design methodologies like user research insights into product development.

"design thinking or like thinking like a designer, that is definitely a really good step or good evidence that it is actually working."
--Design Lead, Agile Hub London.

Takeaway:

Agile Hub is an instrument of new ways of working within Shell. All three disciplines are contributing to the same purpose while each of them has a specific focus on their own expertise.

2.3 Business model: internal consultancy

Shell Agile Hub functions as an internal consultancy. Product requests come from other business units or business portfolios to Agile Hub. Seeing from Figure 2.1, all the requests will first experience a status check, which is an assessment of existing research and exploration in the problem space to decide which level a particular product lies into:

1) Strategic portfolio level

This level indicates little existing exploration of products. This allows Agile Hub to research the problem space on a holistic level, helping the client with decision-making.

2) Pre-defined project level

This level indicates a specific request with a clear problem definition and opportunities. Agile Hub will still explore the problem space on some level using human-centered methods.

3) Opportunity level

This level indicates pure functional requests. Agile Hub will deliver the product while seeking a higher level of engagement.

Status check allows Agile Hub to validate and align product demands with stakeholders before initializing the product development process. Before the status check, there is an optional workshop called Flightplan that helps with strategic decision-making on products, mainly serving the strategic portfolio level of requests.

After the status check, a product will move on to its iterative design and development stage contains three main steps, Lift-off, Orbit, and Landing. Lift-off indicates more in-depth research around the problem space regarding the customer, business, and technical focus. Orbit allows Agile Hub to implement an iterative and agile approach to fast delivery, enabling Agile Hub to decide to continue, pivot, or stop on each product sprint. And the final step Landing is an assessment of value delivery. Product operations will no longer be overseen by Agile Hub but will move back to the clients.

Takeaway:

Agile Hub helps form product teams for internal clients. The status check gives different product team members the liberty to adjust the development plan according to different situations. However, the product expectation and maturity are changing during the whole process, and the status check is not enabling the team members, especially the designers to oversee the impact they are creating.
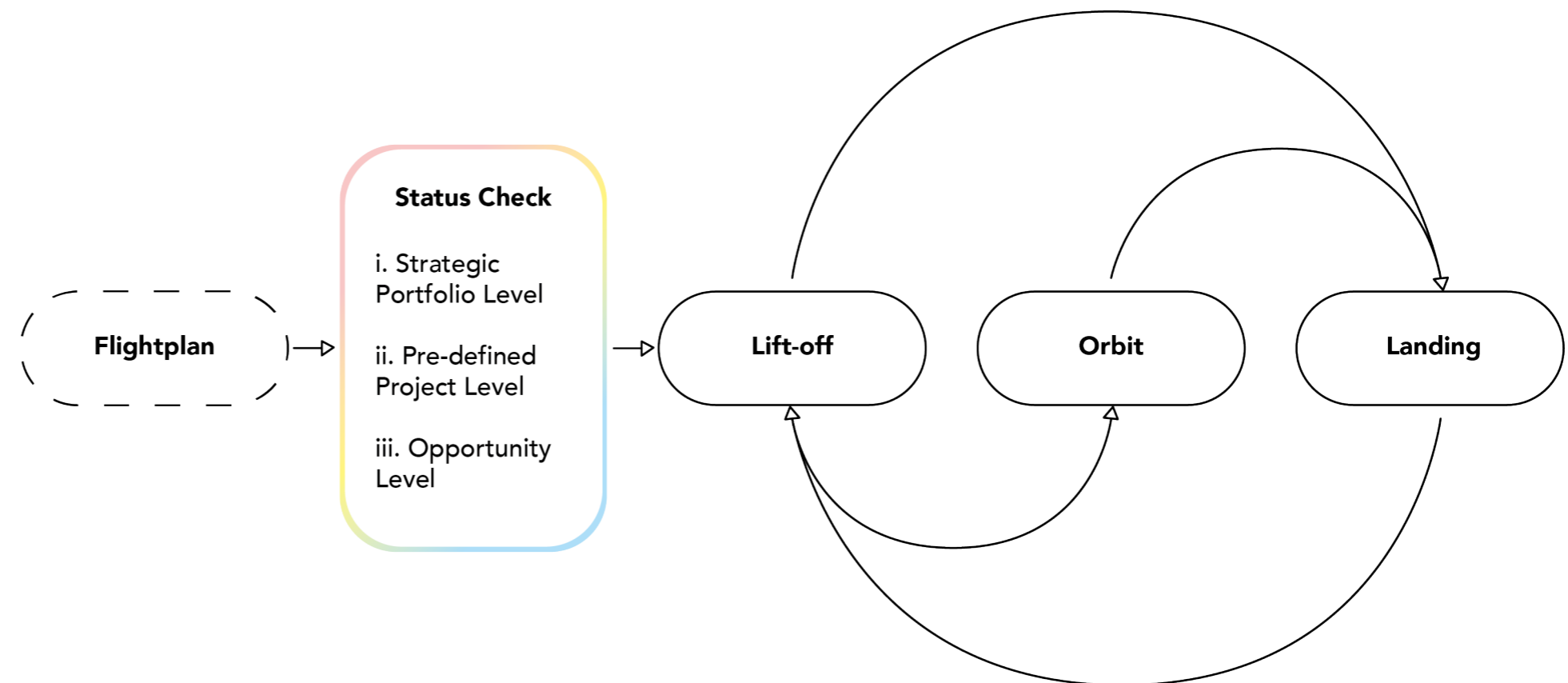

Figure 2.1 Internal consultancy model of Shell Agile Hub

2.4 Audience groups: the Agile Hub designers

To help the organization proceed on the road toward design maturity, it is important to understand the audience to communicate the value of design. The audiences of designers in Agile Hub are three-fold. First, there are multiple designers working in the same product team, or different product teams under the same portfolio. In this case, the other designers are the first audience. Besides designers, the product managers and engineers working side-by-side in the product teams are the second group of the audience. Finally, the external stakeholders like product owners from the business units or portfolios who are not engaged in Agile Hub daily operations form the third group of audience.

An audience map is generated from the interviews, demonstrating the holistic view of interactions between Agile Hub Design and its audiences (Figure 2.2).

The reason it is called an audience map instead of a stakeholder map is that in the context of Agile Hub, the word stakeholder has a strong relation to the external clients.
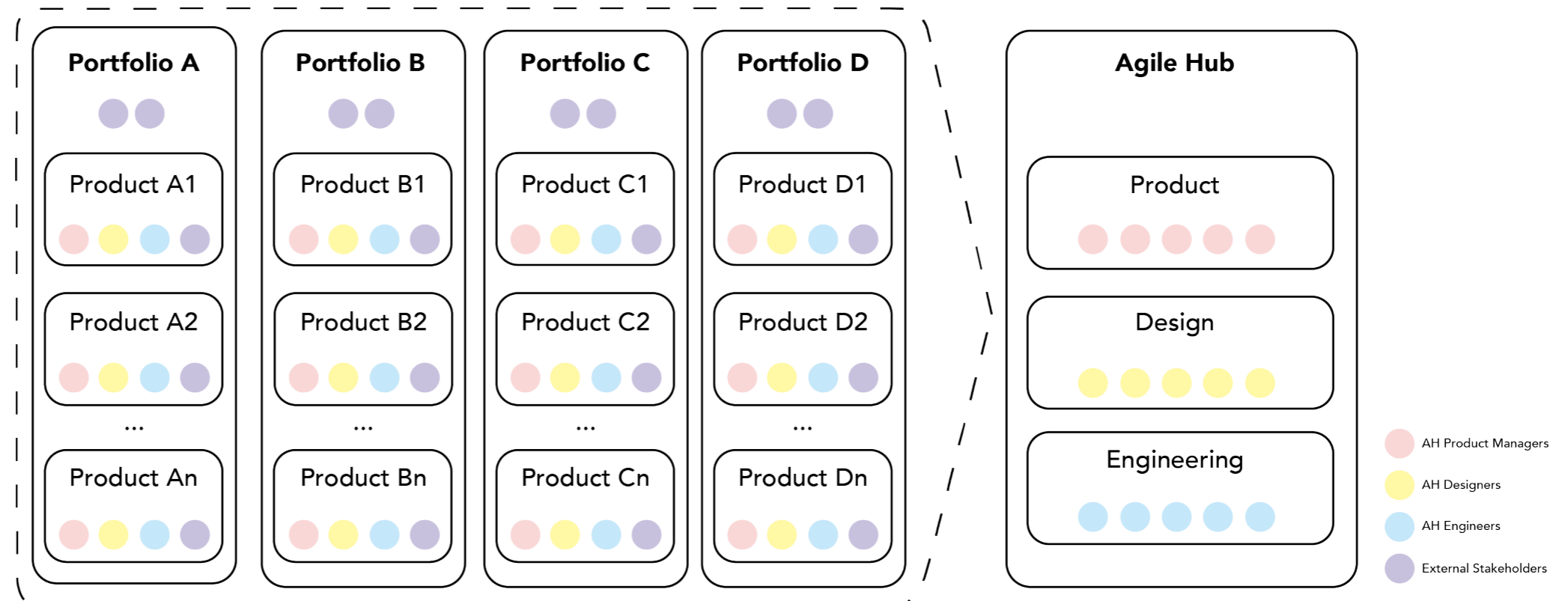

Figure 2.2 Audience map of Agile Hub Design

Takeaway:

Because the formation of product teams is mostly completed by Agile Hub individuals, the designers in Agile Hub face similar groups of stakeholders or audiences while each individual situation is unique.

2.5 Reframing the Problem

Reviewing the context in the former sections, four facts are highlighted:

- Internal consultancy model allows Agile Hub to keep bringing new ways of working and thinking into Shell. But the speed of orchestrating change is slowing down.

- Design leaders in Agile Hub are seeking a higher level of design maturity within both Agile Hub and Shell.

- Designers in Agile Hub work in different product teams, facing the same groups of stakeholders while each individual situation is unique.

- Different products have different levels of design maturity, varying from functional demands to strategic decision-making. This means there is a level of inconsistence between different teams, hence making it harder for the leadership team to create strategies.

The internal consultancy model creates an interesting situation where the value of design is being communicated through each product team by individual designers. To understand in this unique situation how designers are creating impact, the researcher reframes the research question to "how can designers in an in-house studio gain maturity through daily operation in single product teams and contribute to organizational maturity?"

03

Chapter 03:
Design Maturity Exploration

In this chapter, you will find the literature research around the topic of design maturity. The researcher summarized the overlapping indicators from existing maturity models, and found out the similarity between some of them and what design operation management is looking at. The value of change management from the operation level is argued with the support from bottom-up strategies of organizational transformation.

3.1 Design Maturity Models

Vetrov (2013) argues in a perfect scenario, companies should take "a systematic approach to product design from their very first days". Chapman (2014), on the other hand, argues that organizations should move towards gaining a higher ability to deliver design regarding not only functionalities but also aesthetics and usabilities with a direct contribution to business goals. From that, InVision (2019) carried out research across over two thousand companies, studying the relation between the level of design adoption among businesses and the benefit in return. Derived from the models above, more recent ones like the UX maturity model from Nielson Norman Group (2021) and the service design maturity model from Koos Service Design (2022) both argue the design maturity of an organization is how the in-house design capability, no matter user experience design or service design, is perceived from a pure functional ability towards a strategic and systematic one.

Figure 3.1 Design mature from functional to strategic

Some models are assessment-focused, like the Vetrov model, Nielson Norman Group model, and the Koos Service Design model. Their presentations outline a way of assessing the design maturity for the potential clients while providing possible steps to move forward. Other models are more descriptive, like the Chapman model and the InVision model. They concluded their model by carrying out research and analyzing data. These models provide descriptive information for each stage of the maturity level. All these design maturity models aim to help companies that want to further develop the design capability from a functional service provider towards a strategic partner who can contribute to transforming the whole organization. This aligns with the leadership team's persuit to transform Agile Hub from a service provider to a strategic partner.

Besides the common purpose, the researcher finds that existing maturity models share similar indicators when assessing or describing maturity levels. Each maturity model demonstrates a set of maturity indicators (Table 3.1).

Although some of the models have more focus, the five maturity models above have similar maturity indicators that all lie in five categories:

1) Resources
This indicator measures how resources, including money, time, and people, are allocated. The critical component of this indicator includes money/budget, time, people and credibility.

2) Culture
This indicator measures how much a design mindset is appreciated and applied to business. The critical component of this indicator includes consistency, leadership, application, and adoption of a design mindset.

3) Capability
This indicator measures how systematic design tools and methods are used. The critical component of this indicator includes tools, capabilities, techniques, and processes.

4) Integration
This indicator measures to what degree design is integrated with the business. The critical component of this indicator includes the timing of design involvement, integration with business, and organizational structure.

5) Outcome
This indicator measures how design is being communicated and delivered. The critical component of this indicator includes the form of the deliverables and assessment metrics.

3.1 Design Maturity Models

Author/Source	Year of Publication	Number of Levels	Maturity Indicators				
			Resources	**Culture**	**Capability**	**Integration**	**Outcome**
Yury Vetrov (UX Matters)	2013	4	Resources		Process	Priority	
Chapman	2014	6	Resources & People	Application & Leadership	Techniques	Integration &Timing	Deliverables
InVision	2019	5	People	Practice	Platform		
Nielson Norman Group	2021	6		Culture	Process	Strategy	Outcome
Koos Service Design	2022	5	Resources & People		Tools & Capabilities	Organizational Structure	Metrics & Deliverables

Table 3.1 Maturity indicators comparison of design maturity models

To expand figure 3.1, figure 3.2 shows the five indicators on a radar chart to demonstrate five focus when persuing design maturity.
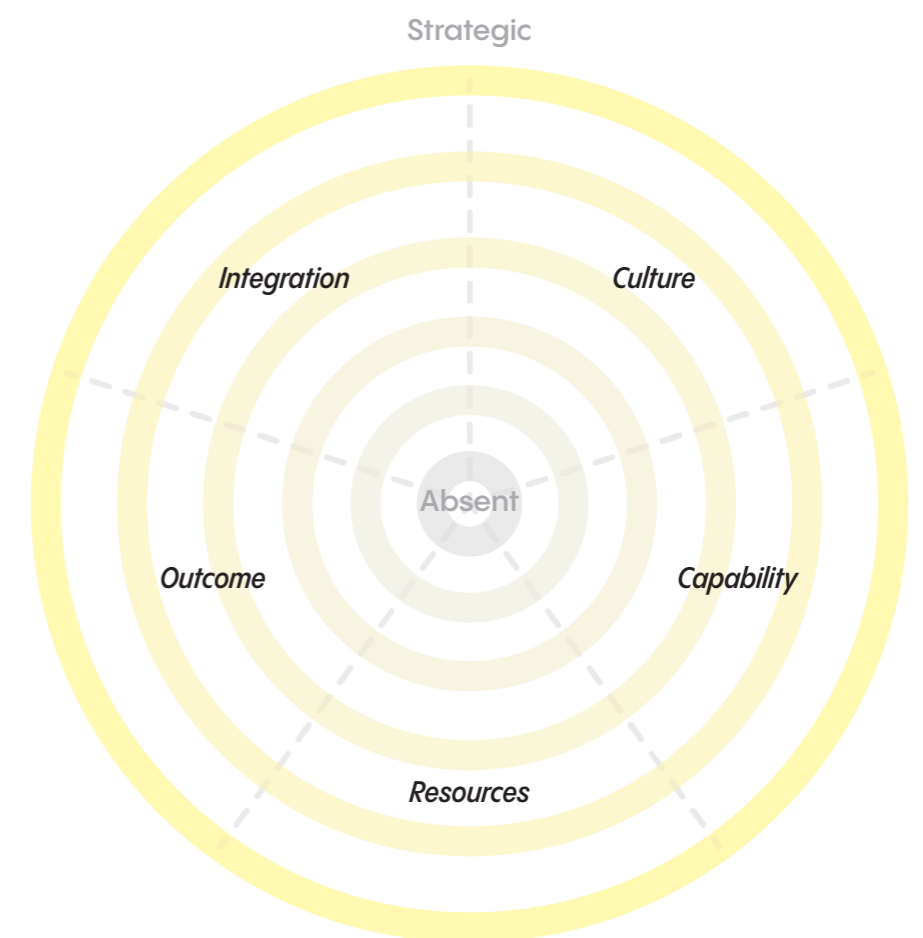

Figure 3.2 Design maturity and the five indicators

3.2 Design operation: the overlapping focus

However, none of the existing design maturity models have a specific focus for internal consultancies like Agile Hub to initiate the transformation from the bottom to the top. That is why the researcher find another direction where there is a specific focus on the bottom level operations for design.

Design operation (or DesignOps) is a continuously growing hot topic since the end of 2016. The concept contributes to a clear purpose of scaling the value and impact of design within organizations, which aligns with the purpose of design maturity models. Kaplan (2019) defines design operation as "the orchestration and optimization of people, process, and craft in order to amplify design's value and impact at scale". The key challenges addressed were fourfold, to grow and evolve the design teams, to improve the quality and impact of outcomes, to create efficient workflows, and to form teams with people with the right skill set. Sabitov (2020) further generated a focus area demonstration for DesignOps, with four areas including people, practice, tools, and craft. He also introduced three levels for each of the topics, from each individual team to the value streams and finally to the whole organization.

Takeaway:

The concept of design operation serves the purpose of scaling design, with focus on people, tools, practice, and craft. These four focus areas partially align with the design maturity indicators (Figure 3.3) but have a more operational perspective. For example, the Resources, Capability, and Outcome indicators are very much grounded in the operational level. The Culture and Integration indicator is less related to the operations but points to an ideal state at the organizational level. The design operation concept offers design managers the ability to start implementing changes to the operations of design teams while aiming for the change at the organizational level.
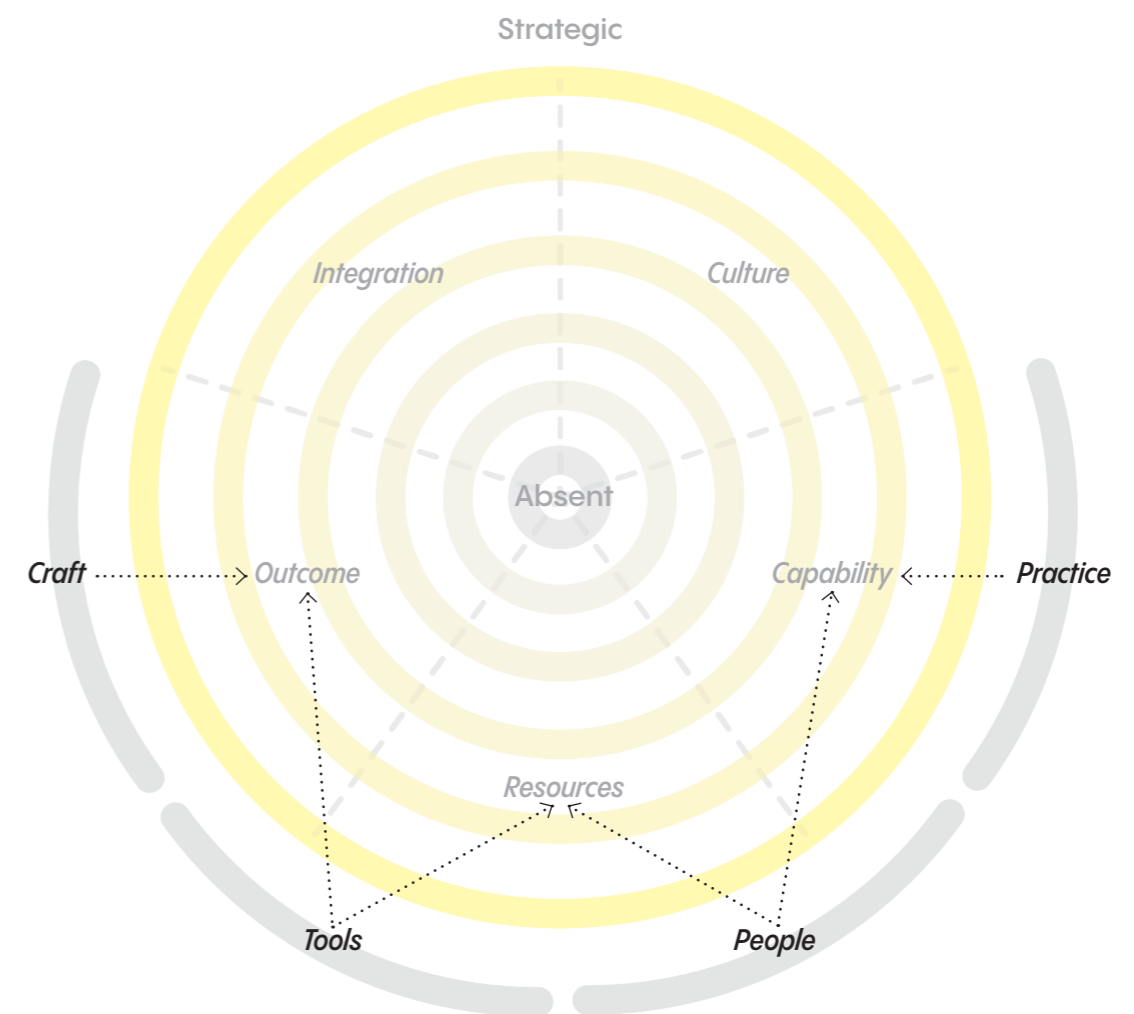

Figure 3.3 The similarity between DesignOps focuses and Design Maturity indicators

3.3 Bottom-up Strategies of Transformation

After exploring the possibility of using the operational-focused design oper-ation model to support the design maturity model with a bottom-up focus, the researcher wants to explore further the main focuses when initiating transformation from bottom to top.

There are three major approaches for bottom-up transformation, which are Networking, Paradigm Reframing, and consciousness raising (Levy, 1986).. Unlike the top-down approaches, the bottom-up perspective requires the middle level managers to play a crucial part, which is to create a vision with his or her followers, and to be able to communicate and align that vision with stakeholders.

Takeaway:

Bottom-up strategies of transformation requires high engagement from mid-dle level managers. To be able to create a momentum of change towards a new paradigm, the managers need to have a clear vision of the future. This vision should base on the communication and understanding of his or her followers, which in the case of Agile Hub, the designers from different product teams.

3.4 Literature Research Summary

From the literatures, there are three arguments that contribute to the researcher's decision when reframing the project direction:

– Design maturity has five indicators: Resources, Culture, Capability, Integration and Outcome.

– Three of the indicator, resources, capability, and outcome, align with the focus of the design operation management.

– To create a momentum of change, the middle level managers need to understand the context at the operational level and have a clear vision towards the future.

04

Chapter 04:
Assignment Reframing

In this chapter, you will find the reframing of assignment directions according to the context and literature research.

4.1 Defining Solution Space

After exploring the context of Agile Hub and literature around design maturity, the researcher tended to connect the two dots.

Regarding the context of Agile Hub, its leadership is pursuing a higher level of design maturity. At the same time, **the designers face challenges in their daily operations with different product situations while interacting with similar groups of audiences and stakeholders**.

On the literature side, existing maturity models share five indicators, three of which strongly focus on the operational level. Moreover, **understanding and communicating visions with the designers at the operational level is a crucial step for mid-level managers to orchestrate transformation**.

The arguments above point to an exciting solution space, where the design maturity framework can be the baseline for understanding and communicating visions. At the same time, the formality can focus on engaging personnel at the operational level and creating coherence among different situations.

Hence, the researcher decided to limit this project's scope to develop a framework to enable design leads to gather and create a shared vision with operational-level designers and empower them with ownership of the initiatives towards design maturity.

4.2 Reframing the assignment

Considering the definition of solution space in the former paragraph, the researcher proposed two directions of solution development to answer the research question, "how can designers in an in-house studio gain maturity through daily operation in single product teams and contribute to organizational maturity":

Assignment 1: To create an assessment framework of design maturity for individual designers from different product teams that generate shared visions.

The first direction envisioned a framework that connects maturity assessment among different teams and allows designers from an internal consultancy to align their visions. Moreover, this framework enables design leaders to understand the mature process from individual design assessments.

Assignment 2: To enable different product teams to apply specific strategies in their daily operation towards a shared vision.

The second direction means translating the assessment framework's result into actionable steps, enabling designers to apply different operational strategies to each situation. Moreover, to gain ownership of actionable steps towards a visionary future.

05

Chapter 05:
Self-assessment framework

In this chapter, you will find the developing process of the first direction of solution, the self-assessment frameowrk.

5.1 Media of the Framework

The researcher selected a form of questionnaire to present the self-assessment framework to best encourage the participants to be truthful when self-assessing the maturity level in the context of their work (Leitz, 2010).

5.2 Creation of the framework

Statement creation

The researcher started creating the statements for the questionnaire from the five indicators he concluded with existing design maturity models. For each indicator, several descriptions of a visionary situation from the existing models were collected. (Table 5.1)

Indicator	Description	Statement
Capability	Research in user experience is strongly coordinated with other customer experience feedback processes. Users are regularly consulted for product/projects. Design research with target end users is done consistently with correct techniques. (Chapman) This manifests itself in up front user/customer experience research and the creation of artifacts such as customer experience maps. (Chapman) Design brings a unique lens to strategy through exploratory user research techniques. (InVision) Have design generalists (e.g., UX designers, product designers) and visual designers on staff. (InVision) Design has clear division of roles and responsibilities. (InVision)	Customers/users are sufficiently researched. Design research methods are fully applied. The data from initial discovery is well applied. We know what we want to achieve as designers. The team is well-formed with skilled people. I face the tasks that I am confident about. Teammates easily understand design researches. I know what I can support with in the development. I know what other teammates are busy with. User testing is effecient and informative. Communication with teammates are easy and efficient.
Resources	There is senior management leadership and accountability for design at the same level as product management, development, marketing, sales, and other functions. (Chapman) A strong set of practices, processes and guidelines exist that are consistently utilized by project teams. (Chapman) Employees participate in the design process through online tools. (InVision) Employees understand what human-centered design is. (InVision) Employees understand why human-centered design is valuable. (InVision)	I am happy about the tool set we use. Design leaders actively fulfill responsibilities. The team have a clear definition of success. Engineers help me with certain challenges. Product managers help me with certain challenges. Engineers easily underastand the deisgn recommendation. The provided time is sufficient. The provided budget is rational. Stakeholders come with clear requirements.
Outcome	Design goals are linked to business objectives with the total customer experience in mind. (Chapman) Executives call attention to the design team's work. (InVision) UX work has become highly effective at serving business goals. (N/Ngroup)	Communication with other designers is in general sufficient. Customers/users appreciate the solution. Everything is well documented. Stakeholders easily understand design researches. Stakeholders are happy about our findings. Stakeholders' requirements are fulfilled. Communication with stakeholders is sufficient.
Culture	Design is considered at a "product family" or portfolio level and the decision-making processes and development are organized in recognition of this need. (Chapman) Key partners are well-integrated into the design process. (InVision) Understanding user needs through research is the primary driver of the project prioritization. (N/Ngroup)	Stakeholders easily understand design researches. Stakeholders appreciate our initial discovery. Stakeholders engage regularly in design activities. Stakeholders appreciate the solution.
Integration	A strong set of practices, processes and guidelines exist that are consistently utilized by project teams. (Chapman) Product/feature ideas are jointly developed and owned between design and key partners. (InVision) Leaders, teams, and individuals are user-centeredand look to design in day-to-day work. (N/Ngroup)	The team share a clear vision of this product. The timing is prior than any form of development. Stakeholders share the same vision with us. Stakeholders are on board with the progress. Stakeholders understand how to grow the solution in the future.

Table 5.1 The creation of maturity statements

5.2 Creation of the framework

Reframing the statement with AH design lead

With the statement created from the description in existing maturity models, the researcher first ask the Design Lead of Agile Hub Rotterdam, Tom Greenwood, to reframe them more to the context for easier understanding from the participants. (Table 5.2)

Testing and iteration

With the reframed statements, the researcher tested the survey with two senior level designers from different product teams. The participants suggested that the order of presenting the statements should be more grounded to the working context, so the researcher used the three groups of audiences defined in an earlier chapter as the order of statements when presenting to the designers. (Table 5.3)

Statement	Reframe with Expert
Customers/users are sufficiently researched.	Sufficient customer research is carried out to design for their needs
Design research methods are fully applied.	Suitable research methods are applied in order to define the product requirements
The data from initial discovery is well applied.	The requirement of design is defined by data generated by customer research.
We know what we want to achieve as designers.	The designers share a clear definition of design success.
The team is well-formed with skilled people.	The design team has both strategic and delivery experts.
I face the tasks that I am confident about.	During the whole process it is clear what I need to do.
Teammates easily understand design researches.	Team members easily understand how the design research result will be used in product development.
I know what I can support with in the development.	The team shares clear product key objectives.
I know what other teammates are busy with.	I know what other team members in my team are busy with.
User testing is efficient and informative.	Validation with users gives clear feedback for the team to act upon.
Communication with teammates are easy and efficient.	The communication with team members is in general sufficient.
I am happy about the tool set we use.	The designers are actively using the design system or other design tools.
Design leaders actively fulfill responsibilities. (1/3)	Design leads enable designers with transparent task allocation.
Design leaders actively fulfill responsibilities. (2/3)	Design leads enable designers with clear design objectives.
Design leaders actively fulfill responsibilities. (3/3)	Design leads help push through the process when stuck.
The team have a clear definition of success.	The product team shares a clear definition of product success.
Engineers help me with certain challenges.	The team members collaborate smoothly to achieve product success.
Product managers help me with certain challenges.	The product managers collaborate with designers in both the problem and engineering spaces.
Engineers easily underastand the deisgn recommendation.	The designers collaborate with engineers in both the problem and engineering spaces.
The provided time is sufficient.	(NOT APPLICABLE)
The provided budget is rational.	(NOT APPLICABLE)
Stakeholders come with clear requirements.	Stakeholders deliver requirements that enable designers to further explore the problem space.
Communication with other designers is in general sufficient.	Communication with other designers is in general sufficient.
Customers/users appreciate the solution.	The user feedback loop is efficient and informative.
Everything is well documented.	The team documented the data generated during each step.
Stakeholders easily understand design researches. (1/2)	Stakeholders easily understand how the result of the research is going to be used in product development.
Stakeholders are happy about our findings.	Stakeholders easily understand why customer research can help them achieve their product goals.
Stakeholders' requirements are fulfilled.	Key objectives are clearly defined with stakeholders.
Communication with stakeholders is sufficient.	The communication with stakeholders is in general sufficient.
Stakeholders easily understand design researches. (2/2)	Stakeholders easily understand the value of spending time carrying out customer research.
Stakeholders appreciate our initial discovery.	Stakeholders are satisfied with the research results.
Stakeholders engage regularly in design activities.	Stakeholders regularly engage in design activities.
Stakeholders appreciate the solution.	The outcome of the product enables stakeholders to achieve their objectives.
The team share a clear vision of this product. (1/2)	The team is assembled with people with core design skills to carry out the product.
The team share a clear vision of this product. (2/2)	Team members easily understand the value of spending time carrying out customer research.
The timing is prior than any form of development.	Stakeholders understand what type of information the designers need to deliver valuable design.
Stakeholders share the same vision with us.	Stakeholders have clear expectations of product development.
Stakeholders are on board with the progress.	Stakeholders regularly align the product direction with the team.
Stakeholders understand how to grow the solution in the future.	The product value and function are successfully delivered to stakeholders.

Table 5.2 reframing the statements with design lead

Designer

The design team has both strategic and delivery experts.
The requirement of design is defined by data generated by customer research.
The designers are actively using the design system or other design tools.
The designers share a clear definition of design success.
Sufficient customer research is carried out to design for their needs
Suitable research methods are applied in order to define the product requirements
Design leads enable designers with transparent task allocation.
Design leads enable designers with clear design objectives.
Design leads help push through the process when stuck.
During the whole process, it is clear what I need to do.
Communication with other designers is in general sufficient.

Team

The team is assembled with people with core design skills to carry out the product.
The product team shares a clear definition of product success.
The team members collaborate smoothly to achieve product success.
Team members easily understand how the design research result will be used in product development.
Team members easily understand the value of spending time carrying out customer research.
I know what other team members in my team are busy with.
The team shares clear product key objectives.
The product managers collaborate with designers in both the problem and engineering spaces.

The designers collaborate with engineers in both the problem and engineering spaces.

Validation with users gives clear feedback for the team to act upon.
The user feedback loop is efficient and informative.
The communication with team members is in general sufficient.
The team documented the data generated during each step.

Stakeholder

Stakeholders understand what type of information the designers need to deliver valuable design.
Stakeholders deliver requirements that enable designers to further explore the problem space.
Stakeholders easily understand how the result of the research is going to be used in product development.
Stakeholders easily understand the value of spending time carrying out customer research.
Stakeholders easily understand why customer research can help them achieve their product goals.
Stakeholders are satisfied with the research results.
Stakeholders have clear expectations of product development.
Stakeholders regularly engage in design activities.
Stakeholders regularly align the product direction with the team.
Key objectives are clearly defined with stakeholders.
The outcome of the product enables stakeholders to achieve their objectives.
The product value and function are successfully delivered to stakeholders.
The communication with stakeholders is in general sufficient.

Table 5.3 rearranging the order of statements

5.3 Feedback and Comments

The researcher put the statements in table 5.3 on an online questionnaire platform called Typeform. The designers were asked to score each statement from 1 (strongly disagree) to 5 (strongly agree). The layout of the web-based questionnaire can be found in the appendices.

Nine designers, both service designers and product designers, from five different product teams, participated in the self-assessment questionnaire. The researcher conducted follow-up interviews regarding the experience of the questionnaire with five of them, and the comments can be divided into two groups:

Compliments:

One service designer mentioned, "the questionnaire helps me realize what I have been through can be better." this was backed by another product designer saying, "it really gets me outside of my daily tasks where I need to deliver and deliver; this gives me something to think about." Besides, one product designer also mentioned that "the result you showed me makes sense with how I feel about my team."

Concerns and discussions:

Besides the nice words, five out of five designers mentioned they think there should be more than just a questionnaire. "what should we be focusing on for the next stage?", "I get why you ask me to do this on my own, but I do feel I want to share some thoughts with other designers." Some also mentioned a lack of information on the situation of other teams, "my team doesn't have a service designer, but I guess it won't be a problem for other teams." From these comments, the researcher concluded two points to focus on when designing the workshop (Chapter 6), which are:

1) Presenting more knowledge of design maturity and its purpose.

2) Finding a way to re-trigger the reflective mindset and hence discussions.

"the questionnaire helps me realize what I have been through can be better."
        --Service Designer, Agile Hub NL.

"it really gets me outside of my daily tasks where I need to deliver and deliver; this gives me something to think about."
        --Product Designer, Agile Hub NL.

"the result you showed me makes sense with how I feel about my team."
        --Product Designer, Agile Hub NL.

"what should we be focusing on for the next stage?"
        --Product Designer, Agile Hub NL.

"I get why you ask me to do this on my own, but I do feel I want to share some thoughts with other designers."
        --Service Designer, Agile Hub NL.

"my team doesn't have a service designer, but I guess it won't be a problem for other teams."
        --Product Designer, Agile Hub NL.

06

Chapter 06:
Action-enabling workshop

In this chapter, you will find the developing process of the second direction of solution, the action-enabling workshop.

6.1 Purpose of the Workshop

As described earlier in the assignment re-framing chapter, the purpose of the second direction is to enable different product teams to apply specific strategies in their daily operation toward a shared vision. Besides, the comments from the self-assessment framework (Chapter 5) suggested two extra points: first, to present more knowledge of design maturity and its purpose, and second, to re-trigger the reflective mindset and discussions.

To fulfill this purpose, the researcher designed a workshop to gather the designers who participated in the self-assessment framework and guide them through several processes to create their own roadmap towards maturity.

6.2 Setup of the Workshop

Besides the introduction welcome in the beginning, the workshop contains five major parts:
1) Understanding (Figure 6.1)
In this section, participants are provided with information regarding the current maturity level according to the average score from the self-assessment framework and some definitions from existing maturity models describing the next stage.
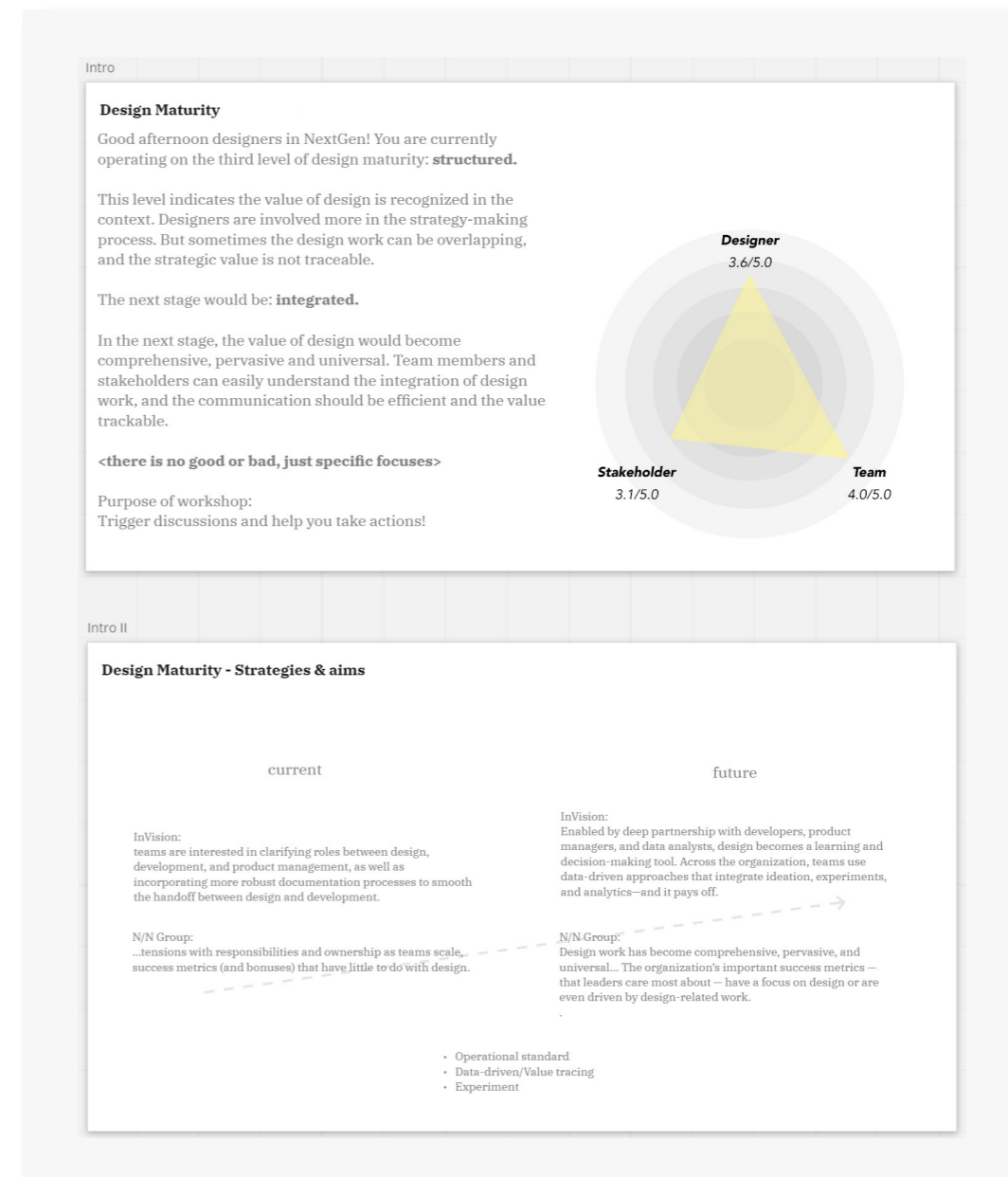
Figure 6.1 the Understanding section

6.2 Setup of the Workshop

2) Re-triggering (Figure 6.2)

In this section, participants are presented with a selection of statements regarding the three audience groups. To fulfill the purpose of re-triggering, the selection of statements follows two rules: first, the average score of a specific statement is lower than the total average, or second, the standard deviation of the score of a specific statement is above one, indicating significant difference among different participants. There will be discussions on these statements, and participants will note down the keywords.

3) Reframing (FIgure 6.2)

In this section, participants will reframe the keywords into their own statements of a higher stage of design maturity. This process allows the participants to create shared future visions and gain ownership of the transformation.

4) Creating ideas (Figure 6.3)

In this section, participants will brainstorm ideas that help move toward a visionary future. Both ongoing initiatives and new actions are welcomed.

5) Sequencing (Figure 6.4)

In this section, participants will sequence the actions they created or listed earlier onto a roadmap. The actions can contribute to one another, while some of them can start very soon, while some might take longer to build up.

Figure 6.2 the Re-triggering and Reframing sections

Figure 6.3 the Creating ideas section

Figure 6.3 the Sequencing section

6.3 Outcome and Comments

The outcome of the workshop is a roadmap with actionable points. Some actions can take place immediately, for example, "have a clear role definition between service and product designers.". Some might take longer to build up to, for example, "create a way-of-working playbook for all three disciplines.". Moreover, the first one mentioned above contributes to the second, creating ongoing momentum for designers.

More details can be found in the workshop walk-through in the appendices.

Most importantly, the designers understand the idea of design maturity and create shared vision statements of their own.

However, the researcher did not include any form of activity tracking and task allocation at the end of the workshop. Assigning tasks to specific designers is essential because the designers at the operational level face multiple complex product situations and might not carry on the initiatives when the responsibility is unclear. This will be covered in the next chapter.

07

Chapter 07:
Design Maturity Toolkit

In this chapter, you will find the deliverables of this project in the form of a manual on how to use and further develop them. The components are four-fold, an overview of framework, the instructions of self-assessment and workshop, and future development of the toolkit.

7.1 Design Maturity Framework with Operational Focus

The researcher concluded the framework from existing design maturity models with a specific focus on the operational level teams. The porpose of this framework is to enable design leaders to gather contextual data and create shared vision with operational level designers, and enpower designers to gain a deeper understanding of design maturity, while gain ownership of the initiatives towards them. Figure 7.1 gives an overview of the five stages describing the changing nature of the design capability.
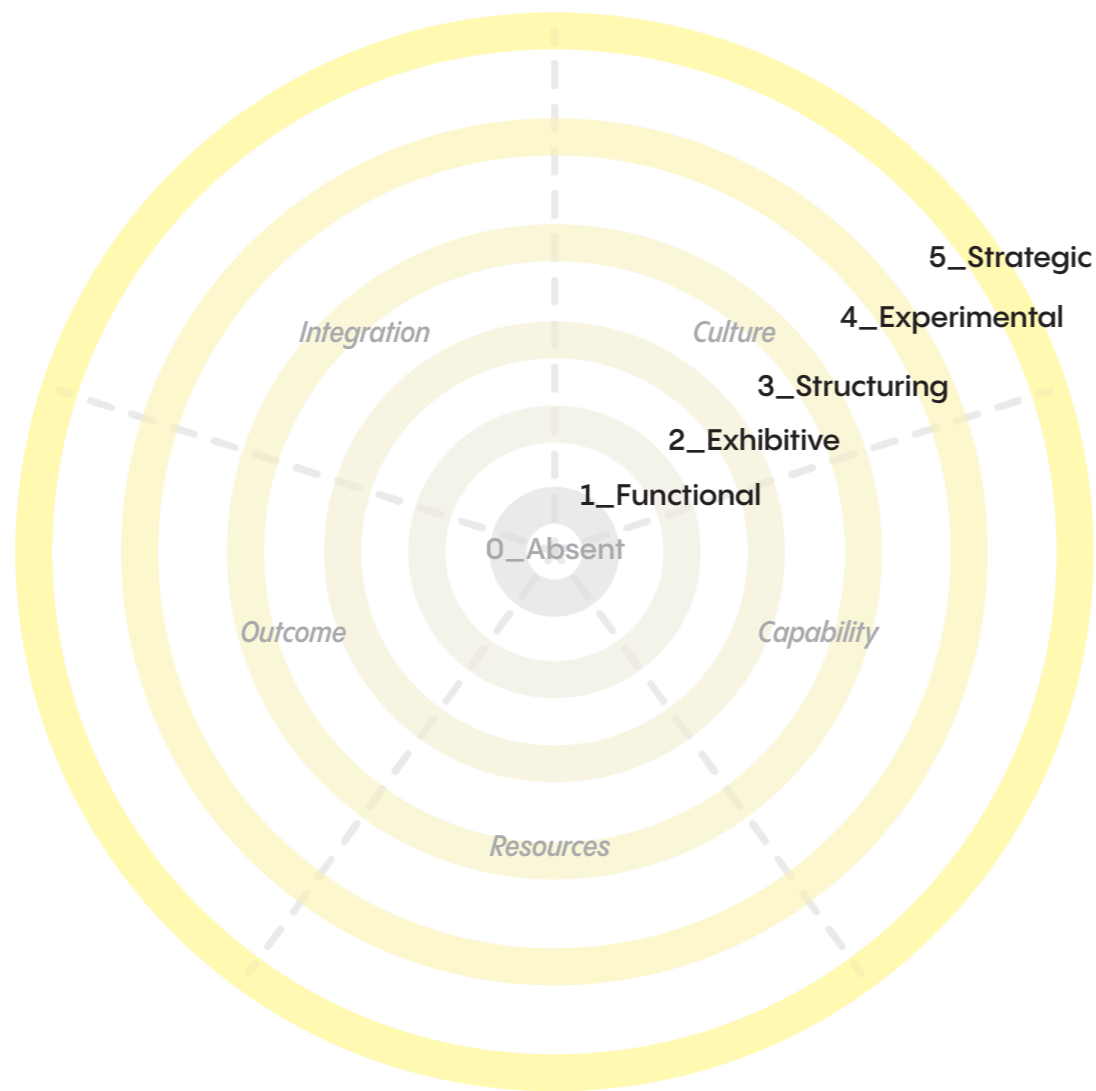
Figure 7.1 The overview of design maturity stages

Stage 0: Absent
This stage indicates that the design capability is not yet in the company's big picture.

Stage 1: Functional
This stage indicates that the primary design function is formed, and the company's designers are merely providing design-related services. The value of design is superficial and is perceived poorly. Inconsistency of design in execution and integration happens frequently. Some friction is created because of little knowledge and low priority of design work. The roles and tasks for designers are unclear, and resources are limited.

Stage 2: Exhibitive
This stage indicates that the design capability is growing to be stronger. More and more products are showcasing the value of design, and the upper management has started to understand that design is more than form-giving. However, designers still suffer from insufficient core design skills in teams while collaborating with non-designers. Designers are implementing new ways of working, but communication is challenging. The impact of design is growing while yet small.

Stage 3: Structuring
This stage indicates the design capability is standardizing and structuring their way of working. The design capability has a good relationship with company portfolios and has stable product requests. The upper management understands what designers are capable of and recognizes their value to the company. However, the design work can be repetitive, and the strategic contribution of design is not yet traceable.

Stage 4: Experimental
This stage indicates that the design capability is more involved in the decision-making process. The outcome of the design is easy to understand, easy to implement, and driven by clear business objectives and key results. Design value is incorporated into success metrics and serves clearly to business goals. Moreover, the designers are starting to experiment with something new from the market with full support from the upper management. The company's voice is becoming louder in the designer community.

Stage 5: Strategic
This stage indicates that the design capability is fully involved in company decision-making. Furthermore, the design-driven mindset has spread across the company. The upper management fully supports and trusts design research and initiatives, and some senior design leaders should sit among the company's management team.

7.1 Design Maturity Framework with Operational Focus

There are five indicators concluded from existing maturity models, among each of them there are some contextual components.

Please note that the researcher did not gathered enough data to form a detailed description for each indicators in each stage of design maturity, this will also be covered in next chapter during discussion.

Indicator 1: Integration

This indicator measures to what degree design is integrated with the business. The key components in Agile Hub context are: team formation, process standardization and stakeholder engaement.

The final stage of this indicator should include:

1) A strong set of practices, processes guidelines or way-of-working standard that are consistently utilized by product teams and other lines of businesses.

2) Product ideas are jointly developed and owned between design and stakeholders at a company protfolio level.

3) Leaders, teams, and individuals across the company are design-driven and leverage the design mindset in day-to-day work.

Indicator 2: Culture

This indicator measures how much a design mindset is appreciated and applied to business. The key components in Agile Hub context are: showcasing research, experiment, and future exploration. The final stage of this indicator should include:

1) Design capability is considered at a portfolio level and the decision-making processes and development are organized in recognition of the design value.

2) Key stakeholders are well-integrated into the design process. They can easily understand the reason of design-driven activities, and are happy about the results.

3) Products are prioritized in recognition of the user needs through research, and the weights in decision-making of design research is high.

Integration

Culture

7.1 Design Maturity Framework with Operational Focus

Outcome

Capability
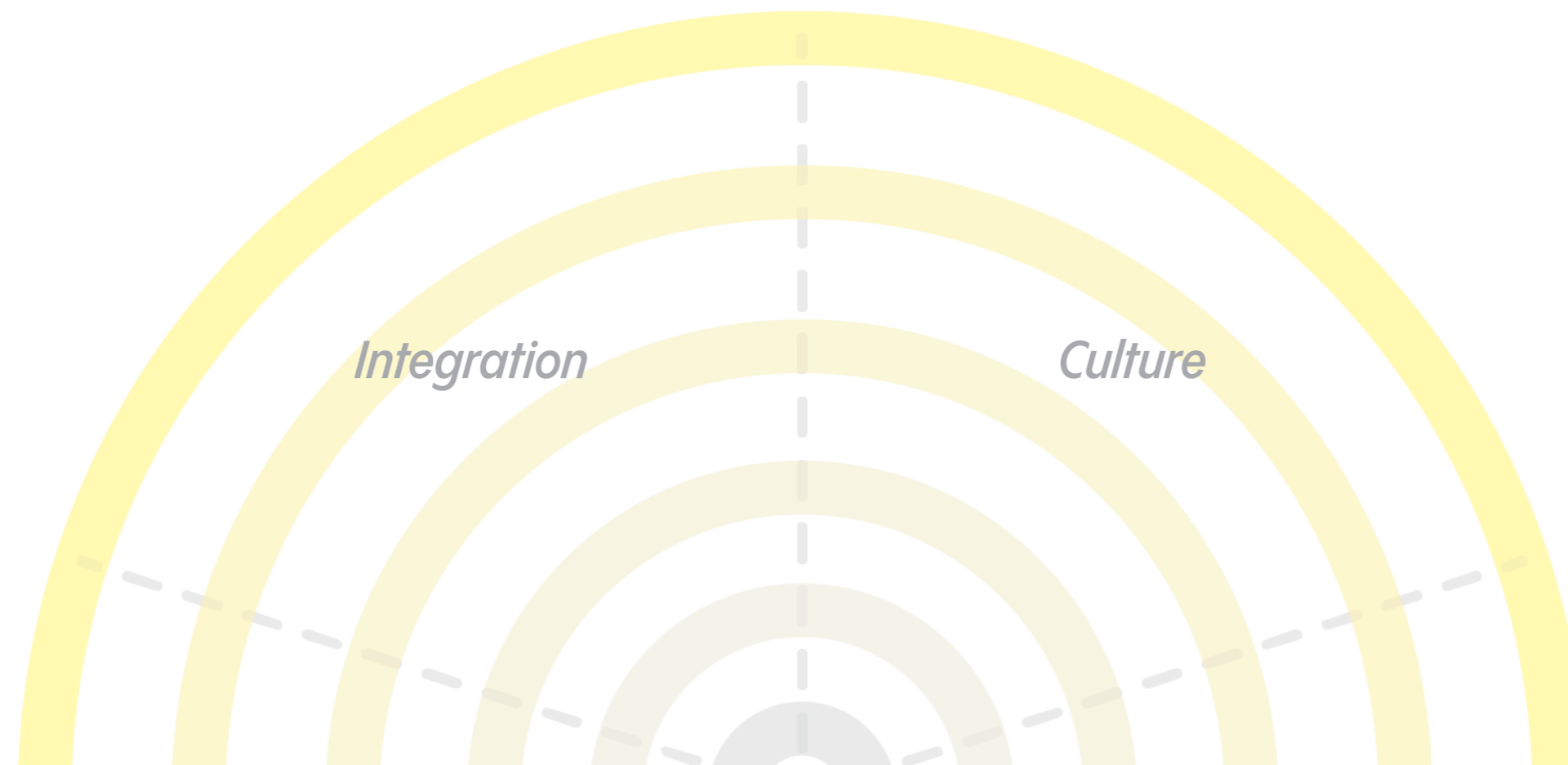
Resources

Indicator 3: Outcome

This indicator measures how design is being communicated and delivered. The key components in Agile Hub context are: business objectives and communicating the value of design.

The final stage of this indicator should include:

1) Design has clear objectives and key results tracking, which aligns with the objectives of business success.

2) There are guidelines that help and standardize the communication of value of design, and the guildlines are recognized by both designers and key stakeholders, while being consistently applied.

Indicator 4: Resources

This indicator measures how resources, including money, time, and people, are allocated. The key components in Agile Hub context are: research tools, design tools, collaboration guildline, product success objectives, user engagement level and design leadership support.

The final stage of this indicator should include:

1) Research and design tools are well developed and designers fully understand when and how to use them.

2) There are collaboration and process guidelines for product teams and are consistently applied.

3) There are clear key objectives of product success, and it recognize the design-driven value.

4) Product team values and provide enough resources for design activities like deisgn research and user feedback.

5) Design leadership holds accountability of supporting design among same or higher level management or other functions.

Indicator 5: Capability

This indicator measures how systematic design tools and methods are used. The key components in Agile Hub context are: role definition, depth of user research, problem space exploration, and design visions.

The final stage of this indicator should include:

1) Clear division and definition of roles and responsibility among designers in teams.

2) User research is carried out constantly and well coordianted, and is strongly involved in strategy-making process.

3) The problem space is well explored before generating solutions in product teams.

4) Designers share a clear definition of disciplinary success and have traceable documentation.

7.2 Self-assessment Questionnaire

Introduction:

The purpose of the self-assessment questionnaire is two-fold:
1) to provide an opportunity for designers to reflect on the working status;
2) to gather maturity level data in a bottom-up fashion.

The self-assessment questionnaire contains a set of statements. The target participants are the designers within different product teams. The participants are asked to score each statements from the scale of one to five, indiciating strongly disagree to strongly agree towards specific statements.

The statements were generated among the descriptions of the highest maturity level from existing design matuirty models. The descriptions were first broken down into different pieces, and then reframed within the Agile Hub context, and reorganize by the order of audiences of Agile Hub designers.

Process:

FIrst, the participants will be asked to fill in the name of thier product team. If one is with multiple team, then one should be asked to choose one team as the team he or she wants to reflect on.

Second, the participants will be presented with the statements by the order of designer-team-stakeholders. In this way they can start by reflecting the closest part of their daily work and gradually reflect on most of the parts that contributes to a deisgn maturity assessment.

Third, the brief introduction of the current operating matuirity level will be presented to participants determinded by the average score.

Outcome:

The scores are calculated with the results.

First, there is an average score of all the statements, indicating the current maturity stage a certain product team is operating on. Besides, there are avrage scores clustered by different audiences (designers, team members and stakeholders). This part is for Agile Hub specifically, to clearly demonstrate the hassles designers experience during their daily operations. And this will also be presented to designers during the workshop to trigger discussions.

For example, from the result of the test group, the designers assessed their interaction with other designers are lower than with team members such as product engineers. This specific problem was later revealed during the worshop that there were existing ways of working with team members, while the line between service designers and product designers are yet unclear.

Finally, there are scores clustered by the five indicators (capability, resources, outcome, culture, and integration). This part is mainly for the design managers to check with the framework, and maybe use some points to challenge the designers during the workshop.

For example, the designers in test group scored highly in "resources", indicating the related tools are well-implemented. However, the "outcome" is relatively lower, indicating the communication

of design goals might be causing some level of friction.

Beside average scores, the standard deviation is calculated for each statement. The reason is to see if there are too much differences between product teams. If the standard deviation is equal or higher than one, then the different product teams under the same portfolio is having different ideas for this specific statement. These statements can help trigger the discussion during the workshop later.

Suggested Format:

- Online forms (e.g. Microsoft Forms)

This will make the calculation easier hence moce faster to prepare for the workshop.

- Printed forms

This takes longer than online forms, but can serve as a part of the workshop, so that the participants can enjoy a smooth experience.

The possible appearance of printed version is in figure 7.2 in the next page.

7.2 Self-assessment Questionnaire

Hello fellow designer!

Let us take a moment to reflect on our daily operations together. The purpose is to help you reflect on some aspects regarding design maturity and trigger some discussion for a later sharing session.

<Please note: there are no right or wrong answers. Just leave your heartfelt answer.>

There will be three sets of questions divided by audience:
a) Designers: the designers working in the same product team and the design leads of the portfolio.
b) Team/team members: the engineers and PMs in the product team.
c) Stakeholders: the people or POs from outside of the product team.

<Please read them carefully and rate the extent to which you agree or disagree with each of the statements.>

Before we start...

Please let me know which product team are you working with: (only write down one here)

_____

Regarding Designers...

	Strongly Disagree				Strongly Agree
The design team has both strategic and delivery experts.	☐	☐	☐	☐	☐
The requirement of design is defined by data generated by customer research.	☐	☐	☐	☐	☐
The designers are actively using the design system or other design tools.	☐	☐	☐	☐	☐
The designers share a clear definition of design success.	☐	☐	☐	☐	☐
Sufficient customer research is carried out to design for their needs.	☐	☐	☐	☐	☐
Suitable research methods are applied in order to define the product requirements.	☐	☐	☐	☐	☐
Design leads enable designers with transparent task allocation.	☐	☐	☐	☐	☐
Design leads enable designers with clear design objectives.	☐	☐	☐	☐	☐
Design leads help push through the process when stuck.	☐	☐	☐	☐	☐
During the whole process, it is clear what I need to do.	☐	☐	☐	☐	☐
Communication with other designers is in general sufficient.	☐	☐	☐	☐	☐

1

Regarding Team Members...

	Strongly Disagree				Strongly Agree
The team is assembled with people with core design skills to carry out the product.	☐	☐	☐	☐	☐
The product team shares a clear definition of product success.	☐	☐	☐	☐	☐
The team members collaborate smoothly to achieve product success.	☐	☐	☐	☐	☐
Team members easily understand how the design research result will be used in product development.	☐	☐	☐	☐	☐
Team members easily understand the value of spending time carrying out customer research.	☐	☐	☐	☐	☐
I know what other team members in my team are busy with.	☐	☐	☐	☐	☐
The team shares clear product key objectives.	☐	☐	☐	☐	☐
The product managers collaborate with designers in both the problem and engineering spaces.	☐	☐	☐	☐	☐
The designers collaborate with engineers in both the problem and engineering spaces.	☐	☐	☐	☐	☐
Validation with users gives clear feedback for the team to act upon.	☐	☐	☐	☐	☐
The user feedback loop is efficient and informative.	☐	☐	☐	☐	☐
The communication with team members is in general sufficient.	☐	☐	☐	☐	☐
The team documented the data generated during each step.	☐	☐	☐	☐	☐

Regarding Stekeholders...

	Strongly Disagree				Strongly Agree
Stakeholders understand what type of information the designers need to deliver valuable design.	☐	☐	☐	☐	☐
Stakeholders deliver requirements that enable designers to further explore the problem space.	☐	☐	☐	☐	☐
Stakeholders easily understand how the result of the research is going to be used in product development.	☐	☐	☐	☐	☐
Stakeholders easily understand the value of spending time carrying out customer research.	☐	☐	☐	☐	☐
Stakeholders easily understand why customer research can help them achieve their product goals.	☐	☐	☐	☐	☐
Stakeholders are satisfied with the research results.	☐	☐	☐	☐	☐
Stakeholders have clear expectations of product development.	☐	☐	☐	☐	☐
Stakeholders regularly engage in design activities.	☐	☐	☐	☐	☐
Stakeholders regularly align the product direction with the team.	☐	☐	☐	☐	☐
Key objectives are clearly defined with stakeholders.	☐	☐	☐	☐	☐
The outcome of the product enables stakeholders to achieve their objectives.	☐	☐	☐	☐	☐
The product value and function are successfully delivered to stakeholders.	☐	☐	☐	☐	☐
The communication with stakeholders is in general sufficient.	☐	☐	☐	☐	☐

2

Figure 7.2 The printed version of self-assessment questionnaire

7.3 Action–enabling Workshop

Introduction:

The purpose of the action-enabling workship is: enable different product teams to apply specific strategies in their daily operation toward a shared vision. Besides, there are some other focus:

1) to provide more knowledge to the participants of design maturity and its purpose;
2) to trigger the reflective mindset the participants experienced during the self-assessment and bring up discussions.

The action-enabling workshop should be hosted by mid-level design leads, for example, the portfolio design leads or senior designers. Please note that we should avoid any means of subordinate relationship between the facilitator and the participants, to ensure the highest level of honesty and creativity.

The participants should have completed the self-assessment, so that they have an understanding of design maturity, and prepared for discussions during the workshop.

Process:

Before the workshop, there some preparation is needed. The facilitator(s) need to create two sets of graphics.

1) the introduction page
A radar chart is required to demonstrate the participants' maturity stages, divided by the three audiences. This step aims to answer the participants' curiosity and show the result of the early self-assessments. Along with the chart,

the facilitator(s) should prepare a brief introduction of the current and the next stage of design maturity. It is also important to mention that the maturity assessment is not for judgments but to enable designers to apply specific strategies for their situations.

2) the statement cards
The facilitator(s) should create a set of statement cards. As mentioned in an early chapter, the selection of statements follows two rules: either the average score of a statement is lower than the total average, or the standard deviation of a statement is higher than one. The facilitator(s) can put these statements onto digital cards to indicate apparent differences among the three audiences and make the workshop experience more enjoyable.

3) warm-up activities and breaks

For a well-engaging co-coreation session, there should be breaks and warm-ups for participants to regain energy. Facilitator(s) should prepare 1-2 breaks in between the session, and three warm-up activities including one to start with.

During the workshop, there are six major steps:

1) Understanding
In this section, participants are provided with information regarding the current maturity level according to the average score from the self-assessment framework and some definitions from existing maturity models describing the next stage.

2) Re-triggering

In this section, participants are presented with a selection of statements regarding the three audience groups. To fulfill the purpose of re-triggering, the selection of statements follows two rules: first, the average score of a specific statement is lower than the total average, or second, the standard deviation of the score of a specific statement is above one, indicating significant difference among different participants. There will be discussions on these statements, and participants will note down the keywords.

3) Reframing
In this section, participants will reframe the keywords into their own statements of a higher stage of design maturity. This process allows the participants to create shared future visions and gain ownership of the transformation.

4) Creating ideas
In this section, participants will brainstorm ideas that help move toward a visionary future. Both ongoing initiatives and new actions are welcomed.

5) Sequencing
In this section, participants will sequence the actions they created or listed earlier onto a roadmap. The actions can contribute to one another, while some of them can start very soon, while some might take longer to build up.

6) Call to action
In this section, participants should take actions to assign tasks among themselves or push to their design leaders. The facilitator(s) should help with creating activity tracks (e.g. Kanban or Jira) and notify the leader of the participants' team.

Outcome:

After the sequencing, the facilitator(s) should leverage tools like Miro Kanban or Jira to assign the tasks to designers. This step aims to ensure the designers can start to take action for the ideas created by themselves and also keep track of the actions to determine the next round of assessment.

Suggested Format:

Please note the format should always be a co-creation workshop. the reason is to make sure operational level designers can create initiatives by themselves and feel the ownership towards the transition.

- Online co-creating platform (e.g. Miro or FigJam)

This allows the facilitator(s) to quickly prepare the contents, and create activity tracking in the end. It also makes participants engagement easy with functions like voting and sticky-notes.

- Printed canvas

This is harder to prepare and call to action, but the engaement level could be higher because of the face-to-face interaction. This could work with the printed version of self-assessments so that the whole session can take place in one timeslot.

The possible appearance of printed version is in figure 7.3 in the next page.

7.3 Action-enabling Workshop

Good afternoon designers!

You are currently operating on the third level of design maturity:
[placeholder for maturity stage after calculation]

This stage indicates [placeholder for description from the framwork]

The next stage would be:
[placeholder for maturity stage after calculation]

In the next stage, [placeholder for description from the framwork]

<Please note: there is no good or bad, just specific focuses for specific situations>

Designer

Stakeholder   *Team*
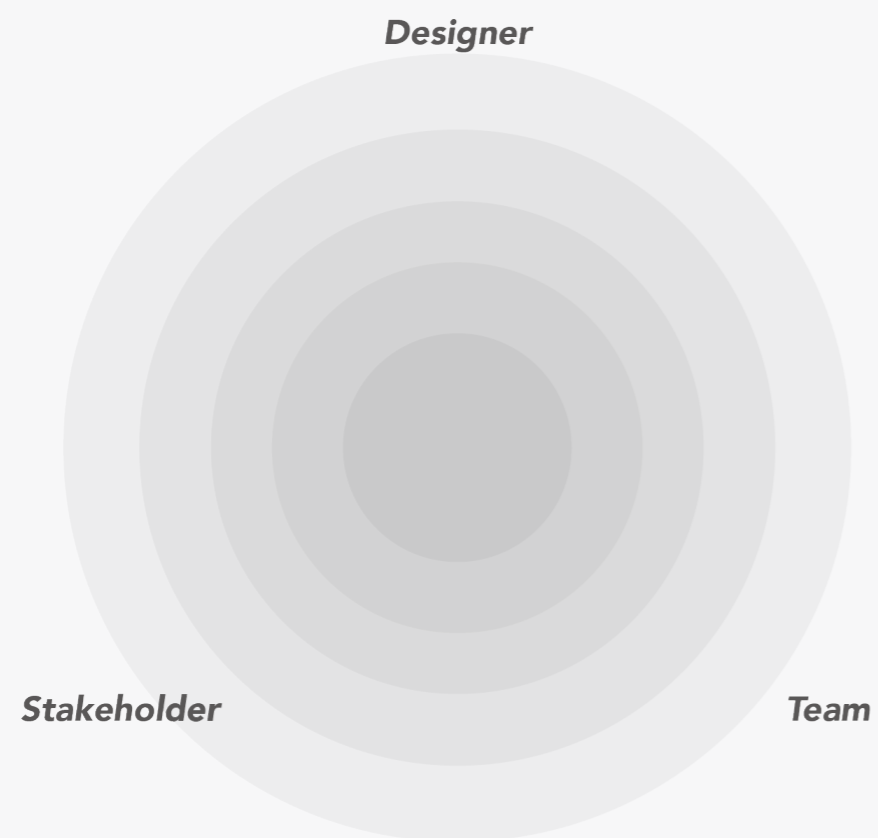
Review and discuss...

Let us first review some statements that showed inconsistence in the result.

▢ **Regarding Designers...**

>DESIGN<

S1:

The design team has both strategic and delivery experts.

[Example card]

>DESIGN<

S2:

The requirement of design is defined by data, generated by customer research.

[Example card]

>DESIGN<

S3:

The designers share a clear definition of design success.

[Example card]

Please put anything you want to mention regarding these staements on sticky notes here!

Please put your reframed statement here!

1

2

Figure 7.3 The printed version of action-enabling workshop

7.3 Action-enabling Workshop

Regarding Team Members...

>TEAM<

S1:

The product team shares a clear definition of product success.

[Example card]

>TEAM<

S2:

Team members easily understand how the design research result will be used in product development.

[Example card]

>TEAM<

S3:

The team shares clear product key objectives.

[Example card]

Please put anything you want to mention regarding these staements on sticky notes here!

Please put your reframed statement here!

3

Regarding Stekeholders...

>STAKEHOLDER<

S1:

Stakeholders deliver requirements that enable designers to further explore the problem space.

[Example card]

>STAKEHOLDER<

S2

Stakeholders easily understand how the result of the research is going to be used in product development.

[Example card]

>STAKEHOLDER<

S3:

Stakeholders have clear expectations of product development.

[Example card]

Please put anything you want to mention regarding these staements on sticky notes here!

Please put your reframed statement here!

4

Figure 7.3 The printed version of action-enabling workshop

7.3 Action–enabling Workshop

Let us create some ideas...

For facilitator(s):
Put the reframed statement here
during break

Please put anything that you believe will contribute to the statement here!

Let us create some ideas...

For facilitator(s):
Put the reframed statement here
during break

Please put anything that you believe will contribute to the statement here!

Figure 7.3 The printed version of action-enabling workshop

7.3 Action-enabling Workshop

Let us create some ideas...

For facilitator(s):
Put the reframed statement here
during break

Please put anything that you believe will contribute to the statement here!

7

Time to set a plan...

Short *Medium* *Long*

Please put all the ideas here according to
how long does it take to start an action,
and try to link them up!

Before we wrap-up, let us assign the tasks by ourselves!

8

Figure 7.3 The printed version of action-enabling workshop

7.4 Future Development of Toolkit

Because the researcher has set the scope of this project to develop a framework to enable design leads to gather and create a shared vision with operational-level designers and empower them with ownership of the initiatives towards design maturity, the focus was mainly on creating the toolkit for design leaders and operational designers to reveal possible initiatives, instead of determining the initiatives directly. However, this toolkit needs to be consistently utilized to achieve its purpose.

First, once the tracked actions are complete, it is a good idea to do the assessment and workshop again to see if the maturity stage has advanced.

Besides, the tracking methods can be tested during repetitive sessions. The researcher suggested leveraging Kanban or Jira to keep track of the initiatives, but with further development, that can be integrated with existing disciplinary excellence programs such as the Rocket program.

Furthermore, more sessions will bring in more data to fill in the detailed indicators of each stage of design maturity. In this way, the framework itself can be gradually completed by Agile Hub designers themselves, creating a deeper understanding and ownership of design maturity.

Chapter 08:
Conclusion and discussion

In this chapter, you will find the discussion and limitation of this project, and some relavant direction worth exploring in the future. Moreover, there is a self-reflection from the researcher and an acknowledgement.

8.1 Discussions

Conclude Findings

Characteristics of an internal consultancy:

The researcher started by exploring the possibility of implementing existing design maturity models in an internal design consultancy like Agile Hub. After researching the context, the researcher found some exciting characteristics regarding internal consultancies that are

1) Designers operating in different product teams, which are very delivery-focused and share similar groups of stakeholders;

2) Different product teams are experiencing different stages of design maturity hence creating inconsistency for design leaders when applying strategies;

3) Designers are very experienced and capable of mature design. However, they are occupied with high-paced operations and have little opportunity to put their knowledge into disciplinary growth.

An operational-focused design maturity framework:

Taking the contextual characteristics, the researcher concluded five overlapping indicators from multiple existing maturity models and found similar focuses between the design operation models and three design maturity model indicators. The researcher proposed a design maturity framework with an operational focus. However, this framework is far from a complete model because the researcher reframed the project scope to empower operational level

designers in order to minimize inconsistency among teams instead of generating a fully functional model.

A two-part toolkit to empower designers:

After reframing the scope, the researcher developed and tested a toolkit with designers in Agile Hub to provide them an opportunity to reflect on their operations with minimal effort and empower them to create initiatives toward a shared disciplinary success.

The first part of the toolkit is a self-assessment questionnaire. The form of a questionnaire makes sure low effort and high honesty. This part enables the designers to understand design maturity through an operational lens while triggering some discussions for actions.

The second part of the toolkit is an action-enabling workshop. The form of a workshop ensures high-level engagement and ownership of the actions generated during the session. This part enables designers to understand design maturity further and to create shared visions and actions.

Hypothesis and Limitations

Hypothesis and Limitations

Hypothesis:

As discussed earlier, the operational-focused design maturity framework is concluded from literature research. Whether or not maturity at the operational level can positively contribute to organizational maturity remains a hypothesis.

Limitations:

First, internal design consultancy's characteristics are only concluded from contextual research in one internal consultancy, Shell Agile Hub. These might not be true for other internal design consultancies.

Besides, as discussed earlier, the operational-focused design maturity framework is incomplete because of the reframed project scope. More data should be gathered to make the framework a fully functional model.

8.2 Future Directions

As mentioned in the limitations, the first exciting direction would be to gather more data to complete the operational-focused design maturity framework.

There are two ways of doing so, first is to implement the toolkit the researcher created and co-create the tangible steps within the design maturity model with the designers.

The second is to propose this basic framework to design communities and gather data from designers with similar pursuits from different contexts.

This method can also help further explore the characteristics of different internal design consultancies, which is another exciting direction.

8.3 Personal Reflection

The past year of my master's program has given me a great opportunity to discover who I am and where I want to be. To be honest, it is quite depressing, especially when seeing others around you already have a clear plan for themselves. But after all, this is a road that everyone in their 20s needs to walk through, and I am glad I had the courage to choose my own path, which is to keep looking for a graduation project that I am truly excited about. And right now, after almost one hundred working days, I want to reflect on what I have learned here.

To learn more than to prove

During the project I always felt I need to prove that I have mastered all the knowledge I learned in these two years, and this idea became a burden that stops me from acknowledging my limitations. I still remember the words from an old roommate of mine who graduated earlier, "the graduation project is your last course in school, not the beginning mark of your career.". This simple statement changed my whole mindset, allowing me to acknowledge my flaws and try my best to overcome them. I believe even after graduation, the learner's mindset is something I want to keep in my professional life.

Balancing the working and leisure time

Be sure to schedule vacations for myself is something I learned with my body during the project. In the past I had a tendency that not working means lazy, which is very untrue. Because of that idea, I cannot fully enjoy myself when off-work, while keep feeling stressed during work, which resulted in low-efficiency. The ability to relax smart is something I learned and cherish very much.

Own my project and manage expectations

At the end of my project, I acknowledged some my miscommunication of project scope with my client. My first reaction is to put extra work to mantain the highest expectations. However, I later find out that because of my reframed scope, I did not gather enough data to provide the highest expectaions from my client. Furthermore, the act of extra work lowered my ownership towards my findings, hence creating reluctance. I still feel very sorry that I did not provide the highest expectation, but I am happy that I make peace with my limitations and regained my energy towards completing the final deliverables.

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