



# Optimisation of clinical workflow integration and IT architecture

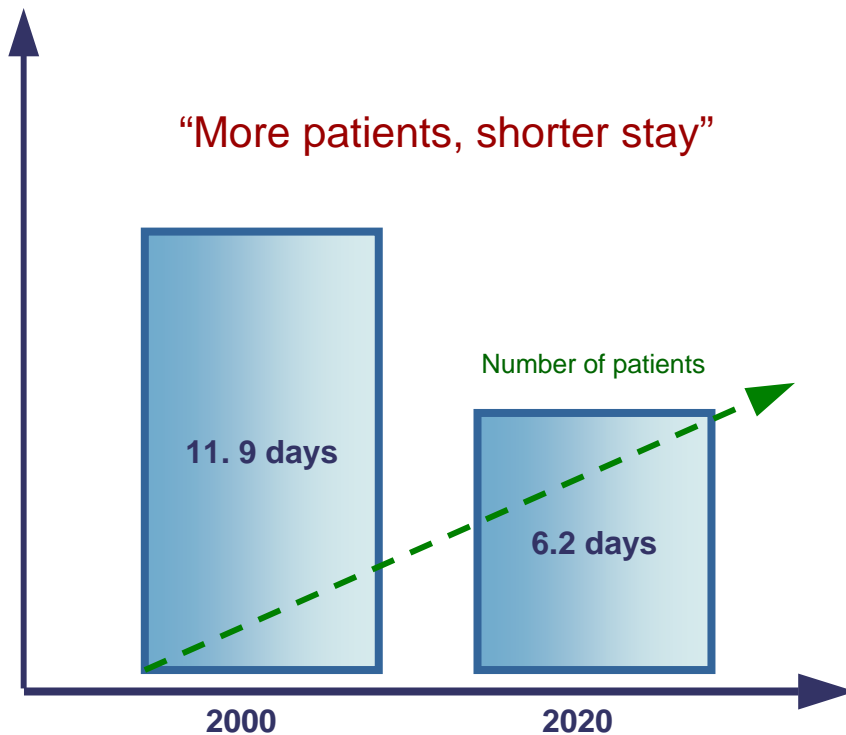
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## What is the background of the proposed project?

Predicted development of the average exposure time of patients in the hospital



The average exposure time of the patients in a hospital will drop 50% within the next 20 years. In 2004 it reached already a number of 8.7 days.

Across from that, the number of patients and the diversity of their diseases will rise. Between 1993 and 2003 this number rose already by 30%.

# What is the background of the proposed project?

## What is necessary for a hospital to remain competitive?

- Provision of more efficient services
- Higher quality of the clinical processes

achievable  
through

- Quality management
- Document management
- Transparency of services
- Process- and patient oriented organisational structure

## What are the objectives of the project?

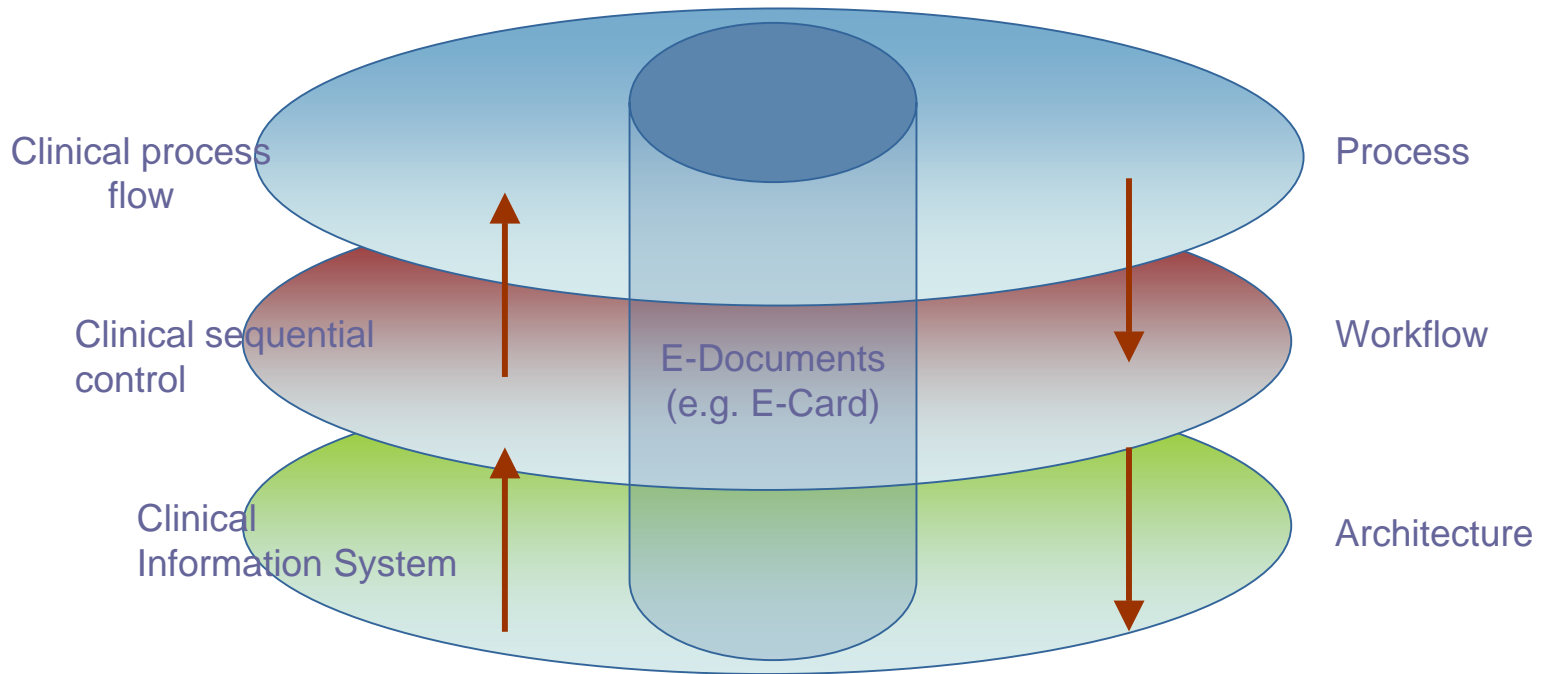
Finding the right answers to the crucial questions:

**What is the impact of electronic documents on the clinical workflow of a hospital?**

**Which requirements must the healthcare information system fulfil in order to integrate electronic documents successfully?**

# What are the objectives of the project?

## Development of a 3-Layer-Reference-Model

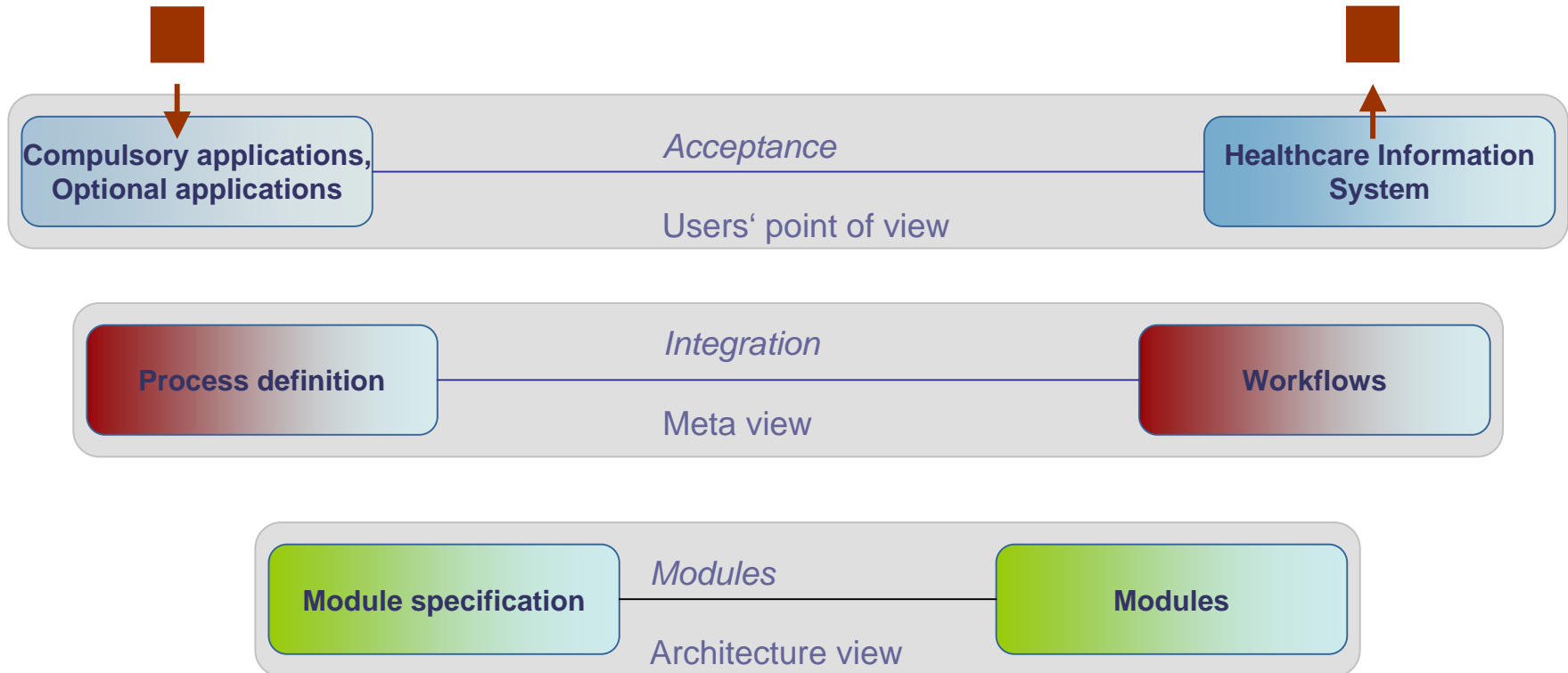


# What are the objectives of the project?

## Process optimisation based on E-Card applications

Requirement profile of complex E-card applications

Utilisation of the implemented complex E-Card applications

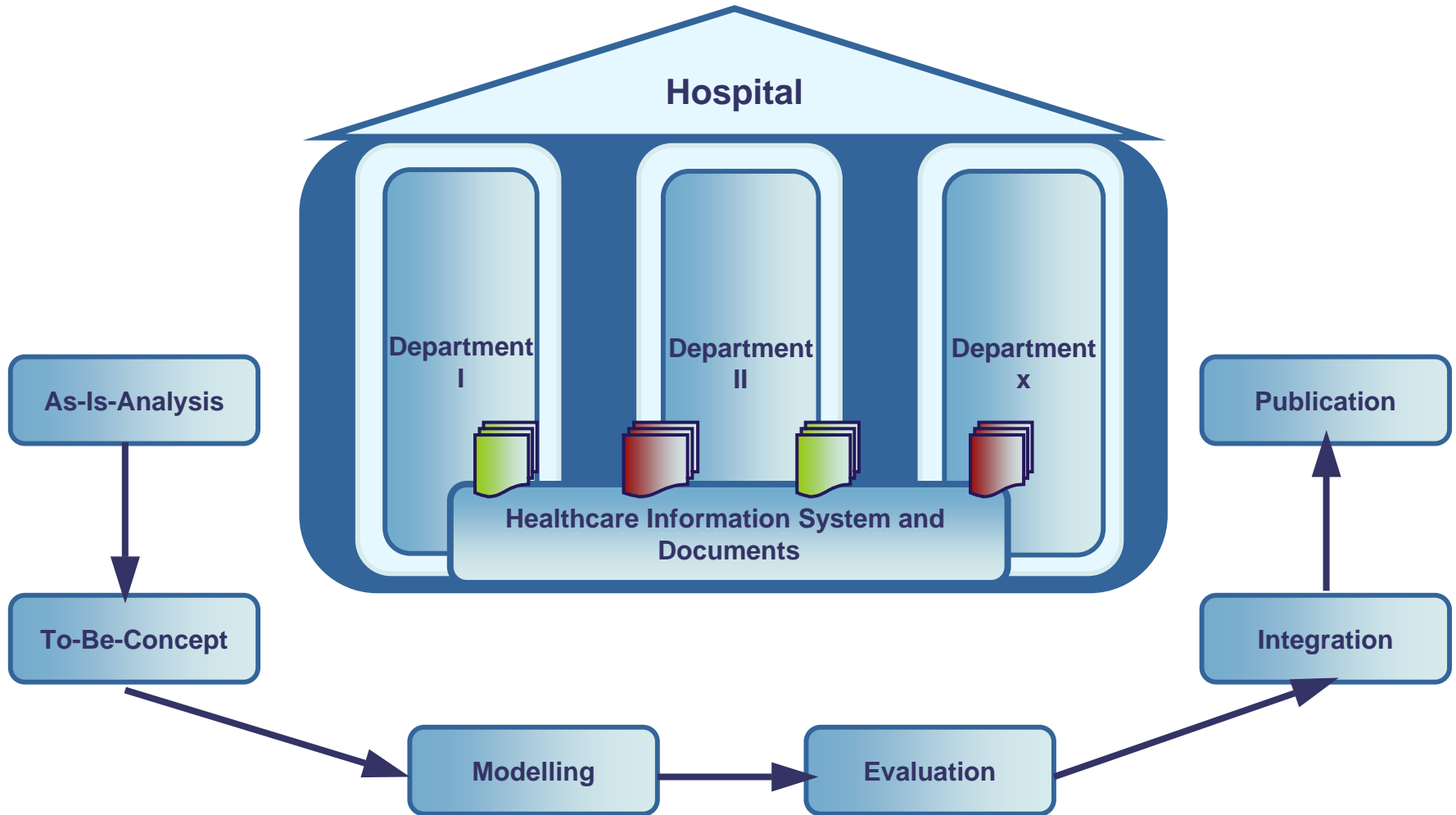


## What are the objectives of the project?

The model will deliver information about:

- Potentials to improve the process quality with the help of E-Card applications and the E-Cards' telematics infrastructure
- Necessary changes within the IT-architecture for a successful implementation of systems for electronic documentation
- Potentials of E-Card applications to support clinical studies
- Economical consequences for the hospital
- Necessary changes in the training and further education of the medical workforce
- Potentials to build up networks in the healthcare sector with the help of optimal processes and the implementation of a telematics infrastructure

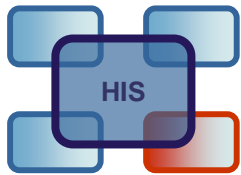
# What is the realisation concept?



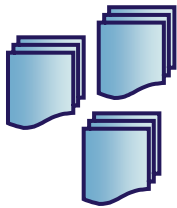
## What are the potentials for the utilisation and distribution?



National and international Healthcare institutions can use the reference model as a guideline for the integration of future ehealth-concepts.



The model provides a comprehensive overview of the clinical processes and the IT infrastructure. It is possible to analyse the impacts of changes in a specific process as well as the required extensions and adjustments of modules within the healthcare information system.



By supporting hospitals to implement data acquisitions in the existing IT infrastructure and by integrating it in the clinical workflow, the model accelerates and eases the collection of data for clinical studies. Exchanging data with other healthcare institutions for the purpose of joint research also becomes easier and far more comfortable.



The quality of health services as well as the economic efficiency of the healthcare sector will improve noticeably. The time and effort for all kinds of clinical documentations drops. This raises the willingness of the hospitals' workforce to use IT-based documentation systems.

## What are the potentials for the utilisation and distribution?

### Distribution of the project results:

- At exhibitions and conferences such as Medica, conHIT and ehealth-Week, the project progress will be presented to a broad user group consisting of scientists and decision-makers in the healthcare sector.
- Interested hospitals and other healthcare institutions will be invited to join a program for “premium partners”. In the program, selected clinical processes and selected modules of the existing healthcare information system will get optimised based on the current beta-version of the reference model.
- Additionally to the reference model, it is planned to produce and publish a guide line which summarises the project results. With both, reference model and guideline, the project team will be able to provide healthcare institutions a conclusive concept for the optimisation of the clinical workflow and IT architecture.
- The scientific quality of the project will be assured through regular publications in professional journals such as *Methods of Information in Medicine*, *International Journal of Medical Informatics* and *Management und Krankenhaus*.

## What are the requirements concerning the transfer business?

- **We are looking for Business Partners and Investors**
- **We want to achieve: R&D Cooperation and Investment**
- **Commercialisation and Licensing will follow**
- **We need ca. 100.000 € for 24 months**

# Thank you!