

Shedding light into the application thicket of hospitals



Dr. Nicole Gerber
Lecturer,
Senior Research Associate,
geri@zhaw.ch

Competency Group Hospitality Management

In a PhD thesis, a procedure reference model for the alignment of non-medical support service applications in hospitals was developed. It helps hospital ICT managers to align applications in a systematic, iterative manner and thus to improve transparency, stakeholder communication, resource management and controllability while reducing complexity, risk and cost. In so doing, the model can make a meaningful contribution to the development of a more effective healthcare provision.

Contributing in the background for a more effective healthcare provision

In hospitals, the application landscape is complex and – due to the fact that in the past ICT strategies were hardly ever holistically defined or implemented – often lacking transparency. At the same time, digitalisation currently poses various new challenges for healthcare organisations, both in the medical and non-medical context.

The goal was therefore to develop a model providing the necessary information about a standardised procedure and its significant aspects for aligning non-medical support service applications in hospitals so that relevant key performance indicators for systematic controlling and optimisation can be generated and configured as a basis for decision-making in the future. In a broader sense, the aim was to contribute to the development of a more effective healthcare provision and to bridge the gap between academia and practice.

Iterative, multi-methods approach

The model was developed based on a pragmatic philosophical grounding in a multi-methodological iterative approach including Design Science Research (DSR) principles for the modelling actions and mixed methods principles for the empirical research. In a first iteration, the relevance of the topic was researched in a survey. In a second iteration, the requirements for a possible model were determined by means of expert interviews based on which, in a third iteration, a procedure reference model was developed. In a fourth iteration, experts were asked to evaluate the model. Based on the findings, the model was then re-designed in a fifth iteration and in a sixth and final iteration, validated.

May I introduce: The model

The outcome of the thesis is the systematically developed and empirically validated “Procedure Reference Model for the Alignment of Non-medical Support Service Applications in Hospitals”, illustrated in Figure 1. The model comprises

- six component models,
- the metamodel
- two input documents and
- a documentation for application as integral parts.

All documents are available and downloadable under

zhaw.ch/ifm/fm-healthcare/procedure-reference-model

Most importantly

The key findings of the research were that

- the model implementation should be carried out in small steps, iteratively and with a long-term perspective
- the challenge of the context is not the technology, but rather the systematic stakeholder management
- the lead should be taken by someone who understands both the model and the business in addition to having the competence to influence the development together with the stakeholders involved
- the proper implementation causes an initial effort which, however, pays off mid- to long-term if done well.

Benefits for practice and scientific community

For practice, the benefit of using the model increases by the extent of the adaptation according to specific individual needs and by the degree of inclusion into the internal continual improvement processes. When applied regularly and competently, in a mid- to long-term perspective, the model can help to reduce complexity, increase transparency and security, improve stakeholder communication and controllability, optimise resources and thus to reduce cost. For the scientific community, the thesis contributes to the development of multi-methodological DSR approaches suitable particularly for complex and multi-disciplinary environments. ■

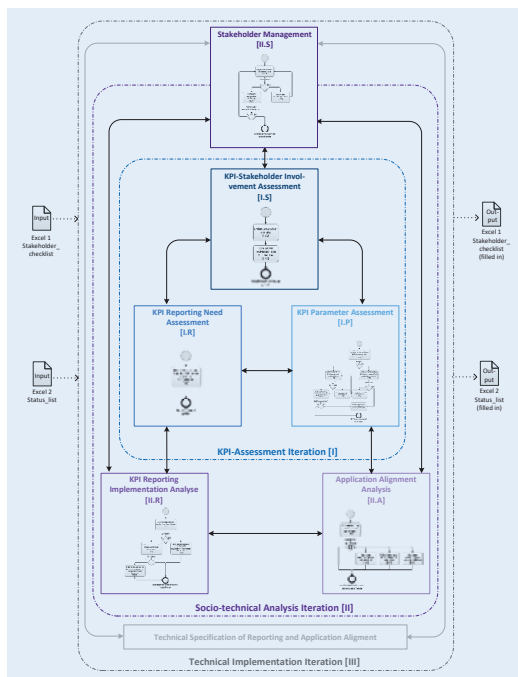


Fig. 1: Procedure Reference Model for the Alignment of Non-medical Support Service Applications in Hospitals