Socio-technical information systems (STIS): Design and application of socially-aware IT – Initial Insights

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Editorial

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Olga Levina

Olga received the diploma degree (Diplom, an equivalent of the Master's degree) in industrial engineering and management from Technical University of Berlin, Germany in 2007. She received her PhD in information systems from Technical University of Berlin in 2012. She was a PostDoc researcher and project manager at Technical University of Berlin until 2015 and at FZI Research Center for Computer Science in Berlin from 2016 until 2020.

Her research interests are focused on digital platforms, digital transformation, business processes and ethical aspects of digital transformation.

She is currently professor for business process management at the Brandenburg University of Applied Science.

Society

Organisation

Business processes

Applications

Communication and data management

Operational system

Hardware

Sommerville 2012

Enterprise as a socio-technical system

Design of an information system

Design of an application

Society

Organisation

Business processes

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Communication and data management

Operational system

Hardware
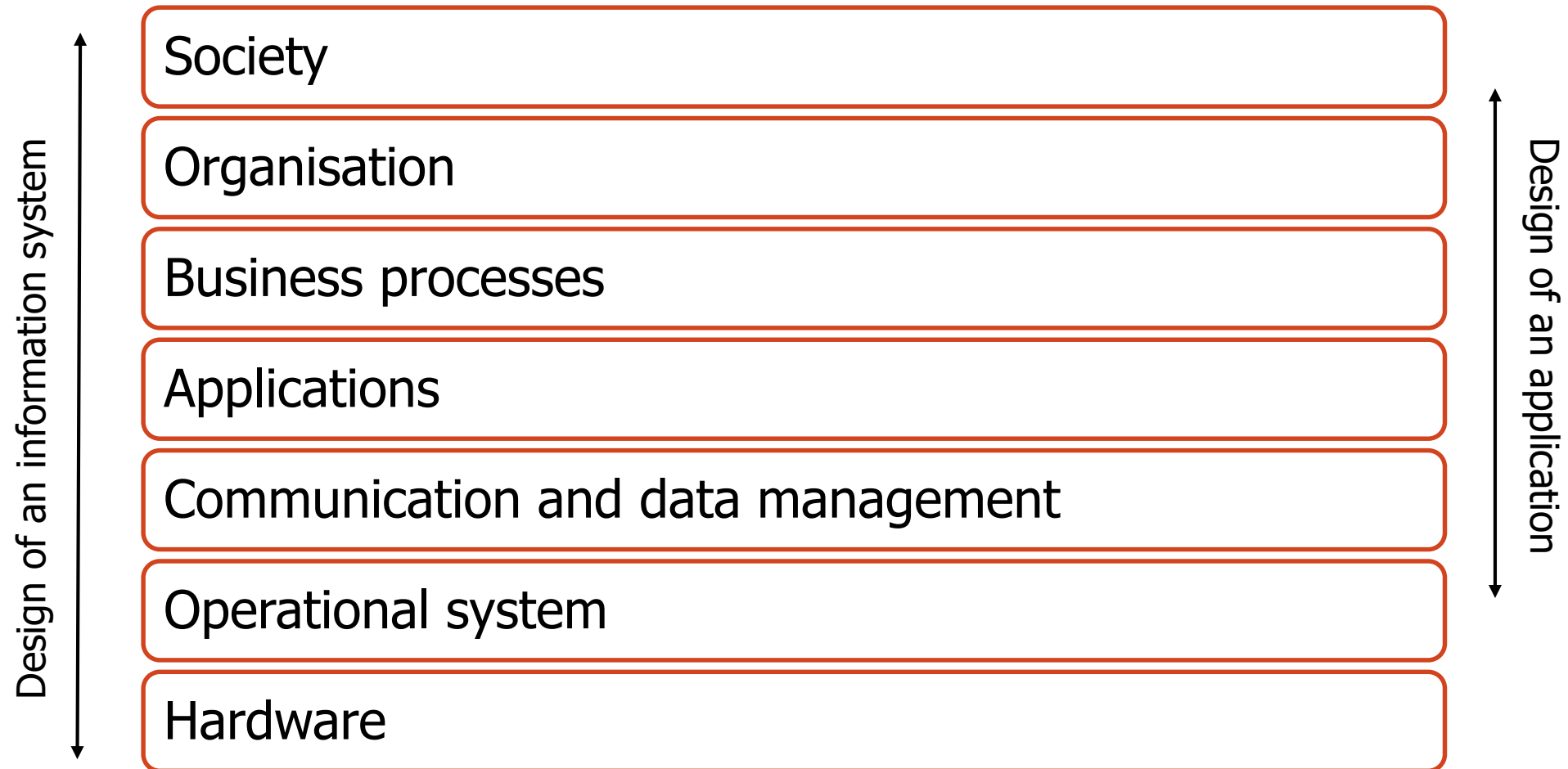
Sommerville 2012

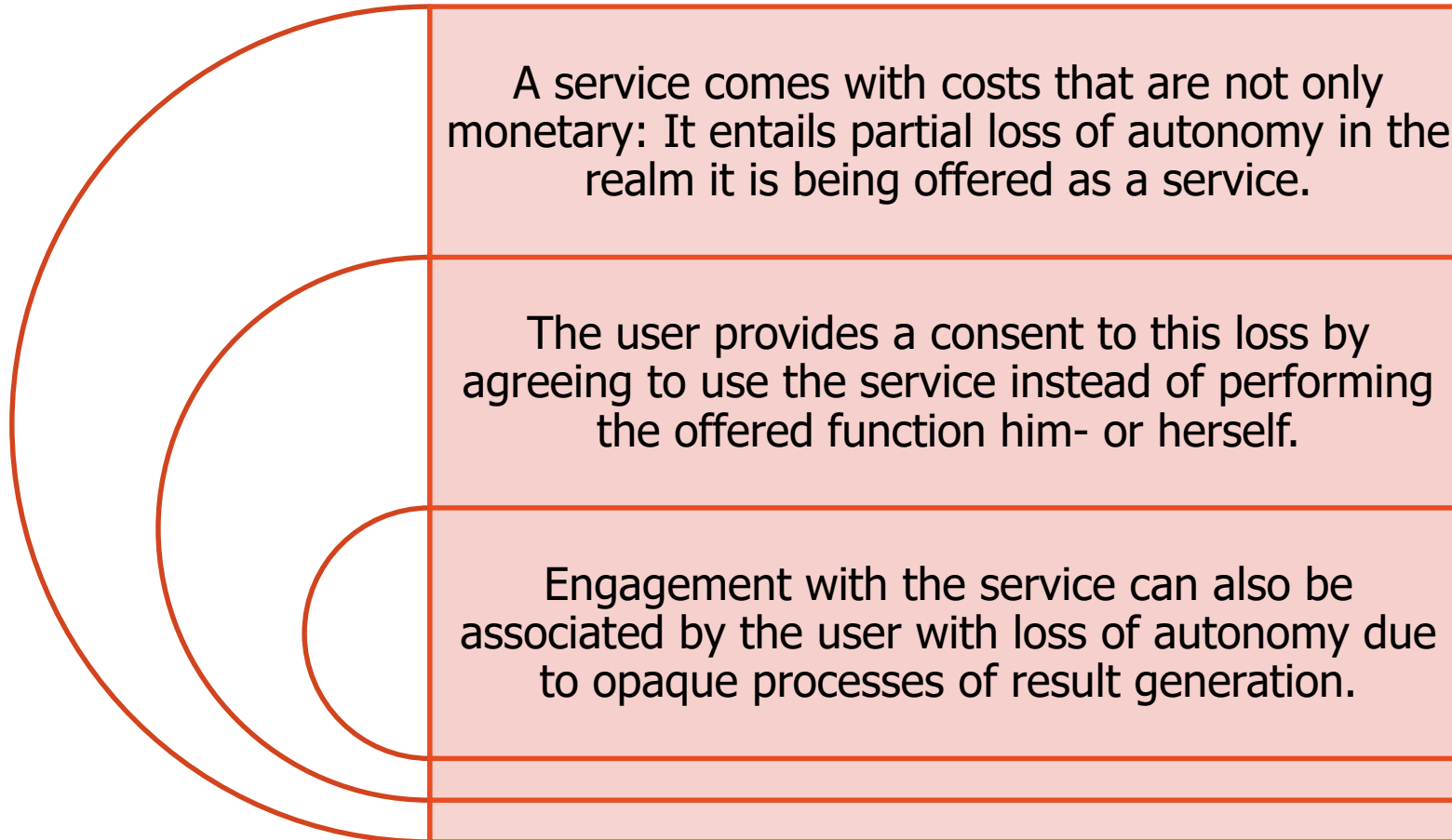# Some aspects for ethical challenges in STIS design- The cost of the service philosophy

A service comes with costs that are not only monetary: It entails partial loss of autonomy in the realm it is being offered as a service.

The user provides a consent to this loss by agreeing to use the service instead of performing the offered function him- or herself.

Engagement with the service can also be associated by the user with loss of autonomy due to opaque processes of result generation.

Challenges for STIS and Information Systems Research (ISR)

⇒ Mitigate the costs of the service philosophy through user-centric MLS design.

⇒ Information Systems Research (ISR) should pursue practices for the creation of IT artifacts that are not only technically innovative but also socially acceptable.

⇒ ISR toolbox should be expanded with tools that balance the technical possibilities and the user needs.

⇒ Ethical compliance of an IT-system is an integral part of the design process, as well as the product use.

⇒ Focusing on the user and the affected user in MLS context is a unique market feature.

Challenges for STIS design: Research areas and questions

Modeling STIS

Data requirements for STIS

Design principles of socially-aware MLS

Testing and evaluating of STIS

STIS interaction patterns

STIS influence on user behavior

Process descriptions for STIS

Performance indicators for STIS

Digital twin design as STIS

Influence of customer data on STIS design and application

Social interaction and STIS design

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Considering Business Process Complexity Through the Lens of Textual Data

Aleksandra Revina

Towards Implementing of Ethical Issues into the Recommender Systems Design

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Co-creating interactive virtual reality training environments. Reflections on a model for a participatory design process

Elisabeth Frankus et al.