

Roadmapping

by *Gerrit Muller* Embedded Systems Institute
e-mail: `gerrit.muller@embeddedsystems.nl`
`www.gaudisite.nl`

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

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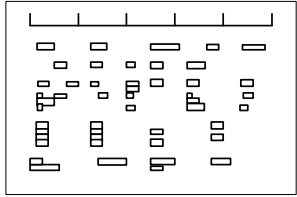
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version: 1.0



The Roadmap Integrates Five Views



Granularity of Roadmap Material

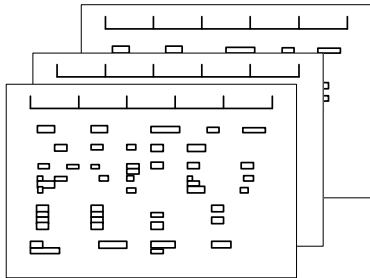


**Toplevel
roadmap**

Single page

Poster

part of many presentations

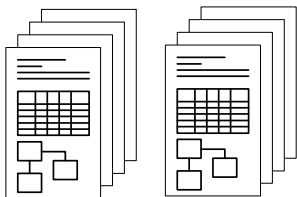


**Supporting
roadmaps**

Single page
per view
or per driver

Poster

part of many presentations



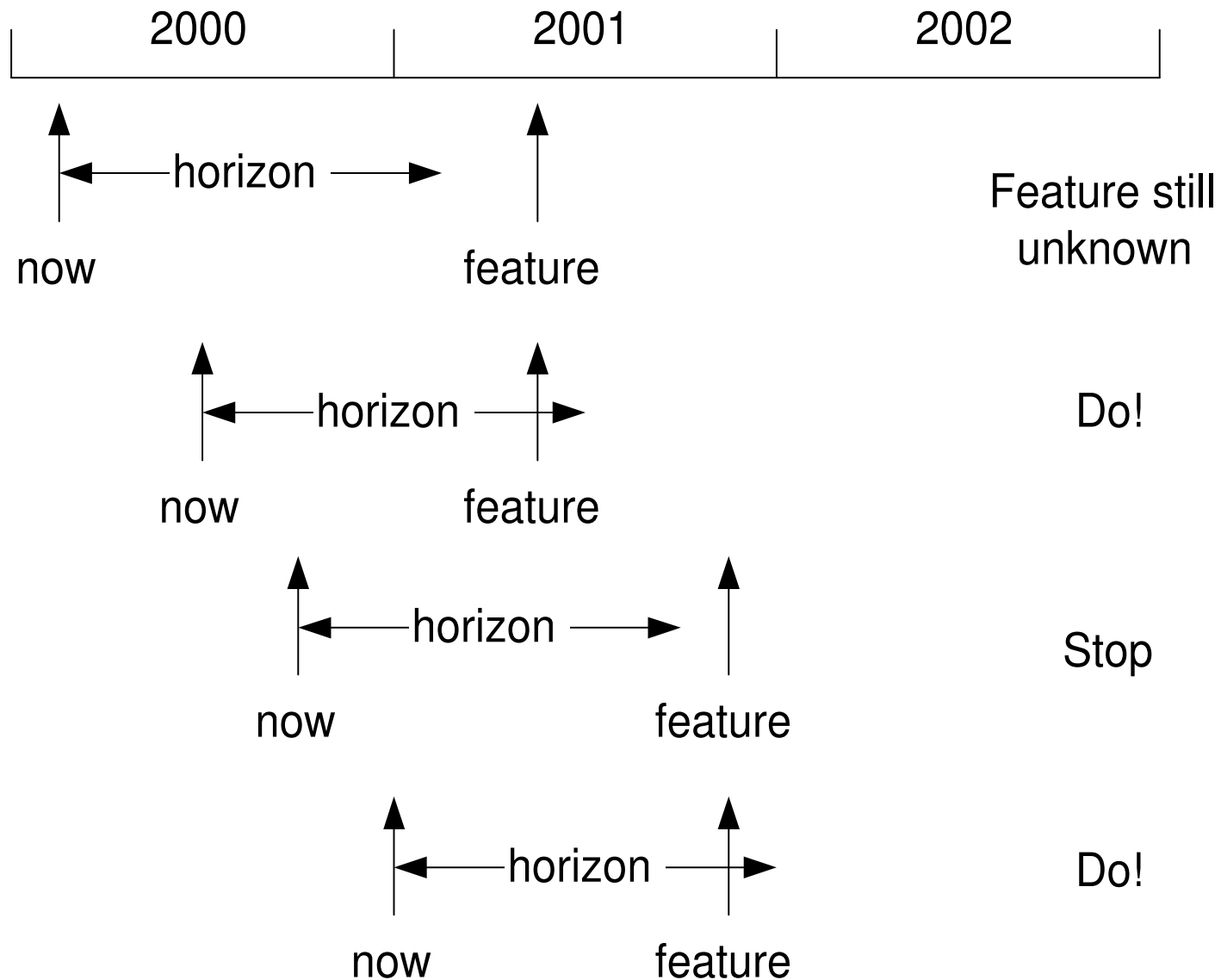
**Supporting
reports**

Document
per relevant
subject

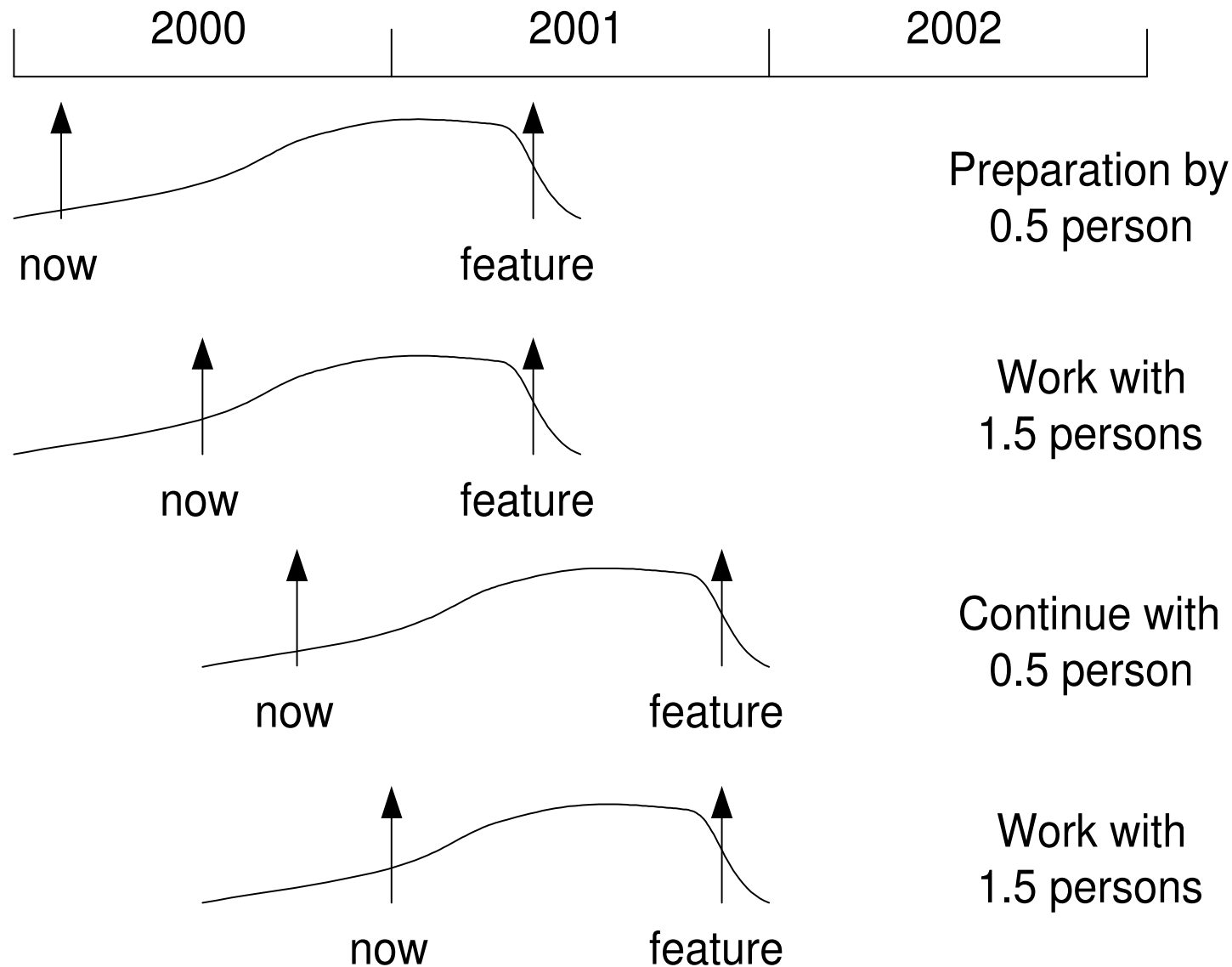
Problems that Occur without Roadmapping

- 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

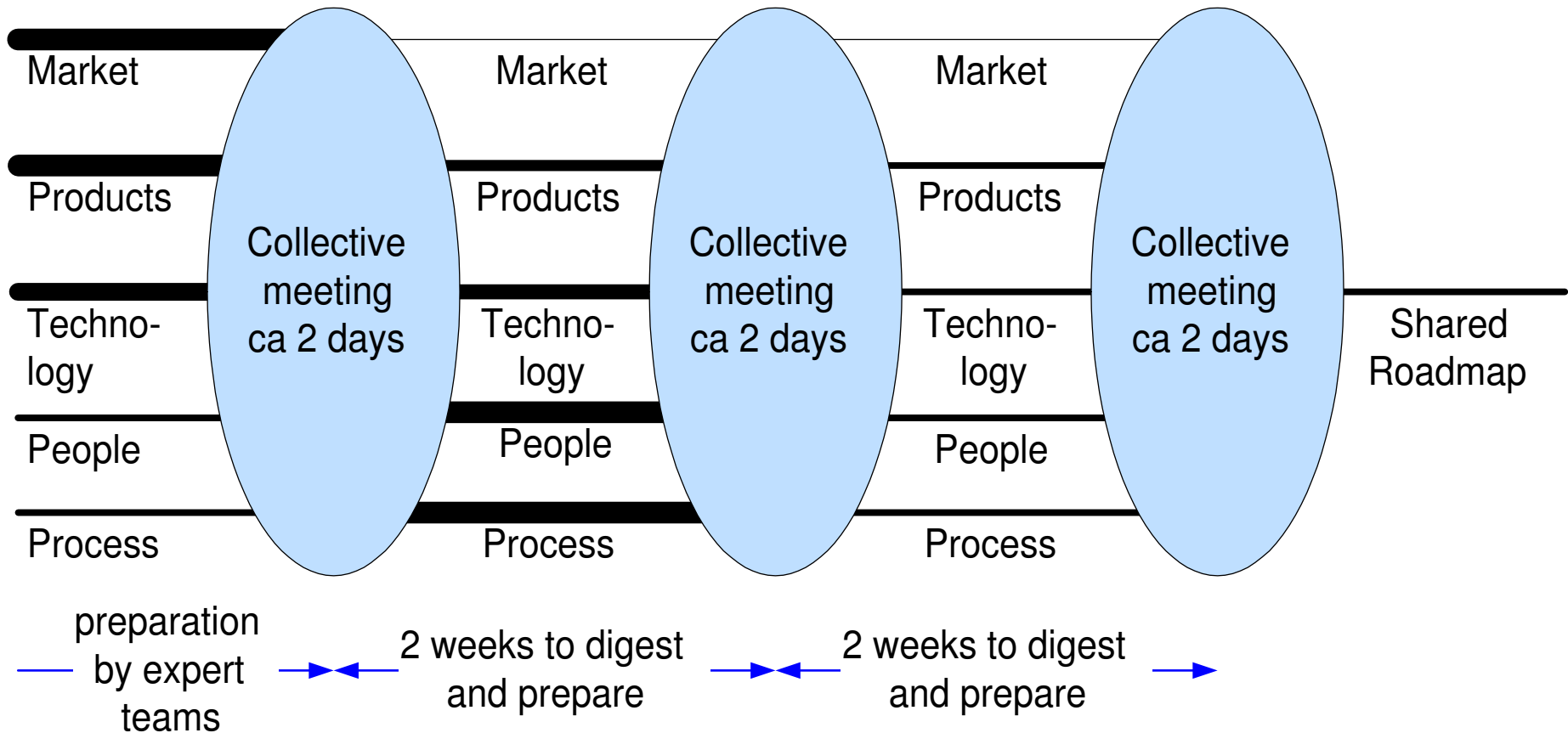
Management with a Limited Horizon



Management with a Broader Time Perspective



Creation or Update of Roadmap in Burst Mode



Typical Stakeholders of a Roadmap

- Business manager (overall enterprise responsible)
- Marketing manager
- People and technology manager(s)
- Operational manager(s)
- Architect

Target of the First Session

- 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

The Roadmap Update Visualized in Time

Market: What is required by the customers and how?

Products: Which packaging of technology into products fulfils the customer needs?

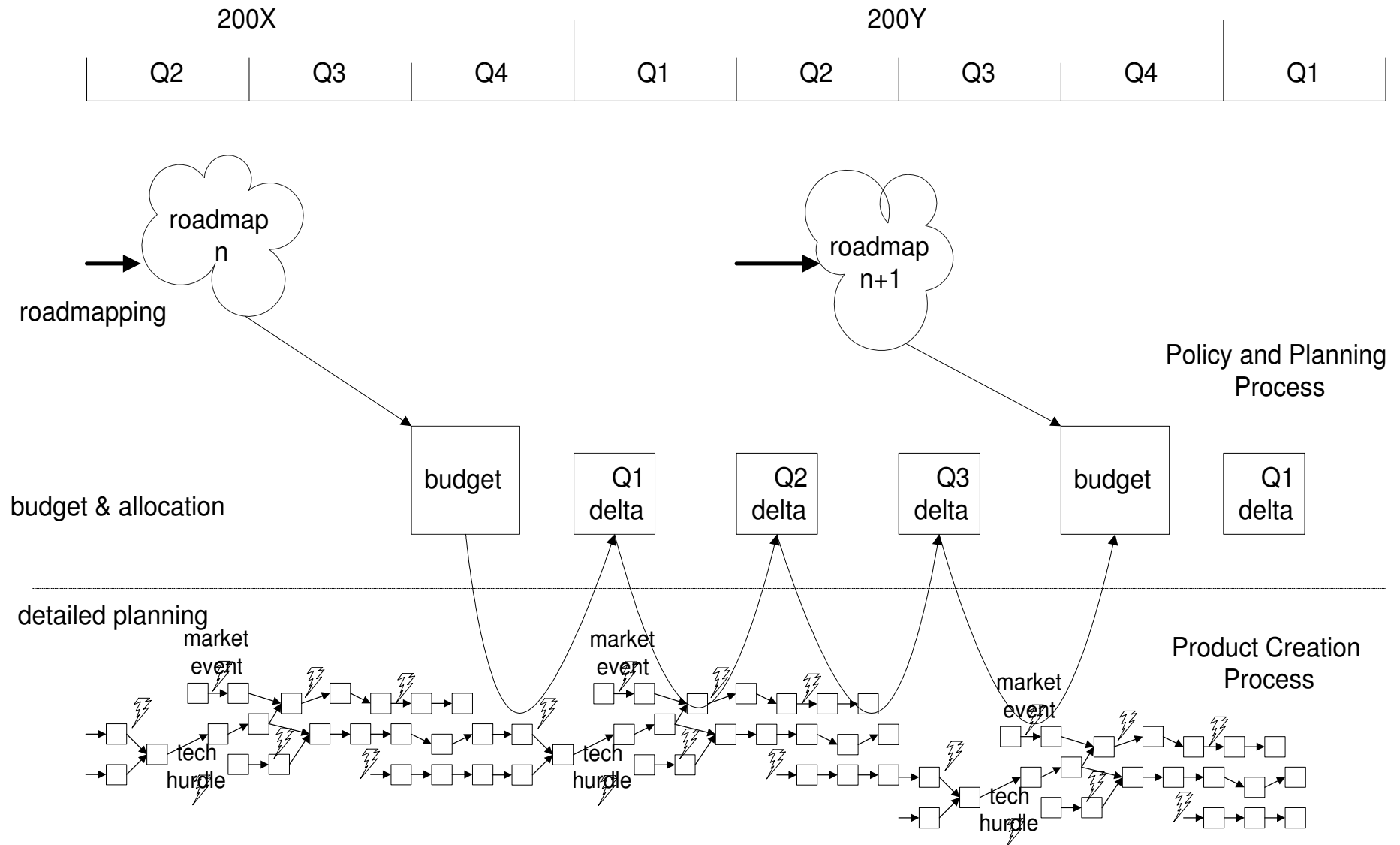
Technology: Which technological trends are relevant?

People: What kind and how many people are required to realize the products and the technology?

Process: Which processes are required to realize the products and technologies with these people?

———— Time ———→

From Roadmap to Detailed Plans



3-Tier Approach

	horizon	update	scope	type
Roadmap	5 years	1 year	Portfolio	Vision
Budget	1 year	3 months	Program	Commitment
Detailed plan	1 mnth..1yr	1 day..1 mnth	Project or activity	Control means

Roadmap Essentials

- 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

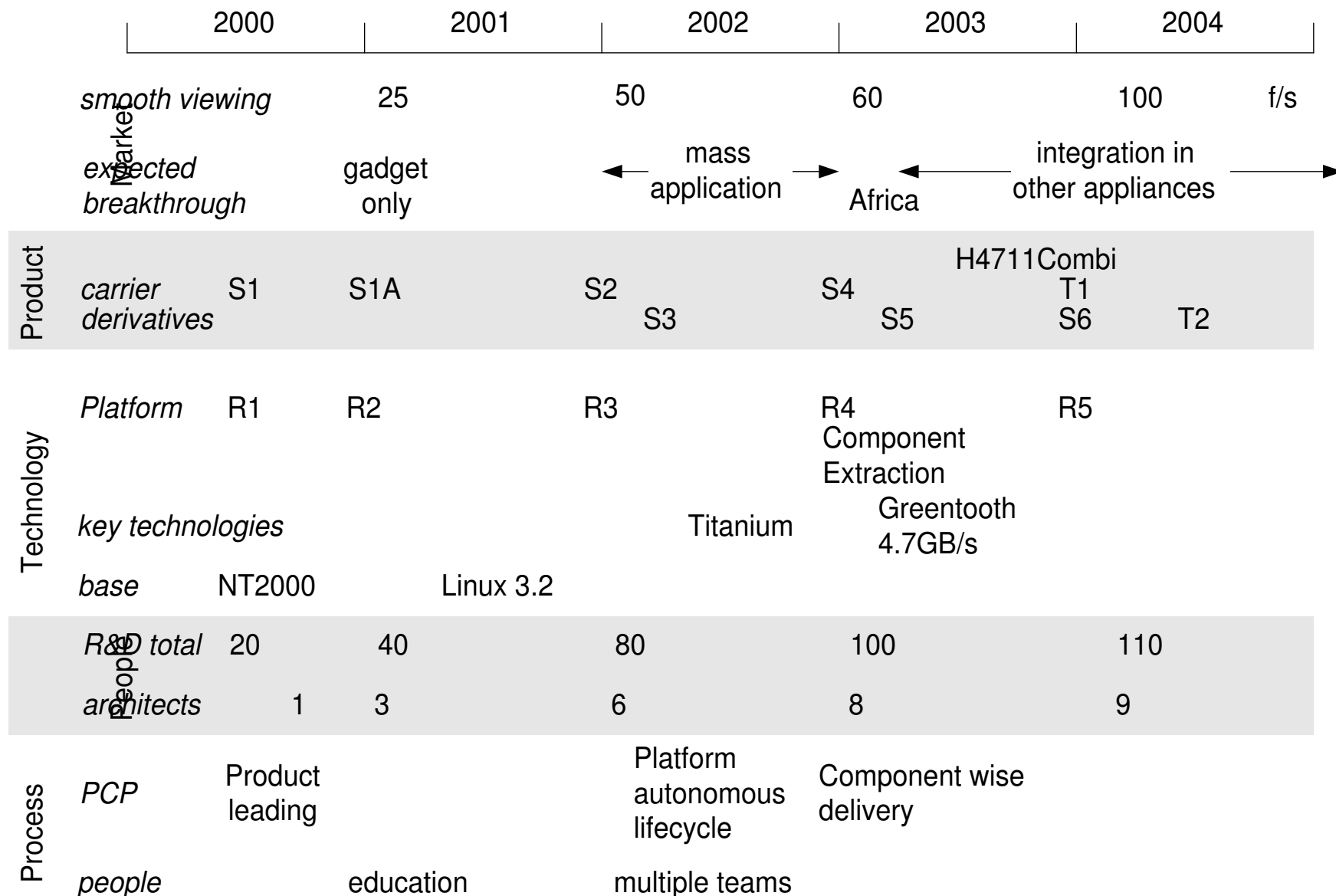
Sources of Facts

- Market analysis reports (number of customers, market size, competition, trends)
- Installed base (change requests, problem reports, historical data)
- Manufacturing (statistical process control)
- Suppliers (roadmaps, historical data)
- Internal reports (technology studies, simulations)

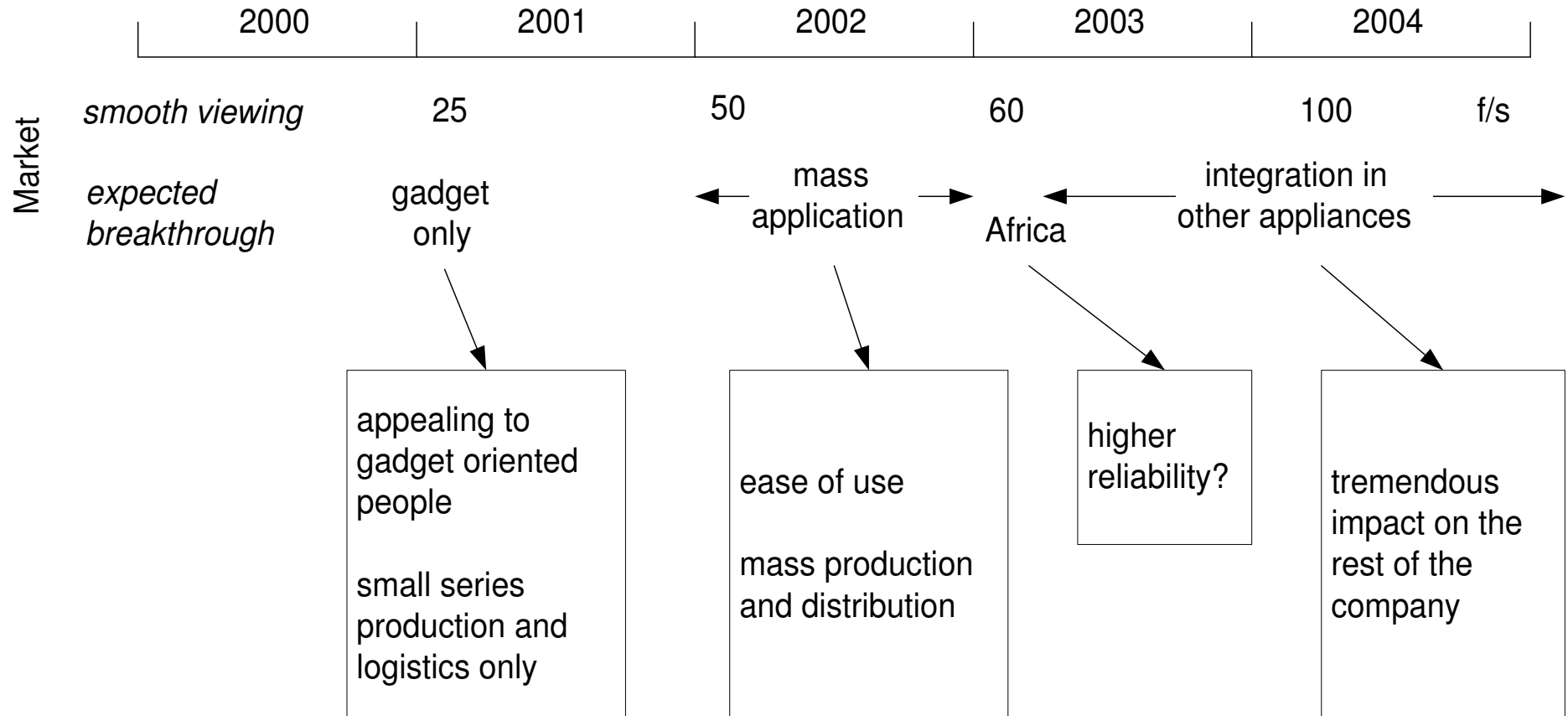
Causes for Overestimation

- 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

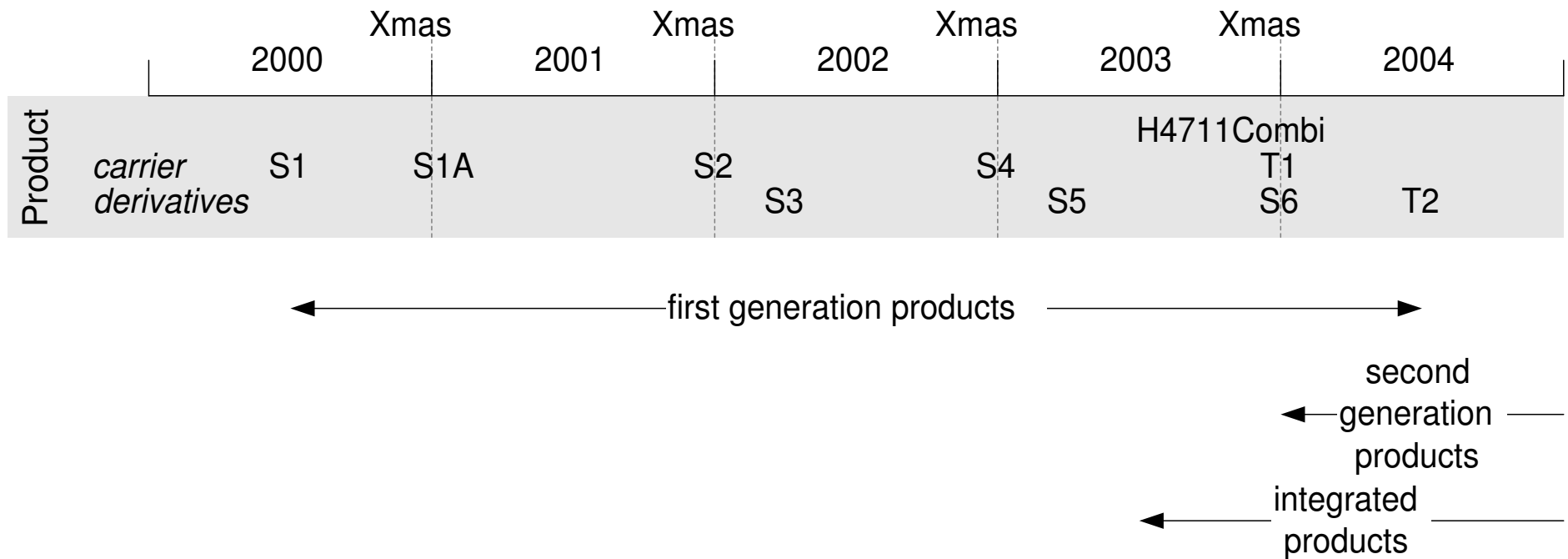
Academic Example of a Roadmap



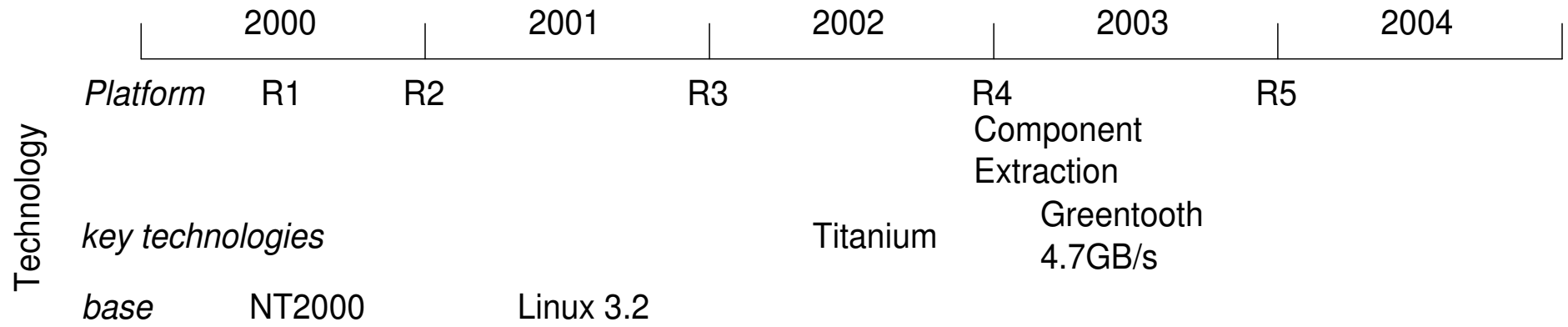
Example Market Roadmap



Example Product Roadmap



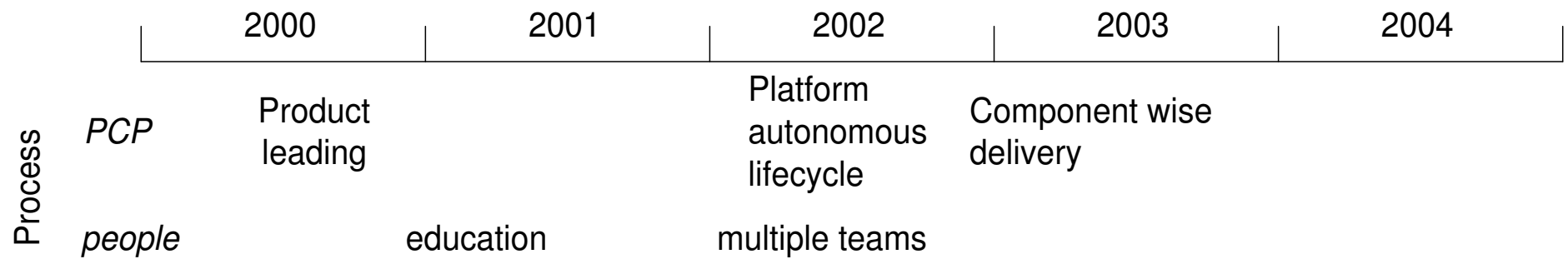
Example Technology Roadmap



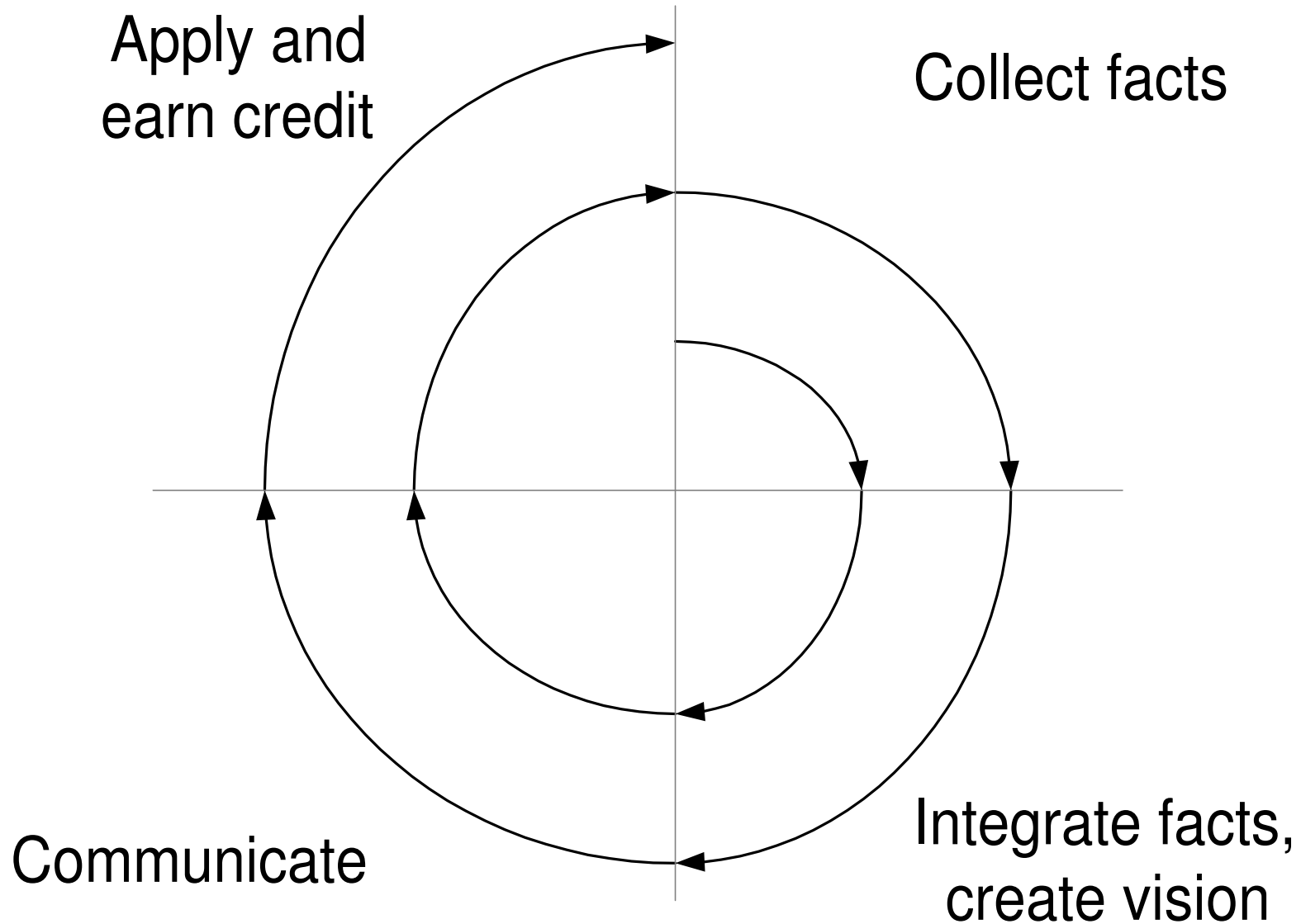
Example People Roadmap

		2000	2001	2002	2003	2004
People	<i>R&D total</i>	20	40	80	100	110
	<i>architects</i>	1	3	6	8	9

Example Process Roadmap



Roadmap Bootstrapping Spiral Model



Change Management Heuristics

- People don't want to **be** changed. They are quite often willing to change.
- Changing the way of working or the culture costs many years.
- Work at multiple tracks at the same time, a.o. managerial, operational, strategic, etc.
- Earn credit by showing usable results.