

FPGI Workshop:
Decision Support and Situation Awareness

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GRID |

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Industry Transformation

Classic Utility



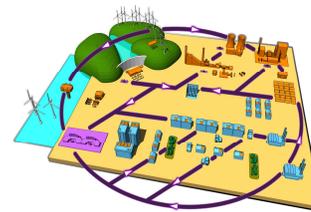
- Vertically integrated
- Cost-based operation
- Physical infrastructure

Competition



- Open transmission access
- Genco divestiture
- Wholesale electric market

Smart-Grid

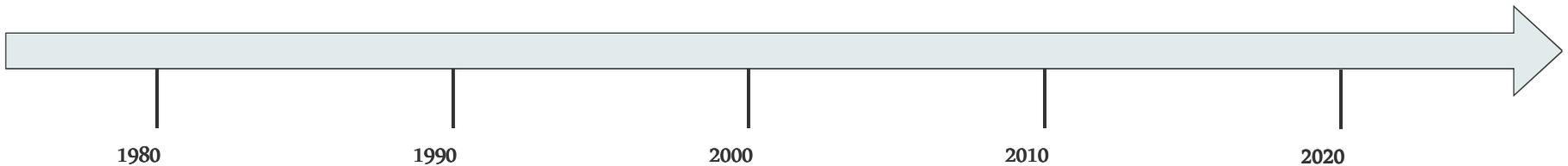


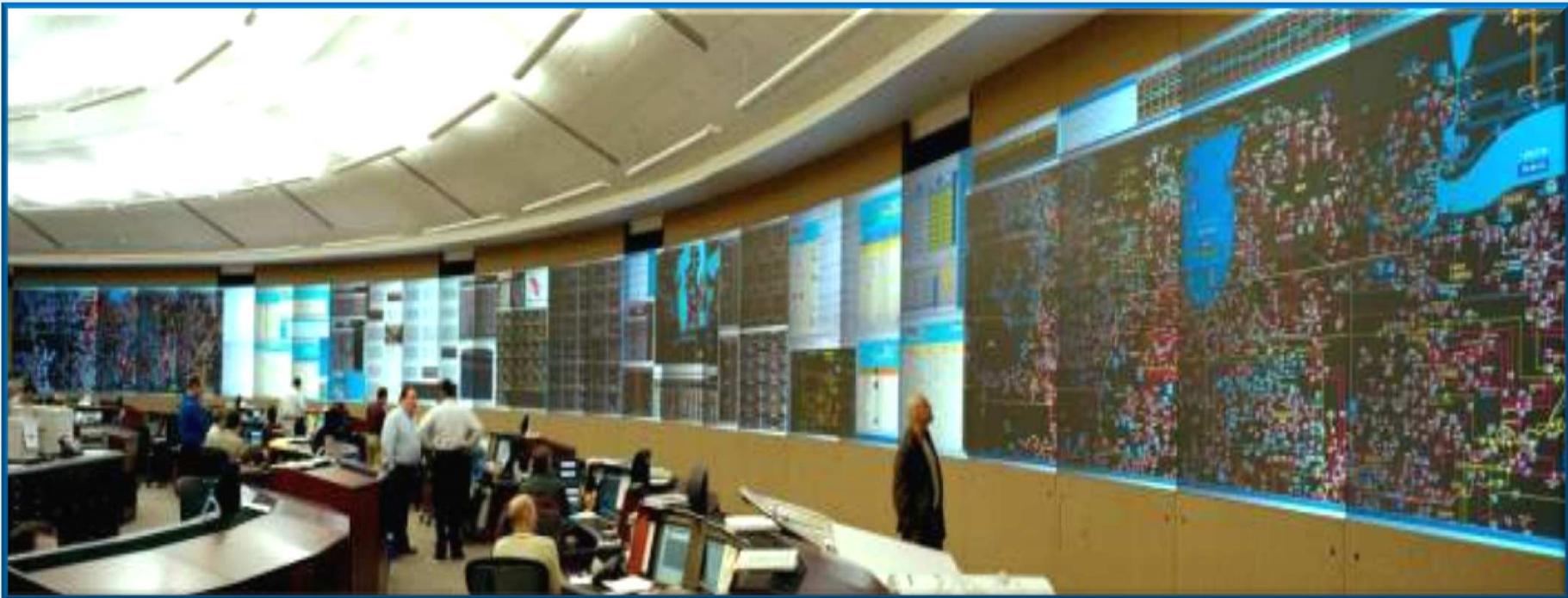
- Distributed intelligence
- Service valuation
- Prosumer choices

Smart City

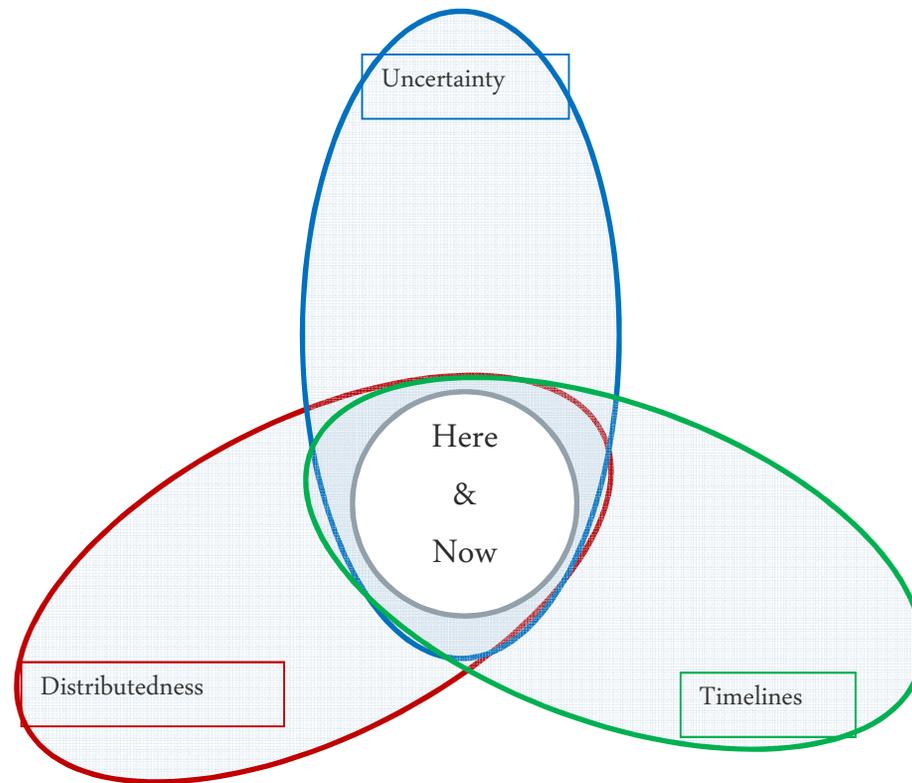


- Sustainability
- Resiliency
- Connectivity

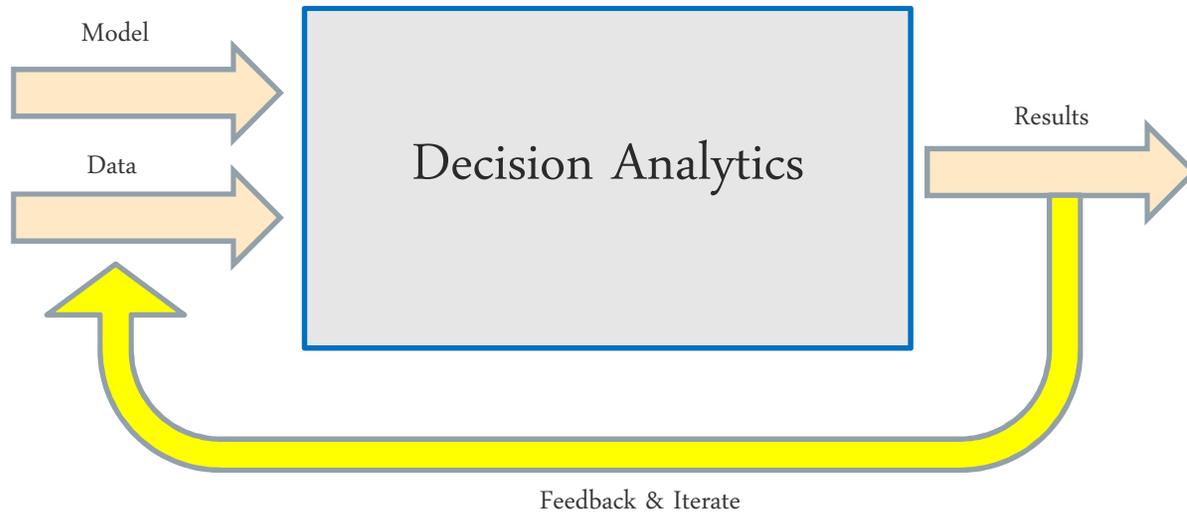




Dimensions of Complexity



Decision Support



Fundamental Challenges are Change Management

- Information Content:
 - Large volume of data
 - Extract critical information based on “changes”
 - Change with respect to norm, time, scenarios, etc.
- User/Usage Profile:
 - A user can change (evolve) from novice to expert
 - Consistency across changing (different) tasks
 - Changes in work environment: e.g. collaboration
- Technology Implementation
 - Customization vs. Common baseline
 - Migration
 - Who can make what changes

Situation Awareness

- Monitor + Infer
- Control + Incentivize
- Predict + Plan
- Benchmark + Assess