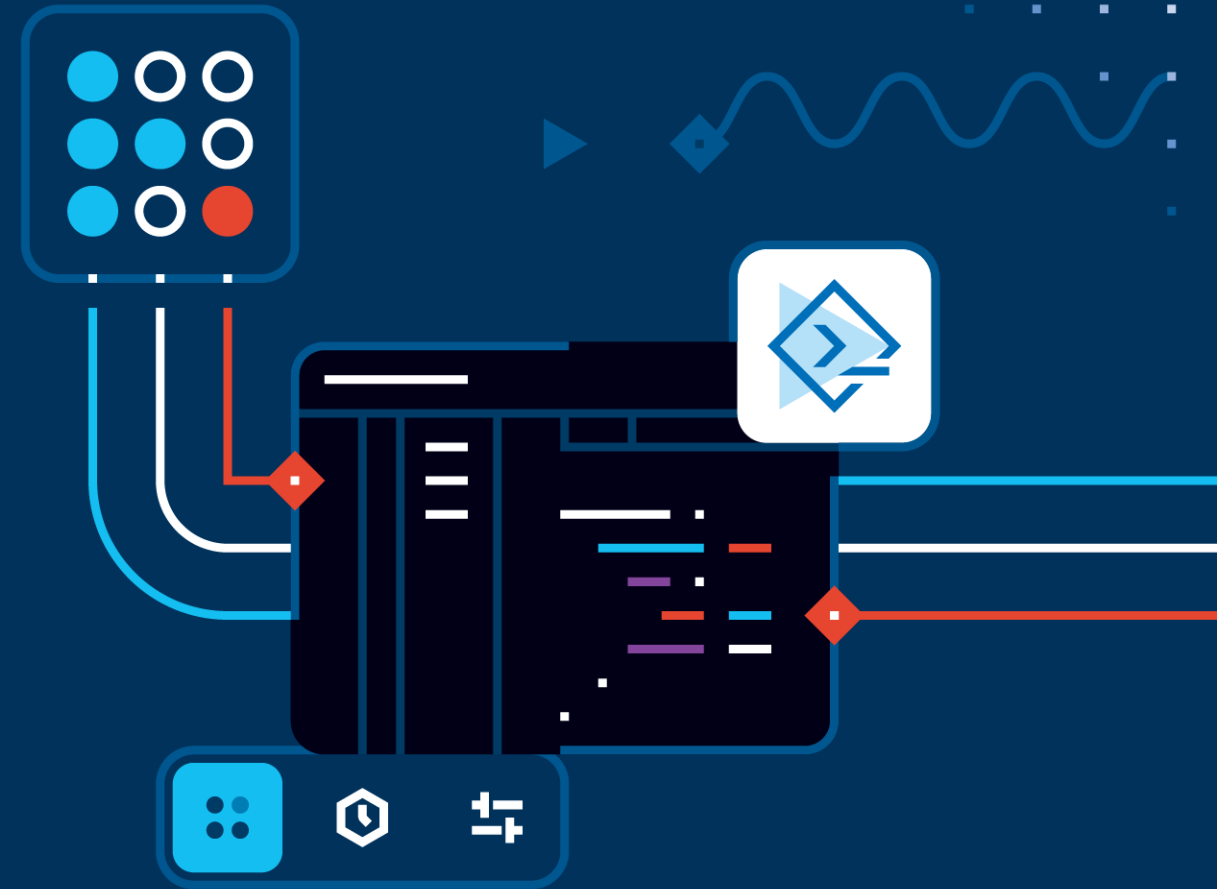




EMBEDDED WORLD NORTH AMERICA 2024

SECURING ENERGY ENDPOINTS WITH DATA PROVENANCE

AENGUS GOREY



Trusting Data Along Its Lifecycle

Data Provenance



Trust in data without verification is a game of risk management



Data poisoning and tampering attacks are increasing



Regulations requiring data provenance are accelerating



Data forensics is challenging over complex data life cycles and infrastructure

DATA AS AN ASSET

Colonial Pipeline Ransomware Attack: Attackers tampered with the company's syslog data to cover their tracks and evade detection.

Data Poisoning Attack on U.S. Electrical Grid: January 2022—DARPA executed a data poisoning attack on the U.S. power grid. It hijacked a smart sensor and manipulated the data, which led to a blackout in New York.

University Hospital Brno Cyberattack: Attackers were able to access and tamper with the hospital's data, including patient records and medical orders.

DATA PROVENANCE ACCELERATING SECURITY COMPLIANCE

NIST: National Cybersecurity Center of Excellence

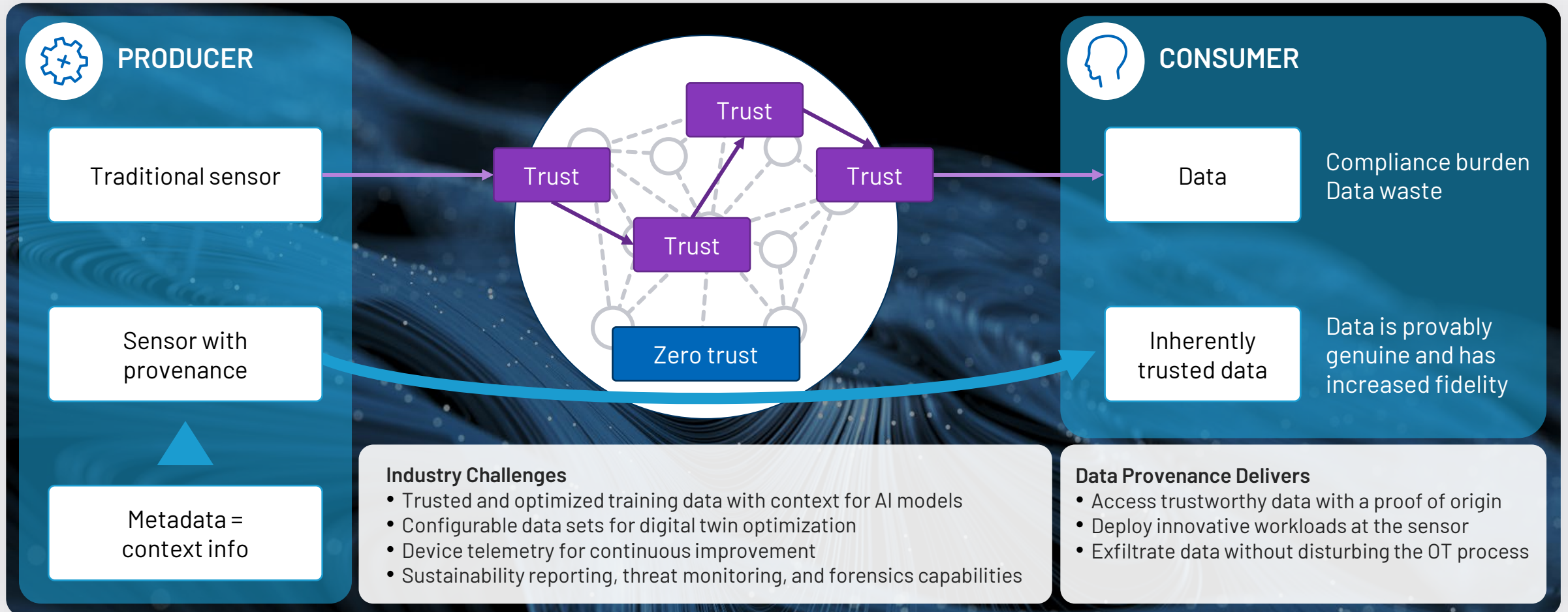
NIS2: Network and Information Security

DORA: Digital Operational Resilience Act

EU CRA: Cyber Resiliency Act

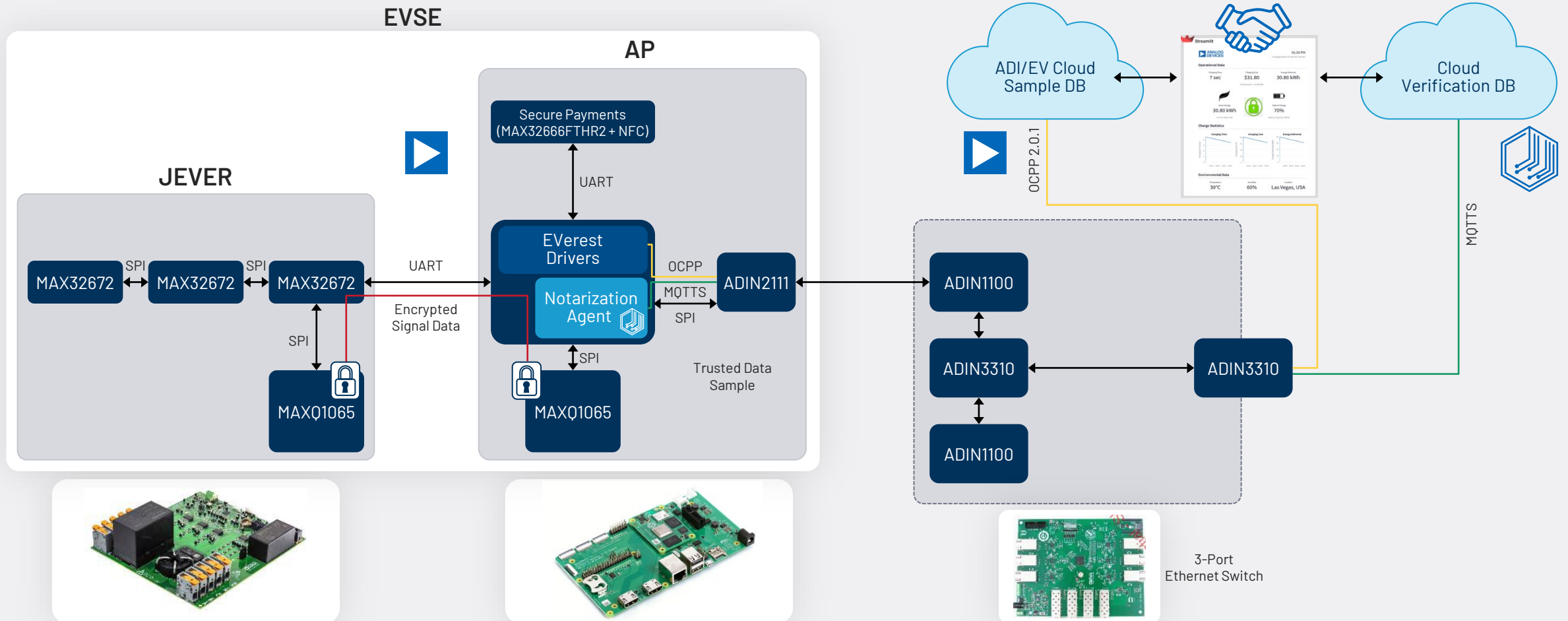
Building Trust for a Zero Trust Environment

Immutable Trust in Data



Energy Solution Edge Architecture

Establishing Provenance Where Data Is Born



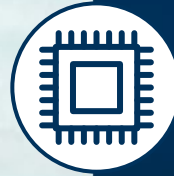


Industry-Leading EV Charging Infrastructure Solutions



METROLOGY

Certifiable, Scalable, Highest Accuracy



DIGITAL PROCESSING

Low Power, Flexible, Secure



POWER CONVERSION

Robust, High Power, Leading Performance



DATA PROVENANCE

Immutable Data Trust Layer



SECURE PAYMENTS

Tamper Detection, Contactless, Certified

What Data Provenance Unlocks

Data Provenance Use Cases



AI/ML DEVELOPMENT

Trusted AI Training Data:
Verifiable data inputs and traceability

Higher Quality Data for AI Models:
Context in data with lineage

Defensible Data Lineage:
Forensic capabilities for AI applications



UTILITY AND INFRASTRUCTURE PROVIDERS

Energy Mix:
Access to trusted grid profile data

Forecast Data:
Improved data access to feed demand management



OEM PROVIDERS

Predictive Maintenance:
Verifiable metrology data tied to asset

Charger Integrity:
Detect and alert unauthorized use

Security Regulation Compliance:
Measuring Instruments Directive (EU MID)



ENERGY CONSUMERS

ESG Reporting and Compliance:
Ensures data integrity and transparency

Fleet Management:
Enabling stakeholders to verify and manage resource consumption



AHEAD OF WHAT'S POSSIBLE

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