

# Medical Imaging Workstation: CAF Views

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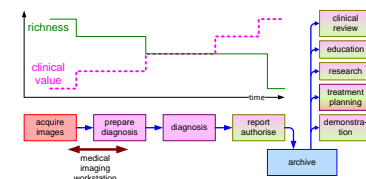
## Abstract

The Customer objectives, Application and Functional views are described. The radiology department and the radiologist are the main customer. The clinical and the financial context of the radiology department is shown. The medical imaging workstation is positioned in the field of IT products and in the clinical workflow. The market segmentation is shown. The typical URF examination is explained. Key drivers are linked to application drivers and to product requirements. The functionality development over time is shown and the role of the information model for interoperability is discussed.

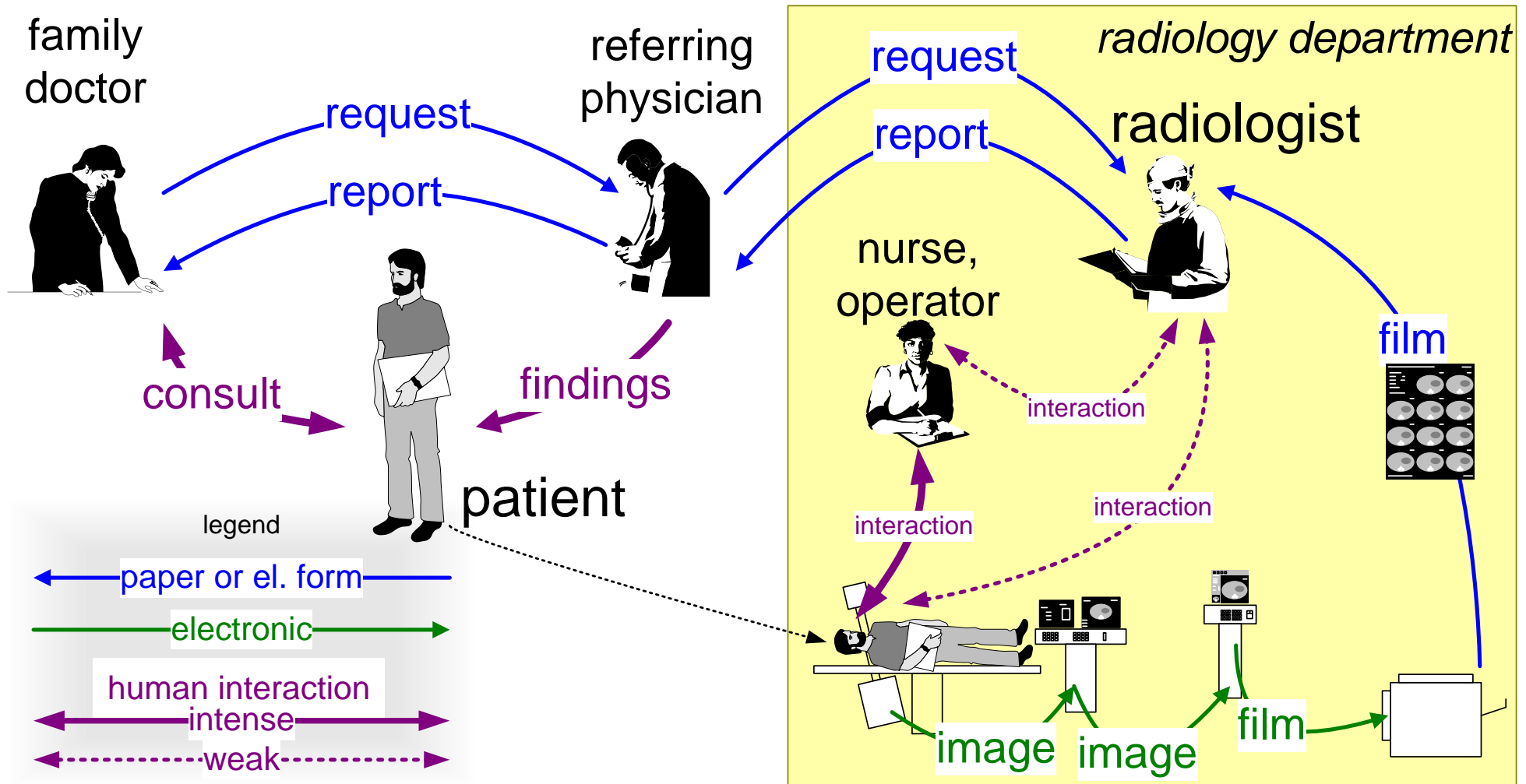
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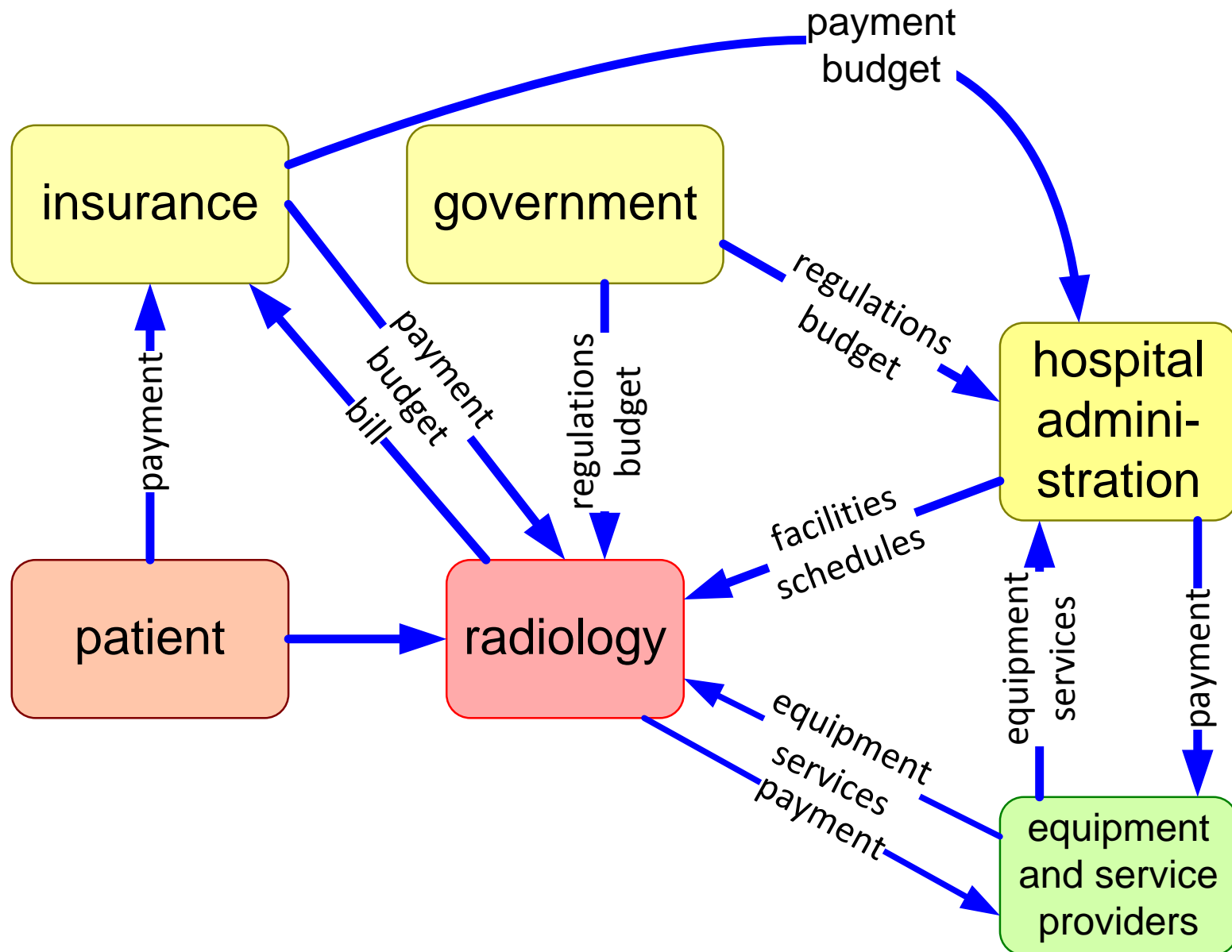
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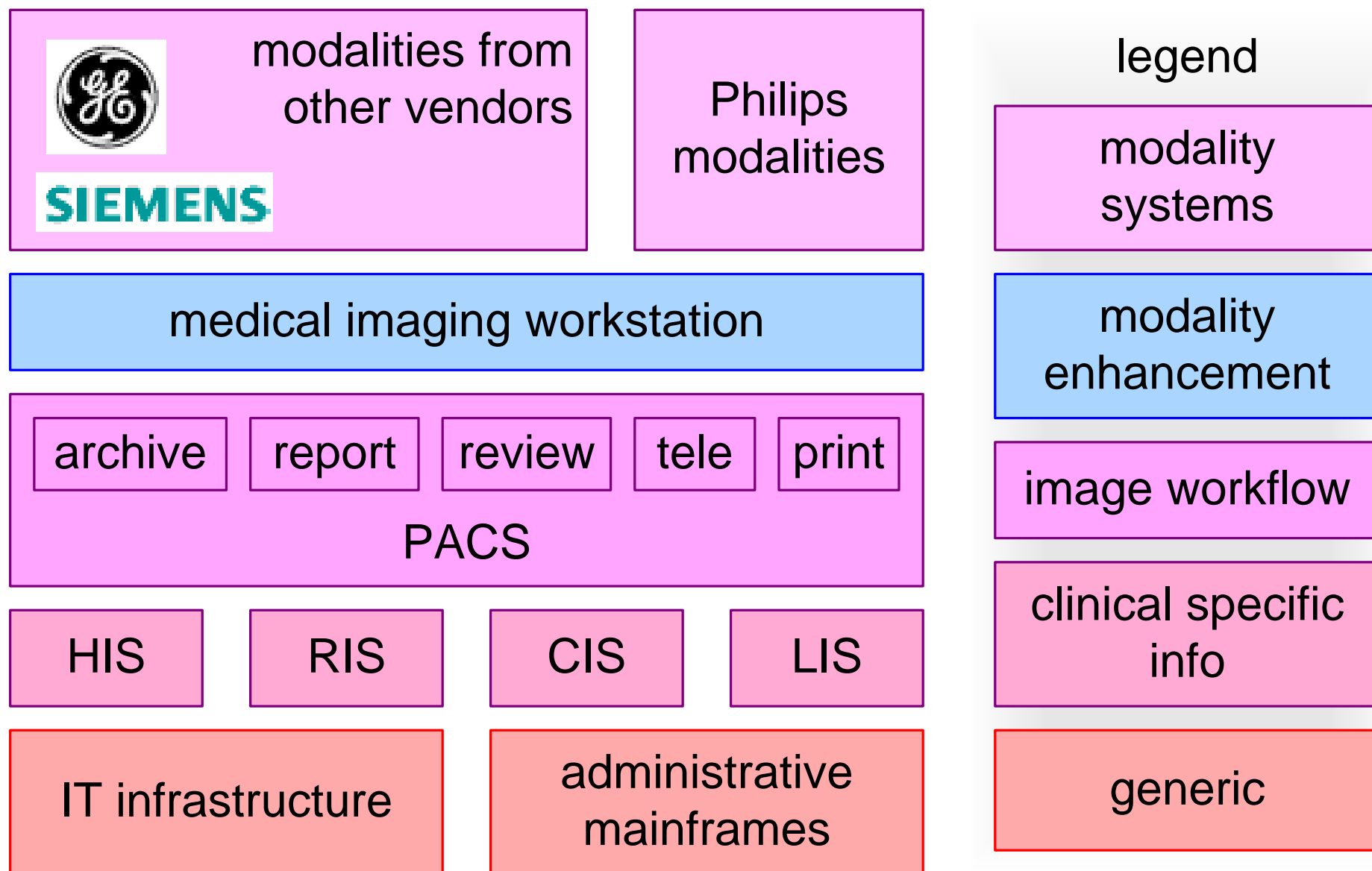
# The clinical context of the radiology department



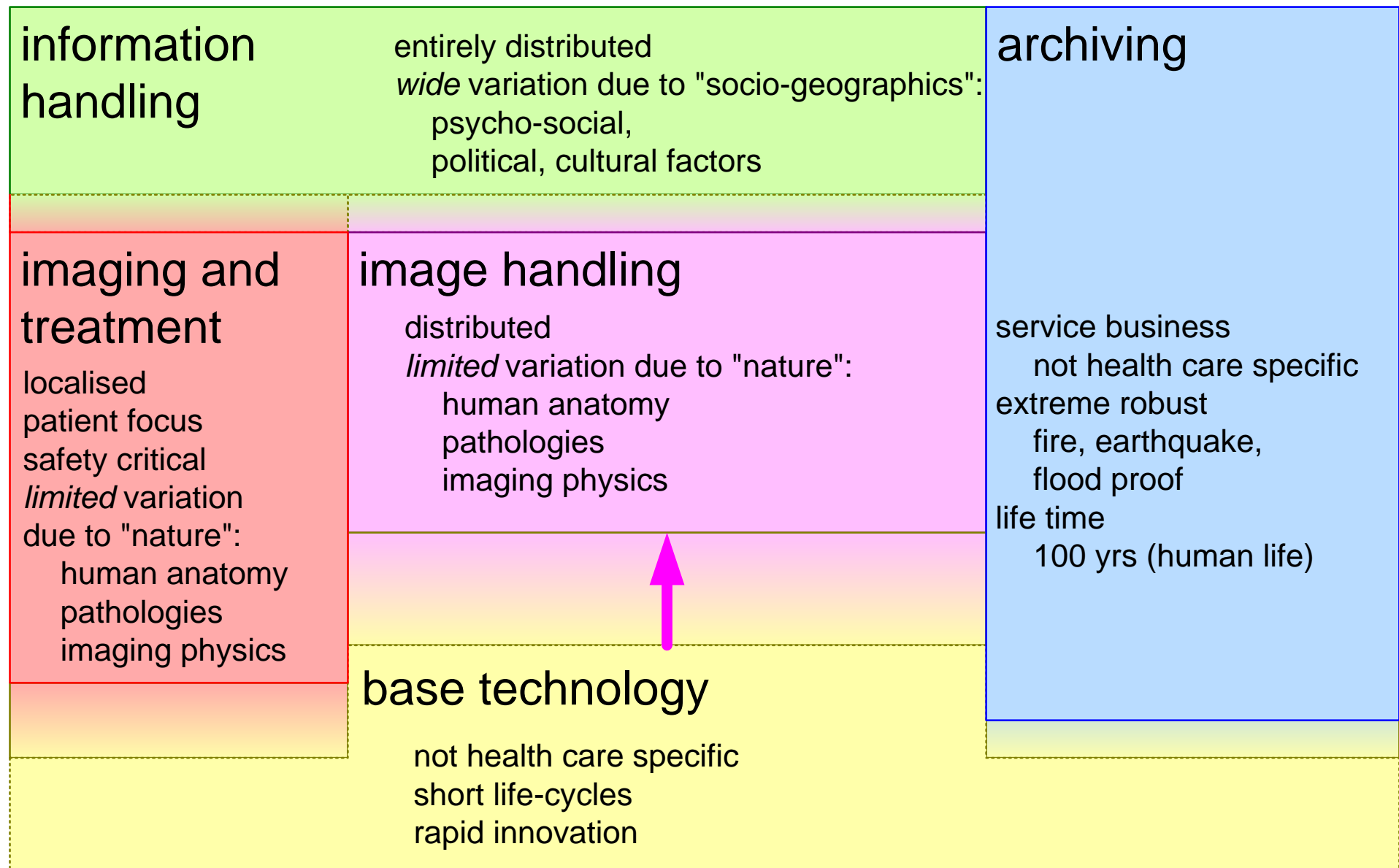
# The financial context of the radiology department



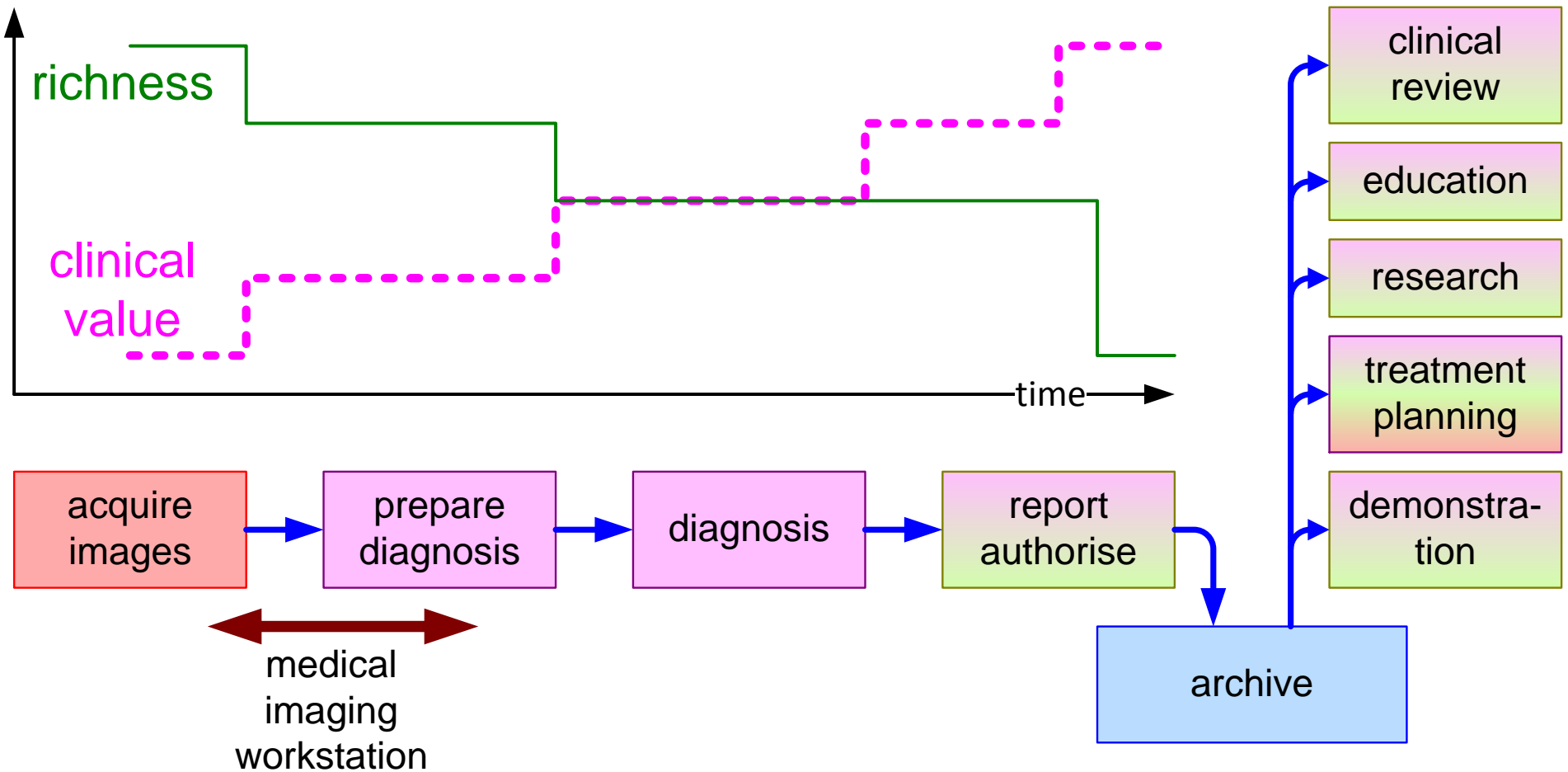
# Application layering of IT systems



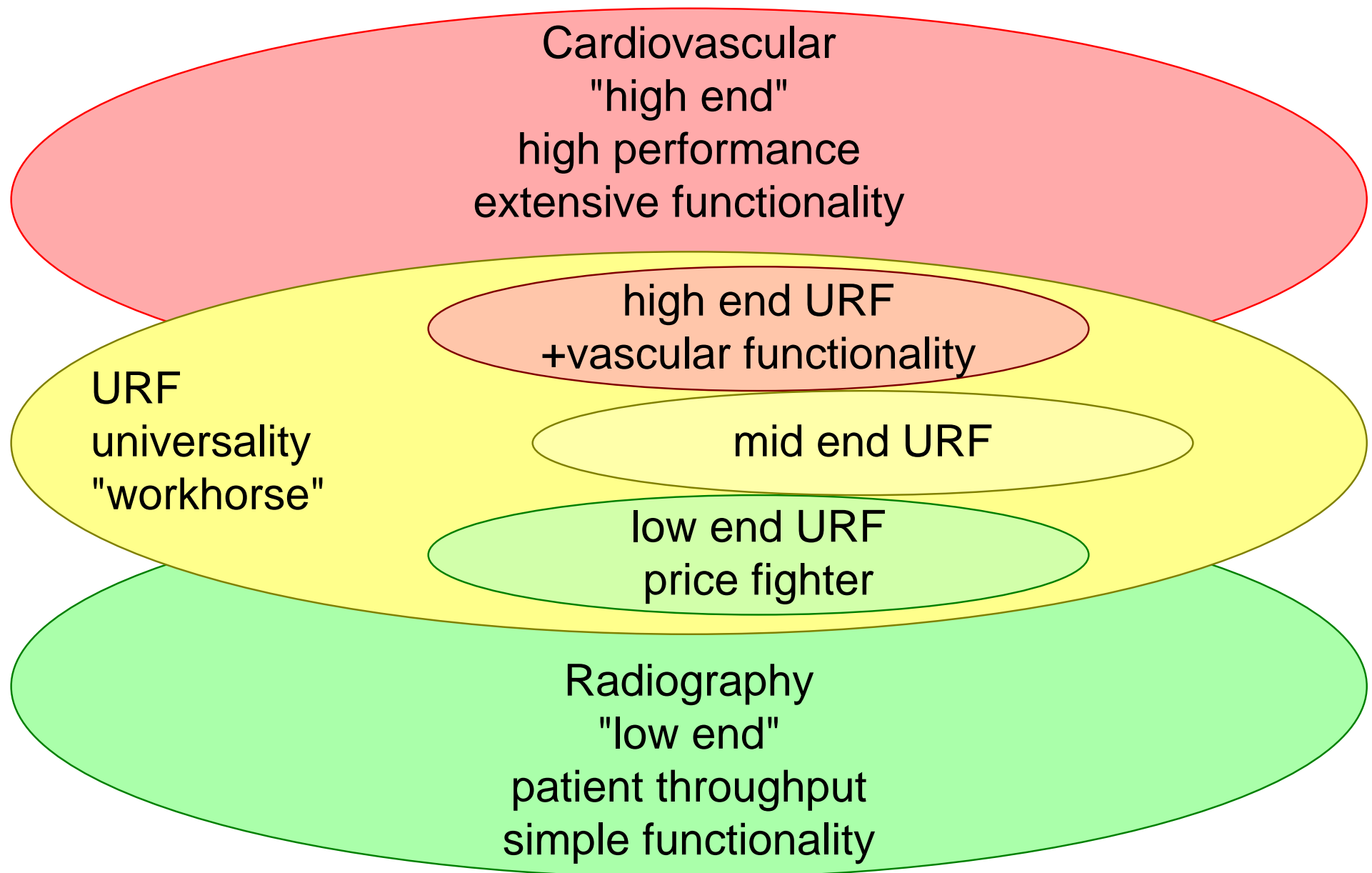
# Reference model for healthcare automation



# Clinical information flow



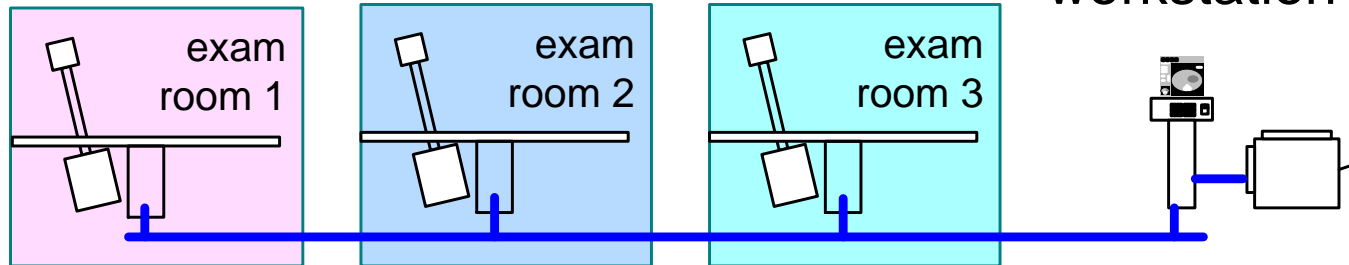
# URF market segmentation



# Typical case URF examination

3 examination rooms connected to

1 medical imaging workstation + printer

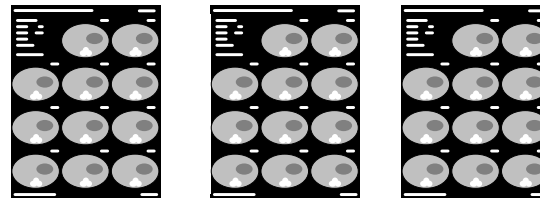


examination room: average 4 interleaved examinations / hour

image production: 20  $1024^2$  8 bit images per examination



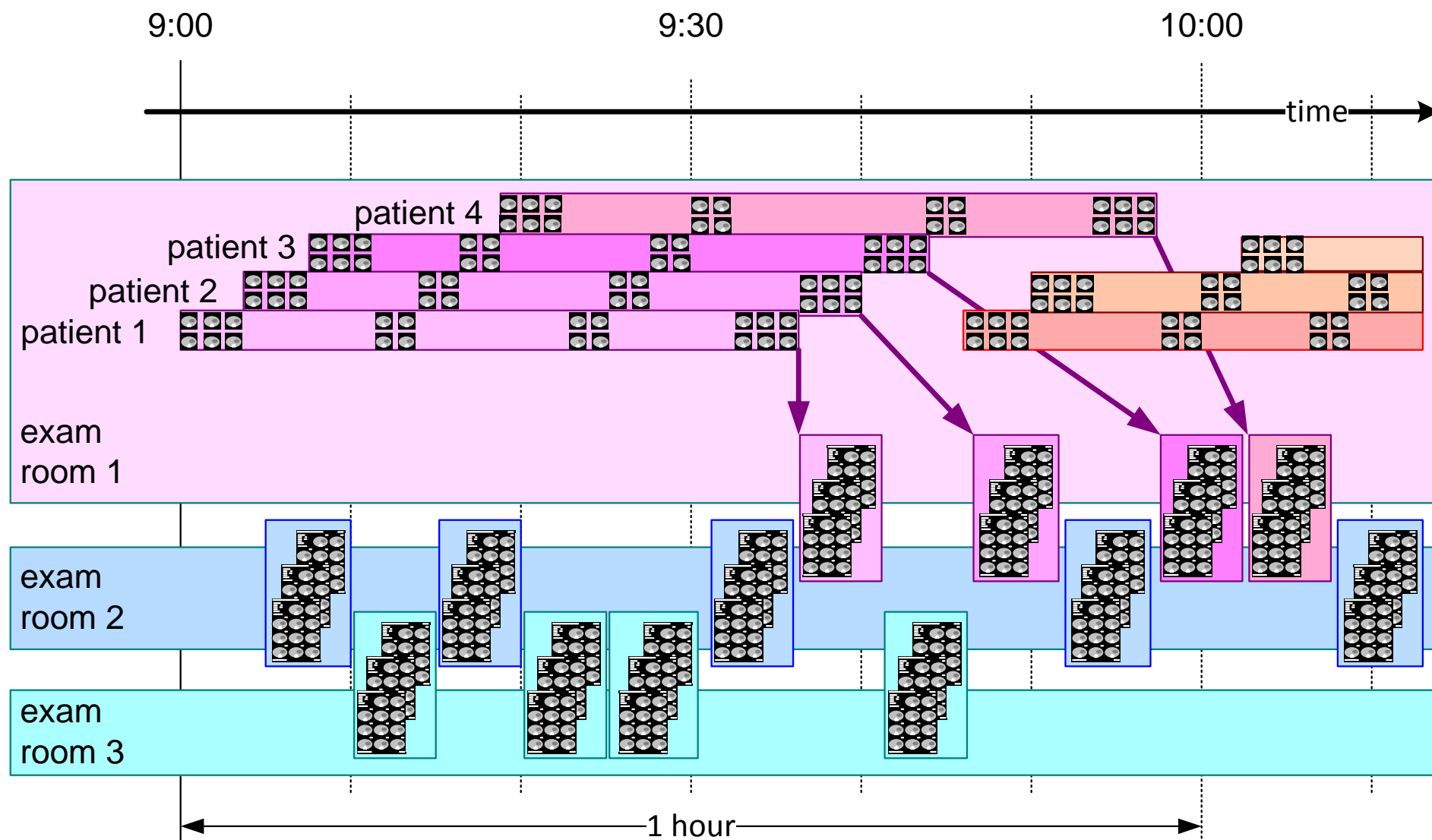
film production: 3 films of 4k\*5k pixels each



high quality output  
(bi-cubic interpolation)



# Timing of typical URF examination rooms



# Key drivers, application drivers and requirements

Customer  
key drivers

derived  
Application drivers

report quality

selection of relevant material  
use of standards

diagnostic quality

acquisition and viewing settings  
contrast, brightness and resolution of light-box

safety and liability

clear patient identification  
left right indicators  
follow procedures  
freeze diagnostic information

cost per diagnose

interoperability over systems and vendors  
multiple images per film  
minimise operator handling  
multiple applications per system

time per diagnose

diagnose at light-box with films  
all preparation in exam room

many  
to  
many

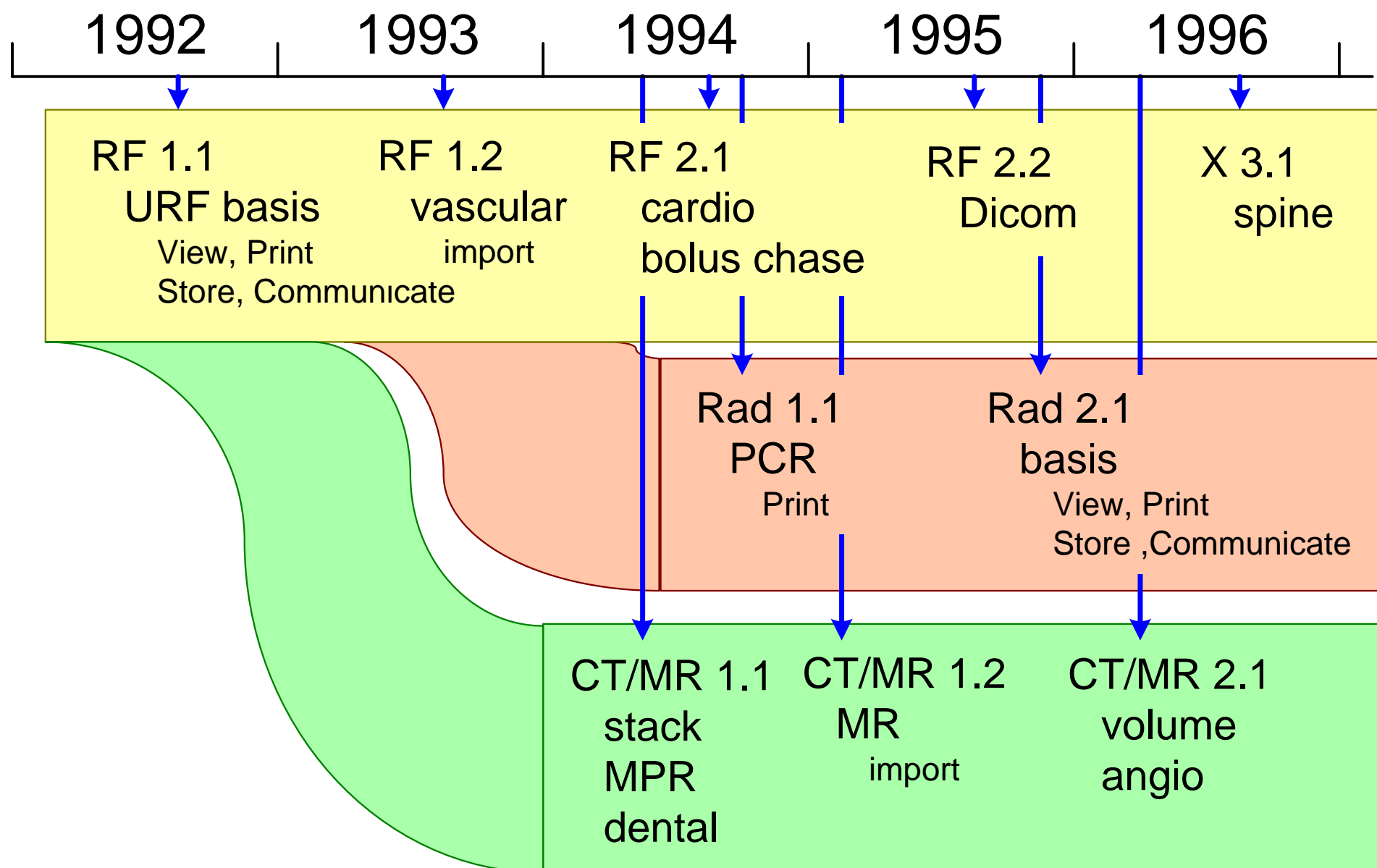
Requirements

import  
auto-print  
parameterized layout  
spooling  
storage  
navigation / selection  
auto-delete  
viewing  
contrast / brightness  
zoom  
annotate  
export *functionality*

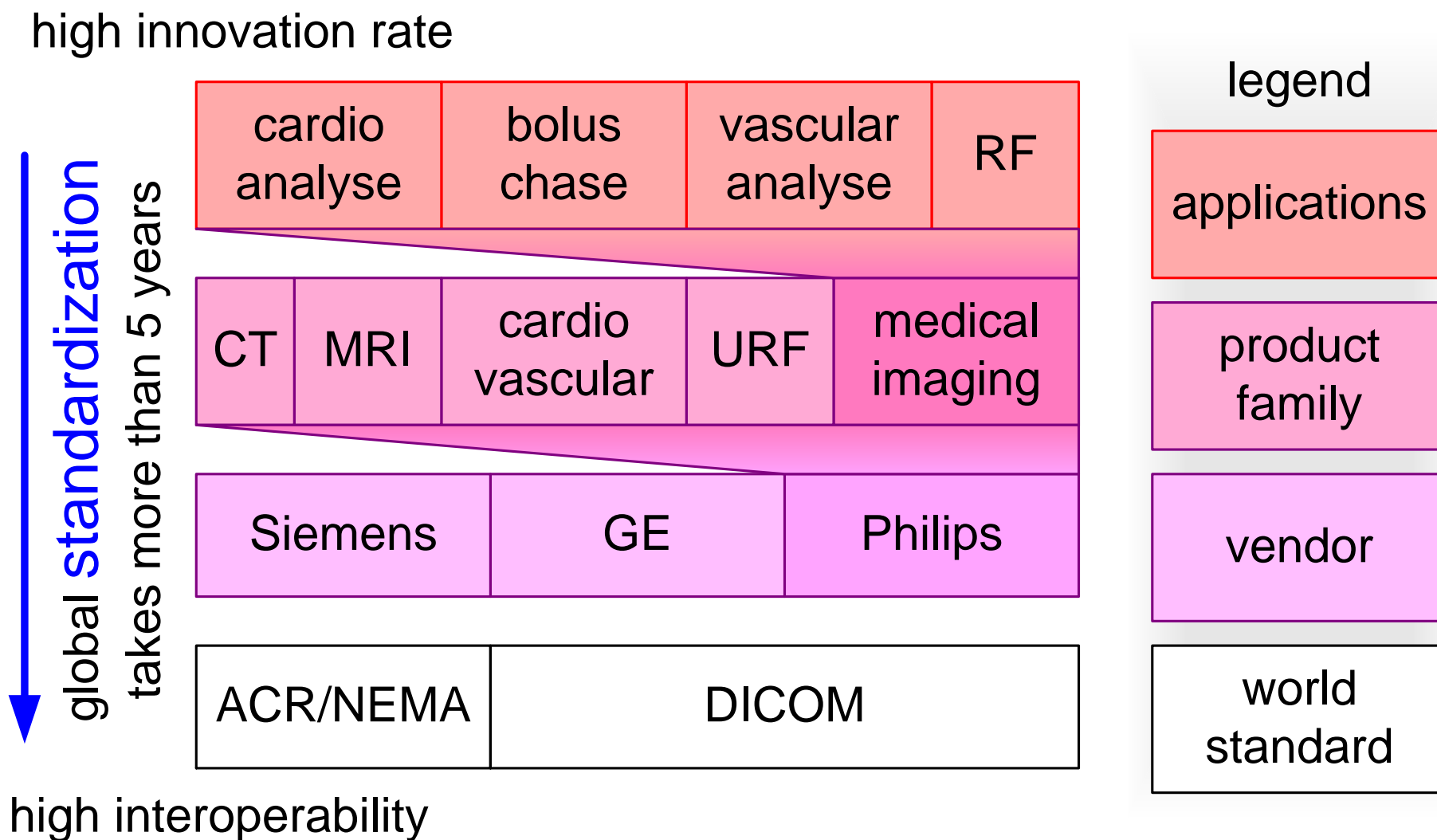
system response  
system throughput  
image quality  
annotation  
material cost  
operational cost *qualities*

shared information model  
viewing settings  
patient, exam info *interfaces*

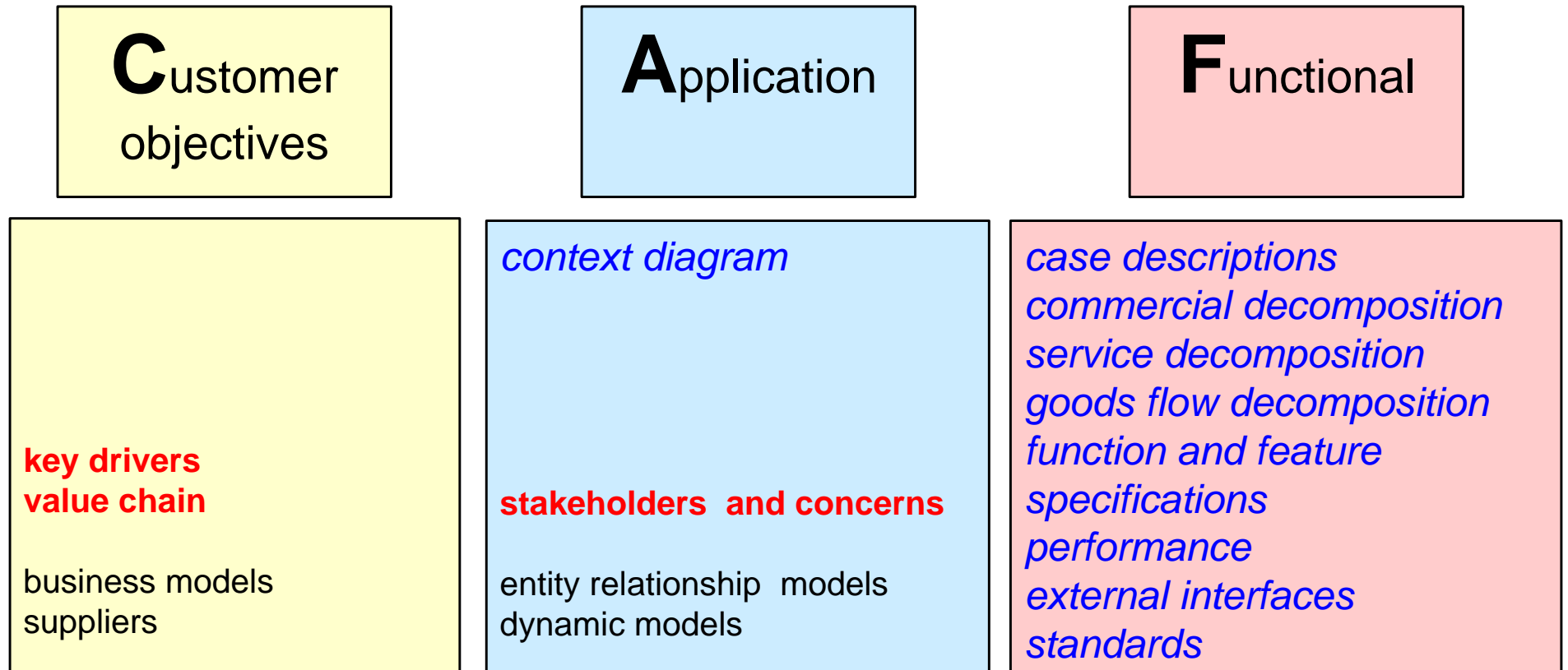
# Retrospective functionality roadmap



# Information model, standardization for interoperability



# Coverage of submethods of the CAF views



legend

*explicitly addressed*

**addressed only implicitly**

not addressed

coverage based on documentation status of first product release