

The background of the top half of the image is a stylized circuit board pattern. It features a grid of lines and circular nodes, transitioning from a light blue on the left to a light green on the right. The pattern is semi-transparent and overlaid on a blurred landscape.

INTERSECT 19

The New Energy Ecosystem



Energy Infrastructure and Industrial Data:

Between global data policies and an evolving iloT environment

Presented by:

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Research Team

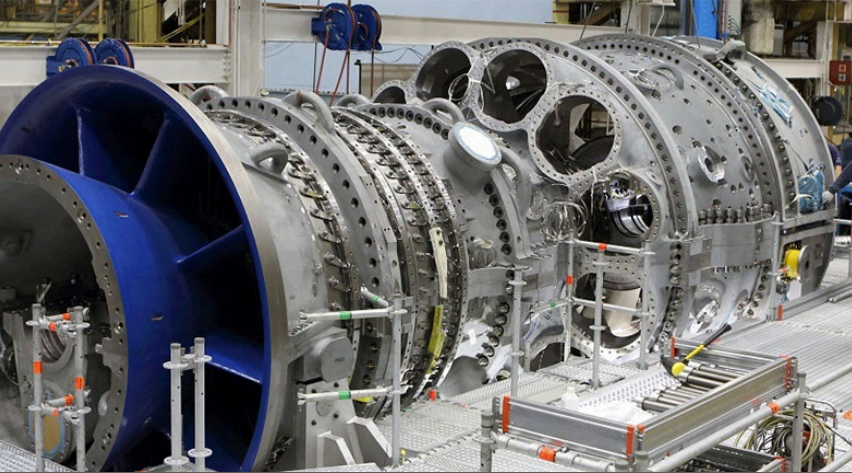
Team	GT Department	Disciplines and areas of expertise
Dr. Milton Mueller (PI)	School of Public Policy	Political economy of information/communication and institutional economics
Karim Farhat Research Assistant (Co-PI)	School of Public Policy	IoT standardization, ICT policy and information security

Overview and motivation

- Second phase of industry analysis by Clark et al. (2018)*
 - Exploring data-driven changes for utility business models
 - Exploring the conditions affecting Industrial Data (ID) production and sharing in the Southeastern United States

- Guiding Question
 - What factors affect strategic choices related to industrial data production and sharing in the Southeastern energy sector?

* Clark, J., Lodato, T. and Sudharsan, S. (2018). *Industrial Data and Regional Economic Development*. Industrial data in power generation. Atlanta: Energy Policy and Innovation Center (EPICENTER)

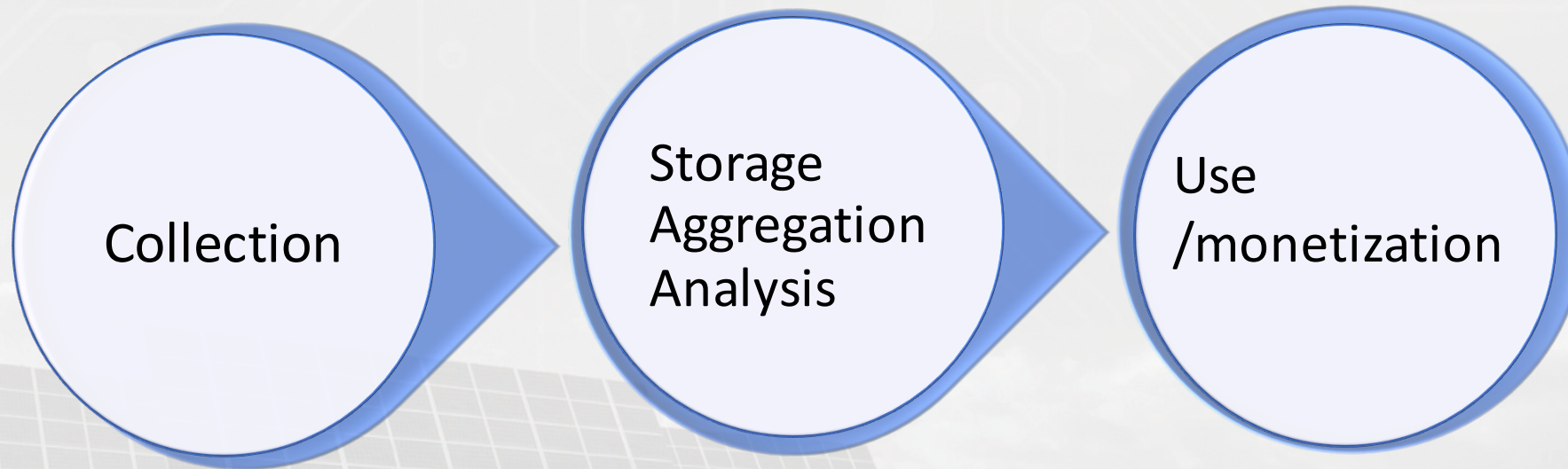


Industrial Data (ID)

- Product of IT/OT convergence
- Data from power generation assets to industrial control systems
- Excludes personal information (PII)

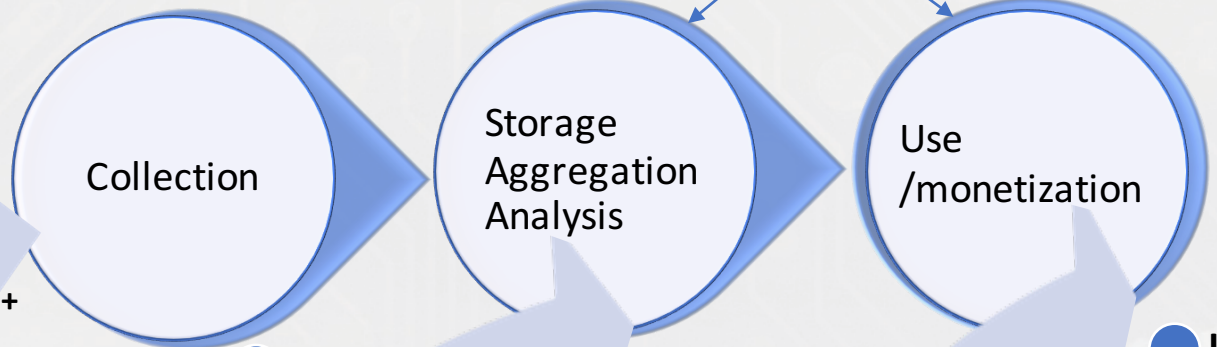


The Industrial Data production circuit



Industrial Data production

Data policies and regulations



- **iloT standardization**
Protocols/standards defining
volume
velocity
veracity
interoperability
etc.

- **Legacy infrastructure + iloT layer**
Sensors/RFIDs
ICS
SCADA
PLCs | RTUs
QoS requirements
SDNs
etc.

- **Cloud vs. on-premise**
SaaS – IaaS – PaaS – CaaS
- **Single binaries/monoliths – VMware – Containers/Docker – Kubernetes**
- **ML techniques and algorithms**

- **Incremental innovation**
Optimization/predictive maintenance
- **Architectural innovation**
New markets/business models – data commodification – Distributed assets – VPP – Blockchain-based data exchange

What we know

- Two data paradigms in the energy sector:
 - Incremental innovation
 - Architectural changes

- ID sharing schemes:
 - Internal – Strategic partnerships – External

What we need to find out

- Firm strategies
- Firm organizational capabilities
- Effect of data policies and regulations
- Data exchange agreements

Approach and anticipated results

- Finalize structured interviews
- Set to terminate in August
- Mapping firms' preferences
- Provide insights for economic development

Thank you!

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Cloud platform market

