



## Data-Driven Cyberphysical Systems



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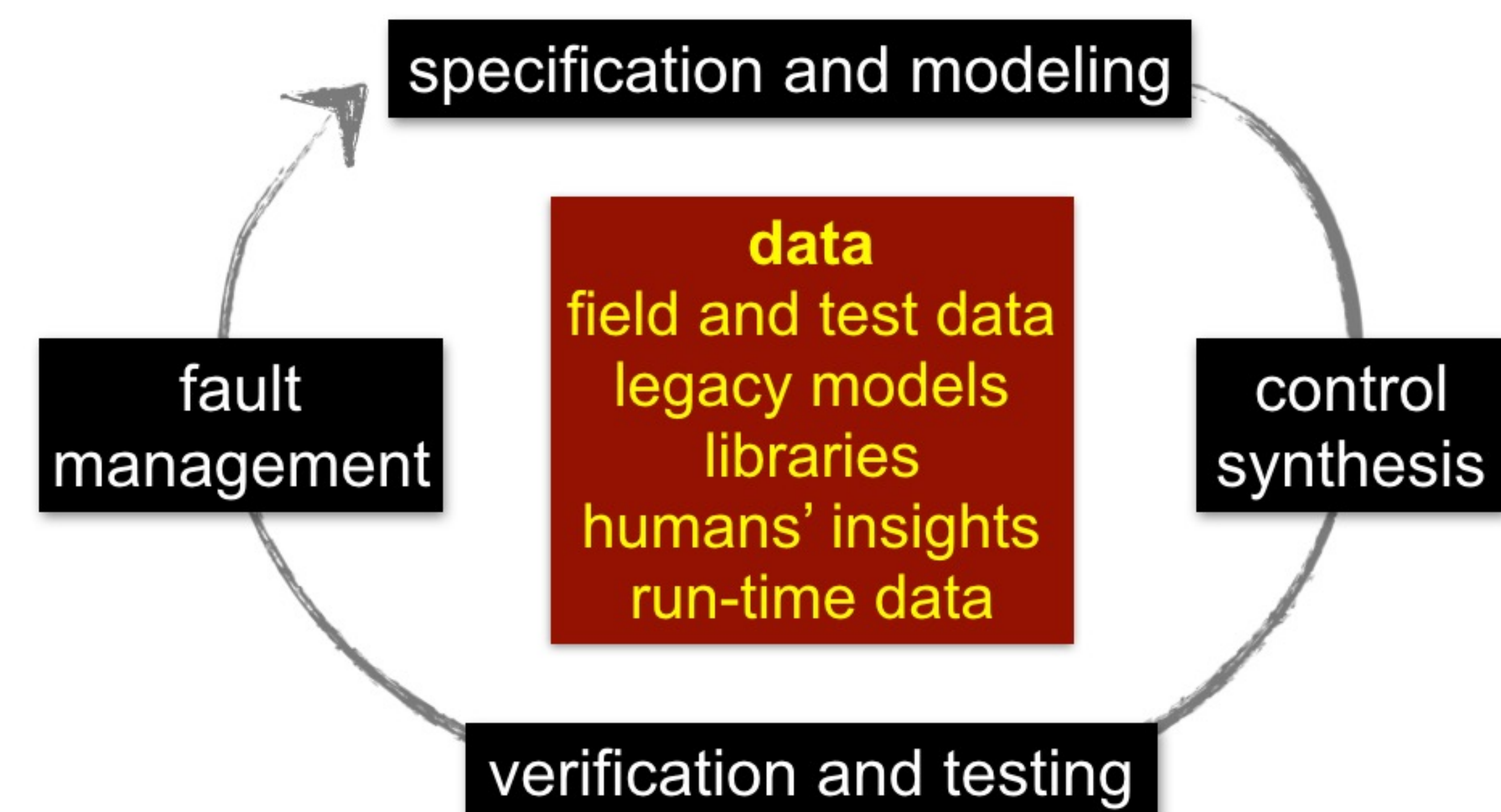
### Challenge:

How can we, *in a data-aware world*, design and operate CPS differently?

### Solution:

**Data-driven methods** complementing model-based design and **respecting the needs of CPS** with emphasis on:

- Safety-criticality
- Obey the laws of physics
- Heterogenous data at run time while closing the loop
- Possibility for proactive data collection
- Sometimes “big” yet often scarce data



### Scientific Impact:

New problems and insights across disciplinary boundaries: not only formal methods, controls and learning but also the application domains, e.g., additive manufacturing

### Broader Impact:

Education and research activities centered about the objective of “claiming our students back”.