Ville Juutilainen

B2B End-User Marketing Concept

Helsinki Metropolia University of Applied Sciences

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In high-tech industrial equipment business, a small / a medium-sized enterprise often operates as a subcontractor to a project contractor, which makes the turnkey delivery to the ultimate plant owner – the end-user. These end-users are important indirect decision-makers. Currently, the case company Enviroburners Ltd does not have a systematic method to influence these indirect decision-makers. In this thesis, an end-user marketing concept is created for the case company to be used in the recovery boiler business in Finland.

This thesis consists of six building blocks. The first block examines B2B-networks of the Finnish recovery boiler business: how they are formed, and which companies are important decision-makers from the case company's perspective. The second block deals with industrial decision-making dynamics, where the end-user's buying behavior and the process are studied. The third block analyses the end-user needs. These three blocks create the necessary pre-understanding and foundation for the end-user marketing. In the fourth block, different marketing approaches are studied and proposed for the use of the case company in the recovery boilers in Finland business area. The fifth block binds the previous blocks into the lifecycle of a recovery boiler. All this is a complex combination and needs an owner inside the case company – the end-user marketing owner, which creates the sixth building block.

The thesis process started by acquiring knowledge of the best practices of B2B (end-user) marketing from topic-related literature. Secondly, an analysis of the Enviroburners end-user context was conducted with internal and external key stakeholder interviews. The analysis was followed by developing an initial proposal of the end-user marketing concept with an internal workshop and the key-stakeholder interviews. In the final phase, the initial proposal was validated with internal key-stakeholders. As a result, the final end-user marketing concept was created.

In conclusion, the proposed marketing concept is a toolbox. With the first tool, the value network is mapped with an internal workshop and the results are validated with external key stakeholders. The second tool is a lifecycle synchronized decision-making analysis tool. With the third tool, the customer needs are analyzed from internal and external sources. The fourth and final tool is a lifecycle synchronized marketing toolkit. The marketing owner uses the toolbox, operates in the networks and distributes marketing responsibility internally. The toolbox creates a holistic tool for the end-user marketing: when you market to the end-user, you do not always market directly to them. Instead in these cases, the marketing is done to a partner company or an external influencer. The end-user marketing involves co-creation and relationships, and the old truth "the best marketing is well-working equipment and good service" is still valid. Moreover, the toolbox gives means for reaching this point.

Keywords	B2B Marketing, B2B Networks, Industrial Decision-Making, Customer Needs, CRM, Marketing Owner, Industrial Life Cycle

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1 Introduction

This thesis explores the forces and the dynamics that affect the business-to-business marketing in the Finnish recovery boiler business and provides a marketing concept for the case company, in the following chapters an introduction to the thesis is given.

1.1 Case Company

Enviroburners Ltd design and manufacture advanced industrial burner systems for energy production and environmental protection. Enviroburners Ltd operate globally and the majority of the products are exported, products for pulping business play a key role in the product portfolio. In their business, Enviroburners Ltd typically operates as a subcontractor to turnkey greenfield power plant projects. The main business areas are pulping industry, power industry, petrochemical industry and metallurgical industry.

Enviroburners Ltd is based in Vantaa Finland, the company has ~20 employees, key activities of the company are engineering, project management, sales and manufacturing. Turnover is approximately 4M€/annum.

1.2 Business Challenge

Enviroburners Ltd customer is usually a project contractor who makes the turnkey delivery to the ultimate power plant owner. Such ultimate plant owners are for Enviroburners Ltd end-users and are important indirect decision-makers. Nevertheless, Enviroburners Ltd currently has no systematic way to influence those important end-users. One of the business areas affected by this challenge is the recovery boilers in Finland business area.

1.3 Scope and objective

The research objective is to develop an end-user marketing concept for Enviroburners Ltd for the recovery boilers in Finland business area. The end-user marketing concept will cover the whole lifecycle of a recovery boiler, from the first initiative to build a recovery boiler to construction and further to the operation of the boiler and all the way to demolition, decades after the first start-up of the boiler. The idea is that the logic can be later copied to other business areas as well.

2 Project plan

2.1 Research design

First, the best practice of B2B end-user marketing was studied from topic-related literature to acquire knowledge and to create the conceptual framework. The conceptual framework includes:

- Value network mapping
- Industrial decision-making dynamics
- Understanding end-customer needs
- End-customer marketing approaches
- Lifecycle approach

After creating the conceptual framework analysis of Enviroburners end-user context was done by data collection with interviews to form the necessary pre-understanding of the end-user context. The data collection included: analysis of Enviroburners key stakeholder expectations, description of recovery boiler lifecycle, description of end-users in question and analysis of the end-users needs. After this stage commenced developing an end-user marketing concept with stakeholder theme interviews & workshops. As a result, the initial proposal of the end-user marketing concept was created. Which includes: value network mapping workshop, lifecycle synchronized decision-making analysis tool, customer needs analysis tool and lifecycle synchronized marketing toolkit. The final phase was the feedback validation of the initial end-user marketing concept proposal, where improvement ideas were sook from the internal key decision-makers to create the final end-user marketing concept. See an illustration of the project plan in figure 1 below.
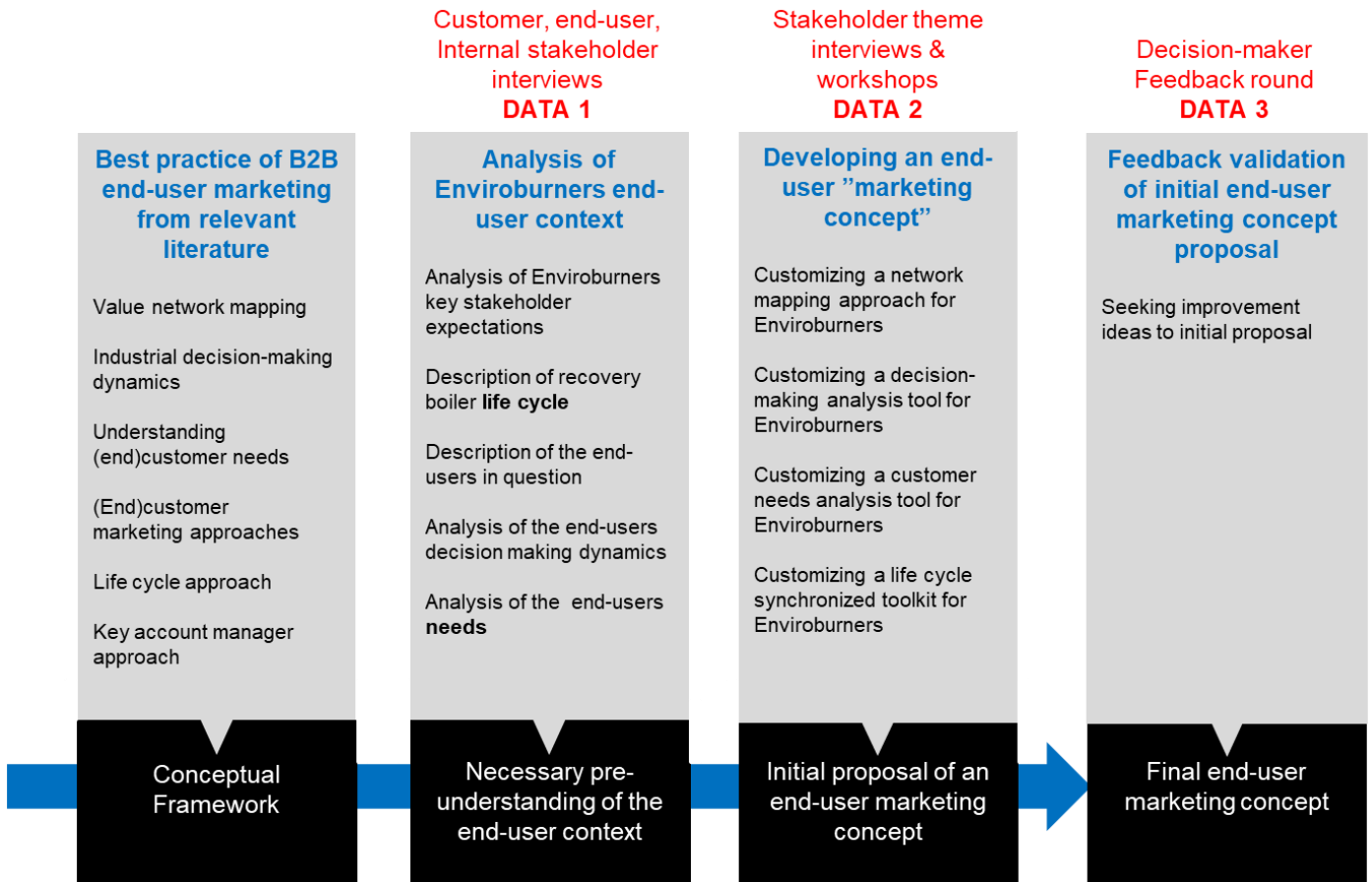
Figure 1. Project plan. An end-user marketing concept for Enviroburners.

The current state analysis was part of the necessary preunderstanding and was done concurrently with the analysis of Enviroburners key stakeholder expectation interviews in the Data 1 in figure 1 above.

2.2 Data plan

The data collection started with collecting data for the analysis of Enviroburners end-user context. This phase included two internal key stakeholder and seven external key stakeholder interviews, to receive the necessary preunderstanding of the end-user context. Then the initial end-user marketing concept proposal was created with internal stakeholder interviews and workshops, some of the key-concepts were validated with external key stakeholders. Last, the initial end-user marketing concept proposal was taken for feedback validation with key internal stakeholders to create the final end-user marketing concept. See table 1 below for an illustration of the data plan.

Table 1. Data plan for the project

	CONTENT	SOURCE	INFORMANT	TIMING	OUTCOME
DATA 1 Analysis of Enviroburners end-user context	• Analysis of Enviroburners key stakeholder expectations • Description of recovery boiler life-cycle • Description of the end-users in question • Analysis of the end-users decision-making dynamics • Analysis of the end-users needs	• Customer interviews • End-user interviews • Stakeholder interviews	• Key customer • Key end-user 1-3 • Other external stakeholders • EB Sales & marketing director and managing director	August & September 2018	Necessary pre-understanding of the end-user context
DATA 2 Developing an end-user "marketing concept"	• Customizing a network mapping approach for Enviroburners • Customizing a decision-making analysis tool for Enviroburners • Customizing a customer needs analysis tool for Enviroburners • Customizing a life cycle synchronized marketing toolkit for Enviroburners	• Stakeholder theme interviews & workshops	• EB organization • (external stakeholder)	October 2018	Initial proposal of end-user marketing concept
DATA 3 Feedback validation of initial end-user marketing concept proposal	• Seeking improvement ideas to initial proposal	• Key internal stakeholders	• EB sales & marketing director and managing director	November 2018	Final end-user marketing concept

In the data collection, methods of the qualitative interview were used. Stakeholders through the whole network and the case company were involved in getting an as broad understanding as possible.

3 Best practice of B2B end-user marketing from relevant literature

3.1 Overview of the literature review

This chapter is going to explore the literature to find concepts that are vital for developing a B2B end-user marketing concept. The first three chapters (value network mapping, industrial decision-making dynamics and understanding customer needs) study the necessary analyzation and data gathering in a business environment. Then different B2B-marketing approaches are explored. The last section acquires knowledge about industrial plant lifecycle approaches. For the four former one's business journal articles and textbooks were used as a source. For the industrial plant lifecycle: consultant reports and master's thesis from Finnish pulp mill was used as the source. In the last section of chapter three is the conceptual framework, where literature review is summarized to create a frame of the best practice of B2B end-user marketing.

3.2 Value network mapping

In B2B markets company is a part of a value network. In their article Johansson & Mattsson (1992, p.205) describe the basic idea of B2B value networks in the following way:

> The basic idea in the industrial network model is that firms are engaged in networks of business relationships. The network structure, that is the ways in which the firms are linked to each other, develops as a consequence of the firms transacting business with each other. At the same time, the network structure constitutes the framework within which business is carried out. (Johansson and Mattsson, 1992, p. 205)

To be able to understand what goes on inside of the company, one needs to understand its relationships. The company should be able to look beyond direct relationships with suppliers and customers and try to make sense of the network of which they form part, due to this reason researchers have moved from the study of business relationships to a wider, network perspective (Ford, 2002, p.xiii). Although, firms and relationships must be studied if one wishes to understand network (Easton, 1992, p.1). Before a company can start creating an end-user marketing plan, it must first understand it's operating environment and other companies that affect its operation. Understanding the operating environment can be acquired with network mapping. The network constraints and circumscribes the behavior of the company (as described in the list below). However, it also

offers opportunities by allowing access to the resources of the rest of the network. In any case, the company is part of a value network, and there are constraints and opportunities. The key issue is the way in which the company manages this balance (Easton, 1992, p.10).

Constraints of value networks:

- Position in the network is rather fixed (and determined by history) and it requires effort to change the position (Easton, 1992, p.10).
- Tight value network limits the behavior of the focal company and it is not easy to leave a network. (Easton, 1992, p.9).
- In loose networks exits and enters are frequent and it is possible that some companies do not perform activities that rest of the network expects them to do. (Easton, 1992, p.9).
- Companies will make conflicting demands towards the focal company, such demands must be reconciled or dealt with some fashion if a balanced position is to be maintained (Easton, 1992, p.10).
- There may be a single powerful organization that defines the characters of the network (Easton, 1992, p.9).
- People may pursue their personal goals instead of company goals inside the value networks (Håkansson and Snehota, 1995, p.32).

3.2.1 Creating a value network map

Network picture allows managers to build imaginary connections between events, objects, and situations in their business environments, so it becomes meaningful to them and their organizations. A network picture, therefore, covers potentially a wide range of the business network in which a focal company is embedded: direct and indirect customers and suppliers, competitors, influencing forces. The company should not only create a network picture but also pinpoint attractive network segments to be able to target scarce resources wisely (Hennerberg, Mouzas, and Naude, 2009, pp.91-113). In figure 2, below the basic idea of the business network with segmentation is shown.
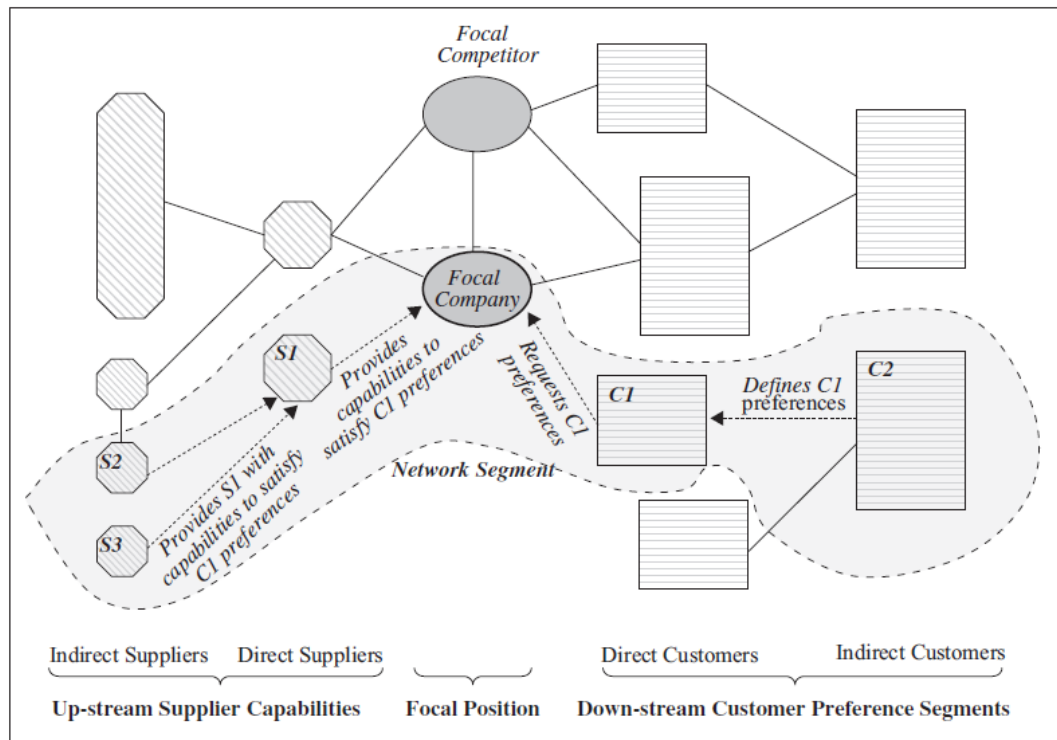
Figure 2. Schematic Representation of a Business Network Segmentation; dotted line delineates one possible network segment. (Henneberg, Mouzas, and Naude, 2009, p.97)

Also, Easton (1992, p.8) identifies this segmentation of the business networks, but he calls it "concentrations in the network" and regarding the network attributes he states that "nets may be characterized along different dimensions: product, geography, process, technology etc." Easton continues by mentioning that one can draw as large network picture as one wants to. Hence, the global industrial system can be considered as one giant and extremely complex network since there always exists some path of relationships that connect any two firms. Another author, Gummesson (2008, p.96) acknowledges the vastness of these networks by saying "every supplier has a relationship to customer's customer. It is there even if it is indirect and not recognized". Due to these reasons, it is essential to know when to stop drawing your network picture and furthermore to identify what to draw into it and how to segment it.

3.2.2 Layers in business relationships

There are different types of relationships from one company to another inside the network. In their paper, Håkansson and Snehota (1995, pp.24-49) identify three layers of the relationships.

1. Activity links – Thousands of activities are performed and coordinated within a company. When two companies build a relationship, a certain part of their technical, commercial or administrative activities can become linked to each other. "A business relationship grows as a flow of exchange episodes in which some of the activities are undertaken by either of the companies." (Håkansson and Snehota 1995, p.28). As shown earlier, all companies have relationships with several different companies; these relationships often include activity links. The activity links create a linkage where activities of a sub-supplier affect the supplier, which will affect the buying company, and which will, in turn, affect the activities of its customer. Håkansson and Snehota (1995, p.29) continue that these complex activity links are often difficult to map as the activity links are only known by those are directly involved. Due to this, a newcomer might face difficulties because newcomer must find out what this pattern looks like and what interdependencies exist between various activities.

2. Resource ties – a company has different resources (workforce, equipment, plant, knowledge, image and financial), in a relationship between two companies some of the resources needed for their activities can be accessed and acquired. Expectations to get access to other company's resources is common in business relationships. These resource ties can affect the whole business network segment and become a valuable asset or a burden, as many companies can have a connection (direct or indirect) to this same resource (Håkansson and Snehota 1995, pp.29-30)

3. Actor bonds – the relationship between two companies can have similar attributes as the relationship between two persons. Håkansson and Snehota (1995, p.31) note that "Bonds arise in a relationship between two companies as they direct a certain amount of attention and interest towards each other – they become mutually committed." These actor bonds affect what parties know about each other's and what they can exchange. Several individuals are often involved in carrying out these activities. Therefore, actor bonds have very personal touch in them. Actor bonds are built around commitment, identity, and trust.

The relationship layers are not as black and white as described above, Håkansson and Snehota (1995, p.33) emphasize that these three layers mix in business relationships - there is an interplay between the layers (actors carry out activities and activate resources) and strength/importance of one-layer changes over time. Often relationships are actor bonds and the purpose of the relationship can be "just to keep in touch" type,

but actor bond relationship can suddenly change to activity links or resource ties. For example, if one company needs access to other company's research facilities, resource ties are created. The possibilities of developing closer and economically more effective relationships (links, ties, and bonds) are large, but one needs to remember that all of these ties up resources of the focal company. Also, Easton (1992, p.8) recognizes the existence of these layers and social connections by stating "networks are socially constructed and there are likely to be disagreements among participants and multiple models of structure."

3.3   Industrial decision-making dynamics

In this chapter industrial decision-making dynamics is studied from organization buying process and organizational buying behavior perspectives. Business to business market segmentation can be done with the macro-segmentation approach (such as purchase volume, size, and location), but it has been proved that this is not enough. Micro-segmentation strategies (such as decision-making process, and buying behaviour) are needed to do better segmentation and customer analysis. Identification of the decision-making process can improve marketing decisions regarding pricing, product standardization, adherence to standards and end-user promotional efforts (Crittenden, Crittenden & Muzyka, 2002, pp. 5-17).

Organizational buying is a process, in the process are stages where decisions are made, and the purchasing organization requires information to be able to make these decisions. Hutt and Speh (2010, p.65) list eight stages of the buying process.

1. Problem recognition (from internal or external source)
2. General description of the need
3. Product specification
4. Supplier search
5. Acquisition and analysis of proposals
6. Supplier selection
7. Selection of order routine
8. Performance review

Each of these stages includes a mixture of people in the purchasing organizations in several different roles; this creates organization buying behavior, which is looked more closely in section 3.3.2 - organizational buying behavior.

Buying process varies a lot in different buying situations; it is important to notice is the buying task "new-task", "re-buy" or "modified re-buy". In new-task purchase buying organization faces the problem that this case is entirely different from previous experiences. Therefore, a significant amount of information for mapping the possible ways of solving the problem at hand is required. Straight re-buy is the most simple form of purchasing, it can be just a simple transfer of money for services/product, or it can include some small information sharing. Modified re-buy occurs when organizational decision-makers feel that they can reach benefits (for example quality increase or cost reduction) by reevaluating alternatives with limited problem-solving. (Hutt and Speh 2010, pp.67-69)

The organizational buying behavior includes four forces: environmental forces, organizational forces, group forces, and individual forces. In following chapters, these four forces are described in detail (see also figure 3 below). Knowledge of the organizational buying process and behavior is fundamental to responsive marketing strategy. When buying organization moves from problem recognition phase to supplier screening and selection, a marketer can play an active role and by knowing the forces behind this process, unique marketing response can be created. (Hutt & Speh, 2010, p.86)
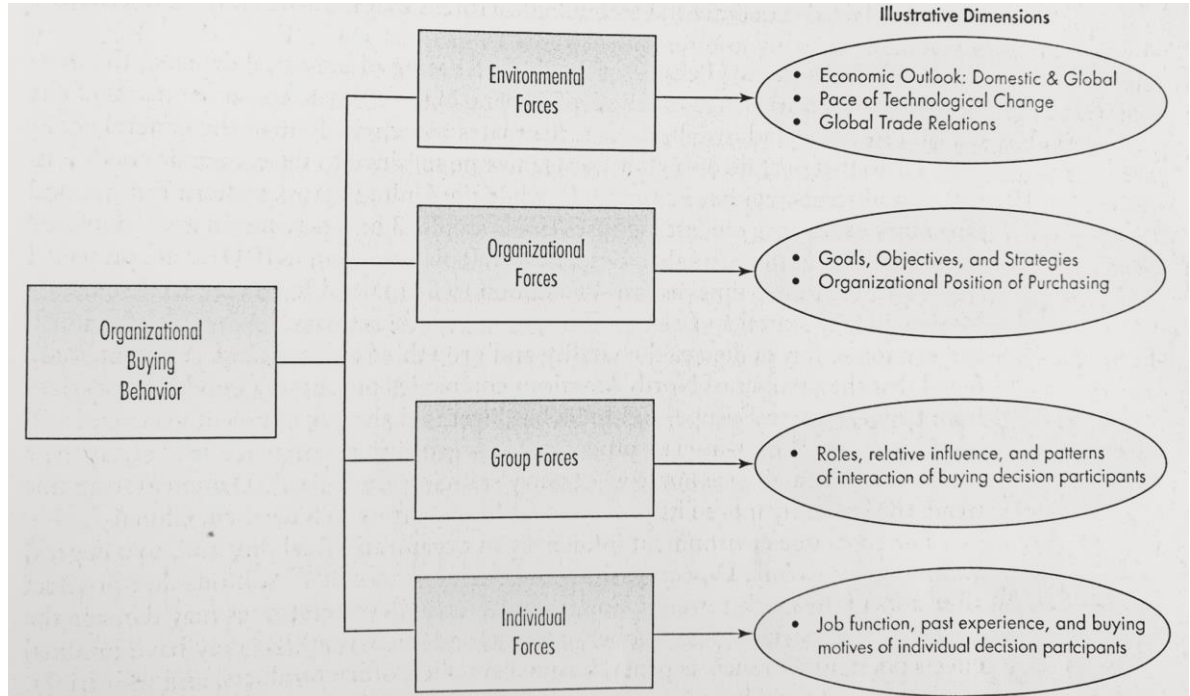
Figure 3. Forces Influencing Organizational Buying Behavior. (Hutt & Speh, 2010, p.71)

3.3.1 Environmental forces

Environmental forces alter the organizational buying plans and frame the nature of the buyer-seller relationship. Changing business conditions (for example the growth rate of the economy), political conditions, new legislation or technological development can change the organizations buying strategy (Hutt & Speh, 2010, pp.71-72).

"The economic environment influences organization's ability and, to a degree its willing-ness to buy" (Hutt & Speh, 2010, p.72)., therefore marketer must pay close attention to the economic and political environment of the market area in question. One must also remember that shifts in general economic conditions do not affect all sectors of the mar-ket evenly.

The pace of the technological change in the industry alters organizational buying plans, in industries where technological change is rapid the importance of the purchasing man-ager in the buying process declines. Technical and engineering personnel tend to be in a more significant role when the rate of technological change is fast. (Hutt & Speh, 2010, p.72-73). B2B marketer must also actively monitor the way buying organization seeks and uses information in the fast-changing environment that internet provides, more about this topic in chapter 3.5. - (End-user) marketing approaches.

3.3.2 Organizational forces

The organizational forces are the role of purchasing in the executive hierarchy, the firm's competitive challenges and and the firm's strategic priorities. In their book, Hutt and Speh (2010, p.73-74) identify four strategic priorities that vary from price driven to win-win economy creating strategies (see table 2 below). It is important that the marketer understands the strategy of the purchaser and align their own activities accordingly. Hutt and Speh (2010, p.74) continue that "leading-edge purchasing organizations have also learned that the "best value chain wins," so they are building closer relationships with a carefully chosen set of strategic suppliers and aligning the activities of the supply chain with customers' needs."

Table 2. Strategic priorities of purchasing (Hutt and Speh 2010, p.74)

Aligning Purchasing with Strategy: *Not Just Buyers*	Shift from an administrative role to a value-creating function that serves internal stakeholders and provides a competitive edge in the market.
Exploring New Value Frontiers: *It's Not Just about Price*	Focus on the capabilities of suppliers emphasizing business outcomes, the total cost of ownership, and the potential for long-term value creation.
Putting Suppliers Inside: The Best Value Chain Wins	Develop fewer and deeper relationships with strategic suppliers and involve them in decision-making processes, ranging from new product development to cost-reduction initiatives.
Pursuing Low-Cost Sources: *A World Worth Exploring*	Overcome hurdles imposed by geographical differences and seek out cost-effective suppliers around the globe.

When purchasing is moving from transaction-based support role and follows strategic decisions by the executive level, many firms centralize procurement functions. The marketer should acknowledge that is the buying organization centralized or decentralized to be able to map the decision-making process, isolate buying influentials, identify buying criteria and to create a targeted marketing strategy. (Hutt and Speh 2010, p.75)

To be able to recognize wether procurement is centralized or decentralized, Hutt and Speh (2010, p.75-76) identify four different factors that contribute for centralization of procurements:

1. With centralization, it is easier to execute company procurement strategy and measure performance of the unit.
2. Costs can be cut down if different offices or factories do purchases with common requirements.
3. If a company uses a few large suppliers centralized purchasing can become useful, if a company uses small local suppliers decentralized purchasing might achieve better results, especially support wise.
4. If engineering plays an active role in the buying process, purchasing functions must be in close organizational and physical proximity.

Hutt and Speh (2010, p.76) note that centralized units place more weight on long term strategic consideration (such as development of healthy supplier complex). Decentralized buyers may emphasize more tactical concerns such as short-term profit creation.

3.3.3 Group forces

B2B purchasing is a group activity, if the specific purchase is a routine rebuy a smaller part of the group is involved (Hutt and Speh, 2010, pp.82-83). If the purchase is complicated new-task buying a larger part of the group is involved and have an active role. Hutt and Speh (2010, p.77) continue that salesperson should seek an answer to three questions to be able to meet the needs of buying organization:

1. Which organizational members take part in the buying organization?
2. What is each member's relative influence in the decision?
3. What criteria are important to each member in evaluating prospective suppliers?

Hutt and Speh (2010, pp.79-80) divide buying process members to users, gatekeepers, influencers, deciders, and buyers. In table 3 below typical importance, role and timing of these members are presented. One must note that these specifications change from organization to another and purchase event to another and the key influencers are often not part of the official purchase department. Furthermore, depending on the organization, one person can assume many (or all) of the roles illustrated below.

Table 3. Buying process roles, descriptions, activities and active stages. Hutt and Speh (2010, pp.79-80)

Role	Description & Activities	Stages that is most active in
User	A person who uses the product in question. May have insignificant or extremely big influence to purchase decision, may even develop the product specifications.	Identification of need Establishment of objectives
Gate-keeper	Control information reviewed by other buying process members. May select which material is provided to whom and which salesperson is granted access and who not.	Identification of need Establishment of objectives Identification and evaluating of buying alternatives Selection of suppliers
Influencer	Engineers, quality control, R&D and other members of the technical department. Have a significant influence on the purchase decision by setting the technical parameters. Maybe outside consultant.	Establishment of objectives Identifying and evaluating buying alternatives
Decider	Makes the actual buying decision. Can be difficult to identify, maybe president of the firm or a design engineer who creates a specification that only one vendor can meet.	Actual purchase decision can be done at any stage, thus this might be difficult to identify
Buyer	Has formal authority to select a supplier and implement all procedures connected with the formal buying process. Can have only administrative role and other members of the buying process often seize the power of the buyer.	Selection of supplier

How to identify powerful members of the buying process? Hutt and Speh (2010, p.81)

- *Isolate the personal stakeholders.* Those individuals who have an important personal stake will play a more active role.
- *Follow the information flow.* Influential members are in the center of the information that surrounds the buying decision. Other members will direct information to them.
- *Identify the experts.* Those who possess the most knowledge and ask the most probing questions of the sales person are often influential.
- *Trace the connections to the top.* Powerful deciders often have direct access to the top management team.
- *Understand purchasing's role.* Purchasing is dominant in repetitive buying situations.

3.3.4   Individual forces

Individuals make the buying decision, not organizations. Each member of the buying organization has a unique personality, set of learned experiences, special organizational function, and perception of how to reach personal and organizational goals. These individuals look the purchase process from their personal view and the goals of the purchase process may conflict between these individuals. For example, users value prompt delivery and efficient service, engineers value quality, standardization and testing and purchasing values price. A marketer should be aware of these individual forces and create a responsive individual marketing strategy. Information processing capability should be taken into consideration, as volumes of information flow into every organization via various channels. Furthermore, a marketing presentation that is effective with purchasing may be completely on the wrong track with engineering (Hutt and Speh, 2010, pp.82-83)

Individuals information processing is cognitive action. Hutt and Speh (2018, p.83) list in their book four selective processes that affect how an individual responds to marketing. Key decision makers can "tune out" or immediately forget poorly planned messages and retain messages they deem important to achieving goals.

1. Selective exposure. Individuals tend to accept communication messages consistent with their existing attitudes and beliefs (for example, purchaser prefers to speak with one salesperson over another).

2. Selective attention. Individuals filter incoming stimuli and notice only certain ones. Trade advertisement that is consistent with persons needs and values passes thorough easier.

3. Selective perception. Individuals tend to interpret information regarding their existing attitudes and beliefs.

4. Selective retention. Individuals tend to recall only information relevant to their own needs and dispositions.

Risk reduction is an important purchase factor and individuals are driven by a desire to reduce risk in purchase decisions. Hutt and Speh (2018, pp.83-84) note that understandable risk is a combination of two components: "Uncertainty about the outcome of a decision and the magnitude of consequences from making wrong decision." In risky purchase decisions buying organization spreads higher in the hierarchy and wider in knowledge, more time is consumed by buying organizations and familiar suppliers are often used to reduce risk.

3.4 Understanding (end)user needs

This chapter gives answer to the question – how to achieve understanding of end-user needs? If one wants to achieve an understanding of what happens in a business network, one need's to examine both the marketing and purchasing side of the relationships (Ford, 2002, p.259). Stringfellow, Nie and Bowen (2004, p.45) state that, understanding customer needs and customer relationship management requires the alignment of three – building blocks: insight into customer decision-making, information about customers and information-processing capability (see figure 4 below).
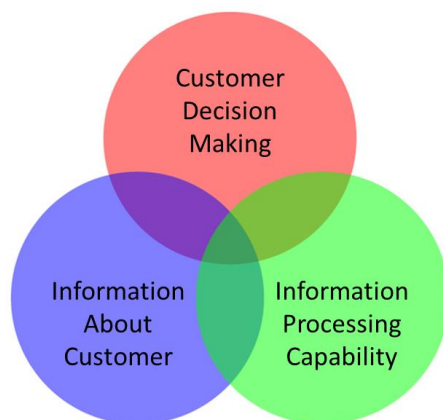
Figure 4. 3-building blocks of understanding customer needs and CRM. (Stringfellow, Nie, and Bowen, 2004, p.45)

Hutt and Speh (2010, pp.92-96) continue that: to be able to understand (end)user needs, one needs to understand the nature of the business relationship. In their book Hutt and Speh (2010, pp.92-96) describe this in following way: In the very basic level is a **transactional exchange** where money is exchanged for basic products with competitive price, in this type of relationship very little communication and information exchange between two parties happen. Contrary to transactional exchange is a **collaborative exchange**; this is a deep relationship where very close information, social, and multiple operational linkages are formed, with mutual commitments in expectations of long-run benefits. The collaborative exchange is typical for high-tech products and includes common problem-solving. Buying firms prefer collaborative relationship when alternatives are few, the market is dynamic, the complexity of the purchase is high, and purchase is essential and strategically significant. Between these two extremes is a **value-adding exchange** where the selling company's objective is to create an understanding of customer's needs. By tailoring the firm's offering to those needs, and providing incentives to keep the customers and to concentrate most of their purchases with the seller's company.

In this paper, collaborative exchange and value-adding exchange receives closer look, because Enviroburners Ltd operates in the high-tech industry. In this type of exchange, the relationship between 2 companies is formed.

It is important to understand that is company ready to form a relationship with the case company. The company can seek for a relationship consciously or unconsciously. Easton (1992, pp.4-6) mentions two main reasons for this seeking:

1. By knowing a partner firm better and appreciating what they can do and have to offer, it is possible for both to reduce costs and increase sales. Knowledge may be created by combining existing knowledge and skills that they both possess. Furthermore, relationships also provide continuity and stability with increased ability to plan, reduce costs and increase effectiveness.

2. Via partner firm, the focal firm can have wider network access. This access further reduces uncertainty and can grant entry to resources, knowledge, and information that otherwise would not be available. Alternatively, partners may be mobilized against third parties, i.e., competitive suppliers.

Buttle (2009, p.41) continues the same list by mentioning the following reasons:

- Product complexity
- Product strategic significance

- Service requirements
- Financial risks
- Reciprocity

Håkansson and Gadde (1992, pp.59-122) have a more economical approach to relationships between two firms: They have found out that large portion (as a rule more than half) of the firm's total turnover is channeled through them. They continue that the technological point of view is also critical, and relationships are central to allowing innovation. They continue by reminding that building a relationship is time-consuming and requires major investments, but at the same time, well-established supplier relations are one of the most important resources any firm has. Last, they state that relationships are built by human contacts and these contacts reach from company to another and therefore need to be seen as a network.

Furthermore, Buttle (2009, pp.42-43) lists several reasons why the B2B customer does not want to have a relationship with supplier:

- Fear of dependency: Customer may be concerned that the supplier is opportunistic and once they are in preferred position prices start to rise. There can also be fear of losing control and flexibility to choose alternative suppliers.
- Lack of perceived value in the relationship: Customer does not believe that the relationship can create savings, or that the relationship can create competitive advantage, generate additional revenue or that there will be any social benefits.
- Customer lacks relational orientation: In many cases, company culture does not support relationship building. The preference towards transactional operations may come for example from buying processes or reward systems.
- Rapid technology changes: In an industry where technological change is rapid, commitment to one supplier might mean that the company misses out new developments.
- Lack of confidence in the supplier: Customers may choose not to enter a relationship if they feel that potential partner is unreliable, too small, strategically insignificant, has a poor reputation or is not innovative enough.

Many types of researches and researchers emphasize that companies need trust in each other. Gummesson (2008, p 32) states that the success of the close collaboration between customer and supplier is often credit to trust and often we know only partially what we are buying, and we do it on trust. Hirvonen, Laukkanen, and Salo (2016, pp.475-482) highlight that B2B buyers often want to purchase from trusted brands that they have

previous experience with or have received positive feedback through their network. Brand and trust are especially important in difficult and complex purchases, for high-risk products and services; "brand names help to build trust toward the selling firm, which, in turn, plays a major role in ensuring customer relationship longevity" (Hirvonen, Laukkanen and Salo, 2016, p. 482).

It is difficult to state a single parameter that frames the need of an end-user because relationships and needs are fuzzy and vary from customer to customer. In some cases, it seems that the "need" is determined by power, where one powerful player in the network sets the needs of others. But power is not always present (Gummesson, 2008, p. 36).

3.5   (End-user) marketing approaches

In this section best practices of business-to-business marketing are reviewed via relationship marketing approach. From literature, three perspectives are researched: Marketing approaches, intercompany contact pattern (and owner of marketing), and means of contact. Furthermore, this section of the paper should not be reviewed alone, because it is in tight connection with networks (chapter 3.2), decision-making dynamics (chapter 3.3) and understanding user needs (chapter 3.4)

3.5.1   Marketing approaches for different customer types and market situations

The marketer must create targeted marketing for different customer types and market situations. Hutt and Speh (2010, pp.92-98) divide customers into collaborative and transactional customers (see chapter 3.4 of this paper). With **collaborative customers** strong and long-lasting relationship building strategies are appropriate, this means that company resources are invested to support the customer with planning directly. Due to this, sales and service persons do not work only with purchasing, but they have direct contacts through the customer's organization structures. This approach means that the company is close to the customer and must be ready to change their product/service to match customer needs. Because customer perceives significant risk (see chapter 3.4 of this paper), they get easily frightened, if the supplier does not show commitment and competence. Also, Gummesson (2008, pp. 30-21) points out the importance of long-term collaborative relationships, especially in situations with a high degree of collaboration

and low degree of competition. The marketer should seek cases where a degree of collaboration is little, and the degree of competition is low, these situations are a fruitful base for long-term collaborative relationships. **Transactional customers** need completely different relationships and marketing strategies, Hutt and Speh (2010, p.98) emphasize that these customers need an immediate and attractive combination of product, price and technical, as transactional customers tend to change from one supplier to another. Furthermore, the relationship is between buyer and seller, investments in building trust through contacts in several organizational levels are a waste of resources. In table 4 below different types of example situations are shown to support identification whether the customer needs a transactional exchange or collaborative exchange.

Table 4. The spectrum of a buyer-seller relationship, (Hutt and Speh, 2010, p.96)

	Transactional Exchange	Collaborative Exchange
Availability of alternatives	Many alternatives	Few Alternatives
Supply market dynamics	Stable	Volatile
Importance of purchase	Low	High
Complexity of purchase	Low	High
Information exchange	Low	High
Operational linkages	Limited	Extensive

To be able to target marketing, one must be able to understand purchasing (see chapter 3.4 of this paper). In his study Campbell (1985, p.43) divides different buying strategies to competitive buying, cooperative buying and command buying. This strategy varies as per different characteristics of product, industry, company, and individual. These identifiable characteristics often lead to a specific type of purchasing strategy. See appendix 1 for list of conditions favoring different buying strategies. After identifying purchasing strategy marketer can respond with marketing strategy (see table 7).

One must remember that buyers use more than one strategy in a given supply market. Usually, one strategy predominates, by identifying buying characteristics such as: number of the suppliers, desire for standardization or technical dependence on the supplier, the marketer can collect data to draw the conclusion that is the buyer strategy competitive or cooperative. In table 6 below Campbell (1985, p.45) has listed these buying characteristics and matched them to competitive and cooperative buying strategy.

Table 5. Buying characteristics and buying strategies (Campbell, 1985, p.45)

	Buying strategy	
Buying characteristics	**Competitive**	**Cooperative**
Number of suppliers	Many	Few
Proportion of purchases held by main suppliers	Low	High
Number of new suppliers taken on recently	Several	Few
Proportion of business given to new suppliers	Moderate	Low
Willingness to accept special adaptations	Unwilling	Willing
Desire for standardization of the product	High	Average
Technical dependence on suppliers	Low	High
Emphasis on buying	Price	Service, quality

After identifying the buyer's strategy with the help of appendix 1 and table 5 above, the marketer must respond with the correct marketing strategy. Competitive buyer requires fast-acting price sensitive strategy; the cooperative buyer seeks for a long-term relationship with co-creation, command buyer requires price negotiations and attention. As per table 6 below, Campbell (1985, pp. 45-46) proposes responses that marketer can use with existing and new customers in different situations.

Table 6. Marketing strategies to match different buying approaches (Campbell, 1985, p.45)

	Competitive buying	**Cooperative buying**	**Command buying**
Existing customers pricing	Match market pricing	Don't overcharge	Negotiate prices
Customer Service	Competitive but no frills	Nothing is too much trouble	At your service
Personal Contacts	Regular visits	Frequent, including courtesy visits from senior managers	Ensure that personal relationships are maintained
Product Development	Do what is required Beware of stealing of ideas	Grasp all opportunities to work with customer Stay ahead technically	Work as required by the customer
New customers	Offer comparable price, service and quality, and stress benefits of multiple sourcing	Where competition is established, offer a major advantage, e.g. by innovation, or wait until there is a lapse by current competitors Beware of being exploited by customer who has no intention of changing	Offer facilities to make whatever is required; propose trial order

In their book Hutt and Speh (2010, pp. 65-84) emphasize that one need's first to understand the purchasing organization and it's needs (see chapter 3.3 of this paper) and create a strategy for these situations, below are the top pics from their approaches:

- In new task purchase: participate in the early stage of the process, gather information on the problem, isolate specific requirements, offer a proposal to match these requirements. Marketers who are supplying other items to the organization are often preferred suppliers, the marketer needs to be ready to assist new-task buyers.

- Straight rebuy: Is a simple process and purchaser might not even contact supplier before purchase. Therefore, the marketer must raise the buyer's attention before purchase (see chapter. 3.5.2 of this paper). "In supplier" must reinforce the buyer-seller relationship, meet the buying organization's expectations and be responsive to changing needs. "Out supplier" needs an understanding of the buying organization. The marketer must convince buyers that their requirements have changed and should be interpreted differently, the objective is to revise the preferred list to include the new supplier (see also chapter. 3.3.2 of this paper).

- Modified rebuy: "In supplier" should try to understand and fulfill the needs to the procurement and move purchase to straight rebuy. "Out supplier" should try to keep the purchase in modified rebuy status so that buyer can examine alternative options. Furthermore, "out supplier" can offer performance guarantees.

- Offer strategic solutions: Understand customer's strategic goals in purchasing (see table 2 of this paper) and meet the demands of the purchaser's strategy. Develop strategic solutions (products, services, ideas) that advance these goals.

- Use key account managers to understand customer's needs and to respond to their centralized purchasing strategy and organization.

- Stimulate demand at the user level, by understanding the user (often operator or maintenance persons) needs. The marketer should assess the potential for conflict between central buyers and local users and create a strategy for resolving this conflict.

- Responsive marketing strategy: Be sensitive to evaluation criteria's and product perceptions of individual members of the purchasing team and create responsive marketing strategy on an individual level.

- Risk reduction strategy: Individuals have a strong desire to reduce risk in purchase decisions. In rebuys and modified rebuys risks are lower, and individual might make purchase decision alone. Higher risk modified rebuys, and new task purchases tend to create larger purchase teams.

3.5.2 Marketing by Key Account Manager (KAM)

In this chapter marketing by a Key Account Manager (KAM) is studied. The KAM's job includes many tasks; this chapter concentrates in the marketing aspect of the KAM's duties. As per Le Bon and Herman (2015, p.43), the need for the use of Key Account Management system comes from 2 conclusions:

1. "Some customers are more important than others."
2. "The supplier's organization must change to support and enhance these critical accounts."

Pre-assumption in this paper is that the scanning and decision of the key accounts are already made.

Marketing in the B2B networks is a complex task and requires deep understanding. Therefore, Le Bon & Herman (2015, p.116) name the KAM as "the owner of the customer relationship."

To be able to do targeted marketing the KAM must identify and understand:

- Value networks of the recovery boiler industry (see chapter 5.2 of this paper)
- (End-)customer decision-making dynamics (see chapter 5.3 of this paper)
- (End-)customer needs (see chapter 5.4 of this paper)
- Identify involved competitors and their power within the purchase organization, competitors' strategies and behavior, elaborate and verify a hypothesis about competitors (Le Bon and Herman, 2015, p.54)

Le Bon and Herman (2015, p.28) state in their book "The more a KAM knows about an account the more successful the KAM will be." With the information that the KAM possesses, the target is that customer sees Enviroburners as a company that is easy to do business with by creating innovative products and services that lead to Customer Lifetime Value (CLV) (Le Bon and Herman, 2015, pp.8-39). Monitoring the results of a KAM-system is essential, monitoring should be done with the use of a Customer Relationship Management (CRM) -software (Le Bon and Herman, 2015, pp.xvi)

3.5.3 Intercompany contact pattern

As realized previously in this paper, there are many things that the marketer must take into consideration when creating the marketing strategy to a specific customer. Furthermore, there are many possible approaches available to each situation. To make sense

to this hazy complicated situation, Cunningham and Homse (1986, pp. 7-8) propose the use of inter-organizational contact pattern. In inter-organizational contact pattern, each supplier employee is given dedicated counterpart in the customer's organization; this person contacts her/his equivalent person with predefined topics to be dealt with and with a predefined interval, data is recorded of these contacts for future use. Example of this inter-organizational contact pattern matrix can be seen in appendix 2.

In new relationships or "early stage relationships" distance from supplier to customer is rather long, and only sales will speak with purchasing. As Cunningham and Homse (1986, pp. 4-6) propose, the distance can be reduced in stages towards a multi-functional network of contacts (shortening the social-, technological-, cultural- and geographical distance). The second step is to create a series of contacts between personnel in different departments. In the third step, the contacts between senior managers of functional departments are formed. In the fourth step contacts between general management in the two companies are formed (see figure 5 below).
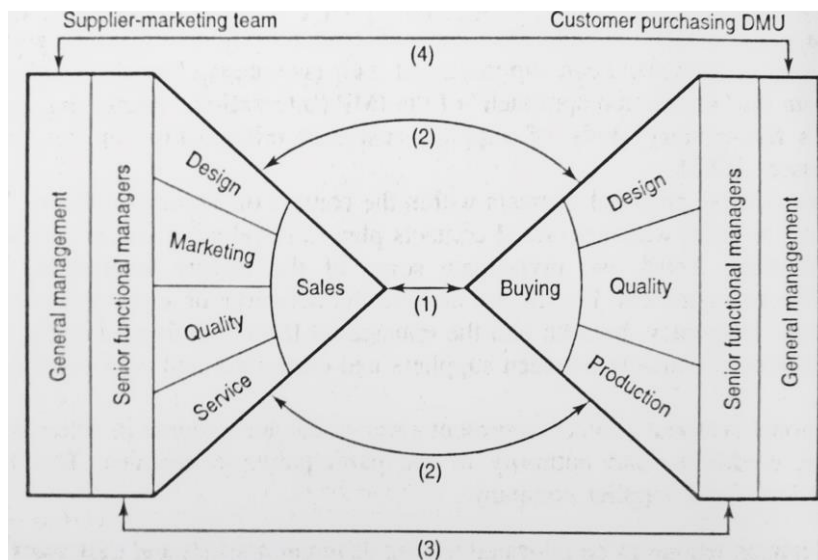
Figure 5. The interface between parties in supplier-customer relationships (Cunningham and Homse, 1986, p. 4)

In their book Hutt and Speh (2010, p.92) state that: "Business marketing is built upon effective relationship management". Furthermore, they emphasize that many of the most successful business marketing firms have special skills in managing relationships with key customers. The interface pattern presented in figure 5 above is one possible way of managing these relationships for achieving collaborative advantage.

3.5.4   Means and channels of contact

As stated earlier, collaborative personal relationships are important in the business to business marketing. These personal relationships need to be maintained via meetings, phone calls and personal e-mails. Digitalization is changing the ways contacting and Laine (2015, pp.9-104) has found four things that have changed in business to business relationships due to digitalization in recent years:

1. The customer has access to nearly unlimited amount of information via the internet, and they know much more about the product that they are about to purchase / that they need, than before digitalization. The customer has so much information available that often (even up to 60% of cases) the customer has already determined their need, challenges and product that suitable to them and in many cases even the supplier, before the first contact to the supplier.

2. Customers expect that they can familiarize themselves with the product/service independently. They want to be in contact with sales as late in the purchase process as possible. This leads to a situation where marketer must know in which channels customer (physical and digital) is active in and seeks for information. It is marketer's job to provide this information easily accessible. With modern digital analyzation, marketing, and data collection tools this can be done effectively, and marketing can be target and personalized to match the customer's needs. Many of the traditional sales and marketing processes can be automated with digital tools.

3. The form of trust has changed a little bit with digitalization. B2B customer trust formation is slowly transforming towards B2C customer trust formation, where recommendations by other users (or influencers) have a heavier weight. The recommendation can be physical or digital. Also, Hirvonen, Laukkanen, and Salo (2016, p.475) acknowledge the importance of trust and brand building by stating: "positive brand image and a strong reputation generate trust toward the supplier in the B2B markets, especially in high-risk purchases".

4. Due to the reasons mentioned above, predictive and proactive role in sales/marketing is in more important role in the digital era than earlier. The supplier in B2B business is a solution provider, who supports the customer through the whole customer journey and innovates with the customer to match the customer's specific needs.

3.6   Lifecycle approaches

The decision-making dynamics, network structure and end-user needs vary as per the lifecycle phase of a recovery boiler. Therefore, it is essential to understand the lifecycle of the recovery boiler to be able to target marketing. In this chapter lifecycle approach of a power plant (recovery boiler) is studied from literature.

Recovery boiler is one type of power plant. In their presentation material consulting company Black & Veatch (Esper, 2014), divide the power plant lifecycle into four main sections and several sub-sections (see figure 6, below):

1. Feasibility / initial engineering, where an initiative to build a power plant is made, and a preliminary study is created to realize the viability of the initiative.
2. Conceptual / definition engineering, where an initiative to built a boiler is taken forward to do preliminary engineering, scheduling, licensing, costing and purchasing.
3. Project execution, where the actual project starts, and the power plant is constructed and taken into operation.
4. Operations, where the power plant is taken into operation that can last for decades.
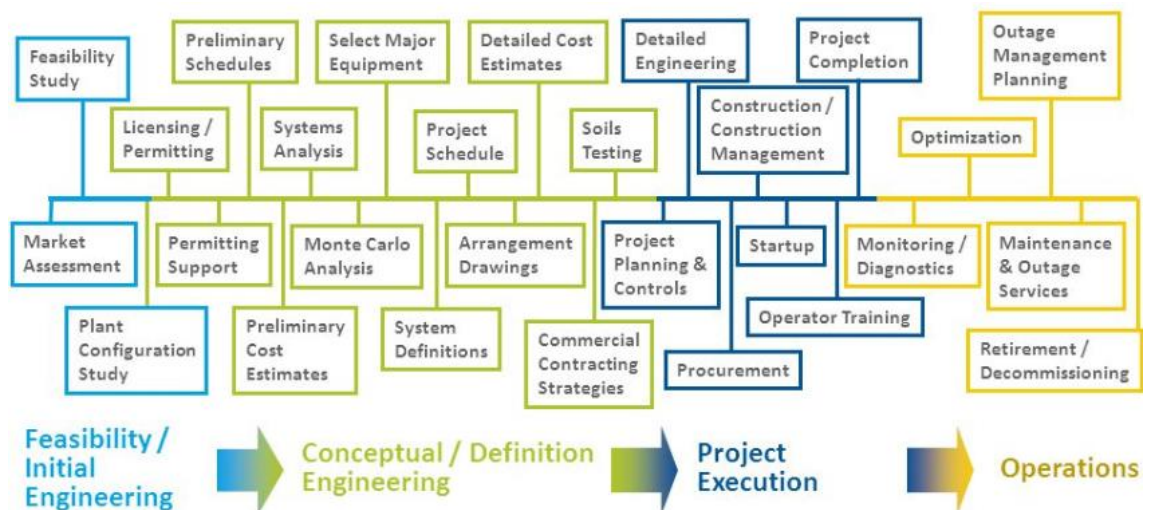
Figure 6. The entire lifecycle of a power plant (Esper, 2014).

The recovery boiler is part of a pulp mill, Lempiäinen (2007, pp.19-33) takes a closer look in his master's thesis into the operations part of pulp mills lifecycle. Operations part of a pulp mill can be divided into three sections (see figure 7 below). Pulp mill has its complete physical lifecycle, from the start of the operation until demolition. Inside this

complete lifecycle is technical lifecycle, which determines the interval of major renovations. Inside the technical lifecycle is operational maintenance lifecycle, where basic maintenance of machines/systems is completed. This basic maintenance is planned on the basis of Reliability Centred Maintenance (RCM) and preventive maintenance.
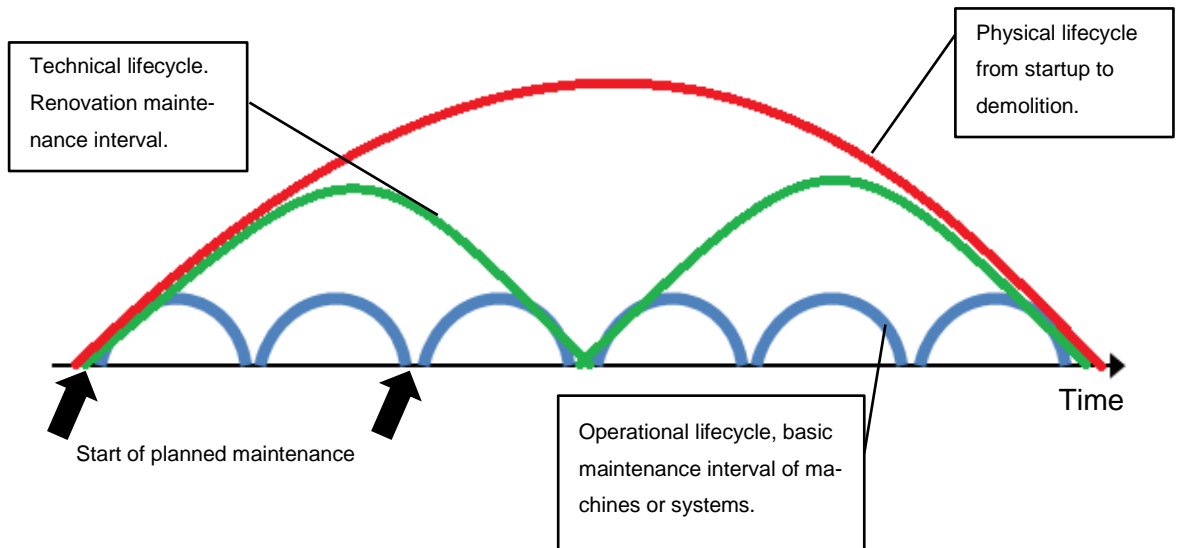
Figure 7. The lifecycle of a pulp mill. (Lempiäinen, 2007, p.33)

Lempiäinen (2007, pp. 22-24) describes the maintenance activities of "a green field" pulp mill in chronological order from the pre-start-up era until the demolition of the plant approximately 35-40 years later. He takes into consideration: spare part policy, preventive maintenance, daily maintenance, renovations, data collection, and cost policy. See table 7, below for detailed maintenance activities in each section of the operation lifecycle.

Table 7. "Greenfield" Pulp mill maintenance designing phases (Lempiäinen, 2007, pp. 22-24)

Years from start-up	Maintenance activities
-3…0	Description of maintenance and spare part policy. Creation of preventive maintenance plan. RCM analysis for each equipment. Development agreements with machine and system providers.
0…2	Implementation of maintenance plan. Collecting data. Learning period.
3…5	Update of the maintenance plan. Availability is in the center of maintenance. The cost structure of maintenance is analyzed. Learning and data collection continues. "Bottlenecks" of the plant are opened with investments.
6…12	Maintenance team plans larger maintenance and upgrade investments that will commence in the next period. Availability is kept on a high level. Maintenance shutdowns, if necessary.
13…16	Halfway of the plant physical life is approaching. Equipment is updated to match the latest technology (if necessary). The maintenance plan for remaining life of the plant is created. The spare part plan is updated because the availability of the spare parts can decrease due to the age of the plant and technology updates.
17…30	Availability is a top priority. Investments are kept on a low level and maintenance cost down.
30…35	The plant is preparing for shut down, cheap maintenance methods are used.

At the beginning of the lifecycle, there is a learning phase when the maintenance team is creating it's working culture and best practices. Data is collected to update the maintenance plan and spare parts policy in the future. When the desired standard for the daily maintenance is reached, it is time to implement the plan in its full volume. At this point, it is time to start planning larger investments and upgrades that will commence in the halfway of the mill's physical lifecycle. After these upgrades, the maintenance plan and spare part policy are updated, as the availability of some of the parts can decrease due to the age of the plant. At this time operational availability is the top priority. In the of the mill's physical lifecycle, cheap maintenance methods are used.

3.7 Conceptual framework

The conceptual framework of "End-User Marketing Concept" consists of six different building blocks: Value network mapping, Industrial Decision-Making Dynamics, Understanding (End)Customer Needs, (End)Customer Marketing Approaches, Lifecycle Approach and Key Account Manager approach (from a marketing standpoint), see figure 8 below. Under the figure 8 is written description of these building blocks.
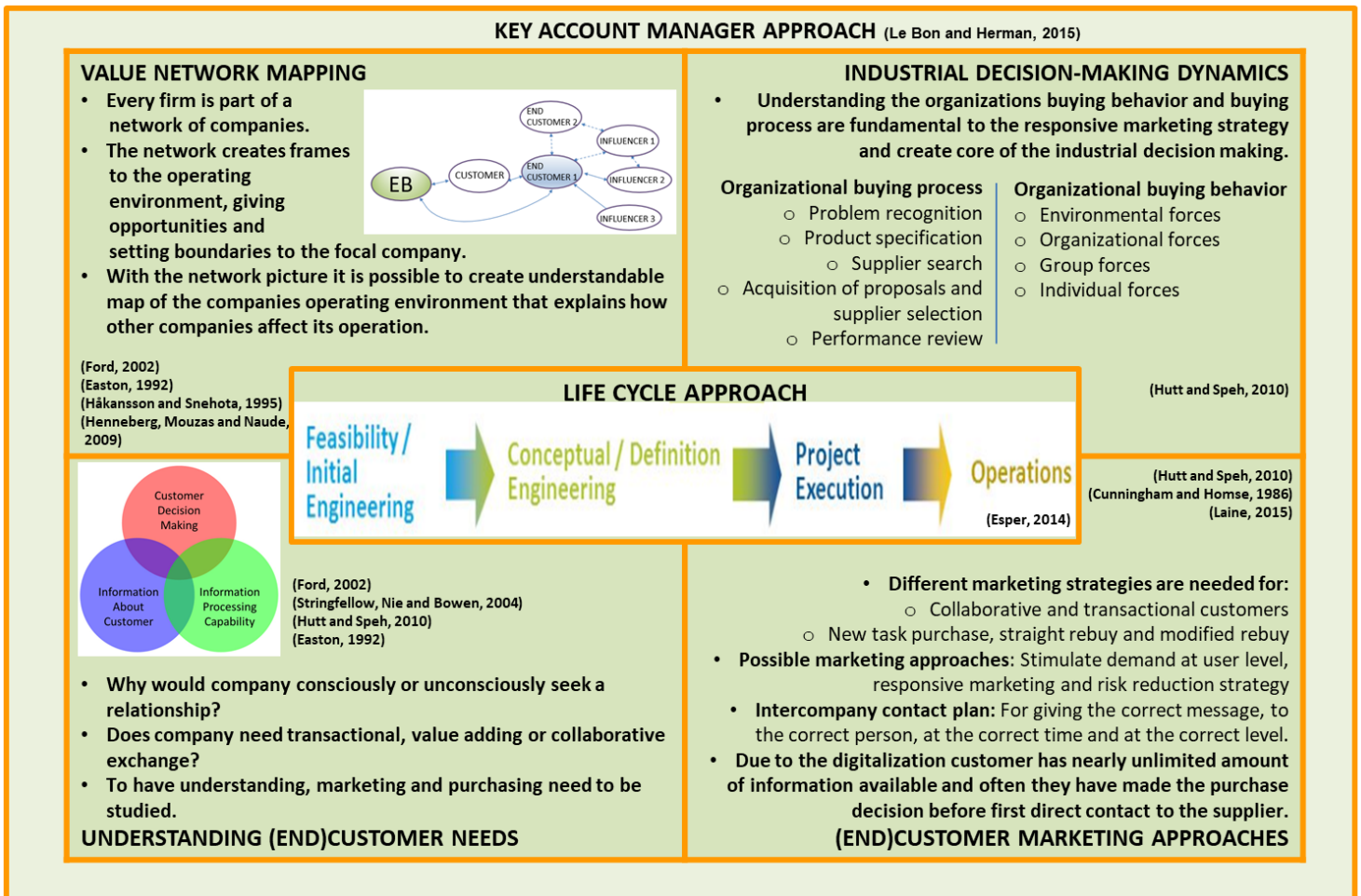
Figure 8. The conceptual framework of "End User Marketing Concept."

Value network mapping

To be able to understand what is going inside the company, one needs to understand the network of companies that the company is part of and the relationships in this network. Aqcuiring the understanding can be done by drawing a value network map. With the help of the map, the company can identify important companies & segments, spot different type of ties between 2 companies and look beyond supplier & customer. The operating network gives opportunities to the company, but also gives frames to the

operating environment and possibly ties the hands of the company. See more about this subject in chapter 3.2 of this paper.

Industrial decision-making dynamics

Industrial decision making consists of two different building blocks: Organizational buying process and organizational buying behavior. In mature organizations buying process is usually well standardized. The buying process varies as per purchase situation: New task purchase, modified rebuy, and rebuy have all different stages and different weight on these stages. Organizational buying behavior consists from four different variables: Environmental Forces where (global) trade situation changes, Organizational Forces where goals and strategies of the company affect the decisions, Group Forces where the formation of the purchasing team affects the purchase decision and Individual Forces where individuals own position has influence. See more about this subject in chapter 3.3 of this paper.

Understanding (end)customer needs

Some relationships require deep collaborative exchange and some relationships need a pure transactional exchange, the need of the customer varies a lot in these two extremities. One must also consider the information processing capability of the customer, the information about the customer and the customer decision-making to figure out the customer needs. In all situations' the customer needs trust when there is trust it is possible to build a deeper relationship with the customer that allows deeper understanding. But there are situations' when the customer does not want to create a relationship with the supplier. See more about this subject in chapter 3.4 of this paper.

(End)customer marketing approaches

When the three previous building blocks are in place, the marketer has means to create targeted marketing. To whom we market (inside the customer and in the value network)? What approach we use (example: responsive marketing or risk reduction)? Who delivers the message (intercompany contact pattern)? Which channels should we use to deliver this message? Digitalization has changed the game in recent years and the marketer must take this in to account. See more about this subject in chapter 3.5 of this paper.

Lifecycle approaches

The industrial plant has four different stages in its lifecycle: feasibility study, conceptual/detailed engineering, project execution, and operation. All these stages involve

different steps, different people, different needs and different interests of the people involved. The marketer must think in a lifecycle way to be able to create a long relationship that matches the requirements of these different lifecycle stages. See more about this subject in chapter 3.6 of this paper.

Key account manager approach

The marketing concept is a large entirety, and someone needs to own it. Otherwise, execution is difficult. One possible owner is Key Account Manager who operates in the networks, creates target marketing and distributes responsibility internally. With KAM-system the target is that (end)customer sees the case company as a company that is easy to do business with by creating innovative products and services that lead to Customer Lifetime Value (CLV). See more about this subject in chapter 3.5.2 of this paper.

4 Analysis of Enviroburners end-user context (with internal and external stakeholder theme interviews)

In this section of the paper analysis of Enviroburners end-user context is conducted with internal and external stakeholder theme interviews to form the necessary pre-understanding and basis for the marketing concept. Analysis of Enviroburners end-user context consists from internal key stakeholder expectations, description of recovery boilers lifecycle, description of end-users in question, analysis of end-user decision-making dynamics, and analysis of end-user needs.

4.1 Analysis of Enviroburners key internal stakeholder expectations

The key internal stake stakeholders are the sales & marketing director and the managing director of Enviroburners. In the interviews following topics were determined as the most important ones regarding this study:

- How to create "pull" from the end user?
- How to get company name to the approved suppliers' list?
- How to get information about the coming projects earlier?
- How to get involved in the project earlier and how to understand the need of the customer/project better, helping Enviroburners to create products and services that match the needs of the customer/project?

- How to get positive information regarding Enviroburners to flow up in the end-customers organization, because usually, only negative information flows up?
- Which Enviroburners employee contacts whom in the end user's organization?
- How to implement using of Key Account Managers and is it wise?
- How to prove the concrete benefits of "the end-user marketing concept"? For example, does it have proved a connection to the conversion rate or the sales margin?
- How to create an end-user marketing system that suits the size of Enviroburners?

Answering the above-listed questions separately is not possible, one must create a holistic approach to be able to answer these questions. What the key stakeholders and Enviroburners need and expect is a full end-user marketing concept (for recovery boilers Finland business area) that is fact-based and proved and shrunk to match the size of the company.

4.2   Description of a recovery boiler lifecycle

Recovery boiler is a power plant that is part of a pulp mill/paper mill; it is an essential part of the pulping processes chemical recovery system. In this chapter the lifecycle of a recovery boiler is conducted with key external stakeholder interviews. Interviews were held in: a supplier company, an equal (but not competitor) company, a customer, an end customer, and a partner company (see the position of each interviewed company in appendix 3). Methods of the qualitative interview were used, Qualitative Evaluation and Research Methods book by Michael Patton (1990, pp. 277-359) was used as the guide-line for the design and flow of the interviews.

As the base of the interview, timeline figures "the entire lifecycle of a power plant" and "lifecycle of a pulp mill" presented in chapter 3.6 of this paper were used. Interviewees opinions about the correctness of the timeliness and usability of the timelines in the Finnish recovery boiler context were researched with questions such as:

- What is your opinion about this timeline?
- Does it suit to recovery boilers Finland case context? (Why yes, why not?)
- Is there something that you would like to remove?
- Is there something that you would like to add?
- Is there something that you would like to change?
- How long is each of these time intervals?

As a result, all the interviewees agreed that the timelines are suitable for recovery boilers Finland case context, but at the same time, all the interviewees had some comments and something to change. Mainly comments and change proposals were connected to the "entire lifecycle of a power plant" timeline:

- The timeline was missing important milestones: "investment decision," "hand-over" and "modernization."

- "Select major equipment" task was renamed as "negotiate major equipment," major equipment in this context means the recovery boiler itself.

- It was noted that many of the tasks are not gates as one might think from the timeline, but they are sliding series of events and can take for an extended period of time. For example, "the negotiate major equipment" task starts at the point presented in the timeline and lasts through all the tasks in the timeline until "the investment decision" task, that is when negotiation with the boiler manufacturer ends and the contract is granted to one of the offerors.

- All the auxiliary equipment (where also burners belong in to) are negotiated by the boiler supplier. The time, the length and the place of this negotiation varies as per the uniqueness of the project. If the boiler supplier needs to make new task purchase, negotiations will start at the same time with "negotiate major equipment task," but if the boiler supplier makes a rebuy, negotiations start as late as in "procurement" task in the project phase.

- It was noted that the feasibility study/initial engineering phase is often secret and handled by a small group of people.

- There are two "cost estimate" tasks. In "the preliminary cost estimate" price is typically +-30% from the final price and in "the detailed cost estimate" price is typically +-10% of the final price.

Figure 9 below is the final recovery boiler lifecycle that has been conducted from the results of the interviews and best practice in chapter 3.6 of this paper.
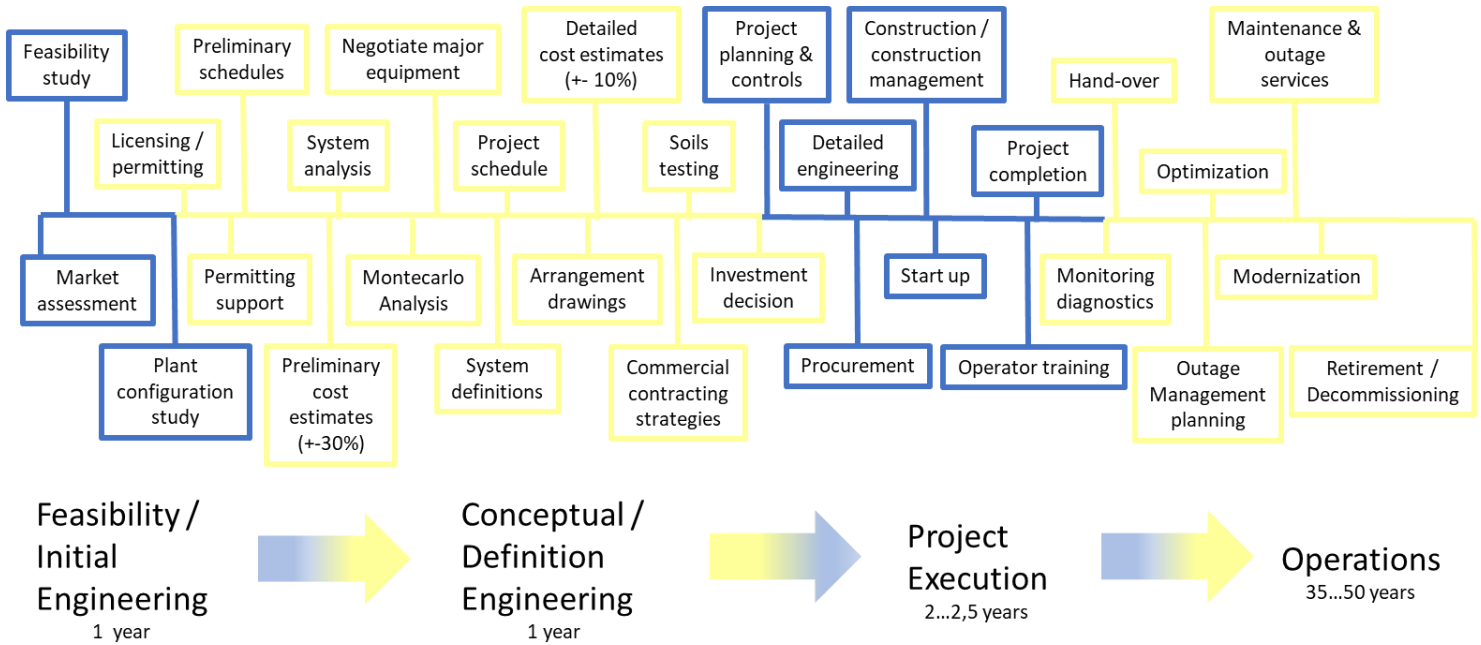
Figure 9. The entire lifecycle of a Finnish recovery boiler.

As can be seen in figure 9 above, operations period is long, varying from 35 to 50 years. Therefore, the operations period deserves a closer look. In the interviews, the second lifecycle as per chapter 3.6 of this paper was used to discuss the operations period more closely. Interviewees confirmed that this is the correct way of thinking the operations period of a recovery boiler. See figure 10 below, where technical, physical and operational lifecycles of recovery boiler are presented.
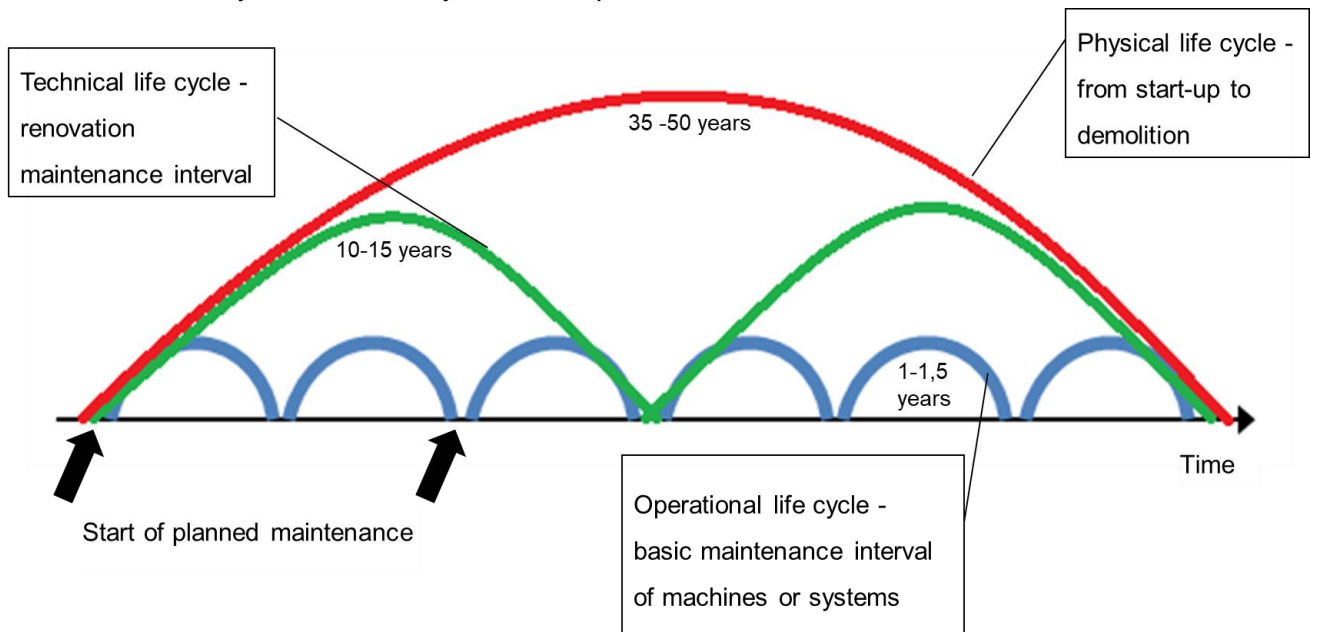
Figure 10. The operations lifecycle of a recovery boiler.

The interviewees made following notes regarding the operations lifecycle:

- The physical lifecycle of the whole plant from start-up to demolition is approximately 35 to 50 years. 35 years being a little bit too short and 50 years is a rare age for a recovery boiler.
- Technical lifecycle, meaning in this context for example bottom renewal of a recovery boiler can be predicted usually years before the end of the technical lifecycle with means of preventive maintenance. The technical lifecycle in this context is typically 10-15 years.
- The operational lifecycle is the basic maintenance, and this is completed in annual service shutdowns that take place typically every 1-1,5 years.

4.3 Description of end-users in question

The end-users in question are recovery boilers of pulp mills/paper mills that are in Finland. There are 17 operational recovery boilers in Finland; the average age is 29 years. Companies that have recovery boilers in operation in Finland are for example Stora Ensi Oyj, Metsä Fibre Oyj, UPM-Kymmene Oyj, and Kotkamills Oy. The recovery boilers of these companies are located in 15 different mills (Tikkanen, 2018, p.7). Recovery boilers are a combination of high-tech machinery and are in operation 24 hours in a day and seven days in a week, except for annual maintenance shutdowns and renovation shutdowns. The end-users inside the company can be divided into three groups: operators who are responsible for operating the machinery, maintenance who are responsible for the upkeep of the machinery and investment team which is responsible for new boiler projects and larger renovation projects. The investment team is not always located inside the specific mill. Depending on the size and type of the investment, the investment team can be located in the mill in question or the corporate office or the team can be a team of experts which is gathered from different mills for the purpose of the investment. In the operations stage of the lifecycle, every recovery has a boiler manager (required by law), this person is the most important decision-maker of the recovery boiler. There is always a user behind the end-user, but in the Enviroburners context the recovery boiler is the end-user and as per interview results one should not look further than this.

4.4   Analysis of the end-users decision-making dynamics

End-user decision-making dynamics was mapped with key external stakeholder interviews. Interviews were held in: a supplier company, an equal (but not competitor) company, a customer, an end customer, and a partner company (see the position of each interviewed company in appendix 3). Methods of the qualitative interview were used, Qualitative Evaluation and Research Methods book by Michael Patton (1990, pp. 277-359) was used as the guideline for the design and flow of the interviews. The interview was divided into two sections:

- In the first section, decision-making dynamics in the feasibility study/initial engineering, the conceptual engineering/definition engineering and the project execution phase of the recovery boiler lifecycle were researched.
- In the second section, the operations phase of the recovery boiler was researched.

These two sections are analyzed in the coming chapters 4.4.1 and 4.4.2.

4.4.1   Decision-making in the pre-operation period of recovery boiler lifecycle

The feasibility/initial engineering phase of the recovery boiler lifecycle is often fully confidential, and only a small team inside the end-user in question knows about the project. The team can be a small team from the head office of the end-user, or it can be gathered from a group of experts from several different mills. The formation of the team varies from end-user to another and from case to another and the identification of the formation (or even the existence) of the team can be really difficult. Therefore, identification of the decision-making dynamics of the team can be nearly impossible. In this phase the end-user involves to the project a trusted consulting company (for example Pöyry or Sweco), the consulting company makes different types of feasibility calculations and recommendations to support the decision-making of the end-user. The end-user can use the publications of the Finnish Recovery Boiler Committee as a source of information at this stage. One way of getting an early hunch of a recovery boiler project that is in the feasibility study phase is to follow theses made for that specific company (a Finnish thesis is a public work and cannot be classified). Purchasing new recovery boiler is a unique action, but because the purchasing team and consulting company have previous knowledge of feasibility studies/initial engineering of a new recovery boiler the action can be determined as a modified re-buy. See figure 11, below for an illustration of the decision-making in this stage.

The conceptual/definition engineering phase is more visible than the feasibility phase; the end-user usually launches a press release about the commencing project. If a press release is not made, alternative route how to get to know about the project is by word-of-mouth inside the business network. The end-user's project team is now extended and there is no single formula for understanding the formation of end-user's purchasing team, it varies from case-to-case. Usually, the end-user has a project manager, behind the project manager is the commercial and the technical unit. Role of the consulting company starts to diminish as the project proceeds, because consulting company usually concentrates on larger entireties and when the project proceeds discussion goes more into detail. In many cases, end-user clearly states the organizational forces (such as goals, objectives, and strategies), but in some cases, the marketer has to dig this information up. Group forces (such as relative influence and role of a person to the decision-making) inside the end-user are not published and it is up to marketer's expertise to understand these forces. As a rule of a thumb, if there is an identifiable future boiler manager, this person usually is important influencer at this stage. Furthermore, individual forces (such as past experience and buying motives) of the participants of the decision-making team must be identified by the marketer. The boiler manufacturer starts to play a major role in the decision-making when "negotiate major equipment" phase starts, because end-users give decision-making responsibility, trust the expertise and listen to the recommendations of the boiler manufacturer. Main ways to influence the boiler manufacturer at this stage is by doing co-operation with the technical team and co-creating solutions to their need. See figure 11, below for an illustration of the decision-making in this stage.

Feasibility study

Preliminary schedules

Negotiate major equipment

Detailed cost estimates (+- 10%)

Project planning & controls

Construction / construction management

Hand-over

Licensing / permitting

System analysis

Project schedule

Soils testing

Detailed engineering

Project completion

Market assessment

Permitting support

Montecarlo Analysis

Arrangement drawings

Investment decision

Start up

Monitoring diagnostics

Plant configuration study

Preliminary cost estimates (+-30%)

System definitions

Commercial contracting strategies

Procurement

Operator training

Power players in each stage (from Enviroburners context)

End user

Consultant

Boiler manufacturer

Feasibility / Initial Engineering
1 year

Conceptual / Definition Engineering
1 year

Project Execution
2…2,5 years
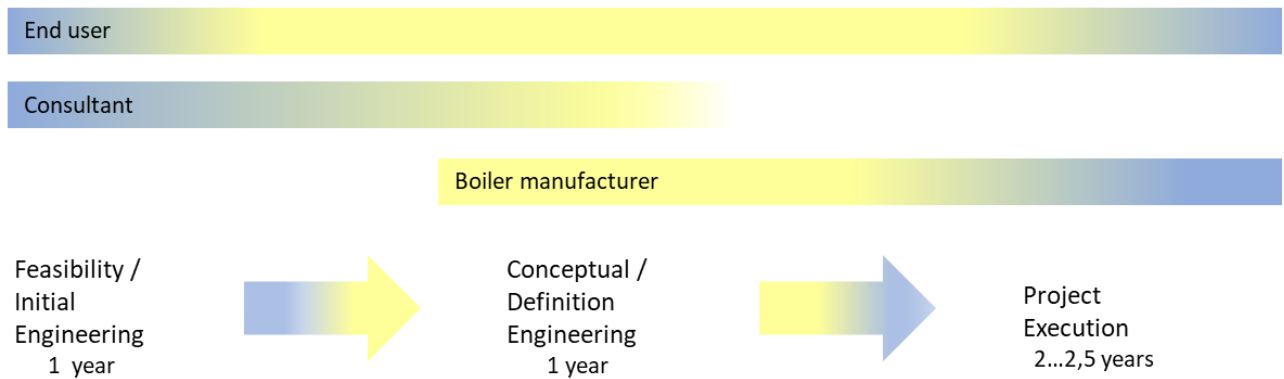
Figure 11. Timeline from feasibility study to hand-over, with power players.

In the project execution phase, much of the decision-making has been handed over to the boiler manufacturer, which is selected at the investment decision stage. The contract between the boiler manufacturer and the end-user creates the frame where the boiler manufacturer operates in. The burners are inside this frame; therefore from Enviroburners point of view, the boiler manufacturer is the power player in this stage. At the procurement stage, burner supplier is decided. If the contract is awarded to Enviroburners, it is important to keep a good relationship with the end-user to create the basis for co-operation after the hand-over. From procurement to hand-over the burner manufacturer is typically not allowed to have direct contact with the end-user. See figure 11, above for an illustration of the decision-making in this stage.

4.4.2   Decision-making in the operation period of recovery boiler lifecycle

In the operation period, the boiler manager is the key decision-maker through the whole operation phase of the boiler; this comes from the manager's position in the company and the legal obligations that the law sets to the boiler manager. The decision-making in the operations period can be divided into two sections: first is the daily operations and "annual maintenance shut-downs" and second is the renovation interval of the equipment. These two sections are studied in the following paragraphs.

In the daily operations and annual maintenance shut-downs, the corporate office sets the operation frame from a financial and corporate strategy point of view in co-operation with the mill. Inside this frame, the mill can operate rather freely and make independent decisions. Typically, the boiler manager makes the decisions in co-operation with the operations engineer, the closest maintenance team and the purchasing team. The closest maintenance team usually consists of the maintenance manager and maintenance engineers (mechanical and automation). The maintenance team is often a part of a separate maintenance company; this division sometimes creates conflicts of interest as the boiler manager tries to maximize the production in a safe manner and the maintenance team tries to keep the machinery running with as low maintenance costs as possible. This type of conflicts of interests can affect the group forces and decision-making dynamics. Furthermore, the experiences from the operators and the mechanics affect greatly in the decision making of their managers. Consequently, the boiler manager seeks support for his/her decision from equals, this support can be found from other mills of the company or the networks in the Finnish Recovery Boiler committee. The final word is at purchasing, which is interested in the commercial terms and the price. It is the marketers' job to identify the organizational forces, group forces and individual forces by conversations with the end-user, this information is not usually available in the public channels.

In the renovations, the decision-making differs slightly from the day-to-day operation decision-making. In this context, the renovation means for example the bottom renewal of the recovery boiler, when also burners are renewed, and possible power upgrades or fuel changes are made (modernization). These are expensive investments that are known many years before the actual incident. The bottom renewal takes place typically approximately every 15…25 years. Therefore, the decisions made at this stage will affect many years in the future. These reasons lead to larger decision-making team that goes

beyond the personnel in the factory; the team often includes people from the corporate office or experts from the other mills of the same company. Furthermore, the use of consultants is more common in the renewals than in the day-to-day operations. These renewals are usually too large to be handled alone by the mill. Therefore, the renewal is usually bought from a contractor company as a turnkey delivery. This change brings another decision-maker to the table – the boiler service company. Consequently, the decision-making in a renovation is a mixture of day-to-day operations and pre-operations decision-making (see chapter. 4.4.1). Again, single formula for identifying the decision-making dynamics of a renovation cannot be created, they change from case to case and it is the marketer's job to identify the dynamics in the specific situation.

4.5   Analysis of the end-users needs

In short: The end-users need reasonably priced burners that work when they are needed and fast & reliable service when necessary. But to reach this point, the end-users need many things on the way. The methods vary from corporation to another and from the mill to another. In this chapter, the path how the ultimate need is reached is analyzed. The end-user is not always able to describe their actual need in different lifecycle phases of the recovery boiler clearly. Therefore, to create holistic understanding 7 interviews were held: a supplier company (1 interview), an equal (but not competitor) company (1 interview), a customer (1 interview), an end customer (3 interviews) and a partner company (1 interview) (see position of each interviewed company in the appendix 3). Methods of the qualitative interview were used, Qualitative Evaluation and Research Methods book by Michael Patton (1990, pp. 277-359) was used as the guideline for the design and flow of the interviews. In the following three chapters, the end-user needs are analyzed through the lifecycle of a recovery boiler from Enviroburners case context.

4.5.1   End-users needs from feasibility study to project execution

In the feasibility engineering phase, the end-user needs permitting support (towards the authorities), especially regarding the emissions to the air. This need continues to be important also in the definition engineering phase. Rarely, the end-user needs to contact Enviroburners directly regarding the emissions of the burners, this information goes via a consulting company in the feasibility engineering phase and via boiler manufacturer in the definition engineering phase.

The biggest thing that end-user needs in this phase is trust, as they do not yet have physical evidence of the to-be-built recovery boilers process, technical, commercial and service capabilities. The main way of building trust is previous references. The end-user evaluates the previous references of the potential burner supplier from the process, technical and service point of view. The burners need to fulfill the process and technical requirements and reach the availability targets. The willingness to serve, professionalism of the service and availability of the service is estimated, this creates the basis of the future relationship. Furthermore, the end-user evaluates the spare part intensity of the equipment through the whole lifecycle of the plant and compares the need of separate spare part items to their current spare parts stock. Therefore, end-user needs spare parts list with prices to support their decision-making. In the pre-engineering phase, the end-user evaluates the skill level of their operators and maintenance personnel. From this information the end-user deduces that do they need to train their employees or hire more people to be able to operate the selected equipment in the operation period of the recovery boilers lifecycle. From these building blocks, the end-user creates a list of approved suppliers, which is handed to the boiler manufacturer as a frame for the contract, sometimes consulting company (example Pöyry or Sweco) creates this list in co-operation with end-user. Of course, the end-user needs the price of the equipment, but end-user rarely sees the price of the burner system in new boiler projects. It is included to the lump sum price of the whole recovery boiler system and the burner price is subject of negotiations between the boiler manufacturer and Enviroburners.

The end-users have started to use a Life Cycle Cost (LCC) assessment to estimate the total costs through the whole lifecycle of the specific equipment. The LCC calculation is a complex calculation and the calculation models are evolving, it is expected that end-users will continue to develop and increase the use of the LCC assessments. Therefore, the amount of information needed from Enviroburners is expected to rise in the future years. The LCC assessment includes elements that are mentioned in the chapter above, but this paper does not state or conclude in detail what kind of information each corporation or mill uses in their LCC assessment and therefore further research is needed.

Depending on the size, strategy, and formation of the end-user's project team the end-user might need several types of information during the definition engineering and project phase of the recovery boiler's lifecycle. This, mainly technical information consists of flow diagrams, process warranties, standards, and material selections. If the end-user's

project team includes employees from an existing mill, then the information needed often goes to a very detailed level and can include small components and operation principles of a small component. When the project continues the end-user needs support and co-creation for planning and preparing of the future services of the recovery boiler. This is the area where many projects fail because the project team and the future service team (in end-user's, boiler manufacturer's and supplier's organizations) tend to look things from their silos and try to reach only the targets that are set to their team. Therefore, what the end-user needs is a co-creator who operates as "a bridge builder" or "a silo breaker" between the project and the service organizations.

4.5.2   End-users needs during the operation period of the boiler

During the operation period, the end-user needs burners that work when they are needed. The burners are critical to the boiler operation and are idle ~90% of the time (depending on the burner type). When the burners are needed, they need to be safe and easy to use and reliable. To reach this target, the mill needs partners because the mills do not have all the knowledge or workforce available internally (the amount of outsourcing varies as per corporate strategy). The mill personnel select this partner in-house and don't use consultants as advisors. But they seek for reference information from other mills and in the business networks (especially inside the recovery boiler committee). The partner that they need must provide full service from day-to-day operations, to spare parts, burning process understanding, co-creation for problem-solving and maintenance. The mill personnel cannot contact several different people in the partner's organization. Therefore, the mill needs a single point of contact who is willing and capable of serving the mill in all different occasions. This person must show full commitment towards the mill and not only meet the managers. Visits to the boiler building are needed for process knowledge and fuller understanding of the needs of the operators and maintenance personnel.

During the annual maintenance shutdown, the burners require maintenance. The mill personnel does not have time to do this. Therefore, this service is bought from the selected partner. The mill needs co-operational planning of the works that need to be done during the shutdown. During the shutdown, the purchased service person needs to be self-directed because the mill managers do not have time to give guidance during the shutdown. Some corporates wish to sign a service agreement with the partner and some purchase service when needed; this varies as per the mill and the corporate strategy and

capabilities of the mill and the partner. All this needs to be provided with a price that creates longevity to the relationship, without feeling that the end-user is being overcharged (cooperative buying).

4.5.3 End-users needs during the renovation of the boiler/burner system

The burners might face renewal/renovation from several different reasons. Typically, the burners are at the end of their technical lifecycle, there is a larger renovation in the boiler (example bottom renewal), the fuel source is changed, or the emission regulations change. The end-user needs vary as per the scope of the job, in a large-scale job (bottom renewal) the end-user needs consultants and boiler service companies, in a smaller job (burner renewal) end-user does not typically need consultants or boiler service companies. In both cases, the end-user needs reliable burner company that knows the specific conditions of the mill. Therefore, the end-user has the same needs in this phase as is in the operation phase, most important of them is again trust (see chapter 4.5.2 of this paper). These purchases are complex, the planning often starts two years before the execution, and the end-user cannot know all the details of the delivery. Therefore, they need co-created turnkey deliveries. The end-user needs a partner who does not only sell a project but can look further into the future when the warranty period of the burner system has ended. The relationship in these situations includes co-creation of the new maintenance plan & spare part plan and implementation of these plans with tailored services for the operation period in the future. All this is bind together by the end-user's purchase organization. The end-user needs to use competitive or cooperative purchase strategy, depending on the scope of the job and the market situation.

4.6 Summary of the analysis of the end-user context

In this section of this paper, necessary pre-understanding of the Enviroburners end-user context was acquired with internal and external (key)stakeholder interviews. There was in total two internal key stakeholder interviews and seven external key stakeholder interviews. (see the position of each interviewed company in appendix 3). The interview results were analyzed and combined to form five independent entireties: Analysis of Enviroburners key stakeholder expectations, description of a recovery boiler lifecycle, description of the end-users in question, analysis of the end-users decision-making

dynamics and analysis of the end-users needs. In the following paragraphs these topics are summarized.

Analysis of Enviroburners key internal stakeholder expectations

The biggest expectation regarding the outcome of this paper is "how to create "pull" from the end-user?", Meaning, how Enviroburners can influence the end-user in such a way that direct customer sees Enviroburners in the more positive light. Furthermore, the key internal stakeholders expect to receive detailed marketing system that fulfills this ultimate goal, is proved to be working and is tailored for Enviroburners.

Description of a recovery boiler lifecycle

The recovery boiler's lifecycle consists of four phases.

1. Feasibility/initial engineering. Typically, this phase lasts approximately one year and is classified. Main tasks in this phase are a feasibility study, market assessment, and plant configuration study.

2. Conceptual/definition engineering. In this phase, the initiative to build a recovery boiler is made public. The phase starts with licensing & permitting, which is followed by preliminary costing, schedules, and engineering. At the end of this phase is an investment decision gate, where the final go/no-go decision is made, and the recovery boiler supplier is selected. This phase lasts approximately one year.

3. Project execution. This phase lasts approximately from 2 to 2,5 years and starts with project planning & detailed engineering, which is followed by the procurement. After procurement the recovery boiler is constructed ready and then the boiler is started up.

4. Operations. The operations period is the longest one and lasts from 35 to 50 years. At the beginning of the operations is starting up and optimization period, where the new recovery boiler is trimmed to its nominal production value. Then starts the phase of normal operation where day-to-day and annual maintenance is carried out to keep the recovery boiler running. Depending on the boiler, there is usually a larger renovation of the boiler 15-25 years after the start-up.

Description of end-users in question

The end-users in question are the recovery boilers of pulp/paper mills that are in Finland. There are 17 operational recovery boilers in Finland; the average age is 29 years. Companies that have recovery boilers in operation in Finland are for example: Stora Ensi Oyj,

Metsä Fibre Oyj, UPM-Kymmene Oyj, and Kotkamills Oy. Recovery boilers are combination of high-tech machinery and are in operation 24 hours in a day and 7 days in a week, except for annual maintenance shutdowns and renovation shutdowns. The end-users inside the company can be divided into three groups: operation, maintenance and investment team. In the operations stage of the lifecycle, every recovery boiler has a boiler manager (required by law), this person is the most important decision-maker almost through the whole lifecycle of the recovery boiler.

Analysis of the end-users decision-making dynamics

The decision-making dynamics of the end-user can be divided into two different time periods: the pre-operation period and the operation period.

- At the beginning of the pre-operation period, the end-user's decision-making team is small, confidential and combined from the recovery boiler top experts of the corporation in question. At this stage, there is a trusted consultant involved. The end-user and consultant are the power players in this phase. After this stage starts the public conceptual/definition engineering phase, where the end-user's decision-making team is extended. There is no single formula for understanding the formation of the team and it varies from case-to-case. In many cases, the end-user clearly states the organizational forces (such as goals, objectives, and strategies). But in some cases, this is not published and the marketer must dig this information up. The group forces and the individual forces are not published (or known) by the end-user and it is up to marketer's expertise to understand these forces. At the end of this phase, the power of the consultant starts to diminish, and the boiler manufacturer becomes the new power player. At the beginning of the project execution phase, the decision-making is handed over to the boiler manufacturer, therefore from the Enviroburners context the boiler manufacturer is now the power player. At the end of the project phase, the end-user starts to play an increasingly larger role again, being the power-player for rest of the recovery boilers lifecycle.

- In the operations period, the boiler manager is the key decision-maker in co-operation with the maintenance manager. The corporate office sets the frame for the operation. Inside this frame, the local recovery boiler team has relatively free hands for doing strategies, plans, and decisions for day-to-day operations and annual maintenance. The organizational, group and individual forces vary from case-to-case and it is marketer's job to identify these forces. The boiler manager

often seeks support from other mills and other recovery boiler managers. For more extensive renovations, the decision-making team is again expanded

Analysis of the end-users needs

The end-user needs trust that your company does what has been agreed. Furthermore, they need reasonably priced products that do what they have been promised to do. To reach this point the end-user needs many things on the way:

- At the beginning of the recovery boiler's lifecycle, the end-user needs support for their engineering, process and financial investigations. This support usually goes via the consultant or the boiler manufacturing company.

- Later, right before the project stage, the end-user needs to see operating references and proves of the services that the supplier can provide after the start-up.

- End-user does Life Cycle Cost (LCC) analysis before the purchase; therefore, the end-user needs data that enables their calculations.

- At the end of the project phase / at the beginning of operations phase the end-user needs co-creation for future services that they need for the upkeep of the equipment.

- During the operation period, the mill needs partners for maintenance services and process consultation. The boiler manager needs to "borrow your brain" for co-creation and solving the problems in hand. Some of the end-user companies wish to do more in-house and some need to outsource more.

- During the renovation, the end-user needs trust-worthy partners who can provide turn-key solutions.

5   Developing an end-user marketing concept proposal for Enviroburners together with internal stakeholders

5.1   Overview of this stage

In this chapter initial proposal for an end-user marketing concept is developed. The initial proposal is based on the best practise (see chapter 3) and analysis of the end-user context (see chapter 4). Developing was done with internal stakeholder workshop and key internal stakeholder interviews.

Employees from service, manufacturing, project, process, engineering, sales & marketing and management department were invited to the workshop. The target was to involve employee from every department, for co-creation and to get as wide perspective as possible. The same workshop was used to find ways to map networks (see chapter 5.2 of this paper) and to understand end-user needs (see chapter 5.4 of this paper).

Internal key stakeholder interviews were used to develop the findings of the workshop further and to customize the decision-making dynamics analysis tool and the lifecycle synchronized marketing toolkit for Enviroburners. Methods of the qualitative interview were used, Qualitative Evaluation and Research Methods book by Michael Patton (1990, pp. 277-359) was used as the guideline for the design and flow of the interviews. Additionally, to validate and to further develop some of the key concepts found in the workshop external stakeholders were interviewed.

The first three chapters (5.2-5.4) develop data acquiring and analyzing tools regarding the networks and end-user. The latter two chapters (5.5 and 5.6) take the collected data into use and develop tools for marketing purposes.

5.2   Customizing a network mapping approach for Enviroburners

Customizing the network mapping approach consisted of four steps: preparing the workshop, the workshop, the key internal and external stakeholder interviews. The goal was to create mapping approach that could be used for any business area that Enviroburners operates in, for clarity and for further use in this research Recovery Boilers Finland business area was used as a reference case.

5.2.1   Step 1 – Preparing the workshop

Preliminary network map was created before the workshop by the keeper of the workshop as per the best practice presented in chapter 2.2 of this paper, see figure 12 below for illustration. The preliminary network map was intentionally left incomplete: some stakeholder companies were not presented at all, and some connection arrows were not shown. This was done to have an easy start for the workshop and to get the conversation & co-creation good kick-off. Preliminary network map consisted of five different stakeholder company layers: Suppliers, EB (Enviroburners) + Competitors, Customers, End customers, and External influencers.
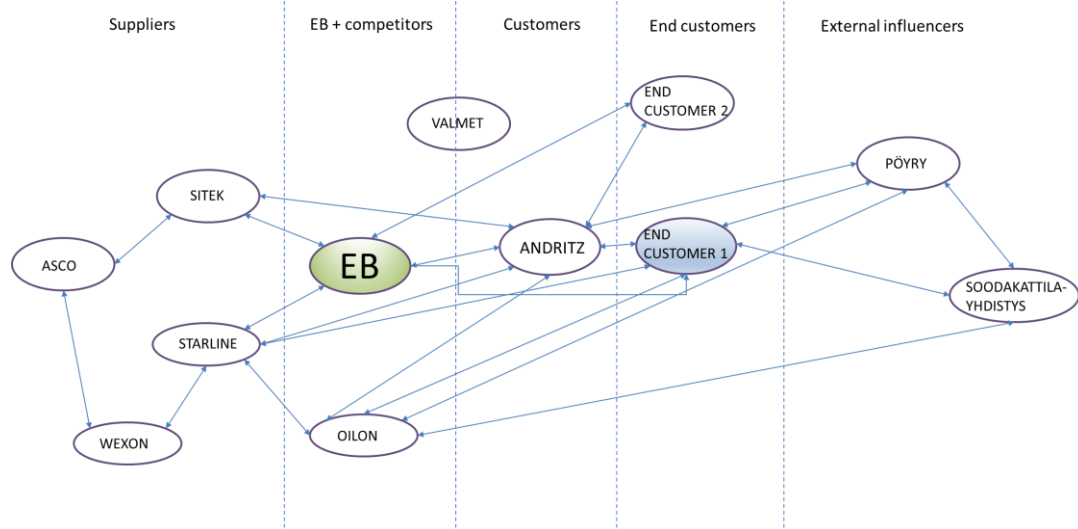
Figure 12. Preliminary Recovery Boilers Finland Network Map, before internal stakeholder workshop

For the use in the workshop, the preliminary network map was printed out on an A1-sized paper to enable co-creation.

The goal of the workshop was to:
- Update the network map (companies and connections).
- Spot important segment from Enviroburners point of view.
- Name possible power players in the network.
- Discuss the relative influence of each company to end customers purchase decision.
- Create a mutual understanding that this is our network (in Recovery Boilers Finland case context).

For the workshop, a set of powerpoint slides was created, see slides 2-4 of Appendix 4.

5.2.2   Step 2 – The workshop

At the beginning of the workshop introduction to the thesis and the workshop was given. After the introduction, employees were invited to fulfill the A1-sized print of the preliminary network map: to draw companies that miss from the network, to draw missing arrows and to cross items that were unnecessary. Then started an open discussion regarding the correctness of the result and relative influence of each company in the network. The center of the discussion rotated around Andritz, Pöyry and Soodakattilayhdistys (Finnish Recovery Boiler Committee), which were determined as the most important influencers in the network from Enviroburners context. Consequently, the important segment was drawn around these companies (see figure 13 below). The power player was thoroughly discussed, and after a vivid conversation, Pöyry was named as the power player because it has strong connections to all customers, end customers and additionally the secretaries of the Soodakattilayhdistys are employees of Pöyry.
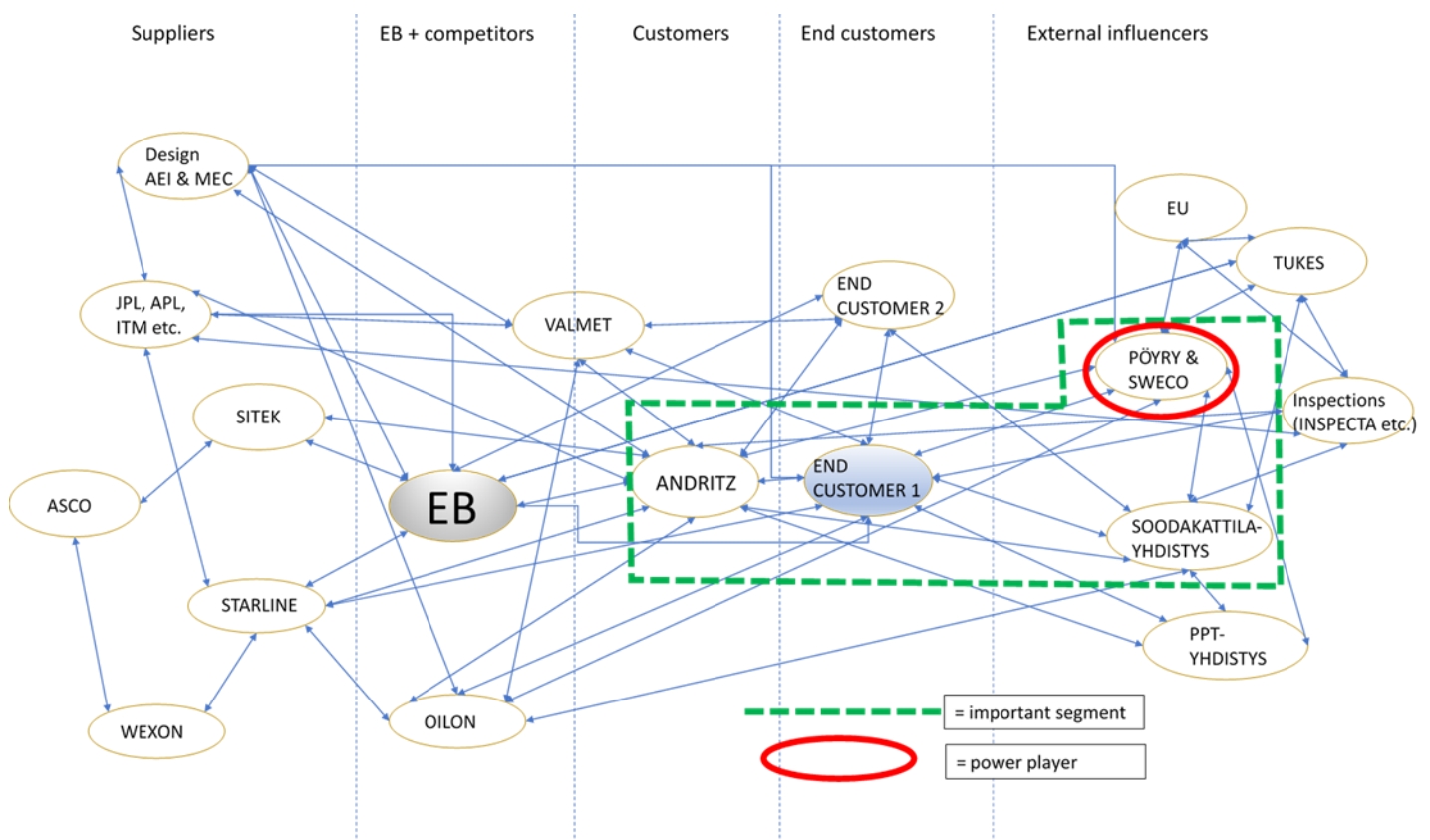
Figure 13. Recovery Boilers Finland network map after the workshop, with the important segment and power player.

From the supplier side, suppliers of AEI design (Automation, Electrification, and Instrumentation) and mechanical design (MEC) was named as important influencers, because these companies have connections to all the companies in the network and one company can do designing for multiple companies in the network simultaneously, even in the same project.

5.2.3   Step 3 – The key internal stakeholder interviews

After the workshop, the key internal stakeholder interviews were held. In this interview results of the network map workshop were validated and feedback & improvement ideas regarding the flow of the workshop were gathered. The interviewed internal key stakeholders were the managing director and sales & marketing director of Enviroburners; interviews were face-to-face interviews.

The fulfilled recovery boilers Finland network map was presented to the interviewees, the network map was validated by them without the need for updates or changes. Interviewees noted that this presented well the situation with this particular end customer. Furthermore, it was emphasized that especially the influence of Pöyry and Sweco could vary a lot from end customer to another, because one end customer may have a more significant in-house knowledge and more skillful purchase and project management organization than others.

A network map has not been drawn in the Enviroburners before (only in peoples mind), and usefulness of the visual network map was realized by stating it's potential to target marketing efforts and to understand the influence of each company to the purchase decision.

The key stakeholders were pleased to the flow of the workshop's network mapping section and they think that co-creation workshop is the best way to create a network map with wide and open-minded mutual perspective.

5.2.4 Step 4 – The external stakeholder interviews

In the external stakeholder interview a supplier, an equal (but not competitor company), customer and an external influencer company were interviewed. In the interviews the map created in the workshops was presented to the interviewees and comments were gathered. Main comments were:

- The map brings to visual form what is normally only in the head of the employees, and it is mainly correct.
- It is difficult to name a power player in the network because it varies as per the lifecycle stage of the recovery boiler.
- The network map is missing a layer "partners," where some of the external influencers (for example; Sweco and Pöyry) would belong into. The banks are important partners as well.
- It would be wise to draw identified important connections with a thick arrow for easier visual realization of the network map.
- The official authorities (Tukes and EU) give the frame where all the companies in the network operate in. The companies can move the frame to the desired direction by innovations and by operating with these authorities. ELY-keskus is missing from the official authorities.
- PPT-Yhdistys is not an important player in this network; it is more connected to paper production than Recovery Boilers.
- The linear presentation model of the network map gives the impression that the supplier (Enviroburners), must always go to end-customer via customer, but in reality, this is not the case in Finland. Domestic suppliers at the level of Enviroburners can (and should) operate directly with the end-customers.

See figure 14 below for the updated and final visualization of the network map.
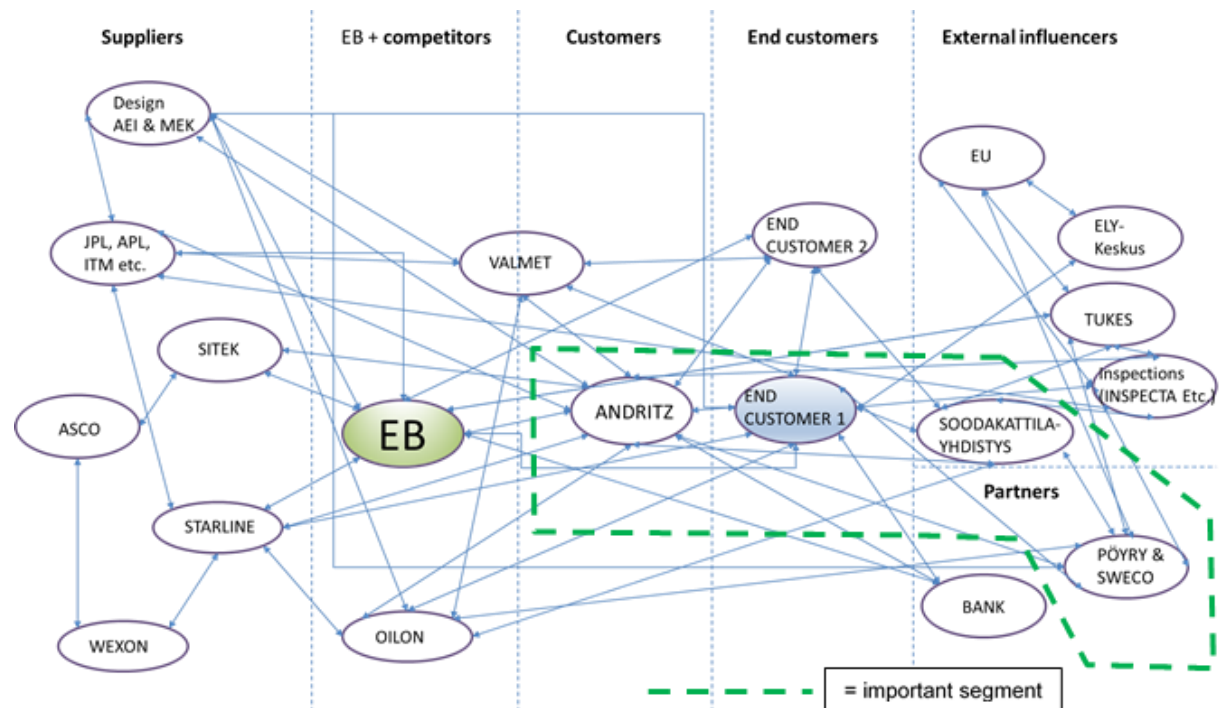
Figure 14. The Final network map, which is updated as per the external influencer feedback

The external stakeholder interviews showed that this stage is crucial to the success of the network mapping, as there were some incorrect assumptions made during the internal research section and the external stakeholders were able to provide new insights to the entirety.

5.3 Customizing a decision-making dynamics analysis tool for Enviroburners

The business cases and customers vary a lot from each other and it is not possible to build a single decision-making dynamics formula that would work from case to case. Furthermore, the interviews held showed that it is the marketer's and salesperson's job to identify these dynamics. Therefore, it is only possible to create tools that support employees in their daily job. The tools presented in this chapter are customized to suit Enviroburners and they are a combination of the findings in the best practice (chapter 3.3 industrial decision-making dynamics) and the interviews (chapter 4.4 analysis of the end-user decision-making dynamics). Furthermore, the tools are customized for each lifecycle phase of a recovery boiler (see chapter 4.2 for details).

5.3.1 Detecting an upcoming project in the feasibility study and initial engineering phase

Before the marketer can start creating a targeted marketing campaign one must be able to detect the upcoming new recovery boiler project as early as possible, preferably before it is public information. Main ways for identifying an upcoming project for Enviroburners is by:

- Looking into the information sources that the end-customers project team might use by:
    - Talking and staying close to the possible consultant companies.
    - Being active in the recovery boiler committee.
    - Talking and staying close to the possible boiler manufacturers.
- Screening possible members of the end-user's project team by:
    - Monitoring possible changes in the job title/function.
    - Staying close to the top recovery boiler experts in the end-user companies.
- Screening situation at a specific mill by:
    - Talking and staying close to the boiler manager
- Studying and analyzing the economic outlook and technological change by:
    - Following global trends for the need of Scandinavian pulp & paper products.
    - By following the technological changes. Such as, the development of wood-based bioproduct mills that produce new wood-based materials (for example wood-based textile-fiber).
    - Studying database of theses made in the pulp & paper industry.
- Keeping eyes and ears open through the whole Enviroburners organization, the hint for an upcoming project can come from a surprising source.

In figure 15 below is the visualization of the above-mentioned identifying means.

Figure 15. Detecting an upcoming recovery boiler project before it is public information.

Creating the required level of trust with the external key stakeholders is a long process and does not happen in a short period of time. Furthermore, analyzation of the available data is not always easy as the obtained data can be incomplete due to the secrecy of the project.

5.3.2 Tool for analyzing decision-making dynamics in the conceptual/definition engineering phase

In the conceptual/definition engineering phase initiative to build a new recovery boiler is made public, this information can be found from the company websites, pulp & paper journals and economic journals.

In this phase, power players are the end-user, the consultant and the boiler manufacturer. The consultant being stronger at the beginning and the boiler manufacturer later. The end-user stays equally strong power player through the whole conceptual engineering phase. It is the marketer's job to identify organizational forces, group forces and individual forces of these organizations. See figure 16 below for an illustration of the identification of these forces by analyzing end-user decision-making in the conceptual engineering phase of recovery boiler's lifecycle.
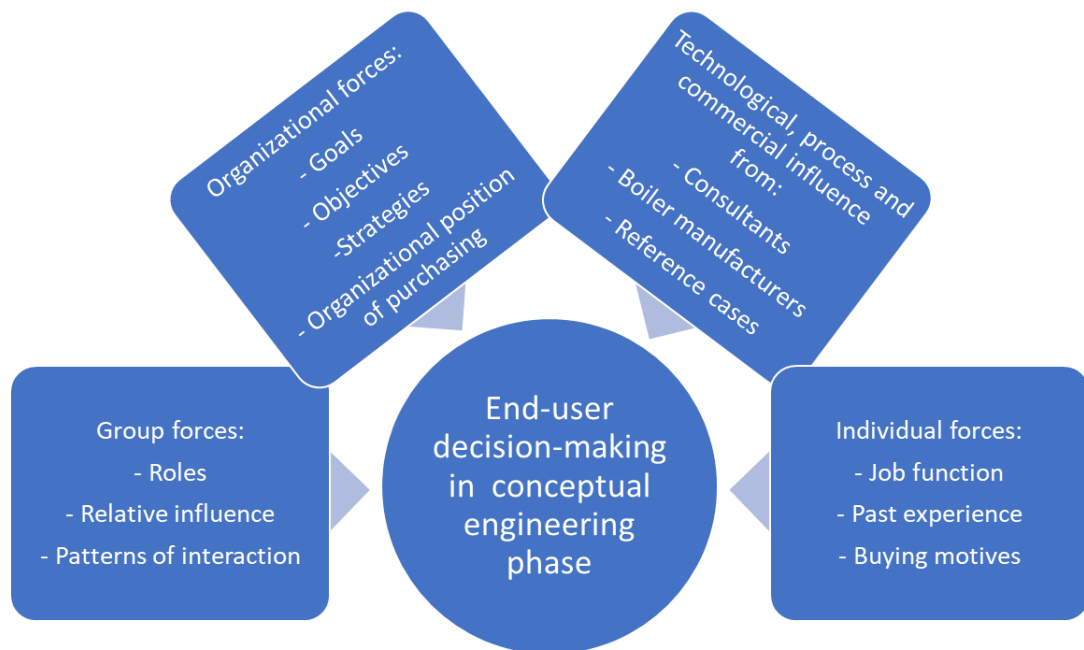
Figure 16. How Enviroburners can identify factors that affect end-user decision-making in the conceptual / definition engineering phase?

Instructions for identifying these forces can be found from chapter 3.3.2 of this paper. There is no shortcut to this and information must be dug up by talking with the identified key decision-makers: a long history of relationship and trust with the key decision-makers in each power player makes the conversation easier and more fruitful. Furthermore, information of successful (and unsuccessful) reference cases travel from boiler manager to another freely; this adds another aspect to the decision-making process of the end-user.

5.3.3 Tool for analyzing decision making in the project execution phase

When the project execution starts, the end-user hands over the decision-making to the selected boiler manufacturer (see chapter 4.4.1 of this paper). The end-user has still decision-making authority and some end-user's use it more than others, but discussions between Enviroburners and the end-user go always via the boiler manufacturer. Therefore, the marketer must now analyze the decision-making dynamics of the boiler manufacturer instead of end-user. The boiler manufacturers project organization is always published and the key decision makers from technological, process and commercial point of view are easy to identify. What is not easy to identify are the purchase strategies, goals and objectives. The boiler manufacturers buying organization is centralized, and this means that they most likely have a purchasing strategy. The purchasing strategy depends a lot from the form of the contract with the end-user. To identify the selected strategy, the marketer can use the table 9 below as support.

Table 9. Strategic priorities of purchasing (Hutt and Speh 2010, p.74)

Aligning Purchasing with Strategy: *Not Just Buyers*	Shift from an administrative role to a value-creating function that serves internal stakeholders and provides a competitive edge in the market.
Exploring New Value Frontiers: *It's Not Just about Price*	Focus on the capabilities of suppliers emphasizing business outcomes, the total cost of ownership, and the potential for long-term value creation.
Putting Suppliers Inside: The Best Value Chain Wins	Develop fewer and deeper relationships with strategic suppliers and involve them in decision-making processes, ranging from new product development to cost-reduction initiatives.
Pursuing Low-Cost Sources: *A World Worth Exploring*	Overcome hurdles imposed by geographical differences and seek out cost-effective suppliers around the globe.

To identify the remaining significant forces (the group forces and the individual forces) at the boiler manufacturer organization, the marketer can use the instructions given in the chapter 5.5.2 of this paper. The importance of an understanding of the decision-making in the boiler manufacturer's organization culminates to the procurement stage in the pre-operation phase of the recovery boiler's lifecycle (see chapter 4.4.1 of this paper). In the procurement stage the boiler manufacturer makes its purchase decision. If Enviroburners is not selected as the supplier, the only thing that is needed is analyzation of what went wrong. This analyzation should not be overlooked, because the insight obtained can support future marketing efforts.

5.3.4 Tool for analyzing the end-user decision-making in the operation period of recovery boiler lifecycle

If Enviroburners is selected as the supplier of the recovery boiler's burner system, the project starts, and marketer should not concentrate in the boiler manufacturer anymore (in this particular project, naturally analyzation of the decision-making in the boiler manufacturer organization is a continuous process). Now marketer must start analyzing the decision-making in the end-user organization during the operation period of the recovery boiler, which can last for 50 years. The key-decision-maker during this period is the boiler manager (see chapter 4.4.2 of this paper), another key-decision-maker is the maintenance manager, after them come their teams of maintenance engineers, maintenance personnel, production engineers, operators, and purchasers, who affect greatly in the decisions of the key decision-makers and are therefore important influencers. These influencers can be decision-makers by making independent decisions in their daily jobs in operating and maintenance of the recovery boiler. Furthermore, the key-decision-makers seek support & information from their equals and reference cases in the same company or other recovery boilers in Finland. There is no single pattern how the mill's decision-making dynamics is formed, and it cannot be copied from the mill to another. One company usually has the same basic strategy how they do the daily operation of a recovery boiler from the mill to mill (for example: how much the company does outsourcing). But the local conditions affect greatly. Therefore, every mill inside the company must be analyzed uniquely, and even the cultural differences (for example the cultural difference between eastern Finland vs. western Finland) affect the decision-making dynamics. The previously mentioned pattern can be used for daily operation and annual maintenance, but when larger renovations take place, the mill seeks for partners outside its organization, then boiler service companies start to affect the decision-making of the recovery boiler. Therefore, it is necessary to create a relationship with the boiler service companies as well, to be able to build a holistic picture of the decision-making dynamics of the end-user. In figure 17 below an illustration of the end-user decision-making dynamics during the operation period of a recovery boiler is shown.
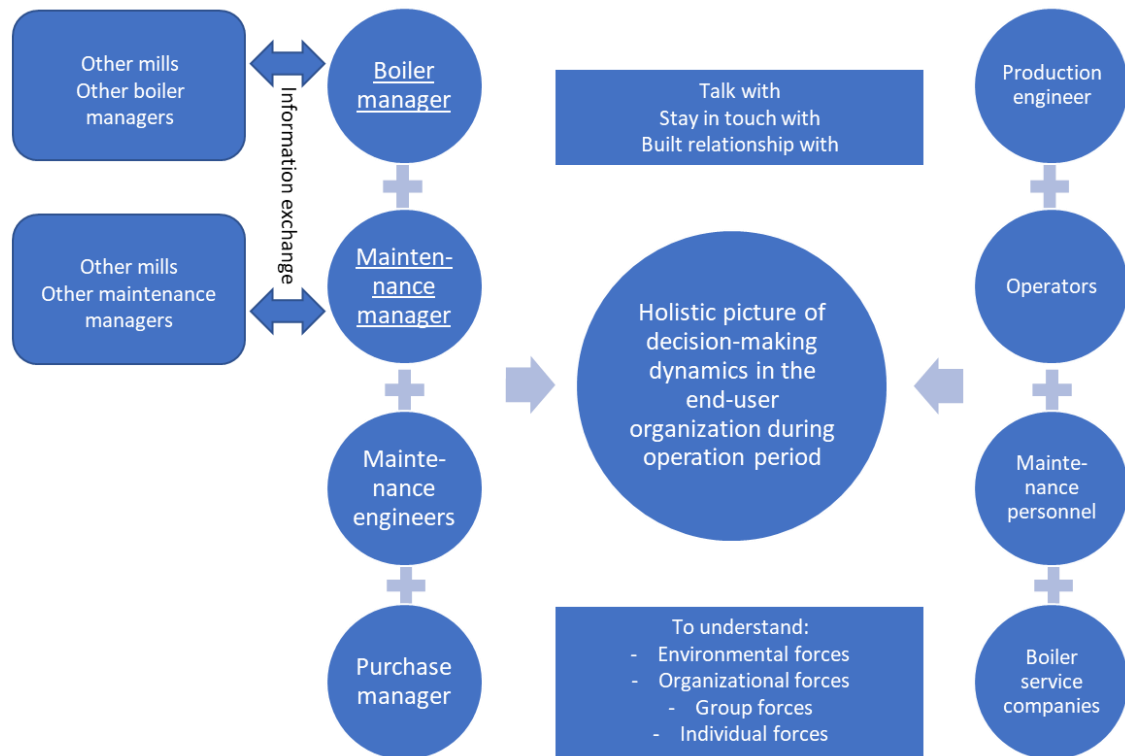
Figure 17. How Enviroburners can identify factors that affect end-user decision-making in the operation phase?

If Enviroburners is not selected as the burner provider at the beginning of the lifecycle of the recovery boiler, this analyzation and relationship building can become extremely difficult. The end-users do not easily grant access to the recovery boiler or agree on a meeting easily with a non-supplier. In these cases, the best sources of information can be other mills in the same company, boiler service companies and annual meetings of recovery boiler committee where it is possible to meet the key decision-makers face to face. The renovation is a turning point where the loss at the beginning of the recovery boilers lifecycle can be turned to the favor of Enviroburners. At this stage the decision-making system and organization is extended beyond the normal day-to-day habits and the head-office of the company & boiler service companies start to play a larger role in the decision-making. Therefore, it is necessary to build & keep good relationships with these actors.

5.4 Customizing a customer needs analysis tool for Enviroburners

The customer needs can be analyzed from an internal and external source. Both sources need to be used to get full insight. The internal source comes from data collection done

during a project and internal co-creation workshop straight after the project has ended. The external insight is gathered from the end-user and key-stakeholder companies by asking specific questions from the decision makers and by doing co-creation with the key stakeholders. In the following chapters customized analyzation tools are developed for both sources.

5.4.1   Tool for analyzing customer needs using an internal source

During a project, employees of Enviroburners can be used as the information source. Currently, Enviroburners does not have suitable CRM-software in use. Therefore, the information needs to be gathered with a form that is fulfilled during the project when events with customer or end-customer occur. The base for the content of the form originated from Kalle Laine's book (2015, p.96). In this book he states that he often asks people who are in direct connection with the customer to list the people with whom they have been in contact with recently and what have been the objects of interest of these people. From this starting point and the best practice presented in sections 3.4, 3.3 and 3.5.2 of this paper a questionnaire was formed to map five different things.

1. Whit whom you were in contact with during the project?
2. From which company?
3. What was this person's job role in the project?
4. Is this person: A influencer, a decision maker or a key decision maker?
5. What were the objects of interest of this person?

Using this form was tested in a workshop. In the workshop, one reference project was used to gather this information, but it was realized during the workshop that this information could not be gathered after the project, it must be an ongoing process that takes place during the project.
The full questionnaire can be found from Appendix 4, slide 8. The workshop was supported by powerpoint slides, which can be found from slides 7-8 of Appendix 4.
Employees through the whole organization were invited to fulfill the form for wider insight. Furthermore, the employees need to be aware of the recovery boiler business networks (chapter 5.2 of this paper) and recovery boiler lifecycle (chapter 4.2 of this paper) to be able to fill the form better.

When the project is reaching its end, the employees are invited to fulfill another questionnaire. The questionnaire includes the same questions that were in the original form,

but the first question is "Whit whom <u>you should have been in contact with</u> during the project? (But for some reason this did not happen.)" The full questionnaire can be found from Appendix 4, slide 8. The workshop was supported by powerpoint slides, which can be found from pages 8-10 of Appendix 4. Then the information in the form and the questionnaire are gathered and sorted for use in a workshop. The list is printed with large font on an A1-paper to enable co-creation in the workshop. Everyone who filled-up the list earlier is invited to the workshop. After the introduction, the keeper of the workshop opens the discussion by presenting names in the lists and invites people to think that does the person have a positive, negative or neutral attitude towards Enviroburners. If the person is thought to have a positive attitude of Enviroburners the name is highlighted with ==green==, neutral with ==yellow==, negative with ==red== and if the attitude of the person is unknown it is highlighted with ==blue== color. Then the participants are invited to write on post-it notes what caused the attitude and if the attitude is negative or neutral, what needs to be done to change the attitude to positive. The resulting data leads to deep insight into the needs and organizational behavior of the end-user. Preferably the workshop keeper is the marketing owner who can use the gathered information to create targeted marketing to the individuals (see more about marketing owner in chapter 5.6 of this paper). This workshop was tested as part of the first workshop, but it was not possible to run it completely, because too much time had elapsed from the reference project and participants were not able to remember details anymore. In the key-stakeholder interviews after the workshop positive feedback was received regarding the content and possibly usable results of the workshop. It was agreed that this workshop would be held in the next possible occasion for testing and further improvement.

5.4.2   Tool for acquiring & analyzing customer needs using an external source

One can gather information about customer needs by asking them directly or indirectly. In the following two paragraphs tools are provided for direct and indirect customer needs acquiring and analyzation.

By asking directly, one asks targeted questions to the boiler managers, machine maintenance managers or other key influencers. These questions can be intrusive, and the marketer must be aware of what is the correct form, place, time and context for asking these questions, not to cause the conversation partner to disconnect. As per the interview results presented in chapter 4.5 of this paper, it was realized that it is good to ask open-ended non-guiding questions to open up the conversation and create a natural path

for further questions. In the interviews that were conducted for this paper, many targeted and detailed questions were asked, in this context the interviewees were open and did not withdraw from the situation. Below is a list of questions that were found useful for finding the needs of the end-user:

- What is the role of consultants in this phase of the recovery boiler's lifecycle?
- What is the role of boiler service companies in this phase of the recovery boiler's lifecycle?
- What is important to the pulp mill/corporation in this phase of the recovery boiler's lifecycle?
- What is important to you in this phase of the equipment lifecycle?
- How much service-work do you do in-house?
- How much service-work do you (wish to) outsource? (What is your outsourcing strategy?)
- What sort of service agreements are you looking for?
- What is the most important thing about this equipment during the operation of the recovery boiler?
- How often do you renew this equipment?
- How much before renewal of this equipment do you start planning?
- How do you wish to limit the scope of the service/purchase in hand?
- Do you use Life Cycle Cost (LCC) calculation methods when purchasing new equipment?

It is not easy to form the questions beforehand without knowing the context. Therefore, the list above can act only as a source of inspiration. These questions can also be asked from the other stakeholders of the business network to form a fuller understanding of the needs of the end-user in different phases of recovery boilers lifecycle.

By asking indirectly, customer needs are mapped with co-creation. Indirect data gathering is often the most natural path because co-creation is a spontaneous environment for information exchange.

From the feasibility engineering to the project execution phase, the end-user needs can be mapped by co-creation with the three power players:

- Consultation companies: Co-creation about emission regulations and available technical solutions.

- End-user: Present references to find out the special needs of the end-user regarding the process, technology, and services.
- Boiler manufacturer: Technical and process co-creation and co-creation of the future services for the operation period.

During the operation period, the main co-creation partner is the end-user, the needs can be mapped by:

- Co-operation in the day-to-day operation by discussing the current state and the future of the recovery boiler and by visiting the production facilities and discussing with the maintenance personnel and operators.
- Problem-solving. When a problem occurs, participate in solving it.
- Co-operational planning of future services and upgrade needs. When the lifecycle of the recovery boiler and the business relationship advances participate in planning.
- Do service during shut down. The current state of the machinery can be thoroughly inspected only during shutdown when the equipment can be dismantled for service.

It is possible that Enviroburners employees are not able to ascertain the needs of the end-user during operation period with means mentioned above. Therefore, it is important to talk with external stakeholders for wider insight. The most important external stakeholder who possesses knowledge is the boiler service company which has a good relationship with the mill.

5.5   Customizing a lifecycle synchronized marketing toolkit for Enviroburners

In this section methods and tools for marketing through the whole lifecycle of a recovery boiler are developed. The methods and tools presented in the following chapters were created by analyzing the results of business network mapping, end-user decision-making dynamics and end-user needs that have been researched earlier in this paper. After this, the preliminary proposal was presented to the key decision-makers of Enviroburners to develop the final toolkit. Each marketing case needs to be carefully analyzed that which tool/method is to be used; all the proposed means are tailored for the use of Enviroburners.

5.5.1   Marketing in the feasibility study phase

In this stage, supplier selections are not made, but Enviroburners can bring forward the latest technical capabilities and services that the company has to offer and by doing this affect the whole investment decision to be more favorable for Enviroburners from technical, process, service and commercial point of view. If it is possible to detect the coming boiler project in the feasibility study phase, marketing efforts can be targeted to the identified project team. Often it is difficult to identify a project in the feasibility study phase. Therefore, continuous co-operation and information sharing are necessary with power players in this stage, including consulting companies (Pöyry and Sweco), end-users top recovery boiler experts and boiler managers at specific mills. The most effective platform for doing this is by holding a seminar in the events organized by the Finnish recovery boiler committee. That said, personal relationships are important, and the solutions need to be tailored to the end-user's needs. Therefore, the seminar can act as a first initiative, but then the marketer must dive into end-user's world and co-create a tailored solution for them. Due to the reasons mentioned above, the marketing strategies suitable for the feasibility stage are risk reduction strategy and stimulate demand at user level strategy (see chapter. 3.5.1 of this paper).

5.5.2   Marketing in the conceptual engineering phase

In the conceptual engineering phase, the project organization of the end-user and consultation company is known. Therefore, targeted marketing can start. The marketing in this stage can be a mixture of four different marketing strategies:

1. Offer strategic solutions – get close to the end-user and understand their strategic target. For example, if the end-user's strategy is to outsource maintenance as much as possible, present them your service capabilities to form trust and include the possibility to have a service agreement after the boiler start-up takes place. Understanding the technological strategies and targets is top important in the high-tech industry where Enviroburners belongs into, by bringing the latest technological improvements into the knowledge of the boiler manufacturers, consultants, and end-user, Enviroburners can move the technological strategy to be more favorable for the company. Furthermore, with discussion/co-creation Enviroburners will get insider information of the end-user needs.

2. Risk reduction strategy - Purchasing a recovery boiler can be a modified re-buy or a new task purchase. These purchases create technological, process and

monetary risks. Therefore, risk reduction marketing strategies can be used. By highlighting the success of previous projects and services available during the operations period, the marketer can move its company to a more favorable situation. If previous references cannot be presented, the marketer should try to move the purchase towards a new task purchase by presenting new technical, process or commercial benefits; this will balance the situation in comparison to competitors.

3. Stimulate demand at the user level - The top important thing in the recovery boiler burners is that they must work when required and they must be easy and safe to operate and maintain. If these conditions are met, the operators, maintenance personnel and lower management will bring the information up to the key decision-makers, making it hard for them to ignore this message from the influencers.

4. Responsive marketing strategy – In a responsive marketing strategy each member of the purchase team is listened carefully, and targeted personalized marketing is made to match these peoples' needs. More about this topic in chapter 5.7 of this paper.

5.5.3   Marketing in the project phase

At the beginning of the project phase marketing efforts need to be targeted towards the selected boiler manufacturer. Actually, the marketing has to be continuous co-creation effort because technological, process and commercial needs of the recovery boiler business is in continuous movement, naturally the frequency of the contacting increases when there is a project in sight. The most important people to do co-creation within the boiler manufacturer's organization are the product managers and the purchasing managers. With the product managers, co-creation of the solution is created to match the technological and process needs. With the purchasing managers, the commercial capabilities of the companies and "trends" of the industry are discussed to get insider knowledge and to form trust. It is important to identify is the particular purchase a modified re-buy of some existing boiler. In the case of modified re-buy, Enviroburners can be "an in-supplier" or "an out-supplier," an in-supplier means that Enviroburners has a reference in the existing boiler of the re-buy. In this case, the marketer should try to keep the scope as identical in comparison to the previous project as possible. If Enviroburners is an out-supplier, the marketer should try to move the project towards a new task purchase to make the situation more favorable to Enviroburners. Because the relationship with the boiler manufacturer is continual, it is wise to use predefined pattern of

interaction, which is controlled by a single person in the organization (More about this topic in chapter 5.6 of this paper).

If Enviroburners is selected as the supplier in the procurement stage of the recovery boiler's lifecycle, then the focus of the marketing moves back to the end-user. During the project phase, Enviroburners is not typically allowed to take direct contact to the end-user. With boiler manufacturer's permission Enviroburners can attend or set-up meetings where services for the operation period are co-created, the natural timing for these meetings is during the start-up and testing period of the recovery boiler because at this stage there is a spontaneous connection between Enviroburners and the end-user. Purpose of these meetings is to start creating a relationship with the end-user, to form trust and to gain a mutual understanding of both companies' capabilities and strategies. With this insider knowledge, Enviroburners can start planning and arranging the service offering that will be offered at the beginning of the operation period of the recovery boiler lifecycle. If this is not done, there is a risk that there is a service void at the beginning of the operation period and some other company fulfills this void.

5.5.4   Marketing in operation phase

Nowadays, the size of the organizations in the mills is driven to a minimum. Therfore, the managers, engineers, team leaders, operators and maintenance personnel do not have time or possibility to know and take care of all the equipment in the recovery boiler to the smallest detail. This leads to outsourcing of the engineering and maintenance services. Therefore, end-users need trust that the selected burner service partner does what has been agreed. The best marketing in the operation phase is well-working equipment and good service, this information will transfer from the mill to another and inside the network of companies (also negative experiences will transfer). The managers in the mills do not have time to write or read lengthy e-mails, nor surf the internet for information, what they need is face-to-face meetings and phone calls that offer solutions that match the current need in the mill and strategy of the company. Fulfilling this need requires frequent visits to the mill, and not only into the office building but also fieldwork is required to show that you respect and understand the conditions in the specific mill. By doing this the marketer perceives the decision-making dynamics and end-user needs, this leads to trust and vast understanding of the mill. With this good foundation, the marketer can do co-creation with responsive marketing, stimulate demand at the user level and use risk reduction strategy (see chapter 3.51, 5.5.5 and 5.5.6 of this paper). The co-

operation/-creation in the day-to-day activities can lead to research & development cases, some of these cases are small and can be executed during the annual maintenance stoppages, but some are larger and can be done only during the renovation of the boiler. This history of co-creation creates an advantage in the future renovation cases when the decision-making team is extended from the normal team that takes care of the boiler in the day-to-day operation.

When renovation of the boiler starts to approach the marketer needs to start a discussion with the boiler service companies that will be offering their solutions to the mill. These renovations are often complex and require co-creation. Therefore, the marketer needs to bring forward the engineering, process, technological and service capabilities of the company. The marketing strategies to be used towards the boiler service companies can be the same as with the ones to be used with boiler manufacturing companies as presented in the chapter 5.5.3 (marketing in the project phase) of this paper. The only remarkable difference is that due to the time interval of the renovations, the technology has usually taken a leap forward and the cases are rarely modified re-buys, more likely they are new task purchases or at least re-buys with a high degree of modifications.

5.5.5 Stimulating demand, through the whole lifecycle of a recovery boiler

One way to market is by stimulating demand at (end)-user level (see chapter 3.5.1 of this paper). As previously stated in this paper, end-user does not always have the possibility or sometimes even the knowledge to follow all the legal, technological, process and commercial changes in the industry. Therefore, it is Enviroburners job to follow all these changes that concern Enviroburners scope and stimulate demand at end-user level with targeted marketing. Furthermore, sometimes information inside the end-user company does not transfer from the user-level to the decider-level. Therefore, it is necessary to have good relationships with operators and maintenance personnel and bring their need to the knowledge of the deciders.
Below is a practical example of how demand can be stimulated by actively following changes in the regulations/standards in the burner industry.

Example, stimulating demand with changes in emission regulations
Emission regulations are constantly changing area in the boiler/burner business, by actively following the changes in the EU-directives, recovery boiler committee's recommendations and trials, etc. Enviroburners can find places where to stimulate demand. The

first step is to notice a change that has possible market potential; then it is needed to do a preliminary economic and technological check of the viability of the prospect. At this point, if possible, do a quick check and a preliminary discussion with a trusted end-user. If the economical test is passed, but the technological check is not, then it is needed to check that what technological changes are needed to reach the new regulations and what partners are needed to reach this new target. When there is "a go-decision," it is time to create a targeted value proposition to customers and customer groups affected. Now the actual marketing starts by bringing the "problem" and solution to the knowledge of the key decision-makers via digital marketing channels and speeches at seminars (for example speech at recovery boiler committee's annual meeting). When the issue is known on a general level, it is time to do targeted marketing by doing co-creation with the end-user. In figure 18 below, an illustration of this process is shown using Osterwalder's (2010, p.44) business model canvas.
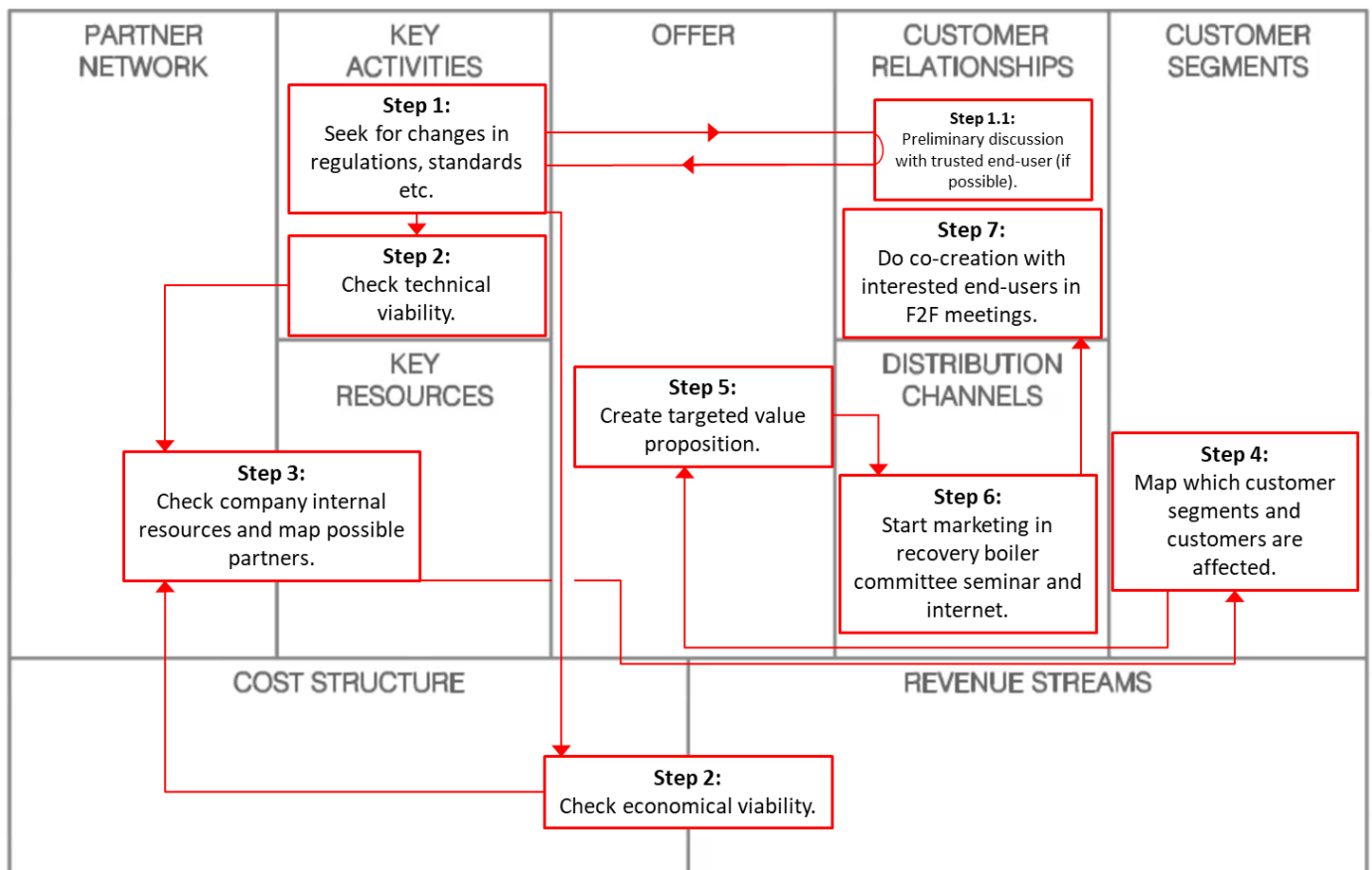

Figure 18. Stimulating demand by detecting changes in emission regulations and creating a targeted marketing campaign.

The figure 18 above is not a gate model, the process can go in a different order, and many things need to be checked on the way. For example, the economic viability check must include a preliminary check of customer segments affected. Furthermore, as the business network is one of the most powerful resources a company has, it is recommendable to do co-creation in the business network (especially with the end-user) always when possible, not only in step 1.1 and seven as shown above.

Risk reduction strategy

Individuals have a high will to reduce risks (technical, process, production, safety, environmental & commercial) in the purchase decision. An "in-supplier" can understand the specific risks involved in the customer's business with the insider knowledge and offer services and products that mitigate these risks. Also, the in-supplier can understand risks in all hierarchical levels and bring these risks to the knowledge of the decision-makers and by doing this stimulate demand. An "out-supplier" can actively seek and bring risks to the knowledge of the customer organization with targeted marketing and by doing this take the purchase organization out from the routine re-buys to expand the purchase to new task purchase where more suppliers are invited to bid. The same marketing sequence presented in figure 18 above can be used to bring risks (and solution to these risks) to the knowledge of the customers.

5.6   Assigning ownership of the end-user marketing concept in Enviroburners

The end-user marketing concept presented in this paper is an extensive entirety and needs "an owner" who is responsible for it. In the chapter 3.5.2 of this paper KAM-system (Key Account Manager) is studied from a marketing point of view. KAM's job includes much more than just marketing, therefore in this paper the owner of the marketing concept is called "the owner of the end-user marketing, pulp & paper industry" (later referred as "the marketing owner" or MO). The marketing owner's job is to build a relationship that is fruitful for both companies Enviroburners and the end-user. When doing this, many companies in the business network will be likely to gain additional value, one of them being the boiler manufacturer. Building the relationship requires collaborative action through the whole organization of Enviroburners with the key stakeholders of the business network. Due to the size of Enviroburners, it is not possible to assign one employee with the title "owner of the end-user marketing, recovery boilers," instead this person must have other functions as well, for example contract manager. Because of to the nature of the business, the marketing owner's role and interface with external

stakeholders need to be looked from two directions: end-user and boiler manufacturer. These two directions are discussed in the following two chapters.

5.6.1 Marketing owner's role and interface pattern with the boiler manufacturer

As noted earlier in this paper the boiler manufacturers play a major role in the recovery boiler burner business. Therefore, correct actions with them are really good targeted end-user marketing as well. With the boiler manufacturers, the MO doesn't only co-operate with the sales and marketing departments of the customer, but the MO also collaborates directly with customer's project department and service department. Internally the MO collaborates and gives heavy support to the project department and operates as a contract manager by steering the project to the right direction and by distributing responsibility to the specialists of that specific field. The MO starts systematically building a deeper relationship with the boiler manufacturer: When the ownership is launched, the system is introduced to the boiler manufacturer (sales, purchasing, service and project department leaders) by the marketing owner and the sales & marketing director of Enviroburners. Then the collaboration and relationship building can start: First (1) the MO starts a collaboration with product managers, project managers, sales and purchasing of the customer's organization. The second step (2), is to start deepening the relationship by opening the discussion between the project and service departments of these two companies. In the beginning, the MO must play an active role in the relationship building of the project & service department. When the discussion is fluent and natural, the MO will move to a supervisory role. When bigger sales opportunities arise, the MO will receive support from the sales & marketing director (3). When the relationship is deep enough, the managing director will start building a relationship with the recovery division director of the customer (4). See illustration in figure 19 below.
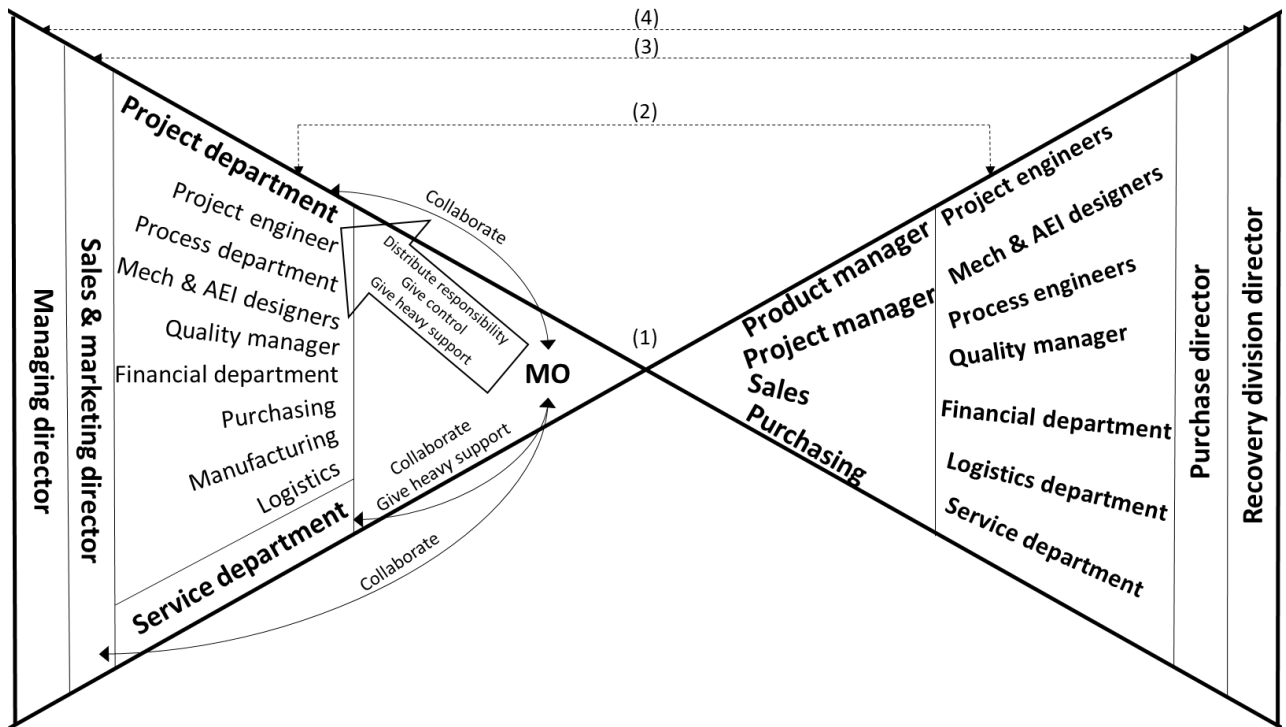
Figure 19. Interface between Enviroburners and boiler manufacturer when using Marketing Owner -system.

By doing this, it is possible to build a relationship with the boiler manufacturer that enables collaboration. The relationship leads to an understanding of the boiler manufacturer's needs. The boiler manufacturer needs to understand the end-user needs. Therefore, understanding the boiler manufacturer needs paves the road for understanding the end-user needs and creates a base for long-term collaborative advantage and value creation.

5.6.2 Marketing owner's role and interface pattern with the end-user

Using the marketing owner system with the end-user requires a different approach in comparison to the boiler manufacturer because usually, the end-user has a handful of key decision-makers who need personal face-to-face interaction that results in tailored solutions. Therefore, the MO is the single point of contact towards the end-user for the day-to-day operation (1), internally the MO is supported by the service, process and engineering department. New boiler purchase initiatives and renovations are larger and more complex projects (as presented in chapters 5.3.1, 5.3.2 and 5.3.3 of this paper). In these cases, the MO is responsible for co-operating with the project manager, boiler

manager, and commercial unit. Each member in the Enviroburners project department will interact with her/his counterpart in the end-user's technical unit (4), sales & marketing director discusses with the purchasing director to get a wider understanding of the purchase strategies and goals (5) and managing director brings the message forward to the mill director (6). Furthermore, because the consultants, the boiler service companies and the recovery boiler committee (and the network) play an important role in the end-user decision making the MO is responsible for cooperation with these entireties as well (7). See illustration in figure 20 below.
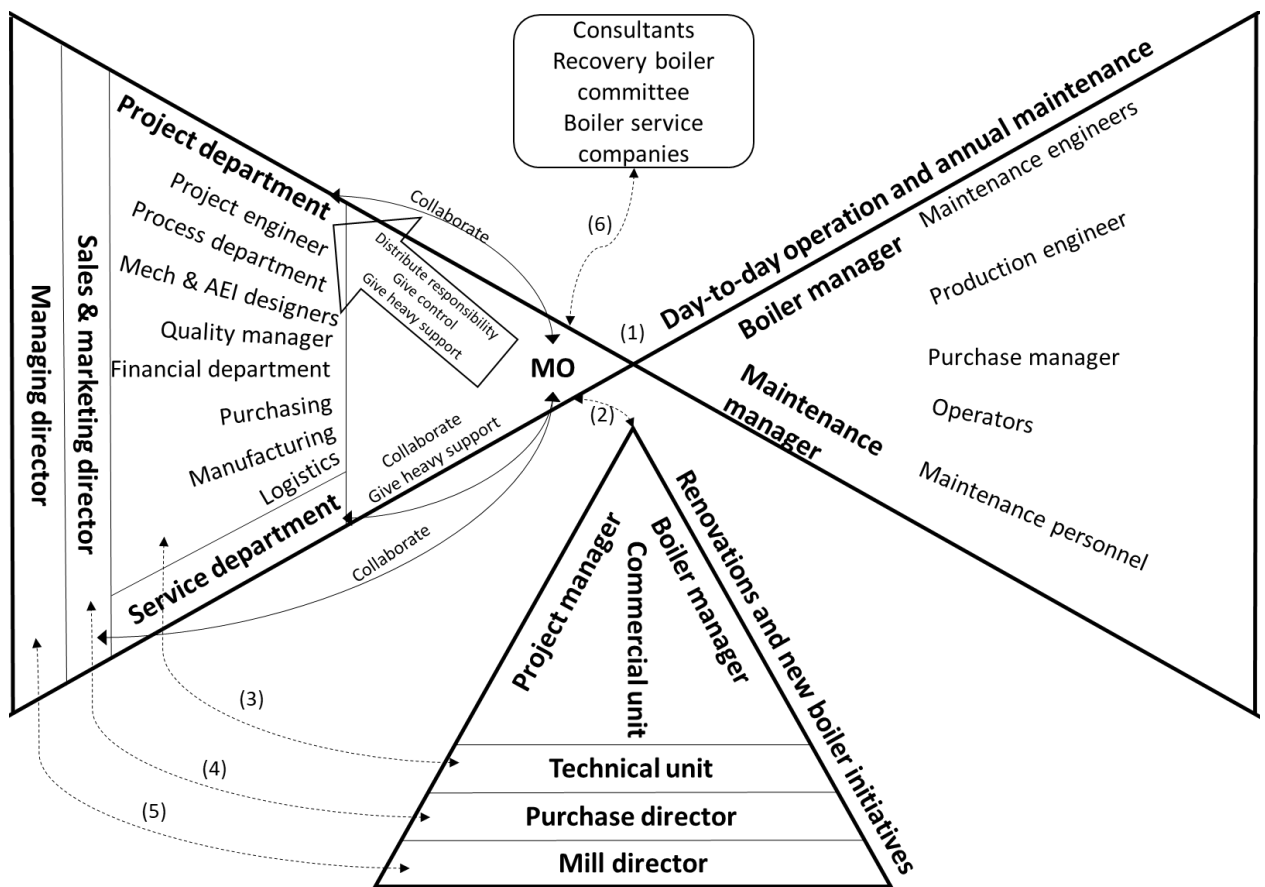
Figure 20. Interface between end-user and Enviroburners when using Marketing Owner-system.

The best marketing is working equipment and services that the customer needs and respects. This target can be reached by the collaboration that the MO-system triggers. Other means of marketing that the owner of marketing uses are presented in the chapters 5.5.1 – 5.5.5 of this paper. Later when a deeper understanding of the customer is achieved, the interface plan can be taken to intercompany contact pattern level, which is presented in the chapter 3.5.2 of this paper.

5.6.3   Means of marketing

Recovery boiler business is a conservative business. The conducted interviews and discussions in the business networks show that face-to-face discussions, seminars, trade fairs, and phone calls are the main means for contacting the key decision-makers of the end-user. The marketer "needs to borrow his/her brain" for the use of the end-user for co-creation and this is not yet possible digitally without real interaction. This being said, the company internet pages are an important source of information and especially the designers through the whole business network tend to look for solutions online before contacting the supplier. Therefore, it is important to have up-to-date information of your products technical and process attributes freely available in the company website for the use of these important influencers (who can become the decision-makers by setting technical or process attributes that other manufacturers cannot fulfill). There are signs that B2B trust formation will follow B2C trust formation, where digital peer-to-peer networks are widely used for sharing user experiences and recommendations. Therefore, Enviroburners must take actions to increase its digital presence in these networks (for example LinkedIn). Increasing digital presence and other digital marketing tools, such as blog posts, search engine optimization, paid online marketing, prospect tracking in digital channels and targeted digital marketing, etc. are not studied in this paper and further research is required.

5.7   The initial proposal of the end-user marketing concept

The initial proposal of the end-user marketing concept is a toolbox that allows Enviroburners to analyze and understand the forces in the B2B network systematically. Furthermore, the toolbox gives targeted marketing means and tools through the whole lifecycle of the recovery boiler. The marketing must be viewed as a holistic concept: occasionally, when you want to market to the end-user you do not market directly to them: instead, you market to the consultants, boiler manufacturers, and boiler service companies. In the recovery boilers in Finland business area, marketing does not mean "traditional advertising," usually it means co-creation and delivering the promised value or making yourself and your company visible in the B2B networks. The best marketing is well-working equipment and good service. As one of the interviewees said it, "make yourself and your company the top expert in the business, so that whenever a person in the network thinks about a burner, the second thought is Enviroburners," this requires plenty of co-creation and trust. The toolbox/marketing concept is a large entirety and needs an owner who

runs the show, operates in the networks distributes marketing responsibility in the Enviroburners – customer interface. This person is called the end-user marketing manager in this context. See an illustration of the toolbox in figure 21 below.

VALUE NETWORK MAPPING WORKSHOP
1. Workshop with EB employees
2. Internal key stakeholder feedback validation
3. External key stakeholder feedback validation & update

LIFE CYCLE SYNCHRONIZED DECISION-MAKING ANALYSIS TOOL
- Detecting an upcoming project in the feasibility study and initial engineering phase
- Tool for analyzing decision-making dynamics in the:
  1. Conceptual / definition engineering phase
  2. Project execution phase
  3. Operation period of recovery boilers life-cycle

OWNER OF THE CONCEPT: END-USER MARKETING MANAGER
Operates in the networks, analyses data (in CRM),
collaborates with internal & external stake holders,
creates targeted marketing,
divides responsibility in the EB – value network interface

1. Analyzing customer needs from internal source
- Data collection by employees in their daily job to CRM
  - Roles, interests, attitudes (etc.) of external decision-makers and stake holders
- Data collection after a project in a workshop

2. Analyzing customer needs from external source
- With targeted questions
- With co-creation

CUSTOMER NEEDS ANALYZING TOOL

Marketing in:
1. Feasibility study phase to end-user and consultant
2. Conceptual engineering phase to end-user, consultant and customer
3. Project phase to end-user and customer
4. Operation phase to end-user and key external stakeholders

By:
- Creating trust
- Co-creation
- Stimulating demand
- Risk reduction strategy
- Responsive marketing
- Offering strategic solutions
- Via digital and physical channels

LIFE CYCLE SYNCHRONIZED MARKETING TOOLKIT

Figure 21. Preliminary toolbox for end-user marketing.

- The 1st tool is the value network mapping workshop, where an internal workshop is held to map the value network. Furthermore, the value network needs to be validated with the internal and external key stakeholders. Additionally, it is necessary to draw the important segment for your own company into the map.

- The 2nd tool is the life synchronized decision-making analysis toolkit. Analyzation of decision-making is subjective science, and the results change from case-to-case and from viewer to another, therefore in the toolbox are "checklists" that support the marketing team when they seek for understanding.

- The 3rd tool is customer needs analyzing tool with two stages. In the first stage, customer needs are analyzed from an internal source and in the second stage,

the customer needs are analyzed from an external source. These three tools create the necessary pre-understanding and foundation for lifecycle synchronized marketing.

- In the toolkits 4th tool, several different marketing approaches are tailored for the use of Enviroburners for use in the recovery boilers in Finland business. The most important one of them is building trust; building trust is a long process where tailored products and services are co-created with the end-user and other stakeholder companies in the network to fulfill the end-user needs. During the research, it was realized that companies in the network do not do modern digital marketing, where you track the moves of the prospects in the digital channels and create digital targeted marketing to turn them into leads. Lack of tool for modern digital marketing is as well the biggest limitation of the toolbox. But in another hand, you need to first build trust as the foundation of the marketing, and as per the results of this research, it seems that trust building in the Finnish recovery boiler business cannot be founded on a digital platform (yet).

- In the center of the toolbox is end-user marketing manager who runs the whole show, operates in the networks, creates targeted marketing strategies and divides marketing responsibility in the Enviroburners – network interface.

See figure 21 above for illustration. See chapters 5.1-5.6 of this paper for detailed descriptions how the tools mentioned above were created and how they can be used.

6 Feedback validation of the initial end-user marketing concept

When the initial proposal of the end-user marketing concept was ready, it was presented to the key internal stakeholders for feedback and validation. The comments gathered in the feedback round were used to further develop the initial proposal to create the final end-user marketing concept. In chapter 6.1 the feedback is displayed and in the following chapters, the final end-user marketing concept is presented.

6.1 Feedback validation of the initial end-user marketing concept with internal stakeholders

Feedback regarding the content of initial toolbox was gathered from key internal stakeholders. The feedback and the final toolbox is presented in the chapters 6.2-6.6 of this paper. The biggest change to the initial one is that the final toolbox is planned to be used with a CRM-software.

Enviroburners is planning to purchase a new CRM-software. The initial proposal of the marketing concept was not planned to be used with a CRM-software, because the current software is not suitable for the purpose. Therefore, the company needs a list of the data that the new CRM-software must support to enable the implementation of the end-user marketing toolbox. The preliminary end-user marketing concept includes plenty of manual data collection. The key internal stakeholders expect that the final end-user marketing concept is ready for using of a CRM-software because using of the toolbox will result to extensive amount of data that needs to be stored, filtered and analyzed. See appendix 5 where the list of CRM requirements is presented.

6.2 FINAL - Value network-mapping workshop

The network mapping workshop consists of four steps: preparing the workshop, the workshop, the key internal stakeholder interviews, and external stakeholder interviews. With the workshop, Enviroburners can map networks of any business area. The workshop created in the initial proposal phase was validated by the key internal stakeholders as it is and does not need further improvements. See chapter 5.2 for the recovery boilers in Finland business area network map.

In the following chapters, the workshop is taken out from the recovery boilers in Finland case context. Therefore, the workshop flow presented below is suitable for any business area of Enviroburners.

6.2.1   Step 1 – Preparing the workshop

The keeper of the workshop creates a preliminary network map before the workshop as per the best practice presented in chapter 2.2 of this paper, see figure 22 below as an example. Leave the preliminary network map intentionally incomplete: for example, do not show some stakeholder companies and do not show some connection arrows. This enables an easy start for the workshop and to get the conversation & co-creation good kick-off. Preliminary network map consists of 6 different stakeholder company layers: Suppliers, EB (Enviroburners) + Competitors, Customers, End customers, External influencers and Partner companies.
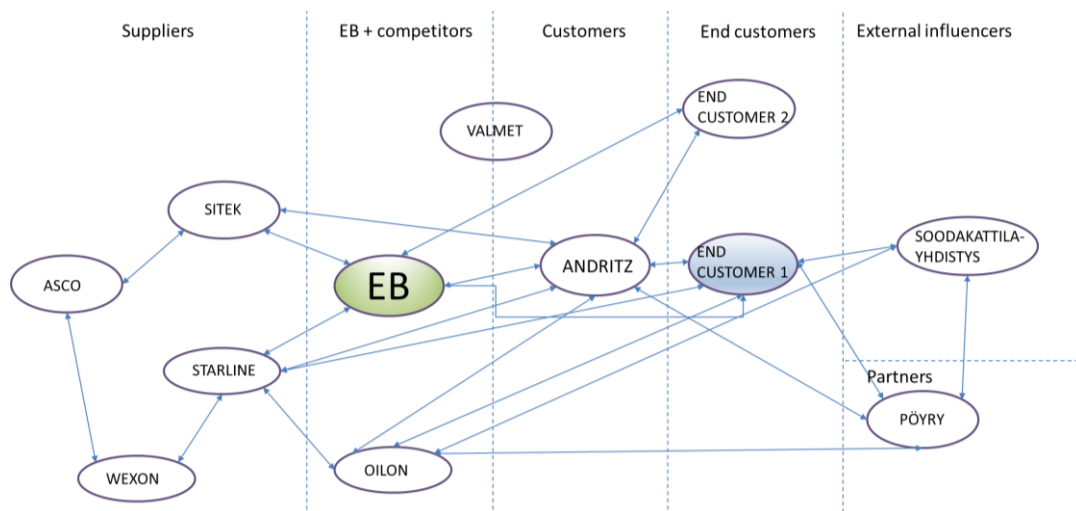

Figure 22. Preliminary Recovery Boilers Finland Network Map, before internal stakeholder workshop.

Print the network map on an A1-sized paper to enable co-creation in the workshop.

The goal of the workshop is to:
- Update the network map (companies and connections).
- Spot important segment from Enviroburners point of view.
- Name possible power players in the network.

- Discuss the relative influence of each company to end customers decision-making.
- Create a mutual understanding that this is our network in this business area.

In appendix 4, slides 3-4 can be used to support the workshop or as a source of inspiration.

6.2.2   Step 2 – The workshop

Introduce the workshop. After the introduction, invite employees to fulfill the A1-sized print of the preliminary network map: to draw companies that miss from the network, to draw missing arrows and to cross chapters that were unnecessary. Then start an open discussion regarding the correctness of the result and relative influence of each company in the network. Follow which companies are in the center of the discussion, these companies can usually be determined as the most important influencers in the network from Enviroburners context. Consequently, open discussion regarding the important segment, and drawn the segment around these companies (see figure 23 below as an example). Then draw the most important connections with a thicker line, for clarity. Discuss the power players in the network, it is likely that the naming of the power player is not possible, as the power player varies as per the lifecycle phase of the plant. Name also important influencers, which can be for example suppliers that have strong connections to the companies in the important segment. The keeper of the workshop creates a transcript of the map.
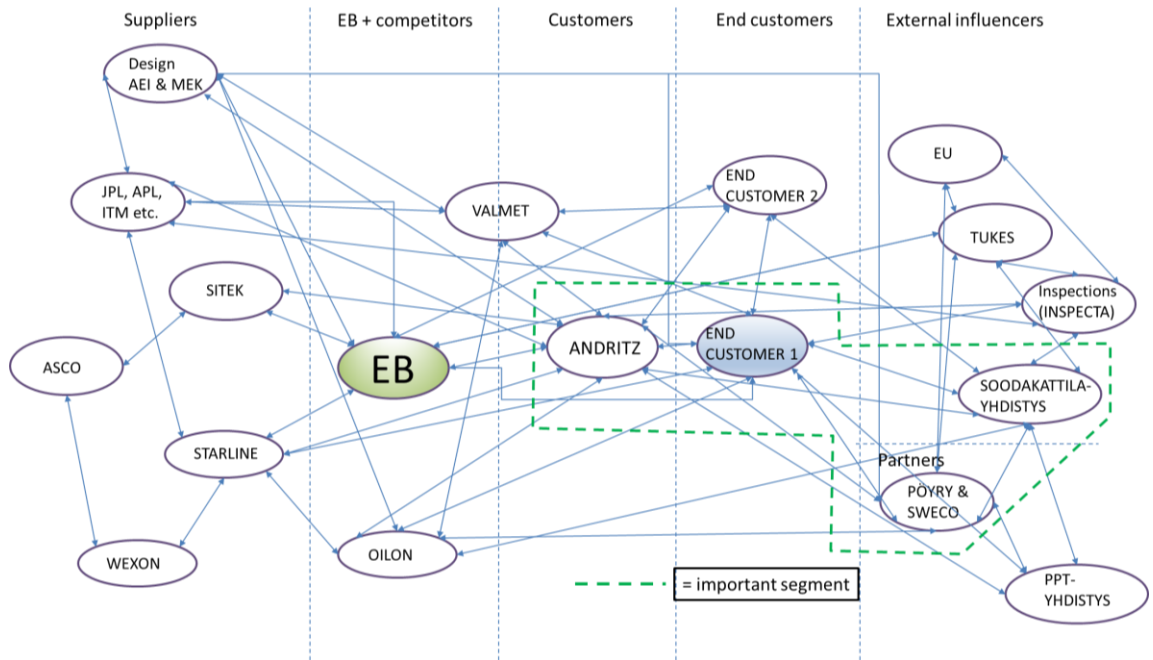
Figure 23. Recovery Boilers Finland network map after the workshop, with the important segment and power player.

The figure 23 above is tailored for use in the recovery boiler's in Finland case context, for other business areas it can be used only as a reference case.

6.2.3 Step 3 – The key internal stakeholder interviews

After the workshop commenced the key internal stakeholder interviews for feedback validation, in these interviews, show the created map and ask targeted questions such as:
- What is your opinion about this network map?
- Is it correct and is there something you would like to add/change/remove?
- Is the important segment correct?
- What do you feel is the relative influence of each player in the network?
- How do the power players change through the lifecycle of the plant in question?

Update the map network map according to comments and keep track of the comments for future use.

6.2.4 Step 4 – The external stakeholder interviews

Interview a supplier, an equal (but not competitor company), customer and an external influencer. Present the map created in the workshops to the interviewees and gather comments with targeted questions such as:

- What is your opinion about this network map?
- Is it correct and is there something you would like to add/change/remove?
- Is the important segment correct?
- What do you feel is the relative influence of each player in the network?
- How do the power players change through the lifecycle of the plant in question?

After the external key stakeholder interviews update the map and present the final map to internal key stakeholders & the workshop team. Lastly, the marketing owner starts using the map as support when creating targeted marketing. The network map needs to be updated frequently to understand the changes in the B2B networks.

6.3 FINAL - Lifecycle synchronized decision-making dynamics analysis tool

The business cases and customers vary a lot from each other and it is not possible to build a single decision-making dynamics formula that would work from case to case. It is the marketer's and salesperson's job to identify these dynamics. Therefore, it is only possible to create tools that support employees in their daily job. These tools were developed in the chapter 5.3 of this paper. In the final phase, the tools were taken for feedback validation with the key internal stakeholders. As a result, the key internal stake-holders stated that the tools presented are valid for recovery boilers in Finland case context and do not need further improvement. Therefore, the lifecycle synchronized decision-making dynamics analysis toolkit presented in the chapter 5.3 is final.

The guideline for tool creation presented in chapter 5.3 of this paper is valid for other business areas as well. When creating a lifecycle synchronized decision-making dynamics analysis tool for other business areas; one needs to follow instructions and theory presented in this paper carefully and pay special attention to the following things:

- Value network mapping workshop must be completed before creating the tool.
- The lifecycle of the end-user plant in question must be mapped before creating the tool.

- Key external stakeholders must be interviewed for understanding the decision-making dynamics in this specific field.

6.4   FINAL - Customer needs analyzing tool

The customer / end-user needs can be analyzed from an internal and external source. Both sources need to be used to get full insight. The internal source comes from data collection done during a project in CRM and internal co-creation workshop straight after the project has ended. The external insight is gathered from the end-user and key-stakeholder companies by asking targeted questions from the decision-makers and by doing co-creation with the key stakeholders.

Tool for analyzing customer needs from an internal source
In the chapter 6.4.1, the tool for analyzing customer needs from an internal source is tailored to be suitable for use with CRM-software (as per key stakeholder validation feedback).

Tool for analyzing customer needs from an external source
The tool developed in chapter 5.4.1 for analyzing customer needs from an external source can be considered as the final tool because the key internal stakeholders validated it as it is except for one enhancement. The enhancement is possible by using the CRM-software where the gathered customer need data is fed into for analysis and filtering.

6.4.1   Tool for analyzing customer needs using an internal source

During a project, employees of Enviroburners use the CRM-software to gather information about the customer and the end-user. This task is done by every employee in the company to obtain fuller insight and is part of the employee's daily job. Data that is gathered to CRM can be found from the appendix 5, chapter 3.

When the project is reaching its end, the employees are invited to fulfill a questionnaire. The questionnaire includes the following questions:

1. Whit whom you should have been in contact with during the project? (But for some reason this did not happen.)
2. From which company?
3. What was this person's job role in the project?
4. Is this person: A influencer, a decision maker or a key decision maker?
5. What were the objects of interest of this person?

The example questionnaire can be found in Appendix 6. The information received from the questionnaire is gathered and sorted to a list for use in a workshop. The list is printed with large font on an A1-sized paper to enable co-creation in the workshop. Everyone who fulfilled the list is invited to the workshop. The workshop is supported by powerpoint slides, which can be found from Appendix 4, slide 9. After the introduction, the keeper of the workshop opens the discussion by presenting names in the lists and invites people to think that does the person have a positive, negative or neutral attitude towards Enviroburners. If the person is thought to have a positive attitude of Enviroburners the name is highlighted with green, neutral with yellow, negative with red and if the attitude of the person is unknown it is highlighted with blue color. Then the participants are invited to write on post-it notes what caused the attitude and if the attitude is negative or neutral, what needs to be done to change the attitude to positive. This results in deep insight into the needs and organizational behavior of the end-user. After the workshop, the data is fed into the CRM-system. Preferably the workshop keeper is the marketing owner who can use the gathered information to create targeted marketing to the individuals.

6.5   FINAL - Lifecycle synchronized marketing toolkit

In chapter 5.5 initial proposal for lifecycle synchronized marketing toolkit was developed. This toolkit was taken for key internal stakeholder feedback validation. The internal key stakeholders validated the marketing toolkit without comments. Therefore, the marketing toolkit presented in chapter 5.5 of this paper is final for use in recovery boilers in Finland business area.

When creating the toolkit for other business areas, one needs to do the background research thoroughly. Business area specific background research includes the following stages:

- Acquiring understanding of the B2B network formation and dynamics.
- Acquiring understanding of the decision-making dynamics.
- Acquiring understanding of the customer needs.
- Lifecycle synchronization of the three topics above.

After the background research has been completed, the marketer has the foundation for creating a lifecycle synchronized marketing toolkit for a specific business area. The marketer can apply different marketing strategies and means of marketing presented in chapter 3.5 of this paper.

6.6 Owner of the concept - the end-user marketing manager and dividing internal marketing responsibility

The end-user marketing concept presented in this paper is an extensive entirety and needs "an owner" who is responsible for it. The owner of the marketing concept is called "the owner of the end-user marketing, pulp & paper industry" (later referred as "the marketing owner" or MO). The marketing owner's job is to build a relationship that is fruitful for both companies Enviroburners and the end-user. When doing this, many companies in the business network will be likely to gain additional value, one of them being the boiler manufacturer. This requires collaborative action through the whole organization of Enviroburners with the key stakeholders of the business network. Due to the size of Enviroburners, it is not possible to assign one employee with the title "owner of the end-user marketing, pulp & paper," instead this person must have other functions as well, for example contract manager. Because of the nature of the business, the marketing owner's role and interface with external stakeholders need to be looked from two directions: end-user and boiler manufacturer. These two approaches are described in detail in the chapters 5.5.1 and 5.5.2 of this paper.

The marketing owner concept was presented to the internal stakeholders for feedback validation. They showed interest in the concept because they had discussed earlier about the KAM-system in the management team. It was also noted that the KAM-system had some identical aspects with the marketing owner concept presented in this paper. Therefore, before applying the marketing owner concept, Enviroburners might need to do a modification to the organization structure and ways of working. Hence, further

research and decisions are needed before the marketing owner concept can be taken into practice.

6.7 Means of marketing

The means of marketing developed in chapter 5.7 were presented to the key internal stakeholders for validation. The key internal stakeholders agreed that the basic concept is correct; as the recovery boiler business is a conservative business, face-to-face discussions, seminars, trade fairs, and phone calls are the main means for contacting the key decision-makers of the end-user. Therefore, findings presented in chapter 5.7 can be considered final and valid for the recovery boilers in Finland business area.

The key internal stakeholders noted that the means of marketing stated above might not be valid for other business areas. Furthermore, it was noted that the digitalization is constantly changing the operating environment. There are signs that the B2B trust formation will follow the B2C trust formation, where digital peer-to-peer networks are widely used for sharing user experiences and recommendations. Therefore, Enviroburners must take actions to increase its digital presence in these networks. However, enhancing the digital presence and other digital marketing tools such as blog posts, search engine optimization, paid online marketing, prospect tracking in digital channels and targeted digital marketing are not covered in the toolbox.

6.8   Summary of the FINAL end-user marketing concept

The final marketing concept is a toolbox for the use of Enviroburners in the recovery boilers in Finland business area. The toolbox can be later "copied" to other business areas by applying the best practice, tools, and development methods presented in the chapters 3, 4 and 5 of this paper.

The toolbox contains four tools:

1. The value network mapping workshop, where an internal workshop is held to map the value network. Furthermore, the value network needs to be validated with the internal and external key stakeholders. Additionally, it is necessary to draw the important segment for your own company into the map to be able to target marketing (see chapter 6.2).

2. Lifecycle synchronized decision-making analysis tool. Analyzing decision-making dynamics is subjective science, and the results change from case-to-case and from viewer to another. Therefore, in the toolbox are "checklists" that support the marketing team when they seek for understanding (see chapter 6.3).

3. Customer needs analyzing tool. The tool has two stages. In the first stage, customer needs are analyzed from an internal source using CRM-software and workshop. In the second stage, the customer needs are analyzed from an external source by interviewing the key external stakeholders (see chapter 6.4).

4. Lifecycle synchronized marketing toolkit. Where several different marketing approaches are tailored for the use of Enviroburners for use in the recovery boilers in Finland business. The most important one of them is building trust; building trust is a long process where tailored products and services are co-created with the end-user and other stakeholder companies in the network to fulfill the end-user needs (see chapter 6.5).

The toolbox is used by the marketing owner (see chapter 6.6), who operates in the networks, creates targeted marketing and divides internal marketing responsibility. Illustration of the toolbox can be seen in figure 24 below.
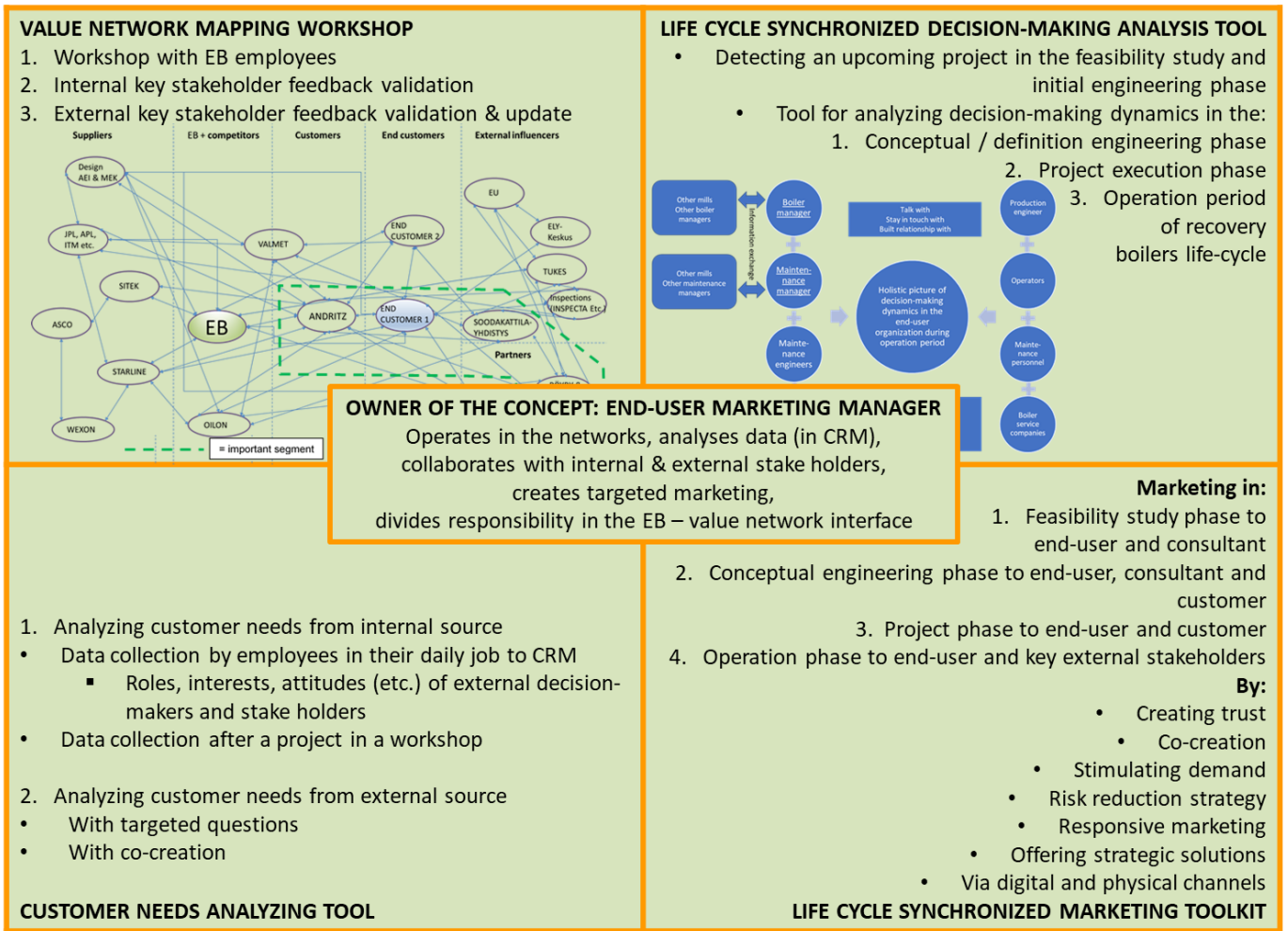
Figure 24. The final end-user marketing toolbox.

The toolbox creates a holistic tool for the end-user marketing: sometimes when you market to the end-user, you do not market directly to them. Instead in these cases, the marketing is done to a partner company, a customer, or an external influencer. The end-user marketing is co-creation and relationships, the old truth "the best marketing is well-working equipment and good service" is still valid. Moreover, the toolbox gives means for reaching this point. Marketing happens via personal relationships especially via phone calls and meetings. There are signs that B2B trust formation is slowly transferring towards B2C trust formation, where trust is formed in digital platforms. This is not yet the case in Finnish recovery boiler business, but Enviroburners should start preparing for it and create a digital marketing strategy.

7 Discussion & conclusion

In this chapter the thesis is concluded. First comes the executive summary, where a summarized report is provided for the use of the top management of Enviroburners. Then comes recommendations what Enviroburners should do next. Last, the author evaluates the credibility of the thesis.

7.1 Executive summary

This thesis was commissioned to build an end-user marketing concept for Enviroburners Ltd, Finland based industrial burner supplier. Enviroburners Ltd often operates as a sub-contractor to a project contractor, which makes the turnkey delivery to the ultimate plant owner – the end-user. These end-users are important indirect decision-makers. Currently, the case company does not have a systematic method to influence these indirect decision-makers. The marketing concept is targeted to the recovery boilers in Finland business area, with the idea that the logic of this case can be copied after the thesis to other business areas as well.

The thesis process started by acquiring knowledge of the best practices of B2B (end-user) marketing from topic-related literature. Secondly, an analysis of the Enviroburners end-user context was conducted with two internal and seven external key stakeholder interviews. Analysis of the end-user context was followed by developing an initial proposal of the end-user marketing concept with internal stakeholder interviews and workshop. In the final phase, the initial proposal was validated with internal key stakeholders. As a result, the final end-user marketing concept was created.

The marketing concept is based on six building blocks. The first block examines B2B-networks of the Finnish recovery boiler business: how they are formed, and which companies are important decision-makers from the case company's perspective. The second block deals with industrial decision-making dynamics, where the end-user's buying behavior and the process are studied. The third block analyses the end-user needs. These three blocks create the necessary pre-understanding and foundation for the end-user marketing. In the fourth block, different marketing approaches are studied and proposed for the use of the case company in the recovery boilers in Finland business area. The fifth block binds the previous blocks into the lifecycle of a recovery boiler. All this is a

complex combination and needs an owner inside the case company – the end-user marketing owner, which creates the sixth building block. These six building blocks form the conceptual framework.

The proposed end-user marketing concept is a toolbox that allows Enviroburners Ltd to analyze and understand the forces in B2B networks systematically. Furthermore, the toolbox gives tools for understanding decision-making dynamics and needs inside the end-user organization. The toolbox provides targeted marketing means and strategies through the whole lifecycle of the recovery boiler. The marketing must be viewed as a holistic concept: meaning that end-user marking is also done via boiler manufacturers, consultants and boiler service companies. Furthermore, the marketer must understand the dynamics in these companies as well. In the recovery boilers in Finland business, marketing does not mean "traditional advertising," usually it means co-creation and delivering the promised value or making yourself and your company visible in the B2B networks. The best marketing is well-working equipment and good service; the toolbox gives means for reaching this point.

The toolbox consists of four tools:
1. Value network mapping workshop
2. Lifecycle synchronized decision-making analysis tool
3. Customer needs analyzing tool
4. Lifecycle synchronized marketing toolkit

The 1st tool is the value network mapping workshop, where an internal workshop is held to map the business network. Furthermore, the value network map needs to be validated with the internal and external key stakeholders. Additionally, it is necessary to draw the important segment for your own company into the map, to identify where you need to target your marketing efforts. The 2nd tool is the lifecycle synchronized decision-making analysis toolkit. Analyzation of decision-making is a subjective science and the results change from case-to-case and from viewer to another. Therefore, the tools in the toolbox are "checklists" that support the marketing team when they seek for understanding. The 3rd tool is customer needs analyzing tool where Enviroburners Ltd employees systematically collect data to the CRM-system. This tool includes two stages: in the first stage, customer needs are analyzed from an internal source and in the second stage the customer needs are analyzed from an external source. These three tools create the necessary pre-understanding and with this foundation, it is possible to start lifecycle

synchronized targeted marketing. In the 4th tool, several different marketing approaches are tailored for the use of Enviroburners, to be used in the recovery boiler business in Finland. The most important one of them is building trust. Building trust is a long process where tailored products and services are co-created with the end-user and other stakeholder companies in the network to fulfill the end-user needs. Other significant marketing strategies are stimulating demand and risk reduction strategies. In the center of the toolbox is the end-user marketing manager who owns the marketing concept: The marketing manager uses the toolbox, operates in the networks, analyses data, creates targeted marketing plans and divides responsibility in the Enviroburners – value network interface. See figure below for an illustration of the toolbox.
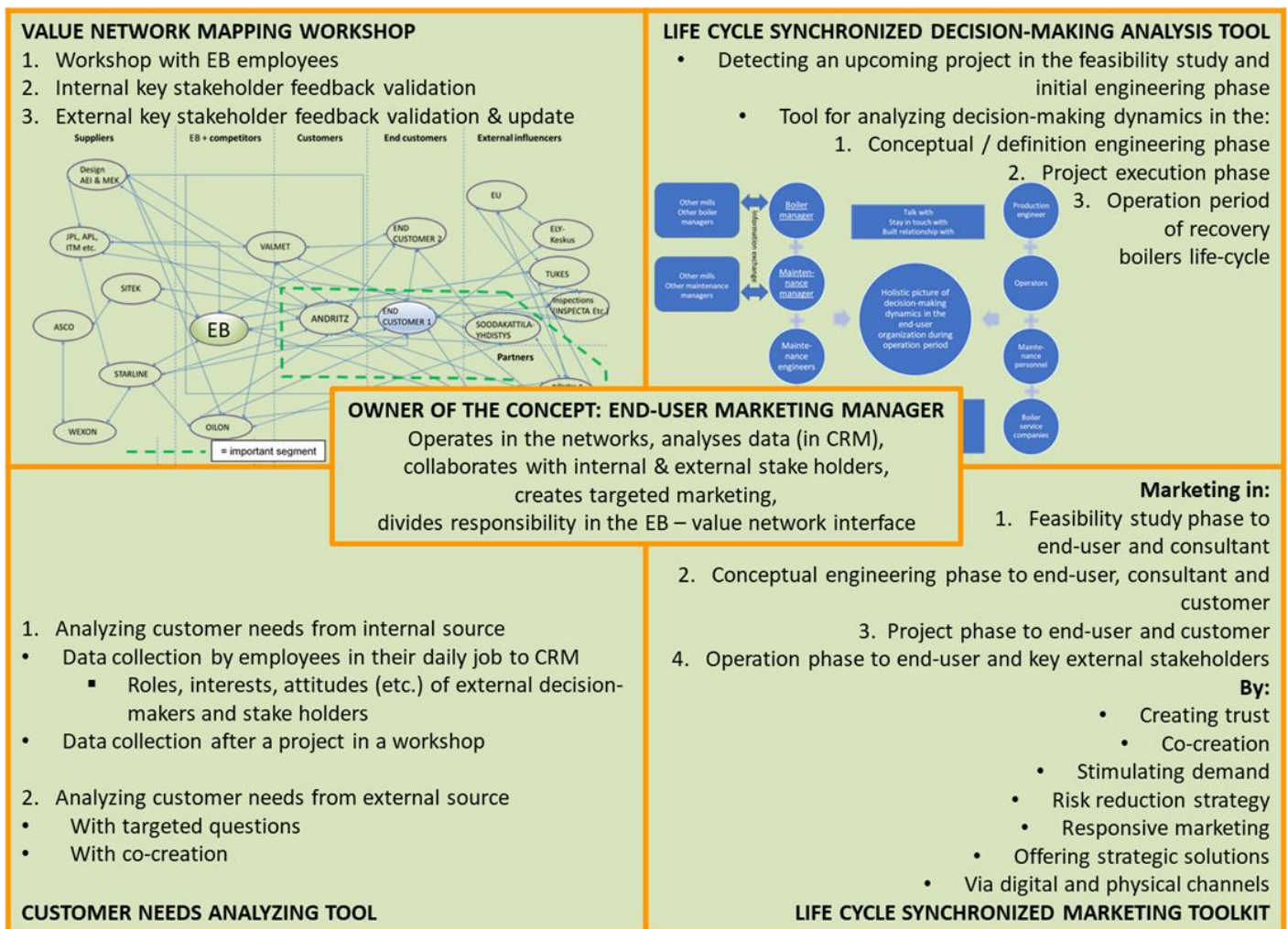

Figure. Toolbox for end-user marketing.

As per the research results, many of the companies in the network operate according to the principles of the toolbox on a basic level, but the companies do not utilize it systematically. In these cases, the marketing team's expertise is crucial. The toolbox allows Enviroburners Ltd to start doing end-user marketing in a systematical way as per the

researched best practice. Using the toolbox enables real collaboration with the end-user, this creates a competitive advantage. Next step for Enviroburners Ltd is to start using the toolbox. Some parts of the toolbox are ready for implementation immediately and some need still bit more improvement before taking into action.

During the research, it was realized that companies in the network have not done extensive investments to modern digital marketing, where you track the moves of the prospects in the digital channels and create digital targeted marketing to turn them into leads. This is as well the biggest limitation of the toolbox; the toolbox does not offer tools for modern digital marketing. But in another hand, you need to first build trust as the foundation of the marketing and as per the results of this research, it seems that trust building in the Finnish recovery boiler business cannot be founded on a digital platform (yet). It is shown that B2B trust building is moving towards B2C trust building, where trust is built in digital peer to peer networks. Therefore, this aspect should not be overlooked, and further research is recommended.

7.2   Practical next step recommendations

The next step is to start implementing the marketing concept. This thesis provides solutions mainly on a strategic level, how the actual implementation takes place needs to be still thoroughly thought. For example: is it possible to implement the marketing concept only in the recovery boilers in Finland business area or does it require companywide implementation in other business areas as well including organizational changes? If the marketing concept is implemented only in one business area, there is a risk that the company lacks strategic direction. One of the biggest tasks before full implementation is purchasing of the new CRM-software, as using of the toolbox will result to a large amount of data. This data needs to be collected, processed and analyzed effectively and conveniently. In any case, the minimum action is to do training to all the employees who operate in the customer interface as the toolbox gives tools for everyone's daily job that enable a better understanding of customer needs and improved customer service via mindset change.

Further research regarding opportunities and means of modern digital marketing should be made to create a digital marketing plan; this is a natural continuum for this thesis. One aspect that was not researched in this paper is how marketing should react to competitors' behavior: what kind of data needs to be collected and how it should be

analyzed? One more interesting subject for further research would be end-user LCC (Life Cycle Cost) assessment for burners: what is currently measured by the end-users and what is the future of LLC assessments, this would allow even deeper analyzation of end-user needs.

7.3 Self-evaluation of thesis project credibility

In this chapter, the thesis project credibility is self-evaluated by the author. The thesis is evaluated via four criteria.

1. Credibility
2. Transferability
3. Dependability
4. Confirmability

Article "strategies for ensuring trustworthiness in qualitative research" by Andrew Shenton (2004, pp. 63-73) has been used as the guideline for the self-evaluation below.

Credibility

Credibility refers to the degree to which the findings of the qualitative research make sense.

Table 10. Credibility.

Measures of credibility	Applicability in this research
Adoption of appropriate, well-recognized research methods.	For data gathering "interview guide approach" (Patton, 1990, p.288) was used, where topics and issues to be covered are predefined, but interviewer decides sequence and wording of the questions.
Development of early familiarity with the culture of participating organizations.	The interviewer had been working in the specific field and business network for 13 years.
Random sampling of individuals serving as informants.	Partly applicable. Interviews were targeted to get the best possible knowledge in the field. Some of the interviewees were selected by the author and some were proposed by the internal key stakeholders of Enviroburners.

Triangulation via the use of different methods, different types of informants and different sites.	Interviews and workshop were used. Interviewees were from different positions and different companies thru the whole business network. See appendix 3 for interview map.
Tactics to help ensure honesty in informants.	Interviews were anonymous and volunteer. Trust was built by explaining the gain for the whole business network in case the research is successful.
Iterative questioning in data collection dialogues.	By using "the interview guide approach" the conversation returned naturally to the same topics, making the questioning iterative.
Negative case analysis.	Not applied.
Debriefing sessions between researcher and superiors.	Frequent debriefing sessions were held with the instructor and key stakeholders of Enviro-burners.
Peer scrutiny of the project.	The thesis project/process was presented three times to fellow students during the process for feedback and improvement proposals. One peer evaluation was made when the thesis was at its final stage.
Use of "reflective commentary."	After every interview, the flow of the interview and the credibility of the results were evaluated.
Description of background, qualifications and experience of the researcher.	Not applied.
Member checks of data collected and interpretations/theories formed.	Straight after the interview topics, questions and answers were briefly reviewed.
A thick description of phenomenon under scrutiny.	Provided in the sections 1.2, 1.3 and the literature review chapter of this thesis.
Examination of previous research to frame findings.	In the literature review, best practice from multiple B2B journals and widely used textbooks were examined.

Transferability

Transferability refers to the generalizability of the quantitative research, it is assured by describing thoroughly how the data collection has taken place.

Table 11. Transferability

Measures of transferability	Applicability in this research
The number of organizations taking part in the study and where they are based.	Eight organizations, all based in Finland. three of them being the end-users.
Any restrictions on the type of people who contributed data.	Some of the interviewees had previous knowledge about B2B marketing and some did not.
The number of participants involved in the fieldwork.	One.
The data collection methods that were employed.	Recording and co-creation workshop.
The number and length of the data collection sessions.	Nine sessions, 45 -75 minutes each.
The time period over which the data was collected.	August – September 2018

Dependability

Dependability in the qualitative study entails the reliability, consistency and accurateness of the study. The dependability can be increased by reporting the research process in detail, so that other researchers would be able to conduct similar research again and receive similar results.

Table 12. Dependability

Measures of dependability	Applicability in this research
The research design and its implementation, describing what was planned and executed on a strategic level.	The research design is presented in chapter 2.1. The implementation followed the research design.
The operational detail of data gathering, addressing the minutiae of what was done in the field.	The data plan is presented in chapter 2.2. Practices are presented before each data collection in chapters 4 and 5. Data plan and those practices were followed in practice.

| Reflective appraisal of the project, evaluating the effectiveness of the process of inquiry undertaken. | Evaluated in the end of chapter 7.3 self-evaluation of thesis project credibility. |

Confirmability

Confirmability in the qualitative research refers to the objectivity of the researcher and assurance that the findings originate from the informants only.

Table 13. Conformability

Measure of confirmability	Applicability in this research
Triangulation to reduce the effect of investigator bias.	Discussed in end of chapter 7.3 self-evaluation of thesis project credibility.
Admission of researcher's beliefs and assumptions.	Discussed in end of chapter 7.3 self-evaluation of thesis project credibility.
Recognition of shortcomings in study's methods and their potential effects.	Discussed in end of chapter 7.3 self-evaluation of thesis project credibility.
In-depth methodological description to allow the integrity of research results to be scrutinized.	Description of research methods used before each data collection section and in chapter 2.2 the data plan.
Use of diagrams to demonstrate "audit trail."	The data plan is presented in chapter 2.2; interview map can be seen in appendix 2. Interview results are shown visual form in each section.

In the thesis process, the basic principle was that triangulation must be used when gathering data and seeking for knowledge, meaning that everything must be cross-checked from multiple sources to achieve regularity. In the literature review, this was achieved by using multiple sources of information when seeking for knowledge. Sources used were journal articles in peer-reviewed business marketing journals and commonly used B2B marketing textbooks. In the data gathering, data was gathered with qualitative interviews through the whole business network from sub-suppliers of Enviroburners all the way to end-users and partner companies (see interview map in appendix 3). As a preparation for the interviews, a base questionnaire was formed, and it was modified to match the interviewee's position in the business network and his/her company. Trust was formed by explaining the purpose of the research and what is the expected gain in the whole

business network in case the research reaches its targets. Further trust was built by agreeing that names and companies of the interviewed individuals will not be published, and companies are not trackable to the answers. As a result, only interviewee's job title and company's location in the B2B network is published. Interviews were recorded to enable observation of interviewees behavior and honesty during the interview and better data analyzation after the interview. The tailored marketing concept was created by using the gathered data and knowledge as a foundation. The means of the creation process were internal stakeholder interviews and a workshop. The results were validated with key internal stakeholders. Some of the key concepts were taken back to the previously interviewed key external stakeholders for further comments and validation.

The thesis process followed the research plan well, but there were some difficulties in the execution. For example, testing of the questionnaire could have been better, as the wording of questions evolved a bit too much from the first interview to the last. The selected interview type was "interview guide approach" (Patton, 1990, p.288), where topics and issues to be covered are predefined, but interviewer decides sequence and wording of the questions. During the interviews, it was realized that by using the interview guide approach questions were often asked unintentionally in a guiding way, which may affect the answers. In the concept development phase, the biggest difficulties were in the creation of the lifecycle synchronized decision-making analysis tool and customer needs analysis tool. Because the data collection of the subjects resulted only to relatively thin data (the typical answer was "it is up to the marketer's expertise to know these things") therefore, the concept creation on these subjects had to rely much on the knowledge acquired from the literature. The thesis process was effective, and work was continuous without longer breaks interrupting the work.

Even though the thesis had some limitations in the execution phase, it fulfilled the evaluation criteria set by Shenton (2004, pp. 63-73) on satisfactory level (see tables 10-13 above). Therefore, the thesis results can be considered proven and credible.

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Conditions favoring different buying strategies

	Competitive buying	Cooperative buying	Command buying
Product characteristics	Low or high frequency of purchases Low switching costs (standardized product) Product performance can be precisely specified	High frequency of purchases High switching costs (customized product) Product performance difficult to specify	High frequency of purchases High switching cost Product can be specified but is customized
Industry characteristics	Supplier's industry fragmented Intense price competition among suppliers Hight rate of technical change Tradition of competition buying	Both industries are concentrated Stable competitive situation in each industry Low rate of technical change Tradition of cooperative buying	Buyer's industry concentrated but supplier's industry fragmented Average level of competition Low rate of technical change Tradition of command buying
Company characteristics	Buying company is larger than supplier Buying company prefers competitive buying Buying company lacks familiarity with the product Centralized buying organization	Both companies are similar in size Both companies seek cooperative relationship Both companies are familiar with each other and respect each other's technical knowledge Organizational structures are similar	Buying company much larger than supplier Buying company prefers to dominate supplier's costs and technology Buying company is familiar with suppliers Buyer has more professional organization than supplier
Individual characteristics	Product perceived as important by buyer Buyer is not risk averse for this purchase Individuals who interact do not know each other well Buyer prefers competitive buying approach	Product is perceived as important by both parties Buyer is risk-averse for this purchase Individuals who interact know each other Both buyer and seller prefer a cooperative relationship	Product is important to buyer Buyer is risk-averse for this purchase Individuals know each other personally Buyer prefers a command strategy and supplier accepts cooperative role

(Campbell, 1985, p.43)

Inter-organizational contact pattern

Nature and frequency of intercompany contact pattern

Nature purpose of contact (N)
1 = Commercial negotiations
2 = Technical negotiations
3 = General commercial information exchange
4 = General technical information exchange
5 = Commercial problem solving
6 = Technical problem solving
7 = Technical training and advice
8 = Progressing (delivery and technical)
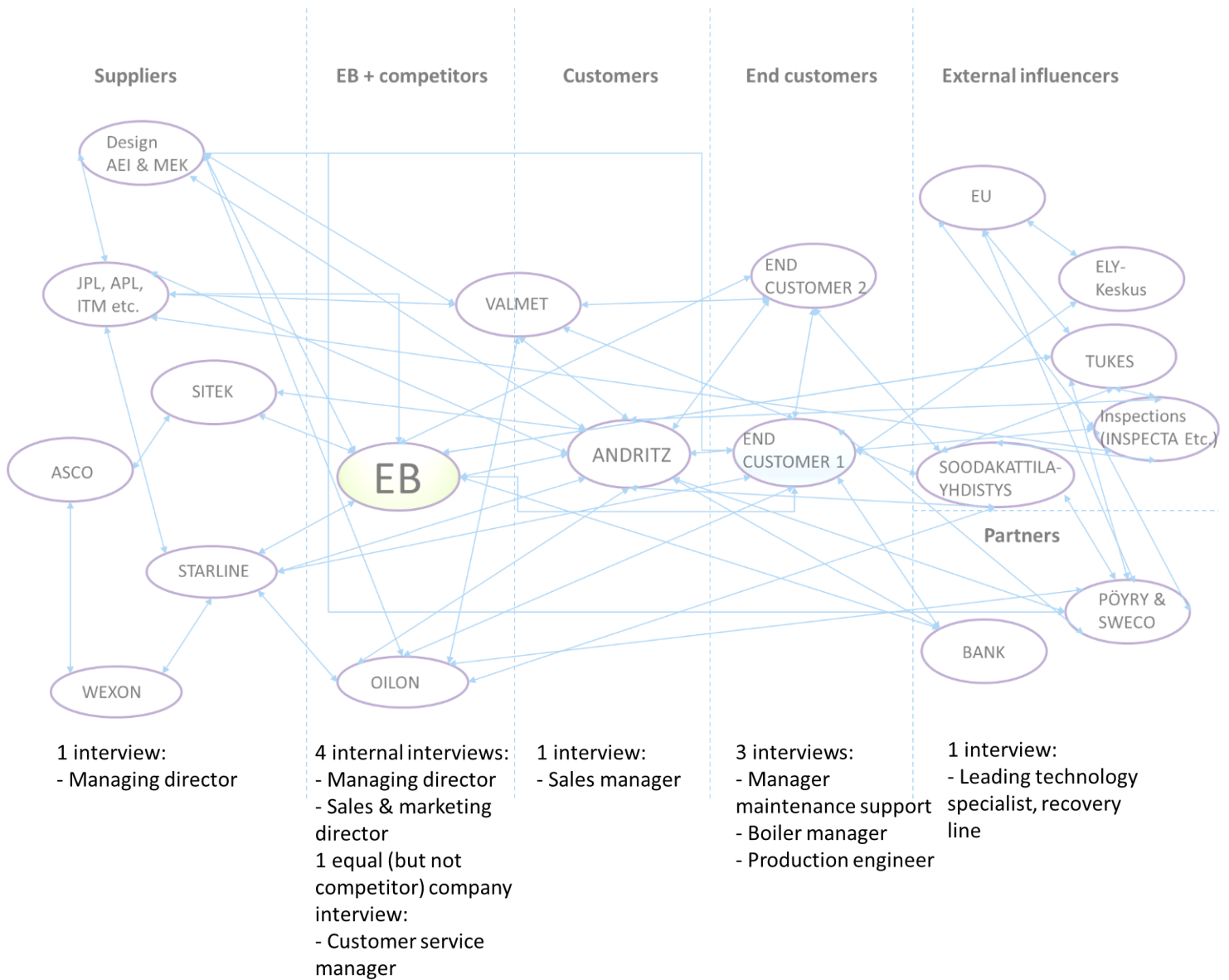9 = Other (appendix var 365)

Frequency of contact (F)
1 = Very frequent (weekly or more)
2 = Frequent (once every 3 months or
    more but less than weekly)
3 = Infrequent (less than every 3 months
    but more than once a year)
4 = Very infrequent (once a year or less)

Customer functions

Supplier functions	1 General mgt		2 Prodn		3 Quality		4 R&D eng		5 Finance		6 Mkting		7 Prchsing		8 Other		9 Other	
	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F
1 Gen. mgt	34	4																
2 Prodn																		
3 Quality					6	3												
4 R&D eng					46	2	46	2					46	3				
5 Finance																		
6 Jun mkt.	34	4			6	3	246	2			3	4	135	2	8	4		
7 Sen mkt.							4	3					3	3				
8 Sal. abr.																		
9 Other***															8	3		

(Cunningham and Homse, 1986, p. 8)

Interview map with interviewees job titles

| Suppliers | EB + competitors | Customers | End customers | External influencers |

1 interview:
- Managing director

4 internal interviews:
- Managing director
- Sales & marketing director
1 equal (but not competitor) company interview:
- Customer service manager

1 interview:
- Sales manager

3 interviews:
- Manager maintenance support
- Boiler manager
- Production engineer

1 interview:
- Leading technology specialist, recovery line

Workshop slides of the internal workshop

Slide 1

Slide 2

Slide 3

Networks:
- Enviroburners Ltd is part of a complex network of companies.
- One company's behavior, resources and personal relationships affects directly or indirectly to Enviroburners.
- In network it is important to identify important segment for your own company.
- In network there can be one power player which sets the direction.

Slide 4

Slide 5

Slide 6

Slide 7

The most important people in the network during different life-cycle phases:

- Whit whom you were in contact with?
    - What subjects did you discuss about?
    - What were the objects of interest of these people?
    - Was this person influencer or decider?
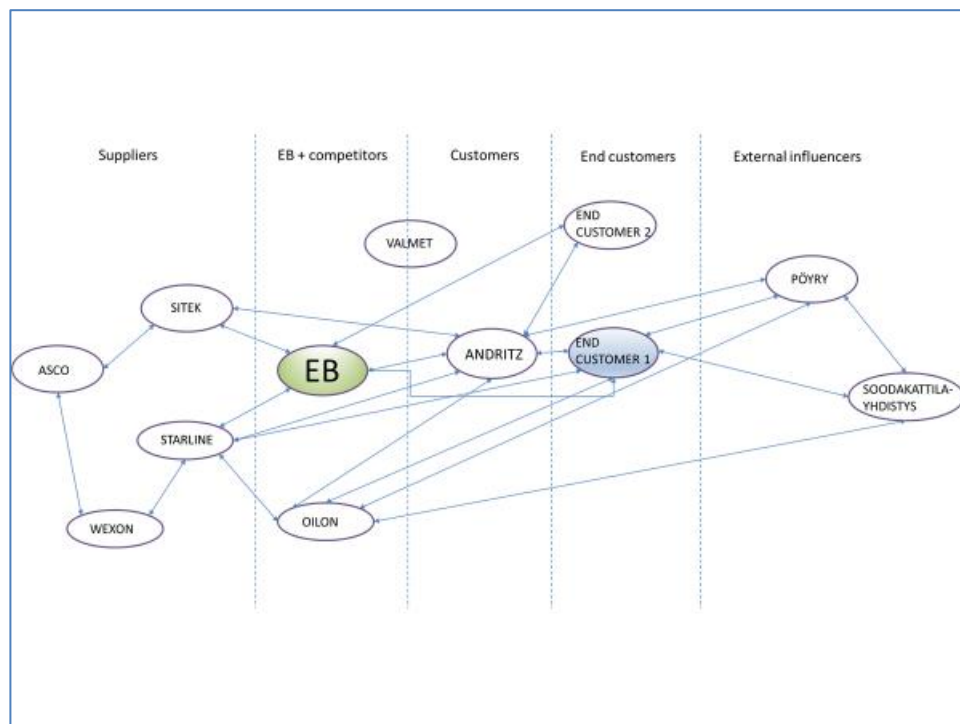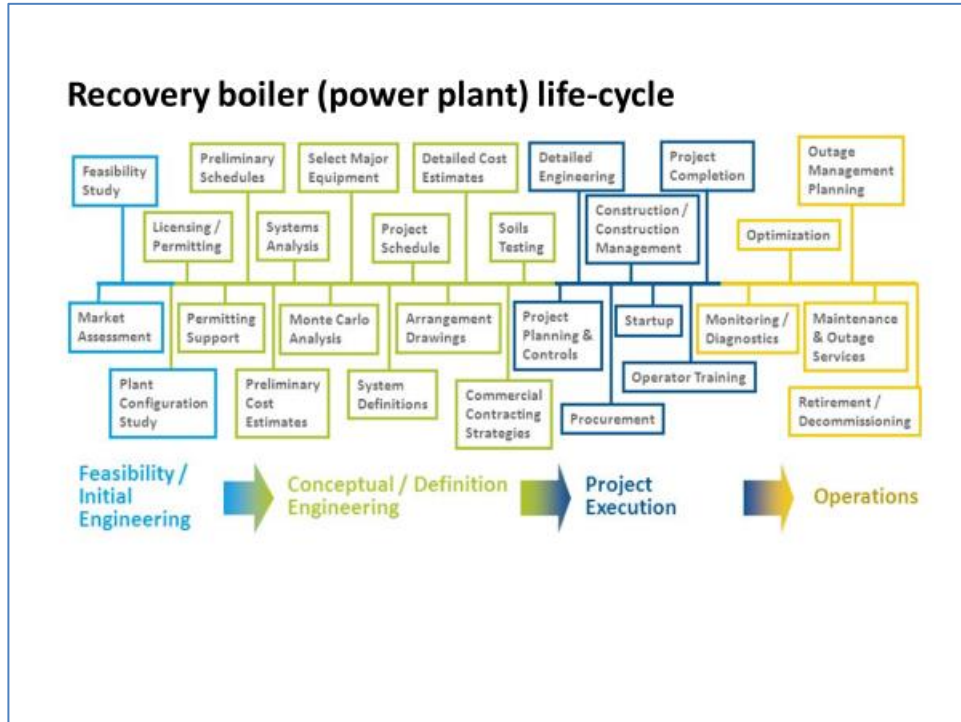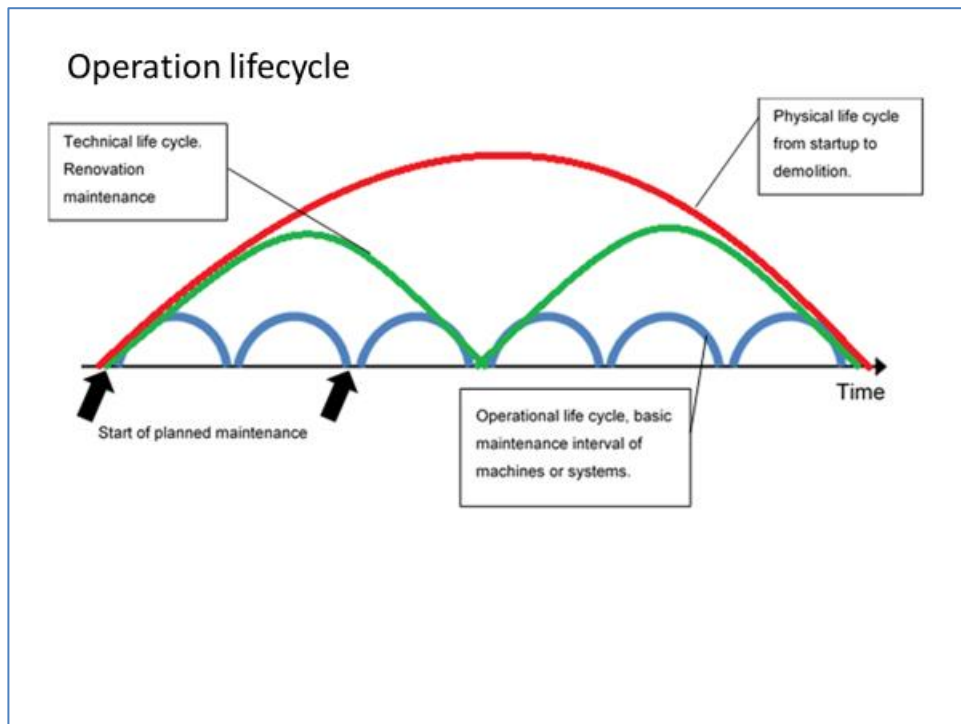   - In what phase of the projects lifecycle did these discussions take place?

- Whit whom you should have been in contact with that the project would have been successful?
    - For fluent execution of the project.
    - Increasing sales.
    - Customer would be satisfied.
    - We would understand the needs of the customer better.
    - Our products would work better.
    - Etcetera...

Please note: Influencer is not always a purchaser. For example designer can (intentionally or unintentionally) create a specification that only one supplier can fulfill, in this case the designer is the decider.

Slide 8

People with whom you were in contact in xxxx project

Name: _____

Company	Name and job role	Decider	Key decider	Influencer	Project phase	Objects of interest
People with whom you were in contact with during the project						

Company	Name and job role	Decider	Key decider	Influencer	Project phase	Objects of interest
People with whom you should have been in contact with during the project						

Slide 9

CRM requirements

1. **Value network mapping**
- Company data and position in the value network.

2. **Decision-making analysis tool**
- Naming the timeline synchronized "power player" companies for each end-user.
- Formation of the decision-making team.
- Organizational forces: Goals, objectives, strategies and organizational positioning of purchasing.
- Group forces: Roles, relative influence and patterns of interaction.
- Individual forces: Job function, buying motives and past experience.
- External influencers: Consultants, boiler manufacturers and reference cases and their relative influence into the decision making.
- Interaction note tool: For documenting the discussions.

3. **Customer needs analysis tool**

   From the internal source:
- Whit whom you were in contact during a project? (including company and job role)
- Whit whom you should have been in contact during a project? (including company and job role)
- Objects of interest of these individuals and the relative influence of these individuals.
- Does this individual have a positive, negative, neutral or unknown attitude towards Enviroburners?
- What needs to be done to change neutral or negative attitude to positive.

   From external source:
- Service agreement preferences
- Role of consultants and boiler companies in the end-user organization
- Scope preferences
- The composition of end-user's equipment
- Lifecycle phase of the end-user's equipment and current state

4. **Customizing a lifecycle synchronized marketing toolkit for Enviroburners**
- Marketing means to be used for the end-user
- Stage of the marketing
- Marketing owner's special toolkit for assigning schedules and tasks for co-workers.

Form template – people with whom you should have been in contact with

People with whom you should have been in contact with during the project						
Company	Name and job role	Decider	Key decider	Influencer	Project phase	Objects of interest