

Submethods in the CAF Views

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Abstract

The customer context and the external characteristics of a system are described in the *Customer Objectives*, *Application* and *Functional* views. This chapter describes submethods to support these views: key drivers, positioning the business of the customer, modelling, use cases and system specification.

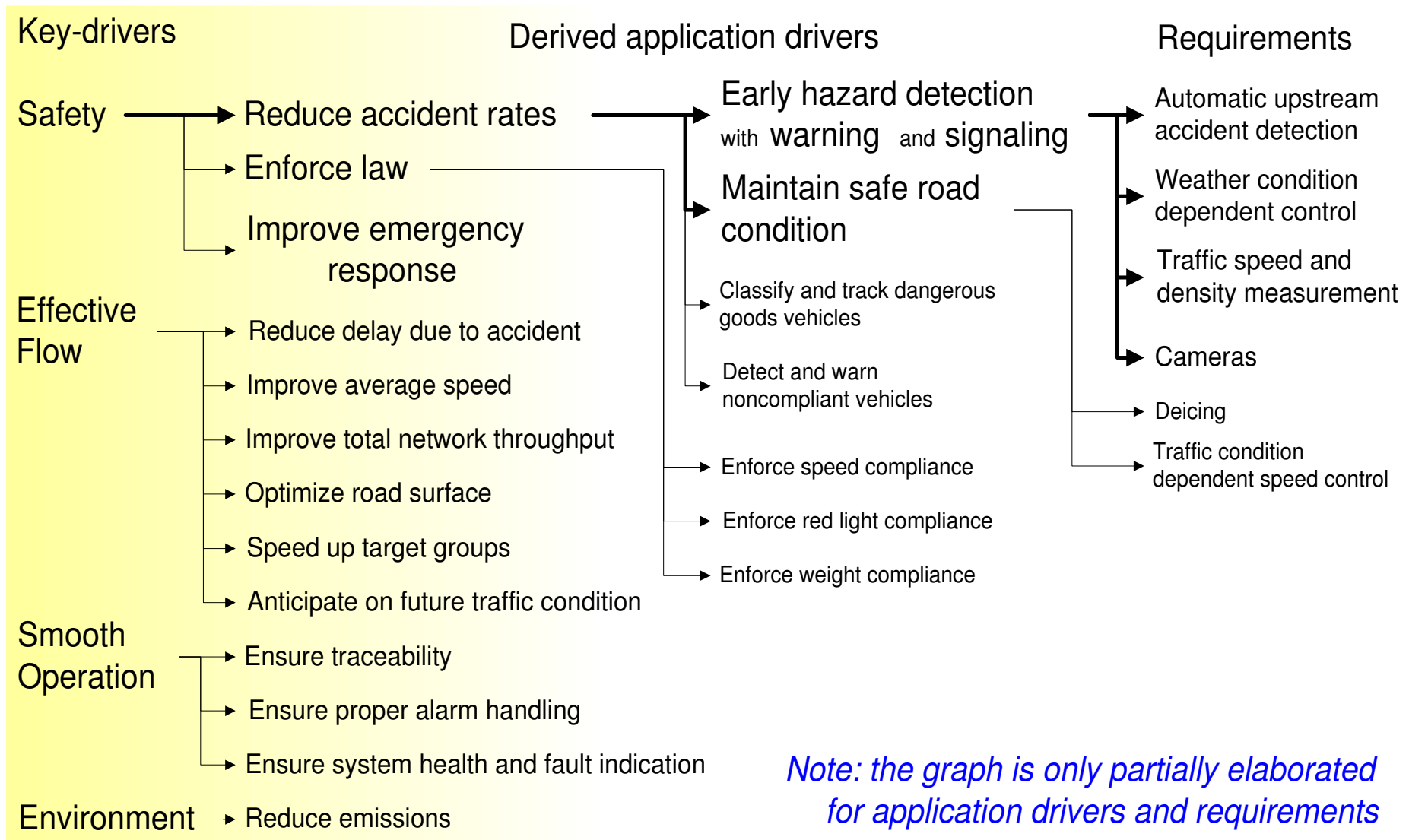
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logo
TBD

Example of the four Key Drivers in a Motorway Management



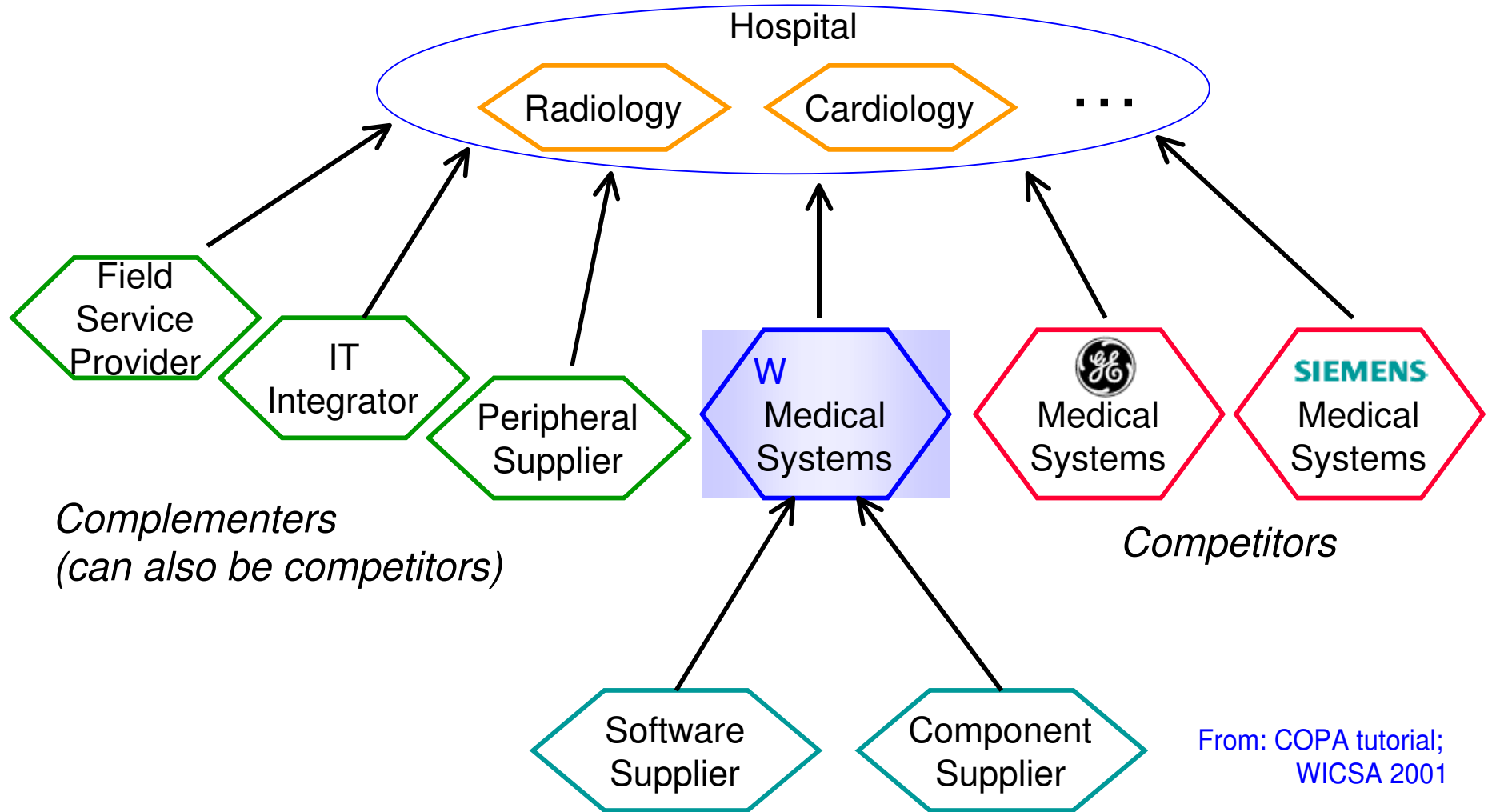
Submethod to Link Key Drivers to Requirements

- | | |
|--|--|
| • Define the scope specific. | in terms of stakeholder or market segments |
| • Acquire and analyze facts | extract facts from the product specification
and ask why questions about the specification of existing products . |
| • Build a graph of relations between drivers and requirements
by means of brainstorming and discussions | where requirements
may have multiple drivers |
| • Obtain feedback | discuss with customers , observe their reactions |
| • Iterate many times | increased understanding often triggers the move of issues
from driver to requirement or vice versa and rephrasing |

Key Driver Recommendations

- Limit the number of key-drivers minimal 3, maximal 6
- Don't leave out the obvious key-drivers for instance the well-known main function of the product
- Use short names, recognized by the customer.
- Use market-/customer- specific names, no generic names for instance replace “ ease of use ” by “minimal number of actions for experienced users ”, or “efficiency ” by “integral cost per patient ”
- Do not worry about the exact boundary between Customer Objective and Application create clear goal means relations

Map of Complementors

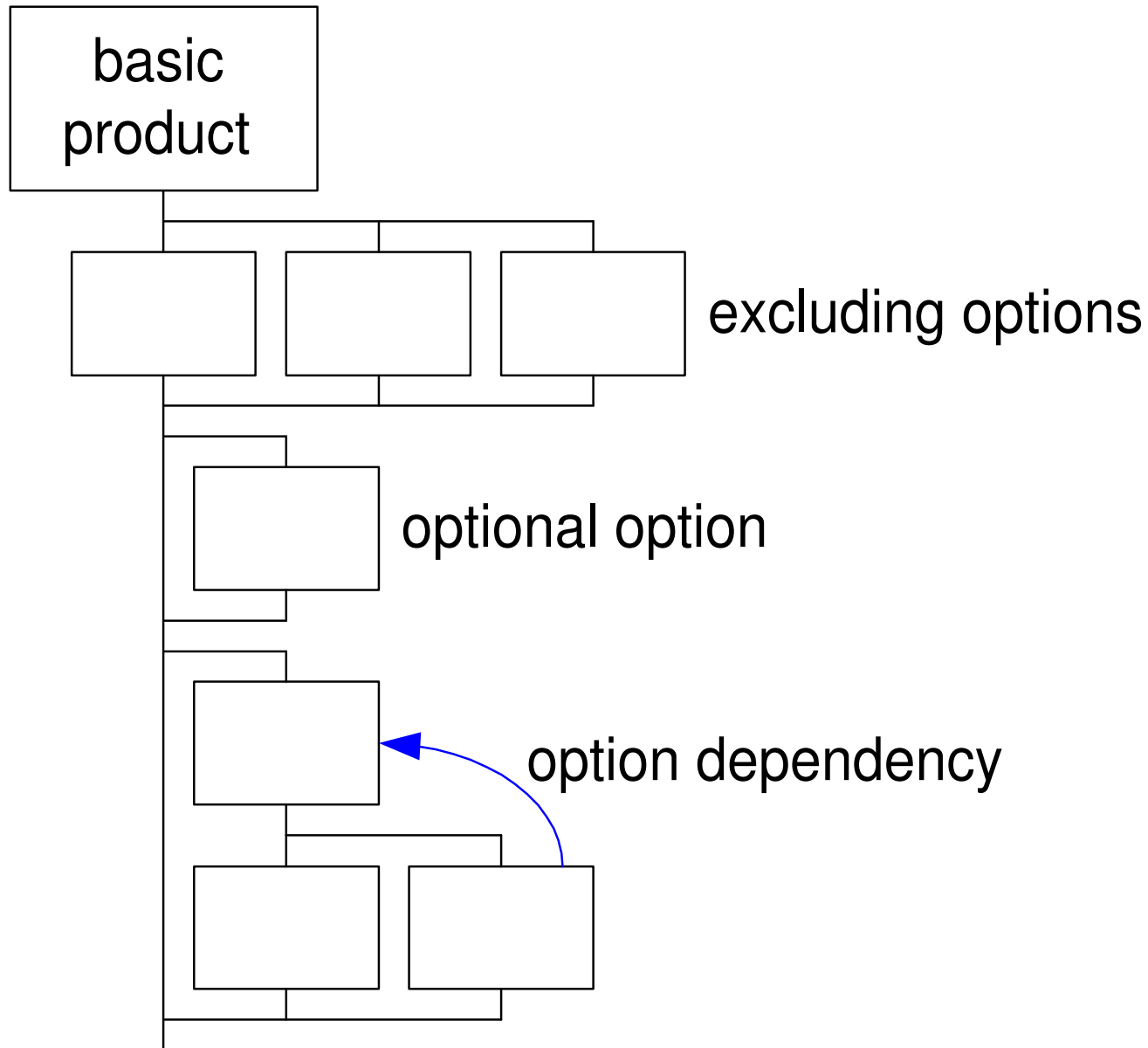


From: COPA tutorial;
WICSA 2001

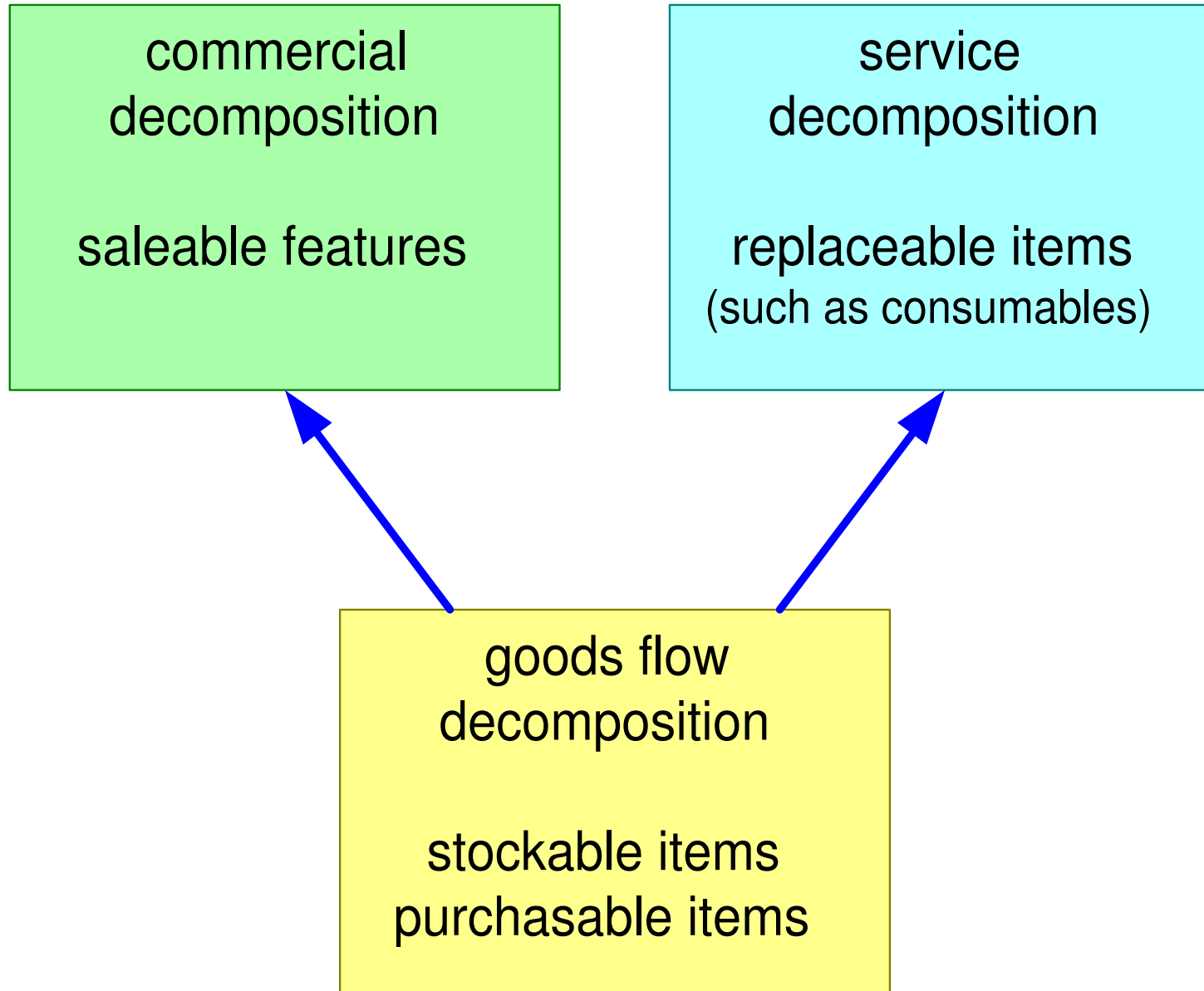
Context of Motorway Management System



Commercial Graph



Logistics Decompositions



Use Case

typical use case(s)

interaction flow (functional aspects)

- select movie via directory
- start movie
- be able to pause or stop
- be able to skip forward or backward
- set recording quality

performance and other qualities (non-functional aspects)

- response times for start / stop
- response times for directory browsing
- end-of-movie behaviour
- relation recording quality and storage

worst case, exceptional, or change use case(s)

functional

- multiple inputs at the same time
- extreme long movie
- directory behaviour in case of
extreme many short movies

non-functional

- response time with multiple inputs
- image quality with multiple inputs
- insufficient free space
- response time with many directory entries
- replay quality while HQ recording

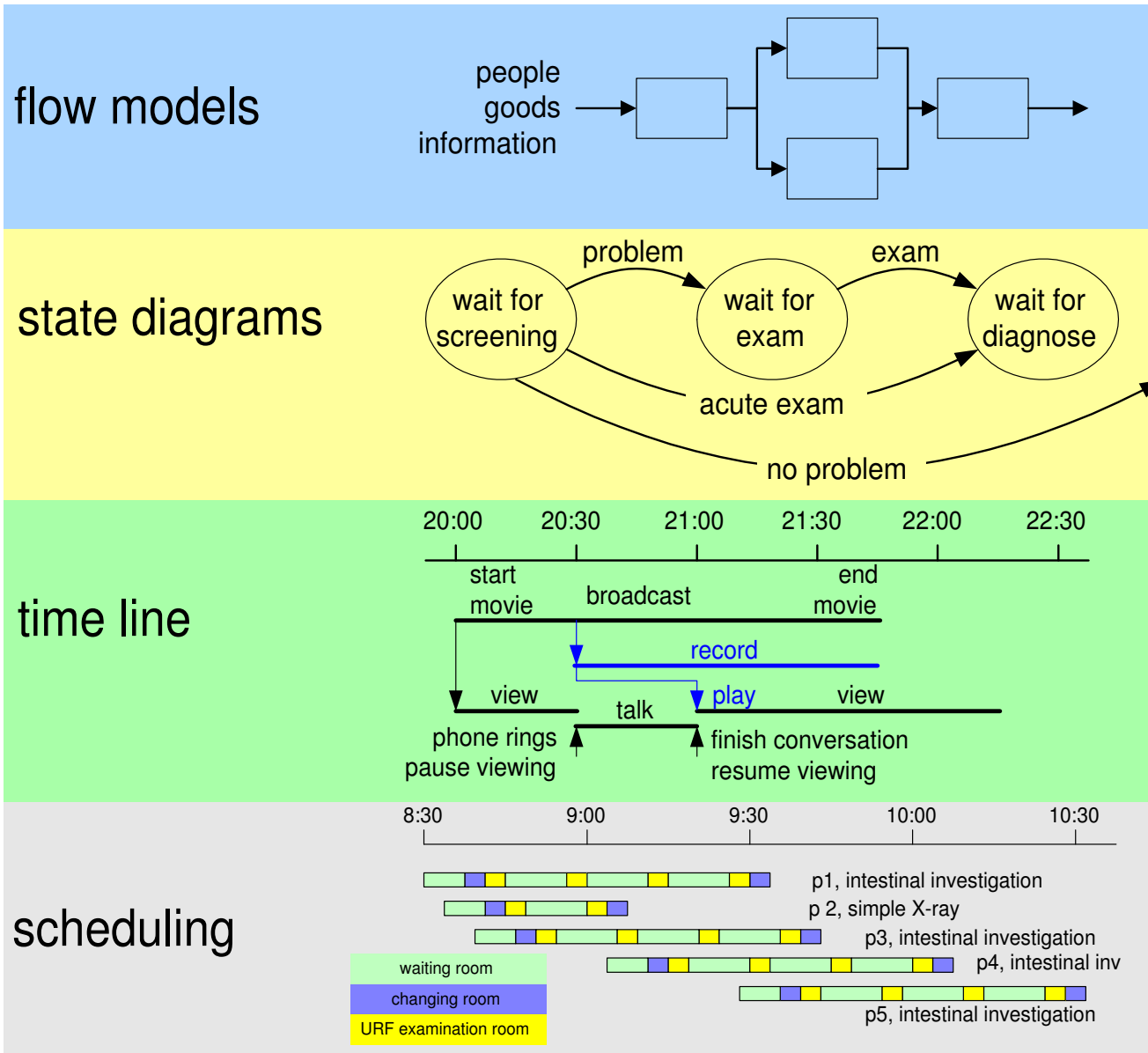
Function Feature Matrix

<i>technical functions</i>	<i>products</i>	home cinema system	flat screen cinema TV	bedroom TV
HD display		+	+	-
SD->HD up conversion		+	+	-
HD->SD down conversion		+	+	0
HD storage		0	-	-
SD storage		0	-	0
HD IQ improvement		+	+	-
SD IQ improvement		+	+	+
HD digital input		+	+	0
SD digital input		+	+	0
SD analog input		0	+	+
6 HQ channel audio		+	0	-
2 channel audio		-	+	+

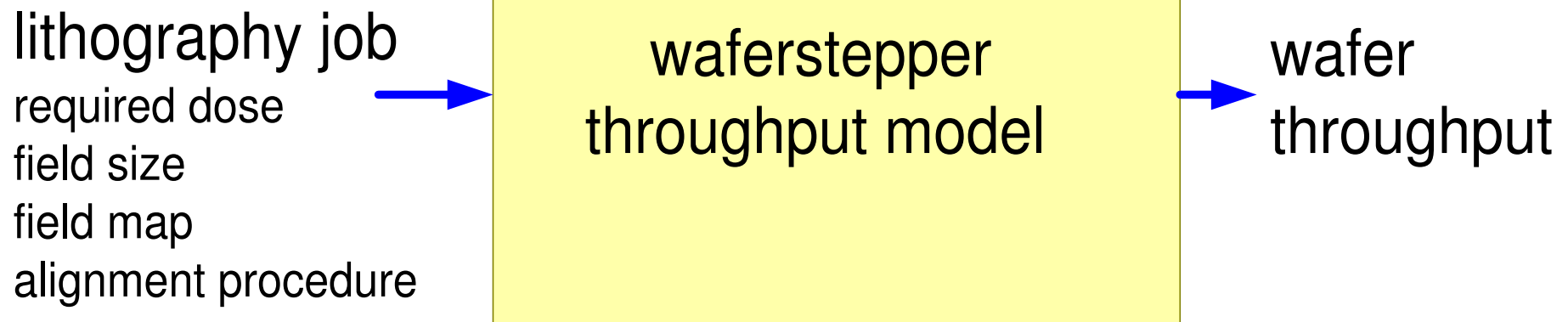
legend

+	present
0	optional
-	absent

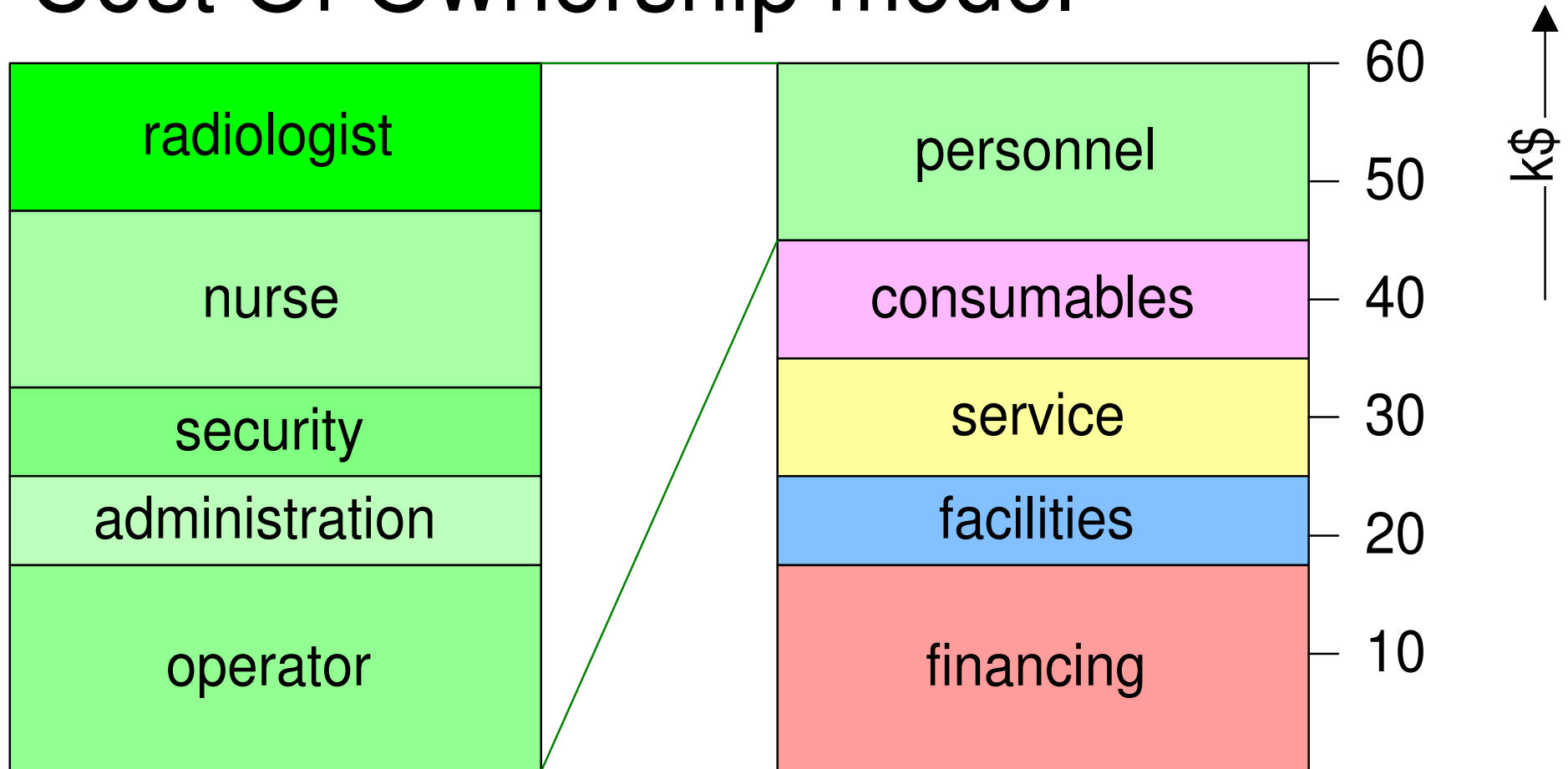
Dynamic Models



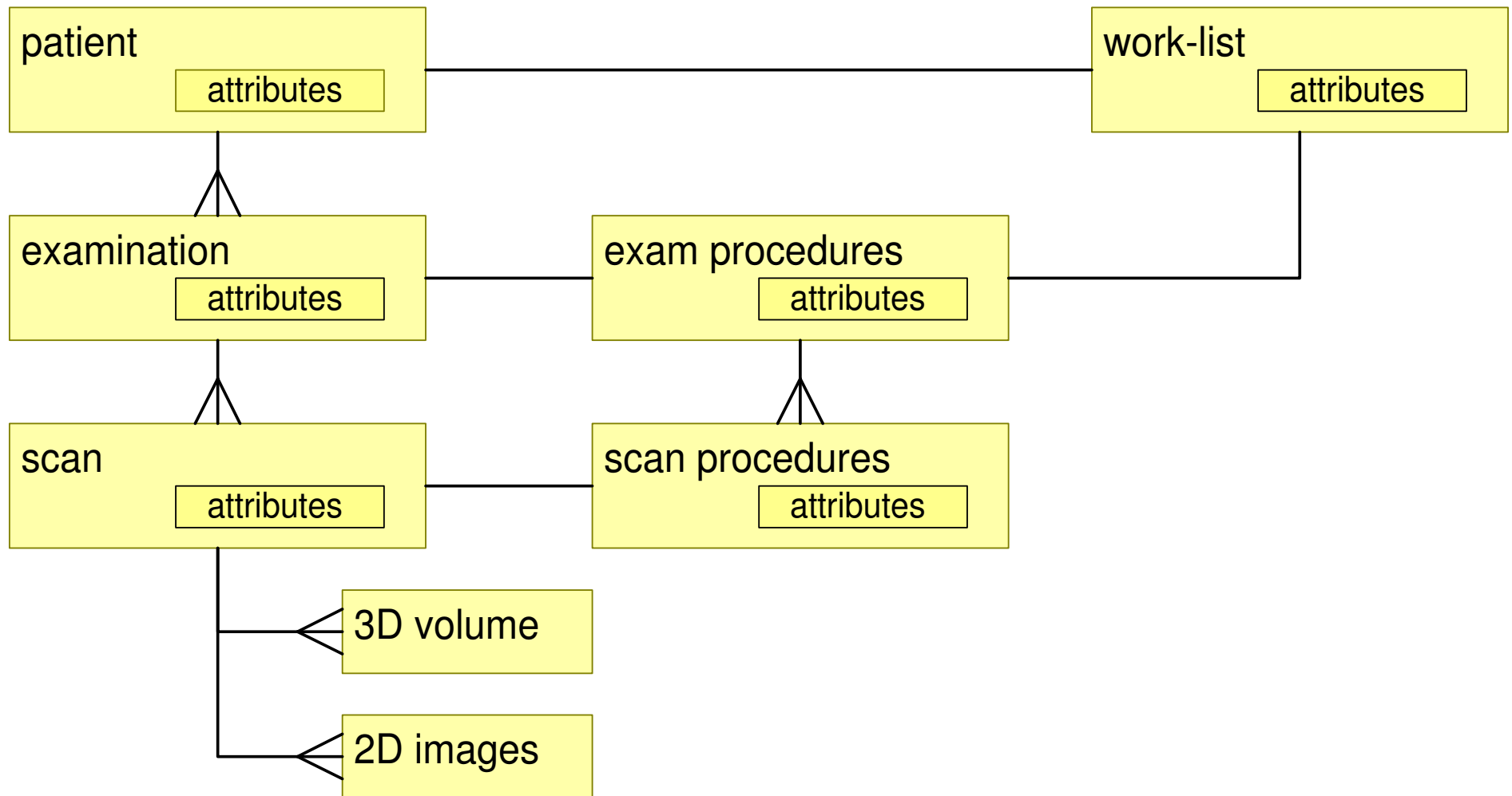
Throughput Model



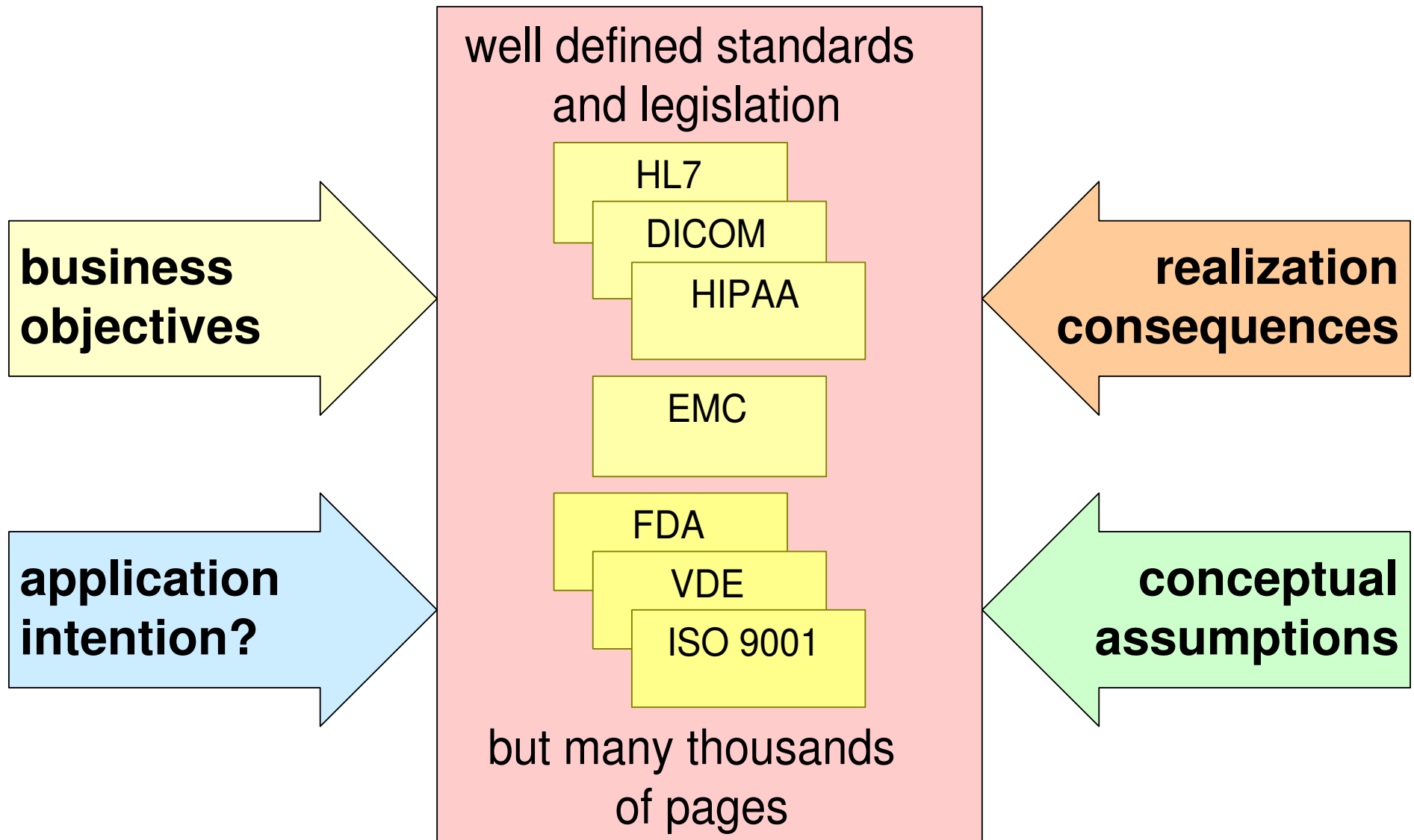
Cost Of Ownership model



External Information Model



Forces of Standards



Overview of CAF Submethods

Customer objectives

key drivers
value chain
business models
suppliers

Application

context diagram
stakeholders and concerns
entity relationship models
dynamic models

Functional

case descriptions
commercial decomposition
service decomposition
goods flow decomposition
function and feature specifications
performance
external interfaces
standards