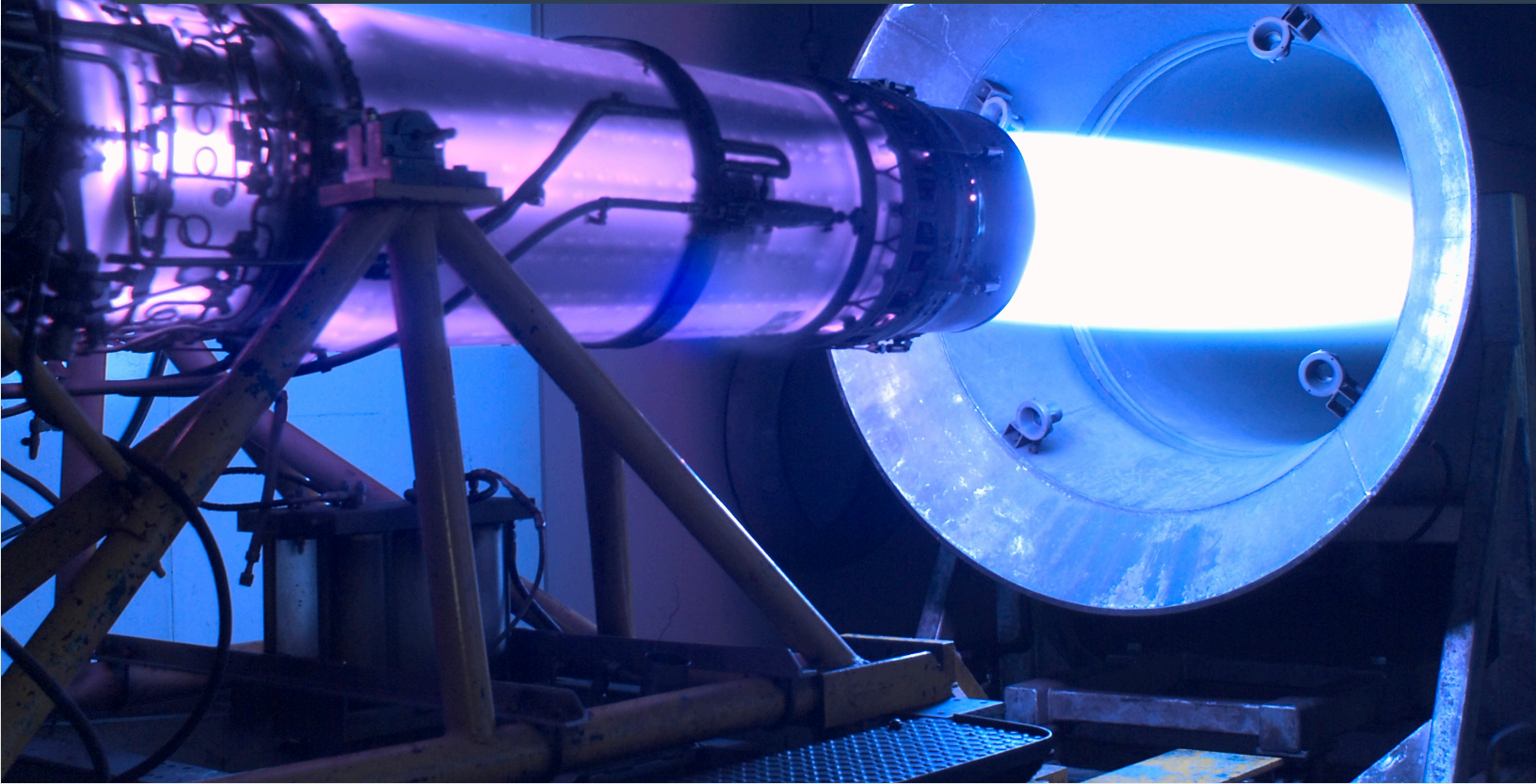# Test Cell Advancement

USE CASE:

Several different companies are working with Peaxy on a difficult problem: How do you manage and transfer test cell data when today's industrial sensors are generating incredibly large amounts of unstructured data? While previous test cells may have generated 60 data points per second, today 10,000 data points might be created in the same time frame.

Data chokepoints arise, often in the transfer path to the data lake. Limited by bandwidth, most companies have no way of getting 10,000 data points per second into the company's data lake, where data is staged for analytics work. While the business problems that need to be solved through advanced analytics might be different in each company — ranging from predictive maintenance, to model orchestration, to design optimization — the "edge computing" data bottleneck remains the same across most companies doing such work.
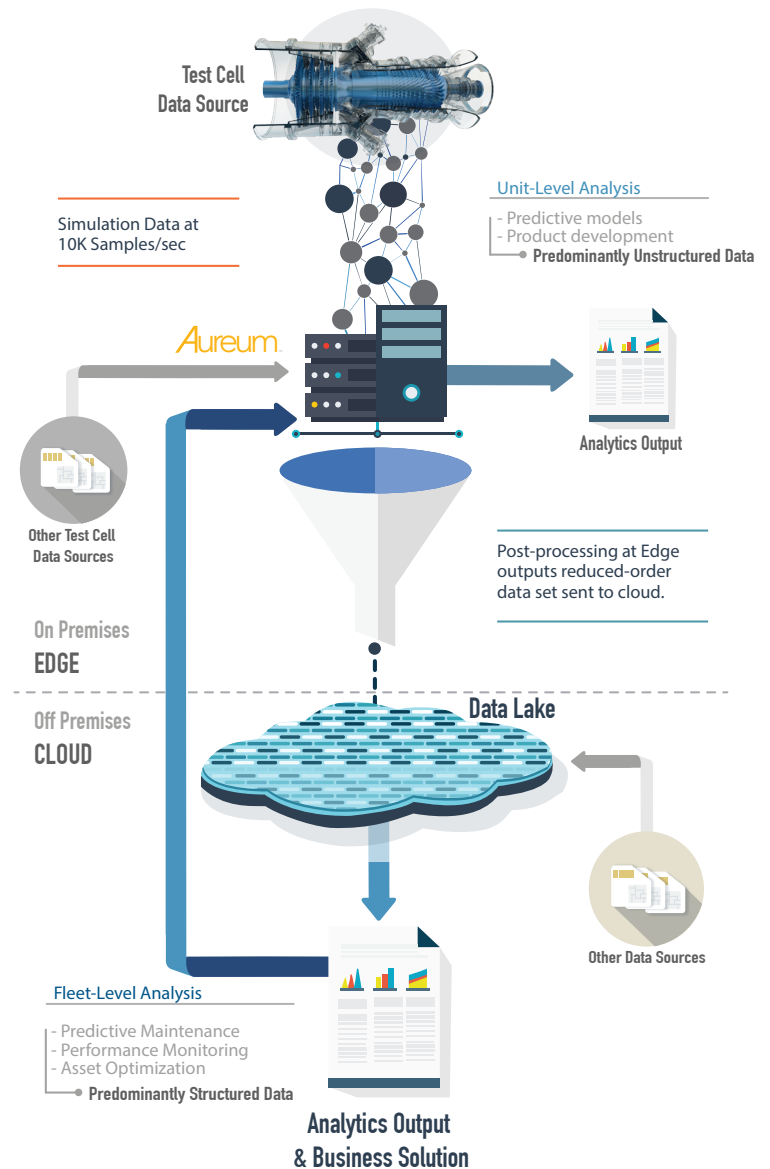

Aureum™

SOLUTION:

Peaxy works with every company to create a data access solution that performs key analytics on the Edge in order to reduce data volume for transfer to the data lake. Aureum and applications working within Aureum perform analytics on the Edge that create new, more useful data for the data lake.

Once the data reaches the data lake, it contains valuable metadata for seamless operation of Find functions. Test cell information is made available to engineering teams across disparate off-site locations. When a company is looking for a root cause for equipment failure or responding to a customer request, the time-to-solution is reduced from weeks or months to hours.

**Test Cell
Data Source**

Simulation Data at
10K Samples/sec

Unit-Level Analysis
- Predictive models
- Product development
  Predominantly Unstructured Data

Aureum

Analytics Output

**Other Test Cell
Data Sources**

Post-processing at Edge
outputs reduced-order
data set sent to cloud.

On Premises
EDGE

Off Premises
CLOUD

Data Lake

Other Data Sources

Fleet-Level Analysis
- Predictive Maintenance
- Performance Monitoring
- Asset Optimization
  Predominantly Structured Data

**Analytics Output
& Business Solution**

Aureum Benefits:

– Accommodates increases in the number of concurrently active test cells with its ability to scale linearly without limit.

– Enables use of existing high–fidelity data sets to lower total escalations and test reruns.

– Threads or links test cell data to other crown–jewel data sets such as geometry and simulations. This enables faster predictive analytics, better system modeling, faster design improvements and a foundation for equipment "birth certificates" and digital twins.

Aureum is a scalable data access platform that aggregates and manages data, helps users find useful data, and preserves and protects that data far into the future. It is used across industries and markets because the enterprise's most important strategic advantage is its ability to make data-driven business decisions. Many businesses are looking for ways to make the best use of their unstructured data, often contained in crown-jewel data sets spread across many physical locations.

PEAXY