Apache NiFi: Ingesting Enterprise Data @ Scale

Timothy Spann

2017 Future of Data – Princeton Meetup
Hosted by TRAC Intermodal

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Agenda

- Apache NiFi RDBMS, EDI, JSON, CSV, Sensors

- EDI
- https://community.hortonworks.com/content/kbentry/59975/ingesting-edi-into-hdfs-using-hdf-20.html
- https://github.com/tspannhw/EnterpriseNIFI

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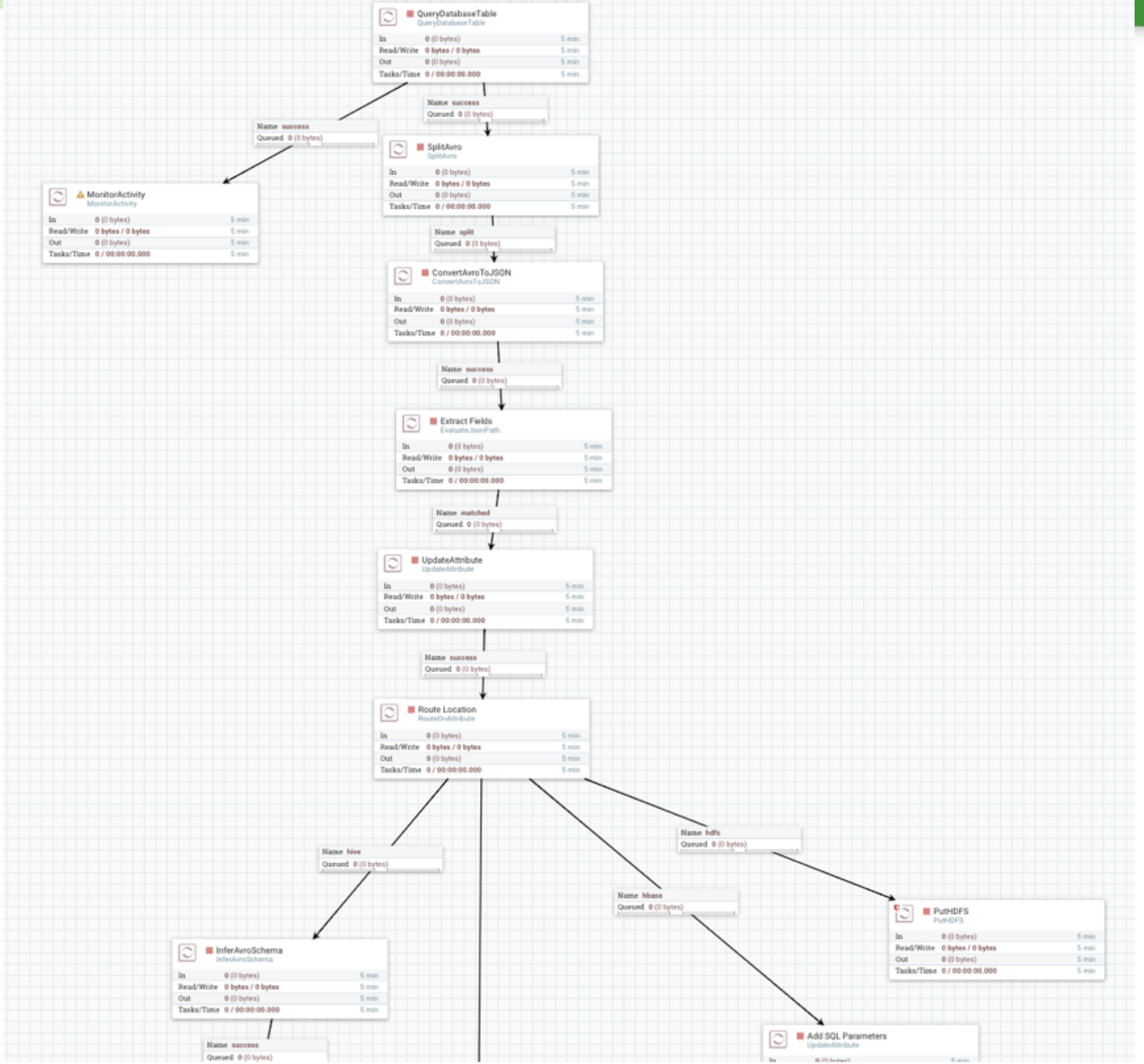

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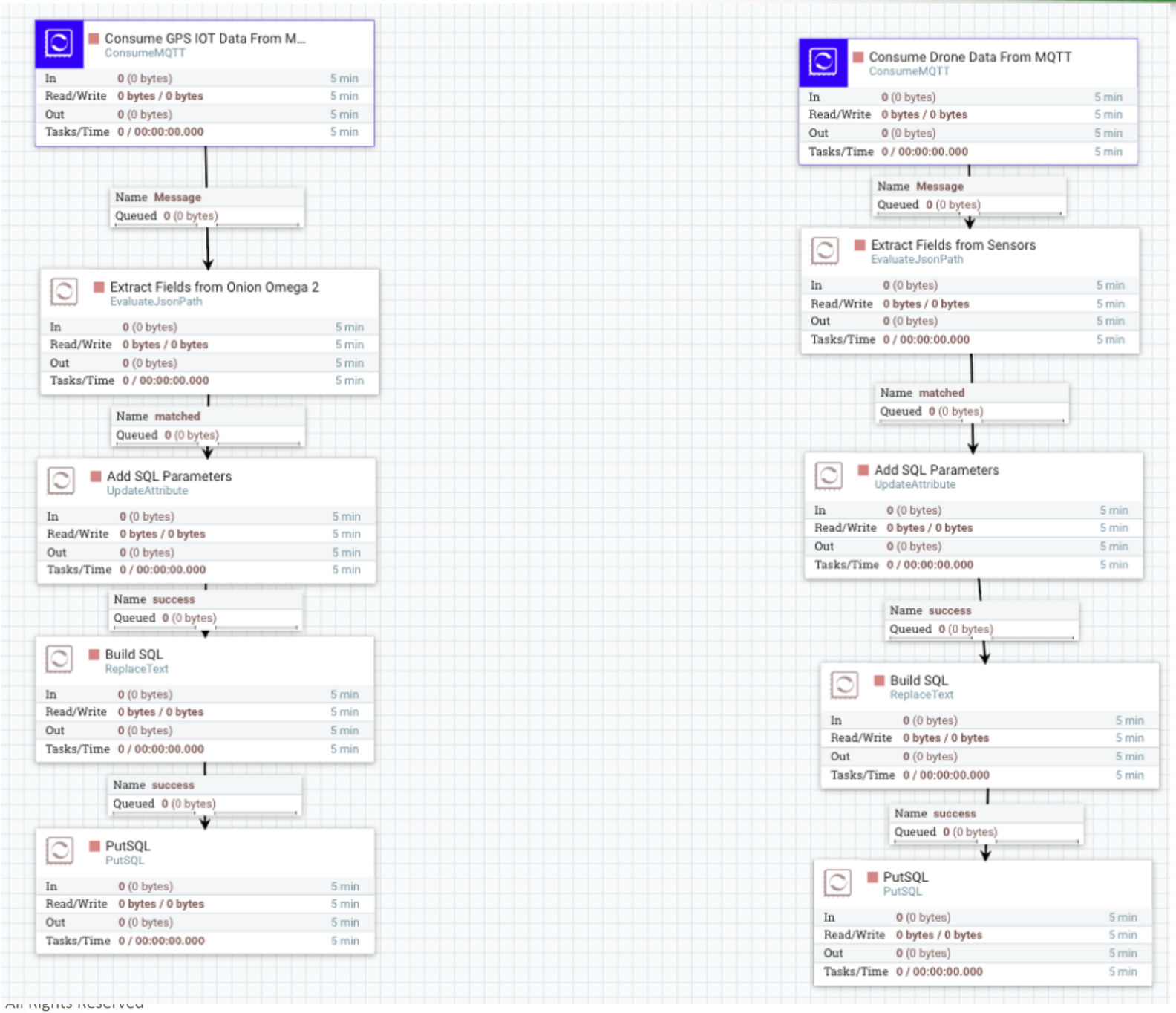

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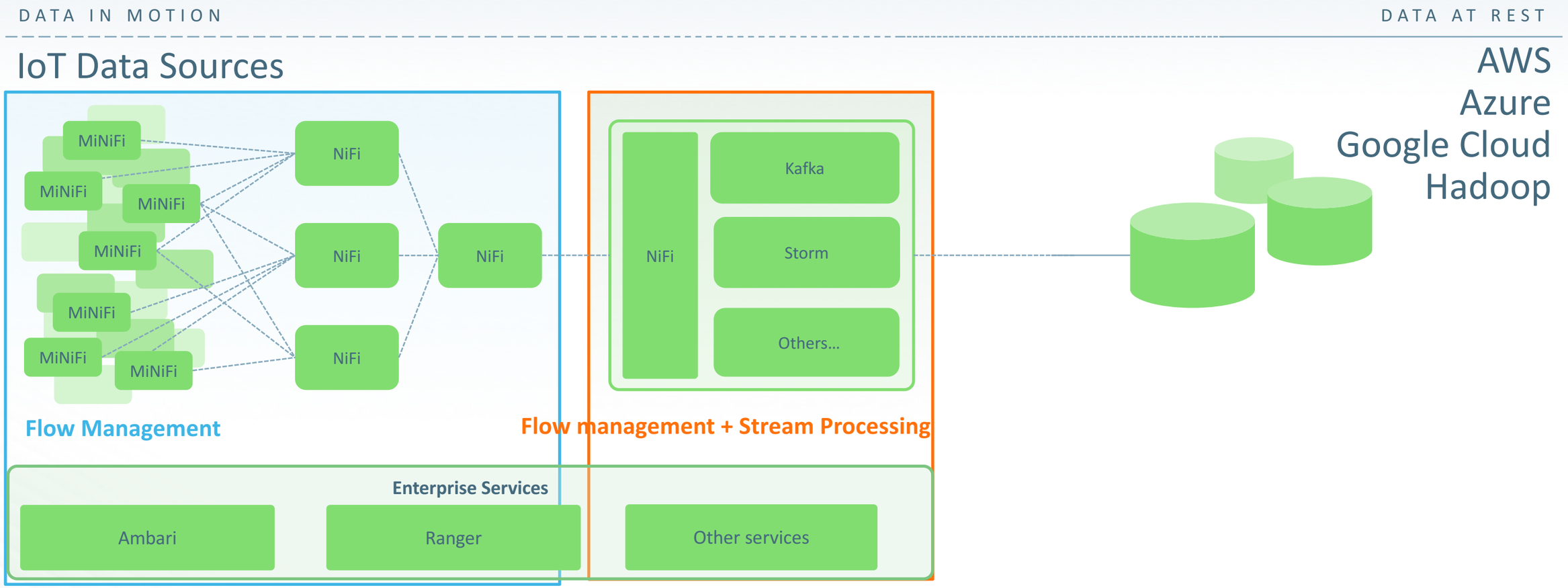
HDF 2.1 – Data in Motion Platform



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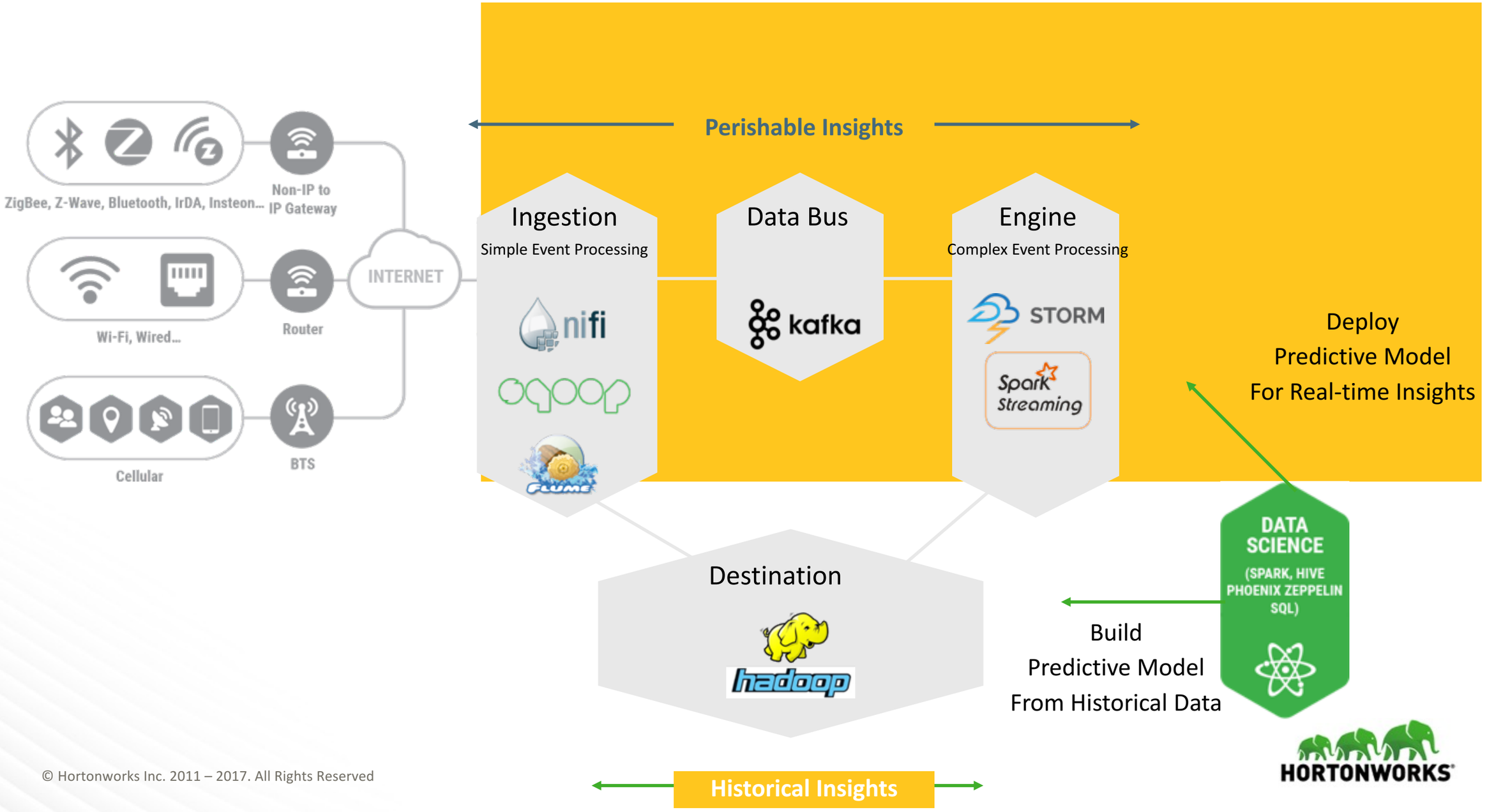
Actionable Insights Architecture



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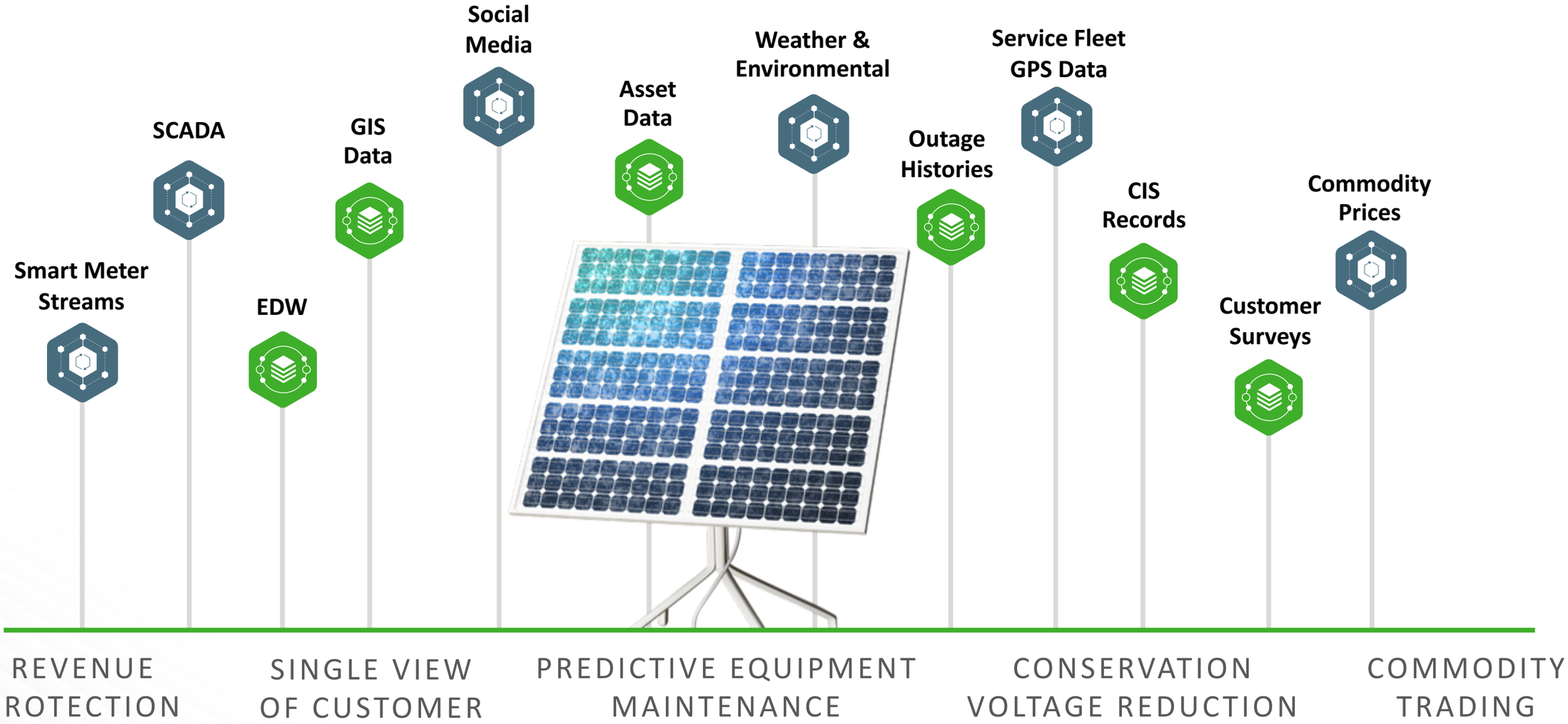
Actionable Intelligence Transforms Industrial, Transportation & Utilities



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What is Apache NiFi?

- Created to address the challenges of global enterprise dataflow
- Key features:
  - **Visual Command and Control**
  - **Data Lineage (Provenance)**
  - **Data Prioritization**
  - **Data Buffering/Back-Pressure**
  - **Control Latency vs. Throughput**
  - **Secure Control Plane / Data Plane**
  - **Scale Out Clustering**
  - **Extensibility**

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Apache NiFi

What is Apache NiFi used for?

- Reliable and secure transfer of data between systems
- Delivery of data from sources to analytic platforms
- Enrichment and preparation of data:
  - Conversion between formats
  - Extraction/Parsing
  - Routing decisions

What is Apache NiFi NOT used for?

- Distributed Computation
- Complex Event Processing
- Complex Rolling Window Operations

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NiFi Terminology

FlowFile

- Unit of data moving through the system
- Content + Attributes (key/value pairs)

Processor

- Performs the work, can access FlowFiles

Connection

- Links between processors
- Queues that can be dynamically prioritized

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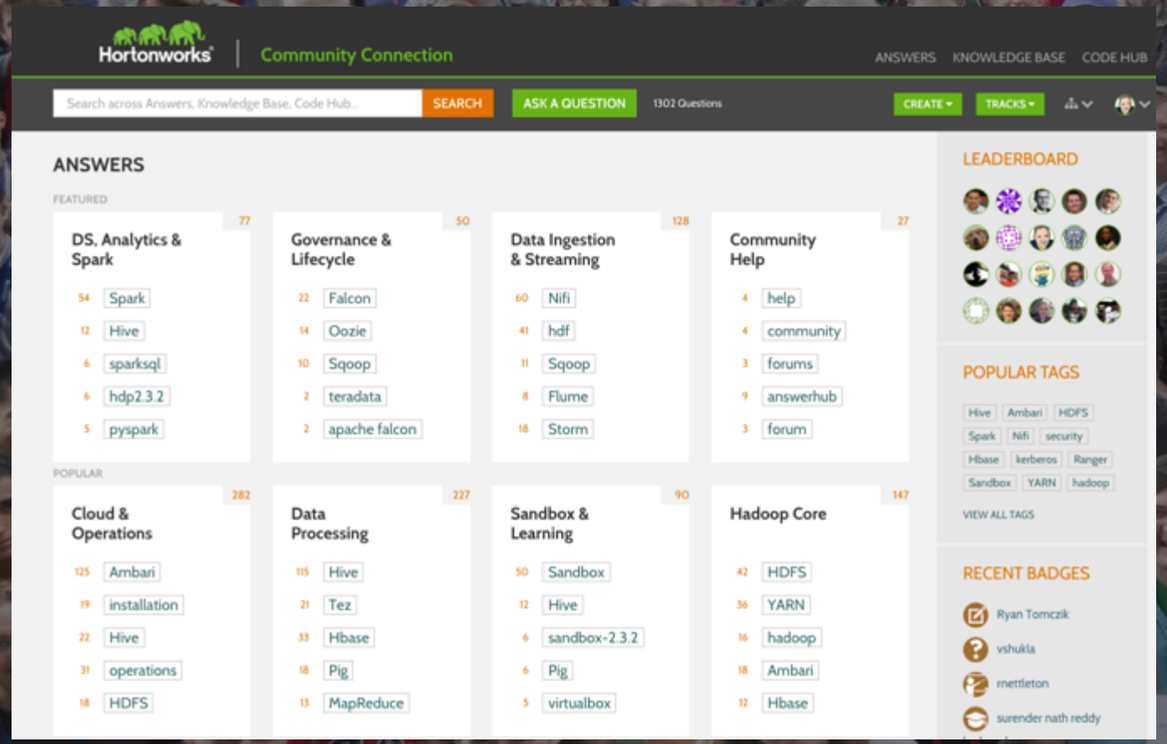
Hortonworks Community Connection



- Full Q&A Platform (like StackOverflow)
- Knowledge Base Articles
- Code Samples and Repositories

Read access for everyone, join to participate and be recognized

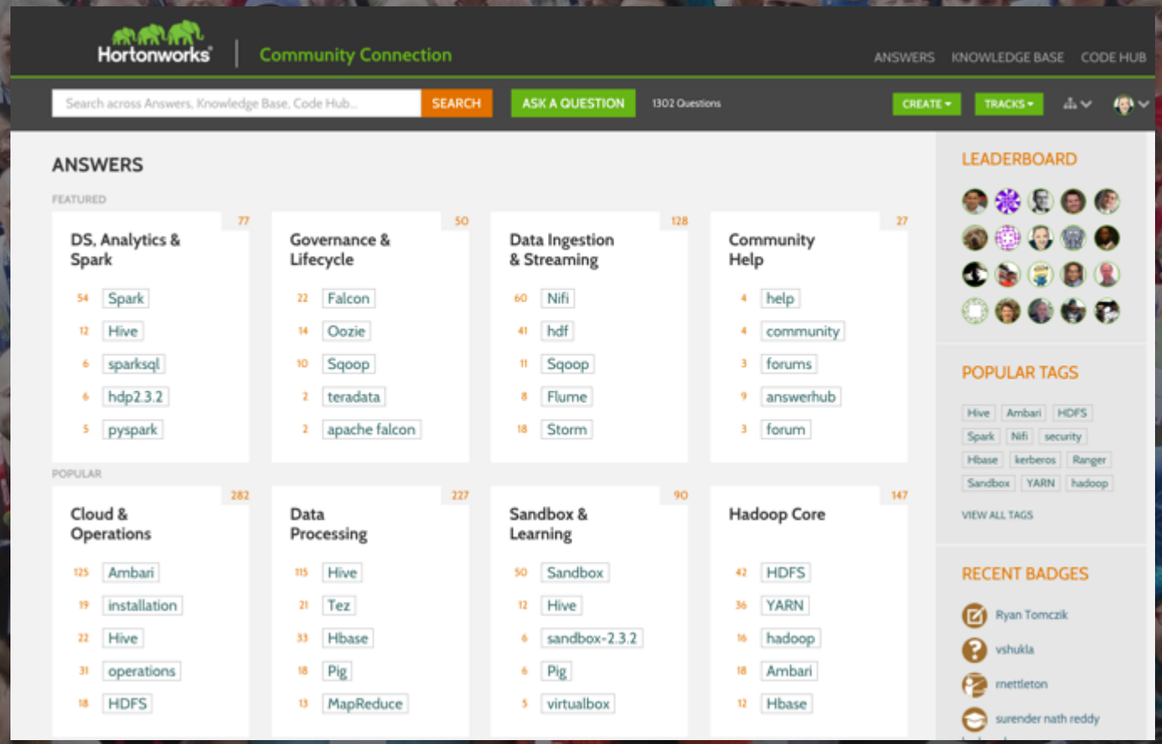
Community Engagement

4,000+
Registered Users

10,000+
Answers

15,000+
Technical Assets

One Website!



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