MACHINE DATA IN ACTION

Datumize

⅋ Datumize

WHAT IS DATUMIZE

> **Deep tech** founded in 2014 in Barcelona. We are a software & hardware vendor in the **data and edge computing** space aimed at unlocking data and legacy equipment for digital transformation.

> **Datumize uncovers sophisticated data and proprietary/closed protocols**, using our unique middleware, embedded in our low-cost hardware device. Captured data are computed on edge and ingested into any destination, preserving full privacy and ownership. Machines are remotely controlled.

> **We have a novel approach to data capture** (passive network sniffing, access to legacy/proprietary protocols) and **edge computing** (edge hardware, 3rd party software).

> **Datumize modernizes existing physical assets**, allowing *real-time monitoring and remote control*. We also ignite *pay-as-you-go and other advanced business models*, based on modernized digital assets. We have the credibility of world-class enterprise clients, leaders in their industry.

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VALUE PROPOSITION

01 ACCESS TO PROPRIETARY & LEGACY MACHINES

> We overcome the captivity burdens imposed by vendors by opening closed/proprietary data protocols.

> Large set of existing connectors, for both industrial and internet protocols, combined with unique methodology.

> **Allows Datumize to read/write data and provide remote control over legacy machinery that deserves an extended lifetime.**

02 UNIQUE DATA SOFTWARE

> Massive R+D investment into Datumize Data Collector (DDC).

> Multiple protocol connectors, network sniffing, deep packet inspection, edge computing and enterprise features.

> **We have the credibility of world-class clients that now enjoy unlimited access to existing assets and data.**
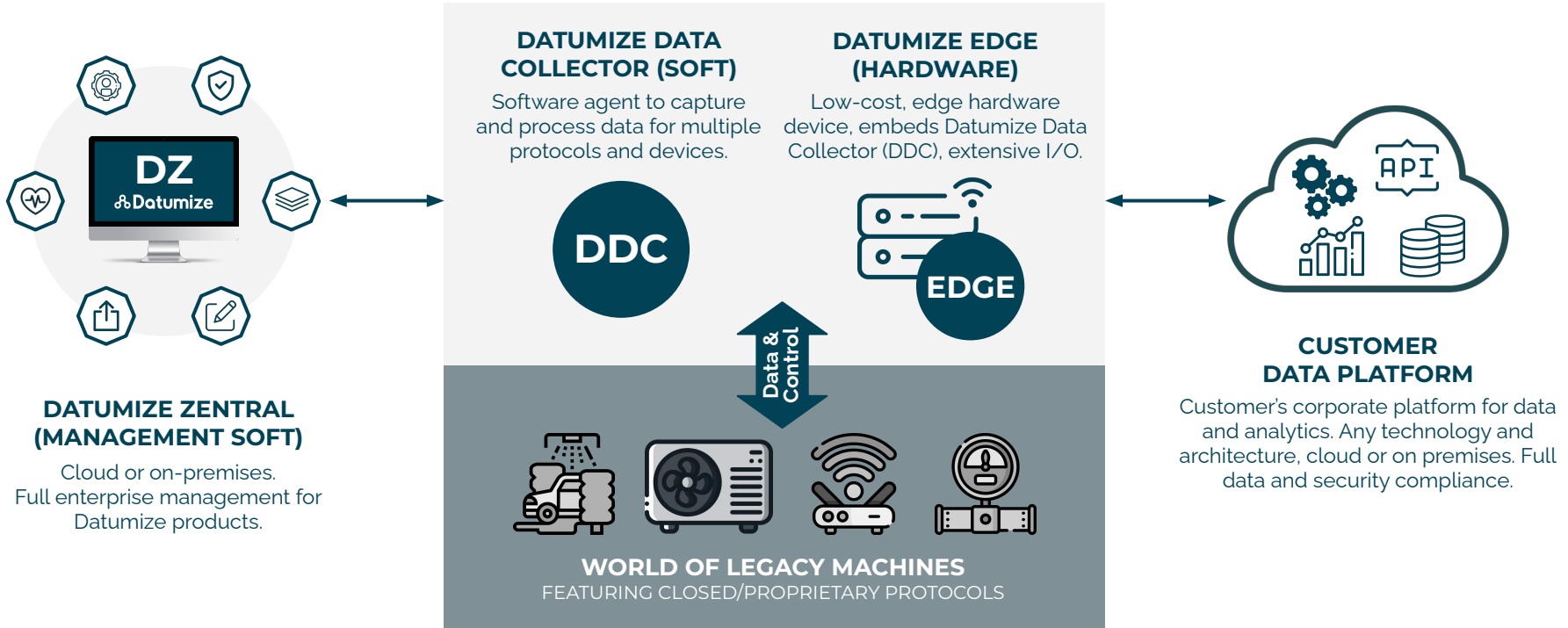
03 LOW-COST EDGE HARDWARE DEVICE

> Untapped data opportunities often require a small computer near to the asset.

> Our edge device is extensible to support multiple input/output methods and technologies, being low-cost to support large, mission-critical rollouts.

> **An edge device brings together the access to proprietary, disconnected, legacy machinery with our data processing and control software.**
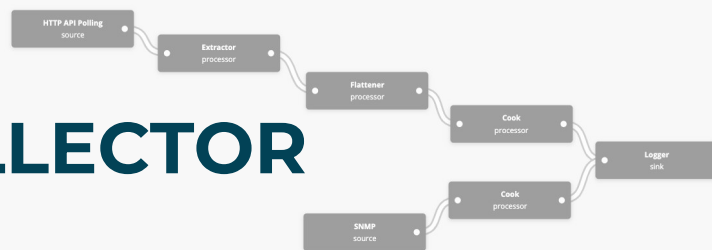
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DATUMIZE PRODUCT SUITE

PRODUCT OVERVIEW

DATUMIZE DATA COLLECTOR (SOFT)

Software agent to capture and process data for multiple protocols and devices.

DDC

DATUMIZE EDGE (HARDWARE)

Low-cost, edge hardware device, embeds Datumize Data Collector (DDC), extensive I/O.

EDGE

Data & Control

WORLD OF LEGACY MACHINES
FEATURING CLOSED/PROPRIETARY PROTOCOLS

DZ
Datumize

DATUMIZE ZENTRAL (MANAGEMENT SOFT)

Cloud or on-premises. Full enterprise management for Datumize products.

API

CUSTOMER DATA PLATFORM

Customer's corporate platform for data and analytics. Any technology and architecture, cloud or on premises. Full data and security compliance.

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DATUMIZE DATA COLLECTOR

LIGHTWEIGHT & REAL-TIME

Seamlessly scales from low-cost devices (eg Raspberry Pi) to high-end multi-core servers. Near real-time data capture, compute and transformation.

MULTI-PLATFORM

DDC runs on Java and supports common operating systems: Unix, Linux, Windows, MacOs. Likewise for companion software (eg. provisioning agent).

EDGE COMPUTING

Pipeline executes any code (eg. JavaScript, Python) and leverages external software (eg. AI models) on the edge. Supports hybrid (cloud & on-premises) topologies.

NON-INTRUSIVE DATA CAPTURE

Passive data capture using network sniffing and deep packet inspection. Smart active (polling) data capture. Multiple protocols, including legacy and custom/API.

ALWAYS YOUR DATA STORAGE PLATFORM

Pipelines yield curated and cleansed data, to be stored in any platform or technology of customer's choice, cloud or on-premises.

3rd PARTY SOFTWARE BUNDLING

Manages versioned packages (bundles) of 3rd party software (eg files, libraries, executables or containers), including remote control and monitoring metrics.

ENTERPRISE & SECURE

GDPR compliance. Encryption. Versioning. Different deployment and security architectures to comply with strict enterprise standards.

EASY TO INSTALL AND OPERATE

Cloud and modern web user interface and API: building, configuration, testing, deployment, endpoint management and monitoring.

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DATUMIZE EDGE

RUGGEDIZED RASPBERRY PI

A versatile device powered by Raspberry Pi and packaged in a ruggedized/basic box, to support advanced data capture and processing, monitoring and control.

LOW COST

Unbeatable cost for modernizing legacy machines. Ultra low-cost version powered by Raspberry Pi Zero, suitable for Wi-Fi mesh nodes or low computing needs.

UNINTERRUPTED POWER SUPPLY

Operating system, processes and data are secured with a built-in uninterrupted power supply (UPS) that guarantees a clean shutdown in case of a power failure.

EMBEDDED DDC

Benefits from an embedded Datumize Data Collector (DDC) bringing data integration and edge computing capabilities. You can manage Datumize Edge as an standard DDC.

MASSIVE I/O CONNECTIVITY

Dual Ethernet ports, dual RS-485, Wi-Fi, Bluetooth, 4G/LTE, CAN bus and other connectors. Manufactured a-la-carte for large volumes. Versatile digital & analog I/O.

ENTERPRISE MGMT & SECURITY

Secured communications. Coprocessor includes unique device identification and encryption. Enterprise management, provisioning, updates and troubleshooting.

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DATUMIZE ZENTRAL

MANAGEMENT
Manage tenants, users, roles, permissions, projects, and any other Datumize asset within one unique platform. Full functionality available through REST API. Available in cloud or on-premises installation.

MONITORING
Enjoy detailed metrics coming from Datumize and bundled products. Out of the box dashboards. Configure technical and business alerts.

DEPLOYMENTS
Full control on Datumize Edge device, firmware and OS. Provision and update Datumize software, including versioning, configurations and 3rd party products,

SECURITY
All API services secured through a single entry point. Built-in database authentication, and Google SSO. Fine-grained authorization at method and role/user level.

EDGE COMPUTING / BUNDLES
Create software packages (bundles) containing any type of files/applications, aimed at automatic and versioned deployment. Supports executables and containers, eg AI models to run on edge.

WORKBENCH
Build, and test your data pipelines using an intuitive visual editor, featuring component drag & drop, automatic field validation, debugging breakpoints, data stubs and versioning.

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DATUMIZE USE CASES

01 MACHINE MONITORING

> Legacy machinery, often disconnected, with limited access due to closed & proprietary protocols.

> Vendor options for advanced machine monitoring include a costly upgrade or full replacement. Heterogeneous machinery increases cost and complexity of a solution.

> **Datumize overcomes protocol limitations and unlocks key machine data to allow advanced metric monitoring**

02 SMART MAINTENANCE

> Main expenditures for machine maintenance come from staff hourly rates and mileage for field services.

> Smart maintenance starts by getting error messages and provide your field service with the right advice before onsite. Advanced maintenance might even consider predictions/ML.

> **Datumize enables smart maintenance actions based on data, and sets the foundation for predictive maintenance**

03 ASSET AS A SERVICE

> Disconnected assets, such as expensive or mission-critical machines, are usually managed financially through capex.

> Modern business models are opex based (pay as you go). When data is provided, business owners can re-think the acquisition and usage models for their critical assets.

> **Datumize enables advanced business models, unfeasible unless machine usage/maintenance data and control (eg. on/off) are available**

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PEOPLE & ASSET MONITORING

GRUPO PIÑERO

Grupo Piñero is a prestigious Spanish group founded in 1977. As a 100% family run business that has become a reference in the industry on a global scale, their raison d'être is to create exciting experiences across the entire travel value chain through their hotel, residential and golf division, our tour operator and incoming service provider, and other at-destination services that complement the offer.

USE CASES

MACHINE MONITORING

SMART MAINTENANCE

ASSET AS A SERVICE

PROJECT SCOPE

6
COUNTRIES

27
HOTELS

+15k
WI-FI ACCESS POINTS

+500M
WI-FI SIGNALS DAY

KEY RESULTS

> **Wi-Fi monitoring seamless solution**
  No need to replace current Wi-Fi infrastructure, multi-vendor support. Multiple data sources supported, both technical and business metrics.

> **Understand guest, employee and asset behavior**
  - Guests' facilities usage and motion path analysis (hotel heatmap and routes)
  - Vehicles (eg. golf cart) usage analysis and positioning (to ensure charging)
  - Ensure Wi-Fi roaming quality in-premises and open air (eg. golf field)

> **Fixed and mobile probes using IoT hardware devices**
  Monitor Wi-Fi metrics in fixed (eg. restaurant) and mobile (eg. carts) locations.

> **Improve key user experience (UX) touchpoints**
  Check-in/check-out process optimization analysis and Wi-Fi bandwidths.

Mateo Ramón Sastre
Chief Information Officer
Grupo Piñero

" I wish we had Datumize years ago when we started to figure out how to understand our guests' experience. We always missed a lot of information. Nowadays, Wi-Fi experience is one of the key quality indicators for our hotels; Datumize retrieves the right data as-a-service and we react faster.

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SUCCESS CASE - BAHIA PRINCIPE
HOTELS & RESORTS

PEOPLE & ASSET MONITORING

TECHNICAL FUNCTIONALITIES

> **Fast time to market**

Easy and quick remote installation. No need for new hardware, wiring or Wi-Fi upgrades.

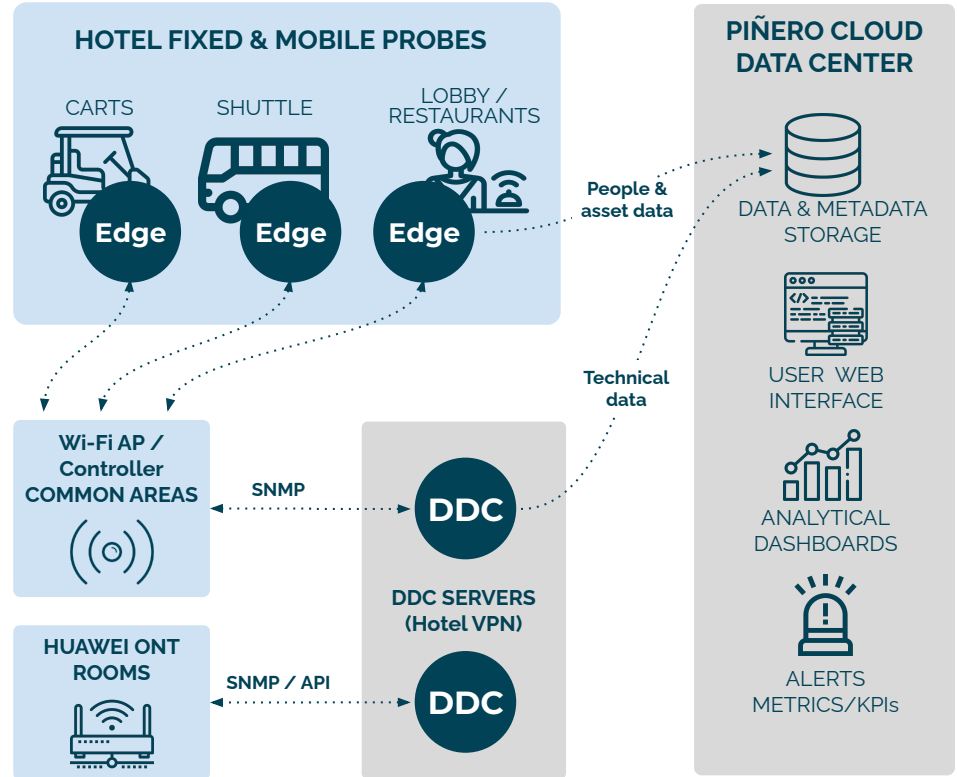> **Support for multiple data sources and vendors**

Access data sources (SNMP, API, local databases and files) as-is without modifications. Support for multiple Wi-Fi vendors and asset (eg. golf cart) interfacing.

> **People and Asset advanced data**

Translate very technical data (Wi-Fi noise in dB, MAC) into relevant business data (people/devices counting per area, position tracking for carts) and technical data (AP saturation).

> **Flexible deployment models**

Data capture takes place from cloud, on-premise or hybrid, depending on Wi-Fi topology. Datumize Edge device installed in vehicles (eg. golf cart) and fixed locations (eg. lobby). Efficient data transmission to cloud data center.

HOTEL FIXED & MOBILE PROBES

CARTS | SHUTTLE | LOBBY / RESTAURANTS

Edge | **Edge** | **Edge**

Wi-Fi AP / Controller COMMON AREAS

HUAWEI ONT ROOMS

SNMP

SNMP / API

DDC SERVERS (Hotel VPN)

DDC

DDC

People & asset data

Technical data

PIÑERO CLOUD DATA CENTER

DATA & METADATA STORAGE

USER WEB INTERFACE

ANALYTICAL DASHBOARDS

ALERTS METRICS/KPIs

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MULTI-VENDOR HVAC AS A SERVICE

EUROFRED

Founded in 1966, Eurofred is a noted leader in the distribution of air conditioning, industrial heating, commercial refrigeration & catering equipment, spare parts and service, operating as Fujitsu's sole distributor in Spain and other countries. Its vision is to maintain leadership via profitable and sustainable services & products.

USE CASES

MACHINE MONITORING

SMART MAINTENANCE

ASSET AS A SERVICE

PROJECT SCOPE

+100 LOCATIONS

3 HVAC VENDORS

KEY RESULTS

> **Advanced data capture and control of multi-vendor HVAC machinery**

Introduced a transparent technology, based on Datumize Edge device and Datumize Data Collector, that allows automatic HVAC machinery data capture and machine remote control, for multiple vendors and protocols.

> **Ingestion into a modern Eurofred's cloud platform**

Data ingested into a cloud platform that allows for sophisticated analytics and insights, available to Eurofred business & technical teams, and also channel actors such as installers, real estate owners and other distributors.

> **New Digital Services offering (eg. HVAC Subscription)**

Creation of new, innovative services in the HVAC industry, such as 24x7 smart monitoring, remote control, or sustainability compliance. The most promising service being HVAC subscription, moving capex to opex for owners, based on the ability to have remote control and billing on real usage.

> Thanks to Datumize we now offer a new data-driven cloud platform to our clients. The 24x7 monitoring allows our technical team to save money while deliver better service, and pay-as-you-go represents a drift in the HVAC industry, compared to traditional asset management model.

Xavier Manzanera

Chief Data Officer

Datumize

EUROFRED (SPAIN)

HVAC SMART MAINTENANCE & PAY-AS-YOU-GO

TECHNICAL FUNCTIONALITIES

> **Disruptive solution in HVAC industry**

Current market solutions provide very limited connectivity with HVAC machinery, mostly limited to user data (eg. room temp) vs. advanced machine data (eg. pump pressure).
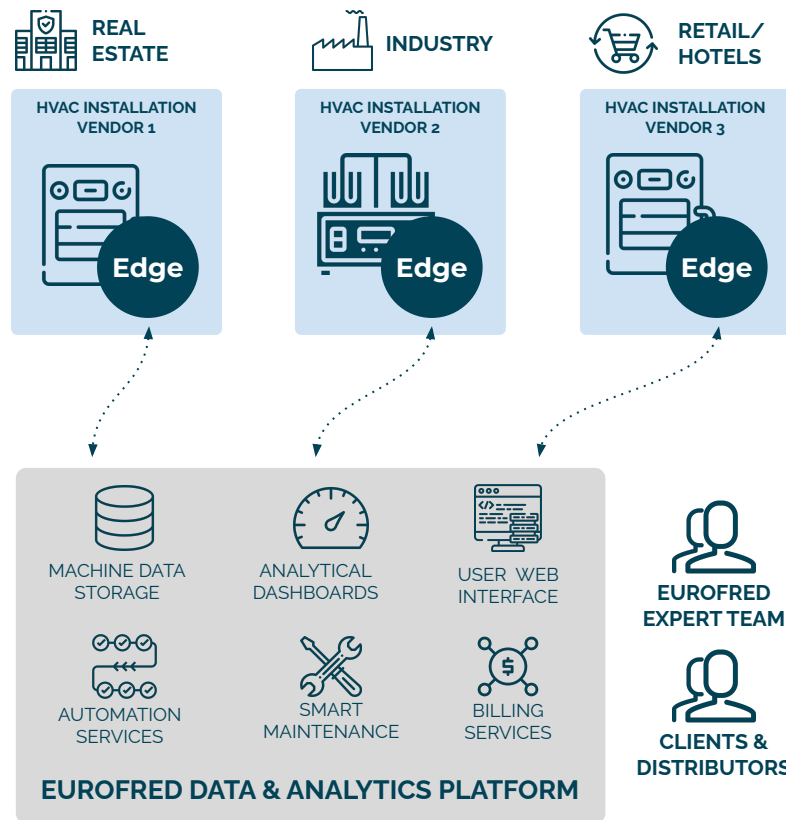
> **Multiple HVAC Machine Protocols**

Supports heterogeneous, proprietary and legacy interaction with HVAC equipment from multiple vendors. Uses Datumize Edge hardware and special-purpose software connectors.

> **Low-Cost Datumize Edge device**

A hardware device allows for data capture and remote control. Based on Datumize Edge open-source hardware product, the device provides a low-cost approach that disrupts the closed and proprietary HVAC market.

> **Cloud Platform for Analytical Insights**

To support current and future use cases, this platform is used to gather HVAC machine data and compute required analytics and dashboards, accessible by different actors.

REAL ESTATE

INDUSTRY

RETAIL/ HOTELS

HVAC INSTALLATION VENDOR 1

HVAC INSTALLATION VENDOR 2

HVAC INSTALLATION VENDOR 3

Edge

Edge

Edge

MACHINE DATA STORAGE

ANALYTICAL DASHBOARDS

USER WEB INTERFACE

AUTOMATION SERVICES

SMART MAINTENANCE

BILLING SERVICES

EUROFRED DATA & ANALYTICS PLATFORM

EUROFRED EXPERT TEAM

CLIENTS & DISTRIBUTORS

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CAR WASH ASSET MODERNIZATION

CEPSA

Cepsa is a global energy company in the oil and gas value chain. With 1.700 gas stations in Spain & Portugal, its car wash systems are used daily by thousands of clients that needed a modernized user experience, without the hassle and cost of renewing all existing car wash systems from multiple vendors and seamlessly integrating with modern payment methods.

USE CASES

MACHINE MONITORING

SMART MAINTENANCE

ASSET AS A SERVICE

PROJECT SCOPE

200 GAS STATIONS

+900 CAR WASH SYSTEMS

5 CAR WASH VENDORS

KEY RESULTS

> ### Minimal investment in infrastructure (capex) and operations (opex)
> Datumize technology requires a minimal investment compared to other alternatives in the market that require modifications to car wash systems, expensive rewiring or even civil works.

> ### Remove captivity and provide compatibility for multiple vendors
> Car wash vendors create captivity by leveraging closed and proprietary systems. Cepsa is now able to penetrate any modern or dated system.

> ### Seamless integration into gas station and corporate IoT platform
> Datumize solution has been architected to match Cepsa IoT platform. Data and infrastructure belong to Cepsa, no more locked-in vendor platforms.

> ### Support for advanced payment systems
> Solution provides best user experience for payment (bank/loyalty card) and allows for tailored promotions (complementary car wash, pay by seconds).

"Data is our 'digital capital'. Car wash modernization is a perfect example of how innovative IoT projects have the ability to unlock and capture smart data to generate the value that Cepsa needs to continue leading the market.

Juan Benavente
Head of Digital Innovation & Emerging Technologies

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CAR WASH MODERNIZATION

TECHNICAL FUNCTIONALITIES

> **Support for closed/proprietary protocols**
Datumize Data Collector supports native protocols for heterogeneous car wash systems, always using a non-intrusive and compatibility approach.

> **Retrieve all car wash data metrics/sensors and enable remote control**
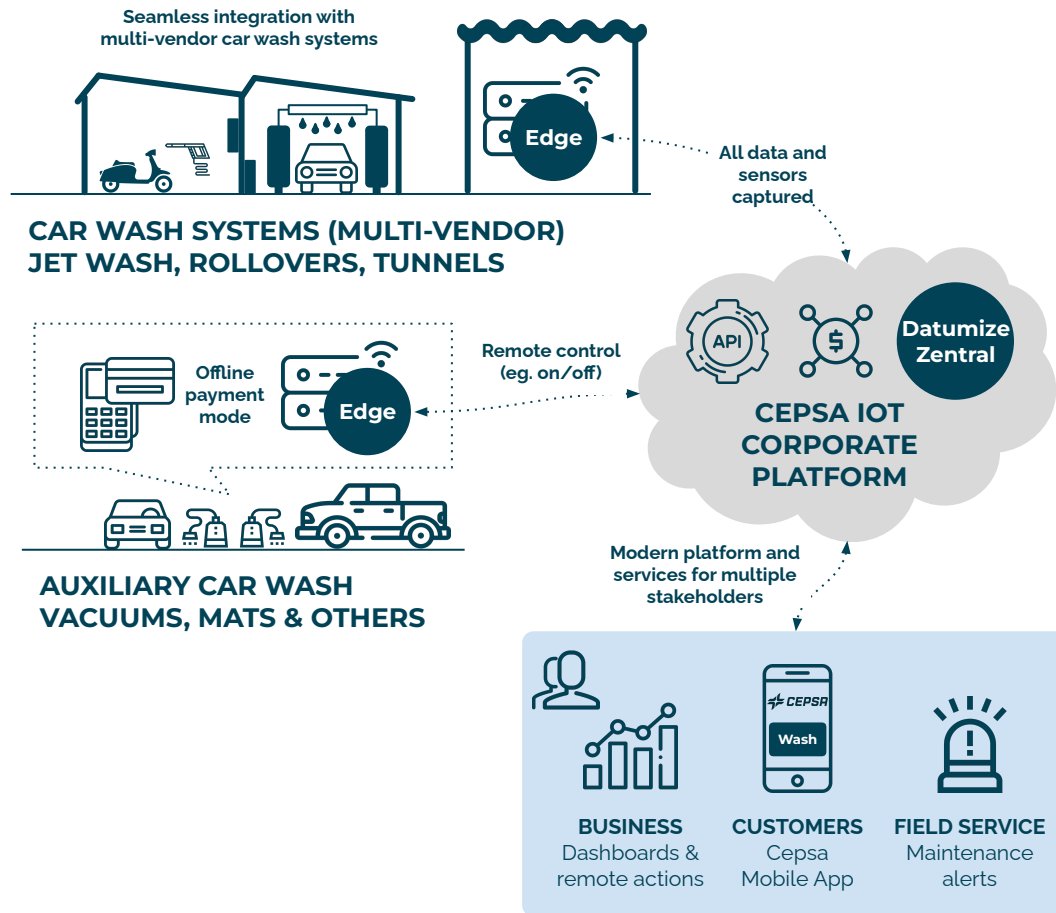All available car wash data (status, error codes, coins, timing) and sensors are read and eventually updated. Remote control (eg. on/off) is provided too.

> **Offline mode**
Car wash works with card payment systems even in the event of network failure.

> **Enterprise deployment**
Flexible network topology (wired, Wi-Fi, LTE/4G, IoT encrypted mesh) and compliance to cyber-security and other corporate policies.

Seamless integration with multi-vendor car wash systems

Edge

CAR WASH SYSTEMS (MULTI-VENDOR) JET WASH, ROLLOVERS, TUNNELS

All data and sensors captured

Offline payment mode

Edge

Remote control (eg. on/off)

API · $ · **Datumize Zentral**

CEPSA IOT CORPORATE PLATFORM

AUXILIARY CAR WASH VACUUMS, MATS & OTHERS

Modern platform and services for multiple stakeholders

BUSINESS
Dashboards & remote actions

CEPSA Wash

CUSTOMERS
Cepsa Mobile App

FIELD SERVICE
Maintenance alerts

Datumize

THANKS

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Datumize