



Evaluating the strategic impact of pivoting offering from custom solutions to products for an IT consultancy

Eero Moilanen

Haaga-Helia University of Applied Sciences

Degree programme in Leading Business Transformation

Strategic Thinking and Management

Thesis

2025

Abstract

Author(s) Eero Moilanen
Degree Master of Business Administration.
Report/thesis title Evaluating the strategic impact of pivoting offering from custom solutions to products for an IT consultancy.
Number of pages and appendix pages 91 + 3
<p>IT consultancies have experienced challenging market environments in the past years. Due to economic challenges and technological development. The demand for traditional IT consultants has decreased and customers have become more aware of alternative approaches to solving IT problems. Consultancies – which grow as the result a steady and growing number of billable hours – are dependent on increasing the number of employees, the number of customers, the hourly rates and quantity of hours billed.</p> <p>IT consultancies are known to create customer value through tailored IT-consultancy projects or competence-based staff augmentation. The thesis objective is to define the criteria for an IT consultancy product concept and evaluate the strategic fit of pivoting customer offering to product concepts from traditional consulting.</p> <p>Theory framework introduces the dilemma of time and material consulting and how the concept of productization is used in various industries to transform services into product-like-concepts. The literature review additionally covers frameworks for the creation of new offering, its relation to company strategy and briefly presents the concept of product management.</p> <p>Research methods focus on thematic interviews. The sample represents business professionals in the consulting industry. Supporting research was done by benchmarking companies in similar situation and reviewing previously documented material.</p> <p>Findings of the research indicate opportunities to pivot towards a product business approach but also highlight the potential risks if required changes are not made in the strategy.</p> <p>Conclusions offer clear changes to begin the transformation to a product-oriented business iteratively. Findings from the thesis research indicate the inability to effectively operate both as a consultancy and product business simultaneously. Therefore, it is recommended that the two businesses are separated into their own organizations to enable clearer focus, leadership, suitable goals and relevant metrics.</p>
Keywords IT-Consulting, Productization, Offering, Pivot, Strategy.

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1 Introduction

The thesis introduction is written with the purpose of exposing the reader to the topic of the thesis. Introducing the topic includes an overview of the current situation and problems that lead to the study.

The objective, identified issues, development tasks, research questions and delimitation are included in the introduction chapter. The chapter includes information regarding the key concepts a reader should be familiarized with. To conclude, the introduction presents the thesis structure, which is stated in the table of contents.

1.1 The commissioning party and industry introduction

In the 21st century, digitalization and IT development projects have become a norm in both private businesses and public organizations.

However, many businesses and government organizations lack the capabilities and resources to develop and maintain new digital solutions. Therefore, consultancies specialised in the specification, delivery, and maintenance of digital solutions have arisen in the years prior. A consultancy specialised in software development can serve businesses and government agencies by allowing them to outsource the software development or resources for software development. Whilst, allowing the customer to maintain a focus on their core business. The cooperation with consultancies enables creating new and innovative solutions through software development. Software development requires unique capabilities, resources, and technology.

The commissioning company in question, Knowit Solutions Oy, is a Finnish IT consulting company that is owned by the Knowit Group from Sweden. In Knowit Solutions Oy, henceforth Knowit, there are approximately 300 people and the revenue in 2023 was roughly 55 MEUR. The purpose of Knowit is to provide tailored IT solutions to their selected market. The market consists of government and business clients in Finland. The solutions are delivered through projects by IT consultants that aim at creating a solution to a specific customer problem.

In Scrum, which is a popular Agile software development framework, all individuals developing a solution are referred to as developers (Heath 2024, chapter 3). In the following content, IT consultants and software developers will be used identically to describe individuals working on the development of software solutions.

Knowit has ambitious growth targets and company leadership has decided to think outside of the box to identify new opportunities to pivot strategy to enable Knowit to reach the goals. Leadership

is interested to explore packaging certain customer solutions into products – or product concepts – that have potential for replication in the current or new markets.

1.2 Introduction to the problem and objective

Scalability is an industry wide issue for consultancies. Aside for hourly rate increases, business grows and scales hand to hand with the number of consultants with billable hours. The ambitious growth targets of Knowit have convinced the leadership to consider alternative approaches to accelerate growth. Knowit is not currently interested in becoming a product business. However, certain customer solutions have been identified to have potential for replication for other customers and across the market. The potential is based on Knowit sales and leadership personnel's opinions. Instead of opinions, Knowit leadership requires knowledge.

The issue hindering growth is that currently all customer solutions are unique. Sales, design, implementation, and delivery require great effort in terms of time and other resources. Then again, the markets for off-the-shelf and one-size-fits-all products are highly contested. Before the thesis project, Knowit is not planning on necessarily becoming a business that creates and markets a single product. Knowit does not have any traditional products and is focused on consulting.

Certain services with potential to be turned into products – or product concepts – have been identified. The thesis objective is not to identify which certain customer specific solutions have potential to be turned into products or product concepts. The thesis objective is to define the criteria for a Knowit product concept and evaluate the strategic fit of pivoting customer offering to product concepts.

1.3 Development task and research questions

The development task was workshopped in cooperation with the commissioning party, Knowit Solutions Oy.

The research objective of the thesis is related to the Knowit Solutions Oy growth strategy, that is being implemented and reiterated. Knowit leadership is in consideration to develop certain tailored customer solutions into products. The thesis objective is to define the criteria for a Knowit product concept and evaluate the strategic fit of pivoting customer offering to product concepts. To reach this objective, the thesis will answer four research questions.

Research questions 1 and 2 will answer how Knowit will define a product in such a way that resonates with customers. Research questions 3 and 4 will answer what is required to create a product concept and whether this pivot will align with Knowit strategy.

Research questions:

1. What criteria does Knowit Solutions Oy use to define a product?
2. In comparison to tailored solutions, why would customers prefer a product?
3. What types of resources, capabilities, and investments are required for Knowit Solutions Oy to transform a tailored solution into a product concept (as defined in RQ1 and RQ2)?
4. How would transitioning to a product-oriented business model align with Knowit Solutions Oy's current growth strategy?

The vision, of Knowit Solutions Oy leadership, is a product or products that are scalable and built from Knowit consultancy experiences.

The first research question will explore the desired characteristics and criteria, of what a product will mean for Knowit Solutions. The product criteria will not define a single product but provide a perspective on what kind of considerations should be made when distinguishing between products and other types of offering.

The second question follows by exploring the customer perception of product concepts in comparison to tailored IT solutions. Customer perception relates to product definition because it is the customer who ultimately decides whether an offering is good or not. The second research question asks what the competitive advantage of a product concept is in comparison to consultancy offering.

The third and fourth research questions explore the product concept requirements from an internal perspective. The third is set to define the requirements to create a marketable product concept from one of the current ideas with potential for such productization. The fourth and final research question links back to Knowit growth strategy. The last research question asks how the product concept approach would align with current Knowit strategy. Knowit strategy is poised to push the company towards ambitious growth targets.

1.4 Key concepts

The following concepts are relevant to the thesis. The terms are explained briefly for clarity to the reader of the thesis.

- IT Consultancy: Supporting with and enabling the digitalization of business through professional services.
- Offering: Products, services or other tangible or intangible things a company sells.
- Productization: Turning or intangible services and experiences into products.
- Knowit Products: A Swedish company in the Knowit Group.
- Knowit products: Potential products for Knowit Solutions to offer.
- Knowit group: The multinational parent company of Knowit companies.

1.5 Thesis structure

Following the introduction, the thesis begins with a literature review. The literature review aims to provide aid from previously conducted research on similar topics and themes. The literature review covers theoretical topics which are then summarized and constructed into a framework to support empirical research. The literature review leads into and provides the basis for the research which is documented in the following chapter. Finally, the results are presented and followed by brief discussions and conclusions to provide suggested recommendations.

1.6 Delimitation

Product lifecycle management will be excluded from the scope of the thesis. Evaluating the lifecycle includes all stages, from idea to discontinuation. Product lifecycle would include topics such as product development, customer service and warranty. These are purposefully excluded to keep the objective clear. These topics can be returned to in future development of Knowit Product if it is deemed necessary.

The thesis will focus on the business requirements in relation to the thesis research questions. In depth technical and financial aspects related to product creation were excluded from the thesis.

Defining a product criterion for Knowit at this stage in the business concerns a framework for how to define products and distinguish them from other offering. Defining a specific product is out of the scope of this thesis.

2 Theoretical framework

2.1 Growth in the IT-consulting industry

2.1.1 Consulting as a business

Consultancies are often specialized in a single, or multiple business functions such as management, IT, logistics or marketing. The United States and Europe are the largest markets for consultancies, though demand is increasing in emerging economies such as India. The global consulting market is expected to grow from 320 billion USD – market size in 2023 – to 400 billion USD by 2028. (Consulting Services – Quarterly Update 6/10/2024 2024, 2.)

The purpose of consultants and consulting is to provide and improvement on the clients' current condition (Weiss 2021a, subchapter 1.1). Consulting is a logical approach to many modern business situations (Phillips, Trotter & Phillips 2015, subchapter 1.1).

Weiss (2021a, subchapter 1.1) describes the most valuable consultants as not only experts, but collaborators, those who can provide both contextual expertise and facilitate development. Phillips et al (2015, subchapter 1.1) agree that the ability to collaborate is crucial for success and for growing the consultants influence and reputation.

According to the Consulting Services – Quarterly Update 6/10/2024 (2024, 2) most of the consulting is performed through project-based assignments, which are also known as engagements.

Companies are increasingly required to digitalize their businesses. A combination of digitalization, new technologies and organizing businesses can be achieved only through collaboration with different experts. (Bouncken, Kraus & Roig-Tierno 2021, 5.) The Consulting Services – Quarterly Update 6/10/2024 (2024, 7) highlights IT and cloud computing technologies as the latest business trend in the consulting industry. The Consulting Services – Quarterly Update 6/10/2024 (2024, 7) continues that currently traditional localized resources are being moved into the cloud for scalability and cost saving benefits.

Consultants serve customers who are professionals working in the client organizations. The service is provided based on existing needs. These needs are either created or anticipated. A part of how consultants add value to the customer is bridging the gap between what customers want and what they need. (Weiss 2021a, subchapter 1.3.)

According to The Consulting Services – Quarterly Update 6/10/2024 (2024, 7) customer are increasingly in need of state-of-the-art technology adaptation and innovative solutions from fields such as automation, artificial intelligence and analytics.

Companies whose business model is not based on digital platforms are especially going through a process of digitizing their traditional business. The end goal of digitizing traditional business models is that all aspects of the business use digital technologies. To achieve digitalization, companies will need to activate the entire organization to participate and use external experts for consultation and collaboration. (Bouncken & al 2021, 5-6.)

A challenge for growth and productivity, especially in IT consultancy, is that great time and effort is required when consultants begin with a new client on a new software project. To increase profitability and productivity consultancies must increase billable time compared to non-billable time. Growth depends on consultants, and new consultants can struggle to find billable activities before the proper experience and training has been completed. Customers traditionally pay consultancies based on time and material. Therefore, customers require to carefully inspect the capabilities of a consultant to have solid proof to the ability to perform and solve the given problem. (Bologna & Lupu 2014.)

The Consulting Services – Quarterly Update 6/10/2024 (2024, 3) reminds that most consulting engagements are priced based on time spent multiplied by the time-based rate. The Consulting Services – Quarterly Update 6/10/2024 (2024, 3) continue that fixed price contracts are less common.

2.1.2 The dilemma of time-based consulting fees

Finding new customers can be challenging in any profession. For consultancies the key to growth is performing well to increase reputation of the company's expertise. Business grows by having clients refer you within their and your network, or by becoming repeat customers. (Weiss 2021a, subchapter 4.1.)

Consultancies succeed when there is an identified market need, for which consultants have both passion for and ability to solve (Weiss 2021a, subchapter 5.1).

Weiss (2021b, chapter 4) writes that consulting business is done based on time spent on the customers problem. Consultants that have pre-acquired knowledge and can be considered skillful should accordingly have higher time-based rates to customers. There is another way to increase billable time which is extending projects. This is however unethical and will likely lead to unsatisfied customers in the long run. Regardless of a consultants' skills there is a limit to how high hourly rates can be. Consultancies should avoid situations where their customers are in a position of not knowing how much potential work will cost. Ideally consultancies should strive for fees based on concrete creations instead of time spent. (Weiss 2021b, chapter 4.)

Fees should be tied to value. Value comes from what is created, not how much time is spent on its creation. Value can be tangible, intangible or peripheral. Tangible value can be measured, such as save time and cost, or gained profit or market share. Intangible value comes from improvement to quality, for example an increase in comfort, or decrease in stress for the customer and its employees. Benefits that are not originally considered a part of the delivery scope but can be seen are considered Peripheral. (Weiss 2021b, chapter 4.)

There is an ethical dilemma with time-based fees in consulting. Customers expect and deserve value as quickly as possible, but consultancies grow based on increases in time spent and fees billed for the same amount of time spent. (Weiss 2021b, chapter 9.)

Weiss (2021c, subchapter 1.1) elaborates that customers want and need their problems to be addressed by solutions delivered with speed and certainty.

Traditionally, consultancies exchange time and create deliverables for money. Units of time are a lazy element to base fees upon, because customers value good solutions and the speed of their delivery above time spent. (Weiss 2021c, subchapter 2.1.)

Customers often ask for estimations on what amount of time is required, to achieve the requested result. Estimations are however only estimations and are prone to be incorrect. Estimating problem solving work and billing based on time and material leaves the customers budget at a risk. In occurrences when urgent issues are uncovered, the dilemma continues by placing the customer in a situation where they must decide to go over their budget or to leave and urgent issue unsolved. (Weiss 2021c, subchapter 2.2.)

Instead of matching the demand from customers, with a supply of consultants. It would be more beneficial for a consultancy meet the customers demand with minimal time spent. (Weiss 2021c, subchapter 2.2.)

2.1.3 Alternative ways of measuring value

The norm for consultancies is to price their efforts with time and material billing. Customers are used to this approach and may be hesitant to purchase services based on any other cost structure. The purpose of using consultants, is to meet or even exceed goals that are selected by the customer. Achieving the goals should lead into improved business outcomes for the customer. There is a dilemma, when customers accept fees based on time and material spent but expect results regardless of the duration of work that is required. (Weiss 2021c, subchapter 3.1.)

In software development, more software developers, more lines of code or more features do not equate to more value produced. The issue is that companies assume more is more and measuring real value is difficult. In the best cases, software features are linked to business outcomes, and we can evaluate whether the software is efficient. (Tamblin 2024, chapter 3.)

Fighting over incremental increases or decreases on the cost of consultancy in time and material-based fees will never lead to a good relationship between the consultancy and its customer. A prosperous relationship is built on shared values and strengthened by good implementation and results. (Weiss 2021c, subchapter 1.5.)

Defined time and material-based costs but an uncertain return on investment will lead to vague benefits for the customer. Whereas clear and solid investment with a strong return on investment will lead to clear results. Shared success is the result of cooperation, cooperation requires investments from the customer to fulfill the purpose of using consultants. (Weiss 2021c, subchapter 1.7.)

Enabling customers to view consultants as partners instead of traditional vendors, consultancies must shift the way offering is communicated. Shifting away from what consultancies can do, and instead communicating what results are expected for the customer is key in measuring value in an alternative way. (Weiss 2021c, subchapter 3.1.)

Deliverables are commonly used but often unsuccessful in offering consultant services. Deliverables are not the same as outcomes. Value should not be based on being somewhere, spending a certain amount of time or handing in something that may be tangible or intangible. Time, material spent, and deliverables are not guarantees of improved business outcomes for the customer. (Weiss 2021c, subchapter 3.2.)

It is easy to measure whether consultants have spent time or handed in deliverables. However, true value is measured with quantitative or qualitative measures. Quantitative criteria are considered a modern approach to measure provided value. The measurements can be used to evaluate the correct cost worth to invest in consultants. (Weiss 2021c, subchapter 3.3.)

Quantitative measures can be for example customer ratings, lead time from idea to market, employee retention or customer acquisition. The quantitative measures need to agree to a criterion, such as increase in number of sales, and a period, such as a month or year. By participating in setting up and agreeing upon the correct measurements, consultants are already providing value upon which fees can be based. Even though an improvement in business outcomes over a certain period is desired and a good measure, the criteria should never be based on a certain percentage increase. A single percentage can be very arbitrary and in truth, out of the consultant or consultant teams' power. Various external forces and unforeseen changes can affect a customer's business

outcome and affect the success of a project. The focus should be on increasing the good and decreasing the bad, regardless of whether it's by 5, 10, or 50%. Consultants should not commit to a unique result if there are variables out of their control. Instead of promising certain percentages, it is better to promise the direction of development, whether it's an increase sale or decrease in lead time. (Weiss 2021c, subchapter 3.3.)

When fees are based on these measurable quantitative results, customers may feel the need to force a certain number or percentage for the increase or decrease. In these cases, it's best to commit to the lowest acceptable increase or decrease. If results are exceeded, it is best to promise the customer to keep the added value to themselves and propose the fees on the minimum acceptable result. This builds trust and allows the customer to see the return on investment over a single project potentially resulting in recurring purchases and projects. (Weiss 2021c, subchapter 3.3.)

Qualitative measures are less tangible but have a higher potential for fees if the customer is allowed to measure the results subjectively. In the best cases success is evaluated with a combination of observed behaviors and concrete fact-based evidence. The results should be judged on a spectrum rather than a quantitative measure where results are either achieved or not. (Weiss 2021c, subchapter 3.3.)

The best way to begin offering consultant project based on value instead of time and material or deliverables, is summarized into three elements by Weiss (2021c, subchapter 4.1.)

1. Business objectives that should be achieved.
2. The measures of success which evaluate the progression towards objectives.
3. Value which customer receives once objectives are achieved.

With the same mentality and prior to the work by Weiss (2021c, subchapter 4.1). Kaplan & Norton (1992 January-February) introduced the balanced scorecard to showcase the relationship between business goals, their measurements and the value they add.

The Balanced Scorecard is a tool to review the strategy of a company through a financial, customer, operative and innovative perspective (Kaplan & Norton 1992, January-February). Weiss (2021c, subchapter 4.1) uses the same approach to package the consultant offering in a way where pricing is based on value instead of time and material spent.

Value-based fees are optimal for projects where the contents can be agreed upon. The fee is based on a contribution that leads to a desired business outcome. (Weiss 2021c, chapter 6.)

2.1.4 Growth in IT consulting

Businesses ought to be reviewing opportunities for growth constantly. (Kotler & Keller 2022, 399). Chen (2024, chapter 1) agrees that companies are continuously required to innovate to stay competitive in the market.

The purpose of any company is not to grow but to find and cater to a customer by understanding their needs, demands and values. Growth is the result of completing the objective. (Drucker 2001, 20-21.)

In terms of organic growth, which does not include mergers or acquisitions, companies grow either by increasing their output or increasing their revenue or profit (Kotler & Keller 2022, 400). Kotler & Keller (2022, 399 - 400) describe achieving inorganic or organic growth with the product market growth framework. The framework views two aspects, products and the customers and whether they are new or existing (Kotler & Keller 2022, 399).

Companies looking to grow should first consider a market penetration strategy to achieve growth. Market penetration is done in existing market with existing products. The second approach is called market development, with this strategy growth is sought out with existing products offered to new markets and customers. The third approach involves creating new products for existing markets, this approach is known as product development strategy. Finally, the most cumbersome but potentially most rewarding of the strategies is diversification. Diversification means creating new products for new markets. Organic growth is usually achieved through market development or market penetration. Product development and diversification can be done organically but generally are more likely to require inorganic growth in the form of mergers or acquisitions. (Kotler & Keller 2022, 399-400.)

Chen (2024, chapter 2) describes a product-led approach to achieve organic business growth.

Increased value to the customer should result in increased fees and therefore growing income to the consultancy. However, the aim of growth should not be to create high fees, but high margins. Margins will also allow for more flexibility in terms of pricing. The fees and perceived value in consultancy are relative to the customer, there is no requirement that two customers should have the exact same fees. The key to growing a consultancy is not worrying about whether your fees could be higher. Instead, the focus should always remain on providing the customer value, meeting their requirements, improving the business outcomes and providing your customer with a feeling that ordering from the consultancy was the correct decision. (Weiss 2021c, chapter 4.)

Shifting from a time and material-based consulting to value-based fees requires patience and a plan. Customers will not switch from time and material to value-based fees, if there's no clear benefit for them. Offering new services to the customer, without limiting their access to support and advice is a good starting point when making the switch. (Weiss 2021c, subchapter 5.2.)

Profitability is traditional based on maximizing the amount of time spent on the customers issues or with the customer. Time spent with the customer in meetings, or tasks created and worked on lead to higher profits for consultants. This creates a dilemma where consultants may participate in and even encourage meetings and activities that are not factually in the best interest of the customer. (Weiss, chapter 2.)

Consultancies are dependent on consultants. A challenge to growth comes from training new consultants with the required knowledge to be selected for customer projects and succeed in them. A reduction in the training time is something that consultancies are interested in. (Bologna & Lupu 2014.)

Traditionally, growth for consulting firms has meant increasing the number of consultants and their billable time. There are however ways to grow consultant business, without adding to the employee head count. Subcontracting, joint ventures, offering additional related services and the sale of products related to your consulting expertise. (Biech 2019, subchapter 8.2.)

Biech (2019, subchapter 8.2) mentions expansion into the product market as a viable option especially for consultancies that have been in business for a longer duration. Biech (2019, subchapter 8.2) continues that veteran consultancies might often have created a portfolio of potential products through their past projects.

Consultants are often considered expendable resources and growth in the consulting industry is often dependent on economic growth and growth in their target customer corporations (The Consulting Services – Quarterly Update 6/10/2024, 6). The best advantage of products is that they can produce steady revenues (Biech 2019, subchapter 8.2).

On the other hand, products require investments of both time and money. Products can originate with any intellectual property that companies have used in their previous customer projects. (Biech 2019, subchapter 8.2.)

Table 1. Growth options for consultancies. (Adapted from Biech 2019, chapter 8).

Growth options	Method	Benefit	Challenge
Growth by adding to headcount	Recruitment and retention	More capacity to serve more customers. Potential for more knowledge and larger offering portfolio.	Training new employees and increases in overhead.
Growth without adding to headcount	Creating, marketing and selling products related to consulting expertise	Scalable sales. The same product can be sold to many customers.	Investment and skills required for a successful product. Requires building, marketing and maintenance.

Based on the writing by Biech (2019, chapter 8) table 1 summarizes the approaches and displays the benefits and challenges to growth based on whether a consultancy business seeks to add to their headcount, or number of personnel. Kotler & Keller (2022, 423) describe growth as something that can only be attained by continuously developing their offering. Weiss (2021b, chapter 10) highlights that simply adding to your consultancy headcount does not guarantee growth and can even result in the diminished profits.

Outside of advisory activities, it is not uncommon for consultants to package their knowledge into products. Traditionally and before the digital age this has been done in the form of books. (Weiss 2021c, subchapter 9.2.)

Simply adding to the number of consultants or developers has even been observed to stagnate growth. Diseconomies of scale is an event in which adding to the number of participants decreases profit. In this event the average output per person decreases. (Tamblin 2024, chapter 3.)

Kotler & Keller (2022, 271) concur that diseconomy of scale to occurs due to production means, such as staff, rising above demand.

Achieving scalable growth outside of traditional product management is possible by aligning product strategy and growth objectives of the company. Modern growth product management begins with detecting trends and focusing on customer requirements to discover previously unseen opportunities for growth. (Chen 2024, chapter 4.)

2.2 Turning custom solutions into products

2.2.1 Productization

A process during which several intangible and abstract elements are combined into a product like concept, is considered productization (Härkönen, Tolonen & Haapasalo 2017). Wirtz, Fritze, Jaakkola, Gelbrich & Hartley (2021) agree in that service productization is a process of transforming various services into products with unique specifications, definitions, pricing and branding in a way that a specific customer need is met. Schwaber & Sutherland (2020) wrote in their Scrum Guide, that a service can be a product, but a product must have clearly defined boundaries as to what it is or is not.

Härkönen et al (2017) found that the process of service productization is often involved in the standardisation, formalization and systemising of intangible service offerings and their related processes. Worthy of note is that Härkönen et al (2017) view standardization and systematization as the core of productization. Wirtz et al (2021) focus on specification, pricing and branding as the most relevant dimensions for productization.

Productization involves activities leading to commercial readiness which enables the sale, delivery and usage of product-like-concepts. These concepts are created with the goal of clarifying the offering of a company. Another benefit of productization is that within the company's offering, productized concepts are more replicable and scalable. During the process a clear need is analysed and based on the findings a definition for which elements are required to turn services into product like concepts. (Härkönen et al 2017.)

Chen (2024, chapter 4) highlights the need for modern product management to emphasise experimentation and unique approaches to achieve scalable growth. Wirtz et al (2021) found that service productization is an approach which enables the differentiation of service offering while making the sale of services easier and more scalable.

Wirtz et al (2021) note that productization of services can be done in various levels of productization. Wirtz et al (2021) write that highly productized services are clearly recognizable through a brand, a clear price and non-negotiable specification. Services with a low level of productization are flexible and variable in their price, brand and delivery contents. Härkönen et al (2017) however concluded that a low level of standardization and lack of clarity in the product structure often lead to issues in meeting customer requirements.

In Table 2. The productization extreme levels, either high or low degree, are presented according to Wirtz et al (2021) from the perspective of brand, price and specification.

Table 2. Dimensions of productization and their features based on productization level (Adapted from Wirtz et al 2021).

Productization perspective	Low Productization Attributes	High Productization Attributes
Brand	<ul style="list-style-type: none"> - Brand is missing. - No distinct value proposition. - Intangible elements. 	<ul style="list-style-type: none"> - Recognizable brand. Through name, logo and design. - Distinct value proposition. - Intangible elements are made tangible with mental or physical cues.
Price	<ul style="list-style-type: none"> - Price elements may be available, but difficult for customer to calculate final cost. - Prices are negotiable and estimations on delivery required before purchase 	<ul style="list-style-type: none"> - Clear pricing for specific customer needs. - Prices visible and there is commitment to pricing before purchase. - Flexibility and future development can be pre-priced
Specification	<ul style="list-style-type: none"> - General and not specific to a unique customer problem. - Delivery, scope, deliverable is not clear. - Each sale and delivery are unique based on the customer and service producers. - Customers have a low understanding of what they will receive. 	<ul style="list-style-type: none"> - Unique solution built to address a unique customer problem. - Predetermined product specification and delivery method. - Service sale and delivery is replicable regardless of customer and service producers. - Customers have a high understanding and clarity of what they can expect at the end of delivery.

Table 2. highlights well defined product concepts with high productization features and loosely defined product concepts with low productization features based on the research of Wirtz et al (2021).

Härkönen et al (2017) view productization elements as more various and a detailed customer-oriented process.

Elements of productization according to Härkönen et al (2017) include:

- Customer orientation.
- Service processes.
- Working methods.
- Service offering.
- Modularization of service.
- Service blueprinting.
- Customer benefits.
- Market potential, volumes and competition.
- Piloting productized services.

Essentially the purpose of productization is to meet the needs of a customer. Turning the customer requirements into a productized concept is difficult and only achievable with cooperation with the customers. (Härkönen et al 2017.) From the customers perspective, clarity of the service offering is necessary when presenting the productized service to the customer. Productization also forces a deeper understanding of different customer requirements, as previously before productization those could be addressed through heavy tailoring in the services offered. Customer orientation ensures that the customers' requirements are understood and considered in the productized service offering. (Härkönen et al 2017.)

Creating a scalable competitive service offering through products begins from the understanding of customer's needs (Chen 2024, chapter 2).

The clarification and documentation of service processes is the second element in productization. Service processes can be considered from the perspective of the company delivering the service, or the company purchasing the service. Though not all processes are visible to the customer, all processes must be formalized and clarified to reduce waste in overlapping work and increase the quality of service. A company's approach to productization and the success in it is dependent on unified ways of working and internal processes. The reproduction of productized concepts in the service offering is also dependant on service processes that can be clearly documented and communicated. The documentation should not be limited to descriptions but also include the required tools and templates for the delivery of service offering in a productized form. (Härkönen et al 2017.)

Productization benefits for the offering company include assisting with resource planning (Härkönen et al 2017).

In productization, clearly defined service processes appear to hold great value especially in the marketing and delivery of product concepts. Clarity means that the productized concept is easier to understand and easier to purchase. Potentially a better understanding leads to shorter lead times and reduction of costs in both the sales process and the delivery process. (Wirtz et al 2021.)

Härkönen et al (2017) regardless of their close relation, working methods can be separated from service process documentation and the related templates and tools. Härkönen et al (2017) found the methods of work to hold value in providing better quality in the productized service.

Härkönen et al (2017) describe service offering as an individual element of productization. Service offering is a multilayered element, which includes dividing and defining the core service, and both the supporting and additional services. The division enables profitable customization of productized services based on the specific customer. Supporting services are beneficial in standing out from the competition, whilst additional services enable customer satisfaction. The core service offering,

additional and supporting services in productization can be considered as configurations of the product concept which enable a level of customer specific customization. (Härkönen et al 2017.)

Wirtz et al (2021) describe service products which are created through productization to consist of core and supplementary services. In addition to the core and supplementary services, the delivery of the productized service is included in the service product (Wirtz et al 2021). To truly understand the element of service offering, different levels of core-, supporting- and additional services modularization of productized concepts is required (Härkönen et al 2017).

A way to describe offering new capabilities built to work together with existing products is referred to as an expansion model approach. An expansionist approach to product-led growth requires understanding customer needs and the capability to tailor services or products. (Chen 2024, chapter 2.)

Modularization is required mainly to enable the management and pricing of product concepts, secondarily it can be beneficial in offering piloting options to customers (Härkönen et al 2017). Chen (2024, chapter 2) describes the need to expand on the initial service offering with add-ons that are built to cater to the specific customer's needs.

Modularization and product-led growth through expansion relate to successful productized concepts being customizable to attract a wider audience and scalable to enable upselling to existing customers. (Chen 2024, chapter 2; Härkönen et al 2017.)

According to Härkönen et al (2017) service blueprints are relevant in productized services. Blueprints are a tool to describe and clarify services. Kotler & Keller (2022, 212) agree that service blueprints can be useful for quality control and standardization of the delivery of service.

Clarity is especially achieved for the division of responsibilities between the customer and service provider. Blueprinting also assists with discovering new modules and working methods in the productized service. (Härkönen et al 2017.)

Separately from the element of customer orientation, customer benefits are mentioned as a key element of productization by Härkönen et al (2017). Studying potential customer benefits can be done through an in-depth customer understanding either through a combination of prolonged cooperation, experience and studies in the form of questionnaires. Though in productization, the customer benefits may be secondary to the company's internal benefits. (Härkönen et al 2017.)

One of the productization elements is the market potential of productized services, considering the potential volumes and competition. The business aspirations of productization often play a minor

part in comparison to the internal benefits of productization, though especially productized additional services can be used for differentiation. (Härkönen et al 2017).

The final element of productization is the piloting of productized concepts. Piloting of productized services is common before including productized services in the company portfolio and to enable the development of productized services through iterative feedback loops. (Härkönen et al 2017.)

Chen (2024, chapter 1) agrees that piloting is a good approach to continuously experiment, learn and iterate to develop product concepts that enable growth.

With the elements described by Härkönen et al (2017) there are various key findings. Primarily productization is about the systematization or even standardization of service offerings and their related processes. Second, to ensure the customers' requirements are understood, customer orientation must be considered in productization. Third, as part of productization, the related service processes, tools, templates and working methods must be clarified and documented. Fourth, the productized service needs to be modularized or divided into core services, additional services and supportive services to enable customizability, management and development of the productized concept. Fifth, productization and its related methods and elements revolve around the ability to replicate and scale, describe services in a clear method, in-depth customer understanding and gathering feedback that enables the development of service offering. Finally, and especially in cases of complex services and large service portfolios, the understanding of services externally and internally is a requirement for the successful sale and delivery of productized services. (Härkönen et al 2017.)

Companies can productize several services to be sold independently or as supporting service products to other products and services in the portfolio (Härkönen et al 2017). Companies often benefit from identifying or building complementary offerings within their portfolio (Chen 2024, chapter 9).

Härkönen et al (2017) identified two dimensions to a company's product portfolio and the products within. A technical side of products is controlled by engineers and required for service development. The commercial side of products is controlled by sales and required to be clear for the customers to understand. Requiring a knowledge of both technical and commercial dimensions, the productization of services considers offering and service processes. (Härkönen et al 2017.)

Though standardization is a key element of productization, Wirtz (2021) reminds that achieving an identical service outcome consistently is not necessarily the purpose of productization.

2.2.2 How to productize services

The productization of services is highly dependent on customer orientation. Successful products and services are built in collaboration with customers. Customers in this sense can be both internal and external to the company. A successful productization creates a service product or product concept which can be sold and delivered profitably. (Härkönen et al 2017.)

As stated earlier, Wirtz et al (2021) provide an approach to productization through specification, brand and price.

Specification begins with the customers. Understanding their needs and translating them into a standardized product concept which can be replicated. Standardization comes from clear descriptions of what service processes are required and how they are implemented, from both a commercial and technical perspective. Documentation and service blueprinting are good tools for specification but outdone in importance by repetition and routine ways of working. Modularization of intangible and tangible service elements is a necessity to avoid creating a service that is too complex to comprehend by customers or employees. Moreover, rather than standardizing the aim of productization is formalization. Formalization is less strict than standardization. The strictness should be considered based on the business environment. Formalized services are not merely well documented and clarified. They are also well-defined processes and replicable through routines and certain activities. Formalization leads to a productised services which are not dissimilar to products. (Härkönen et al 2017.)

Formalization helps companies working especially in knowledge-intensive business services to develop their service offering (Tuominen & Martinsuo 2019). Tuominen & Martinsuo (2019) discovered that especially in knowledge-intensive businesses such as consulting, regardless of formalised and well documented guidelines, the delivery of product services no matter how productized still requires skill and motivation from consultants.

Formalization is most likely to be successful in cases where services have potential for growth or scalability. Skilful and motivated employees are required to formalize services in practice through design iteration. Additionally, managers should oversee that formalization is done in a way to provide key strategic outcomes. Formalization should involve the employees who are experienced in the delivery of services that are to be productized. Freedom to influence the productization process when formalizing services also means there is no one correct way to productize services in knowledge-intensive businesses. (Tuominen & Martinsuo 2019.)

The purpose of branding is to create tangibility in the mind of the customers and employees (Wirtz et al 2021).

Branding is the marketing function assigned to differentiate products and services in the mind of the consumer. Even though brands are created with activities of a company, in the end the brand is what the customers perceive it to be. Attributes and benefits of a product must be unique and visible for customers to see desired differentiation in one product or service over another. (Kotler & Keller 2022, 235.)

Productizing services requires service companies to move away from using the company as a single brand. Productization requires branding to be multilevel. The company should be branded, but the individual productized services and supportive services should be branded individually. Companies need to consider building brand architecture. (Wirtz et al 2021.)

Wirtz et al (2021) propose brand architecture as a crucial activity for companies looking to productize services. Kotler & Keller (2022, 245) introduce brand hierarchy to manage how a company's products and services are perceived by their specific intended target audience, how the products relate to each other and the company brand.

A brand extension is the birth of a sub-brand that is strongly linked to the parent brand. A brand extension occurs when a company attempts to reach a new audience or product category. In these cases, the strong parent brand is thought to assist the new brand extension, as the parent brand already exists in the mind of the customer group. (Kotler & Keller 2022, 251.)

Brand extensions are not always good choices even with positively viewed brands. In certain scenarios, extensions can be miss-leading. Especially in cases the new brand is seen as a prototype probing into a market, which the parent brand is not positively affiliated with. (Kotler & Keller 2022, 251.)

Regardless, brand extensions are a common occurrence as brands tend to evolve over time (Kotler & Keller 2022, 260).

Pricing for productized services needs to be clear and presented at the customer's request without delay or explanations (Wirtz et al 2021). Härkönen et al (2017) agree that a known price is required for whatever the product concept or service configuration is, that is being sold to a customer. From a business standpoint, price is the one marketing element that creates revenue (Kotler & Keller 2022, 284).

Increasing trends in consumer business, for consumers to prefer to pay per use solutions, are making their way into the business-to-business landscape. Business customers increasingly want to pay per use instead of allocating fixed capital towards high costs. Software delivery companies

are commonly using productization to shift offering from project deliveries to product business. (Systä & Yrjönkoski 2019, 1.)

In business-to-business context, pricing performance improves when the authority for pricing is centralized and managed with perspectives from finance, sales and marketing functions (Kotler & Keller 2022, 266). Kotler & Keller (2022, 266) further elaborate that to succeed pricing must be a systematic and iterative process, additionally strategists must thoroughly understand buyers' perception of the received value.

The correct positioning for an offering depends on quality and price. For businesses, the correct price is determined by the pricing objective. The objective determined the desired purpose of pricing. Clarity in the objective leads to easier pricing decisions. There are various pricing objectives such as short-term profit, market penetration, market skimming and quality leadership. (Kotler & Keller, 269.)

Price elasticity of demand records the effect of pricing change on the demand for an offering. Inelastic demand means that a change in price has little effect on demand, while elastic demand means that a change in price has great effect on demand. Price elasticity is low, or inelastic, in situation where an offering is unique and distinctive. (Kotler & Keller 2022, 271.)

Pricing objectives need to take variable and fixed costs into account to break even or be profitable with new offerings. Understanding the effect of the experience curve on pricing, analysing competitors' prices and iteratively selecting the correct pricing method is required to succeed with new offerings. (Kotler & Keller 2022, 272-273.)

Wirtz et al (2021) add that pricing also relates to the specification of the productized service and service components. Different tiers for productized service components deserve different pricing levels to highlight the qualities of each specific service or service component (Wirtz et al 2021).

Traditional methods vary from pricing based on the following. Desired markup, desired rate-of-return or even pricing based on competitors. A more modern approach is economic-value-to-customer (EVC) pricing. EVC considers value proposition as it is perceived by the customers and places premiums based on the competitive edge provided by the company. (Kotler & Keller 2022, 274.)

Wirtz et al (2021) highlighted productized services to generally consist of individual supportive and interrelated services. Optional-feature pricing is an effective way to separate cost covering and high margin aspects of the productized service (Kotler & Keller 2022, 277).

Worthy to mention, in some segments a low price might be the competitive edge that customers value the most (Kotler & Keller 2022, 275). Price is generally affected by the costs, customers and competitors (Kotler & Keller 2022, 284).

2.2.3 Benefits and risks of productization

From a company point of view, productization increases quality control over delivered services. Productization can also be considered a measure of how well a company understands its own capabilities and the requirements of the customer base. Productization through recurring and repetitive activities also enables the automation of some service delivery activities, leading to less work spent on the delivery. When operational clarity is present, productization benefits businesses through improved manageability, clear earning logic and both internal and external communication. (Härkönen et al 2017.)

Productization begins with customer cooperation and measures the level of customer understanding (Härkönen et al 2017). In the same tune, Tuominen & Martinsuo (2019) highlight better customer satisfaction and employee engagement as benefits of formalization of services.

Formalization as a part of productization standardization (Härkönen et al 2017) was found by Tuominen & Martinsuo (2019) to increase the number of sales and the profitability of pricing, while also decreasing the dependence on individuals. Due to formalization, productized services were easier to comprehend and sell, easier to price profitably and made it easier to onboard new recruits to the company (Tuominen & Martinsuo 2019).

In the specification of productized service offering, standardization is an extreme of formalization (Härkönen et al 2017). When formalization is too strict in knowledge-intense services, it can limit skilled employees' ability to create value for customers and lower their motivation (Tuominen & Martinsuo 2019). Wirtz et al (2021) emphasise that productization is not a solution for all companies offering services, especially since highly developed service products become product-like to the extent that creativity begins to suffer.

There are various benefits to the customer from productization as described by Wirtz et al (2021). Especially in complex services productization can help customer comprehend what they are potentially buying, how it will be delivered and how it will provide value (Wirtz et al 2021). When considering benefits to the customer, it is important to remember the customer who is paying for the service maybe different to the users using the service (Härkönen et al 2017).

Productization enables cost effectiveness in the creation of new product services for concepts that meet customer requirements (Härkönen et al 2017). This statement is supported by Kotler & Keller

(2022, 272) experience curve description where repetitive actions in the production of an offering lead to employees becoming more skilled and faster.

Productization considers various aspects of turning services into products, intangible into tangible, confusing into understandable. The objectives for productization are often scalable growth, manageability and standardization of processes and methods. (Wirtz et al 2021; Härkönen et al 2017.)

2.3 Offering pivot

2.3.1 Pivot and strategy

Furr & Dyer (2014, 170-171) explain the term pivot as being popularized during the early 2010's to describe a change in key strategic areas. As a term used to describe a change in the strategy of a company, a pivot requires reallocation and restructuring of resources and activities (Kirtley & O'Mahony 2019, 1-2). However, making small incremental changes to refine or optimize a solution or strategy is not considered a pivot, but referred to as iteration (Furr & Dyer 2014, 171). Later Furr & Dyer (2014, 177) describe broad and narrow pivots, where narrow pivots are synonymous with iterations.

Newly acquired knowledge that conflicts with the current presumptions is the beginning of a strategic pivot. Though often companies tend to make multiple decisions which lead to small incremental changes instead of a single grand decision. Over time, multiple strategic elements are removed, added or modified, leading to an eventual pivot. (Kirtley & O'Mahony 2019, 1.)

Successful companies have pivoted especially in instances where a performance plateau has been reached. In these events, companies have noticed that an increase in the amount of developers would no longer increase growth but instead decrease efficiency. Instead of readjusting revenue and growth expectations, companies can pivot to a strategy where growth is sought through optimizing efficiency and decreasing the cost of creating solutions. (Tamblin 2024, chapter 3.)

A strategic change is an alteration in the strategy of a company. The strategic change becomes relevant when companies are faced with new information and the rise of new problems and new opportunities. Strategic changes come in the form of either exists or additions. As companies are faced with new problems, strategic exits must be considered. Strategic exits in offering refer to the removal of certain products or services without replacing them. In the event of new opportunities, companies can make a strategic change through a strategic addition. A strategic addition is referred to when a company includes new activities or value propositions its strategy. (Kirtley & O'Mahony 2019, 11-12.)

Furr & Dyer (2014, 171-172) agree that pivoting refers to changes towards either a new problem or a new solution related to for example customer segments, or changes related to one or more of the key elements in a company's business model such as pricing, customer acquisition or operational structure.

A strategic change is not a pivot. A pivot requires the reallocation of resources to reorient the strategic direction of the company. To pivot, companies make several strategy changes and must make both strategic additions and exits. (Kirtley & O'Mahony 2019, 23-24.)

Famously Drucker (2001, 20-21) recollected his own conclusions by stating the purpose of any company is to find and cater to a customer by understanding their needs, demands and values. According to Furr & Dyer (2014, 18) uncertainty related to the understanding of customers originates in two aspects, technological and demand uncertainty. Technological uncertainty refers to the question of whether we can make a good solution. Demand uncertainty refers to whether the customers will buy it. (Furr & Dyer 2014, 18.)

When evaluating the need to pivot or make strategic changes, companies can best help themselves make educated decisions by actively removing uncertainty by conversing with stakeholders to discover new information (Kirtley & O'Mahony 2017, 28). Uncertainty is often high in the growth stages of companies (Furr & Dyer 2014, 46). When facing uncertainty, it is important to apply innovative approaches to reduce uncertainty through experimentation (Furr & Dyer 2014, 48).

To validate potential pivots or strategic changes, a company must remove uncertainty to the best possible extent through rigorous experimentation. (Kirtley & O'Mahony 2019, 28; Furr & Dyer 2014, 48.) Companies must remove barriers for experimentation and allocate time for innovation (Furr & Dyer 2014, 59).

For the development of new offerings, short time restricted cycles are required to experiment, gather evidence and learn. The focus should be on maximum 2-month windows to ask and answer specific questions related to the pivot. These are known as pivot cycles. Pivot cycles allow teams and individuals to focus on the questions at hand as a priority. Experimenting within pivot cycles requires hypothesis and structure for the conducted experimentation. The key to experimentation is learning and therefore there must be a way to measure what actions affect which results. Before starting a pivot cycle, the product, offering, and company status must be clear to the team. (Furr & Dyer 2014, 173-174.)

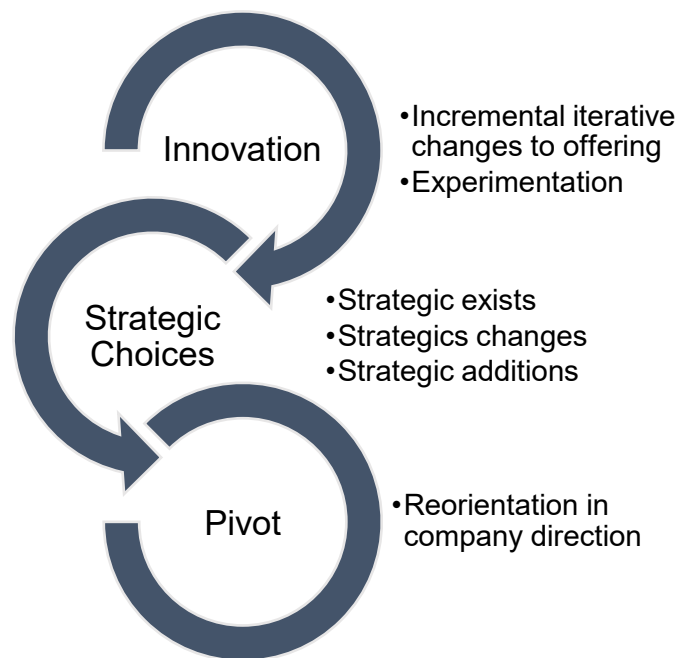


Figure 1. Process from innovation work to potential pivot. (Adapted from Kotler & Keller 2022, 425; Furr & Dyer 2014, 13; Kirtley & O'Mahony 2017, 11-12; 23-24.)

Figure 1 displays the process where innovation occurs in the incremental changes to a product offering (Kotler & Keller 2022, 424). Strategic choices by Kirtley & O'Mahony (2019, 11-12) depend on continuous experimentation and innovation to gather evidence and make good strategic decisions. Finally resulting in a potential pivot to steer the company towards a different opportunity or problem (Furr & Dyer 2014, 171). (Figure 1).

Kotler & Keller (2022, 425) and Furr & Dyer (2014, 13) highlight the relationship between creating an environment for innovation and the creation of new successful products.

2.3.2 New offering

In terms of offering, consultancies provide what is known as pure services. Pure services include no physical attributes. Services where products and service are combined, such as restaurants which provide food, its preparation and delivery can be considered hybrid services. (Kotler & Keller 2022, 209.)

Productization aims to shift traditional services into product-like offerings (Wirtz et al 2021). Especially amongst consultancies, comparing customized solutions to specified ready-to-go solutions is a differentiation question (Wirtz et al 2021).

Creating new offerings is considered innovation. Innovation, however, is not restricted to only new products or services, but includes adapting new technologies and approaches to a company's existing business model. There are various methods to innovate related to a company's business model that are not only the creation of new product or services, for example innovation can include new ways to distribute value, price value or brand value. Especially in industries with rapid technological advancement and fierce competition companies must innovate to create market value in new ways. (Kotler & Keller 2022, 423.)

Kotler & Keller (2022, 425) introduce a process for the creation of new offerings. The process is not too dissimilar to the Innovator's Method introduced by Furr & Dyer (2014, 30).

Both the process for new offering creation and Innovator's Method relies on development, experimentation and validation. (Kotler & Keller 2022, 426; Furr & Dyer 2014, 29.)

Systä & Yrjönkoski (2019, 1) concur that investing in offering development should be done gradually and a full-scale commitment to developing new offering should not be done without a commitment from the first customers.

The process for the creation of new offerings by Kotler & Keller (2022, 425-426) is done through a five-step process. Starting with idea generation, concept development, continuing onto business model design, offering development and finally commercial development. (Kotler & Keller 2022, 425-426.)

The innovator's Method begins with insight to seek problems worth solving. The second step is the problem approach to discover customer's need. Third the solution step is about prototyping the quick solution. Fourth step is the validation of go-to-market strategy and business model. (Furr & Dyer 2014, 30.)

Kotler & Keller (2022, 425) and Furr & Dyer (2014, 2) see offering development as akin to innovation and place it as the responsibility of managers. Furr & Dyer (2014, 49) however highlight that managers themselves should enable teams and organizations to innovate, rather than be the innovators themselves.

Innovation is mostly done incrementally as improvements in the offering. Completely new products and services are less common and successful new products or services even less common. People, not companies, perform innovation. There are various approaches to manage the creation on new offerings, but all involve changes in the organizational structure. Existing or new departments, innovation centres, task forces, practice communities and cross functional teams are different methods to enable people to come together to create new offerings. (Kotler & Keller, 425.)

For a product definition to emerge, Floren and Frishammar (2012, 22) explain a development process for ideas and concepts.

Defining new products should be approached iteratively. Turning ideas to concepts starts with development, which includes sub-stages refinement and screening. Alignment is required after refinement, both internal and external alignment should be considered. Finally, product concepts require legitimization. All the steps lead to a product definition through collaboration and iteration. (Floren & Frishammar 2012, 22-23.) The stages and sub-stages and how they affect companies are summarized in table 3.

Refining and screening of ideas must occur in connection with each other. Iteration between the idea and its refinement is crucial to begin a successful product concept. Aligning the refined idea concepts needs to take place regarding both internal and external forces. Internal alignment includes alignment with existing offering, portfolio and strategy. External alignment must be done to apply visibility to the customer requirements, market conditions and competition. Finally following alignment, legitimization is required. Key stakeholders for the product concept must accept and legitimize the product concept. (Floren & Frishammar 2012, 23.)

Great ideas require collaboration to turn into concepts. To elaborate, a customer representative may witness an opportunity for a new solution, but their limited understanding of the market, and company resources means they need to collaborate with other parties iteratively to formulate the idea into a product concept. (Floren & Frishammar 2012, 24.)

Refinement of ideas to product concepts ought to display a nature of experimentation and creativity. At this stage a team of developers iteratively develops informal and inexact features. Refinement occurs based on past experiences and is successful if a feedback-oriented culture of learning is implemented in a company. A well-structured refinement process involves internal functions and standardized processes to create a fast way to refine ideas to cut bad ones out and focus on ones with potential. External stakeholders such as customers also have a place in refinement, if not directly then through the internal stakeholders acting as their voice. Additionally, to customers, other external stakeholders' interests should be considered in refinement of ideas. As a counterbalance to refinement, screening is a method where a company continuously evaluates the product concept is worth more investment or should be abandoned. Most companies are found to do a poor job at screening. Screening is mainly used to focus on ending poor projects, whereas it should also be focused on identifying good projects. It is important to have a systematic way to screen ideas. The systematic way should include the development teams own screening and external gatekeeper-like screening to ensure a balance of experience and neutral opinions. (Floren & Frishammar 2012, 26-27.)

Alignment of ideas and product concepts regards the alignment of strategy. Poor alignment with strategy often leads to lower chances of being successfully developed and commercialized. Successful products align with strategy and operational abilities. Often a mistake companies make is developing technologically superior products, which do not align with company strategy which leads to a miss-match between products and customer requirements. Aligning externally means understanding the market and competitor offerings. Inability to identify and understand any competition often means the product concept will fail. When observing alignment for product concepts, success is dependent on high alignment for both internal and external elements. With low alignment, risks arise that can jeopardize the product. (Floren & Frishammar 2012, 28-29.)

The legitimization of product concepts relates to social and political aspects in a company. Good ideas may be cut because they lack the support and commitment of management whereas bad ideas can flourish if the correct manager is on board. Collaboration between people and functions is a necessity to succeed. Passionate product concept owners help steer product concepts during unclear phases where uncertainty is high. (Floren & Frishammar 2012, 30-31.)

The creation of new products should be done systematically through a process (Floren & Frishammar 2012, 22-23). The process stages and sub-stages are summarized in table 3.

Table 3. The stages of idea and product concept development and their effect on companies. (Adapted from Floren & Frishammar 2012, 24-31.)

Stage	Sub-stage	Focus on	Avoid
Development	Refinement	<ul style="list-style-type: none"> • Collaboration internally and with customers and other stakeholders • Most value with minimal effort • Culture of iterative experimentation and learning 	<ul style="list-style-type: none"> • Detail oriented development • Over-formalization • Development in a silo
	Screening	<ul style="list-style-type: none"> • Informal screening in between teams and individuals • Formal screening through measurable activities • Analytics and assessments • Collaboration 	<ul style="list-style-type: none"> • Hierarchical screening committees • Opinion based screening
Alignment	Internal	<ul style="list-style-type: none"> • Consider potential for commercial success • Strategic alignment with capabilities and offering portfolio 	<ul style="list-style-type: none"> • Developing products that don't fit strategy
Alignment	External	<ul style="list-style-type: none"> • Benchmarking • Strategic partnerships • Understanding and learning from your surroundings 	<ul style="list-style-type: none"> • Working alone based on past assumptions
Legitimization		<ul style="list-style-type: none"> • Gaining sponsorship from leadership • Cooperation between functions 	<ul style="list-style-type: none"> • Politics and subjective views

Though there isn't a fool proof way to create successful products. There are at least two clear requirements which must be met to turn ideas into commercial product concepts. An iterative process and collaboration between internal functions and with external stakeholders. (Floren & Frishammar 2012, 22-24.)

Chen (2024, chapter 4) notes that a deep understanding of customers will always be required to successfully create a desirable offering.

In addition to understanding your customers and building products iteratively, software producers productizing services should prepare for changes in their business model and commercial

operations. Even if these changes come gradually, they will become reality after the validation of a new product. (Systä & Yrjönkoski 2019, 1.)

2.3.3 From custom IT projects to productized offering

Traditionally IT consultants' delivery mechanism is software projects. Long sales processes are a great way to acquire knowledge regarding the customer expectations and requirements. Unfortunately, often the project managers or software developers who are tasked with the delivery and implementation of the project are not participants during the sales process. (Savolainen & Ahonen 2015.)

Scalability and product development investments become more manageable through the productization of software projects and their delivery. Productized software solutions should be incrementally built configurations of technical modules. This enables variability and experimentation during the development of new offerings. (Systä & Yrjönkoski 2019, 1.)

Savolainen & Ahonen (2015) discovered a gap in-between software project implementation and business context. Savolainen & Ahonen (2015) continue by describing that often project managers, though well versed in project management, are lacking in the in-depth knowledge of the customer business context, problem to be solved and customer expectations.

In the sales and delivery of IT projects, there is a high risk for knowledge loss and unclarity during the handover from sales to implementation (Savolainen & Ahonen 2015). Regardless of the level of productization, software developers, sales teams, management and software buyers can benefit from a clear scope, price and delivery of a productized software solution (Gyamerah, Härkönen & Mustonen 2021, 89).

Productization does not necessarily mean creating software-as-a-service (SaaS) products (Gyamerah et al 2021, 89). Productization does however, mean moving from low sale unit professional services towards higher sale unit packaged software products (Systä & Yrjönkoski 2021, 3).

In the process of productization (figure 2), packaged configurations of different software component, services and supporting materials come together to form a software product. Productization is the process in which the intention is to increase clarity from the customer point of view. Making the intangible tangible, formalization and the ability to reproduce a solution offer value to all internal and external stakeholders. (Gyamerah et al 2021, 94.)

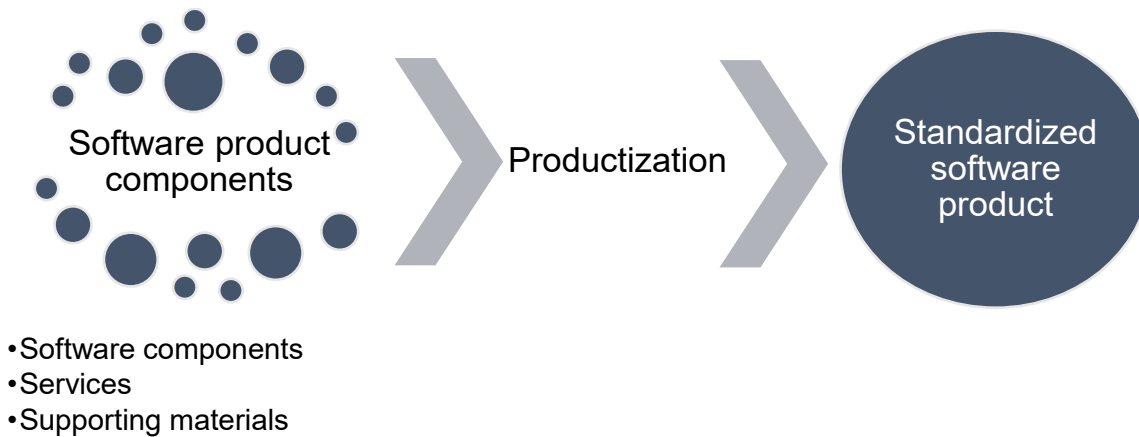


Figure 2. Process in which software product components are productized into a standardized software product (Adapted from Gyamerah et al 2021, 94).

The standardized software product displayed in figure 2 is composed of a software product structure. The structure of a software product is presented in figure 3. The structure includes commercial and technical aspects which are separate from, but connected to, each other (Gyamerah et al 2021, 99-101).

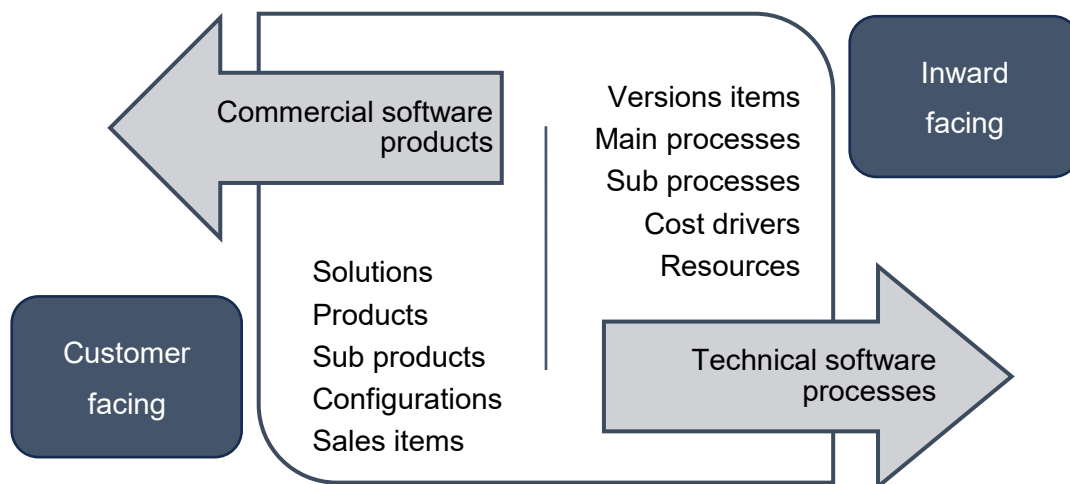


Figure 3. Productized software product structure (Adapted from Gyamerah et al 2021, 97-98).

The productized software product structure in figure 3. divides software products into customer facing commercial products and non-customer facing processes required to set up the product. Customer facing products, such as solutions, products, sub-products, configurations and sales items can be clearly understood, bought, sold and billed. Non-customer facing processes such as versions, primary and secondary processes and different tasks and required resources are linked to sales items or costs accumulated in the production and delivery of software products. Instead of

delivering software, companies can deliver products which consist of software and services. (Gyamerah et al 2021, 97.)

Software product offerings can generally be delivered as SaaS, On Premise or Business Process-as-a-Service (BPaaS). On Premise refers to solutions where a customized configuration of a software product is delivered to the customers servers. SaaS refers to configurable software products delivered on the software producers' servers, but the configuration and operations are managed by the customer. BPaaS is like SaaS, but the service and operations are managed by the software development company. In BPaaS the software development company configures and installs the software. The value to the customer comes from the software development company conducting service operations for the customer, allowing the customer to access the service if necessary. Regardless of the type, product structure is similar. (Gyamerah et al 2021, 97-100.)

Systä & Yrjönkoski (2019, 3) describe software products which require installation as old school. Gyamerah (2021, 97-100) findings show that SaaS and BPaaS software offerings do not require installation on the customers servers as traditional On Premises services do. Systä & Yrjönkoski (2021, 3) however highlight that modern SaaS products may even begin their product life as On-Premises services.

Systä & Yrjönkoski (2019, 4) offer a brief process for the launch of software products. Described in figure 4 the process begins with the proof of concept, leading to individual sales of the first 10 customers, the product reaching maturity with mass distribution. The process can be tracked through several functions such as marketing, sales, delivery, product, invoicing and end of use (Systä & Yrjönkoski 2019, 3). Incremental and experimentative approaches for moving towards software products is widely supported. (Kotler & Keller 2022, 426; Furr & Dyer 2014, 29.)

Systä & Yrjönkoski (2019, 6) introduced three phases, visualized in figure 4, where productization can be done gradually depending on the success of phases.

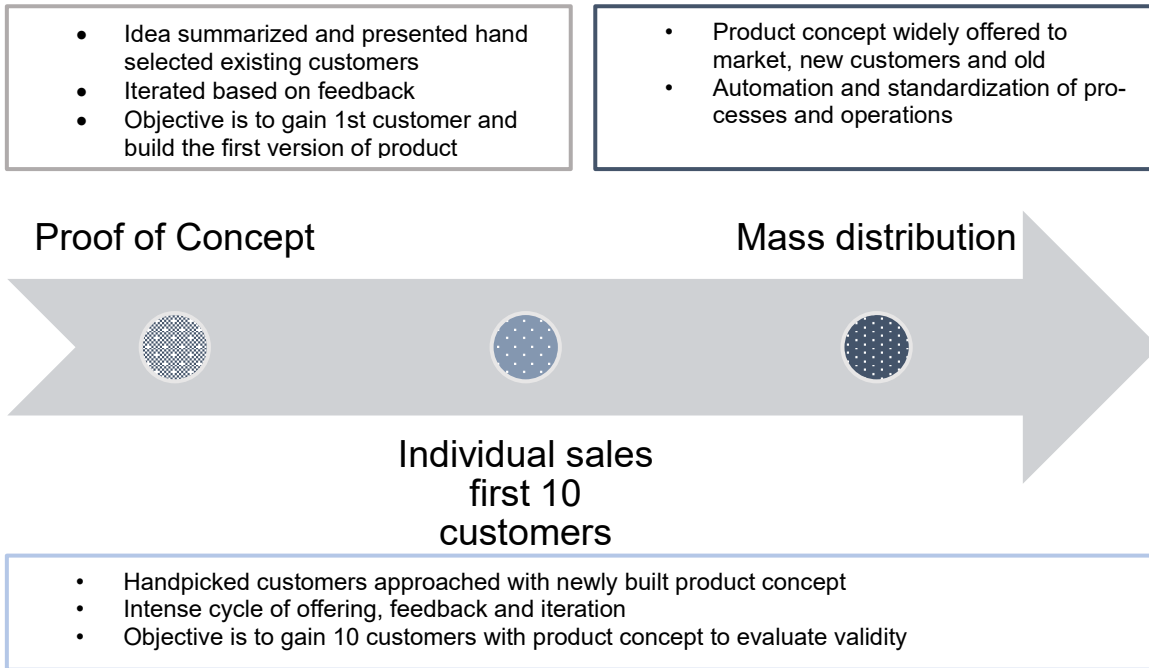


Figure 4. Process for launching software products (Adapted from Systä & Yrjönkoski 2019, 4-5.)

The objective with a proof of concept is to gain the first payment commitment. This should be achieved before building the product by presenting the concept in light methods to selected customers with whom the company has the presumed best reputation. Commitment to build and commitment to pay, the customer and company can iterate and re-imagine the concept. After a commitment to pay and build by both parties, the first version of product concept is built and delivered. The next step in the process has the objective of reaching the first 10 customers with the product concept. (Systä & Yrjönkoski 2019, 5.)

The second stage requires more investment than the first, as product management is cooperating with potential customers, developing the product based on feedback, creating desired features and structuring pricing and branding (Systä & Yrjönkoski 2019, 5). This is not dissimilar to the production elements described by Wirtz et al (2021). However, the elements are clarified and standardized as Kotler & Keller (2022, 426) and Furr & Dyer 2014, 29) suggested iteratively.

The second phase, displayed in figure 4, includes involvement from more functions such as marketing to begin the creation of promotional material and gathering of customer insights and buyer personas. The second phase ends, either in a cancellation of the new product concept or a move to phase three, mass distribution. In the third phase operations are systemized and automation added where possible. The product continues its lifecycle with focus on sales instead of development. (Systä & Yrjönkoski 2019, 5.)

Offering clarification can be achieved through productization of software products. Creating a product structure for software products increases the marketability of software solutions since it clarifies the product concept for management, sales and the customers. (Gyamerah et al 2021, 101).

Productization, as described by Härkönen et al (2021), focuses on clarity towards internal managers and customers alike. Wirtz et al (2021) consider productization requirements primarily from a commercial standpoint. Gyamerah et al (2021) offer software productization specific guidance. The summarized key similarities and difference based on the focus, benefits, growth and the effect on customers, managers and other employees can be observed in table 4. The observations are made based on the work of Wirtz et al (2021), Härkönen et al (2017) and Gyamerah et al (2021).

Table 4. Summarization of productization. (Adapted from Wirtz et al 2021; Härkönen et al 2017; Gyamerah et al 2021).

Observation on productization	Service products and productization (Wirtz et al 2021)	Service productization (Härkönen et al 2017)	Productization and Product Structure (Gyamerah et al 2021)
Primary focus area	Marketing and sales	Standardization, manageability and control	Creation of software products
Benefits	Enhances commercial operations. Processes defined	Provides structure through standardization or formalization of services	Clarity of software products scope. Standardization and documentation
Growth	Enables service scalability and distribution	Modularization and configuration based on customer need	Structure for scalability and repetition
Effect on staff	Employee support through clarity and improved understanding	Improved manageability	Better understanding of resources, offering and roles
Effect on customers	Reduce perception misalignment. Customers understand the sales product	Increased customer interaction	Improved communication and clarity between customers and company

2.3.4 Product Management

To stay competitive in the field of software productization, companies require excellent product management processes (Systä & Yrjönkoski 2019, 3). Product Management is defined by Lukassen & Schuurman (2023, chapter 1) as a process in which a product is created in cooperation with stakeholders and internal functions to create an offering that provides value. Levy (2021, chapter

6) continues that unique value can only be created through balancing business objectives with user value.

Chen (2024, chapter 1) introduces Growth Product Management as a key role for modern product management to use experimentation and data to identify scalable growth strategies and pivot when necessary. Chen (2024, chapter 5) continues that scalable growth is attainable only with continuously developing products made by customer centric companies with a passion for excellent user experience.

Regarding product management roles Tamblin (2024, chapter 2) separates Product Owners and Product Managers. Both are required for successful product management, but Product Owners are more focused on servicing the business need by understanding requirements and leading a team to produce the required features and capabilities. Product Managers are more focused outwards to find out from customers, what the business needs are. (Tamblin 2024, chapter 2).

Chen (2024 chapter 12) makes no separation of these roles but agrees that a growth product manager is required to be able to innovate through data driven decisions and a customer-oriented mind set. Customer orientation is also one of the key elements of productization (Härkönen et al 2017).

When it comes to product management processes, both Tamblin (2024, chapter 2) and Chen (2024, chapter 12) agree that scalable growth is dependent on successful product management, which requires skilled product managers with the ability to orchestrate innovation.

Regardless of job title, an individual person should be accountable for the ownership or management of a product. The purpose of this role is to define an understandable and clear product, with a unique value proposition. Clear definitions of a product are a product vision, product goal and a product backlog. Though these must remain flexible and iterative. (Schwaber & Sutherland 2020.)

Products can be anything tangible or intangible, it could be a service or something more abstract. Regardless of shape or size, to deliver unique value a product must have unique and clear specifications, cater to specific users and use cases and provide value for stakeholders. The purpose of a product is to deliver unique value. Product goals are used to materialize the optimal future of the product. (Schwaber & Sutherland 2020.)

2.4 Theoretical review summarized

The purpose of summarizing the theoretical review is to demonstrate the framework to guide empirical research. Answering the research questions is supported by theoretical findings. A

theoretical framework has been constructed to link research questions and theoretical findings. The theoretical framework steers the empirical portion of the research in data collection and analysis.

Theoretical framework to steer empirical research related to research question 1. What criteria does Knowit Solutions Oy use to define a product? Perspectives to consider listed:

- A product can be tangible or intangible, however it needs distinct specification (Schwaber & Sutherland 2020).
- Product specifications can be highly flexible or strict depending on the purpose (Wirtz et al 2021).
- A key characteristic of a product is its goal or an objective which the product is aiming for (Lukassen & Schuurman 2023 chapter 10).
- A single productized product concept should be split into two aspects to accommodate for both an external and internal perspective (Gyamerah et al 2021).
- The creation of new products should be approached iteratively and through experimentation (Systä & Yrjönkoski 2019).
- A product requires a paying customer (Systä & Yrjönkoski 2019, 5) a successful product scales to many customers (Härkönen et al 2017).
- Productized services are often made due to various customers having the same requirement (Härkönen et al 2017).
- Products require a layer of customizability to be competitive in the eyes of the customers (Härkönen et al 2017).
- Defining products should be done incrementally and systematically (Floren & Frishammar 2012, 24-31).

The second research question: In comparison to tailored solutions, why would customers prefer a product? Empirical research is supported by the following theoretical findings:

- There is a dilemma in traditional time and material-based consulting fees and collaborative development cannot exist when customers value speed and consultancies value time spent on consulting (Weiss 2021c, subchapter 11.1).
- Customer can perceive value tangibly, intangibly or peripherally (Weiss 2021b, chapter 4.)
- Increasingly customers are interested in service providing partners where expected value is outcome driven (Weiss 2021c, subchapter 3.1).
- Productization makes buying easier and has potential to shorten lead times leading to quicker improvements on the customer situation (Wirtz et al 2021).

- Modern product creation is collaborative and provides customers a unique opportunity to influence the development of the product which they are buying (Floren & Frishammar 2012, 24-25).
- Trends indicate, that B2B customers are more interested in paying per usage instead of allocating fixed capital upfront (Systä & Yrjönkoski 2019, 1).
- In traditional IT project offering, there is often a different team selling and implementing solutions (Savolainen & Ahonen 2015).
- Customers may be interested in outsourcing certain maintenance or even business activities to software product providers (Gyamerah et al 2021, 98-100).
- Successfully productized services have configurability (Härkönen et al 2017).
- Configurability means customers don't have to opt for a one size fits all solution when buying products. (Gyamerah et al 2021, 100).
- Productized services prove companies have an in-depth understanding of the customer needs and user activities (Härkönen et al 2017.)

The third research question 3: What types of resources, capabilities, and investments are required for Knowit Solutions Oy to transform a tailored solution into a product concept? Begins the reflection inward to consider how a consultancy might begin productizing services. The following summary of theoretical findings provides structure for the empirical research regarding the third research question.

- Productization is a process in which intangible elements of services are systemically transformed into a marketable product (Härkönen et al 2017).
- Productization requires product management (Systä & Yrjönkoski 2019, 3).
- Product management requires a stakeholder-oriented product leadership role (Chen 2024, chapter 1).
- Successful productization is about clarity, it requires aligned internal processes and clear ways of working (Härkönen et al 2017).
- An in-depth understanding of the competition and market is crucial to begin productization and the creation of new offering (Floren & Frishammar 2012, 27).
- Productization requires the skills to specify, brand and price offering accordingly (Wirtz et al 2021).
- Specification requires the ability to formalize or standardize product creation and delivery (Wirtz et al 2021).
- Service design and blueprinting is required to transform services into products (Härkönen et al 2017).
- A brand is the way customers perceive the product and its values (Kotler & Keller 2022, 235).

- The iterative development is crucial since pricing is the only marketing element which creates revenue (Kotler & Keller 2022, 284).
- The ability to systematically screen good ideas is often lacking in companies (Floren & Frishammar 2012, 24-31).
- Creating commercial software products requires technical software processes for creation and maintenance (Gyamerah et al 2021, 97-98).
- Modern offering and product development is done iteratively, and investments can coincide with the number of customers (Systä & Yrjönkoski 2019, 4-5).
- To correctly validate product concepts with potential, a company should perform idea refinement combined with the correct amount of systematic screening to pick the ideas with the highest potential (Floren & Frishammar 2012, 30-31).

Research question 4: How would transitioning to a product-oriented business model align with Knowit Solutions Oy's current growth strategy?

- A new product or offering does not necessarily constitute a change in strategy (Kirtley & O'Mahony 2019, 1).
- Product goals should be created in a way that serve the company business strategy (Lukassen & Schuurman 2023 chapter 10).
- Strategic alignment regards the new products suitability to succeed within the company strategy and goals (Floren & Frishammar 2012, 28-29).
- New information and learning are attained through experimentation, especially in times of uncertainty (Furr & Dyer 2014, 48).
- Strategic changes should be made, either to start or stop a strategic activity, based on iterative development and multiple decisions (Kirtley & O'Mahony 2019, 1).
- Especially in software development companies a diseconomy of scale can be observed (Tamblin 2024, chapter 3).
- Without innovation, experimentation and learning, it is difficult to consider strategic alignment or strategic choices and their impact on a company (Floren & Frishammar 2012, 28-29).

3 Methods and implementation

3.1 Research approach

In business, the ability to make informed decisions is the objective of research. Idea creation, research execution and results analysis are considered as three steps to guide research. (Hair, Page, Brunsveld, Merkle and Cleton 2023, chapter 2.)

The thesis expected outcome relates to providing leadership with suggestions and knowledge that can be applied instantly. A case study was conducted to approach the business research objective. A case study is required when the intention is to provide ideas and suggestions for business development (Moilanen, Ojasalo & Ritalahti 2022, chapter 3). Bajpaj (2018, subchapter 1.5) writes that the objective of business research is to explore potential solutions to identified business problems.

In applied research, it is common to use historical findings from the business in question to consider potential expectations for a certain situation. Applied researchers use theory to set guidelines and frameworks for their studies. (Hair et al 2023, chapter 2.)

Moilanen et al (2022, subchapter 3.2) also highlight that case studies are more common in traditional research but also have use in business research when it comes to acquiring knowledge for business decisions. The thesis objective is to define the criteria for a Knowit product concept and evaluate the strategic fit of pivoting customer offering to product concepts. Even though the objective is two-fold, the expected outcomes are to provide ideas and suggestions for business development. A case study supports this objective and expected outcomes sufficiently.

Moilanen et al (2022, subchapter 3.2) clarify that case studies are useful when a researcher seeks to acquire in depth understanding of the development task. Case studies fit a plethora of research targets, whether they are situational, functional or process related targets.

Development work does not always require following a strict framework, but it is beneficial to use accrued knowledge by familiarizing oneself with literature. With case studies, there are traditionally four phases:

1. Define development task or state the problem
2. Familiarization with the problem and clarifying the development task
3. Collecting and analyzing data in various ways.
4. Providing recommendations for development

The list illustrates a traditional process used in case studies. (Moilanen et al 2022, subchapter 3.2.)

The four phases of a case study are represented for this thesis in figure 5. Following the theoretical framework a preliminary familiarization was conducted with available Knowit material, the author's experience and discussions with Knowit offering representatives. The four-step process described in the list is straightforward and enables the thesis to provide business development suggestions quickly, while using data from various sources and collected in different ways.

3.2 Methods for data collection

When studying to gain a better understanding, qualitative methods such as interviews are recommended (Moilanen et al 2022, subchapter 4.1). Related to the thesis objective and research questions, this open-ended approach is suited well. There are many opinions, experiences and views within the Knowit organization related to the research problem. In business research, managers are generally interested in making better decisions with the assistance of a large amount of data (Hair et al 2023 chapter 12).

A case study can be used to collect data with various methods. A combination of quantitative and qualitative. Data can be collected from interviews, observations, workshops or from previously collected information such as company, market or product documentation. (Moilanen et al 2022, subchapter 3.2.)

To gather data for the thesis, various methods were used. In figure 5 the case study phases and steps for data collection are presented. In preparation for data collection, pre-research was conducted to familiarize with the Knowit current offering and strategy. For data collection from Knowit personnel thematic interviews were conducted.

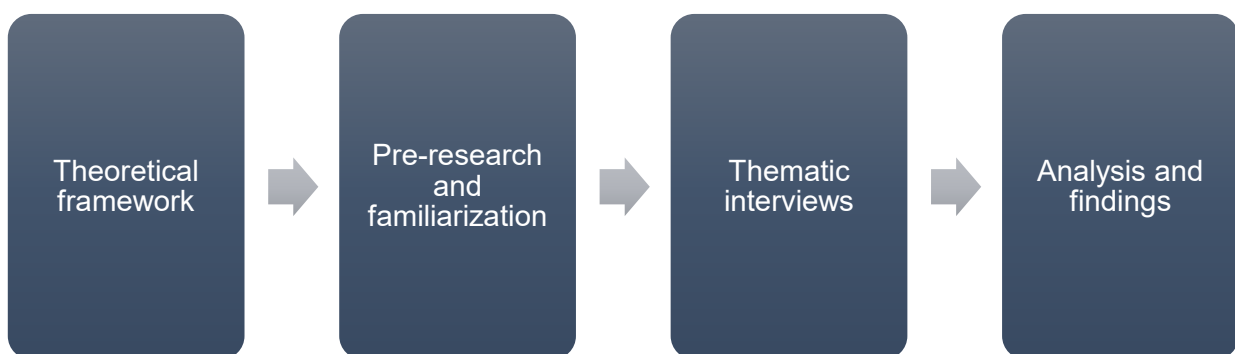


Figure 5. Case study phases.

During the thesis pre-research and familiarization phase, an understanding of the portfolio was gathered through various discussions with Knowit staff. The pre-research and familiarization included reviewing the current Knowit functional offering portfolio, as it is documented. The portfolio

is a data table with 86 rows each representing an offering from Knowit and fourteen columns representing different attributes related to the offerings. The portfolio consists of written data to communicate information regarding Knowit offering to Knowit internal personnel.

The supporting pre-research concluded with a discussion to benchmark differences between Knowit group companies in Finland and Knowit Group. Knowit Group consists of various companies in several European countries. To gain additional insights two leaders from the Sweden based company called Knowit Products was contacted. The discussions with the leaders of the Swedish Knowit Products company were excellent for reaffirming findings from the thematic interviews and for benchmarking the differences between Knowit Solutions in Finland and Knowit Products in Sweden.

Benchmarking is a method where a separate organization, with experience in a successful implementation of similar research, is studied to gain insight instead of conducting new research. Benchmarking will require its own set of research objectives and questions. (Moilanen et al 2022, subchapter 4.8.)

Knowit Products in Sweden used to be in a similar situation in which Knowit Solutions in Finland currently is. Therefore, it was interesting to benchmark the situation and research on the approaches that were taken by the other company.

Secondary data differs from primary data due to the nature of collection. Primary data is collected for the research whilst secondary data has already been collected for another purpose but can be used to assist with the current research. (Bajpaj 2018, subchapter 6.2.)

The Knowit internal materials used in the pre-research familiarization are akin to secondary data in this thesis, whilst primary data was collected for this research specifically. The primary data was collected in thematic interviews with Knowit staff. Instead of workshops, it was decided that one on one interviews would provide more freedom of expression for the participants, due to the anonymity.

Regardless of their level of structure, interviews are a popular method for collecting data. Structured interviews follow strict paths whilst unstructured interviews are extremely flexible. Independent of the structure, interviews require a facilitator or interviewer and one or more interviewees. Semi-structured interviews can lead to unforeseen findings due to the freedom of the interviewee to follow-up on answers depending on the interviewee and their specific answers. Semi-structured interviews follow a structure but are not restricted to exact questions. (Hair et al 2023, chapter 8.)

Moilanen et al (2022, subchapter 3.2) describe interviews and workshops as flexible and applicable in many scenarios. Factuality of the findings were verified with the authors experience working for the company in collaboration with company leadership.

A non-structured or semi-structured approach through theme interviews and workshops is ideal when there is a chance the wording of, or order of questions may vary from interview to interview. These interviews enable the thesis to dive deeper into themes to build upon on quantitatively gathered knowledge. (Moilanen et al 2022, subchapter 4.2.)

Hair et al (2023, chapter 8) note that semi-structured interviews require a pre-defined list of topics or themes for guidance. In the case of the thesis, the in-depth interviews with Knowit personnel provided understanding to achieve the development task. The formulation of questions in the interview and their order slightly changed depending on the interviewee's role and background.

Finally, all data collected was analysed and the findings are presented as themes in thesis chapter 4 Results. The steps taken in the case study are displayed in figure 5. Data collection framework is compiled in Table 5. The research questions are presented and the methods by which to attain findings and source where data is available is presented.

Table 5. Data collection table.

Research question	Data sources	Methods
RQ1: What criteria does Knowit Solutions Oy use to define a product?	Knowit Functional Offering Portfolio	Reviewing previously documented material
	Knowit personnel	Thematic interview
RQ2: In comparison to tailored solutions, why would customers prefer a product?	Leadership at Knowit Products	Benchmarking Knowit Products
	Knowit personnel	Thematic interview
RQ3: What types of resources, capabilities, and investments are required for Knowit Solutions Oy to transform a tailored solution into a product concept (as defined in RQ1 and RQ2)?	Leadership at Knowit Products	Benchmarking Knowit Products
	Knowit personnel	Thematic interview
RQ4: How would transitioning to a product-oriented business model align with Knowit Solutions Oy's current growth strategy?	Knowit personnel	Thematic interview

In table 5. Most of the research questions are aimed to be answered through the thematic interviews. Answering the first question required an understanding of the Knowit functional offering portfolio and other pre-documented material. The discussions with Knowit Products in Sweden to benchmark differences and similarities were especially helpful for gaining insights for research questions 2 and 3.

Semi-structured interviews require professional moderation. The ability to communicate clearly and listen is crucial for success. The abilities of the moderator or interviewee increase over time with experience but can be supported by preparation and organization. (Hair et al 2023, chapter 8.)

The author's professional experience in facilitation and moderation was helpful in the semi-structured interviews. Participants from Knowit Products concluded that the interviewee had done his homework before the benchmarking discussion.

3.3 Methods for sample selection

Research data samples represent a smaller portion of the entire population that the study relates to. It is often impossible to gain a total census by gathering data for the entire population, therefore samples must be used. (Hair et al 2023, chapter 7.)

Selecting the interviewees – or in other words the sample – was done in a planned and iterative manner. The sample consisted of Knowit employees.

The approach to sampling depends on the methods. Researcher judgement is often used as non-probability sampling in qualitative research as opposed to probability sampling in quantitative research. Probability sampling is dependent on random procedures for objectivity, whilst judgement is dependent more on subjective views and opinions of the researcher. (Hair et al 2023, chapter 7.)

Sampling process includes defining the target population, size, a sampling frame and technique. A target population consists of individuals with the possession of information required for the research. Incorrect target population may lead to skewed results. The research objective is the most crucial factor when planning on the potential target group. Sample frame differentiates from the population by representing the specific smaller group which data is extracted from. Sampling techniques are either random or non-random, depending on the case and need. Sample size refers to the number of participants in the research. (Bajpaj 2018, subchapter 5.4.)

Random and non-random sampling are two differing approaches to sampling. In random sampling each representative of the target population is subject to an equal probability of being selected for the sample. In non-random sampling factors such as experience and subject knowledge impact the sample selection. (Bajpaj 2018, subchapter 5.5.)

The author's judgement was used to select the first interviewees. In the end, the thesis used a sample size of eight thematic interviews from the company staff. The staff members were selected based on judgement of the author and the recommendation of the participants. The first interviewees assisted with widening the sample and target population in the relevant direction. Hair et al (2023, chapter 7) refer to a sample growing through referrals as a snowball sample. Likewise, Bajpaj (2018, subchapter 5.7.4) describes snowball sampling as the process in which referrals from previous interviewees are the basis for new interviewees added to the sample.

A judgement sample or purposive sample is often selected due to the availability leading to relatively low cost and high speed of research (Hair et al 2023, chapter 7). The sample representatives were selected by the author from Knowit commercial, delivery and leadership functions. In table 6. The thematic interview participants and durations are presented. The table outlines the role of the

target person who is interviewed, the date and duration of the interview. The Knowit staff was the target population of the thesis and 8 individuals from 3 key functions was selected as the relevant sample. The sample is presented in table 6. The thematic interview participants and durations.

Table 6. Thematic interview participants and durations.

Interviewed person	Function within Knowit	Interview date	Interview duration
Knowit Head of Offering	Commercial	3.4.2025	75 minutes
Knowit Strategy Project Manager	Delivery	3.4.2025	60 minutes
Knowit Client Executive A	Commercial	7.4.2025	60 minutes
Knowit Client Executive B	Commercial	9.4.2025	60 minutes
Knowit Client Executive C	Commercial	11.4.2025	60 minutes
Knowit CEO	Leadership	11.4.2025	45 minutes
Knowit VP for Services	Leadership	15.4.2025	60 minutes
Knowit Head of Delivery Enablement	Delivery	22.4.2025	45 minutes

The sample for this thesis was not selected randomly but approached with judgement and referrals from previous interviewees.

The thematic interviews were conducted and transcribed through Microsoft Teams. In table 6. Thematic interview participants and durations, Client Executive lettering is related to the order in which the executives were interviewed.

The data present in Table 6. showcase the interviewees' role, the function of the role, interview data and duration. For clarity, we can divide into two main functions, Commercial and Delivery. Commercial function includes offering, sales, marketing. Delivery function includes projects, consultants and other customer value delivery mechanisms such as trainings. Leadership refers to company C-level leadership.

3.4 Methods for data analysis

According to Moilanen et al (2022 subchapter 4.2) interviews should be transcribed and the transcriptions read, understood and connected to theoretical framework.

The interview transcriptions from Microsoft Teams were read, the recording rewatched and analysed iteratively as part of the research. Microsoft Teams AI provided a summary of the interviews

which was used in collaboration with findings from the transcripts to discover relevant themes. Figure 6 displays the process of analysis to discover relevant themes iteratively.

According to Hair & al (2023, chapter 11) emerging themes, their identification and further pattern interpretation is the objective of analysis. The emerging themes from the interviews were identified as part of an iterative process of analysis to discover relevant themes is described in figure 6. Research findings can be categorized by themes in various ways such as typifying or grouping by extremes. Typifying relates to grouping themes according to common elements. (Moilanen et al 2022, subchapter 4.2.)

The thematic typifying approach was selected to group the themes based on the common aspects that arose in the interviews and were discovered in the pre-research and familiarization phase. Data analysis was done while reflecting on the theoretical framework.

Figure 6 displays the process of iterative analysis to discover relevant themes. Themes were discovered iteratively by rewatching the interview and re-reading the transcription. Microsoft Teams created AI notes summary based on the recordings. These notes were used in comparison with the authors own notes. The This process was repeated two times after the initial interviews.

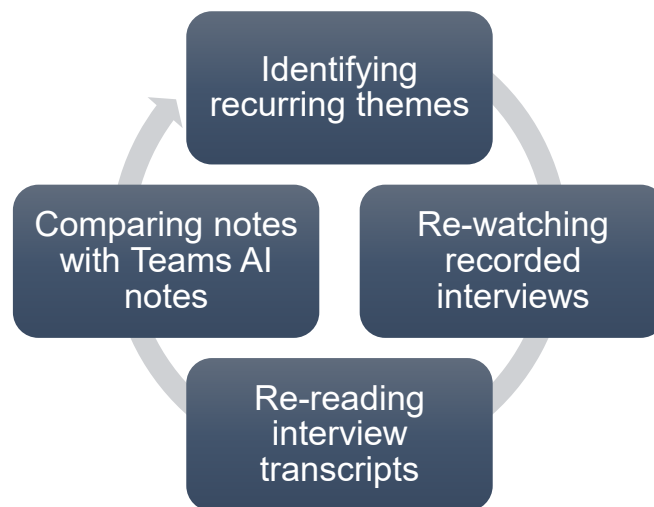


Figure 6. Process of analysis to discover relevant themes.

In the analysis of qualitative research, the research objectives should be kept in mind constantly. The discovery of common themes and patterns should be reflected on the research objective. Their relation to the objective should be clarified to identify the relevant and possibly inconsistent findings. It may also be that findings lead to the discovery of a need to collect even additional data. (Hair et al 2023, chapter 11.)

Inductive reasoning is used often in qualitative research. This analytical approach works well with qualitative research due to its nature of generating new ideas through discovery. Inductive reasoning leads to the clarification of emergent themes from the data. Grounded theory can be built with inductive reasoning. Grounded theory is either theory or concepts that are created as the result of inductive reasoning. (Hair et al 2023, chapter 11.)

The analytics process in figure 6 culminated with identifying relevant themes. The relevant themes were discovered with the help of Miro, the Innovation Workspace. Miro is a blank canvas tool where notes can be written and compiled in a free form way using digital sticky notes. The process was done iteratively and an example snapshot of the board, with detailed notes hidden, can be viewed in figure 7. Snapshot of Miro Board with digital sticky notes emerging around key themes.



Figure 7. Snapshot of Miro Board with digital sticky notes emerging around key themes.

Qualitative research requires proper verification when moving to conclusions. Re-checking data is needed to verify findings and validate the credibility of findings. Data needs to justify findings and the logical lead from data to conclusions needs to be presented. (Hair et al 2023, chapter 11.)

Moilanen et al (2022, subchapter 4.2) describe the two-fold process of analysis to contain reduction by grouping findings and the interpretation of the results. The Miro board was iterated several times by rewording, reducing, combining and clarifying notes after iteratively analysing the interviews and their transcriptions.

4 Results

The typified findings from the research are presented in this chapter as overarching themes. The themes are built upon common elements that were discovered during research.

The pre-research and familiarization were done by reviewing the current offering and portfolio as it is documented and through non-structured discussions with Knowit staff. Additionally, discussions with Knowit Products company in Sweden were descriptive of the risks and rewards, challenges and opportunities of transforming a consultancy towards product-oriented business.

During the pre-research it was noticed that Knowit offering is divided into two existing layers, expertise and services and has potential for a new additional layer for products.

The results of the pre-research and familiarization are combined into the themes discovered in the primary research done by semi-structured interviews aimed at the sample of eight Knowit staff members from three key functions.

The themes that were identified are:

- The current level of productization in offering.
- Defining the product layer and criteria for products.
- Obsession with the problem – also known as specialization.
- Leadership and organization.
- Roles and responsibilities.

The themes are covered through their own sub-chapters in the results chapter. The current level of productization describes the offering and its perceived layers in Knowit. Defining the product layer criteria for product-like-concepts gathers the relevant factors that make up products and in-turn separate products from other layers in the offering. Obsessing with the problem, or specialization, dives in depth on the issue of understanding the needs of customers in a market to create products, not just to create single excellent customer solutions. The theme of leadership and organization explain the requirements for company leaders and the organizational structure required to consider. Finally, the specific roles and their responsibilities are covered in the final theme.

Each theme is summarized with a corresponding figure to present the key findings.

4.1 Current level of productization in offering

The pre-research familiarization led to the identification of three layers in Knowit offering. The layers are competence, services, and products. Figure 9 presents the layers in the offering pyramid for Knowit.

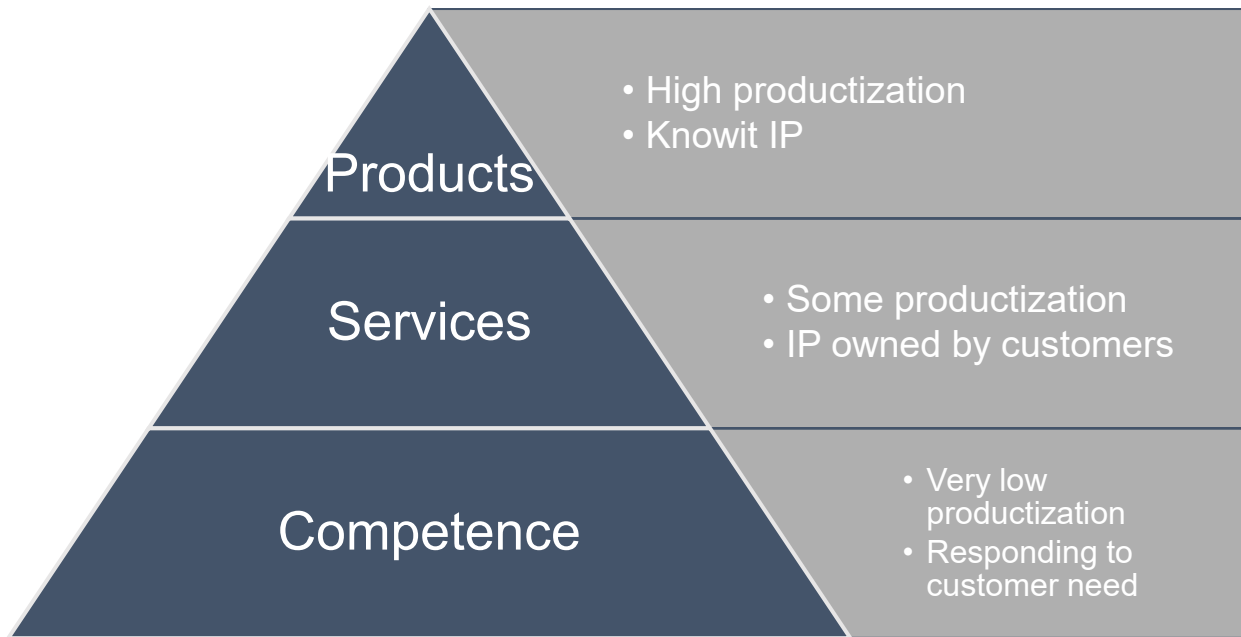


Figure 9. The Knowit offering pyramid.

The Knowit offering triangle presented in figure 9 emerged in the thematic interviews and resonated with all interviewees, at least to some extent. The base of the pyramid consists of individual consultants' competence. Competence can be commercialized and sold, traditionally by consultancies on a time and material-based rate. All interview participants agreed that the bulk of offering for Knowit is currently derived from the competence layer. Though especially leadership is interested in shifting the focus upwards on the pyramid.

In this lowest layer of the pyramid, all the productization elements appear to be loosely defined. The brand is Knowit, but brand perception is dominated by the individual consultant and their competence. Price is hourly but varies depending on consultant and customer. Overall price also depends on the duration of the project which is highly unpredictable. Specification also varies greatly depending on the customer needs, status and the consultant's own skillset

Though these layers arose in all the interviews, especially leadership presented interested in growing the highest layer of product. A leader stated:

“As we move up in the layers, margins increase. But so does the barrier of entry.”

The Knowit functional offering portfolio did not make any distinctions whether the offerings belonged to the competence, service or product layer. An interviewee from the leadership team noted that:

“Knowit sells competence and a little bit of service on top.”

All leadership team members noted that Knowit is a step above other time and material offering consultancies due to specialization in offering across the entire IT-requirement instead of a single technology or service type. A participant from the delivery function regarded Knowit as a full-service IT consulting house.

According to interviewees from the commercial function, Knowit competence offering is divided into five competences, which cover the basic IT service requirements of most modern companies. The competences are cloud services, software development, data solutions, quality assurance and artificial intelligence. Delivery function participants both agreed that Knowit offering is based on set competence areas. A client executive described the offering as:

“Something for everyone at a high level.”

An interviewee from the commercial function described the current offering as being so varied that the even the sales function is unaware of all the previous deliveries Knowit has performed.

All interviewees agreed that Knowit has a large offering. Commercial function interviewees consider the offering to create an image of Knowit, as a one-stop-shop for all the IT requirements. Other interviewees thought that the offering may be perceived as confusing and to be lacking focus. Objectively the offering does cover the core IT requirements of today. Considering the expertise offering revolves around cloud technologies, data management, quality assurance, software development and artificial intelligence. The delivery function interviewees reminded that regardless of competence in question:

“Knowit delivers value to the customer in traditional IT projects. Value is delivered on a project or time and material basis”.

A client executive shared the leadership statement regarding Knowit offering revolving around competence but elaborated that:

“Knowit is excellent at selling competence and skilled consultants to customers. In addition to individual consultants, we are excellent at selling and delivering projects where the solution is built from scratch”.

All interviewees agreed that the majority of Knowit offering is in competence. One of the client executives noted that according to seminars they had participated in:

“The demand for time and material consulting is decreasing in the future.”

Knowit Products in Sweden described their customer cases as arising from customers demanding solutions which are at least partly packaged, instead of being built from scratch.

The second layer of the offering pyramid includes services. All client executives mentioned a specific service as the Knowit offering with the most potential for productization. The service will be called “service A” from here forward.

Service A has received the excellent customer feedback. Service A has been sold and delivered to more than one customer. One client executive noted that Service A has the best sales material – in both quality and quantity – of any of our offering, branding has been done to some extent. They did voice concerns that pricing is somewhat unclear. Another client executive disagreed and thought the pricing for Service A is very clear.

A delivery function representative noted that certain customers are accustomed to buying a certain consultant and are unlikely to settle for anyone else if there is a previously built relationship. Though a client executive stated that the team based Knowit branded service teams have generally received excellent feedback from customers. Service A has a revolving roster of developers operating it. The unique value of service A would not be attainable by a single consultant or developer. The delivery function interviewee stated:

“For us. The customers are accustomed to purchasing specific consultants. They want to read their CV, interview them and ask for references.”

A member of the leadership function and a client executive both agreed that Knowit has growing offering as a system integrator. A delivery team member offered a concrete reference where Knowit had acted as a system integrator. This reference case is known as Service B. In service B, Knowit is combining a customer need with a third-party product. Value was added through tailoring and implementation of the solution. In this case, a legacy process was replaced by a modern solution. The problem that was solved in service B is known to exist in various companies which deal in software development and especially generating testing data for software products.

Client executives described several services which had some level of productization. The common factor in these services is that they are based on various components, products and competence. None are built from scratch. The benefits of productization, as one client executive put it, is:

“You can tell the customers this is what you receive. The scope is clear and so are the expected benefits”.

The client executives had differing views on the level of productization amongst all services. Leadership agreed that there are services with potential for productization, but no systematic productization has been done to any service yet.

Delivery team interviewees noted that some level of productization has been done with solution teams which deliver specific services. One of the interviewees stated:

“The team is not dependent on any individual consultant, but the team is very good at delivering the service to the customer.”

The second layer of offering, services, includes a higher level of productization where value is delivered through teams instead of individuals. Especially commercial function interviewees highlighted continuous services in this category. The continuous services are solutions, which have been built in collaboration with customers by Knowit consultants. The services are a combination of customer specific intellectual property and Knowit competence.

The leadership and delivery function interviewees highlighted that services are not limited to a solution being built in collaboration with customers, but that the solution maintenance is outsourced by the customer to Knowit. Leadership and commercial function interviewees also highlighted increased stickiness of the services. Leadership noted that the services have been valued by customers due to the contractual freedom it provides but that the solutions have provided such value to customers that they are unwilling to discontinue ordering the services. One of the interviewees stated:

“Our services are easy to buy and technically easy to remove if the solution is not up to expectations. However, we have noticed increased stickiness and an unwillingness to quit using our services. Customers seem very delighted with our services.”

In competence and services layer, a member of the commercial function stated that Knowit competitive edge is the ability to deliver across the IT service requirements lifecycle. They continued that Knowit is flexible and can deliver services in cloud, on premise or a hybrid.

The brand of Knowit over individuals is highlighted in service A for the point-of-view of the customer. Even though delivery interviewee reminded that:

“Individual developers still play a key role in the excellent service delivery.”

Though it is possible, that if a customer has a contact person for the service, they may perceive the service to be linked to that individual Knowit employee. However, in the background the service may be operated by a revolving roster of individuals in the team. Gyamerah et al (2021, 97-98) highlighted the need in software productization to divide the product into customer facing product elements, and background elements invisible to the customer.

All commercial and leadership interviewees agree that ambitious growth targets require more than consulting in the offering. Leadership referred to increased stickiness, or customer retention, as the result of productization. An interviewee stated that:

“Consulting as a business is fundamentally broken.”

According to the interviewee, customers are only interested in buying experienced senior consultants which means hiring juniors is out of the question. Another interviewee continued that:

“Finding new senior consultants is difficult and expensive since all the best consultants already have customer engagements.”

Leadership was keen on highlighting the business potential of all three layers. Interviewees noted that as margins rise while climbing the pyramid, so does the need to specialize.

According to leadership, there are currently no offerings in the product layer. In other words, Knowit does not yet offer any products. The current offering is based on what customers require and providing the customers with the necessary competence in the form of consultants. One interviewee described this as:

“Consultants waiting for fire-commands from the customer. We want to turn this around so that we are not dependent on what the customers think they need. The goal would be to actively understand the customer problems and actively offer solutions.”

Continuing with the same approach leads to specific customer solutions, built with customer selected components and with specific customer intellectual property. All interviewees showed interest in the potential active delivery of solutions.

Interviewees agreed that the current business process is optimized for selling expertise. The interviewees agreed that a change in the business process is required if a different outcome is to be expected.

Pre-research clarified some issues with productizing the service layer. The services layer offering growth opportunities can be negatively impacted by Knowit acting as a system integrator. Opportunities for IP rights and recurring revenue are limited due to the services relying on third party products and customer IP.

The highest level of productization and the tip of the pyramid is products. The products in Knowit offering are currently non-existent. As a consultancy, Knowit does not have any offering that could be categorized as products. The interest, of especially leadership is to move towards products or at least product-like-concepts. Commercial function representatives have identified several customer solutions which have potential to be transformed into products. Defining the criteria of which solutions with potential to transform are touched upon in the following themes.

The services layer represents a small, but growing portion of Knowit offering. To relatively grow the services offering, more systematic productization and commercialization is required. The current offering in the services layer includes various customer deliveries which are perceived by Knowit to hold potential for higher productization and even being turned into products. There appears to be

some disagreements related to the level of productization and clarity across these services with potential for higher productization and transformation into products.

Productization can be applied to all layers in the Knowit offering pyramid. To specify content and purpose, standardize the delivery of value, price and brand can be improved across all layers of the pyramid. Thought increasing productization does not equate to products. It was discovered in the interviews that leadership nor commercial function do not necessarily have interest to move Knowit into a pure product business but are interested in increasing productization to such an extent, that Knowit has product-like-concepts in their portfolio.

The summary of the first discovered theme related to the current level of productization in offering at Knowit is presented in figure 10.

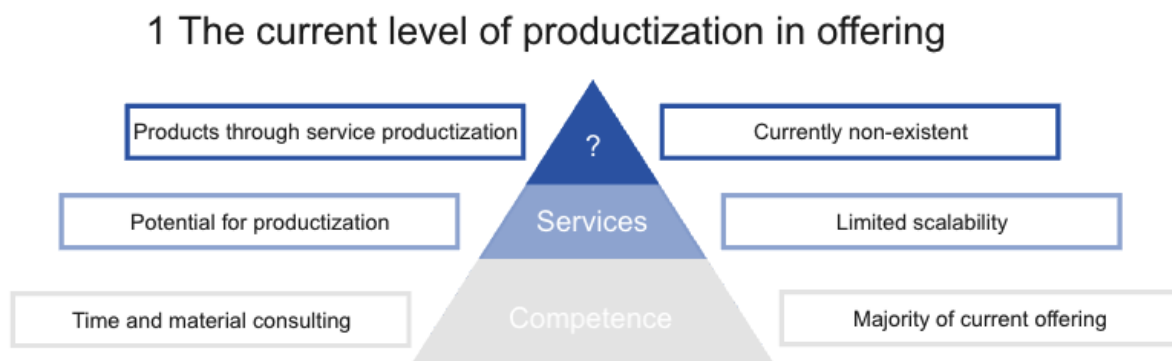


Figure 10. Summary of theme 1.

Figure 10 includes the summary of theme 1. Includes the majority of current offering in competence, delivered through time and material consulting. The services layer has potential for productization but is limited in scalability. The highest level of productization, which does not yet exists will consist of products.

4.2 Defining the product layer and criteria for products.

Productization is a spectrum. It became apparent in the interviews that Knowit is not looking to become a SaaS product business. The Swedish Knowit Products benchmarking conversation also highlighted their disinterest in becoming a pure product business, due to the different nature and highly competitive market for software products as a service.

One of the Knowit Products leaders stated that:

“Our offering is 80% product and 20% consulting to enable the best combination of speed and customer specific design.”

According to the pre-research discussion with Knowit Products in Sweden, they consider themselves to be an IP (intellectual property) based consultancy instead of a SaaS product business. In comparison to Knowit consultancy business in Sweden, their work is conducted with a further horizon, longer customer engagements and using the balance sheet for activating research and development costs. The description was given by the Swedish participants in the pre-research phase.

Many interviewees voiced concerns regarding Knowit wanting to take caution and not turning into a SaaS product business. The interviewees in some cases referred to productized offering as product-like-concepts instead of products.

Defining a product appears to be difficult for Knowit leadership and commercial function. From discussions with Knowit Products in Sweden it occurred that traditionally defining products may not always be desirable. According to the pre-research, criteria should be defined in a way that enables systematic research and development for products that can be replicated to various customers, but in a way that leaves flexibility for customer specific customization.

The product criteria are difficult to define. Especially according to leadership, the space between services and products layer can be difficult to define.

As an example, a Knowit leader used iPhone as a standardized product and iPhone accessories such as hardware cases with unique designs and software with specific features to offer the customer a layer of customization and personalization. Defining the criteria for Knowit follows a similar path. An interviewee from leadership stated:

“The number one requirement with product criteria, is the necessity to understand the customers problem”.

Leadership stated that products and their criteria are fundamentally different to consulting. The leadership interviewees noted that product criteria should lead to outcome driven solutions, instead of input and output driven consulting. The interviewees also discussed the importance of understanding not just a single customer, but a problem that is shared amongst the entire market. A leader stated that:

“Our product criteria should relate to solving a competitiveness and efficiency issue for our customers.”

From the pre-research we learned that Knowit Products defines their products to exist in between consulting and traditional SaaS products. The key aspect related to their products is marketability. According to Knowit Products, this means that each sales includes some combination of existing IP – also known as products – and consulting – also known as competence.

Pre-research discussion highlighted a specific industry solution, which Knowit Products is offering. The product is 80% packaged as a ready to go product with 20% consultation on top.

Knowit leadership agreed in the interviews, that creating products with potential to be bought and sold without consultation is not the current strategic objective.

A commercial interviewee described their idea of a product for Knowit as being a combination of intangible and tangible aspects. A delivery interviewee mentioned the continuous nature of the concepts, both being used by the customer for a long duration and opening the door for recurring revenue as a criterion for a Knowit product. A client executive shared the thought, that recurring revenue should be a product criterion. They stated:

“Recurring revenue is fundamentally different to consulting, as it balances the income for months with fewer working days and therefore fewer opportunities to deliver and bill time and material consulting.”

Many interviewees noted that the lack of Knowit owned IP is a key factor that separates the services and product layer. One leader noted that:

“In addition to IP, the level of productization should be high enough, so that Knowit can clearly tell the customers what will be delivered, how it will be delivered and what impact it can be expected to make.”

A commercial function interviewee mentioned that increased productization leads to better customer understanding. Commercial function interviewees focused on highlighting productization within the services layer to create future products. Commercial and leadership interviewees mentioned that increasing productization should clarify pricing and branding of the products or productized services. Wirtz et al (2021) highlighted specification, brand and price as the corner stones for productization. An interviewee mentioned the confusion surrounding Knowit offering from the perspective of services with potential for productization:

“In some cases, we don’t even have a uniform name for our services that could be productized. The name depends on who you ask”.

Pre-research indicated that of the 86 rows in the offering portfolio only 12 were categorized as ready-to-sell. Client executives agreed that further sales should include further productization and systematic delivery. The 12 ready to sell offerings could be categorized as services.

In addition to IP, clear scope, price and brand, leadership mentioned product criteria regarding expected outcomes, quality in the delivery and lifecycle of the product and possible certification as requirements to transform services into products. Interviewees from the commercial and delivery functions mentioned that products should have a clear value proposition and guarantee towards the customers. One client executive attempted to describe their ideal product as follows:

“The product should come with a story; the story should be relatable and clearly indicate the value of the solution. Productization should include stories that increase understanding and reduce unknowns for the customer.”

Commercial interviewees highlighted the need for product demos, to be built without considerable effort per potential customer. Ideally potential customers would be able to input similar data as they are dealing with to see the potential product in action. One client executive noted that:

“Seeing is believing. Customers can unfortunately have poor imagination”.

According to leadership, the product criterion should be created in such a way that the delivery speed, from beginning to being ready for production use, should be much faster than that with services or built from scratch solutions. Leadership continues that ideally, Knowit products offer a solution to customers who are faced with a make or buy decision. Commercial function representative described a similar situation where:

“Ideal customers are faced with a decision to train staff, build by themselves, hire consultants to build it, or buy a ready or semi-ready solution.”

Many of the interviewees mentioned teams as a key component to service delivery. Instead of individual consultants. A delivery function interviewee mentioned that SLA based service teams deliver many of the current services. A client executive views teams as a product criterion for Knowit. Leadership also highlighted team delivery as a core aspect of offering products. As one of the leaders put it:

“Knowit decides who delivers the solution. The customer doesn’t get to decide.”

According to the interviewees, Knowit product criteria should leave room for customization. One interviewee noted that in a way, products should generate competence related consulting.

The difficulty of creating a solid product criterion for IT solutions was addressed in the pre-research. Knowit Products in Sweden, mentioned that all their products require consultancy or system integration. A pre-research participant from Knowit Products described their product business as:

“IP based consulting. Solution driven sales where product is an enabler for the solution. Or alternatively, product driven sales where a larger consulting project is the consequence of an existing product.”

However, the pre-research did indicate that a non-negotiable product criterion is a single code track. Deviations from the master should not be done, as this will lead to the loss of product identity in the future. A leader from Knowit agreed that creating a unique branch for a customer should not be done, without making sure both parties understand that this decision fundamentally changes the

future of the solution. Supporting this vision, one of the client executives saw that the key criterion for products is to not deliver a solution to one problem in various ways depending on the customer.

A risk currently affecting Knowit offering is that the lack of product definition and the lack of business process has in some cases – according to commercial function interviewees – inherently led to Knowit providing the same solution to different customers in different ways. Leading to short term time and material billing but missing out on long term sustainable solutions for a growing number of clients.

In summary, most interviewees agreed that potential products should be Knowit IP, and they should generate recurring revenue in addition to one time or time and material-based income. The interviewees agreed that products would be fundamentally different approach due to their outcome driven nature. Interviewees also mentioned various balancing acts between pre-defined product and additional consulting to customize customer solutions. One of the leaders floated the idea of cost-plus-margin pricing where customers could view the product acquisition as an investment compared to ordering consultants or building it themselves.

Interviewees agreed that transforming a service into a product, would require product vision, goals and roadmap. Pre-research with Knowit Products highlighted customer expectations that can be used for product criteria. These include customers expecting industry specific basic features and regulatory compliance. Customers also expect well documented versions and a roadmap. According to discussion with Knowit Products, product customers require access to a roadmap, even though they understand that a roadmap is not guarantee.

According to interviewees, the products for Knowit should also be related to Knowit core competence. Using existing learnings and know-how to build products is imperative. Even if the IP is owned by the customer, industry insights and learnings can be applied to the construction of the product or in the development of future product features and capabilities.

Productization is a spectrum and there is no one correct amount of productization. According to pre-research and many of the interviewees, the ideal product definition for Knowit is a combination of product and consulting. Figure 11 displays productization as a spectrum according to the interviewees.

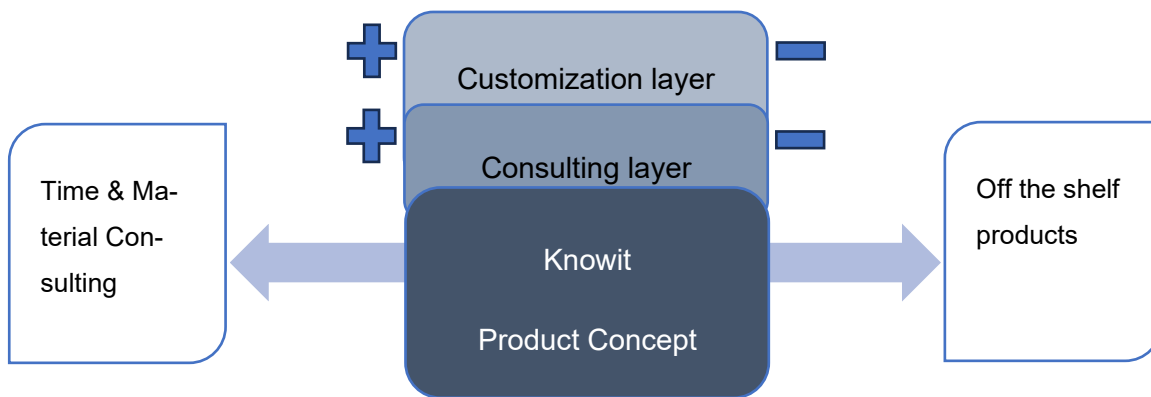


Figure 11. Productization spectrum according to interviewees.

Knowit Products in Sweden described situations where product led offering had the consequence of a large-scale consulting project to deliver and customize the product for the specific customer case. In other instances, the solution led offering was supported by an existing product being used as a reference of success in the customer's specific industry or in solving a similar problem. In figure 11 extremes of the offering productization scale are represented. The left extreme has very little productization and is essentially responding to customer need for consultants. The other extreme represents SaaS-like off the shelf products which could potentially be purchased without any assistance or consulting from the supplier. The trade-off with moving the level of productization the amount of consulting required and the amount of customer specific tailoring available. Figure 11 presents the increase of consulting and potential customization resulting in a decrease in productization. On the other hand, moving to more productized and standardized products enables faster delivery and clearer pre-defined outcomes.

From pre-research with Knowit Products in Sweden we also learned that building products, which require consulting to be successfully delivered and have a layer dedicated for customer specific tailoring opens various revenue models. Revenue can be derived from fixed costs, recurring royalties and traditional time and material-based activities.

Productized services and products can have such a wide and positive impact that will prolong Knowit and customer business relationship.

Summary of the second theme is presented in figure 12. The summary includes the criteria for a Knowit product. Knowit product criteria is difficult to define according to the interviewees. Interviewees agree it can be tangible and intangible whilst comprising of systematically delivered

components and competence enabled customization. At its core, interviewees agreed that Knowit products need to be Knowit intellectual property and focus on solving a market problem and not a unique single customer problem.

2 Defining the product layer and criteria for products

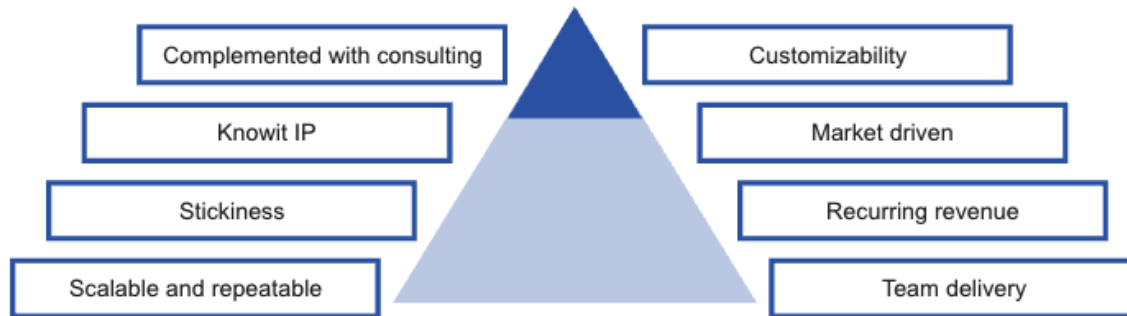


Figure 12. Summary of theme 2.

The summary (figure 12) includes the relevant pricing desires in recurring revenue, customer stickiness, team based delivery and the scalability which are requirements for a Knowit product.

4.3 Obsession with the problem – also known as specialization

Obsessing over the problem to choose the right solutions with potential to transform into products – as defined in product criteria.

Potential criteria were identified in the interviews. According to interviewees, various customers must have the same problem for a service or other solution to be productized into a product.

The non-unique customer problem depends on in-depth customer understanding and experience. It was presented by leadership that Knowit should build products which solve a competitiveness issue but not a competitive edge issue for the customers.

According to the interviewees, Knowit expertise is in IT and software development and their customers expertise is in the customers' respective field. Leadership envisions products for Knowit to maintain and increase the customers competitiveness and therefore allows for the customer to use more focus on findings and gaining competitive edge in their own market. A client executive from the commercial function also highlighted that successful Knowit productized solutions and current services aim towards an outcome, where customers have more time to focus and allocate resources on their own innovation tasks.

In the interviews, leadership were transparent and mentioned that currently Knowit is not sure how to identify and validate problems which could be worth solving with productized services or products. In the pre-research it was noted by Knowit Products, that the fundamental question in product business revolves around which products to build and which problems to deem worthy of solving.

In the interviews, participants mentioned specialization to solve a single or various problems in a single market. Leadership interviewee mentioned that:

“We are currently not very good at systematically identifying product opportunities in the market. Through consulting efforts, we have stumbled into problems which may be worthy of a product. But these problems have not been systematically validated.”

A participant from the commercial function agreed that Knowit is ill-equipped to systematically gather customer insights to improve understanding of potential problems to be solved with a product solution. The same interviewee hoped that in the future, if Knowit moves towards product business or even productization:

“Knowit should begin focused over the potential problems, this would require a more systematic feedback loop and activities to identify common elements in past, present and potential customer cases.”

The pre-research indicated that in Knowit Products, confidence in the problem is key. For a potential solution to be turned into a product, the problem must be shared by many customers and be – at least to some extent and in a way customers value – uniquely solvable by Knowit Products.

Knowit leadership and commercial function representatives highlighted the need to specialize offering throughout the interviews. Leadership interviewee did highlight that:

“Knowit is very good with offering services and competence around modern technologies. However, technologies are not an ideal specialization when it comes to differentiation in the IT solutions market.”

Interviewees described the current state of offering as slightly confusing and varied. Though interviewees agreed that this is due to Knowit growing through acquisitions and the merging of two IT consultancies in the previous years.

Leadership added to this, that Knowit specialization is the ability to deliver an entire lifecycle of supporting IT services around the clock. They continued that specialization leads to competitive edge in the market and in the competition for future talent in recruitment.

Many interviews noted risks in deciding what is a problem worth solving and then formulating a solution to that problem. Leadership showcased an example where a certain successful service was sold first and built later. They explained that from a cost perspective, there would have been no way of building the service and then trying to sell it. Systä & Yrjönkoski (2019, 3) describe a similar

approach by starting off with a proof-of-concept and selling the first iteration of a solution before constructing it. Systä & Yrjönkoski (2019, 3) offer additional steps where productization, investments and product development go hand in hand with the number of customers acquired related to the product.

Many interviewees mentioned Knowit Innovation Zone as a piece of the organization which utilizes consultants without assignments to solve interesting problems with innovative approaches. However, leadership noted that the duration for which consultants can participate in the innovation is usually cut short, due to a customer engagement beginning. One of the leaders said:

“When the priority is customer work, we cannot successfully productize simultaneously.”

A delivery function interviewee mentioned that most solutions Knowit offers are related to a specific single customer need. The need is dictated by the customer and Knowit attempts to offer competence to solve it. Leadership noted, that to succeed with productized services or products, Knowit needs to gather a better understanding of the market, not just individual customers. This is echoed in the thoughts of an interviewee:

“The focus should be on an in depth understanding of the market and general problems that all the customers have. In most cases we fixate over and focus on a single customers problem and end up creating an excellent solution that has no or very little value for other customers in the market”.

It was mentioned by another interviewee that in the further productization of offering at Knowit, discipline to say no to customers must be existent. Without this discipline, productization and product development will not be able to coherently create scalable solutions which can be delivered to more than one customer.

The solution in one case for Knowit Products was to focus on a specific process within a specific industry. The pre-research explored a product from Knowit Products where good enough market understanding led to the identification of a crucial business process that had various specialized products for exact phases in the common industry business process. Knowit Products was able to create a product which covers the entire process with a modern solution. Strengths of the Knowit Products solution include the ability cover the entire process. Additionally, it's adaptable and customizable for specific steps in the process depending on customer needs and even functions with other solutions through modern integration capabilities.

According to the interviewees, choosing the correct services to productize further is currently opinion based. Most interviewees agree that to move from opinions to data driven insights would require the necessary activities, organization, timeline and culture, which currently do not exist.

Through the benchmarking discussion with Knowit Product in Sweden, it was discovered that obsessing over the problems worth solving is the only way to be able to pick which solutions to transform into products. A critical finding from the discussion is that obsession requires activity. The only way to truly comprehend and understand problems worth solving requires active participation and conversation. For Knowit Products in Sweden this means having people in roles where they are actively cooperating with customers both existing and potential to identify solutions with potential to become product-like-concepts.

For Knowit Products in Sweden, selecting the correct solutions to turn into product-like-concepts is a fundamental question. Confidence in the problem and value in solving it must be clear. Knowit delivery function and leadership agreed that the technical ability to build products is not an issue for Knowit, the issue is being able to identify those problems that are worth solving.

Though commercial function interviewees mainly shared this confidence and lack of ability, there was a shared worry of potential shortcomings in the skills to sell products in comparison to selling consulting work.

According to a leadership interviewee, the vast offering portfolio also means that exact solutions are often customer led. Knowit provides the skill and tools to build what the customers want. In another perspective, this could be seen as a lack of specialization. As stated by the leader:

“Specialization would lead to more active sales where customer problems are identified, and a solution offered instead of the tools to find a solution.”

Interviewees agree that the only way to improve the lacking systematization in collecting customer insight is to actively begin gathering it. Market research, innovation, experimentation, cost benefit analysis was mentioned as activities by commercial and leadership interviewees. These activities should be included in productization or product development activities according to interviewees.

None of the interviewees doubt Knowit ability to technically build excellent products but see the marketability and commercialization as the bigger hurdle. A commercial function interviewee mentioned the opportunity of using the existing consultants as a network of knowledge to begin gathering insight. They claimed:

“Gathering feedback systematically, directly from customers or through the existing network of Knowit consultants is a no brainer move. The consultants know their specific customers issues. However, finding the budget and resources to take the correct consultants away from billable work for this activity is a challenge”.

Other interviewees did note that there are channels and events for sharing consultants' experiences from customer work. Interviewees mentioned events where consultants can network, and even present customer success stories. Additionally, Knowit has an employee ambassador

programme which highlights individual consultants and their skills and experiences. However, participants agreed this current method is not sufficient for being meaningful in the increase of customer understanding within Knowit. An interviewee noted:

“It’s nice if everyone is more aware of Knowit capabilities and customers problems we’ve helped solve. But more important is that the target customers are aware of Knowit solutions and the correct people at Knowit understand the general customer problems”.

Another risk that was identified in the interviews related to customer understanding is customer behavior. One of the interviewees shared concerns about the buying behavior of Knowit current customers.

“Some of our customers are accustomed to purchasing time and material-based consultants. With some of the larger clients we wouldn’t even know whom to contact related to selling productized services.”

Interviewees agreed that the current organization is fine tuned to sell time and material consulting. One of the interviewees noted that:

“We would need some start-up minded mad scientists to obsess over finding customers and creating innovative solutions for them.”

The pre-research indicated success at Knowit Products for solving an industry problem instead of a customer problem. In summary, the fundamental difference in product business and consulting is the focus. In product business, a company should obsess over the problem within a market rather than specific customer problems. Market driven product business should obsess over the common denominator, whilst customer driven consultant business obsesses with customer problems. Figure 13 summarizes the key aspects of theme 3. The theme is related to specialization and discovering the correct problem that should be solved with a product.

3 Obsession with the problem - also known as specialization

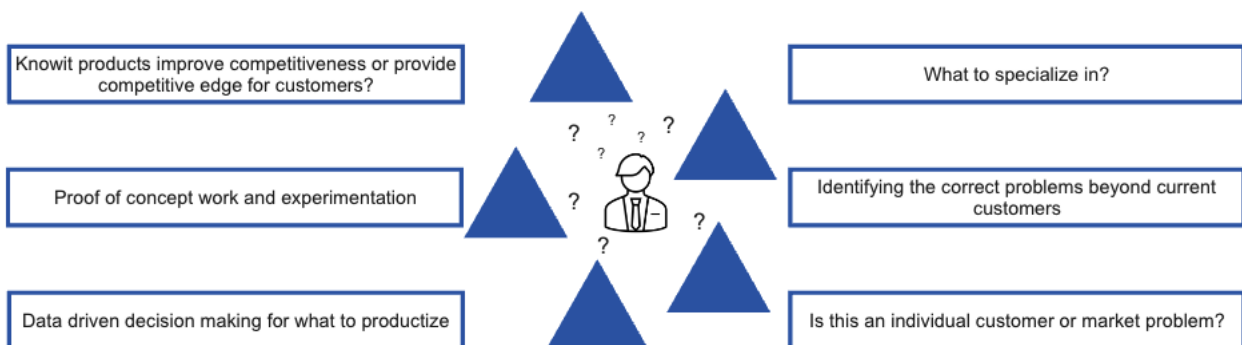


Figure 13. Summary of theme 3.

Experimentation and data driven insights are required as part of the obsession with the correct problem.

4.4 Leadership and organization

Interviewees shared a common understanding of differing requirements for leadership and organization when comparing consultancy business and product business.

Interviewees from the delivery and commercial functions highlighted a need for a culture of experimentation to be enabled by leadership. In addition to cultural support for experimentation, one client executive wished for more freedom to experiment, fail and iterate. The client executive stated:

“There should be a culture and structures to enable trying the further marketing of certain services. But I think that should also be reflected in the company strategy”.

In addition to cultural change, interviewees, that do not represent leadership, requested a clear strategic change and the patience to see it through from leadership.

Leadership, along with commercial function interviewees agree that for the change towards product business to be successful, investments must be made. In reference to consultancy and product business, one of the leaders noted:

“We cannot have one playbook for leading and organizing two fundamentally different businesses.”

The same leader noted that it is not possible to make a drastic change to build a new organization by recruiting or removing consultants from customer projects. The change needs to be gradual. Though the notion of a new organization gathered support from other interviewees. A commercial function interviewee noted that ideally product business would be separated from competence and service business.

From the pre-research we learned that Knowit Products in Sweden is separate from the Swedish Knowit consultant business. According to the pre-research participants they occur their own costs and revenue and report directly to group leadership.

The separation of businesses is supported by interviewees. Client executives highlighted that salespeople will always sell what is more beneficial to them. The continued that:

“We should not expect the same salespeople to be able to sell both consulting and products. Even if they were able to do so, who would dictate the priorities of what to offer and when?”

Interviewees agreed that consultancy business and product business require different leadership and measurement. Almost all the interviewees mentioned KPI's (Key performance indicators) as needing to be fundamentally different. Utilization was mentioned by many interviewees. One of the leaders interviewed said:

“Utilization is the main measurement in consulting. Product business would require totally different measurements. I’m unsure of our ability to begin the change in measurements.”

One of the client executives had similar thoughts:

“Utilization and current margin driven business leadership does not translate to product business.”

Leadership brought forth ideas on the separation of product and consultancy business. Either through the creation of a Knowit start-up business for product business or the acquisition of an existing product business to compliment Knowit offering. One of the leaders mentioned:

“Even if we separate product business, there are synergy benefits that can be shared by consultancy and product businesses such as premises, administration and technical support. But synergies cannot continue to commercial functions such as sales.”

It is currently unclear for leadership how Knowit should organize to perform product business. However, according to the interviews, leadership is certain that a new organization is required. Whether it’s a new company, business unit or team is still uncertain. What is certain, according to leadership, is that the organization needs its own leaders, unique goals, measurement and the ability and tools to create a product that can succeed in a market.

One of the interviewees suggested making changes to the leadership of Knowit by combining sales roles in the leadership group into one and adding a product business role.

From the pre-research discussions with Knowit Products it was learned that for product business, the priority must be products. The interesting organizational collaboration was explored, where a Norwegian Knowit company has created a product, which has a go-to-market organization as a separate company under a Swedish Knowit company. The Go-to-market organization is responsible for taking the product to new geographical markets. The Norwegian Knowit company owns the product and oversees its development. The go-to-market organization is responsible for the products commercialization. According to the pre-research the two organizations work in close collaboration.

The interviewees suggestion on the level of separation for consultant and product business differed across all roles and functions. A client executive suggested:

“In between the current functional organizations of commercial and delivery, there should be a new product function”.

According to the pre-research, the leader of Knowit Products reports directly to the group level CEO. The idea has been to separate product and consultancy business. Highlighted also in the interview with leadership all products within the Knowit group do not belong to a single company. It

appears Knowit Products is a company that manages companies which create products within the Knowit group.

Knowit Products described that, product-oriented offering requires investments and longevity. This means that leadership must be able to justify investments for product development.

The non-leadership interviewees from Knowit also hoped that if Knowit makes the decision to pivot towards product-oriented business, there would be adamant time, resources and patience provided. In the interviews leadership seemed to share this opinion.

Leadership displayed awareness that making decisions of what to specialize in, or focus business on, means letting go of some business elements. Leadership seems to be most interested in balancing the year-round business growth. In a consultancy-based business it is heavily reliant on and fluctuating because of the number of working days which change month to month.

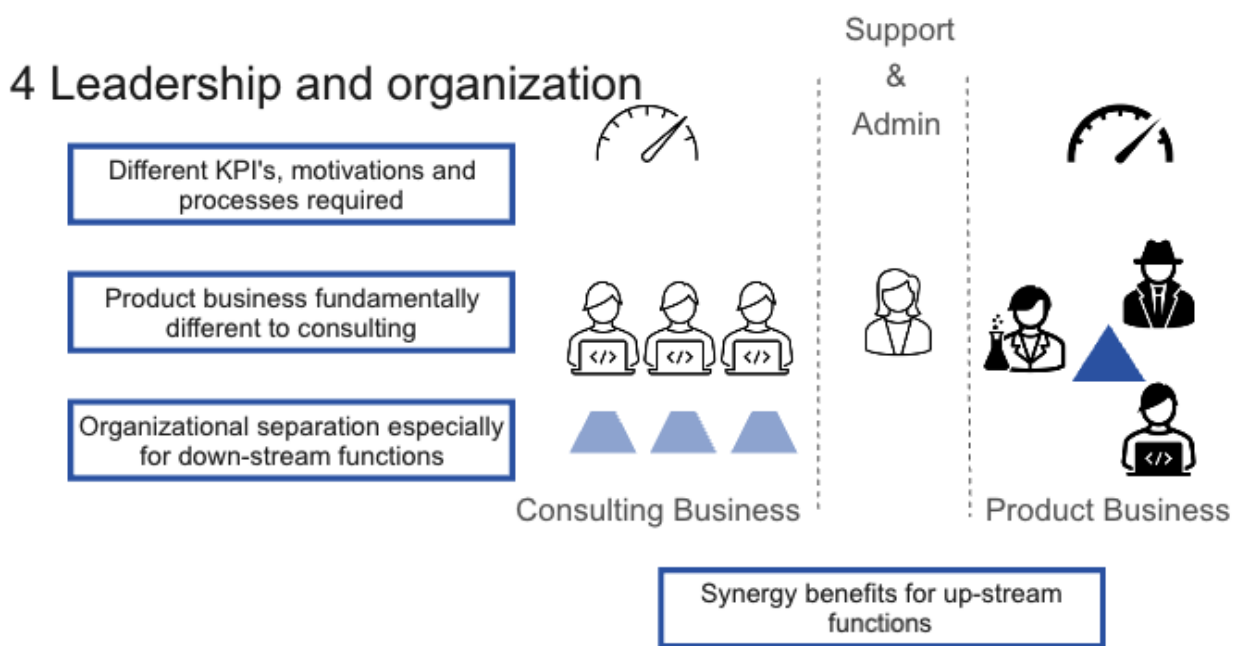


Figure 14. Summary of theme 4.

The summary presented in figure 14. Depicts the interviewees shared concerns for the requirements towards different leadership, measurement and organizational structures in product business as opposed to consultancy. The shared synergy benefits should remain at an administrative level but separation in downstream activities is desired.

4.5 Roles and Responsibilities

Changes in leadership and strategy need to carry over to functions, operations, roles and responsibilities.

A shared request for new roles was given by all commercial interviewees. Product management or product leadership was mentioned by the interviewees. In addition to product leadership role, interviewees agreed that a product team should be created. Especially one delivery interviewee highlighted the need for a team to create and deliver products. The idea was shared by leadership, but with more details:

“The product team needs to start out small, we can only afford to move so many of our best consultants to a new organization where they are unable to generate billable customer value”.

The need for product management in a new product organization is clear to all interviewees. One of the leaders highlighted that:

“Product development requires management. It’s not easy to manage new features and not create customer specific solutions when the idea is to potentially serve an entire market.”

In the pre-research material, Knowit offering portfolio, almost all offerings are assigned a product owner. However, according to one of the commercial interviewees this does not equate to the actual responsibilities of a modern product owner. Chen (2024, chapter 1) introduced growth product management as role which is responsible for creating scalable growth by having an in-depth understanding of a market.

Regardless of titles, the interviewees agree that product management means the skills and mandate to identify opportunities and to offer market driven products. In the pre-research, Knowit Products mentioned that within their go-to-market organization, they are constantly investigating potential for new competitive edge. It’s a part of everyday activities. Other findings from the pre-research include that the investigation requires dedicated roles and time. Performing market recon is the responsibility of all key personnel in the product organizations in Knowit Products. The specific roles that the go-to-market organization is not related to traditional sales, but to business consultants, project leads and developers.

Client executives floated the idea of outsourcing sales to partners. Additionally, one of the client executives reminded that:

“To sell through partners or other outsourced channels, the level of productization must be high.”

However, another interviewee noted that high level of productization should reduce the requirement on salespeople and increase the requirement on marketing and increasing the awareness of Knowit productized services within the target market.

The interviews with leadership mentioned potential separation of organizations. It was thought that synergy benefits can be attained with the support of Knowit, regardless of the level of separation between the potential new product organization and the existing consultant organization. Leadership did note that synergy benefits should end with supporting activities. Customer facing commercial, delivery and other functions need to be separated due to the differing nature of the businesses. One of the leaders mentioned specific functions for product organizations:

“Product sales, product marketing, go-to-market, product development all these functions would be required but are currently missing.”

Leadership continued to raise concerns by mentioning that there are shortcomings in specific skills related to product business such as in-depth market understanding and investment calculations. One of the participants from the commercial function shared the thought that investment and return on investment calculations would be needed.

For example, for Knowit Products these skills such as reconnaissance in the market and creating investment calculations are needed on a recurring basis. Unlike Knowit consultancy businesses, Knowit Products uses their balance sheet for research and development cost activation.

Leadership also highlighted other open questions regarding the roles and responsibilities of the new product organization:

“Do we require specific consultants to deliver products, or can that potentially be an avenue to bring in junior staff?”

Product manager will require skills to understand and manage customer expectations in a way that does not lead to unmanageable and unscalable branches in the product.

There is uncertainty whether the current sales staff can sell products, and whether we have the correct individuals available to create sellable products.”

A delivery organization representative in the interviews mentioned other responsibilities that the new organization should have. They mentioned skills and practices such as business design, for example with the help of business model canvas or other similar tools to find new and innovative business opportunities.

Most of the interviewees agreed that the core responsibility should be to understand the need within a market and create new competitive edge for Knowit.

The commercial interviewees mentioned that a higher level of productization will also enable selling through partners and expanding the potential of Knowit market reach.

Key roles identified are a product owner or product manager. Someone who has the mandate to build products that are successful. The success of a product cannot be measured or evaluated with a single customer, but a single customer is required to begin the validation.

Knowit Products in Sweden reminded that active reconnaissance is required by everyone involved in the product organization. Active participation in events, other places and channels with customers is key to gaining confidence in the problem.

A few interviewees mentioned the need for innovators in a new productization or product organization. Regardless of background, the ability to identify business opportunities is a valuable skill, which is often overlooked as something inherent. However, the ability to identify business opportunities, like most things, improves with repetition and allocating time to that activity.

Roles and responsibilities should derive from strategy and operations. A change in strategy needs to affect operation and a change in operations should impact roles and responsibilities. Delivery function interviewees mentioned the need for, and potential of, using the existing consultants and teams to increase internal knowledge of customer and existing offering. Co-creation and feedback should not only be left to the productization organization to be done with customers, but also internal staff.

When it comes to product management, both Tamblin (2024, chapter 2) and Chen (2024, chapter 12) noted that scalable growth is dependent on successful product management, which requires skilled product managers with the ability to facilitate innovation.

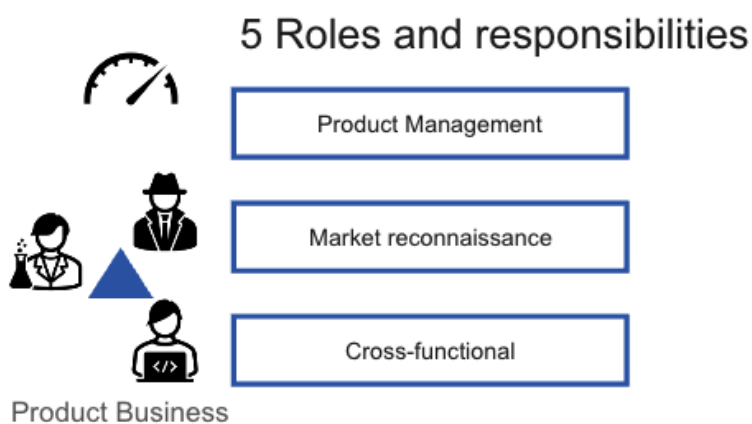


Figure 15. Summary of theme 5.

In summary, product organization will require specific roles and responsibilities that serve the requirements of leadership and measurements in the new organizations. The summary of theme 5 (figure 15) presents the new role of product management and responsibility of market reconnaissance for the product organization. The organization needs to be cross-functional and able to create and deliver a market-oriented product.

4.6 Summary of findings

The current offering consists of competence and services. Moving into a product-oriented business to enable scalability would create a product layer to the offering. Productization can be increased across the offering portfolio. There are many current services and competences with potential to be productized into products or product-like-concepts.

Products – or product-like-concepts as some of the interviewees referred to this new potential offering – are difficult to define. Interviewees agreed on some elements that a product should have, as opposed to competence or services. Product needs to be company owned IP and consist of a combination of ready to go software components, Knowit delivery competence, modern integration capabilities and to delivered by teams.

Obsessing over which problem or problems the Knowit product should solve resulted in a fundamental difference between consulting and product business. In consulting, the objective is to create unique tailored customer solutions which require obsessing over a single customers problem. There is a chance, that one or more customers may share the problem. This, however, does not equate to a scalable and replicable solution. In product business, the obsession should be to discover a common denominator within the market. Focusing on solving a single customer, or a few customers problem often leads to failure as a product business.

Leadership needs to comprehend the fundamental differences between consulting and product business. Strategic changes and organizational adjustments are required to succeed as a product business. Key measurements and functions do not translate from consulting to product business.

The new organization and its functions require new roles and responsibilities. Product organization has different goals, measurements and functions than consulting.

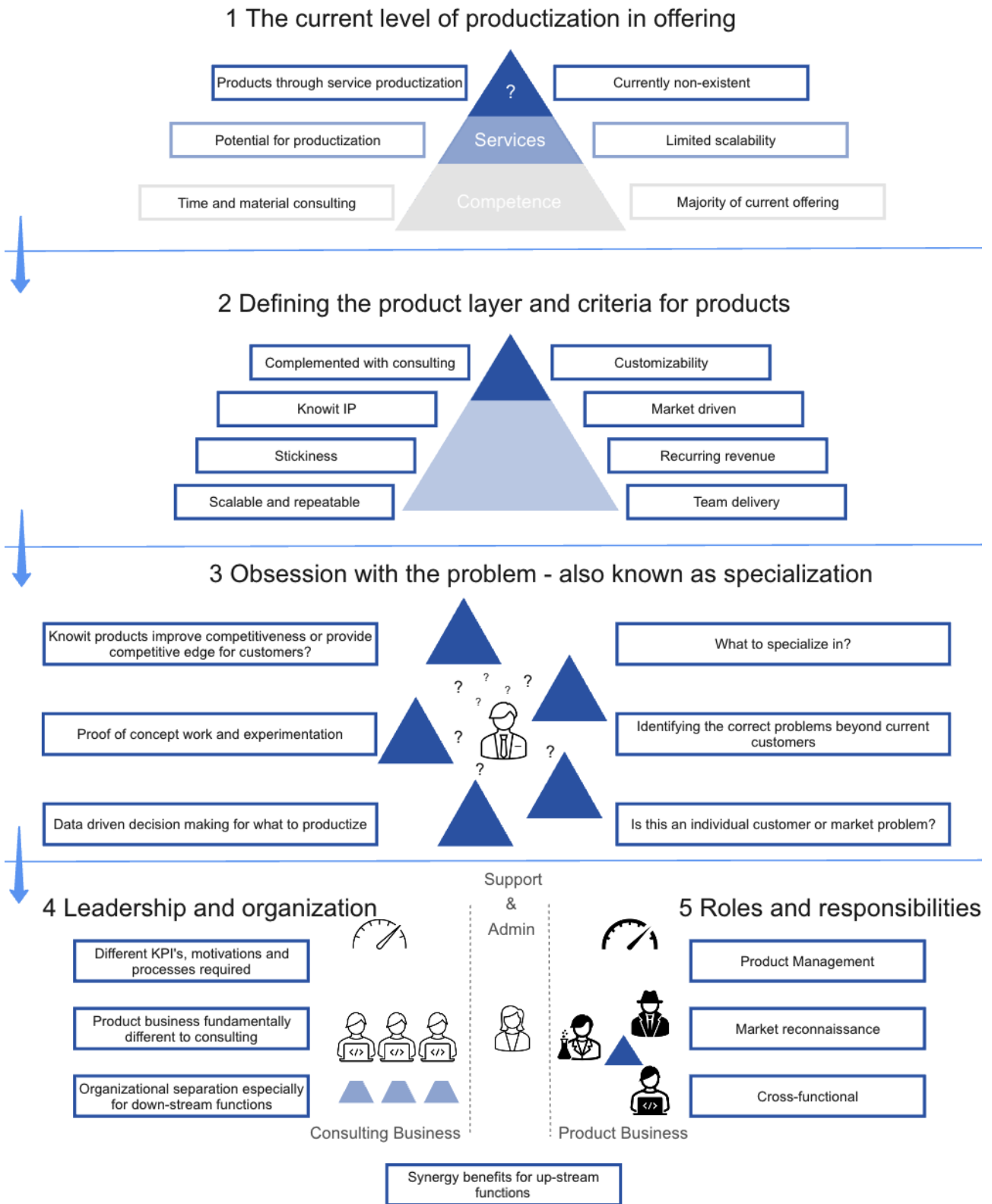


Figure 16. Summary of results compiled into thematic groups.

Summary of results and all themes are compiled into thematic groups displayed in figure 16. The main themes are presented as they were discovered during the empirical research. The themes

are in order from top to bottom based on the order in which they were discovered. Themes one through three relate to identifying the current offering and desire in productization. Describing the productized criteria leads to the theme of deciding what is the correct problem worth solving. This question was described as fundamental, by participants in the pre-research. Finally themes four and five relate to supporting the creation of products for Knowit.

5 Discussion

In this chapter, the summary of the results is presented. The summary of results provides answers to the research questions. Additionally, conclusions are presented which include clear steps for Knowit to take and the reasoning for doing so.

In the last subchapters the reliability and ethical perspectives are covered. Future development ideas presented with an evaluation of the development task. Finally, data management plan is briefly presented.

5.1 Summary of the results

In the following subchapters we will cover the research questions and their answers. Research questions one through four are addressed with findings from the research. The conclusions are made based on both the literature review and empirical research.

5.1.1 Research question 1

RQ1: What criteria does Knowit Solutions Oy use to define a product?

Knowit divides their offering into three layers of a pyramid. The base layer is personal competence which is offered as traditional time and material consulting. The second layer is unique customer-based services which are created by consultants. The second tier of services can also be considered to include semi-productized offerings such as training sessions, structured workshops and status analysis, for example for test coverage. Certain services and solutions which have led to the creation a unique customer owned solution have potential for productization. These solutions are of interest for Knowit to further productize and turn into marketable products. The product layer is the on top of the offering pyramid. The product layer has the highest margins and the highest barrier of entry.

Clear product definition requires product vision, goal and backlog (Schwaber & Sutherland 2020).

Knowit created products, which at the time of reporting do not yet exist, should consist of both tangible and intangible elements. The following criteria should be applied to Knowit product-concepts:

- Product has goal, vision and purpose. There is a clear outcome that the product delivers.
- Product goal is related to a problem worth solving. The problem must be shared by customers in the target market. Knowit expertise is in IT while the customer expertise is in their own business. Therefore, preferably the problem relates to the competitiveness of the customer. Solving this problem should be seen as an investment by the customers, enabling

customers to spend more operational focus on innovating and gaining competitive edge in their own business.

- Products must be and remain scalable. Scalability means that a product can be delivered to more than one customer. Remaining scalable means that products must not be customized in such a way, that disables their scalability.
- Products can have a layer of customization for customer specific requests, but the core must be made for the market.
- Own IP. Knowit products must be Knowit IP to be replicated to more than one customer. There are currently cases where services with potential for higher productization have been created for customers and IP is owned by the customer. In these cases, it may be worth investigating if purchasing the IP is worth it for Knowit.
- Knowit products must be sellable and deliverable by teams and not be dependent on individual consultants or client executives. A higher level of productization means clearer branding, pricing and specification. Specification includes the scope of what can be delivered and the standardization of how it is delivered.
- The products must be related to Knowit core competence be compatible with proven technologies such as Microsoft Azure, Google Cloud and Amazon Web Services.
- Knowit products can have different elements, some of which are visible to the customer and some which are not. However, products must have room for customer specific service design.
- Knowit products have a demo that can be displayed to a customer with minimal effort from the Knowit product sales team members.
- Product must lead to recurring revenue or royalties, unlike expertise and services offering.

Defining a universal product criterion for software products is not worthy of pursuit. However, using frameworks to productize software into products has guidelines. The goal is turning intangible and tangible service elements into a clear and understandable concept which can be bought, sold and delivered. (Härkönen et al 2021.)

Wirtz et al (2021) approach product criteria through productization. At Knowit products and the productization of services are considered very similar. Interviewees were careful to call the potential new offering products and instead referring to it as product-like-concepts or productized services. Wirtz et al (2021) note that the process is iterative and consider the key elements to make a product to be a clear specification, understandable brand and the correct price.

A smart approach is to not pre-define criteria but continuously test and iterate the criteria against market needs. Härkönen et al (2017) mention market research, service blueprinting and piloting of productized services as example tools for testing and iteration.

Product criteria can differ in what is perceived by the customers and what elements are reviewed only internally by the company (Gyamerah et al 2021, 97).

Productized services should also have variable modules comprised of primary and secondary services that can be added to or removed from the main product according to customer needs. Products are scalable and replicable in comparison to services. Product criteria should consider customers, the service creation and delivery, value adding offering and different components which make up the product (Härkönen et al 2017).

In Figure 17 presents the structure of a Knowit product. The separation of internal and external elements of a product (Gyamerah et al 2021, 97-98). is displayed with the desired separation of core product and customer specific customization layer.

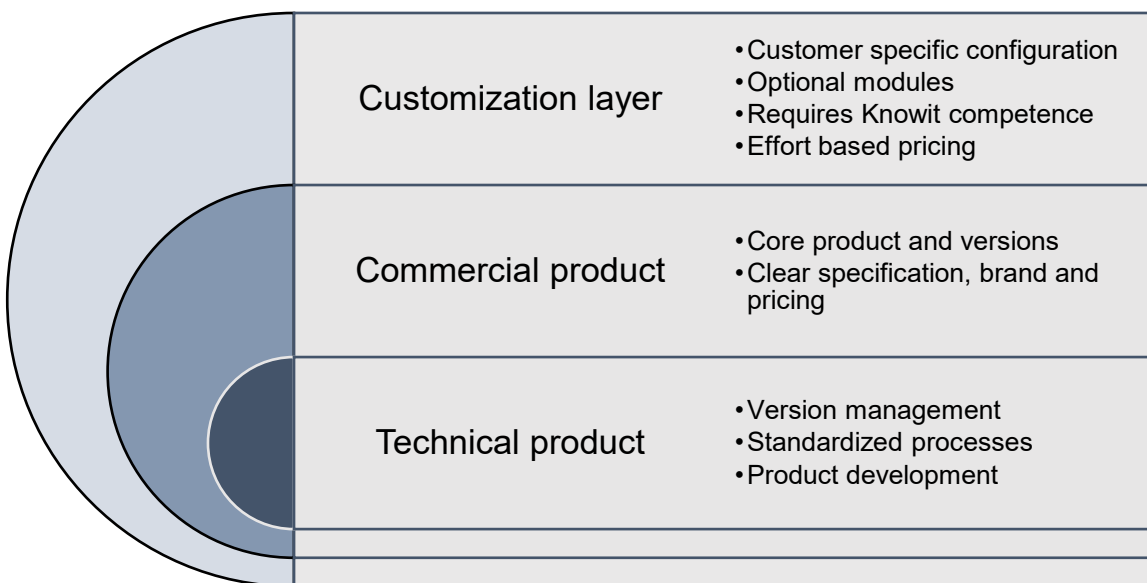


Figure 17. The structure of a Knowit product.

The structure of a Knowit product requires clarification in future research related to the thesis topic. As a principle, the layers are dependent on one another. For example, customer specific customization should be limited in a way that does not result in various off branches of the product. Modern software development approaches and using for example feature flags and admin user interfaces can be used to accommodate customer specific service design requirements.

Building and selling Knowit products should be achieved by becoming good at productization. Good productization leaves a layer of customer specific customization (Härkönen et al 2017). The marketability of the product or products is dependent on the correct price, resonating brand and valuable specification. These aspects cannot be excelled at without experimentation and iteration.

5.1.2 Research question 2

RQ2: In comparison to tailored solutions, why would customer prefer a product?

Knowit customers are accustomed to buying consultants with time and material. Generally, Knowit receives excellent feedback for their consultants and services. Moving towards product business, means the focus must shift from individual customer satisfaction to solving a problem within the market.

Higher productization means less dependence on individual consultants. Moving towards productized services can provide customers with the ability to choose proven solutions and receive value faster. Productized services which are not tied to individual consultants' knowledge also reduce risk and provide flexibility for customers in the future.

Trends indicate that time and material-based business will continue to meet pricing resistance in the IT services market. Customers want the certainty of proven solutions instead of the uncertainty of building from scratch. Products have potential especially in situation where customer require assistance to streamline processes to maintain competitiveness. For customers looking to gain competitive advantage with innovation, tailored IT solutions are perhaps a better alternative.

In figure 18 competitiveness and competitive edge from the customer perspective are presented separately. The differing aspects that customers generally need to improve with innovative IT solutions. Competitive edge refers to standing out against the competition. A competitive edge cannot be gained with generic solutions which your competitors have access to. Unique tailored solutions which should not be replicable need to be created from scratch. Wirtz et al (2021) highlighted consultancies such as McKinsey purposefully avoiding products and offering unique solutions to create unique innovative solutions for their clients.



Figure 18. Competitiveness and competitive edge from the customer perspective.

Competitiveness and competitive edge from the customer perspective (figure 18) presents an opportunity for the sweet spot of potential Knowit products. In the competitiveness section of their business, customers should value productized solutions as opposed to custom solutions. Knowit should focus on providing proven solutions to common problems with innovative and highly productized IT services. Maintaining competitiveness generally refers to improving efficiency and reducing costs. This approach also frees the customer to spend more focus on sharpening their competitive edge.

The creation of new offering is always tied to close collaboration with customers (Floren & Fri-shammar 2012, 24). Knowit needs to focus on identifying the common requirements within a market related to competitiveness. There are excellent opportunities to begin this endeavor with the existing relationships to customers.

In time and material-based consulting, customers are often left in great uncertainty regarding the outcome or eventual cost to reach a desired outcome (Weiss 2021c, subchapter 3.1).

5.1.3 Research question 3

RQ 3: What types of resources, capabilities, and investments are required for Knowit Solutions Oy to transform a tailored solution into a product concept (as defined in RQ1 and RQ2)?

The need for new resources, capabilities and investments is clear. The change from consulting towards product-oriented business is a fundamental one.

Innovating to create new or improved offering requires changes to the organization structure (Kotler & Keller, 425).

Knowit should create a new organization, with the goal of creating and selling products. The organization requires at least a product manager with the ability and mandate to perform the objective of the organization.

Resources can be shared from the current Knowit Solutions Oy, but only at an administrative level. The need for separate key resources is clear. The differing nature of consulting and product business means that personnel and tools must be allocated to the creation and commercialization of a product or product. Resources can be acquired from the existing Knowit staff or hired from the outside.

Researchers Systä & Yrjönkoski (2019, 3) state that excellence in product-oriented software business requires excellence in product management function.

Product management would be a new function for Knowit. The new function should be separated into its own organization. The organization needs to have the capability to investigate potential market problems worth solving with a product. The organization needs the capability to experiment and the ability to make investment calculations. To do so, a deep understanding of product management, product creation and product lifecycle management will be required.

The product manager is a leadership role. The product manager will require a team of reconnaissance officers who are tasked with the in-depth active analysis and investigation of problems worth solving. The team must be able to find and use experimentation to solve problems within the market. The team should be cross functional with members having skills in product management, development, marketing, sales and software delivery.

Investments must be made in development costs. Differing greatly from the consultant counterpart, product business will not generate revenue as quickly as consulting.

Product development opens the door for research and development to be recorded as an asset on the company balance sheet. The activation is only applicable to development which is intended to result in the completion and sale of a product. The development costs appear as assets on the balance sheet instead of costs within the income statement. The development costs appear on the income statement gradually in expenses as they are amortized. (Investopedia 2024.)

Additional accounting capabilities and skills may be required as Knowit has not performed research and development at this extent in the past. Regardless of accounting, real costs will occur as the

product is developed. Knowit will need to find a way to finance the development of products. The investments into this product team should not be reviewed through utilization.

Leadership needs to be willing to allocate time and resources for this endeavor. Benchmarking with Knowit Products in Sweden should be continued actively to ensure there aren't any overlaps in offering and to find opportunities for collaboration.

Regardless of title, product organization requires a leadership role where the responsibility is to define a clear product with unique value proposition (Schwaber & Sutherland 2020).

5.1.4 Research question 4

RQ 4: How would transitioning to a product-oriented business model align with Knowit Solutions Oy's current growth strategy?

Currently, the Knowit strategy does not align well with transitioning to product-oriented business. Product business requires its own strategy, operations and people. Separated from the current consulting organization.

Strategy changes with strategic exits and additions (Kirtley and O'Mahony 2019, 11-12). Knowit product strategy should be separated from the consulting strategy.

The change will require development of the current growth strategy. Leadership, prioritization and KPI's need to be reflective of product-oriented business. This new direction will require a change in business objectives and organization. Shorter sighted growth goals may have to be pushed aside for longer horizon goals.

Scalable growth strategies, pivoting at the right time and into the right direction requires systematic product management to enable data driven experimentation (Chen 2024, chapter 5).

The success of the strategy, and product management team should be evaluated first on their ability to discover opportunities and respond to them by building marketable product-concepts. Secondly, the success should be evaluated in time based on the number of sales a product-concept has done, revenue created, and profit earned, for example monthly. Furr and Dyer (2014, 173-174) introduce time sensitive pivot cycles to clarify uncertainty which enables better strategic decision to be made.

Increased level of productization transforming services to products should lead to higher unit sales in comparison to consultancy services. (Systä & Yrjönkoski 2021, 3).

Measurements for guiding a new product organization need to differ from those of a consulting one. Kaplan & Norton (1992, January-February) introduced the balanced scorecard as a tool to review a company's strategy from the perspective of finances, operations, customers and innovation. A balanced scorecard or similar measurement tools that are independent on consultancy experiences will help to differentiate the new business.

Building new software products from existing services should be done iteratively. Starting from proof of concept (PoC). PoC purpose is to gain one customer, before building the first version of the product. Second stage is to gain the first 10 customers. After which mass distribution of the product is targeted. (Systä & Yrjönkoski 2019, 4-5.)

Coinciding with these stages Knowit has already created several PoC's. Active innovation work is required in all the stages, but investment can be limited to be gradual in nature.

Floren & Frishammar (2012, 24-31) include alignment as a crucial step in between new offering development and its' legitimization. Many of the commercial interviewees highlighted that Knowit is well designed for the sale and delivery of traditional consulting services. Alignment with current consulting strategy and operations may be high, but not enabling product led growth.

Currently, the strategy is not aligned with the plan to pivot towards a product business. The change needs a new strategy. The strategy needs to be clear, operations aligned with the strategy and people willing and able to implement the strategy.

5.2 Conclusion

The conclusion presents a summary of actions for Knowit to pursue. The actions are related to defining a product concept and the evaluation of strategic fit of pivoting offering from custom offering to products.

A change in strategy, or a new strategy is required in the pursuit of growth through productization or product-oriented business. Knowit should remember key findings:

- Software products can be defined in a way that leaves room for customer specific configuration. Productization is a systematic process which turns services into products. The main idea of productization is to create marketable concepts which are scalable and independent of individual consultants.
- Customers value outcome over output. Especially in matters of improving efficiency or reducing costs, customers value speed and certainty over unique solutions.

- Creating great products is validated by the market, not individual customers. Creating great products requires patience, a product driven organization. The organization requires its own resources, capabilities and investments.
- When pivoting from consultancy to product business, a change in strategy is required. Accounting for the different nature of product-oriented business. Strategy change means adding strategic elements and removing others, or the creation of a new strategy. Strategy changes should reflect in the operations and people's skills and motivators.

How to proceed? Create cross-functional task force to begin the transition into a product organization. The purpose of the task force and product organization should be twofold:

1. Understand the customers context extremely well.
2. Land a bullseye with offering.

The two steps should be conducted iteratively as seen in figure 19 displaying the purpose of the product taskforce.

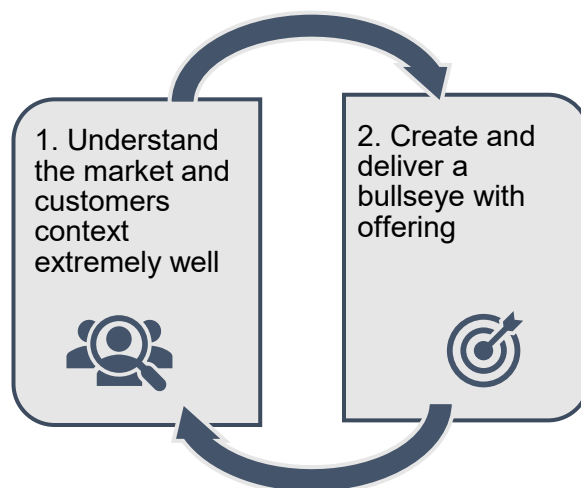


Figure 19. The purpose of product taskforce.

Figure 19 displays the iterative nature of investigation, reconnaissance and experimentation to create a product which succeeds in the market and is desired by multiple customers. Step 2 differs from the IT consulting business fundamentally. Instead of creating new and unique solutions to customer problems, a standardized product aims to solve a non-unique problem for a variety of customers. In step 1 the nature of the potential offering is reflected in the kind of problems Knowit needs to solve based on market and customer understanding. The steps should result in a smaller, clearer and more detailed offering portfolio for the product organization. The potential product offering experimentation requires both quantitative and qualitative data. The vision of the taskforce is to be separated into its own start-up like company.

This purpose should be attained through the building of products to enable scalable and sustainable business growth. To achieve the goal clear action is suggested in this conclusion.

Whilst moving towards a strategic pivot, the product-oriented approach can be experimented with a task force. Furr and Dyer (2014, 173-174) suggest time restricted pivot cycles to clarify uncertainty which enables better strategic decision to be made.

Knowit has various consultants actively serving customers across various industries. The taskforce can use the existing offering, sales and consultant network to begin systematically harnessing information regarding customer needs and wants.

Customer behavior related to products is relatively unknown to Knowit. But we do know that trends in the industry forecast less interest in tailored solutions and traditional consulting. Additionally, based on the authors experience while staffed at a Knowit customer, customer purchasing behavior is moving from centralized purchasing to strategically prioritizing business level purchasing.

When making changes to strategy, Knowit should remember that strategy needs to be clear and understandable, operations need to be aligned to strategy. Finally, the people need to be able and motivated to perform the strategy.

To maximize the benefit of this research, Knowit should continue to pursue the topic, evaluate strategy, remove uncertainties and consider the development of the current business model.

The identified Knowit offering pyramid is displayed in figure 7. The recommendation, for a company experimenting with moving into a product-oriented business is to separate the product business into its own company. The separation is visualized in figure 20.

The offering of expertise and sales through consultants, is customer driven. Customers desire skills and competences which they do not have and do not want to invest in. In a way, this outsources the risk of recruitment to companies such as Knowit. In these cases, Knowit business model is not dissimilar to personnel rental business. The offering of services and their further productization is limited due to the IP belonging to the customer and each delivery project being customer specific. The services offering leaves Knowit in a position of acting as a system integrator, combining own consulting knowledge and resources with third party products to create unique customer solutions. A low level of productization can improve Knowit operational efficiency but will not lead to product business.

The offering of product, which before the thesis does not yet exist at Knowit, is an entirely different business. A clear recommendation of the author is to separate the product business from

consulting business, which offering consists of expertise and services. The separation is visualized in figure 20. Some internal, admin and back-office synergies maybe worth it to combine but it is not favorable to seek for synergies where there are none.

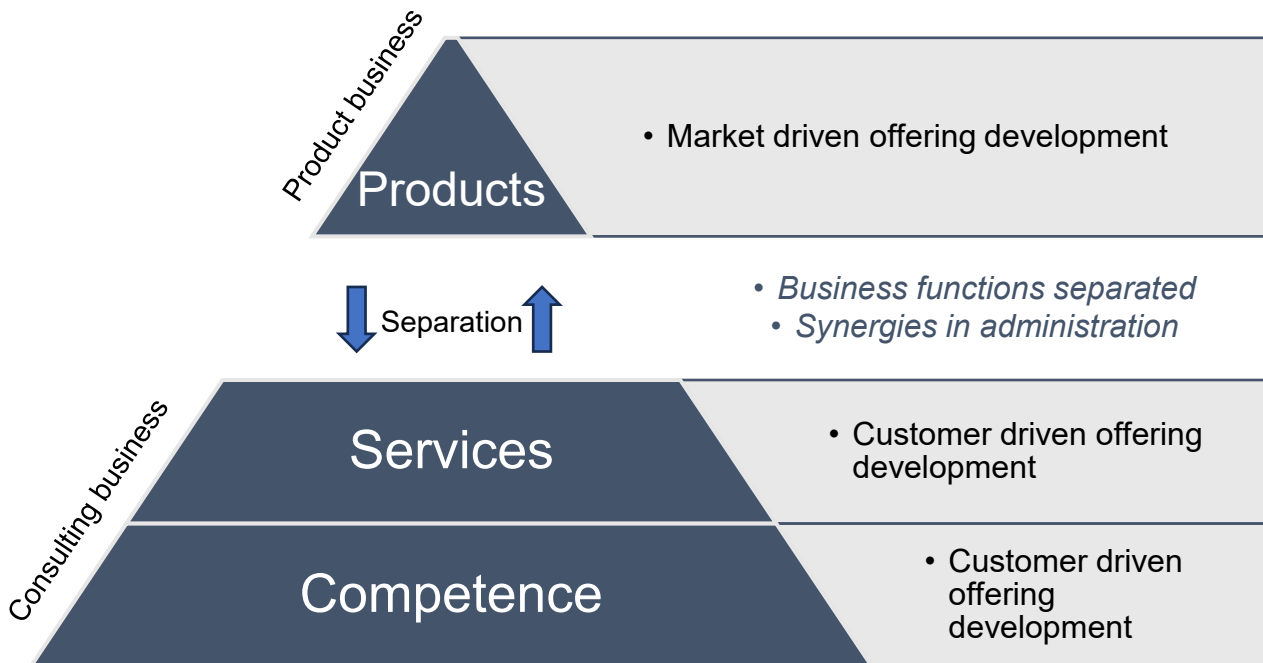


Figure 20. Separation of product business.

The driver for the development of offering layer is highlighted in figure 20. Consulting business remains customer driven, where specific customer cases and needs end up dictating what is delivered. Consulting business can offer expertise and existing services for trendy and emerging customer needs, without significant investments and no product development. The most important factor is having the expertise, third-party product knowledge and connections to deliver what the customers want.

Product business is a different aspect all on its own. To receive the maximum value from productization, the goal should be the creation of products. A criterion for Knowit products should be the delivery to more than one customer. Creating an own product requires product development organization with its own leadership, goals and functions such as sales, marketing and product development. In some cases, it may be possible for the product organization to borrow consultants and expertise from the consultancy company, but it must not be the only source for expertise for the product organization. The product organization requires freedom to achieve its goals regardless of the consultant organization.

There are synergies in Knowit supporting up-stream functions such as human-resources, payroll, administration and IT-support for a potential Knowit product organization. Down-stream functions, which are closer to the customers such as sales, marketing and product management and development must be unique to the new organization. If these organizations are not separated, leadership is essentially outsourcing business decisions and prioritization down to the organizations themselves. For example, sales function which sells consulting projects and products will be forced to prioritize and choose which ever option is easier for them. Good leadership will make that prioritization up in the chain of command by separating the organizations and their priorities.

The new product organization cannot be customer service driven like the consultant organization. The new product organization must be market driven. The key to being market driven is continuous and systematic reconnaissance of the market to identify shared problems which are worth solving in a single product, for many customers. Worth relates evaluating cost versus benefit of creating a product. The product organization cannot oversee a single product. The product organization oversees the product roadmap, product portfolio and any products which are worth building and marketing. The product organization must take care to avoid customer specific customization, this is left for the consulting organization. Customer specific customization in products, will lead to situation where the organization is stuck with customers, unable to progress or build upon either the product or the customer specific solution.

It may sound somewhat counterintuitive, but product business cannot be successful by focusing on individual customers. Focusing on customers leads to tailored services. Product business should focus on an entire market. The requirement is to understand the market well enough and then land a bullseye with offering. Market driven products cannot fixate over individual customers.

There is a necessary balance to customization. Product business means that competing for individual customers who require a customized solution is not included in the strategic choices. However, some customization options must be available for individual customers without jeopardizing the competitive advantage in a product market.

To finally summarize the conclusions. Knowit needs to:

- Separate product business into its own strategy, operations and organization.
- The new organization should start as a taskforce and iteratively experiment with productization.
- The goal of the team should be the completion of a sellable and competitive product.

5.3 Consideration on research ethics and reliability

Interviews have potential to be unreliable due to bias (Hair et al 2023, chapter 8). Limitations on the reliability of research exist. Findings based on interviews may be biased, either due to the interview or interviewee. The thesis can provide steps for progress, but their correct application depends on the exact situation and objectives. Hair et al (2023, chapter 1) highlights that reliability of business research is crucial to the value it can produce.

Reliability of the findings is limited due to one common employer for all the interviewees. Views may be limited to existing ways of doing things and previously made plans. Bajpaj (2018, chapter 2) notes that in depth interviews lack statistical validity. The thesis findings are dependent on the interpretation of interviewees and their ability to clearly voice their concerns and thoughts.

Ethics in research often revolve around trust. Ethical requirements are also presented forcefully through laws, rules and regulations. (Hair et al 2023, chapter 1.)

Ethical aspects of research and development revolve around humans and our interactions with one-another (Moilanen et al 2022, subchapter 2.2). The thesis development recommendations aim to be truthful and considerate towards the individuals who partook in the sample.

Corporate social responsibility is often seen as an additional layer on top of innovation, but it needs to be considered in innovation work (Pedersen 2015, 124). From a social responsibility perspective, the pivot towards product business can be reviewed from a sustainability standpoint.

Pedersen (2015, 74) also highlights employment planning, recruitment and organizational design as social responsibility aspect. For IT consultancies, organizational development is required to transform towards product-oriented business. Scalable growth in product and consultancy business differ in a variety of ways.

Data from the research is stored in the company SharePoint. The visibility is limited to company internals. Newly generated data consists of interview transcripts. Existing data from Functional offering portfolio is available for company internals.

Interview recordings and transcripts are available in Microsoft Teams for the duration of 90-days after the interview. After which the interview recordings will be deleted.

To ensure consent from interview participants, a research announcement and consent form was created. The documentation was presented at the beginning of the interviews. The research announcement includes information related to the storage and disposal of data. The documents are available in the appendix.

5.4 Evaluation of the development task and future considerations

Business research aims to provide management with the necessary information to make decisions. (Bajpaj 2018, subchapter 1.5). Implementing the offered solutions is up for the final consideration of management (Bajpaj 2018, subchapter 1.5.1) and must accept that it is still possible to make incorrect decisions (Bajpaj 2018, subchapter 1.5.5).

The thesis objective was to define the criteria for a Knowit product concept and evaluate the strategic fit of pivoting customer offering to product concepts. The thesis does not present an individual product concept but offers relevant attributes to enable scalability and differentiate from consulting offering. The strategic fit of product and consulting business was clearly seen as needing a separate strategy for successful implementation.

Any new business strategy or commercial offering is eventually evaluated by the market and customers. Product success can only partly be evaluated at the product launch. Value generated by any product must be evaluated throughout the product lifecycle.

When evaluating the success of the research, the decisions that were made must be accounted for. In business the decisions are validated through the business impact of those decisions. The evaluation is a constant process and cannot be generically linked to a specific period. (Bajpaj 2018, subchapter 1.5.5.)

The results of research should be presented visually and explained in a summarizing way. The proposal based on the research should be presented in a long form written and short form oral ways. (Hair et al 2023, chapter 16.)

The thesis results were presented to company management in a visual and summarized method.

Based on the research methods of the thesis, future development methods are suggested. Further development of the research topic requires reflection and additional iterations. The conclusions of the thesis are akin to action research.

Iterations of reflection, planning, action and observation and repetition with a modified approach are a staple of action research. This action research approach is highly participatory and time consuming with recurring discussions building upon one another. (Moilanen et al. 2022, subchapter 3.3.)

As future development, benchmarking could be conducted to a more in-depth level to enhance knowledge. Further research could involve close collaboration with Knowit Products in Sweden. An alternative approach to research could be the cooperation with the go-to-market organizations

within the Knowit group to offer products within the group to individual markets with a local go-to-market organization. A business model canvas is used to analyse potential businesses or products (Moilanen et al 2022, subchapter 4.8). A business model canvas will support further investigation into the shift in offering towards product-oriented offering or the alternative path of Knowit group cooperation as a go-to-market enabling organization.

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Appendices

Appendix 1. Research announcement

Template for Research Announcement

The research announcement was distributed to the thematic interview participants of the study as a pdf along with the consent form. If the participant was unable to review the document before the interview. It was done at the beginning of the interview. Consent was confirmed on Teams recording.

Research Announcement

Title: Evaluating the strategic impact of pivoting offering from custom solutions to products for an IT consultancy

Student's Name and Contact Information: Eero Moilanen – eero.moilanen@knowit.fi

Supervising Teacher's Name and Email Address: Mr Juha Olava. Juha.Olava@haaga-helia.fi

Commissioning Party: Knowit Solutions Oy

Objective of Data Collection: The thesis objective is to define the criteria for a Knowit product concept and evaluate the strategic fit of pivoting customer offering to product concepts.

Method and Phases of Data Collection: Recorder interview.

Duration of Participation: Approx 60 minutes.

Preparation Prior to Participation: No.

Benefits of Participation for the Participant or their Represented Organization: Co-creation and cooperation with and within Knowit Solutions Oy leading to better services.

Handling, Storage, Recipients, Potential Disposal, and Future Use of Data: Primarily utilizing the storage services provided by Knowit. Data will be stored in Knowit sharepoint or

Microsoft tools such as Teams, Word, PowerPoint and Excel. Specific data such as interview transcripts, product names, customer names and offering portfolio will not be shared outside of Knowit.

Personal information data will not be stored on external devices such as USB drives, hard drives, or phones. The data collected will not be used for teaching or further research. The data can be

used for company specific development in the future. All personal data will be stored and handled according to Knowit policy. Interviewee names will not be presented in the thesis. Interviews will be recorded and transcribed by Microsoft Teams. AI may be used to assist in the summarization of interview topics.

Dissemination of Results: The thesis report will be published in the Theseus online library.

Funding and Potential Conflicts of Interest: Thesis related costs are funded by Knowit. Potential conflicts of interest relate to thesis timeline, Knowit timeline and the author's non- thesis related work. The author is an employee of Knowit.

Additional Information Eero Moilanen – eero**@knowit**

Appendix 2. Consent form

Template for Consent Form

I hereby give my consent to participate in the research to define the criteria for a Knowit product concept and evaluate the strategic fit of pivoting customer offering to product concepts. According to the research announcement provided as an attachment.

The content of the research announcement has been explained to me, and I understand the nature of the study, what participation entails for me, how the data I provide will be used, and how it will be stored. I have had the opportunity to ask questions and have received satisfactory answers to all my inquiries.

I understand that participation in the research is voluntary. I am aware that I can withdraw this consent at any time without giving a reason, and for instance, I can discontinue the interview if I so desire.

Consent can be withdrawn by [description of the withdrawal process]. Please note that once the research results have been analyzed, the contribution of a single participant cannot be retrospectively removed.

For additional information about the research, the thesis author/authors [name/names, contact information] can be contacted.

With my signature, I confirm that I give my consent to participate in the research.

Name of the Consent Giver

Date

Signature

Appendix 3. Thematic Interview questions

Table 7. Thematic interview questions and sub-questions.

<i>Thematic interview questions</i>	<i>Sub-questions</i>
<i>How would you describe the current Knowit offering portfolio?</i>	<ul style="list-style-type: none"> - What kind of services have potential for higher productization? - How would you describe a product for Knowit? - What kind of characteristics should a Knowit product have? Provide examples.
<i>Based on your experience with customers, why would they value productized services over time and material consulting?</i>	<ul style="list-style-type: none"> - What kind of feedback have we received from customers? - Where does Knowit have room for improvement according to customers? - What kind of rejections have our tailored solutions received from customers?
<i>What kind of investments and organizational changes are required to start offering productized services as products?</i>	<ul style="list-style-type: none"> - In your experience, what steps should be taken and which factors to consider when transforming services to products? - What kind of investments and resources do we require to turn a solution into a product concept? - What sort of organizational changes would it take to begin the active sales and delivery of a product concept? - Can you provide examples of challenges to this change?
<i>How would a pivot towards product business impact Knowit strategy?</i>	<ul style="list-style-type: none"> - Strategy is currently being iterated. What sort of elements should be considered in product concepts in relation to strategy? - What challenges do you think a product business approach would bring in the short and long term? - Which strategic or leadership changes would the pivot require? - How should functional teams be organized?