

# SEFS Future and Trends

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## Abstract

In the previous century, the military and aerospace domain developed systems engineering to support the development of complicated systems. The functionality and services that we are using depend on the interaction of many systems and organizations. We call this complex rather than complicated. When developing complex systems, the developers cope with more uncertainties, and unknowns, and the inherent complexity of the dynamics between many systems and humans. Digitalization facilitates the development of interconnected systems. We view models as a means to help us coping with the complexity

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status: planned  
version: 0

logo  
TBD

## trends



features



performance expectations



number of products



release cycle time  
years → months



openness  
interoperability

## consequences



feature interaction



complexity



amount of software



integration effort



reliability

## solutions



new methods  
new tools



hardware performance



new software technology



new standards



reuse

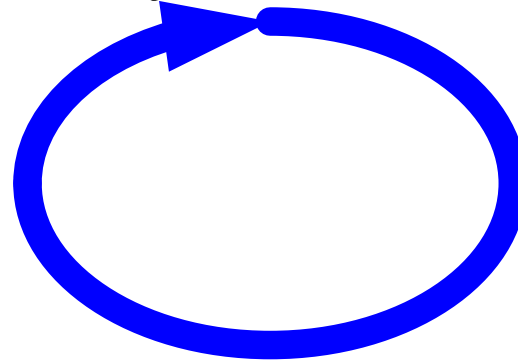
discover latent needs  
enable emergence  
where is the business

**creativity**

**market dynamics**

globalization  
hype waves  
Moore's law

**security**  
privacy, DRM  
versus usability

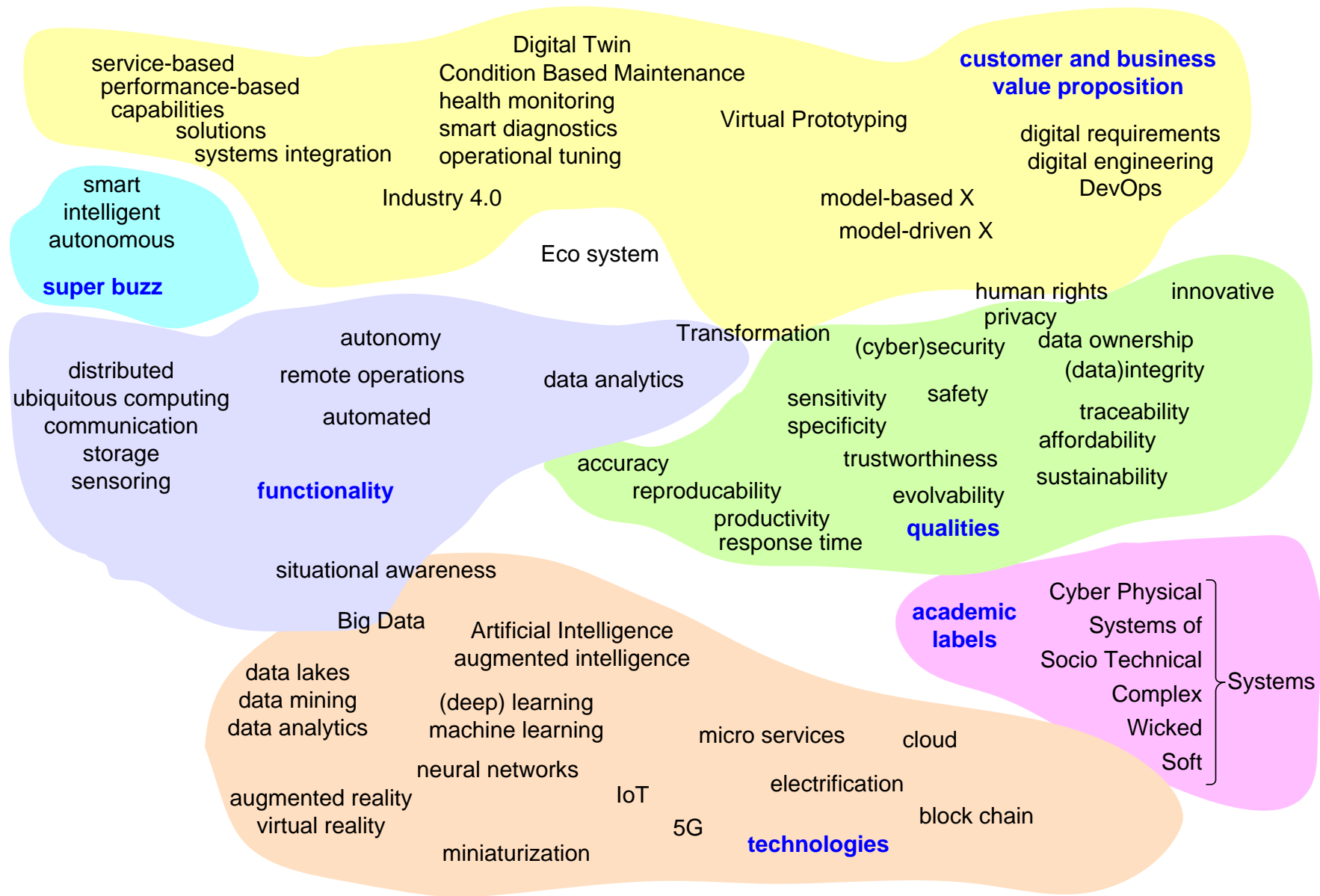


**interoperability**  
emerging behavior, future vs legacy  
heterogeneous vendors

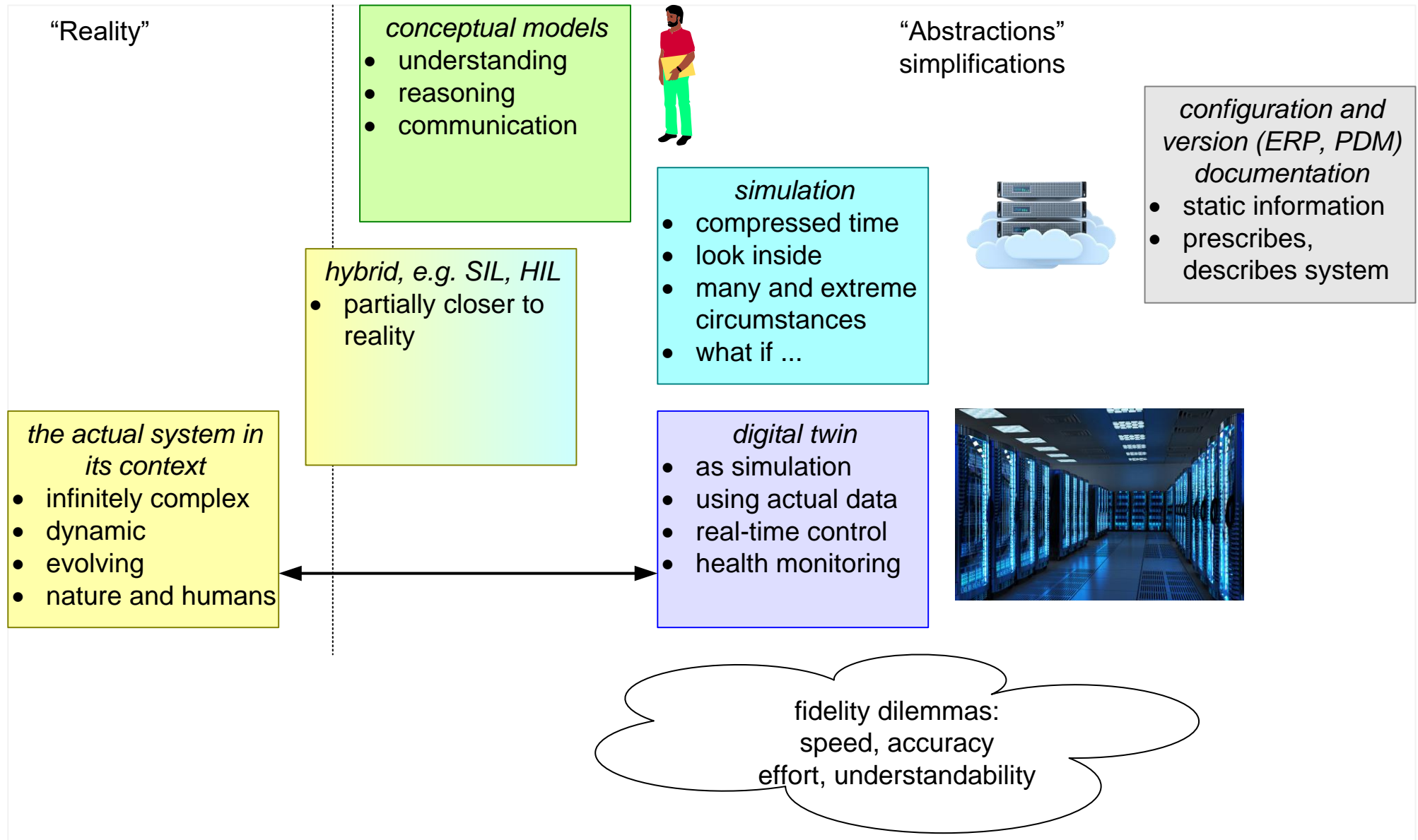
**power consumption**  
weight, cost, performance

**reliability**  
complexity  
heterogeneity  
#engineers involved

# Digitalization Cloud



# Digital Twins



# Systems of Systems

