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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status: draft
version: 0
# Types of synergy

<table>
<thead>
<tr>
<th>C (Customer objectives)</th>
<th>A (Application)</th>
<th>F (Functional)</th>
<th>C (Conceptual)</th>
<th>R (Realization)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiple markets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>different customers</td>
<td>different applications</td>
<td>similar products</td>
<td>shared concepts</td>
<td>shared technology</td>
</tr>
<tr>
<td>material sciences</td>
<td>EM specialists</td>
<td>everything possible</td>
<td>e-beam sources, optics</td>
<td></td>
</tr>
<tr>
<td>life sciences</td>
<td>biologists</td>
<td>specific handling</td>
<td>vacuum</td>
<td></td>
</tr>
<tr>
<td>semiconductors</td>
<td>process quality</td>
<td>high throughput</td>
<td>acquisition control</td>
<td></td>
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</tbody>
</table>

| **Single market**      |                |               |                |                |
| same customers         | different applications & stakeholders | different products | shared concepts | shared technology |
| radiology department   | gastrointestinal | radiography | patient support |                  |
|                       | orthopedics    | x-ray diagnostics | patient information |                  |
|                       | neurology      | MRI, CT scanner | image information |                  |
|                       |                | viewing        | storage & communication |                  |
Approach to Platform Business Analysis

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
Explore Markets, Customers, Products and Technologies

market segments  customers  products  technology

Asian country  Asian city  Won Lan  JJ express  P1800  P1900  P2200  P2600
Asian  US  cost  volume  basic  buffer  hf feeder  feeder
private  city  quality  traffic  sunp.  buffer
African  US  cost  quality  power  1800/k/h
private  social  cost  traffic  2100/k/h
EU  EU  EU  2100/k/h

EU  Johnson  Columbia  cost  volume  3000/k/h
Pretoria national  taste  cost

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
- Functional
- Conceptual
- Realization

**Product**

**What**
- Configuration
- Functional model
- Physical model

**How**
- Key drivers
- Derived application drivers
- Requirements

**Customer**

- Safety
- Effective Flow
- Smooth Operation
- Environment

**Application**

- Safety
- Effective Flow
- Smooth Operation
- Environment

**Functional**

- Early hazard detection
- Maintain safe road condition
- Speed up target groups
- Anticipate on future traffic conditions
- Enforce speed compliance
- Enforce red-light compliance
- Enforce weight compliance

**Conceptual**

- Automatic upstream accident detection
- Weather condition dependant control
- De-icing
- Traffic condition dependant speed control

**Realization**

- Early hazard detection with warning and signalling
- Maintain safe road condition
- Enforce law
- Improve Emergency Response
- Improve average speed
- Improve total network throughput
- Optimize road surface
- Speed up target groups
- Anticipate on future traffic condition
- Reduce delay due to accident
- Detect and warn non compliant vehicles

**Key drivers**

- Reduce accident rates
- Enforce law
- Improve Emergency Response
- Reduce delay due to accident
- Improve average speed
- Improve total network throughput
- Optimize road surface
- Speed up target groups
- Anticipate on future traffic condition
- Ensure Traceability
- Ensure pr
- Ensure sys

**Derived application drivers**

- Reduce accident rates
- Enforce law
- Improve Emergency Response
- Reduce delay due to accident
- Improve average speed
- Improve total network throughput
- Optimize road surface
- Speed up target groups
- Anticipate on future traffic condition
- Ensure Traceability
- Ensure pr
- Ensure sys

**Requirements**

- Automatic upstream accident detection
- Weather condition dependant control
- De-icing
- Traffic condition dependant speed control

**Graph**

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

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MPBAPrductMarket
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

sketch:
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

time line:
wake up
sit, position
table
coils

stakeholders:
patient
nurse
physician
admin

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Make Map of Customers and Market Segments

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MPBAPositionMarketMap
Identify Product Features and Technology Components

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MPBAfeatures Technology

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Mapping From Markets to Components

market segments

features

components

1. cost
   - power
   - traffic
   - volume

2. basic
   - 1800k/hr
   - 2100k/hr
   - 3000k/hr
   - buffer

3. adjust
   - order
   - workflow
   - prepare
   - packing
   - process
   - browse
   - fast imaging
   - networking
   - file-system
   - climate subsystem
   - handling subsystem

4. P1800
   - P1900
   - P2200

customer key drivers

products

market segments: mature performing, mature cost, changing cost, changing performing

features: mature cost, mature, performing, changing, cost

components: adjusting, order, workflow, preparing, packing, process, browse, fast imaging, networking, file-system, climate subsystem, handling subsystem

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**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

### Products

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<th>P1900</th>
<th>P2200</th>
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### Table

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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