Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law

Towards An Empirical Analysis Of Trustworthiness Attributes In The Context of Digitalization

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Presenter

Sandro Hartenstein is a security analyst and engineer. With his professional experience as software developer since 2001 and the security know how of the master study in Security Management 2010 he advises enterprise companies on secure software development. Currently he is working as a research assistant primarily on his dissertation on the development of trusted software in the research project at the HWR Berlin.

Research Team

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Research Topics

- Trustworthiness Software Development & Web-Services
- Trustworthy KI Web-Services
- Privacy in Web-Services
- Automated conflict resolution approaches für Web-Services
- https://blog.hwr-berlin.de/schmietendorf/forschungsthemen/

Agenda

- Introduction
- Related Work
- Viewpoints
- Future Work

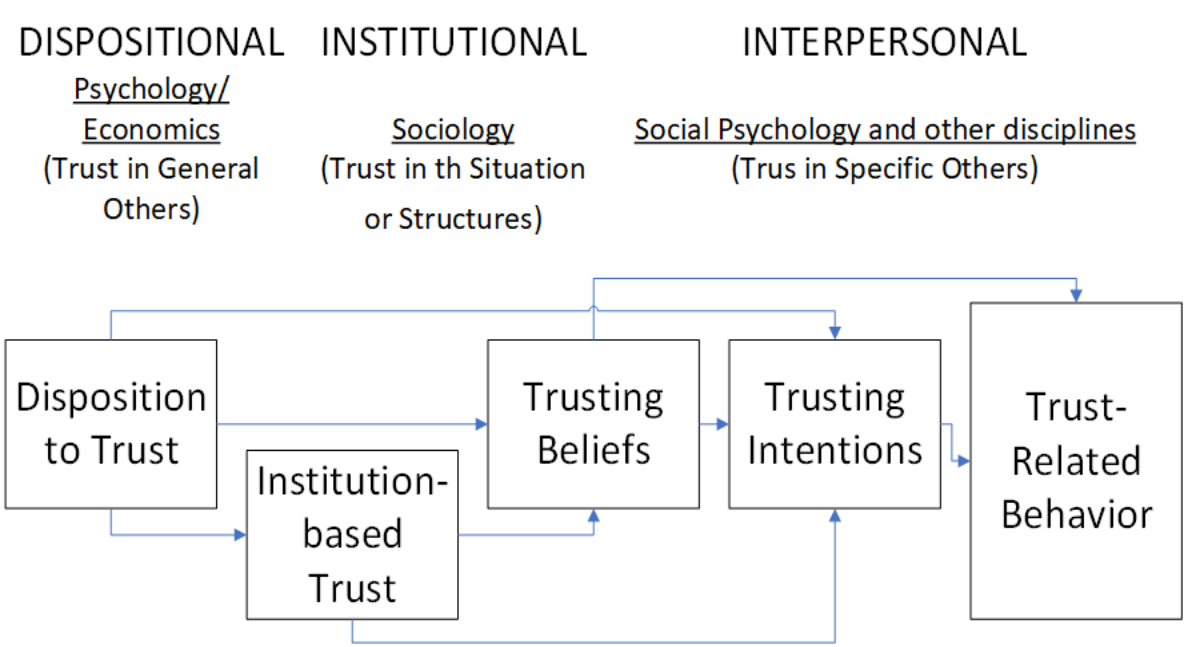
Introduction

Introduction

- Trust and Trustworthiness of services are essential
  - in the digitalization
  - perceive differently across multiple academic and industrial disciplines
- **STEEPLE** Analysis of the influences as key method [1]
  - **S**ocial, **T**echnological, **E**conomic, **E**nvironmental, **P**olitical, **L**egal and **E**thical

Related Work

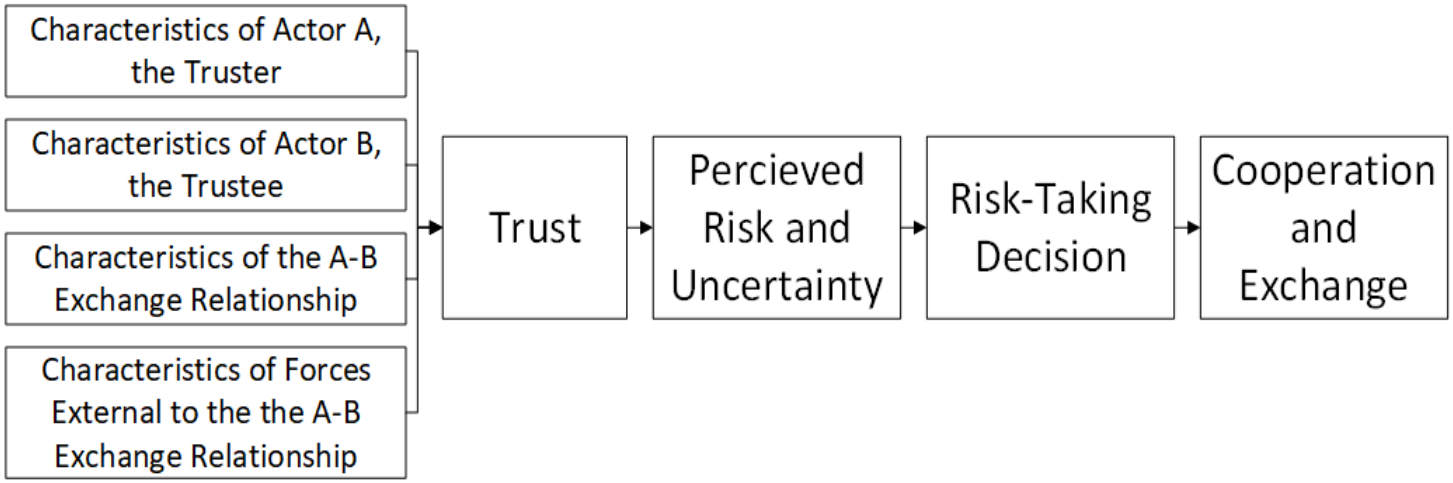
Related Work



- McKnight brought together the various aspects and their dependencies on trust in one design [1]
- distinguishes in trust in the institution through psychology and sociology, which influences the personal trust

Related Work

- 2016 Robbins shows a modern trust-risk-act-model [1],
- called relational trust
- connections between trust, risk assessment and the relation to activities



Related Work

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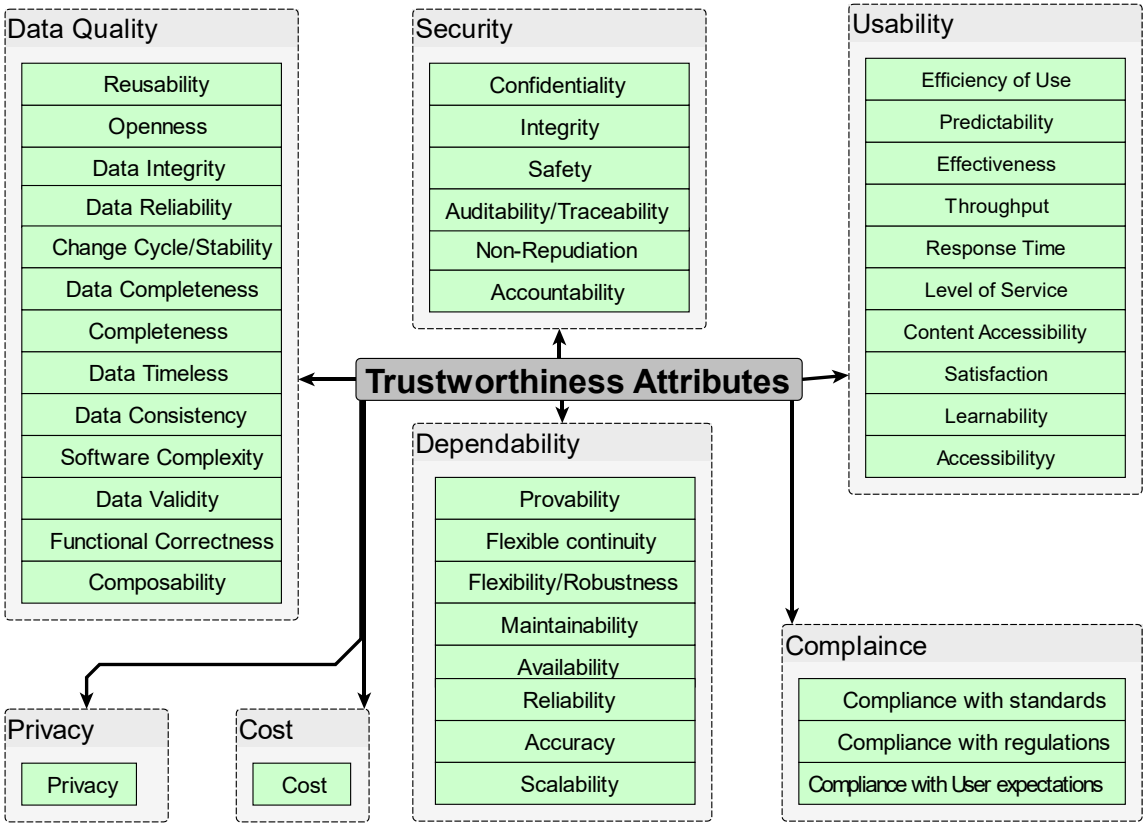
- Trustworthiness attributes of web-based software identified by literature review [1] and survey [2]



Viewpoints

Viewpoints

- two main elements are decisive for its reputation with consumers
  - **User trust and**
  - **the trustworthiness of the service**
- trust can be personal, transferred and based on core trust, for example in institutions
- The trustworthiness of the service is
  - based on its attributes and
  - on those confirmed by third parties

Viewpoints

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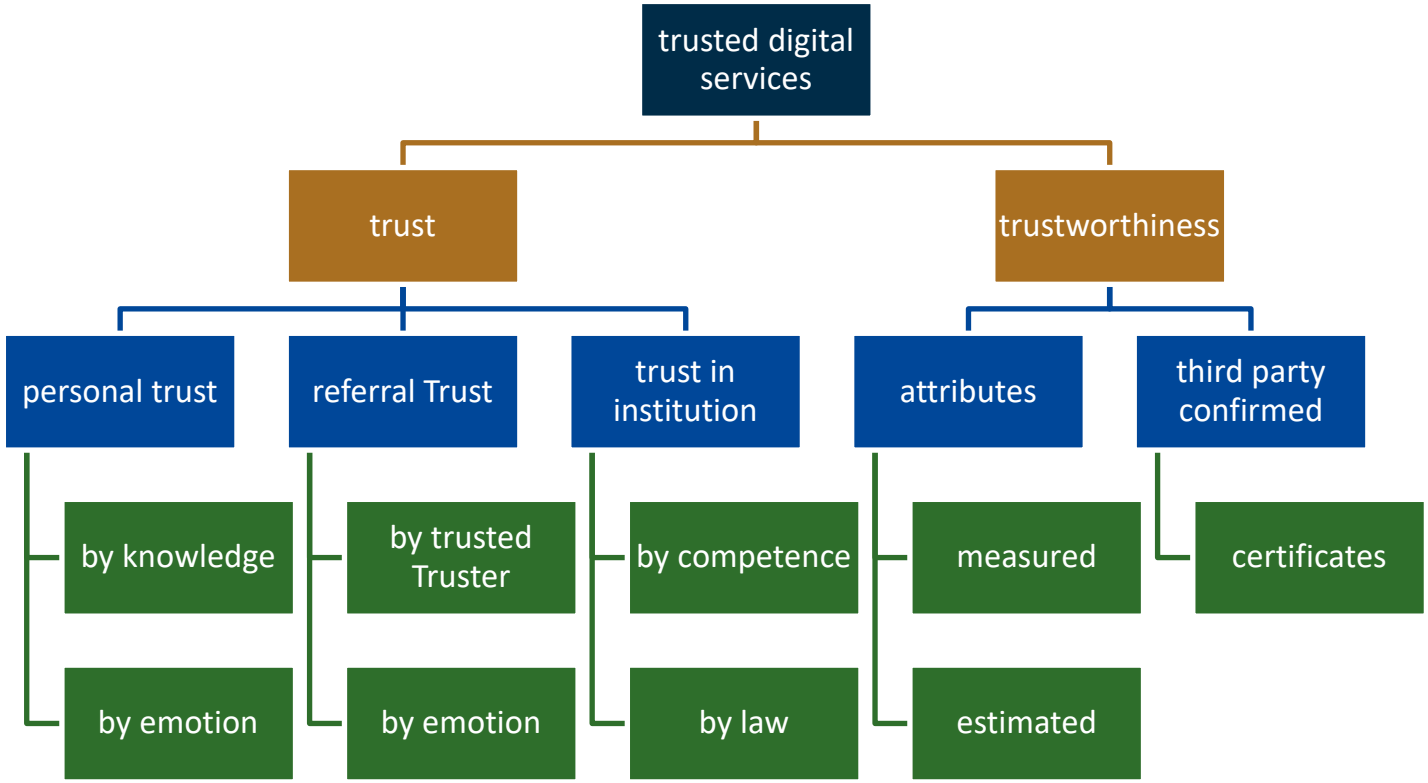

Future Work

Future Work

- We Initiate the research project **EUMoVe**
  - Empirische Untersuchungen zur Modellierung von Vertrauenswürdigkeit (EUMoVe)
  - In eng.: Empirical studies on trustworthiness modeling
- S1 – Simulation of a trustworthy scrum process
- S2 – Trustworthy public WiFi
- S3 – Trustworthy AI-Webservices
- S4 – Trustworthy web presence of mediators

Future Work

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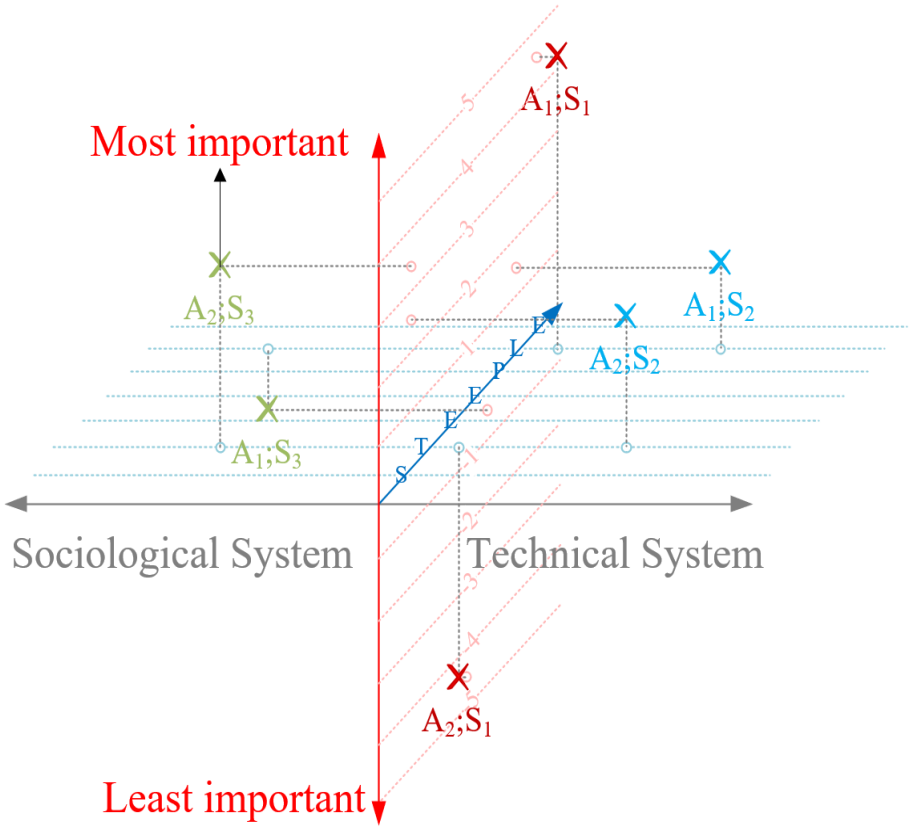
- Each empirically determined trustworthiness attribute (A_i) per examined system (S_j) should be weighted.
- attributes are categorized according to the STEEPLE dimensions
- create the general model
- similar or different systems will contribute to the overall set, but also add information on different weights



Thank you.

We will gladly answer your questions by email:

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