

## Technical quality assurance in hospitals: The challenge of defining and maintaining quality

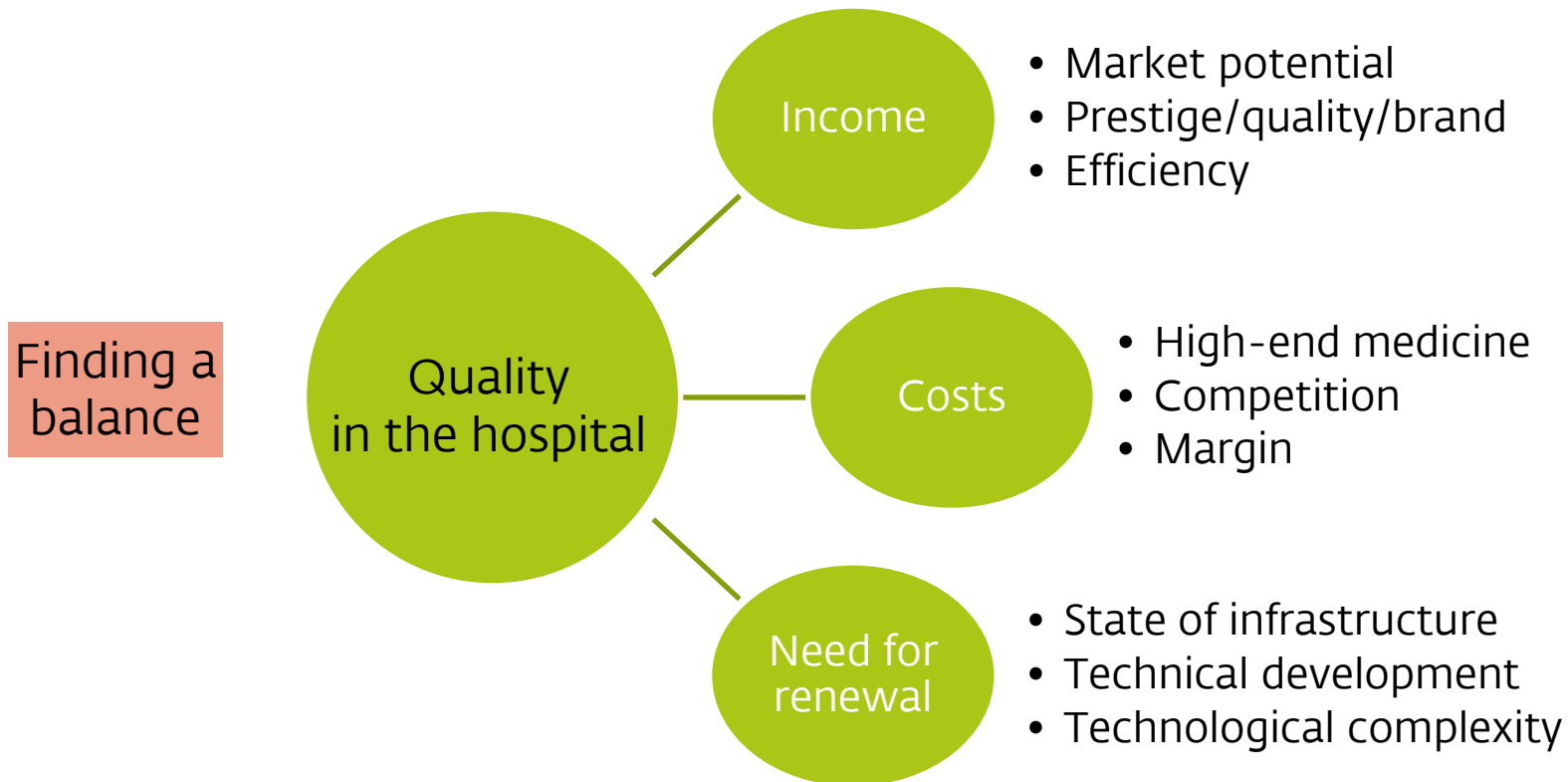
### IHS annual conference 2016

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## Initial situation

Technical development, a major need for renewal and more intense competition are placing heavy demands on those in charge of hospitals.

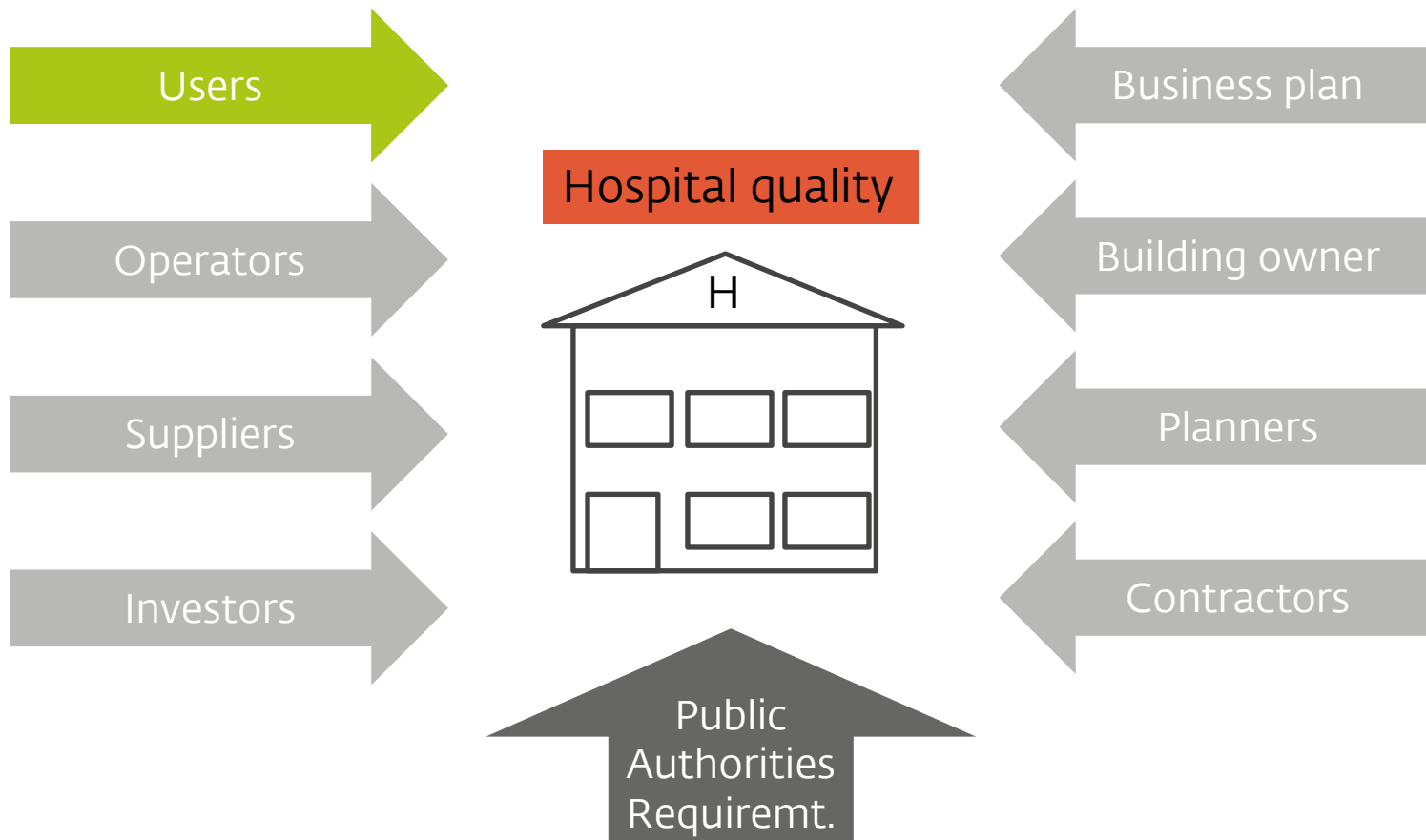


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## Hospital construction project:

## Many people involved – different views

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## Many user groups – different needs

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Support	Medicine	Customers/externals
Staff administration	Nursing staff	General patients
Catering for staff	General doctors	Private patients
Technical services	Specialists	Visitors
Facility Management	Radiologists	
	Training	

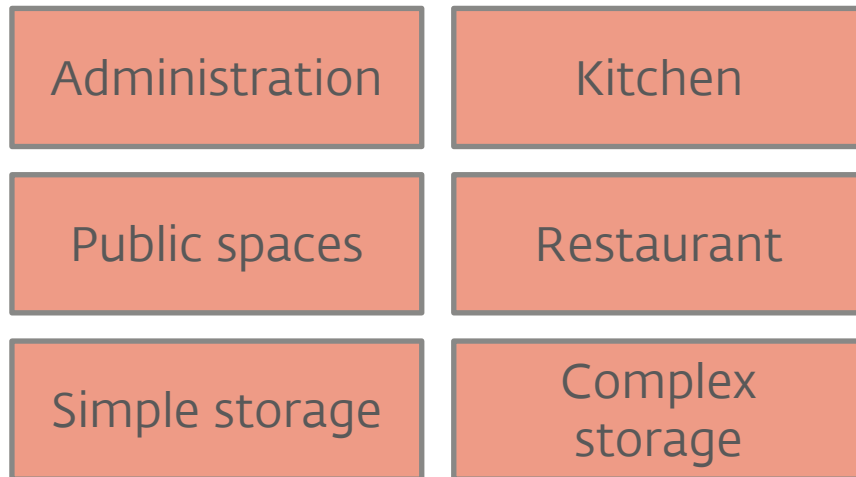
→ A wide range of knowledge  
→ A wide range of needs

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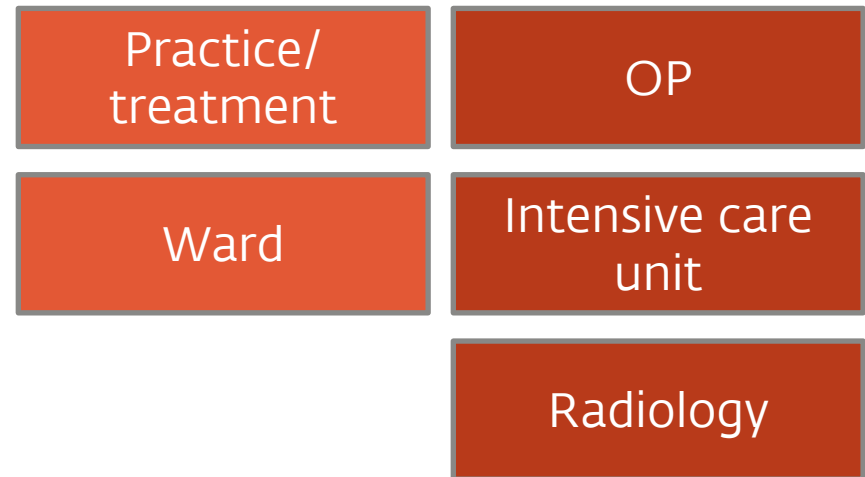
## Numerous utilisation units – different requirements

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### Support



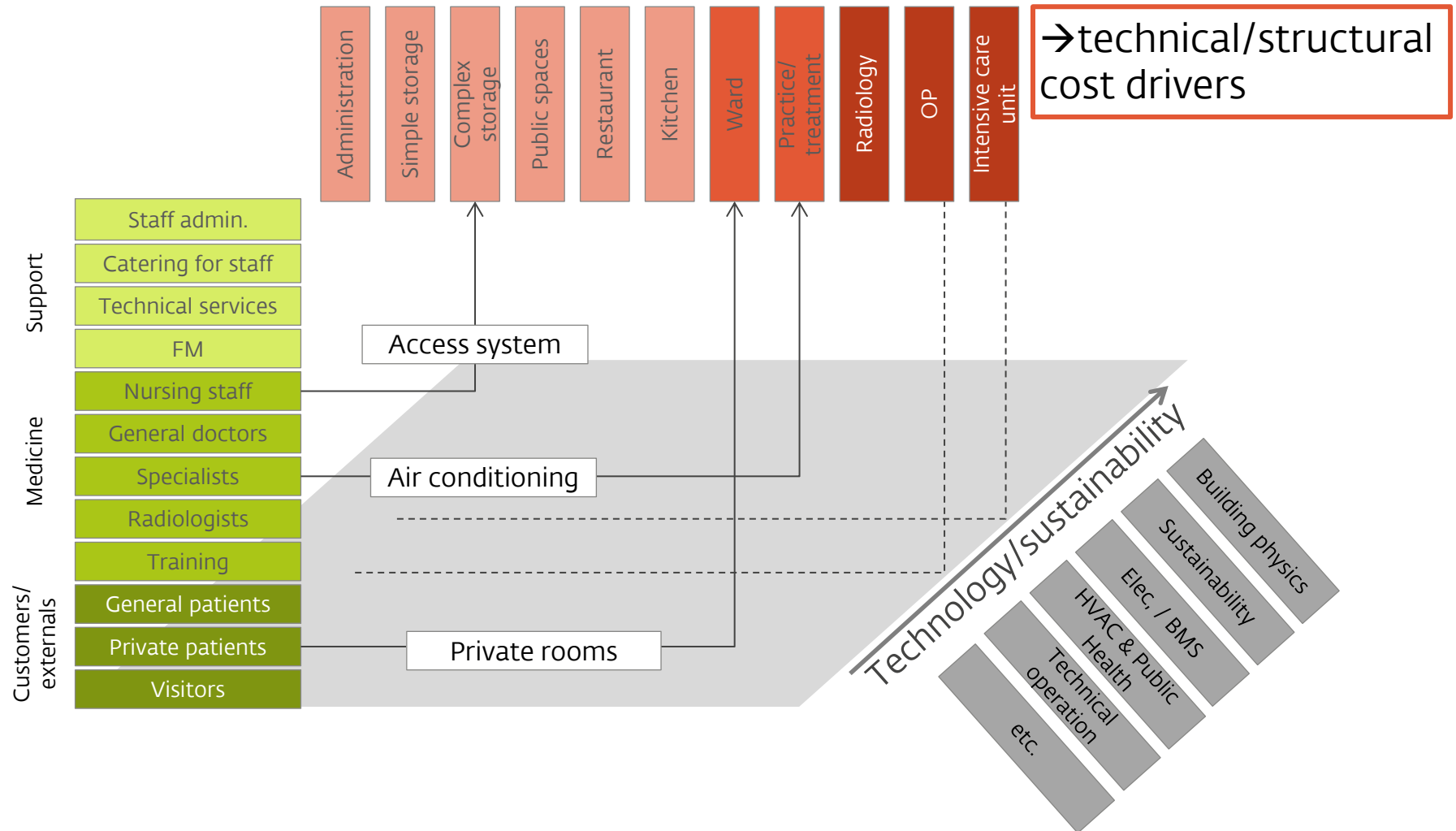
### Core process



→ Complex requirements

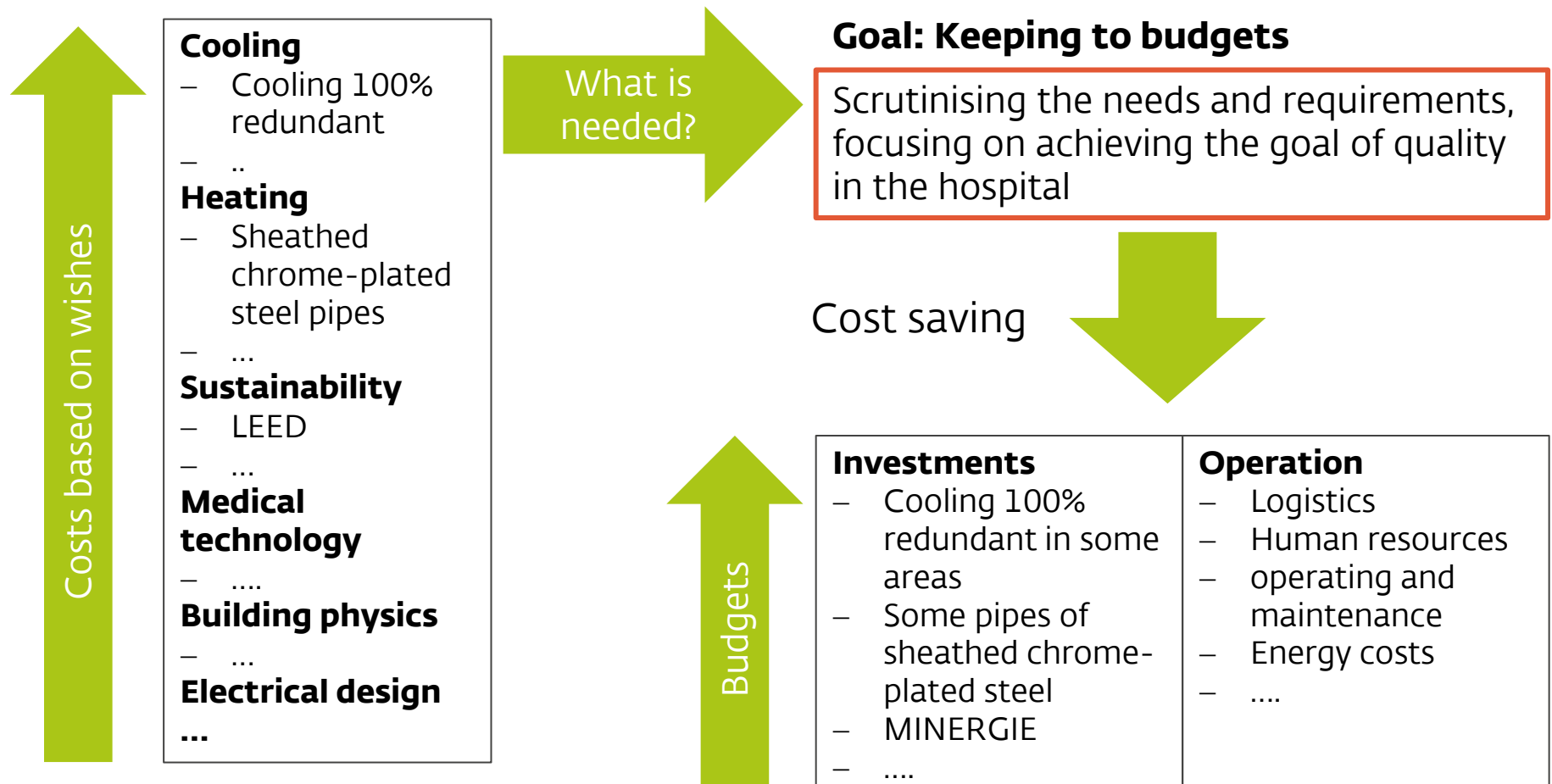
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## High demand for functionality – great need for communication



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## Long wish list – strict budgets



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## Definition of the qualities

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### Process:

- Hospital strategy: Overriding goals, product quality
- Market analysis, risks and clarifying the budget situation
- Surveys and workshops with users and experts
- Overview and analysis of needs/requirements
- Definition of technical quality and sustainability goals: technical specification, room book, etc.  
Note: life-cycle costs for operating and framework conditions (laws, etc.)

Where necessary, categorisation according to: whole building, utilisation units, types of room



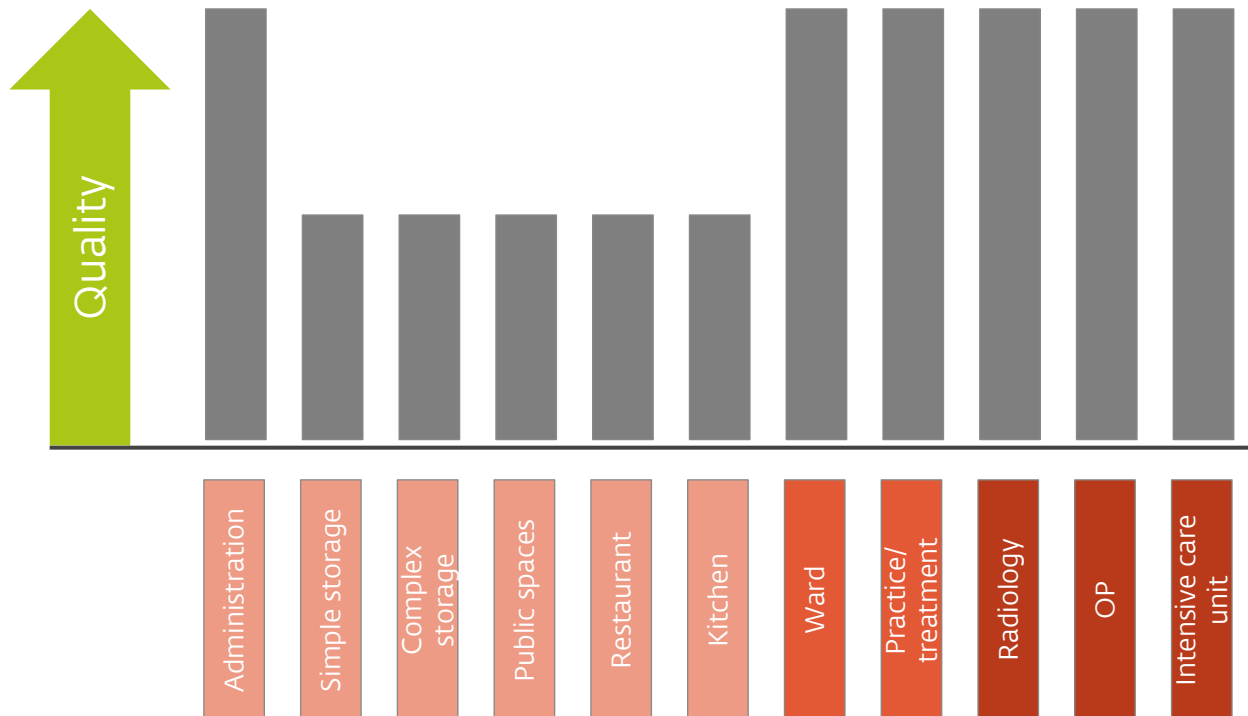
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## Scrutinise quality level SIA phase 1-2

SIA: swiss society of engineers and architects

### Example: BIM organisational requirements vs. revision drawings

Building/utilisation unit level (possibly also by discipline)

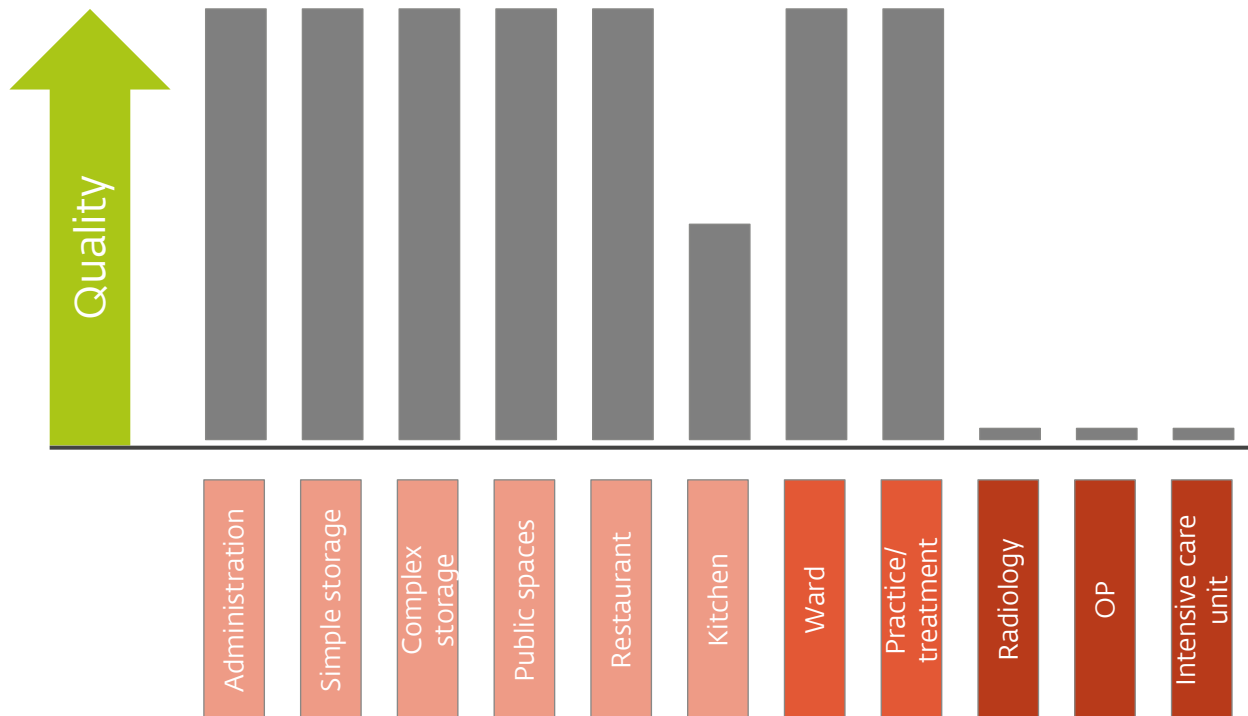


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## Scrutinise quality level SIA phase 1-2

### Example: Sustainability label for construction project?

Building/utilisation unit level

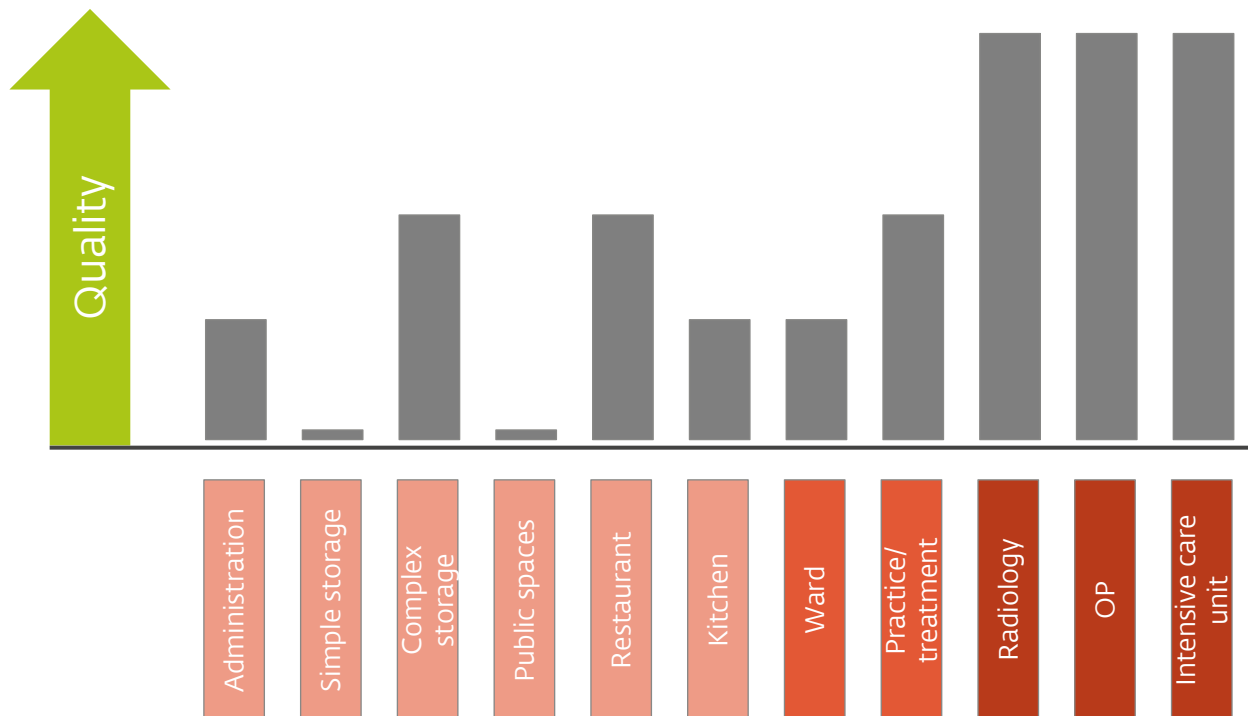


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## Scrutinise quality level SIA phase 2-3

### Example: Requirement for cooling (redundancy)

Utilisation unit level

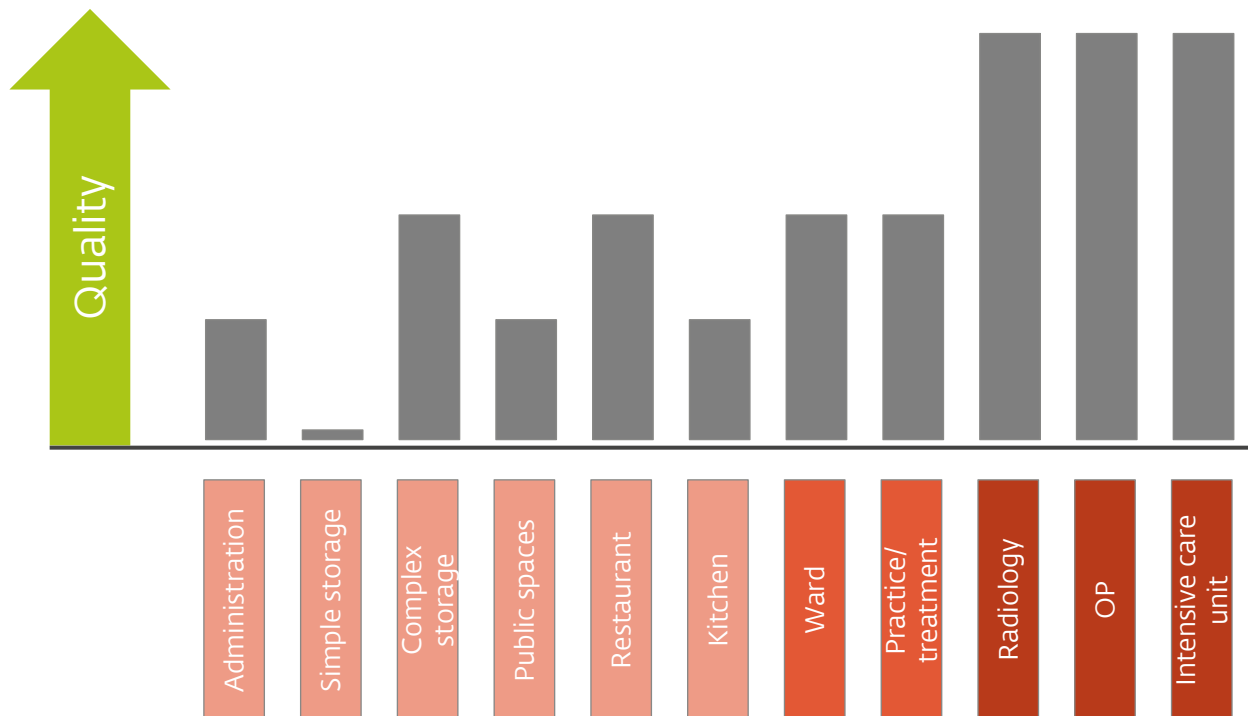


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## Scrutinise quality level SIA phase 4

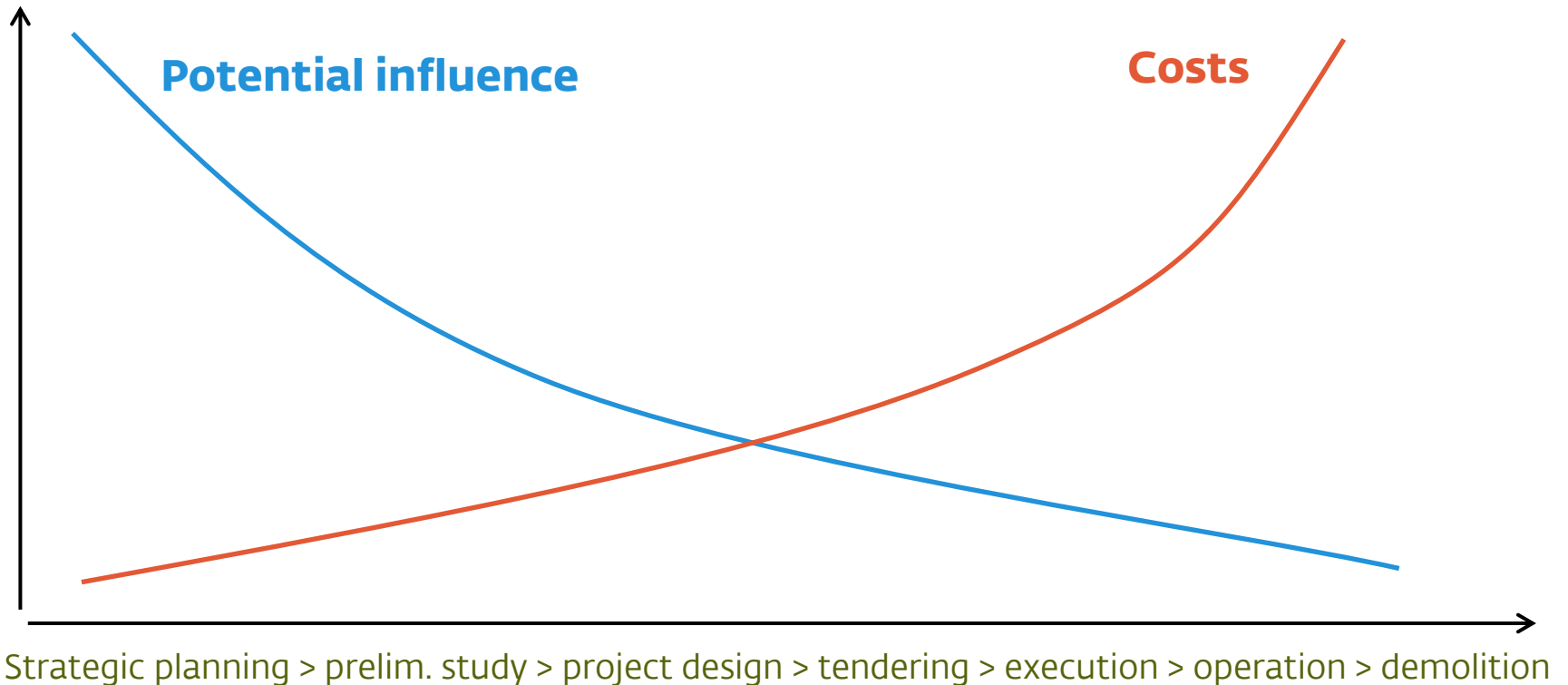
### Example: Requirement for sheathing heating pipes

Utilisation unit/cost position level



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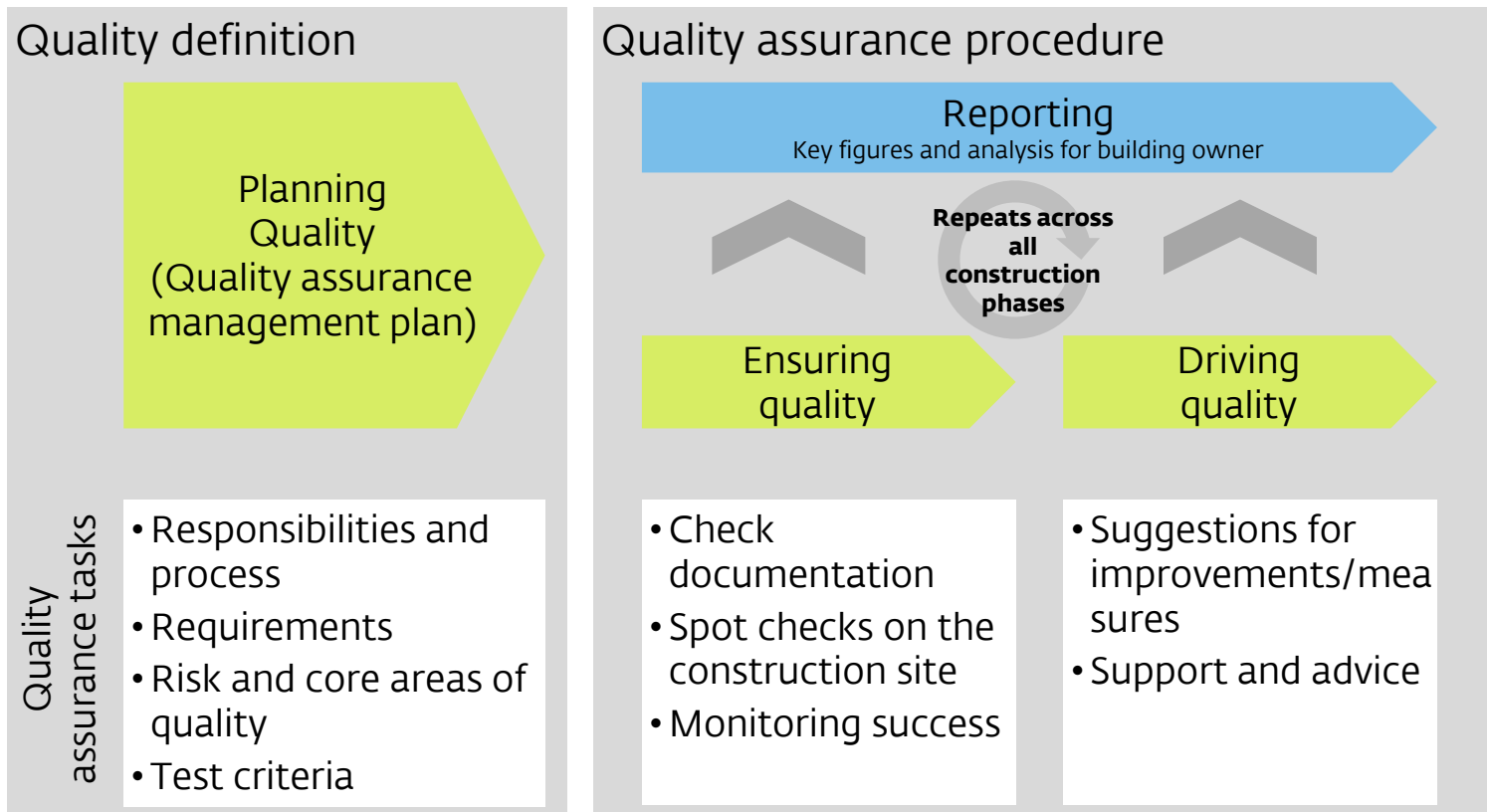
## Cost leverage depends on implement. time



**→ Analyse the quality level early on and define goals**

# Quality assurance process

## Quality assurance as a means of achieving goals



In conformity with standard: SIA MB 2007

**Well-organised quality assurance is only possible with sufficiently defined requirements and functionalities**

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## Example

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### **DO NOT FORGET:**

Even technically superior solutions aren't always high quality and functional.



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## Summary

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- Determine hospital strategy
- Framework conditions and definition of processes
- Ascertain wishes and demands
- Analyse quality level in good time → Cost leverage
- Define technical quality (Differentiate buildings, utilisation units, types of room)
- Quality assurance: Carry out planning and implementation measures at the correct phases, allow for enough time in process.



Thank you for your attention