Roadmapping

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Abstract

This article describes what a roadmap is, how to create and maintain a roadmap, the involvement of the stakeholders, and criteria for the structure of a roadmap.

Distribution

This article or presentation is written as part of the Gaudí project. The Gaudí project philosophy is to improve by obtaining frequent feedback. Frequent feedback is pursued by an open creation process. This document is published as intermediate or nearly mature version to get feedback. Further distribution is allowed as long as the document remains complete and unchanged.
The Roadmap Integrates Five Views

- **Customer objectives**
- **Application**
- **Functional**
- **Conceptual**
- **Realization**

**Market**

**Products**

**Technology**

**People**

**Process**

Time, ca 5 years

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RSPRoadmapStructure
Granularity of Roadmap Material

- **Top-level roadmap**: Single page, Poster, part of many presentations

- **Supporting roadmaps**: Single page per view or per driver, Poster, part of many presentations

- **Supporting reports**: Document per relevant subject
Problems that Occur without Roadmapping

Frequent changes in product policy
Late start up of long lead activities, such as people recruitment and process change
Diverging activities of teams
Missed market opportunities
Management with a Limited Horizon

2012 | 2013 | 2014

now | horizon | feature | Feature still unknown

now | horizon | feature | Do!

now | feature | Stop

now | horizon | feature | Do!
Management with a Broader Time Perspective

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ROADanalogManagement
Creation or Update of Roadmap in Burst Mode

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ROADbursts
Typical Stakeholders of a Roadmap

- business manager
- marketing manager(s)
- people, process, and technology manager(s)
- operational manager(s)
- architect(s)
- overall enterprise responsible
- discipline or line managers
- project or program managers
- project or program managers
Shared vision on market

First iteration of possible products as an answer to the market

Share technology status, as starting point for technology roadmap

Explore people and technology status, to identify main issues
Target of the Second Session

Obtaining a shared vision on the desired technology roadmap

Sharing the people and process issues required for the products defined in the first iteration

Analyzing a few scenarios for products, technologies, people, and process
<table>
<thead>
<tr>
<th>Market: What is needed by the customers?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Products</strong>: How to package technologies into products to fulfill market needs?</td>
</tr>
<tr>
<td><strong>Technology</strong>: What technological trends are relevant? What technologies are needed?</td>
</tr>
<tr>
<td><strong>People</strong>: What kind of and how many people are required to realize the products and technologies?</td>
</tr>
<tr>
<td><strong>Process</strong>: What processes are required to let these people realize the products and technologies?</td>
</tr>
</tbody>
</table>
From Roadmap to Detailed Plans

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ROADbudgetPlan

Policy and Planning Process
Product Creation Process

budget
Q1 delta
Q2 delta
Q3 delta
budget
Q1 delta

market events
market events

201X
Q2 Q3 Q4
roadmap n
roadmapping

roadmap n + 1

201Y
Q1 Q2 Q3 Q4

budget
Q1 delta
Q2 delta
Q3 delta

market events
market events

tech hurdle
tech hurdle

business plan:
budget & allocation
detailed planning
# 3-Tier Approach

<table>
<thead>
<tr>
<th></th>
<th>horizon</th>
<th>update</th>
<th>scope</th>
<th>type</th>
</tr>
</thead>
<tbody>
<tr>
<td>roadmap</td>
<td>5 years</td>
<td>1 year</td>
<td>portfolio</td>
<td>vision</td>
</tr>
<tr>
<td>budget</td>
<td>1 year</td>
<td>3 months</td>
<td>program</td>
<td>commitment</td>
</tr>
<tr>
<td>detailed plan</td>
<td>1 mnth-1yr</td>
<td>1 day-1 mnth</td>
<td>program or activity</td>
<td>control means</td>
</tr>
</tbody>
</table>
Selection of most important or relevant issues

Key drivers as a means to structure the roadmap

Nothing is certain; ambiguity is normal

Use facts whenever possible

Don’t panic in case of impossibilities
Requirements for a Good Roadmap

Recognizable issues for all stakeholders
Clear positioning in time; uncertainty can be visualized
The main events (enabling or constraining) must be present
Limited amount of information to maintain the overview
## Sources of Facts

<table>
<thead>
<tr>
<th>Source</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market analysis reports</td>
<td>number of customers, market size, competition, trends</td>
</tr>
<tr>
<td>Installed base</td>
<td>change requests, problem reports, historical data</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>statistical process control</td>
</tr>
<tr>
<td>Suppliers</td>
<td>roadmaps, historical data</td>
</tr>
<tr>
<td>Internal reports</td>
<td>technology studies, simulations</td>
</tr>
</tbody>
</table>
Causes for Overestimation

Quantization effects of small activities (the amount of time is rounded to manweeks/months/years)

Uncertainty is translated into margins at every level (module, subsystem, system)

Counting activities twice (e.g., in technology development and in product development)

Quantization effects of persons/roles (full time project leader, architect, product manager, et cetera per product)

Lack of pragmatism (technical ambition is not too bad during the roadmap process, as long as it does not pre-empt a healthy decision)

Too many bells and whistles without business or customer value