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IEC 61850 Panel Discussion:

What it means to you and where is it on the Utility's roadmap

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AVEVA

Panel agenda

- The what and why: IEC 61850 overview – SISCO

- A Utility's perspective video

- Audience questions

- The how: The use of FogLAMP as base platform for transmission – Dianomic

- Open conversation – Q&A session

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IEC 61850

Overview & Adoption

Transforming The World Of Energy Using Open Standards

About SISCO

- Founded in 1983
- **Focus:**
  - Providing integration solutions based on knowledge, experience, and open interoperable standards
- **Standards:**
  - IEC 61850
  - CIM (IEC 61970/61968)
  - COMTRADE (IEEE C37.111)
  - ICCP-TASE.2 (IEC 60870-6)

About Joel

- Vice President, SISCO

- Editor of 61850-7-1, -7-2, -8-1

- Lead TISSUE Task Force (61850 Maintenance Process)

- Chair, 61850 Conformance Test Procedures WG

- US Technical Advisor for IEC TC57

61850 Fundamentals

Communications

- IEC 61850 was designed to abstract the physical communications layer
- MMS is the client/server transport. Wireline transport is somewhat analogous to DNP or modbus
- GOOSE/SV
  - Multicast technologies that allow one publisher to send to many subscribers

Semantic dataModel

- Bay1Control/QA1XCBR1.Pos.stVal

Engineering Process - files

- System Configuration Language
  - XML
  - Describes the entire 61850 system
  - File types defined
    - SSD – System Specification Description
    - SCD – System Configuration Description
    - SED – System Exchange Description
    - ICD – IED Capabilities Description
    - IID – Instantiated IED Description
    - CID – Configured IED Description

Engineering Process
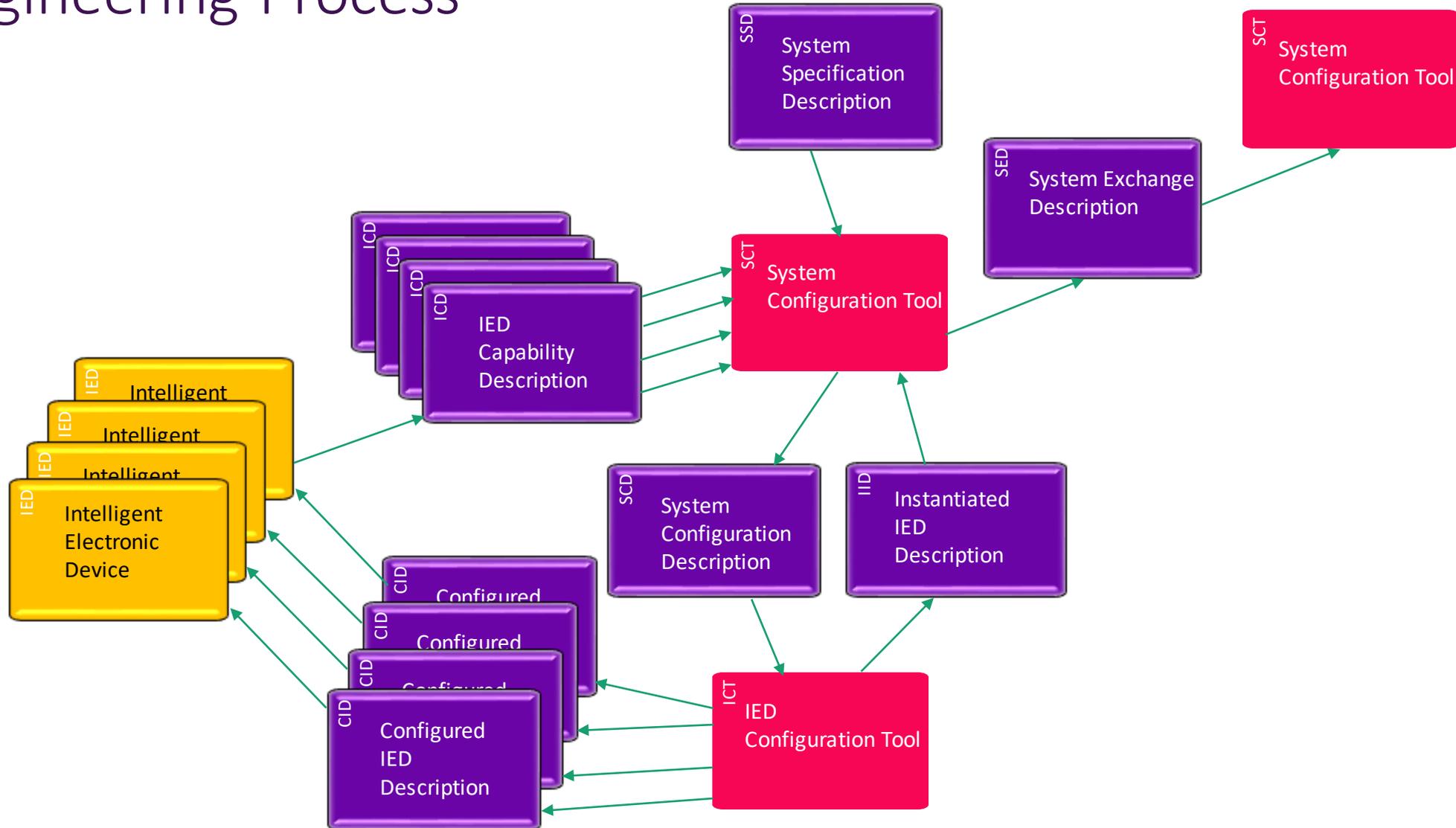
Benefits of Digital Substation

- Size/Weight
  - Real Estate
  - Shipping
- Safety
- Training and Hiring
- Machine Processable Configuration
  - Documentation is maintained as part of process
  - Design reuse
  - Rigorous testing
- Data Accessibility

What is FledgePower?

Operational Deployments

Open Source Development

Hear from the Utilities - Video

The Fourth Industrial Revolution Changes Manufacturing Forever

We Deliver
Intelligent Industrial Data Pipelines and Edge ML
Insights and Actions for Bottom Line Results

We Believe

Intelligent Automation Starts at the Edge

INNOVATION

Digital transformations from machine to cloud. The heart of tomorrow's better yields, quality, safety and efficiencies.

SUSTAINABILITY

For generations to come. These innovations should be at the core of every manufacturer's mission.
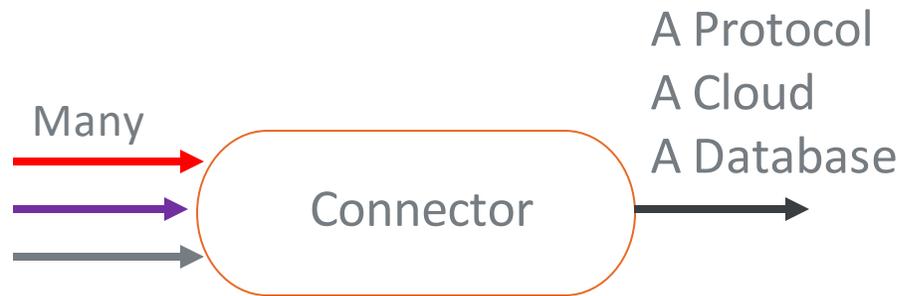
COMMUNITY

Cooperation between companies, departments, and specialists solving the problems we share.
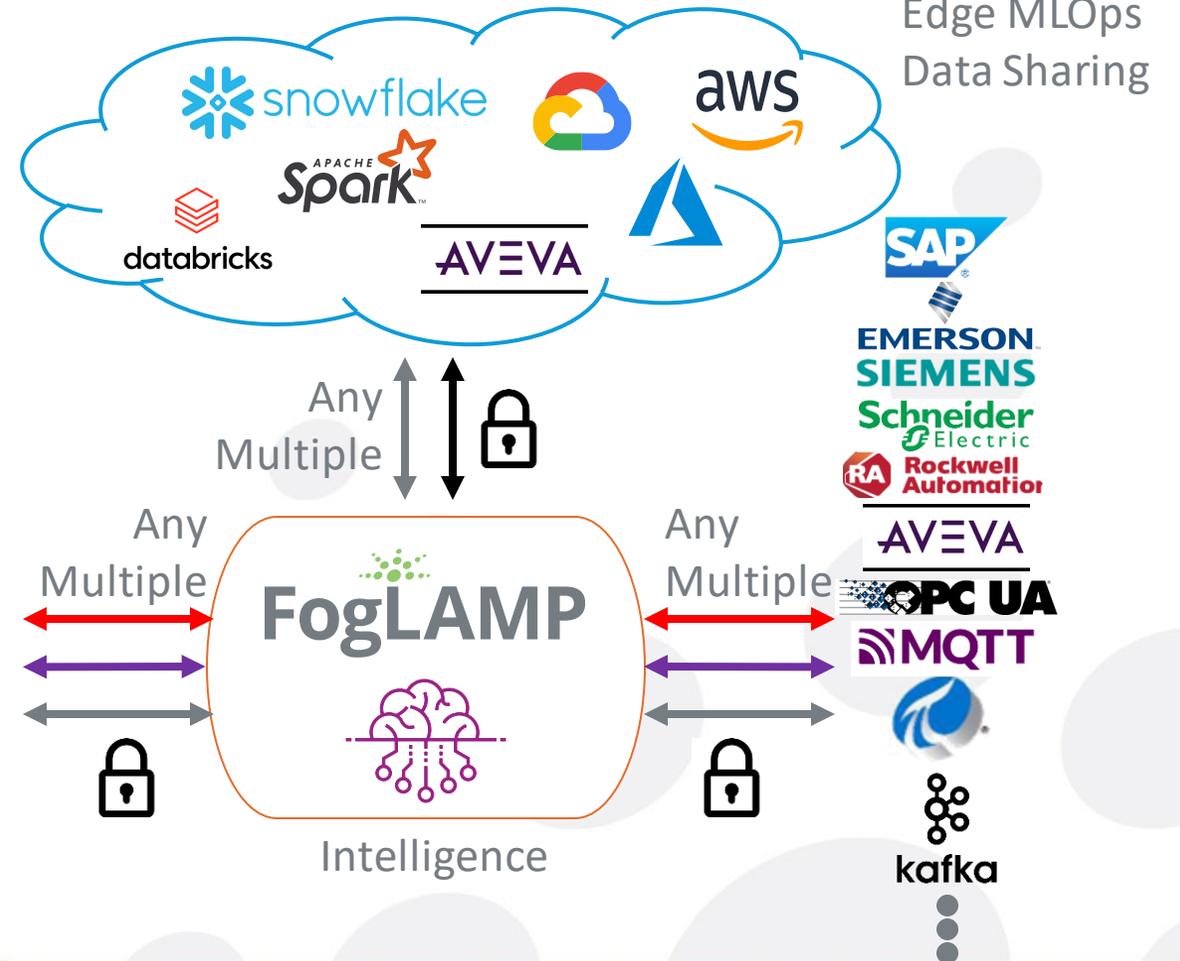
Dianomic
Edge insights and actions that deliver bottom line results.
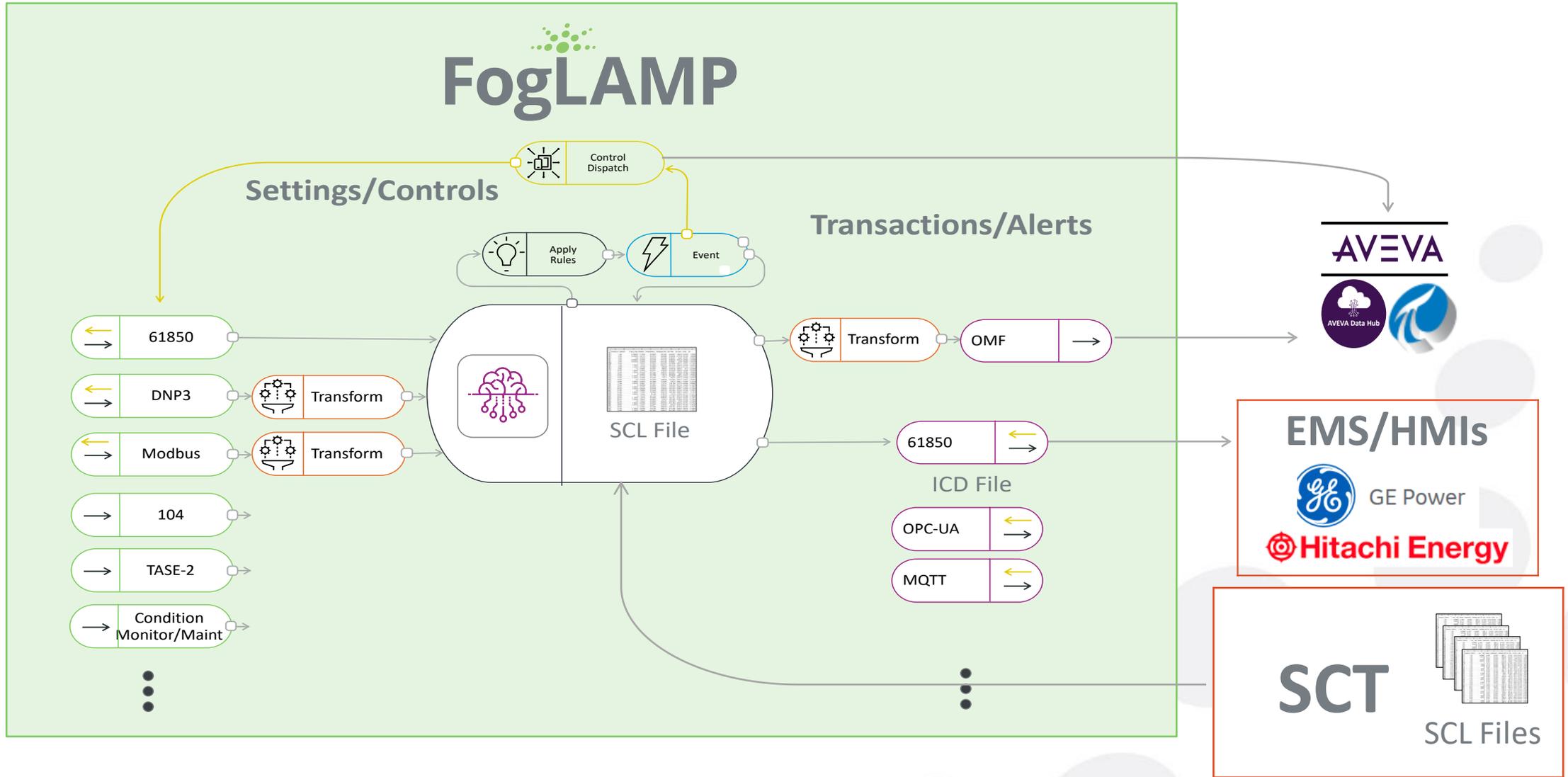
Data Management vs Data Collecting

Intelligent Data Pipelines

FogLAMP IEC61850 Features and Benefits

- Integrate 61850 device data with the PI System

- Use 61850 semantic models to automate PI AF

- Use 61850 semantic models on non-61850 devices

- Use 61850 control signals on non-61850 devices

- Multiprotocol gateways between 61850, 104, Modbus, DNP3, and TASE-2

- Manage and secure intelligent data pipelines at scale from any sensor/actuator to all operational systems

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