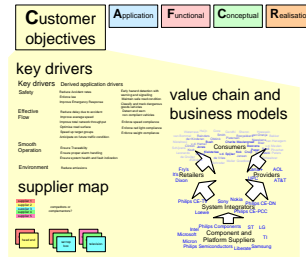# The customer objectives view

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Abstract

The purpose of the customer objectives view is described. A number of methods or models is given to use in this view: customer key drivers to understand the essentials, value chains and business models to understand the position of the customer and a supplier map to understand the supply side of the customer.

1 Introduction

The customer objectives view describes the goals of the customer, the **what**. The goal of articulating these objectives is to better understand the needs and therefore to be able to design a better product.

In searching the objectives some focus on the product is needed, although the architect must keep an open mind. The architect must prevent a circular reasoning, starting from the product functionality and, blinded by the product focus, finding only objectives matching with this same functionality.

Ideally the trade-offs in the customer domain become clear. For instance what is the trade-off between performance and cost, or size and performance or size and cost. The key driver method articulates the essence of the customer needs in a limited set of drivers.
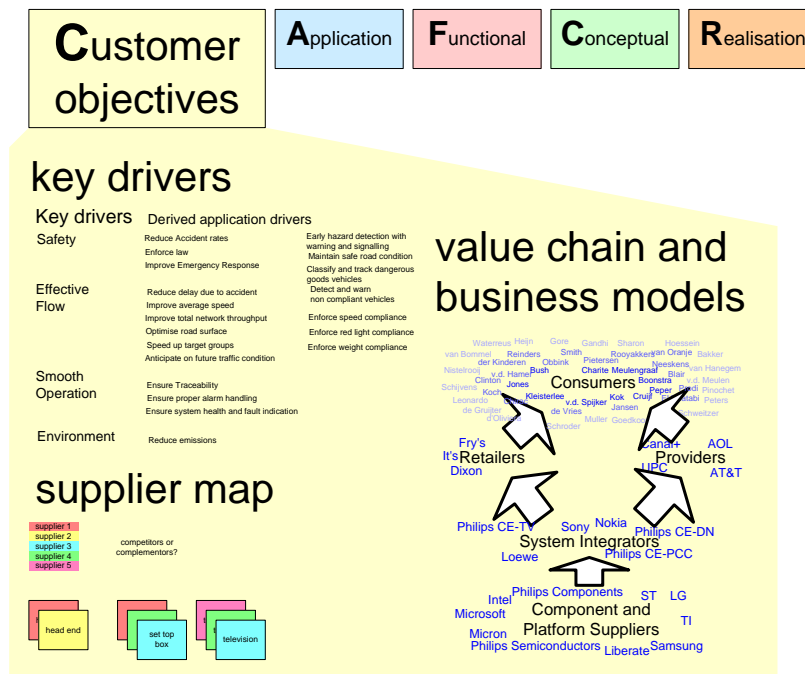

Figure 1: Overview of Customer Objectives View methods

The customer is often driven by his context. Some of the models and methods described here address ways to understand the customer context, such as value chains and business models. Value chains and business models are used to address the customer's customer. The supplier map addresses the supplying side of the customer.

Figure 1 shows an overview of the methods in the customer objectives view.

2 Key drivers

The essence of the objectives of the customers can be captured in terms of customer key drivers. The key drivers provide direction to capture requirements and to focus the development. The key drivers in the customer objectives view will be linked with requirements and design choices in the other views. The key driver submethod gains its value from relating a few sharp articulated key drivers to a much longer list of requirements. By capturing these relations a much better understanding of customer and product requirements is achieved.
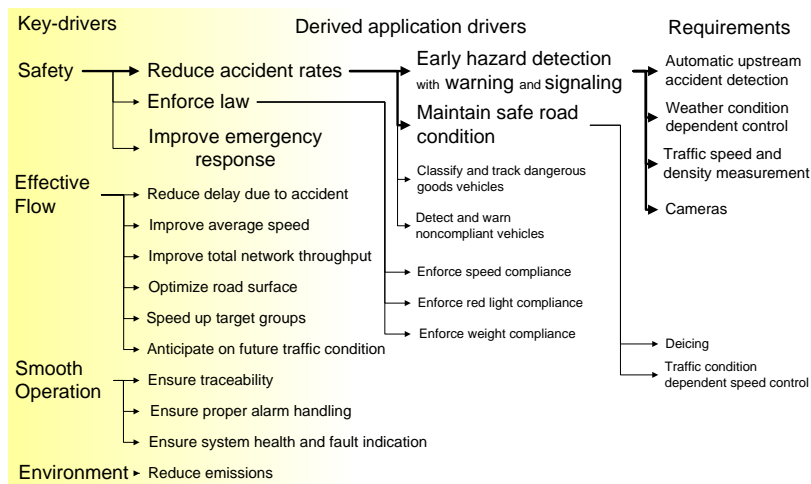
Note: the graph is only partially elaborated for application drivers and requirements

Figure 2: Example of the four key drivers in a motorway management system

Figure 2 shows an example of key drivers for a motorway management system, an analysis performed at Philips Projects in 1999.

Figure 3 shows a submethod how to obtain a graph linking key drivers to requirements. The first step is to define the scope of the key driver graph. For Figure 2 the customer is the motorway management operator. The next step is to acquire facts, for example by extracting functionality and performance figures out of the product specification. Analysis of these facts recovers implicit facts. The requirements of an existing system can be analyzed by repeating *why* questions. For example: "Why does the system need *automatic upstream accident detection*?". The third step is to bring more structure in the facts, by building a graph, which connects requirements to key drivers. A workshop with brainstorms and discussions is an effective way to obtain the graph. The last step is to obtain feedback from customers. The total graph can have many n:m relations, i.e. requirements

• Define the scope specific.	in terms of **stakeholder** or **market segments**
• Acquire and analyze facts	extract **facts** from the **product specification** and ask **why questions** about the **specification** of **existing products**.
• Build a graph of relations between drivers and requirements by means of brainstorming and discussions	where **requirements** may have **multiple drivers**
• Obtain feedback	discuss with **customers**, **observe** their **reactions**
• Iterate many times	**increased understanding** often triggers the **move** of issues from **driver** to **requirement** or vice versa and **rephrasing**

Figure 3: Submethod to link key drivers to requirements, existing of the iteration over four steps

that serve many drivers and drivers that are supported by many requirements. The graph is good if the customers are enthusiastic about the key drivers and the derived application drivers. If a lot of explaining is required then the understanding of the customer is far from complete. Frequent iterations over these steps improves the quality of the understanding of the customer's viewpoint. Every iteration causes moves of elements in the graph in driver or requirement direction and also causes rephrasing of elements in the graph.

• Limit the number of key-drivers	minimal **3**, maximal **6**
• Don't leave out the obvious key-drivers	for instance the well-known **main function** of the product
• Use short names, recognized by the customer.	
• Use market-/customer- specific names, no generic names	for instance replace "ease of use" by "minimal number of actions for experienced users", or "efficiency" by "integral cost per patient"
• Do not worry about the exact boundary between Customer Objective and Application	create clear **goal means** relations

Figure 4: Recommendations for applying the key driver submethod

Figure 4 shows an additional set of recommendations for applying the key driver submethod. The most important goals of the customer are obtained by limiting the number of key drivers. In this way the participants in the discussion are forced to make choices. The focus in product innovation is often on differentiating features, or unique selling points. As a consequence, the core functionality from the customer's point of view may get insufficient attention. An example of this are cell phones that are overloaded with features, but that have a poor user interface to make connections. The core functionality must be dominantly present in the graph. The naming used in the graph must fit in the customer world and be as specific as possible. Very generic names tend to be true, but they do not help to

really understand the customer's viewpoint. The boundary between the Customer Objectives view and the Application view is not very sharp. When creating the graph that relates *key drivers* to *requirements* one frequently experiences that a key driver is phrased in terms of a (partial) solution. If this happens either the key driver has to be rephrased or the solution should be moved to the requirement (or even realization) side of the graph. A repetition of this kind of iterations increases the insight in the needs of the customer in relation to the characteristics of the product. The **why**, **what** and **how** questions can help to rephrase drivers and requirements. The graph is good if the relations between goals and means are clear for all stakeholders.

3   Value chain and business models

The position of the customer in the value chain and the business models deployed by the players in the value chain are important factors in understanding the goals of this customer.

Figure 5 shows an example value chain from the Consumer Electronics Domain. At the start of the chain are the component suppliers, making chips and other elementary components such as optical drives, displays, et cetera. These components are used by system integrators, building the consumer appliances, such as televisions, set top boxes and cellphones. Note that this value chain is often longer than shown here, where components are aggregated in larger components into subassemblies and finally into systems.
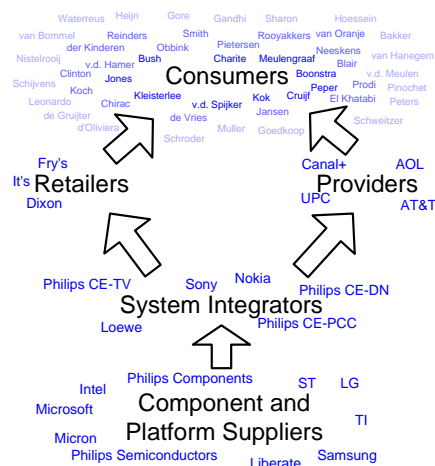

Figure 5: Example value chain

The consumer appliances itself are distributed through 2 different channels:

the retailers and the service providers. Retailers sell appliances directly to the consumers, earning their money with this appliance sales and sometimes also with maintenance contracts for these appliances. Providers sell services (for instance telecom, internet), where the appliance is the means to access these services. The providers earn their money via the recurring revenues of the services.

Retailers and service providers have entirely different business models, which will be reflected by differences in the key drivers for both parties.

Reality is even much more complicated. For instance adding the *content* providers to the value chain adds an additional set of business models, with a lot of conflicting interests (especially Digital Rights Management, which is of high importance for the content providers, but is often highly conflicting with (legal) consumer interests).

4 Suppliers

The value chain must be described from the point of view of the customer. The customer sees your company as one of the (potential) suppliers. From the customer point of view products from many suppliers have to be integrated to create the total solution for his needs.
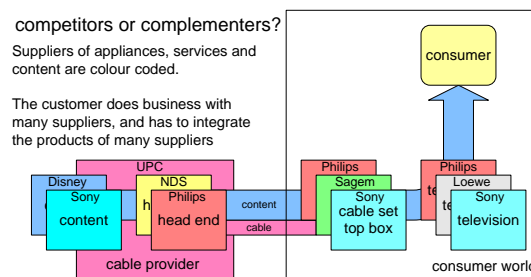

Figure 6: Example of simple supplier map for a cable provider

In terms of your own company this means that you have to make a map of competitors and complementers, which together will supply the solution to the customer. Figure 6 shows an example of a simple supplier map for a cable provider. If your company is delivering set top boxes, then some companies can be viewed as competitor and complementer at the same time.

References

[1] Gerrit Muller.   The system architecture homepage.   http://www.gaudisite.nl/index.html, 1999.

History

Version: 0.3, date: November 11, 2004 changed by: Gerrit Muller

- replaced Figure keydriver recommendations by methods figure and separate recommendation figure.

Version: 0.2, date: July 8, 2002 changed by: Gerrit Muller
- updated figure supplier map

Version: 0.1, date: July 3, 2002 changed by: Gerrit Muller
- updated key driver figure
- updated figure supplier map

Version: 0, date: March 26, 2002 changed by: Gerrit Muller
- Created, no changelog yet