

# Modeling and Analysis: Applications and Variations

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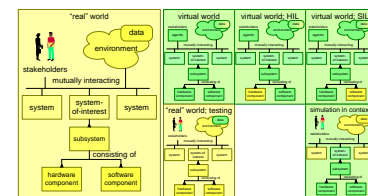
## Abstract

Models are used for a wide variation of purposes. Stakeholders can get confused between "reality" and the virtual counterparts. In practice, many hybrids between "real" and virtual systems exist. For example, planning and training systems using real algorithms and data, and physical systems using a world model for situation awareness.

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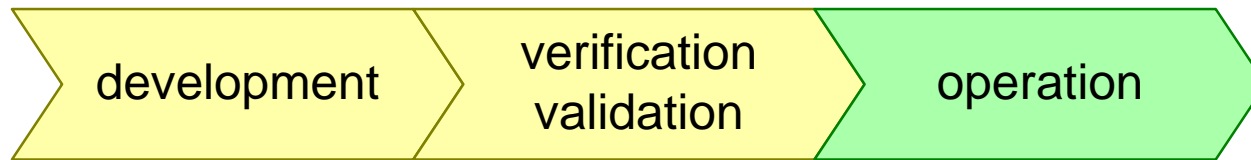


# Model Applications and Variations



capability analysis

*Systems of Systems*  
apply all  
asynchronously



understanding  
exploration  
optimization

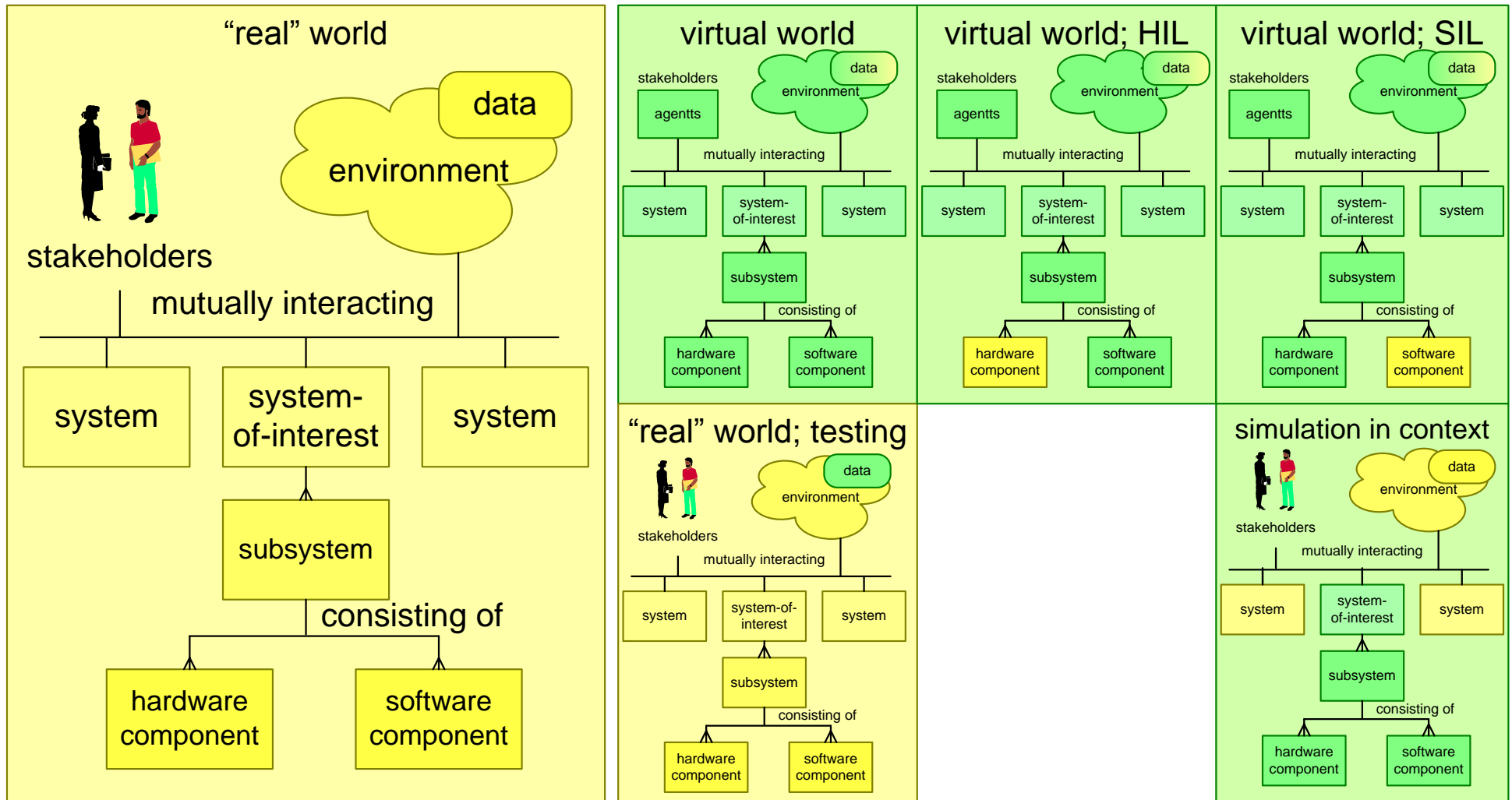
test data  
comparison  
trouble shooting

mission planning  
training  
health monitoring

*evolvability*  
all phases repeat  
with same needs

*in system*  
situation awareness  
planning  
training  
health monitoring

# Spectrum from Real to Virtual Systems



# Architecting for Variations

