

18 MAY 2022

Managing EDS and delivering Data Pipeline as a Service to OCS

Enabling fast improvement iterations

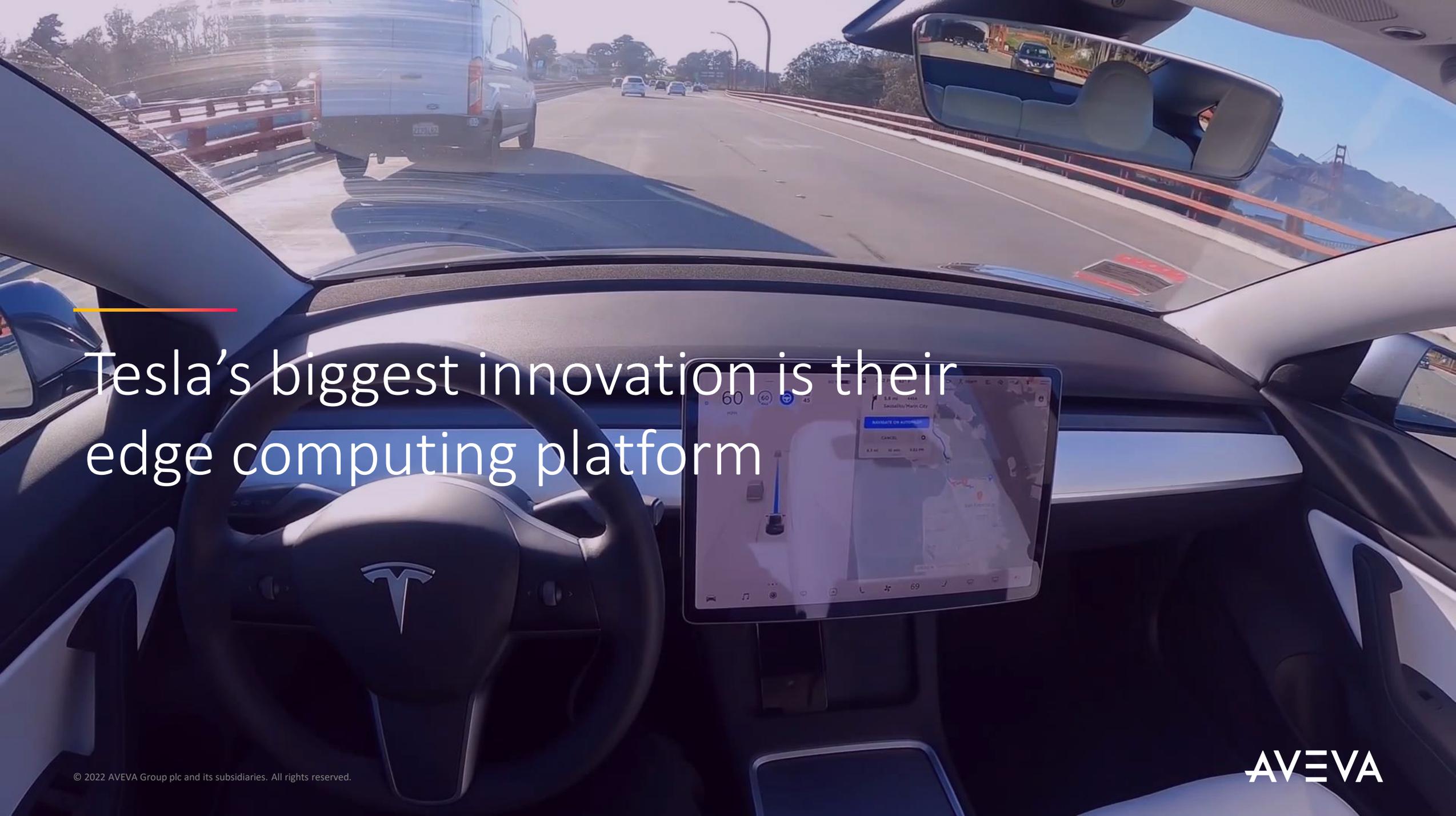
Martijn Handels & Joost Lasschuit

AVEVA

Enabling fast performance enhancing iterations for remote operations

By delivering advanced edge computing as a service





Tesla's biggest innovation is their edge computing platform

Combining three key components into a single platform

DATA



**Industrial data
acquisition**

APPS



**Edge application
management**

SECURITY



**Edge platform
security**

Data acquisition

Making EDS to OCS scalable

- **At the edge**

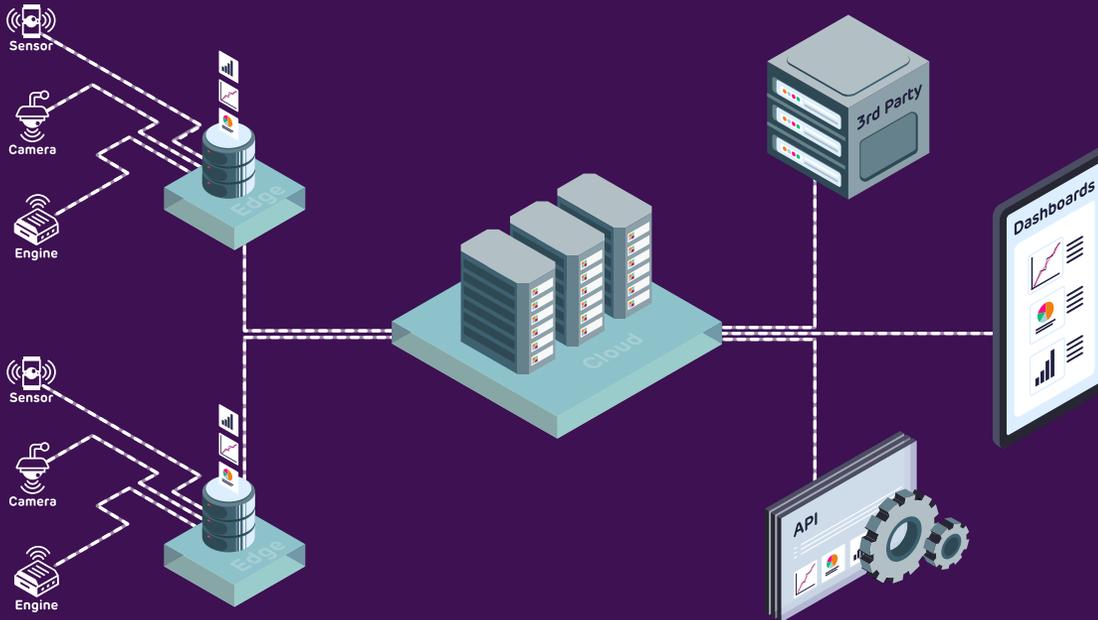
EDS provides the agility to interface with most common protocols and edge applications

- **In cloud**

OCS integrates, structures and stores all EDS data in a cloud repository

- **Visualization**

Out-of-the-box visualization options bring the data to life



Application management

User-friendly app management with Polaris

- **Application management**
With our edge management platform Polaris we enrich edge data with dedicated edge applications
- **App Center**
Manage edge applications in the Polaris App Center via asset group-specific templates
- **Focus on digital IP**
We are the 'plumbers' that manage the data pipeline and allow fleet operators to focus on their distinguishing edge applications and other digital IP





Cyber security

Encryption of data, apps and communication

- **Public Key Infrastructure (PKI)**
Polaris comes with a PKI to encrypt data offloading & application management
- **Platform health monitoring**
Polaris continuously monitors platform health and security
- **CI/CD pipelines**
Dedicated Polaris recipes to support and assure continuous integration and delivery of feature updates

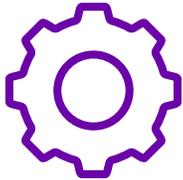
Let's see how it works

The screenshot displays the 'Polaris Car' application interface. At the top, the breadcrumb 'Nodes / Polaris Car' is visible. The main header shows the application icon, the name 'Polaris Car', and the ID 'Id: RaspberryPi46'. Below the header, there are navigation tabs: 'Overview', 'Applications', 'Node twin', 'Timeline', and 'Data'. The 'Applications' tab is active, showing a list of services:

- Polaris Car Manager**: Running | Version: 1.0.0
- Polaris Edge UI**: Running | Version: 1.0.0
- Mosquitto MQTT Broker**: Running | Version: 2.0.12
- Polaris Car Controller**: Running | Version: 0.1.1
- Polaris Car Webcam**: Running | Version: 1.0.0
- Polaris Data Collector**: Running | Version: 2.0.0
- Polaris Car Data Acquisition**: Running | Version: 0.1.1

At the bottom of the interface, there is a green 'Deploy' button with a lightning bolt icon and the AVEVA logo.

Accelerating performance improvement iterations



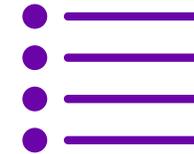
Challenge

- Providing Data pipelines as a Service to widespread types of remote asset operators.
- Allowing these operators to dedicate their internal resources to developing differentiating edge analytics applications



Solution

- Deployed managed EDS-to-OCS data pipelines via secured edge management platform
- Included Public Key Infrastructure for encryption of data, containerized apps and edge nodes



Benefits

- Comprehensive edge data & app management infrastructure available from day 1.
- Significant increased iteration rate & capabilities for R&D and Performance Enhancement projects

Helin makes advanced edge computing simple



**Standardized edge
infrastructures**

**Advanced analytics
applications**

**Dedicated
global support**



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“The Edge Will Eat The Cloud.”

Thomas J. Bittman, Distinguished VP Analyst Gartner

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