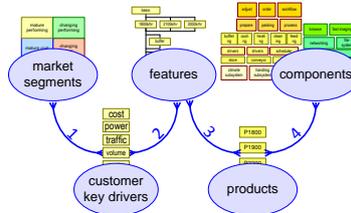# A Method to Explore Synergy between Products

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Abstract

Many companies struggle to benefit from similarities between products they sell. The challenge is to find these commonalities that can be shared between products, while the product value for different customers is not (too much) compromised. A method is provided to understand the playing field both in marketing and technology. Better understanding of the playing field facilitates choices about synergy.

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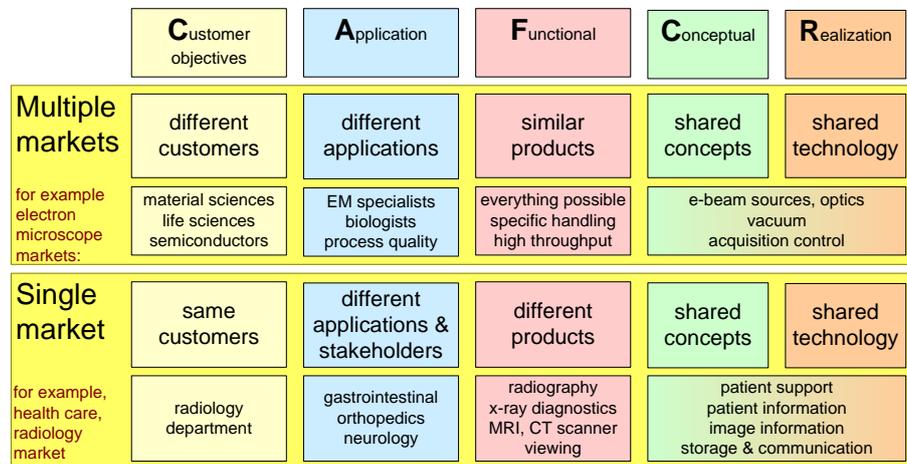
1   Introduction

Figure 1: Types of synergy

We cab distinguish two types of situations where we can strive to harvest synergy, as illustrated in Figure 1:

Single market, different products where the customer world is homogeneous, while products can be quite heterogeneous in both concepts and technologies that are used.

Multiple markets, quite similar products where the customer world is heterogeneous, while the products are different, but quite similar. The similarity in the products suggests that synergy is present that can be harvested.

Figure 1 also shows one example in both categories. The radiology department in health care is an example of a homogeneous market, where many different products are interoperating to provide the desired capabilities. Some of these systems are diagnostic equipment with different imaging modalities, e.g. X-ray systems, Magnetic Resonance Imaging, Computer Tomography. However, also information technology systems are used for administration, viewing, communication, and archiving. Some functionality is quite similar between these different systems, and hence might result in synergy opportunities.

2   Stepwise method to explore synergy opportunities

Figure 2 shows the stepwise method to explore and analyze opportunities to harvest synergy.

explore markets, customers, products and technologies
share market and customer insights
identify product features and technology components
make maps: market segments - customer key drivers customer key drivers - features features - products products - components
discuss value, synergy, and (potential) conflicts
create long-term and short-term plan

Figure 2: Approach to Platform Business Analysis

Explore markets, customers, products and technologies to create a shared understanding of the playing field.

Share market and customer insights by studying one customer and one product, followed by a more extensive study of work flows.

Identify product features and technology components by doing initial specification and design work.

Make maps where the views that resulted from the first steps are related.

Discuss value, synergy and (potential) conflicts to get the main issues on the table in a factual way.
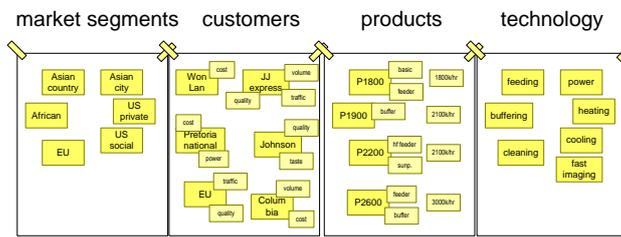
Create long term and short term plan to transform what can be done into something that (probably) will be done.

The whole process described by this method should be performed by an exploration team, a small team of key people, including marketing managers, architects, and key technology experts.

2.1 Explore markets, customers, products and technologies

The exploration is performed by using fixed time boxes to discuss the following questions by the exploration team:

- What markets do we want to serve?

- What specific customers do we expect? What are the key concerns per customer?

- What products do we foresee? What are key characteristics of these products?

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brain storm and discuss time-boxed

Figure 3: Explore Markets, Customers, Products and Technologies

- What technologies do we need?

The purpose is to make a quick scan of the playing field so that a shared insight is created between the members of the team. Figure 3 shows the typical result of the exploration: a number of flip-charts with sticky notes. This first scan can be done in a half day to a full day.
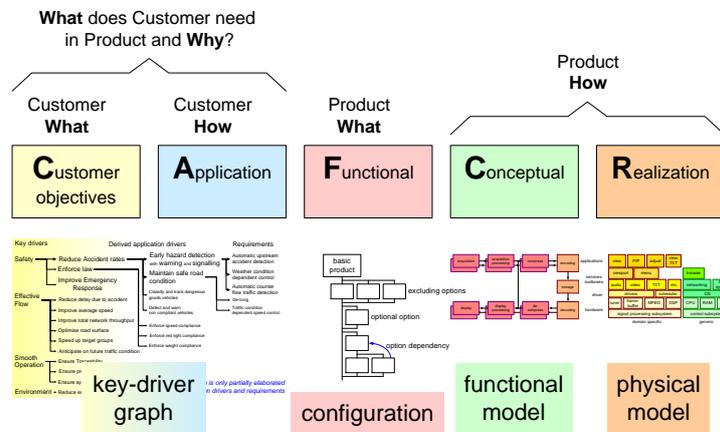
2.2 Share market and customer insights

Figure 4: Study one Customer and Product

The challenge is to get more substance after the first quick scan. Figure 4 shows how the CAFCR model is followed to explore one product for one market in more depth. The idea is that one such depth probe helps the team to get a deeper understanding that can be extended to other product by variations on an theme. In this figure the CAF-views are covered by a key driver graph, the F-view focuses

on the required commercial product structure, The Conceptual view is used for a functional model of the system internals and the R view shows a block diagram. This is an example of a CAFCR analysis, but specific markets and products can benefit from other submethods in the CAFCR views.
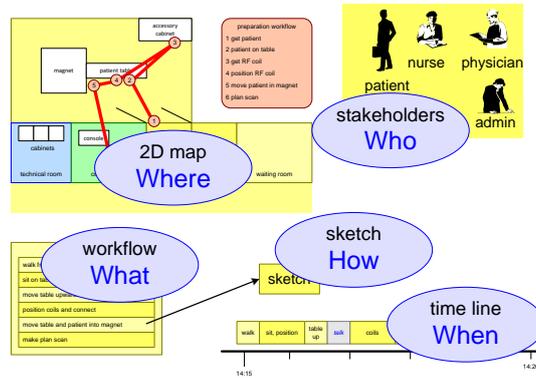

Figure 5: Work Flow Analysis for Different Customers/Applications

The next step in digging in deeper is to explore the work flow of different customers. Figure 5 shows the different perspectives on the customer work flow:

Where are work flow steps performed?

What is done in the work flow?

Who is involved

When are steps performed, and what is the duration?

How are selected steps performed?

A specific insight in the work flow of different customers and applications is critical for later choices about synergy. This step is too often skipped, either because of time pressure or because of ignorance. Insufficient understanding of the use compromises the products and hence degrades the value for classes of customers.

At this moment the exploration team has insight in different customers. It helps the team and its stakeholders if the growing insight of these different customers and their needs for products can somehow be captured in a single map with a few main characteristics. Figure 6 shows a simplistic example. Often characteristics such as price and performance parameters are used for such map.
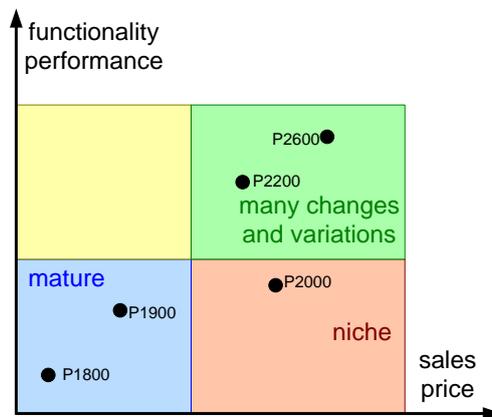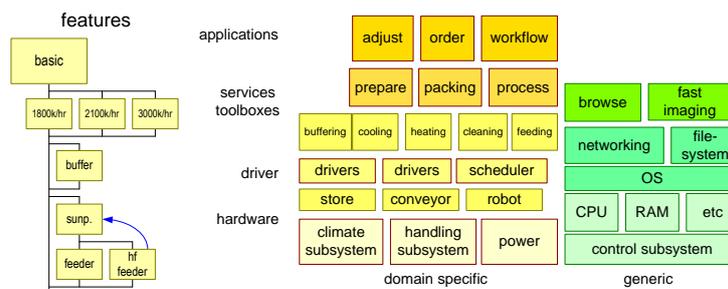
Figure 6: Make Map of Customers and Market Segments

Figure 7: Identify Product Features and Technology Components

2.3 Identify product features and technology components

In this step the commercial structure of the product is further elaborated: What are the required commercial configurations, what should be optional? Also the construction decomposition is elaborated: what are the expected hardware and software components or building blocks, what are the dependencies between them? The main purpose of this step is to understand the potential commercial and technical modularity. From this modularity the synergy can emerge between products.

2.4 Make maps

The first views have resulted in the identification of *market segments*, *customer key drivers*, *features*, *products*, and *components*. In this step the objective is to relate these views, e.g. *market segments* to *customer key drivers*,
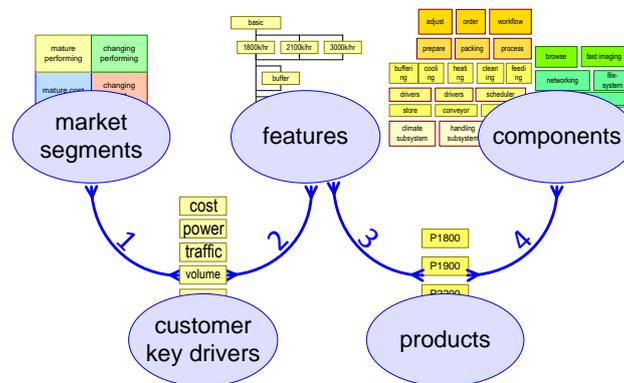
Figure 8: Mapping From Markets to Components

customer key drivers to *features*, *features* to *products* , and *products* to *components*, see Figure 8. Each mapping can be many to many, for example different market segments can share the same key drivers, while every market segment has multiple key drivers.

2.5 Discuss value, synergy and (potential) conflicts

Figure 9: Example Criteria for Determining Value

In general the wish list for features is longer than can be implemented in the first releases. We need more insight in the value of the different features to facilitate a selection process, as discussed in [3].

Figure 10 shows the results of this selection process. Note that the discussion provides most of the value to the exploration team. The need to characterize and agree on the scoring forces the team to compare features and to articulate their value.

Figure 10: Determine Value of Features

2.6 Create long term and short term plan

Practical constraints such as time and effort often determine our choices in synergy and the order in which we realize these choices. The exploration team has to translate their vision that has grown into a plan showing in what order it could be realized. Part of the plan will be short term: what do we do rather concrete in the next few weeks or months? The long term plan visualizes the big picture of moving towards synergy: how do we envision that we will migrate to the synergetic situation? Note that again making the short term and long term plan serves the purpose to force the exploration team in this practical discussion.
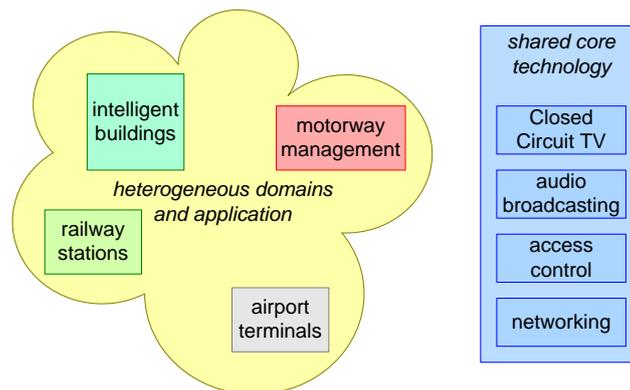
3 Example of synergy

Figure 11: Example of synergy between heterogeneous markets

Figure 11 shows an example of a company serving 4 heterogeneous markets:

intelligent buildings, motor way management systems, airport terminals, and train stations. This company performs projects in these 4 markets, providing Closed Circuit Televisions, access control, audio broadcasting, and the integration. The synergy is in the technical components, such as cameras and loudspeakers. The question was if there is also potential synergy in the integration, e.g. the networking, system control, and operator interfaces. For that purpose the key driver diagram in [2], was developed.

References

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

[2] Gerrit Muller. Key drivers how to. `http://www.gaudisite.nl/KeyDriversHowToPaper.pdf`, 2010.

[3] Gerrit Muller. Requirements elicitation and selection. `http://www.gaudisite.nl/RequirementsElicitationAndSelectionPaper.pdf`, 2010.

History
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- Created, using Exploring Product Lines presentation as starting point, no changelog yet