



Contributions to SmartGrid Security Centre

by

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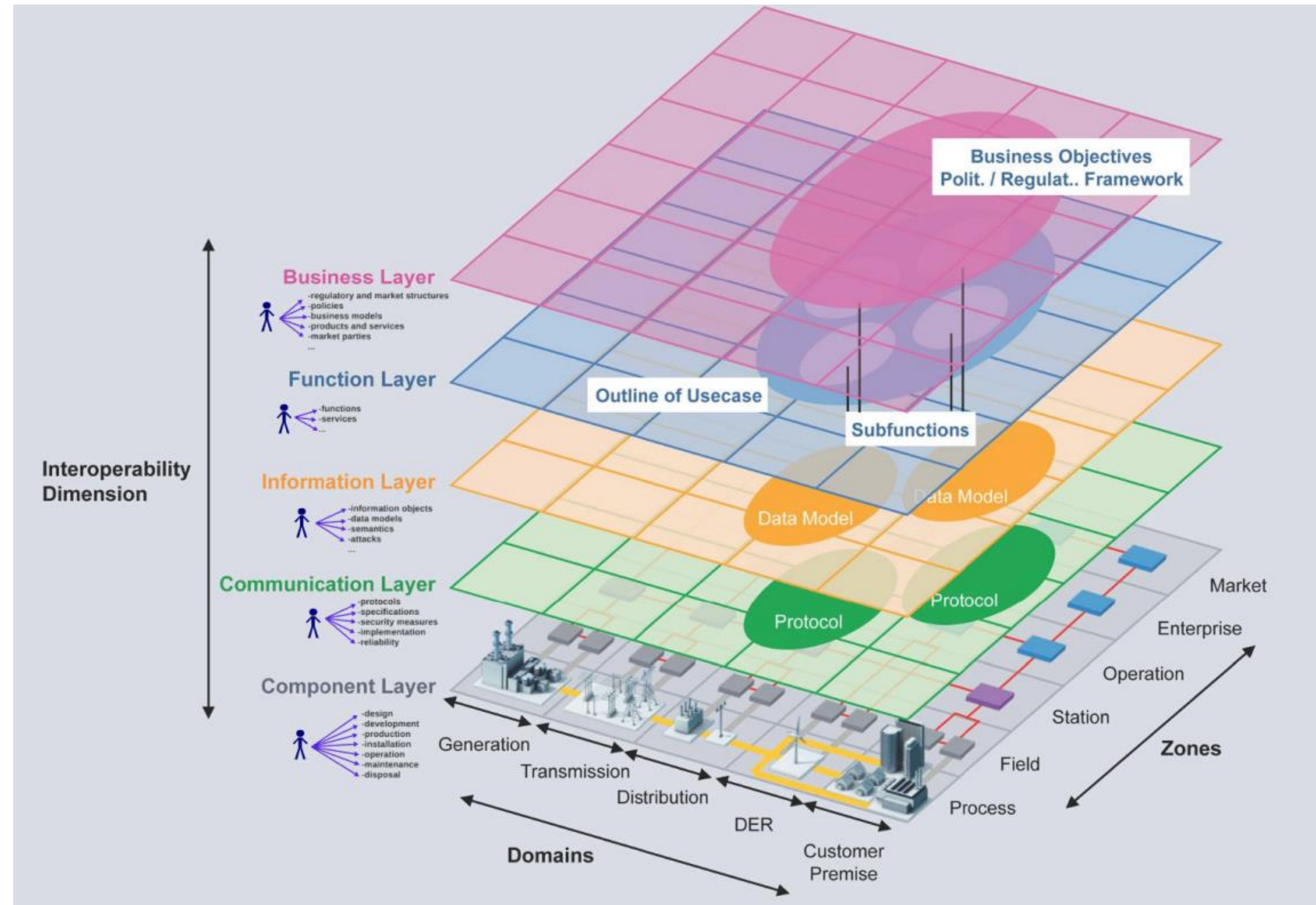
<http://www.IoTSec.no>, [#IoTSec](#)

WP3 - T3.2 - Incentives and Usability for IoT Security - Introduction

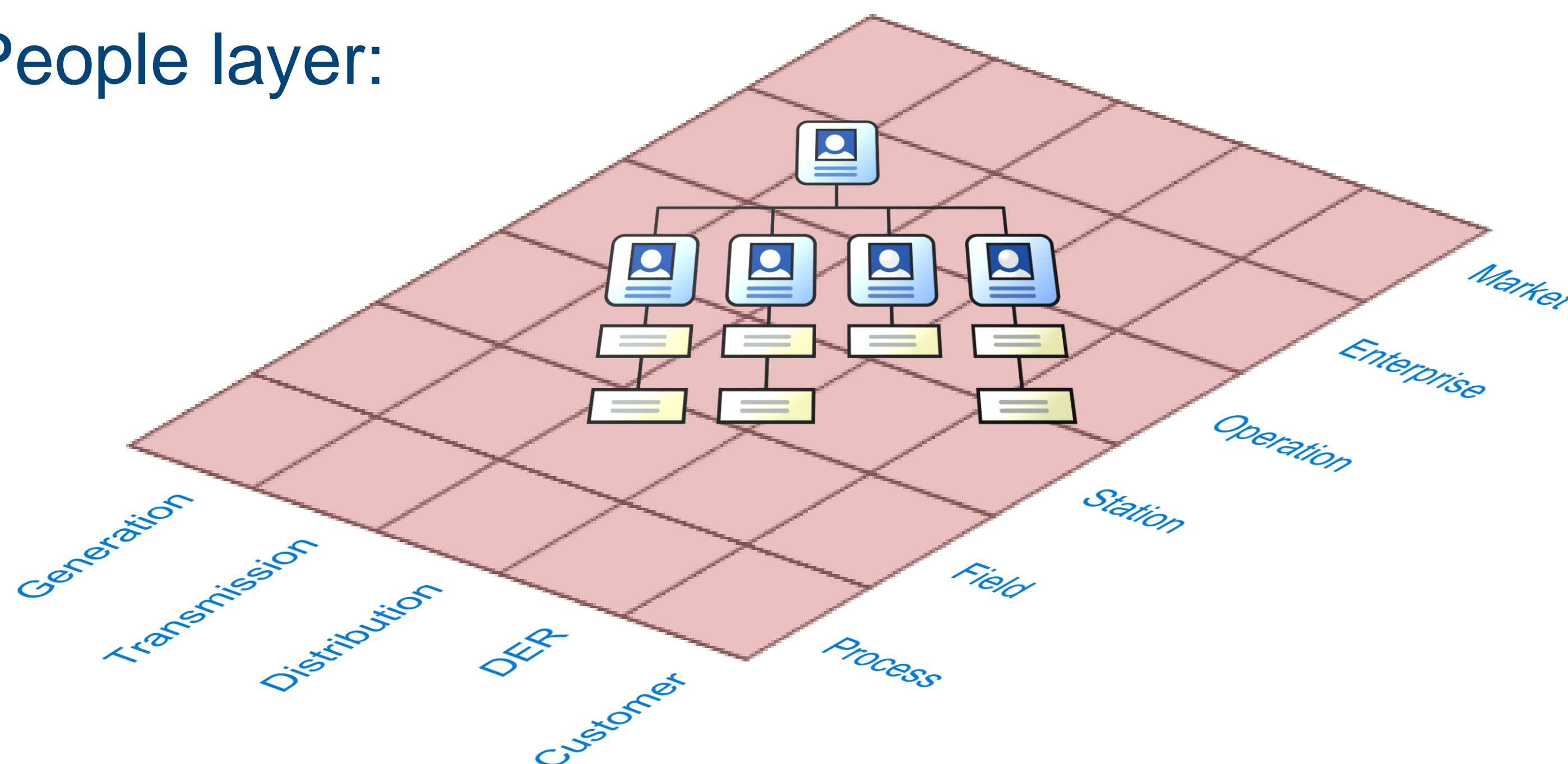


- Focus on human motivation in risk analysis – CIRA method

- Need for:
 - representing human actors within the system



People layer:



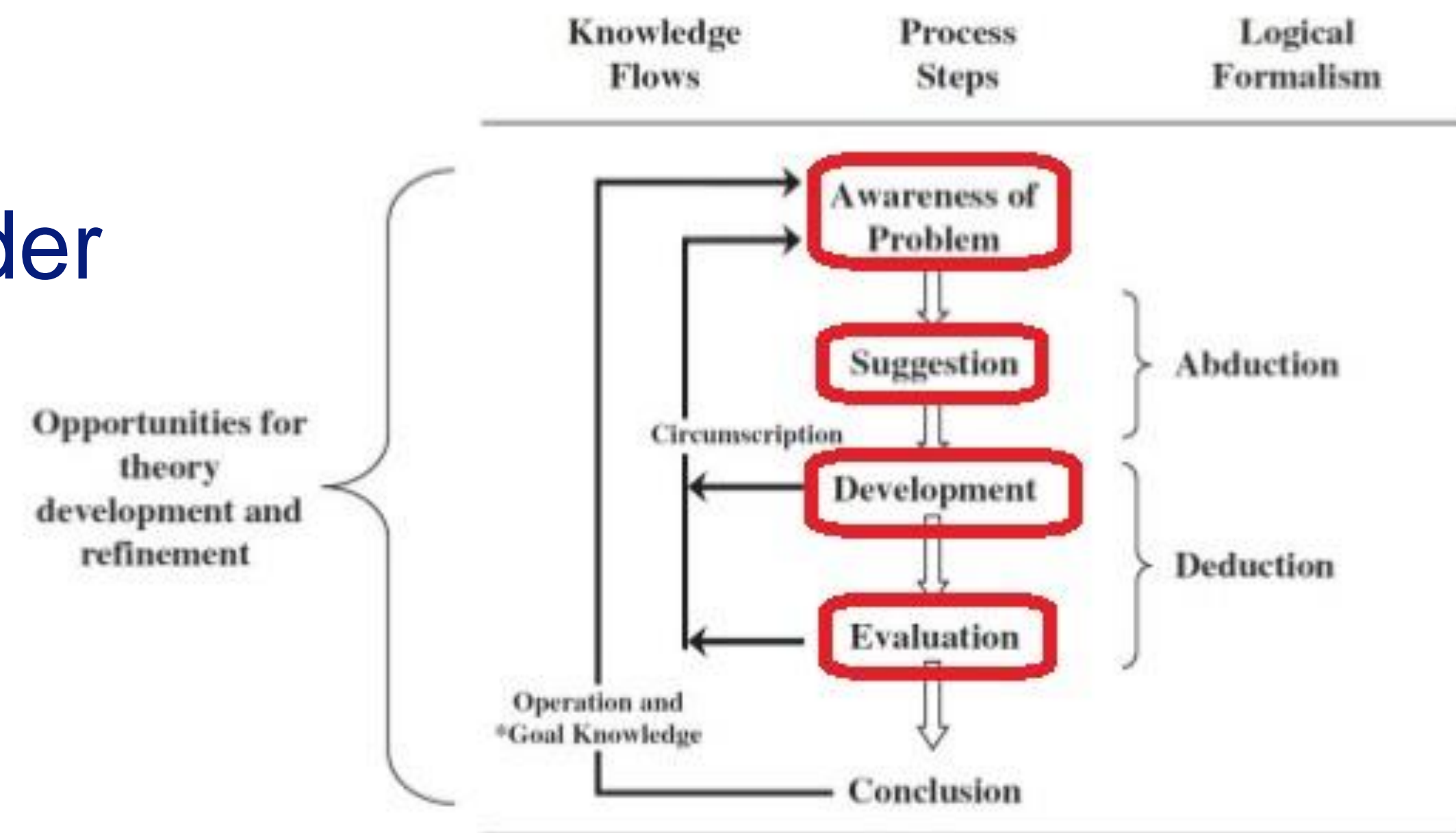
- Human Actors:
- Roles with associated actions
 - Responsibilities
 - Dependencies
 - Incentives

Allows:
Mapping of real-world situation
Identification of named strategy owners that can take on a certain role

● Artifact extending the current model **Design Science Research Cycle**

- Further development needed (consider People layer's connection with other SGAM layers)

Information layer or Function layer



From Kuechler, W. & Vaishnavi, V. (2008). On theory development in design science research: anatomy of a research project. *European Journal of Information Systems*, 17(5), 489-489-504. doi:10.1057/ejis.2008.40

Example – hypothetical but possible



- Steve aged 32 works as Energy Engineering Manager at an ESCO (energy service provider company – provides energy saving solutions to commercial and private clients)
- Receives a bribe of NOK 100,000 from a competitor in exchange for a comprehensive list of the company's current clients who are approaching the end of their contract.
- Who is at risk?
 - company – loss of costumers
 - customers – privacy threat – Secondary use of personal data

Example - hypothetical but possible



- Understanding his motivation allows predicting likely behavior
- Use of Basic Human Values¹:
 - men attribute more importance to power and achievement values
 - women attribute more importance to universalism, benevolence values -> consequences
- Cultural group membership has even greater impact on value priorities

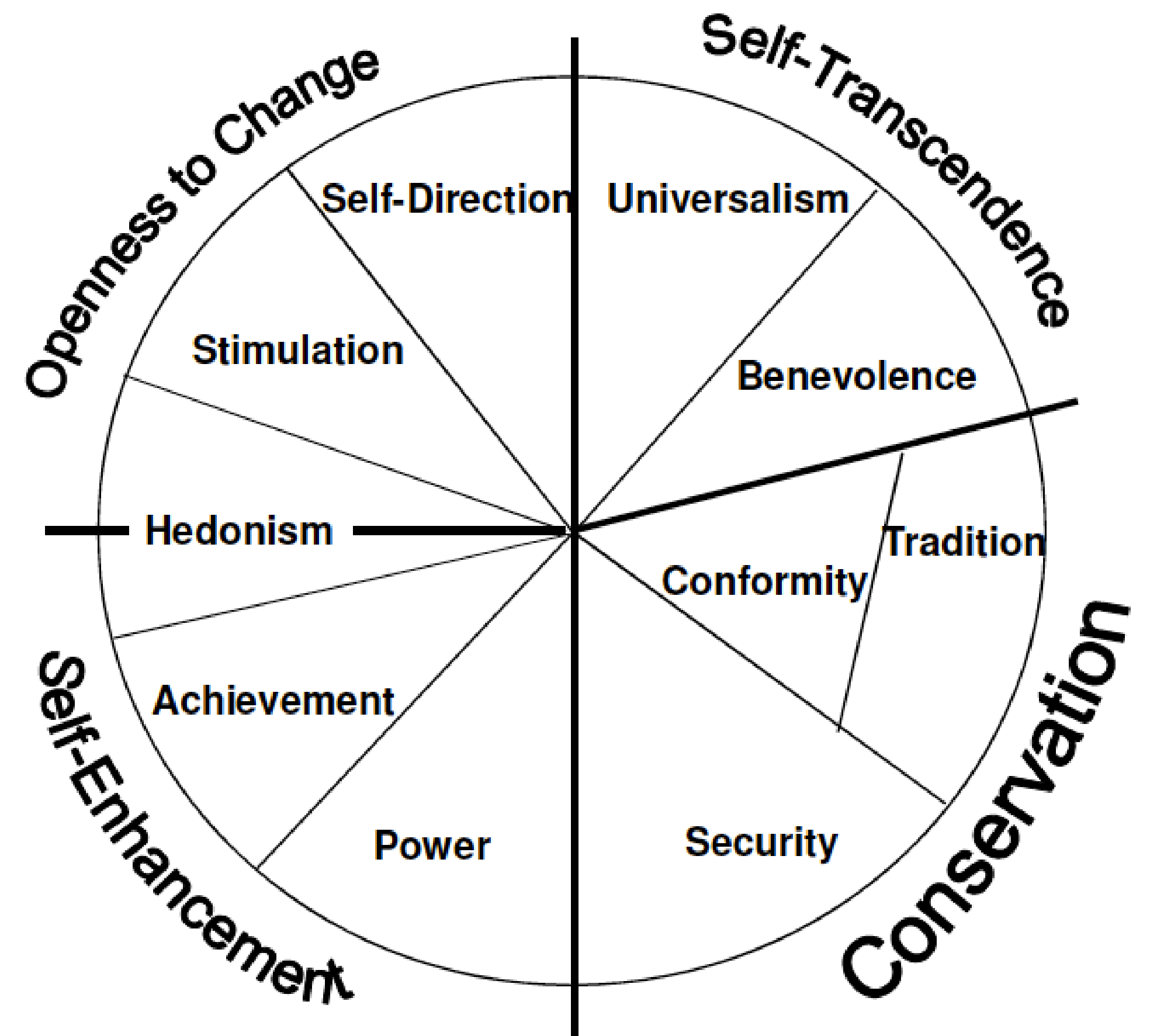


Figure 1. Theoretical model of relations among ten motivational types of value

- applicable to identify risks that are related to human behavior/decisions
- applicable to a wide range of situations depending on problem framing
- input is needed to evaluate the artifact – availability of test subjects?

Questions