A Method to Explore Synergy between Products

by Gerrit Muller    University of South-Eastern Norway-NISE

e-mail: gaudisite@gmail.com

www.gaudisite.nl

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.
Types of synergy

**Multiple markets**
- **Customer objectives**: different customers
- **Application**: different applications
- **Functional**: similar products
- **Conceptual**: shared concepts
- **Realization**: shared technology

**For example, electron microscope markets:**
- Material sciences
- Life sciences
- Semiconductors
- EM specialists
- Biologists
- Process quality
- Everything possible
- Specific handling
- High throughput
- E-beam sources, optics
- Vacuum
- Acquisition control

**Single market**
- **Customer objectives**: same customers
- **Application**: different applications & stakeholders
- **Functional**: different products
- **Conceptual**: shared concepts
- **Realization**: shared technology

**For example, health care, radiology market**
- Radiology department
- Gastrointestinal
- Orthopedics
- Neurology
- Radiography
- X-ray diagnostics
- MRI, CT scanner
- Viewing
- Patient support
- Patient information
- Image information
- Storage & communication
## Approach to Platform Business Analysis

<table>
<thead>
<tr>
<th>Explore markets, customers, products and technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share market and customer insights</td>
</tr>
<tr>
<td>Identify product features and technology components</td>
</tr>
<tr>
<td>Make maps: market segments - customer key drivers</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Customer key drivers - features</td>
</tr>
<tr>
<td>Features - products</td>
</tr>
<tr>
<td>Products - components</td>
</tr>
<tr>
<td>Discuss value, synergy, and (potential) conflicts</td>
</tr>
<tr>
<td>Create long-term and short-term plan</td>
</tr>
</tbody>
</table>
A Method to Explore Synergy between Products

brain storm and discuss time-boxed
Study one Customer and Product

What does Customer need in Product and Why?

Customer

What

Customer objectives

How

Application

Product

What

Product objectives

How

Functional

Customer

Application

Product

Conceptual

Realization

Key drivers

Safety

Effective Flow

Smooth Operation

Environment

Derived application drivers

Safety

Reduce Accident rates

Enforce law

Improve Emergency Response

Effective Flow

Reduce delay due to accident

Improve average speed

Improve total network throughput

Smooth Operation

Optimise road surface

Speed up target groups

Environment

Anticipate on future traffic condition

Requirements

Early hazard detection with warning and signalling

Maintain safe road condition

Enforce speed compliance

Enforce red light compliance

Reduce weight compliance

Safety

Reduce Accident rates

Enforce law

Improve Emergency Response

Effective Flow

Reduce delay due to accident

Improve average speed

Improve total network throughput

Smooth Operation

Optimise road surface

Speed up target groups

Environment

Anticipate on future traffic condition

Reduce Accident rates

Enforce law

Improve Emergency Response

Product

What

key-driver graph

configuration

functional model

physical model

Note: the graph is only partially elaborated for application drivers and requirements

A Method to Explore Synergy between Products

version: 0

September 6, 2020

Gerrit Muller

MPBAProductMarket
Work Flow Analysis for Different Customers/Applications

preparation workflow
1 get patient
2 patient on table
3 get RF coil
4 position RF coil
5 move patient in magnet
6 plan scan

patient
nurse
physician
admin

2D map
Where

walk from dressing room to table
sit on table and position patient
move table upwards
position coils and connect
move table and patient into magnet
make plan scan

walk
sit
position
table
up
coils

sketch
How

walk
talk
talk

sketch

What

stakeholders
Who

time line
When
Make Map of Customers and Market Segments

A Method to Explore Synergy between Products

Gerrit Muller

version: 0
September 6, 2020
MPBAproductMarketMap
Identify Product Features and Technology Components

A Method to Explore Synergy between Products

version: 0
September 6, 2020

Gerrit Muller

features

- basic
- 1800 k/hr
- 2100 k/hr
- 3000 k/hr
- buffer
- sunp.
- feeder
- hf feeder

applications

- adjust
- prepare
- drivers
- drivers
- store
- climate subsystem

- order
- packing
- heating
- cooling
- conveyor
- handling subsystem

- workflow
- process
- cleaning
- feeding
- robot
- power

services toolboxes

- domain specific
- generic

drivers

- scheduler
- control subsystem

hardware

- power
- OS

- fast imaging

- file-system

- networking

- browse

- CPU
- RAM
- etc
Mapping From Markets to Components

Market segments

Features

Components

1. cost
2. mature
3. volume
4. power

Customer key drivers

Products

1800/ hr 2100/ hr 3000/ hr

Mature performing
Changing performing
Mature cost
Changing cost

Adjust
Order
Workflow

Prepare
Packing
Process

Browse
Fast imaging
Networking
File system

Buffer
Cooling
Heating
Cleaning
Feeding

Drivers
Store
Conveyor
Scheduler

Climate subsystem
Handling subsystem

Climate
Buffering
Heating
Cooling
Cleaning
Fast imaging

P1800
P1900
P2200
### Example Criteria for Determining Value

- Value for the customer
- (dis)satisfaction level for the customer
- Selling value (How much is the customer willing to pay?)
- Level of differentiation w.r.t. the competition
- Impact on the market share
- Impact on the profit margin

Use relative scale, e.g. 1..5 1=low value, 5 - high value
Ask several knowledgeable people to score
Discussion provides insight (don't fall in spreadsheet trap)
### Determine Value of Features

<table>
<thead>
<tr>
<th>features</th>
<th>products</th>
<th>P1800</th>
<th>P1900</th>
<th>P2200</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>satisfaction</td>
<td>sales price</td>
<td>market share</td>
</tr>
<tr>
<td>feeder</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>hf feeder</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>buffer</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>sunpower</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

### A Method to Explore Synergy between Products

**11 Gerrit Muller**

---

**version:** 0  
**September 6, 2020**

**PFproductFeatureMapWithNumbers**
Example Platform Scoping

**heterogeneous domains and application**

- intelligent buildings
- motorway management
- railway stations
- airport terminals

**shared core technology**

- Closed Circuit TV
- audio broadcasting
- access control
- networking