

A PROCESS MODEL FOR IT-MIGRATIONS IN THE CONTEXT OF A HOSPITAL MERGER

Results from an Austrian case study



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WHAT TO EXPECT?

- Background: Foundation of Kepler University Hospital in Jan. 2016
- Theoretical Considerations on mergers and IT-migrations
- Objective
- Customized Research Model – Methodology and Results on
 - Phase 1
 - Phase 2
 - Phase 3
- Discussion

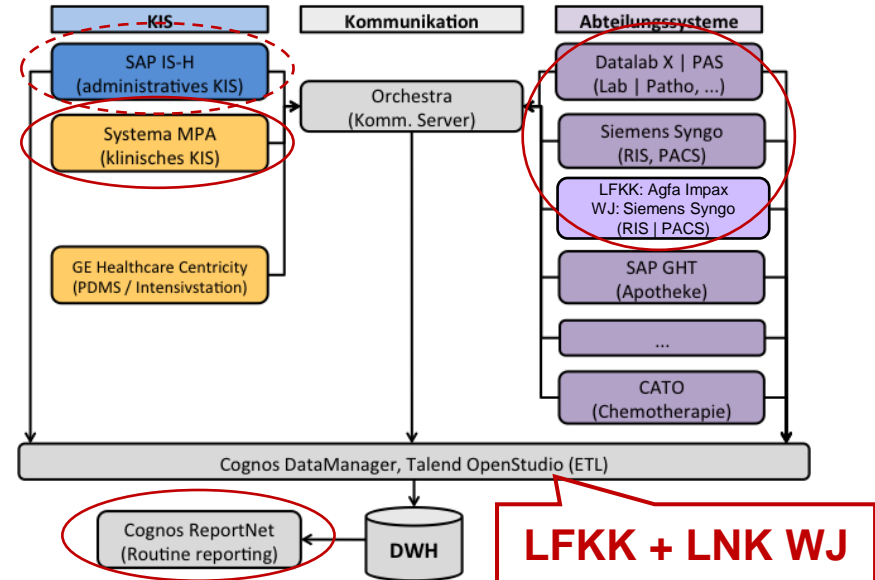
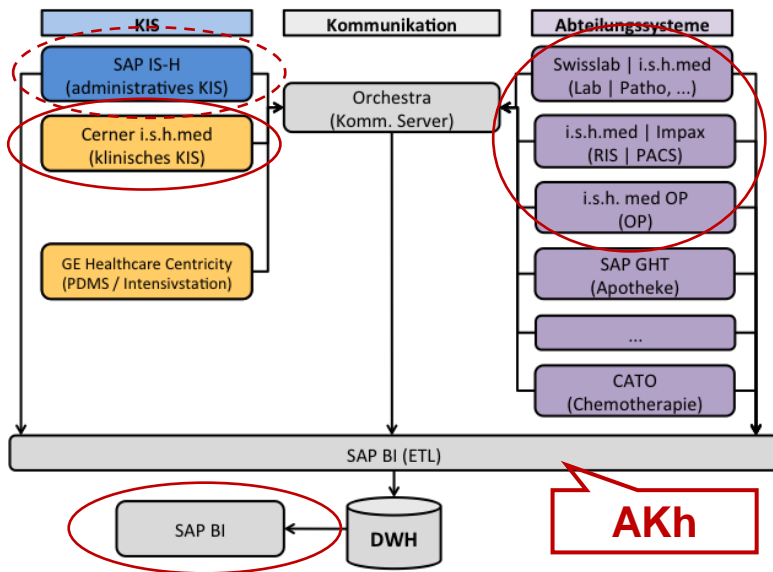
BACKGROUND KEPLER UNIVERSITY HOSPITAL



Indicator	AKh	LFKK	LNK-WJ	total
Legal ownership	City of Linz	State of Upper Austria	State of Upper Austria	
Number of beds	886	270	669	1,825
Stationary stays	60,000	19,566	17,894	97,440
Outpatients	275,000	21,107	18,917	315,024
Total spending*	230.6	106.5	143	480.1
Staff	2,838	1,142	1,838	5,817

(* in million Euro)

BACKGROUND: ORIGINAL IT-LANDSCAPE



■ Main differences:

- administrative HIS
- clinical HIS**
- laboratory information system, radiology information system, reporting / BI-system, ...

THEORETICAL CONSIDERATIONS

- Company mergers often lead to IT-migrations [1], [2]
 - focus is often on financial and legal challenges
 - Strategic planning and organizational change are often neglected
 - Holistic analytical and planning activities are important for the long-term success
- IT integration itself is critical for the merger success [3]
- Migration of hospital information systems (HIS) and the electronic health record (EHR) are crucial for the success [4]
- Uniform HIS can exploit the full potential of a hospital's IT-support and process automation [5]

OBJECTIVE OF THE IT-MIGRATION AND THE PRESENT STUDY

IT Migration

The KUK will offer an highly effective IT support for all users working in clinical care, administration, research, and teaching, and this highly effective IT support will be realized through the merger and standardization of information and communication systems from the three former hospitals.

Study

The research goal was to develop and apply a customized but still generic process model for IT migrations after hospital mergers, including the selection process of an appropriate future HIS.

METHODOLOGY

Phase 1:

- Definition of migration objectives, identification of basic conditions

Phase 2:

- Evaluation of the IT infrastructure in the former individual hospitals

Phase 3:

- Development of migration scenarios, selection of one scenario

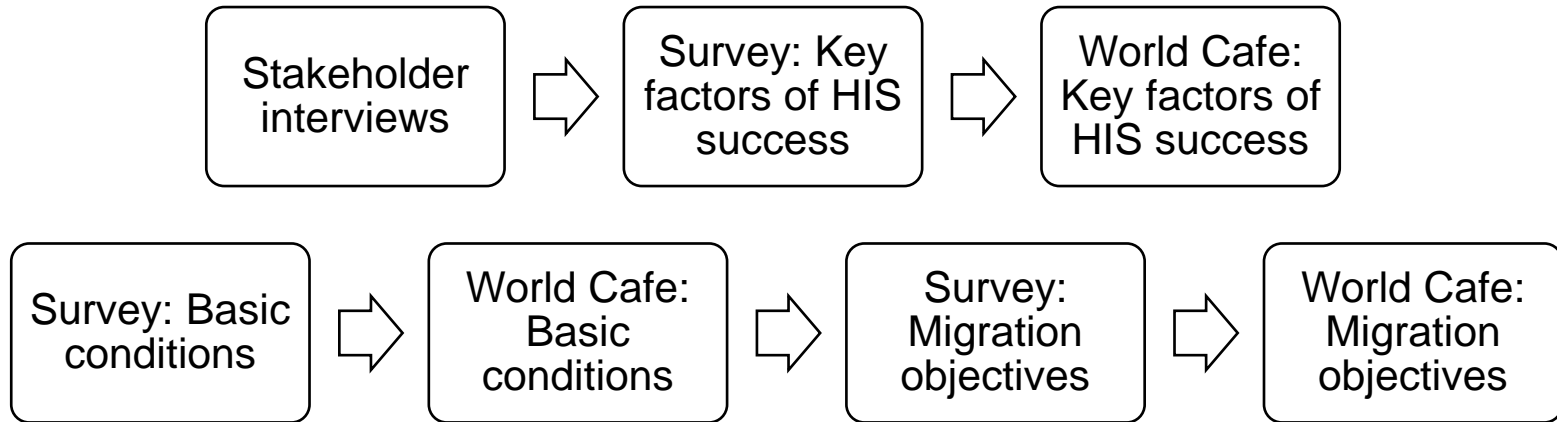
Phase 4:

- Design of a project plan, installing of operational teams

Phase 5:

- Implementation of the IT migration

PHASE 1



Key Factor of IT Success

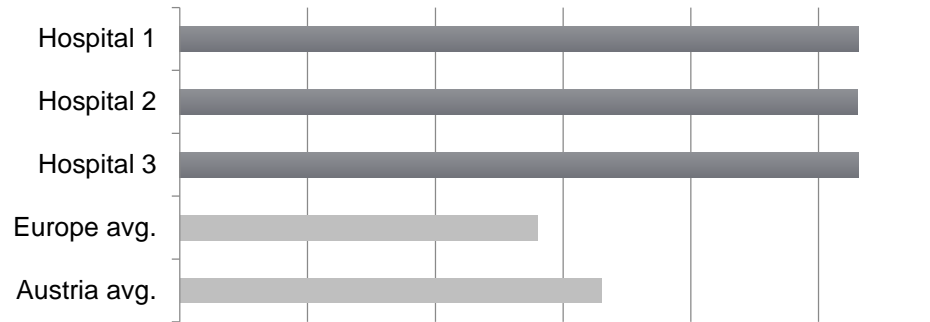
Sufficient financial resources
 Qualified IT-personal
 Reliability of the IT-systems
 Clearly defined IT-strategy
 Sufficient personal resources
 Trained staff
 Uniform system for patient administration
 Process orientation in IT
 Human success factor
 Maximum risk reduction

IT Migration Objectives

High data security
 High reliability in patient related IT systems
 Informed and IT-trained staff
 Realization of IT synergy effects
 Uniform HIS
 Open IT infrastructure
 Investment in sustainable technologies
 Use of mobile technologies
 Paperless hospital
 Outstanding IT systems for research, teaching and care

PHASE 2

■ Determination of HIS maturity level



■ Detailed IT evaluation of all hospitals

- Including a gap analysis (degree to which the IT migration objectives were achieved)

■ All three hospitals were at a similar level, providing a solid IT basis for the University hospital

PHASE 3

- 5 days intensive workshop as key element of decision making:
 - IT-migration strategy team (13 members)
 - HIS vendor representatives
 - Goal: development, evaluation and rating of migration scenarios

- Strong preference for one migration scenario (62% vs. 38%)

Evaluation Criteria	Scenario	Vendor	HIS
Controllability of risks	*		
Consideration of organizational and personnel restraints	*		
Customer orientation		*	
Innovative power		*	
Professional and personnel competence			*
Degree of coverage of clinical care processes			*
Enhancing opportunities for cooperation with university hospitals			*
Sustainable investment in terms of technology			*
IT support of research & teaching tasks			*

- SWOT analyses from different focus groups supported this decision

DISCUSSION

- High degree of user integration
 - High acceptance of process and decision
 - No perceived situation of winners and losers
- 5 out of the 10 top key factors are of category human
 - Only one of category system
- Transparent process model enabled productive working atmosphere
 - Heterogeneous group
 - More than 40 stakeholders from different professional groups, hierarchic levels and organizations
 - Competitive HIS vendors

DISCUSSION

- New organization was founded almost two years after project start
 - Lack of accountable decision makers
 - Late decisions led to milestone delays
 - Late definition of future IT-provider
 - Missing definition of future organizational structure
 - Uncertainties concerning financial and personnel resources

- Implications:
 - Early user integration
 - Organizational change management
 - Proactive information policy

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