

Module 34, Architectural Reasoning Customer Space Analysis

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Abstract

This module provides methods and techniques to analyze the customer space.

Distribution

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draft

version: 1.1

Methods to Explore the Customer Perspective

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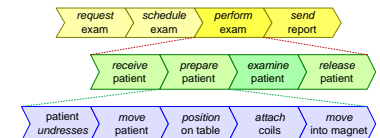
Abstract

This presentation provides a set of techniques to explore the customer perspective. The main purpose is for an organization to understand its customer sufficiently. Architects need this level of understanding to guide specification and design.

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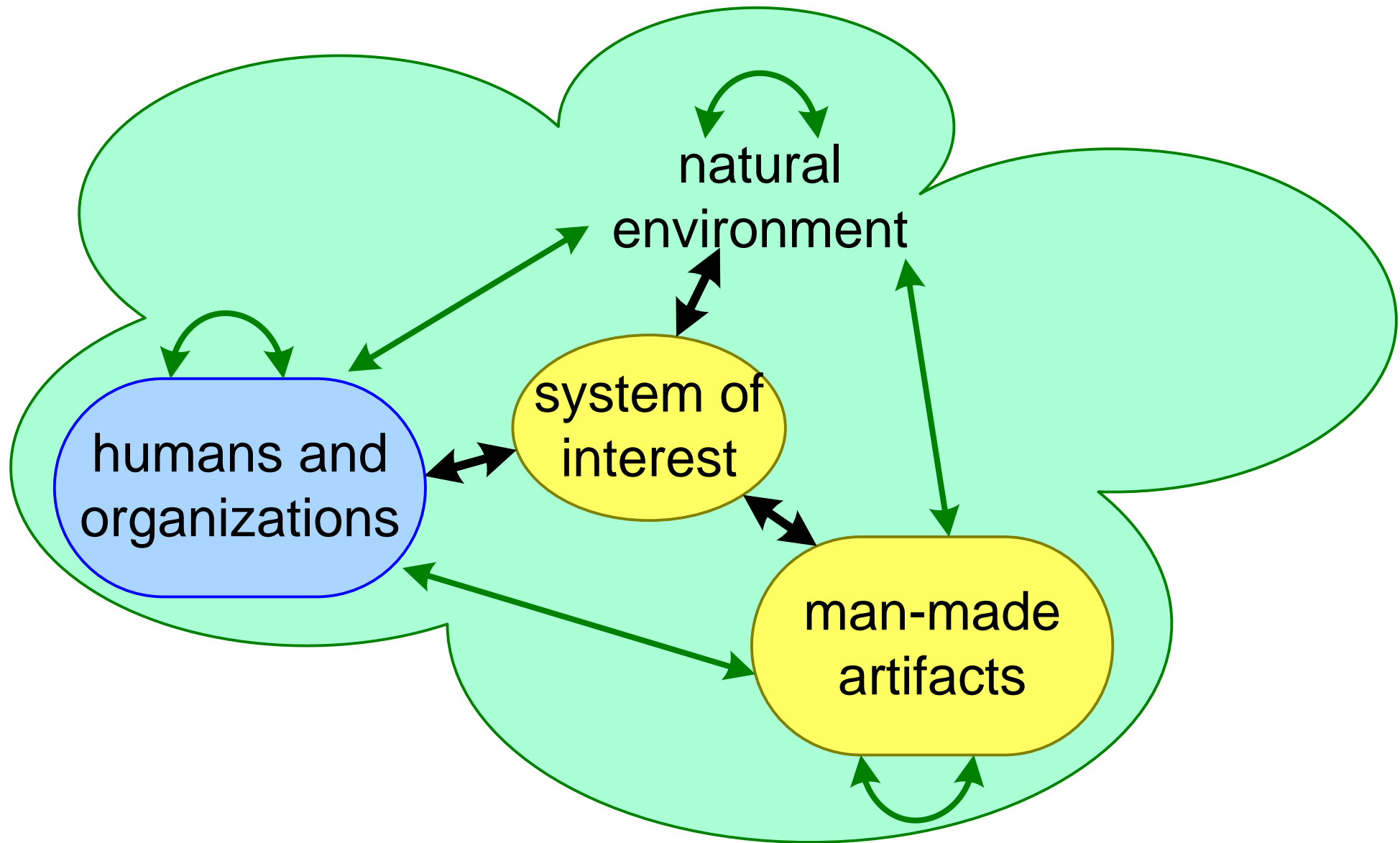
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Overview of methods

what	story telling, scenario	http://www.gaudisite.nl/info/StoryHowTo.info.html
who	stakeholders and concerns	<i>humans</i> <i>organizations</i> autonomous behavior emotions
how	system context diagram workflow	<i>human-made artifacts</i>
when	timeline	from seconds to years
where	map	from nanometers to kilometers
why	customer key driver graph productivity model	http://www.gaudisite.nl/info/KeyDriversHowTo.info.html
financial	cost of ownership model money flow	

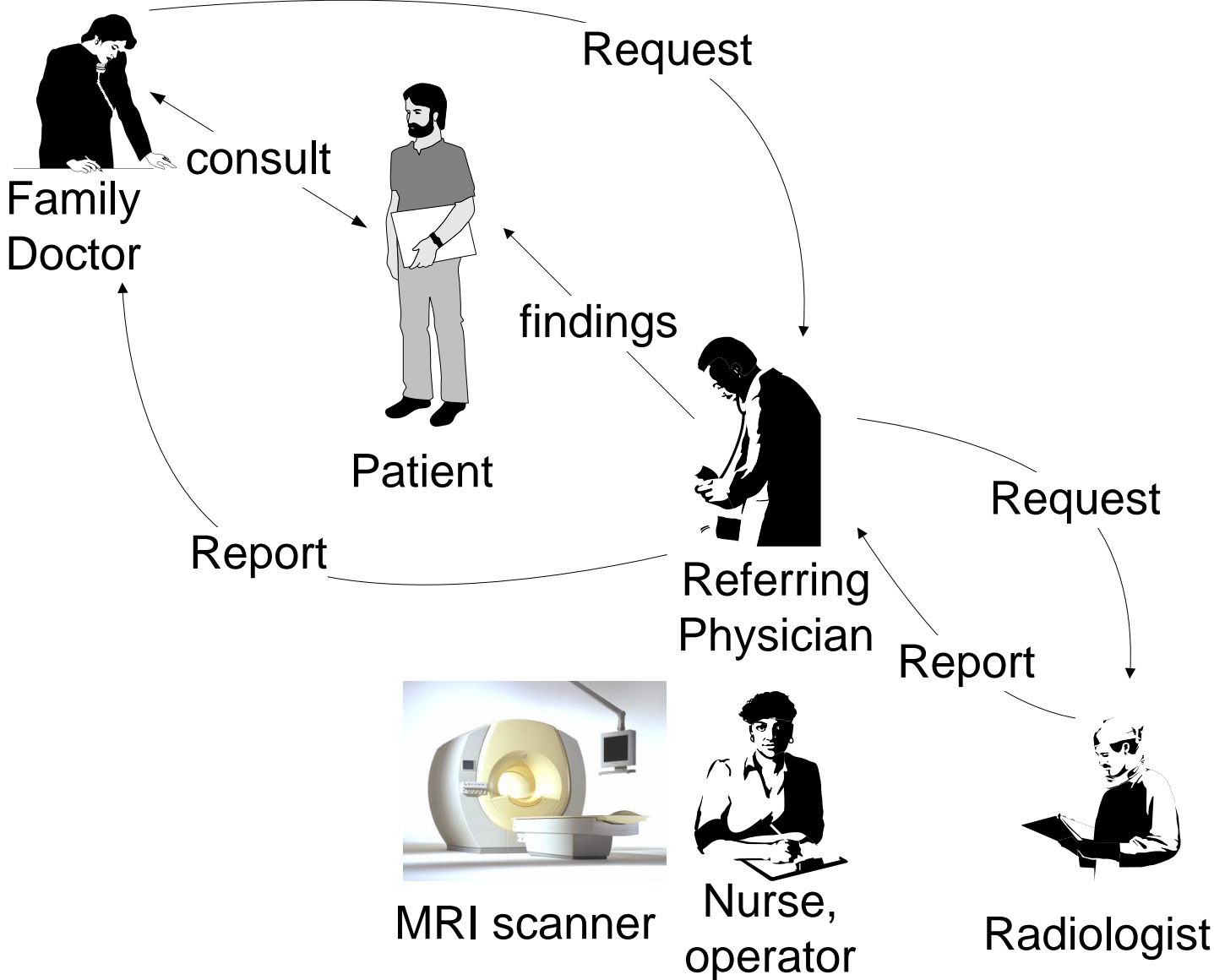
Various Perspectives on Context



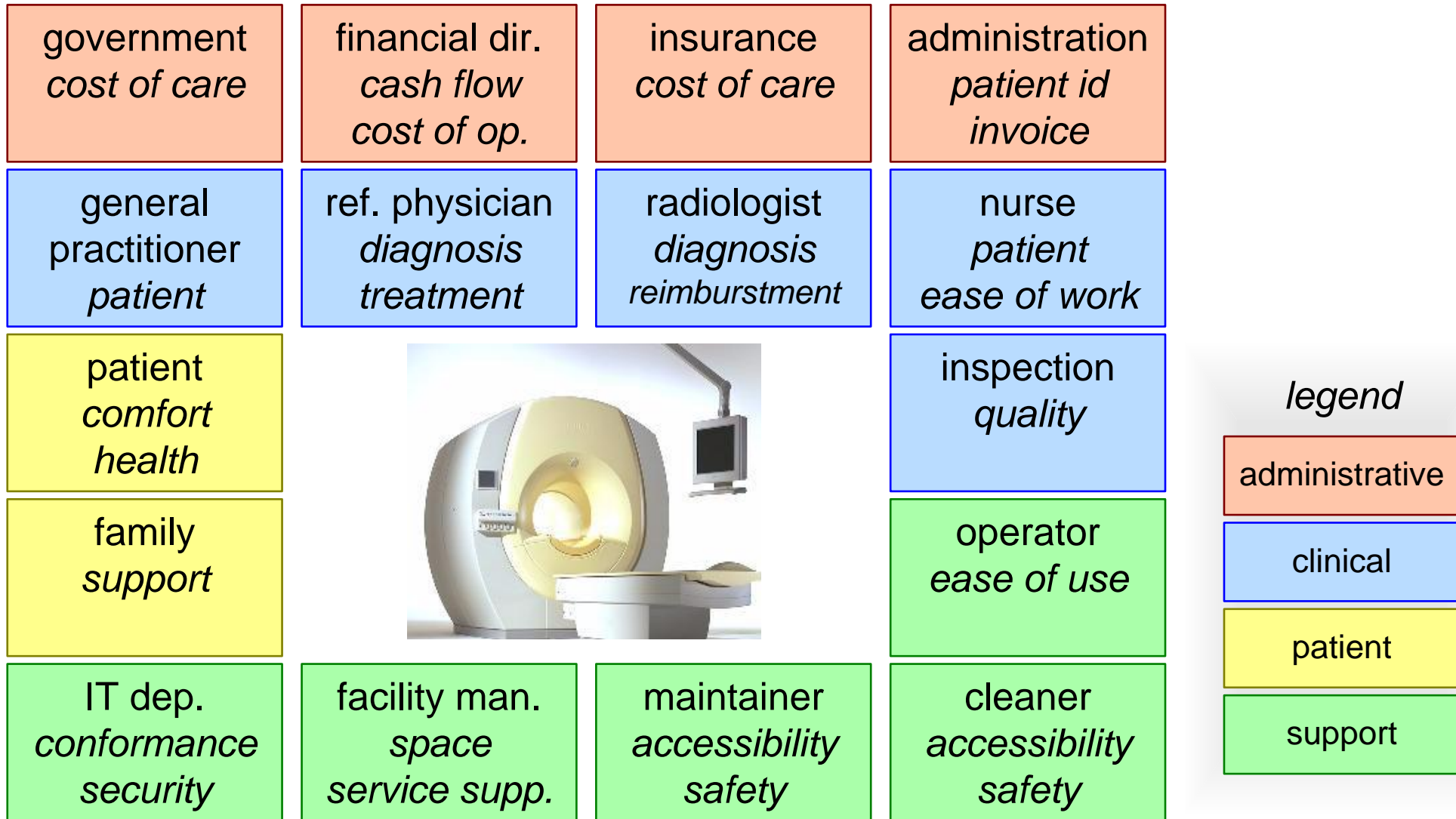
Scenario: Patient George

- Patient George has continuous headache.
- His family doctor has send him to the Neurologist.
- The Neurologist wants to exclude the possibility of a tumor and requests an MRI examination.
- The Radiologists does not see any indication for a tumor.
- The Radiologist sends his report to the Neurologist.
- The Neurologist discusses his findings with the patient and sends a report to the family doctor.

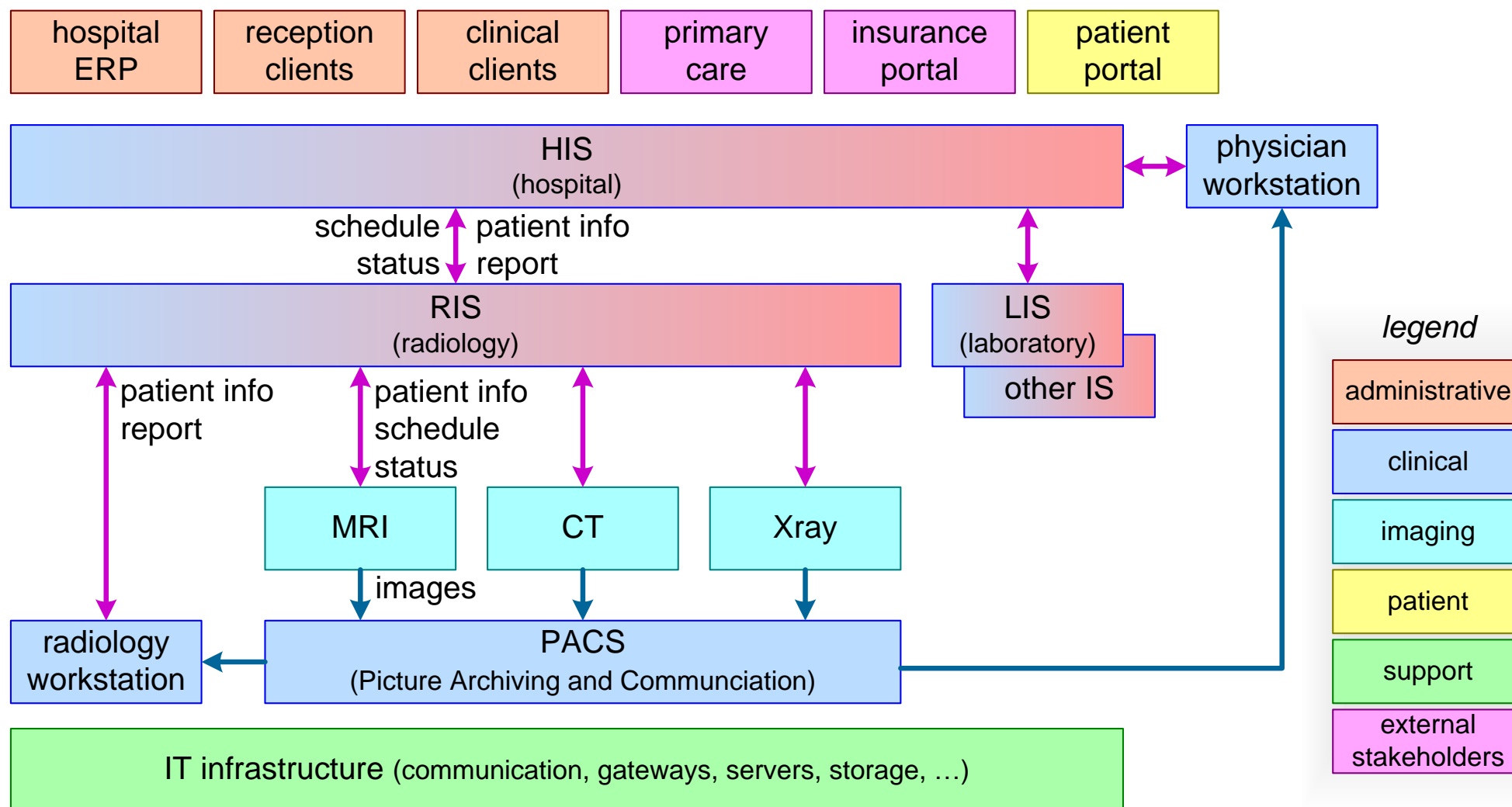
From Complaint to Diagnosis



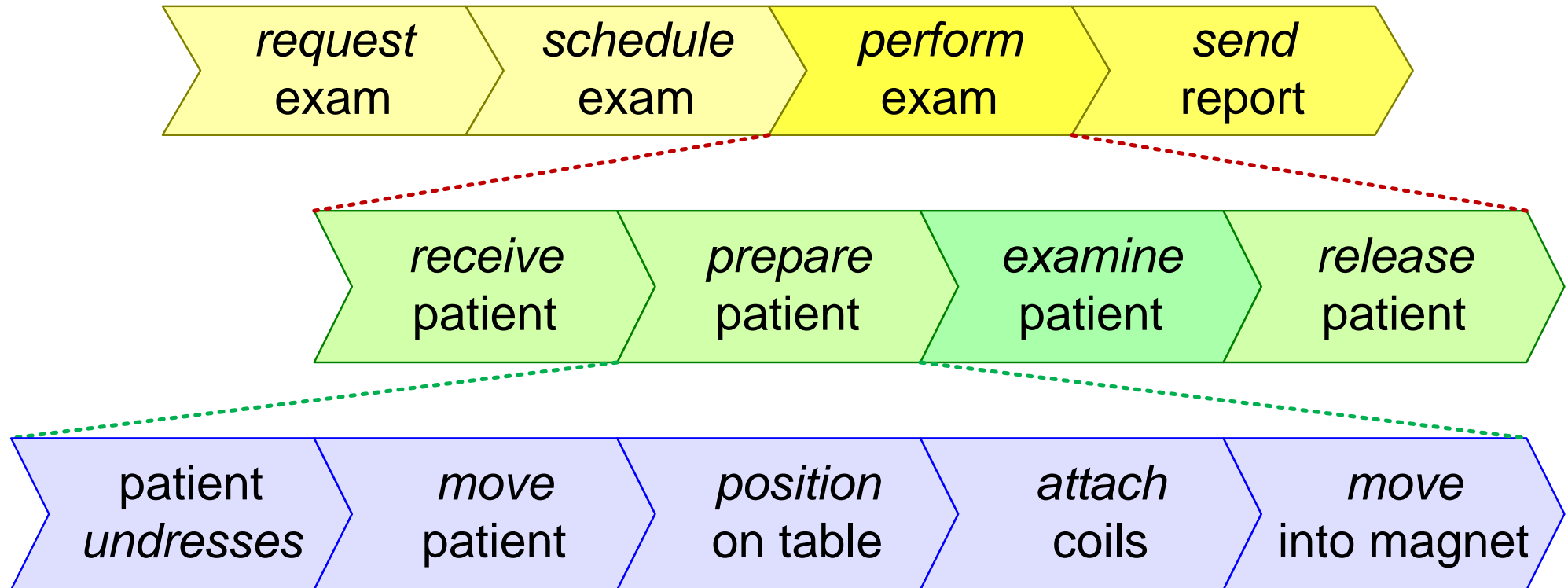
Stakeholders and concerns MRI scanner



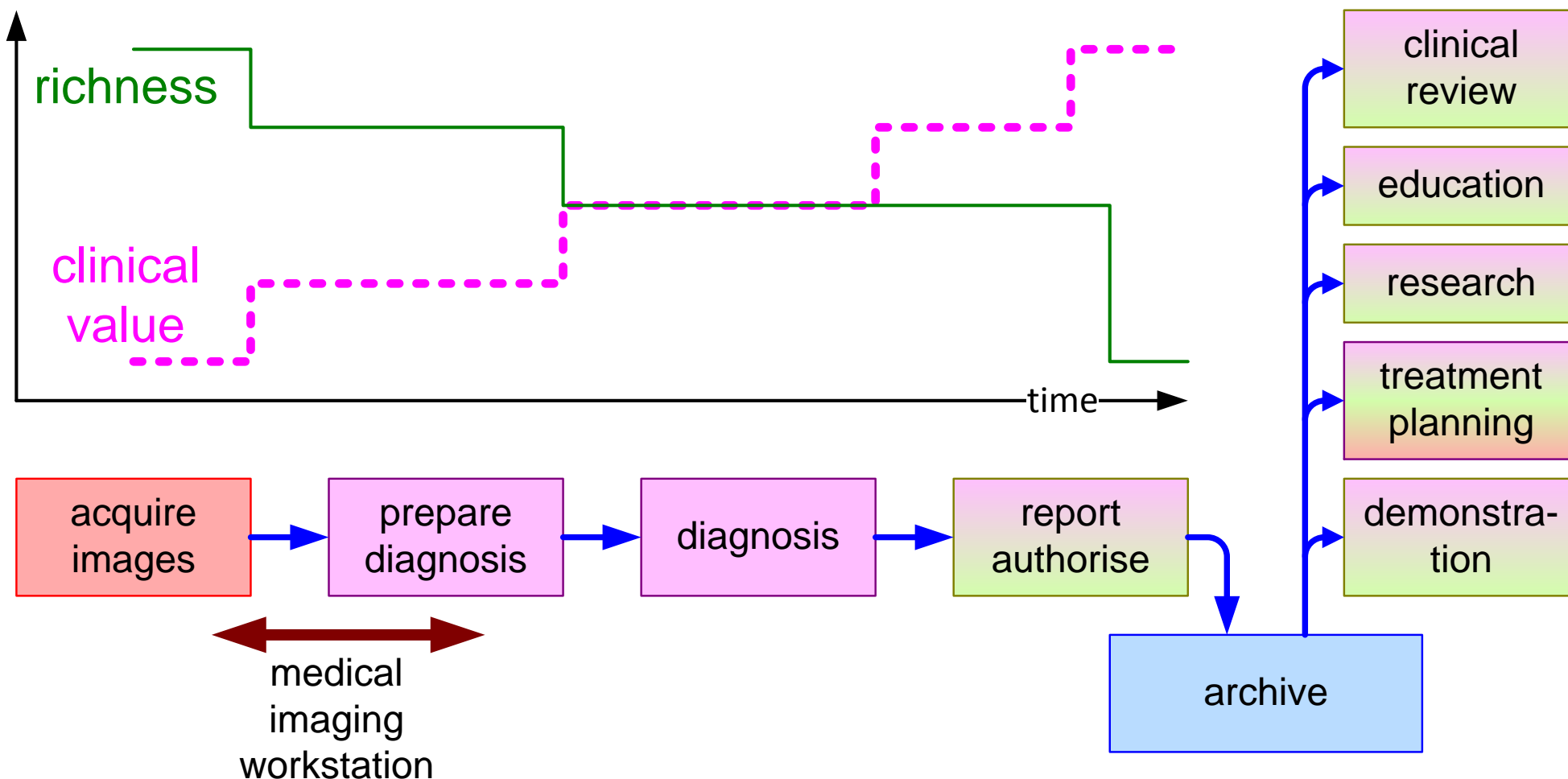
Context of MRI



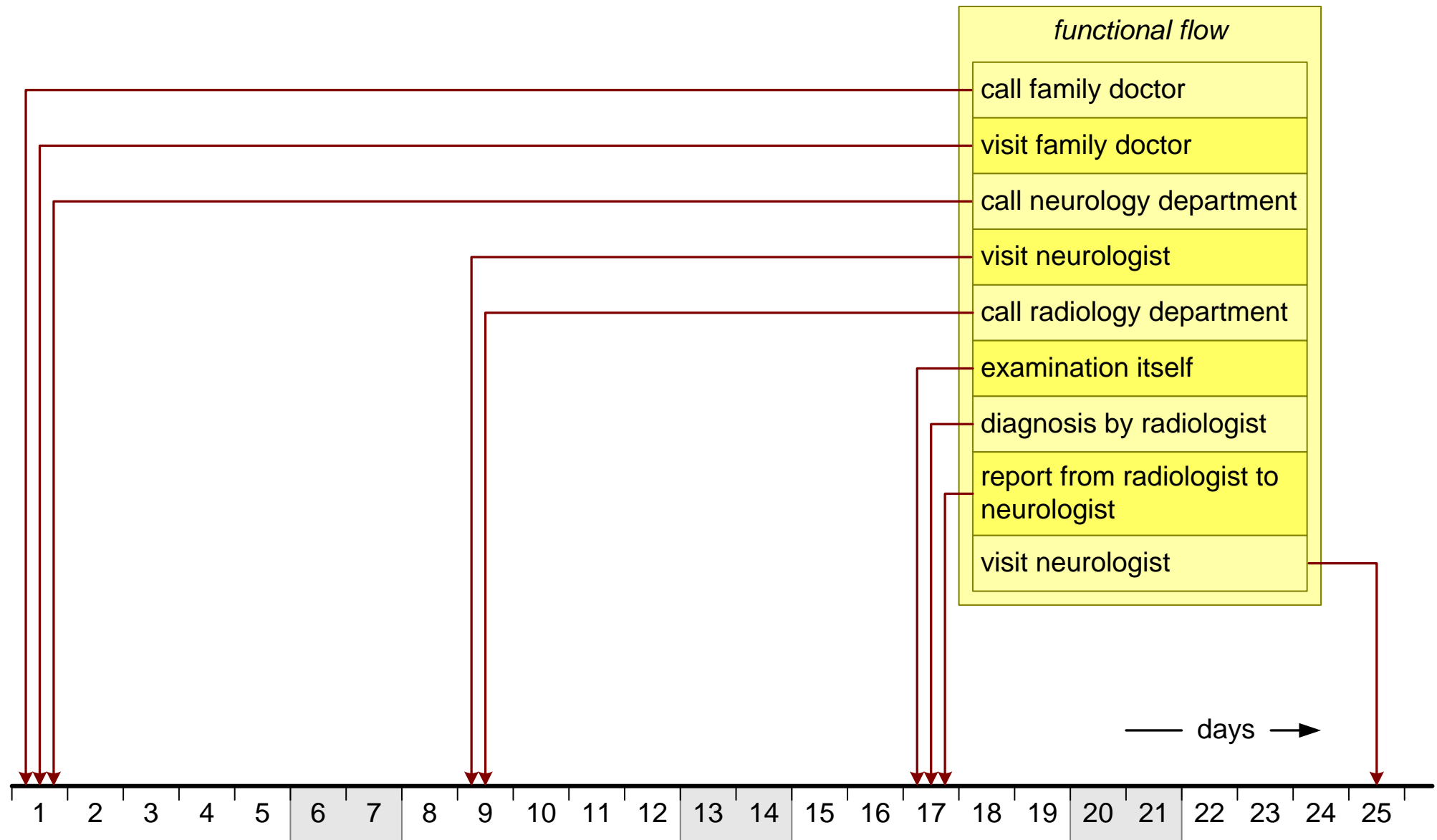
Workflow



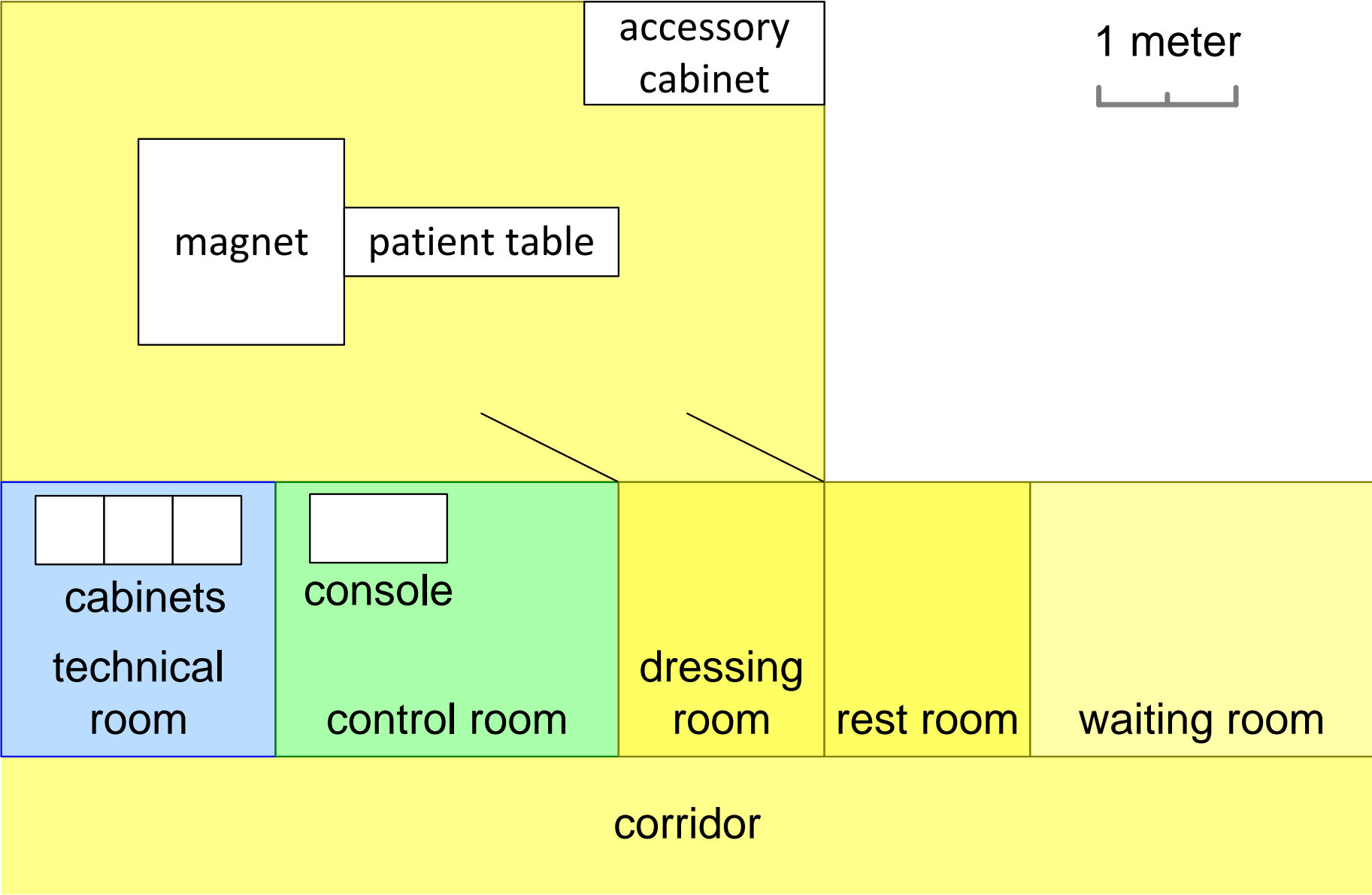
Clinical Information Flow



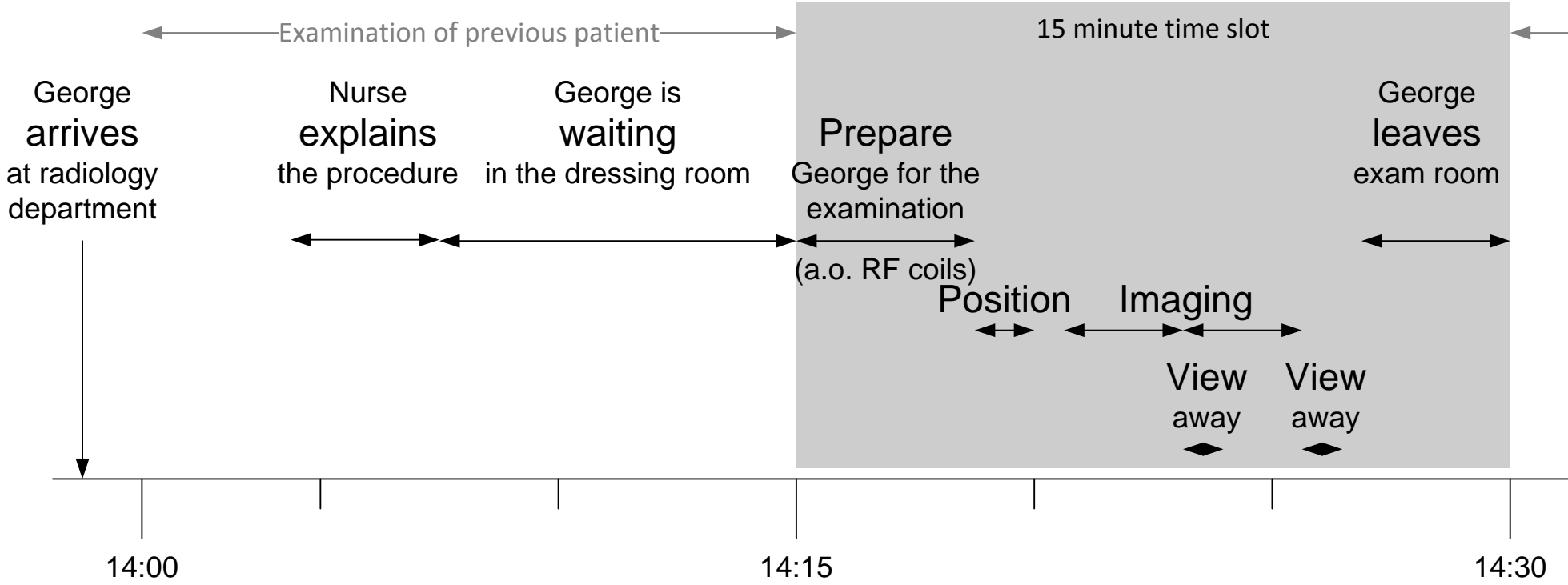
weeks view: from Complaint to Diagnosis



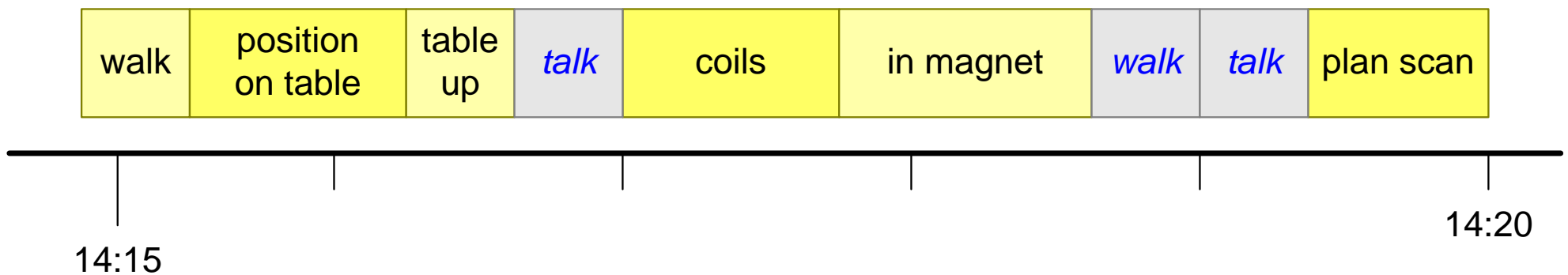
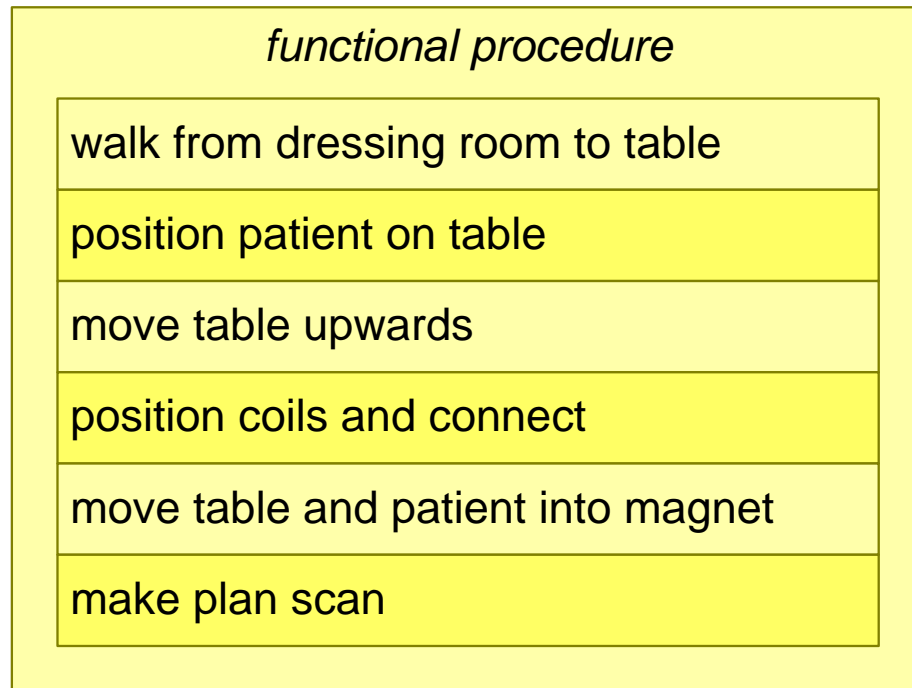
Room Layout



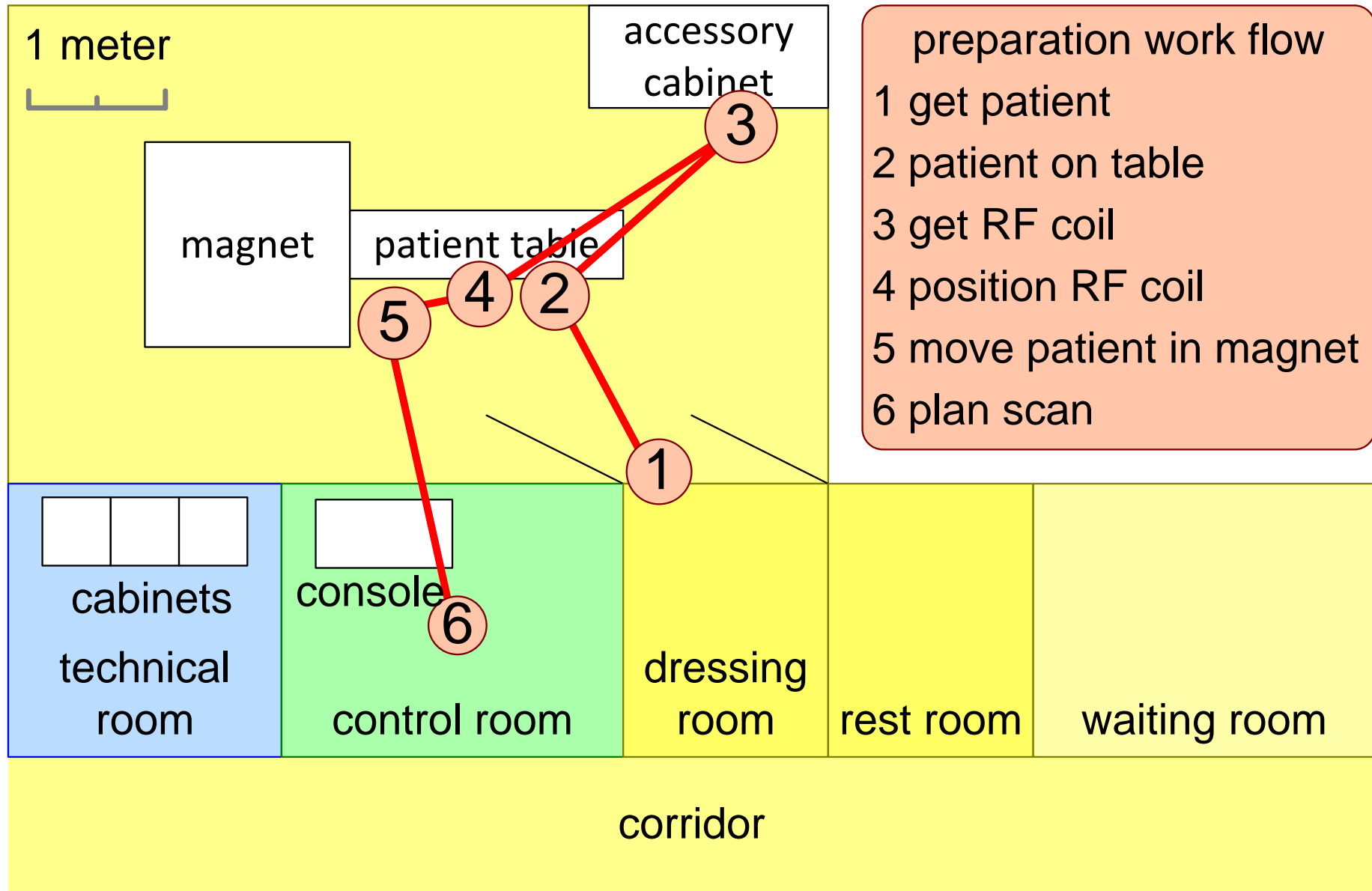
half hour view: Examination



5 minute view: Patient Preparation (1 operator)

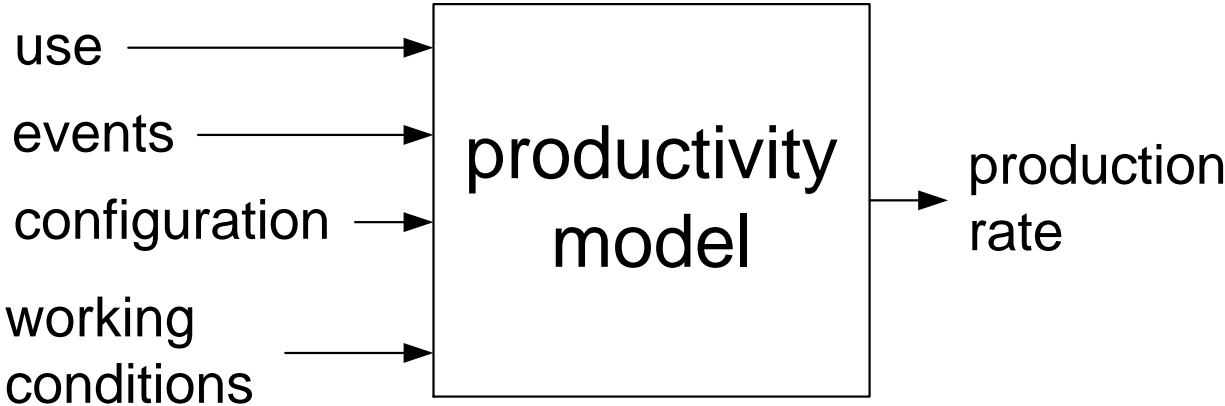


Patient Preparation Work Flow

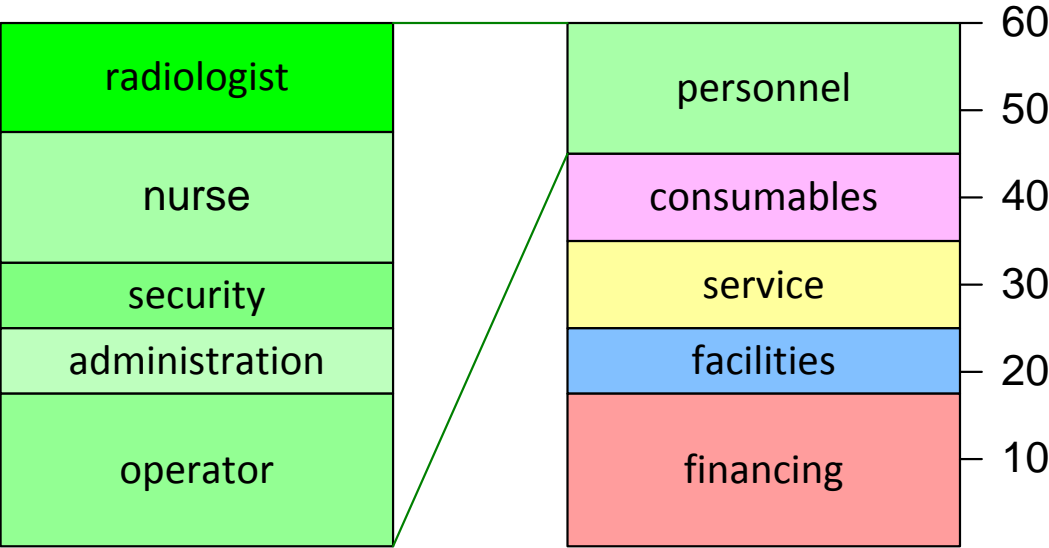


Productivity and Cost models

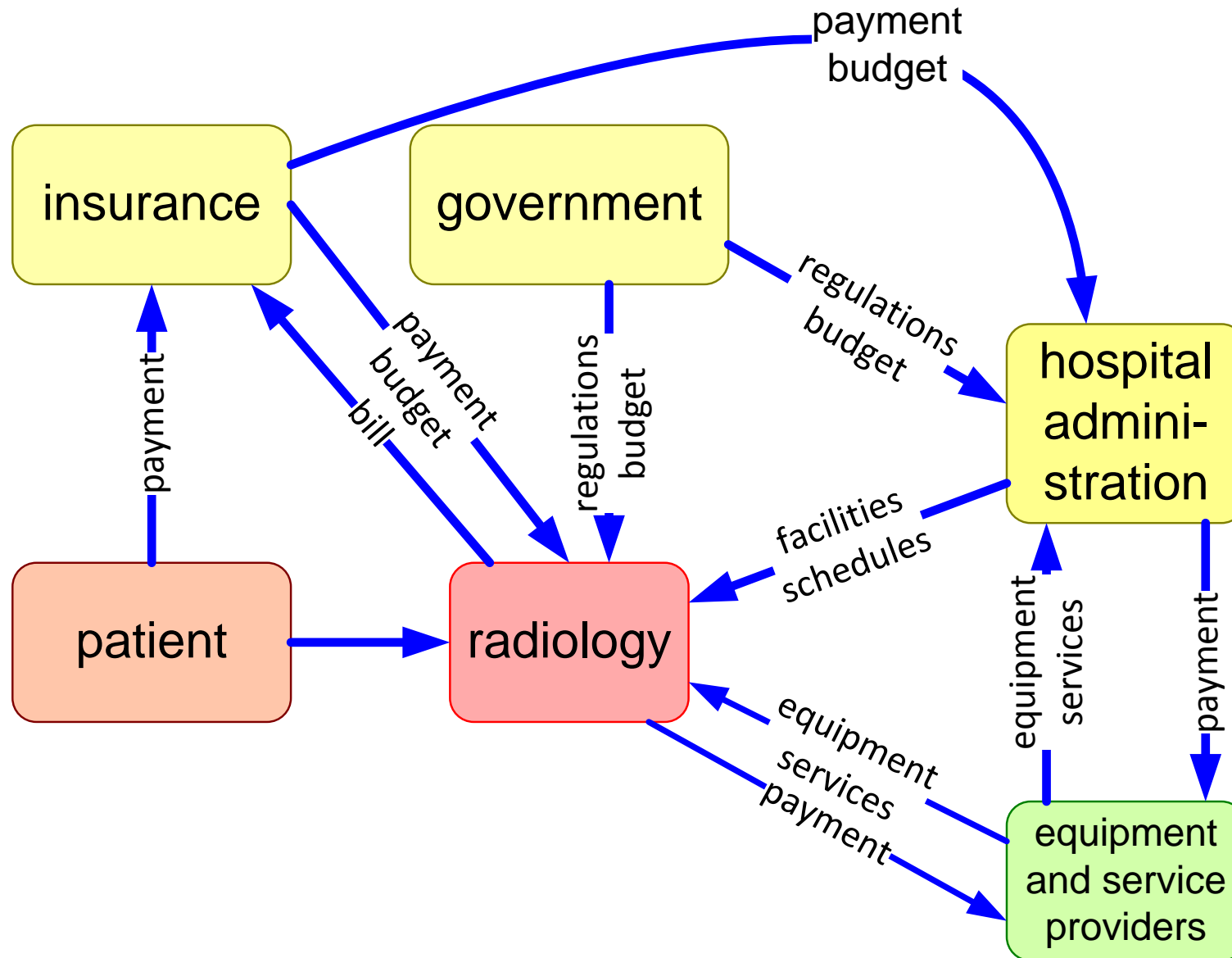
typical



Cost Of Ownership model



The financial context of the radiology department



Make a **context diagram**, showing the **systems** and their **relations** in the **customer space**

- typically, tens of systems are relevant for customers

Capture one or a few main **workflows** in the customer space

Key Drivers How To

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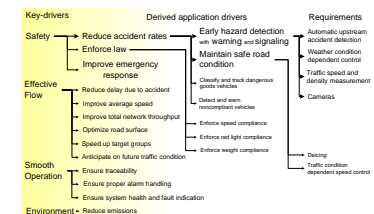
Abstract

The notion of "business key drivers" is introduced and a method is described to link these key drivers to the product specification.

Distribution

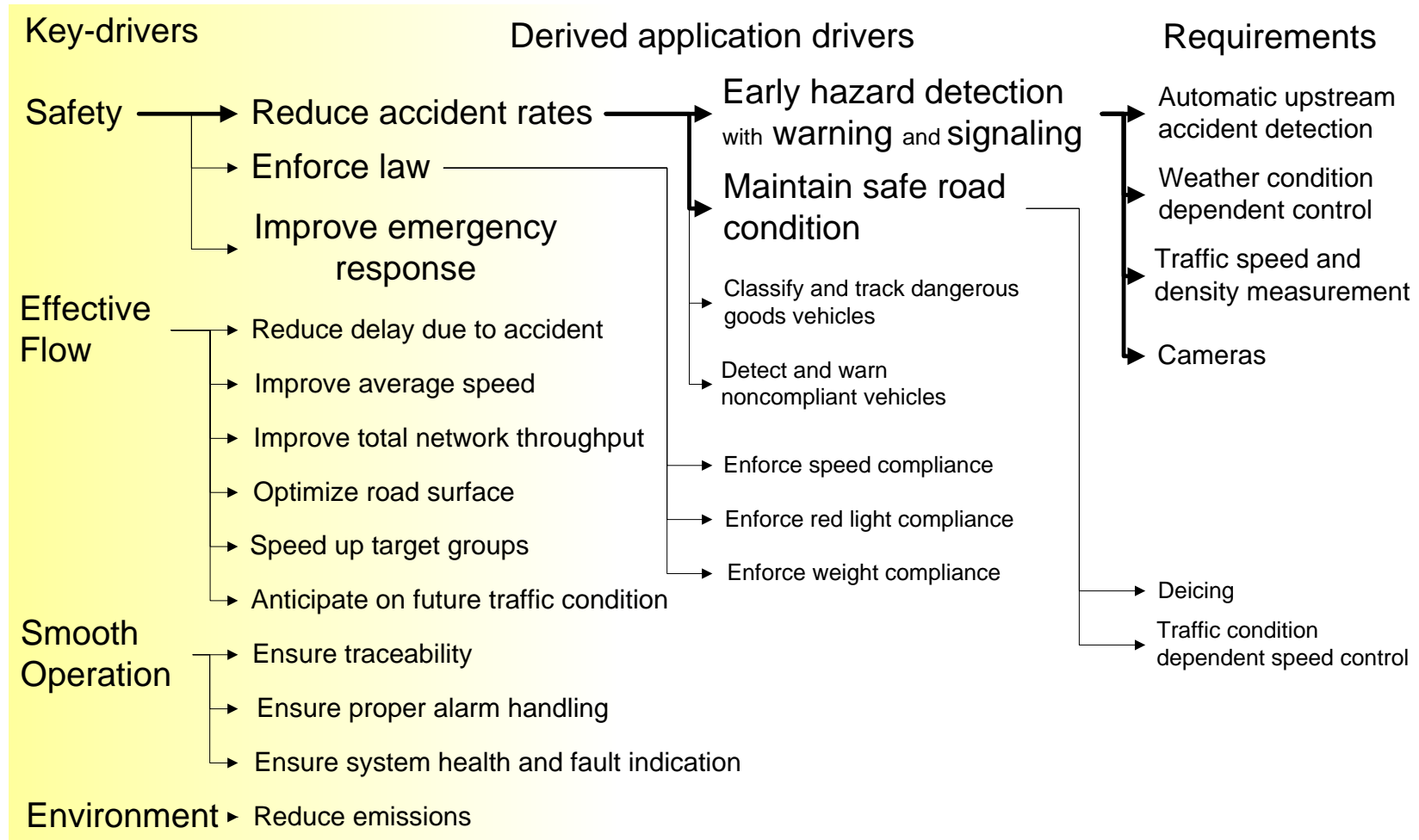
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Note: the graph is only partially elaborated for application drivers and requirements

Example Motorway Management Analysis



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

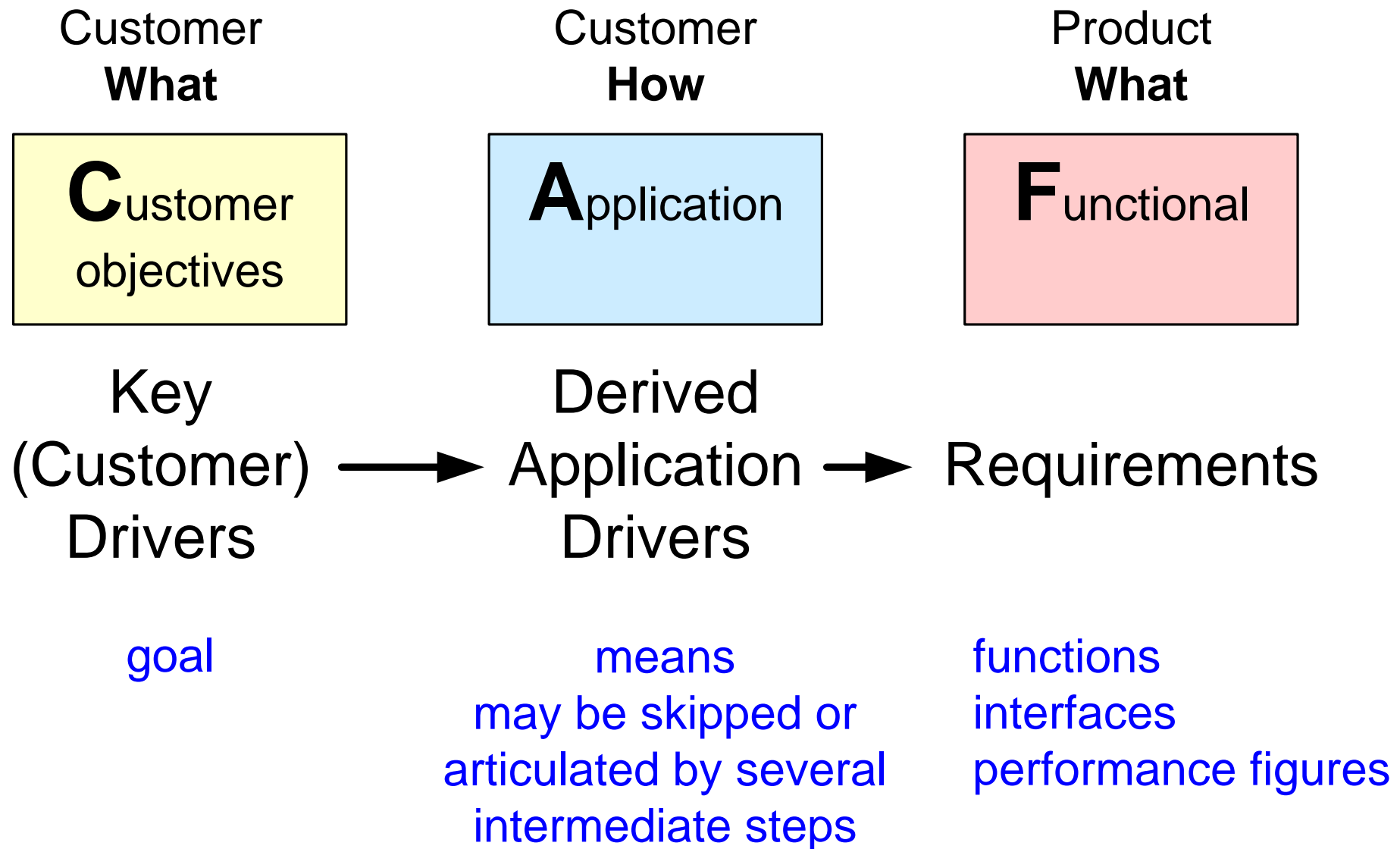
Method to create Key Driver Graph

- | | |
|--|--|
| • 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 |

Recommendation for the Definition of Key Drivers

- 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

Transformation of Key Drivers into Requirements

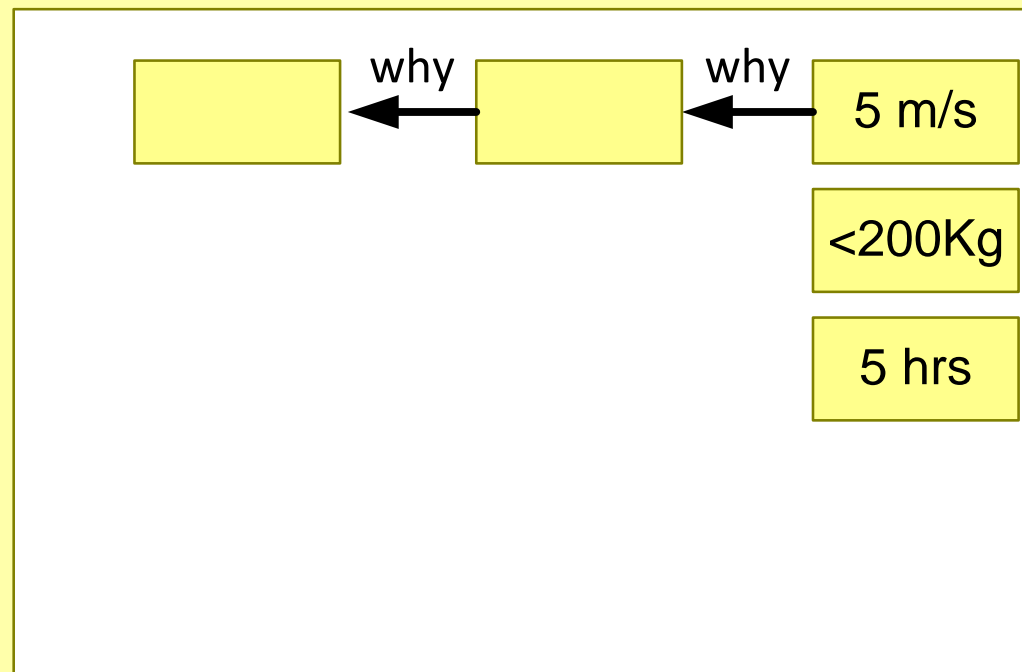


Exercise Customer Key Driver Graph

Make a **customer key driver graph**

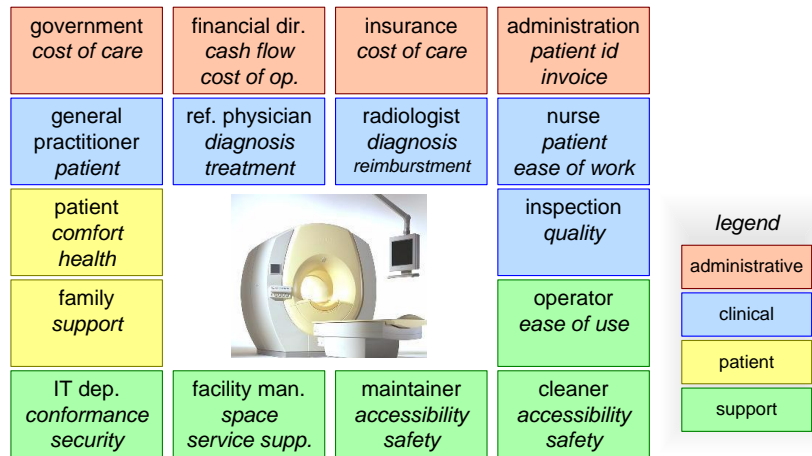
Use yellow note stickers

Start at the right hand side

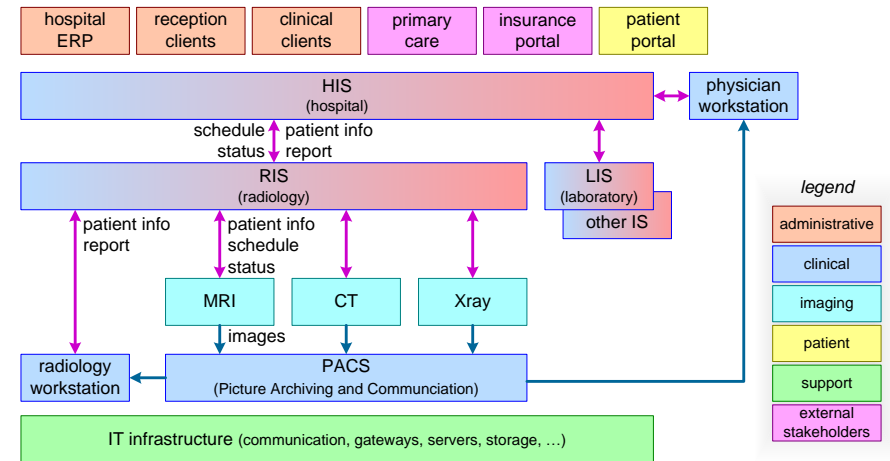


Analysis Methods and Techniques

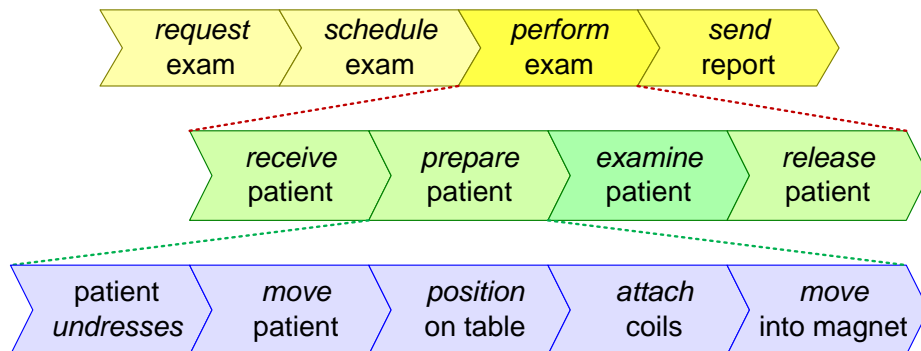
Stakeholders and Concerns (Who)



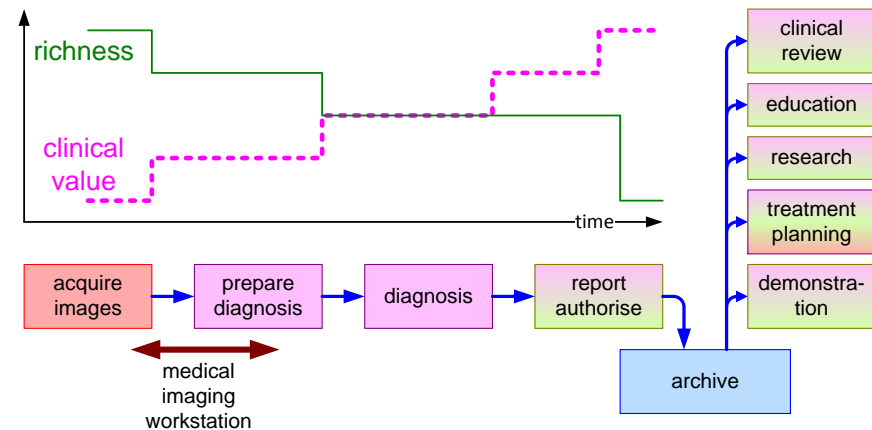
Context Diagram (what systems)



Workflow (what dynamics)

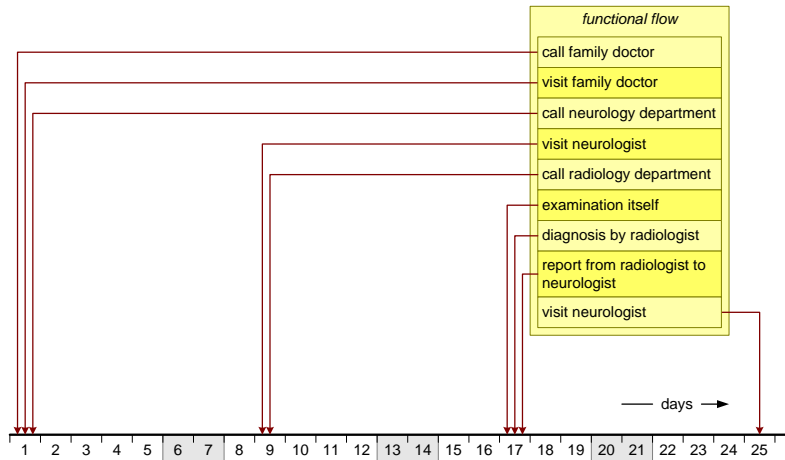


Information Flow

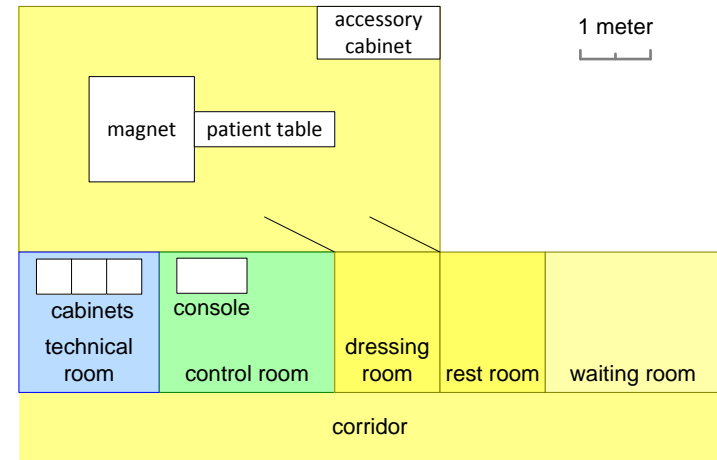


More Analysis Methods and Techniques

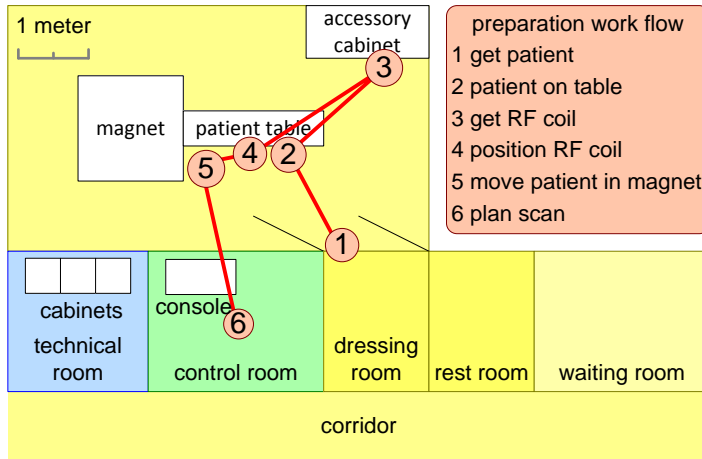
Timeline (when, what, who)



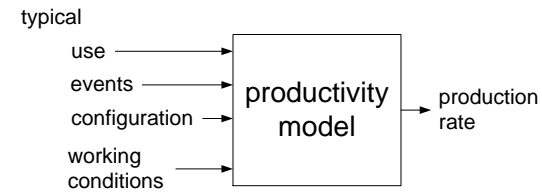
2D or 3D map (where)



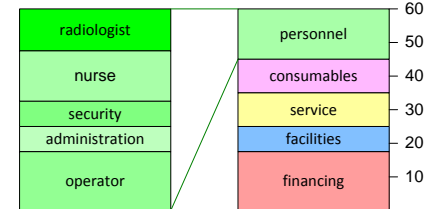
Annotated map (where, what)



Cost Models

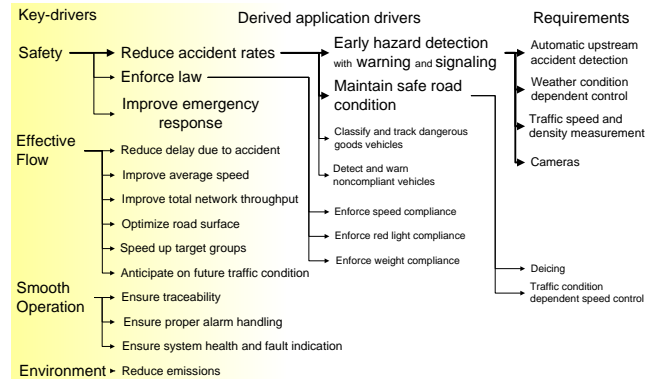


Cost Of Ownership model



Customer Key Driver Graph

Focus on Customer World



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

Specific Scope, Fact Based

- 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 *where requirements may have multiple drivers* by means of brainstorming and discussions
- 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*

3 to 6 Key driver, Capture Tensions

- 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*

intentionally left blank