The role of roadmapping in the strategy process

by Gerrit Muller       Buskerud University College
          e-mail: gaudisite@gmail.com
          www.gaudisite.nl

Abstract
The strategy process is positioned in a simplified decomposition of the business
in processes. The ”CAFCR” model is introduced as a means to structure a
roadmap (CAFCR is also used as a means to structure architecture descriptions
and methods).

The steps to come to an integral roadmap are explained. The goal of the roadmap
is discussed, in relation with mission and vision and in relation with a committal
plan.
The role of roadmapping in the strategy process

2 Gerrit Muller

version: 0.2
March 6, 2013
RSPprocessDecomposition
Tension between processes

The role of roadmapping in the strategy process

version: 0.2
March 6, 2013
RSPprocessDecompositionAnnotated
Platform strategy adds one layer

Customer

Supplying business

Strategy

Customer oriented

Short term; cashflow!

Value

Product creation

Mid term; cashflow next year!

Component or platform creation

Long term assets

People, process and technology

Long term know how (soft) assets

The role of roadmapping in the strategy process
4 Gerrit Muller

version: 0.2
March 6, 2013
RSPprocessDecompositionPlusAnnotated
CAFCR framework for architecting

What does Customer need in Product and Why?

Customer
What

Customer
How

Product
What

Product
How

Customer objectives

Application

Functional

Conceptual

Realization

drives, justifies, needs
enables, supports

The role of roadmapping in the strategy process
5 Gerrit Muller

version: 0.2
March 6, 2013
CAFCRannotated
Integrating CAFCR

What does Customer need in Product and Why?

Customer
What

Customer
How

Product
What

Product
How

Customer objectives

Application

Functional

Conceptual

Realization

context understanding

intention

objective driven

opportunities

constraint awareness

knowledge based

version: 0.2
March 6, 2013
MSintegratingCAFCR
CAFCR can be applied recursively

The role of roadmapping in the strategy process

Gerrit Muller

version: 0.2
March 6, 2013
CAFCRrecursion

Consumer

Drives

Customer's Customer Business

Enables

Value Chain
larger scope has smaller influence on architecture

Enables

Customer Business

Drives

System (producer)
The role of roadmapping in the strategy process

version: 0.2
March 6, 2013
RSProadmapStructure
From generic mission to factual roadmap

The role of roadmapping in the strategy process

version: 0.2
March 6, 2013
RSPmissionVsRoadmap
The role of roadmapping in the strategy process

version: 0.2
March 6, 2013
RSPfromMPToPP

Gerrit Muller
# People estimate, program view

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>system</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>software</td>
<td>2</td>
<td>10</td>
<td>30</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>20</td>
<td>40</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>electronics</td>
<td>5</td>
<td>16</td>
<td>20</td>
<td>12</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
<td>18</td>
<td>16</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>mechanics</td>
<td>8</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
<td>14</td>
<td>8</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>optics</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>total</td>
<td>20</td>
<td>42</td>
<td>64</td>
<td>74</td>
<td>52</td>
<td>39</td>
</tr>
</tbody>
</table>

estimates by program manager

estimates by discipline manager
## People estimate, discipline view

<table>
<thead>
<tr>
<th>software</th>
<th>2002 actual</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orion</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Gemini</td>
<td>2</td>
<td>10</td>
<td>30</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>20</td>
<td>40</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Scorpion</td>
<td>54</td>
<td>80</td>
<td>60</td>
<td>30</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70</td>
<td>50</td>
<td>20</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>research</td>
<td>4</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>maintenance</td>
<td>22</td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>42</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40</td>
<td>50</td>
<td>50</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>total</td>
<td>83</td>
<td>132</td>
<td>139</td>
<td>137</td>
<td>125</td>
<td>124</td>
</tr>
<tr>
<td></td>
<td></td>
<td>133</td>
<td>136</td>
<td>128</td>
<td>101</td>
<td>95</td>
</tr>
</tbody>
</table>

**estimate by program manager**

**estimate by people manager**
Roadmap of people skills

The role of roadmapping in the strategy process

- Product creation requires different processes to 2006.
- Customer support varies with high, medium, and low skill levels.

Version: 0.2
March 6, 2013
RSPpeopleDisciplines
Operational axis is more dynamic

product creation

operational decomposition

prog 1
prog 2
prog 3

prog 1
prog 2
prog 3

prog 1
prog 2
prog 3

2002
2004
2006
The role of roadmapping in the strategy process

version: 0.2
March 6, 2013
RSProadmapToPlan

15 Gerrit Muller
## Example of committal plan

<table>
<thead>
<tr>
<th>Gemini</th>
<th>2002 actual</th>
<th>2003</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>system</td>
<td>software</td>
<td>electronics</td>
<td>mechanics</td>
<td>optics</td>
<td>total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sales</td>
<td>k$ unit</td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>70</td>
<td>90</td>
<td>100</td>
<td>105</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>20</td>
<td>25</td>
<td>25+3</td>
<td>22+7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>products</td>
<td>S2, S3 T1, T4</td>
<td>S4</td>
<td>V6</td>
<td>S6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fte</td>
<td>system</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>software</td>
<td>2</td>
<td>10</td>
<td>18</td>
<td>24</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>electronics</td>
<td>5</td>
<td>16</td>
<td>17</td>
<td>19</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mechanics</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>optics</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>total</td>
<td>20</td>
<td>42</td>
<td>50</td>
<td>58</td>
<td>64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The role of roadmapping in the strategy process

Gerrit Muller

version: 0.2
March 6, 2013
RSPsummary
Summary of role in business

strategy, process
roadmap, plan

reality facts
context, overview
empowerment

customer oriented
(sales, service, production)
process

product creation
process

people, process and technology
management process

The role of roadmapping in the strategy process
version: 0.2
March 6, 2013