

MAY 18, 2022

Real Time Fleet Analytics with Aveva Data Hub

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AVEVA

About IPD, IDS & Casne

Industrial Parts Depot, LLC

- IPD is a leading innovator of replacement heavy duty engine parts for diesel and natural gas equipment
- Based near Los Angeles, CA, IPD has a worldwide presence in every continent except Antarctica
- Privately-held, family-owned business since 1955



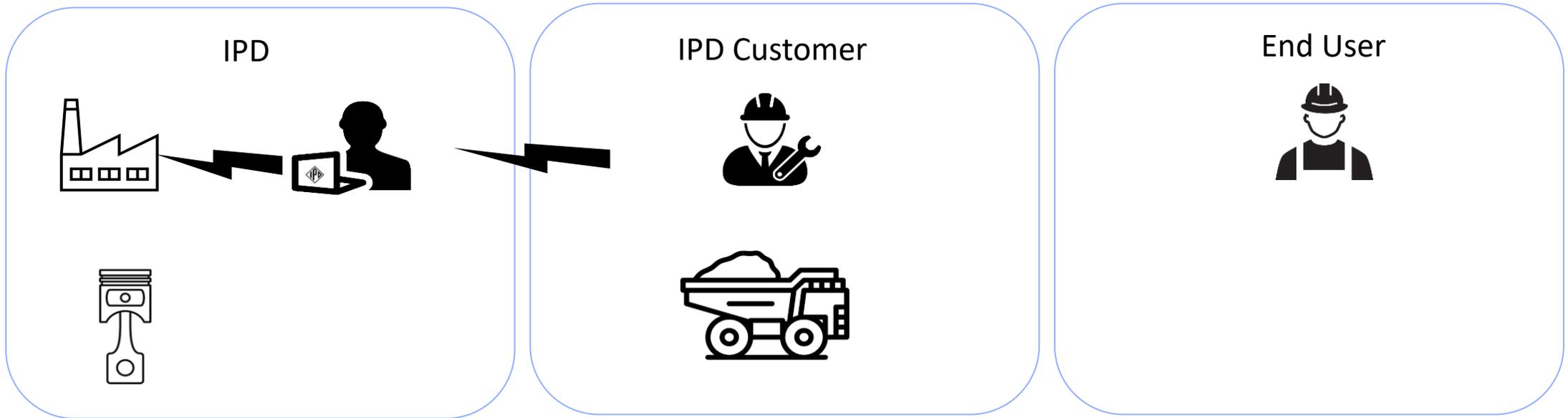
Industrial Digital Solutions, LLC

- IPD formed IDS in 2021 to simply & intelligently connect assets with owners, operators, managers, and service channels.



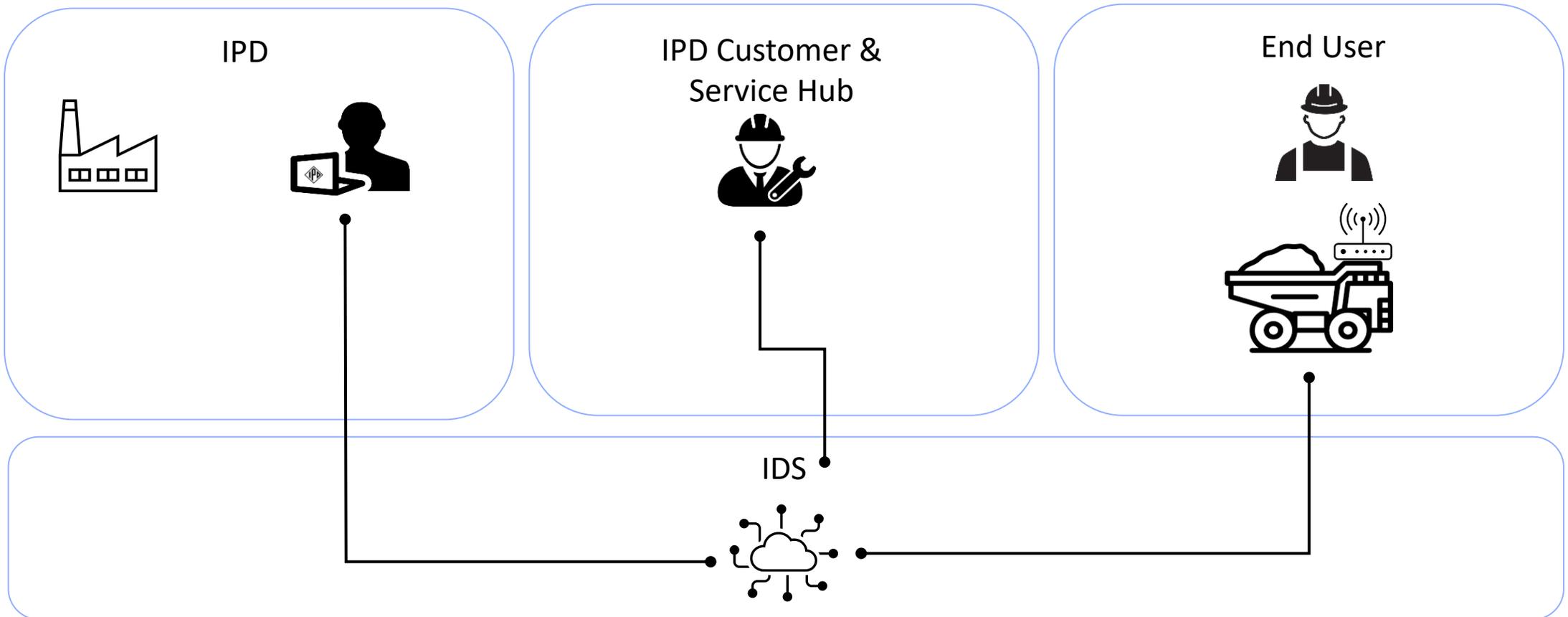
IPD Since 1955

Traditional parts manufacturing and distribution



IDS Brings In New Opportunities

Following our parts to the last mile



What Problem Are We Solving?

- Finding the “Goldilocks” solution for the small-mid sized fleet market

OEM Solutions

- Complex integrations
- ✗ Difficult to understand
- Focused on one-make fleets
- Optimized for large fleets



Current Aftermarket Solutions

- Generic fault codes
- ✗ No engine/machine/vehicle expertise
- On highway truck location tracking
- No service channel
- Raw data difficult to understand



IDS Solution

- Simple integration
- ✓ Integrated service channel
- All makes all models
- Utilize rebuilders and trusted partners

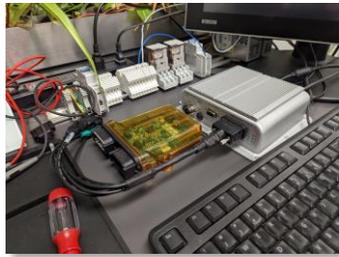


Business challenge addressed

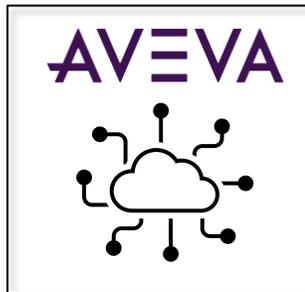
- **Large, underserved market – small to medium-size fleets**
 - Small to medium-sized truck fleets in USA represent 50% of total market
 - Off-highway CAT alone has >3.5M units in the field
 - IPD is uniquely positioned to access this fragmented market
- **Provides a solution previously only available to large fleets**
 - Existing affordable products deliver an incomplete solution
 - No “industry standard” exists
- **Leverages IPD to create new recurring revenue streams**
 - Not just existing but new customers (OE-agnostic)
- **How does IPD and IDS deliver this next tech product?**
 - IDS partners with Casne to deliver world class solution



System Architecture Overview (10,000 ft) **MACHINE** **MRX**



MRX-
Link



CLOUD
DATA



WEB
PORTAL



OPERATOR



OWNER/MAN
AGER



SERVICE
PROVIDER

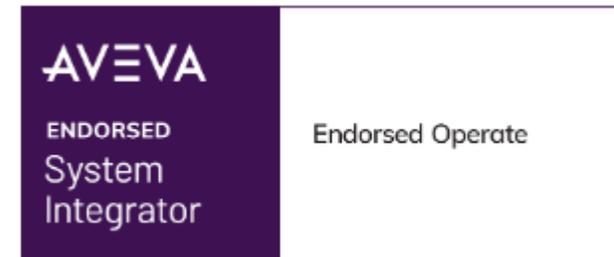
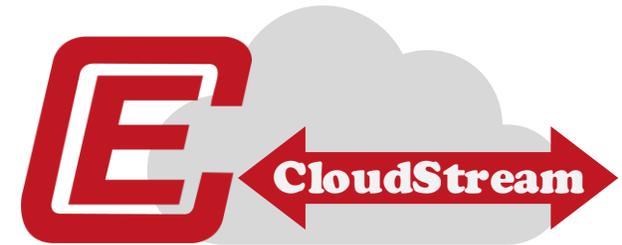
cdi
fault code
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j1708 lte
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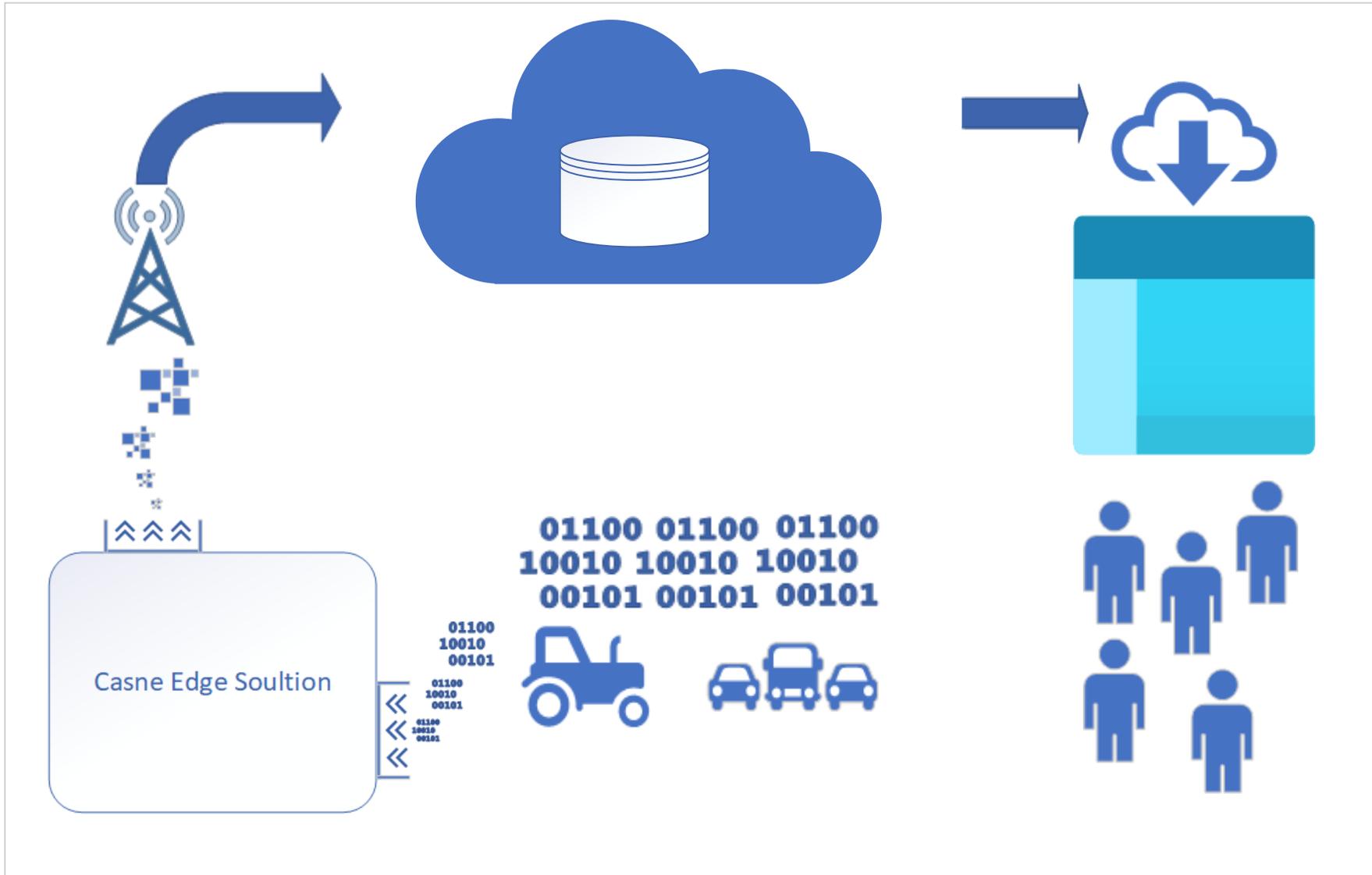


- Operating globally from Bellevue, WA USA. Established in 1979
- Full-service engineering, systems integration, and technology services.
- AVEVA Endorsed Systems Integrator (AVEVA PI systems) since 2006

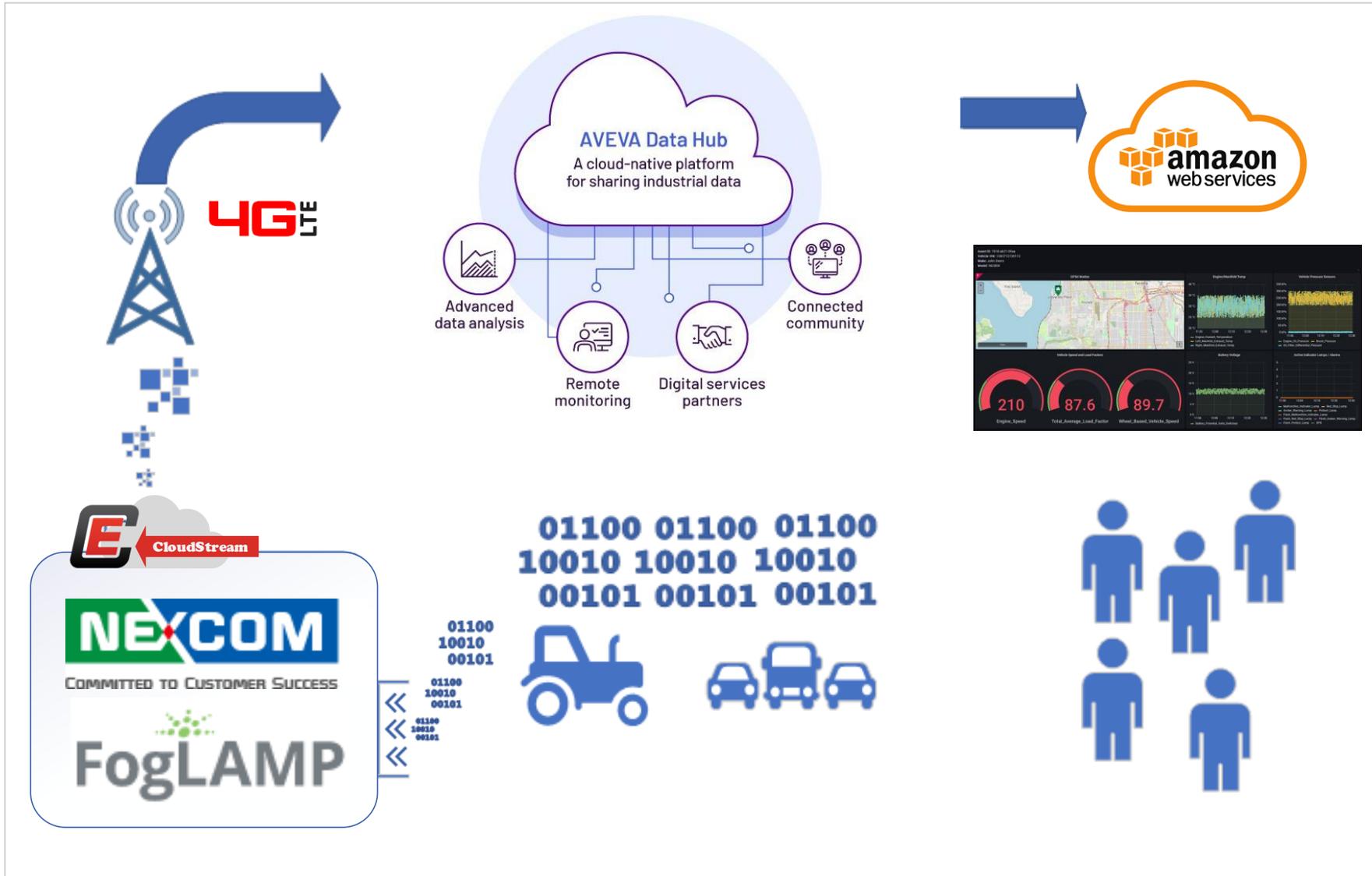
- Oil and Gas
- Power Generation
- Water/Wastewater
- Manufacturing
- Data Centers
- Critical Facilities
- Transportation



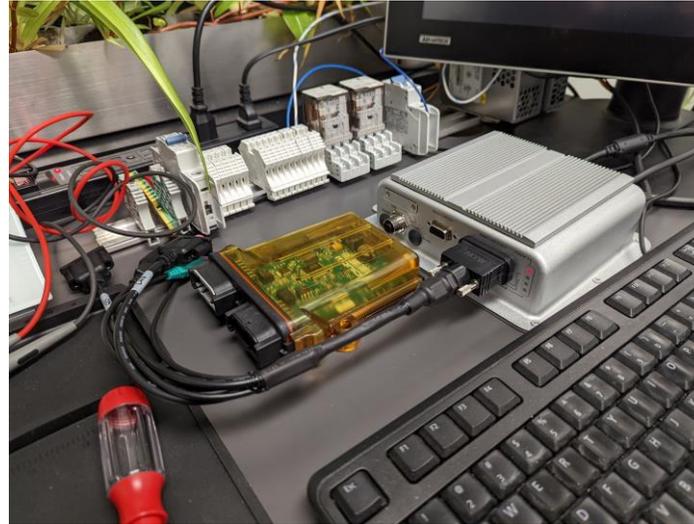
Concept Design



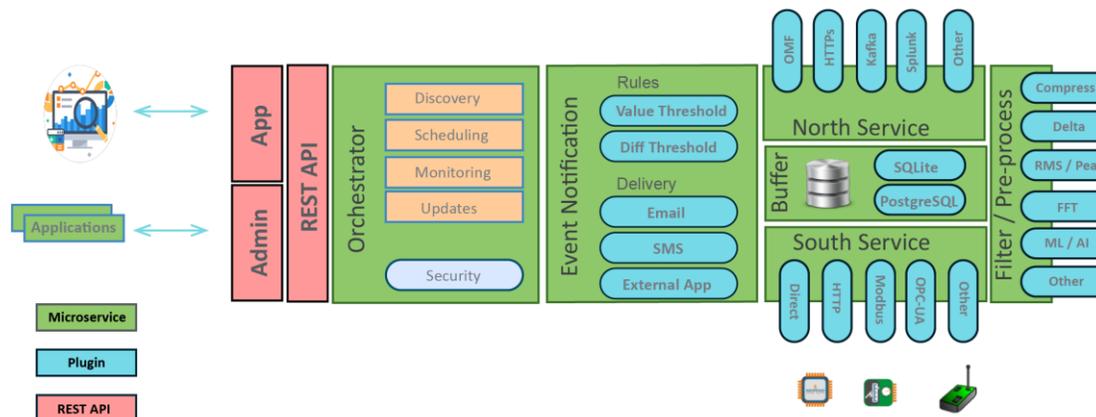
Physical Design



Putting it all together.....



FOGLAMP ARCHITECTURE



MachineRx Alpha Units

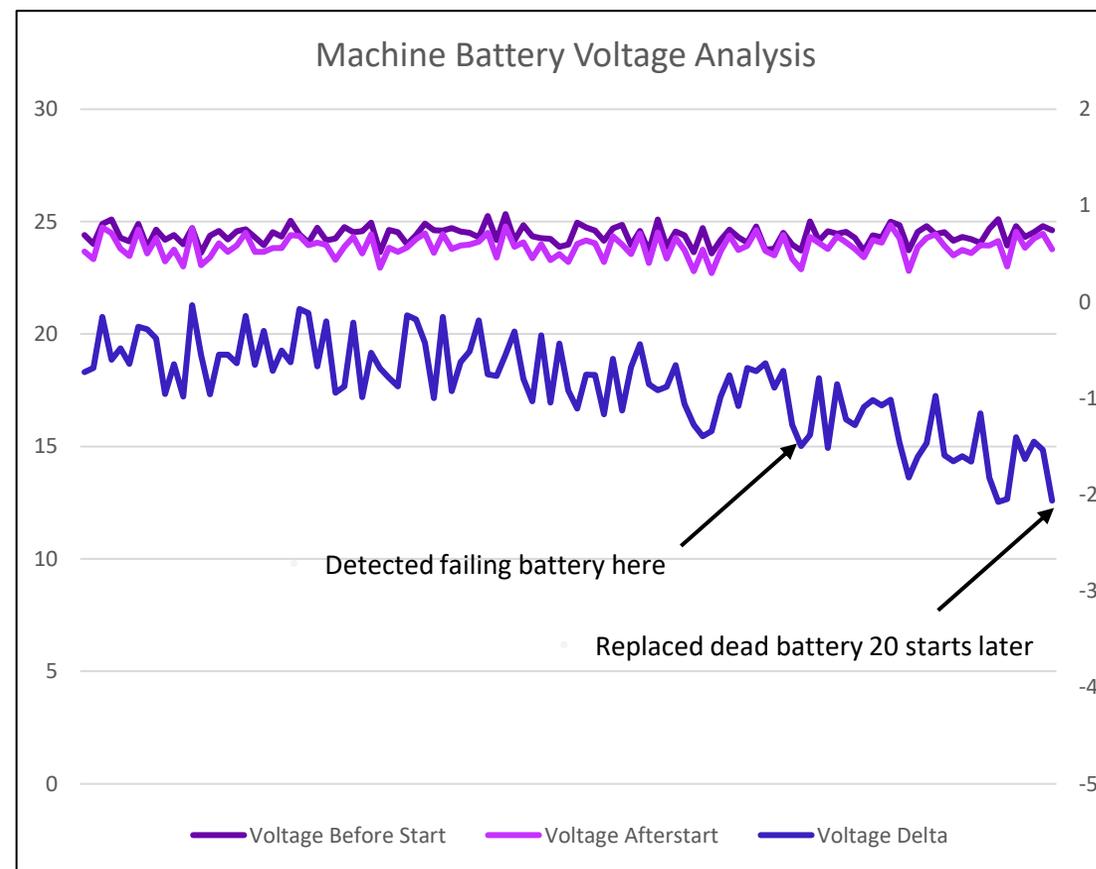
Customer Profile:

- Privately owned construction fleet
- Located in Southern California
- Fleet moves approx 100 mile range
- 98 units
- 55 on-highway trucks
- 43 off-highway machines
- Mixed fleet makes/models
- Primary concerns:
 - Fuel cost
 - Downtime
 - Productivity



Impact: Creating actions from data

- Putting data into the cloud is one thing
- Making useful conclusions is another
- Alpha units in the field since Jan 2022



Reduce Fuel Costs -- Increase Productivity -- Reduce Downtime

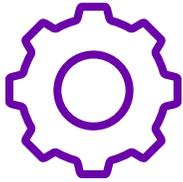
Potential Savings Impact

Reduced fuel costs

- 5% reduction in fuel used (reduced idle time, + fuel system optimization) equals \$33/day savings or **\$670/month per asset**
- Decreased downtime
 - Unplanned downtime equals a loss of \$5k per hour and 25% reduction in downtime equals savings of **\$335/month per asset**
- Increased productivity
 - 2.5% increase in productivity in additional work done equals additional **\$415/month per asset**



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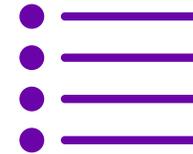
Challenge

- Providing state-of-the-art real-time monitoring and analytics capabilities for small to mid-sized fleets. Digital transformation of old school machinery.



Solution

- Deployed ruggedized Intel based edge solution to push data to the AVEVA Data Hub where it is centralized and sent to visualization platform for end user.



Benefits

- Increased productivity, reduced downtime, decrease theft, and reduced fuel costs for used assets in the transportation, equipment, construction, and mining markets.

Questions: 5 minutes



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