

IOT CONNECTED PRODUCTS

BASED ON AZURE IOT SERVICES



IOT INDUSTRY OVERVIEW

Due to successive technological developments and innovations, the global industrial landscape has drastically transformed over the last years.

Industry 4.0

*It aims at **transforming** traditional industries into intelligent ones by incorporating innovative technologies.*



Internet Of Things (IoT)

*It pursues to pervade our everyday environment and its objects, **linking the physical to the digital world** and allowing people and “things” to be **connected anytime and anywhere**.*

Both customers and vendors are now demanding **smart and connected products**.

The ideal solution consists of **scalable** and **innovative cloud platforms** which could help to solve their current business challenges.



CONNECTED PRODUCT SOLUTION

AZURE IOT MAIN BENEFITS

Develop depending on business needs

Connect, monitor, and control billions of devices by choosing to develop with **speed** and **simplicity** on a fully managed application platform, or build more **flexible** and **customized** solutions using robust platform services

Scalability

Scale from proof of concept to global solutions wherever and whenever you're ready

Edge Power

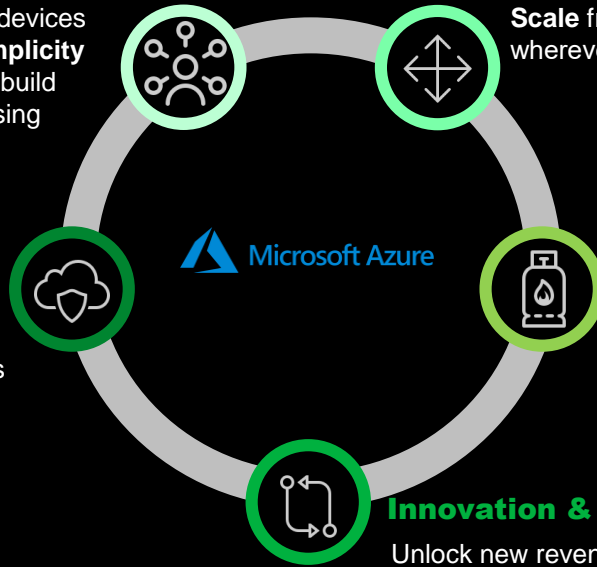
Spend **less time** communicating with the cloud and operate more **reliably** even in extended offline periods with **Azure IoT Edge**

Innovation & Integration

Unlock new revenue streams and opportunities through continuously enhanced data, **AI**, and **analytics** solutions, and **integrate** seamlessly with existing systems

Security

Portfolio of **regulatory** and **compliance certifications** in the industry, and maintain control of IoT data, devices, and applications



CONNECTED PRODUCT SOLUTION

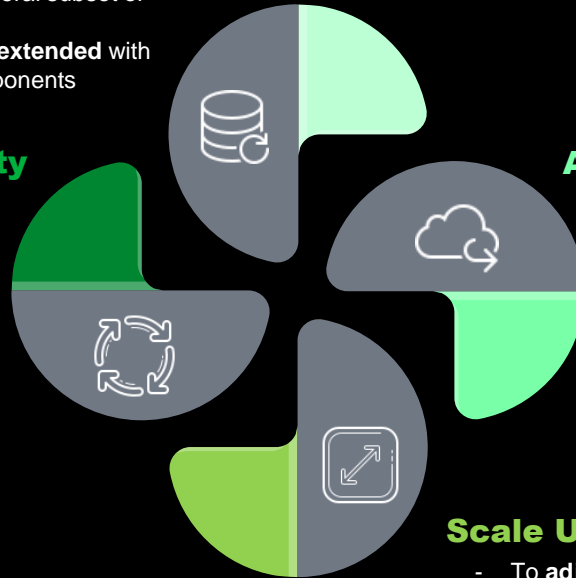
AVAILABILITY & SCALABILITY

Geo-replication

- The architecture may **scale** by distribution of peripheral subset of components to **reduce latency** of communications
- This peripheral architecture is **flexible** and may be **extended** with partial/complete business logic and data layer components

Business Continuity

- To build a **resilient** solution that ensures your systems remain online and **always available**
- To **protect** the business from the **risk** of downtime



Auto-scaling

- to **automatically** perform **scalability** actions such as scaling up/down in an automated fashion based on workload demand
- to **ensure** the **right** amount of resources are available for the demands of the workload and **efficiency** in operations
- to **eliminate wasted** resources or unneeded resources and calibrate running costs depending on the real need

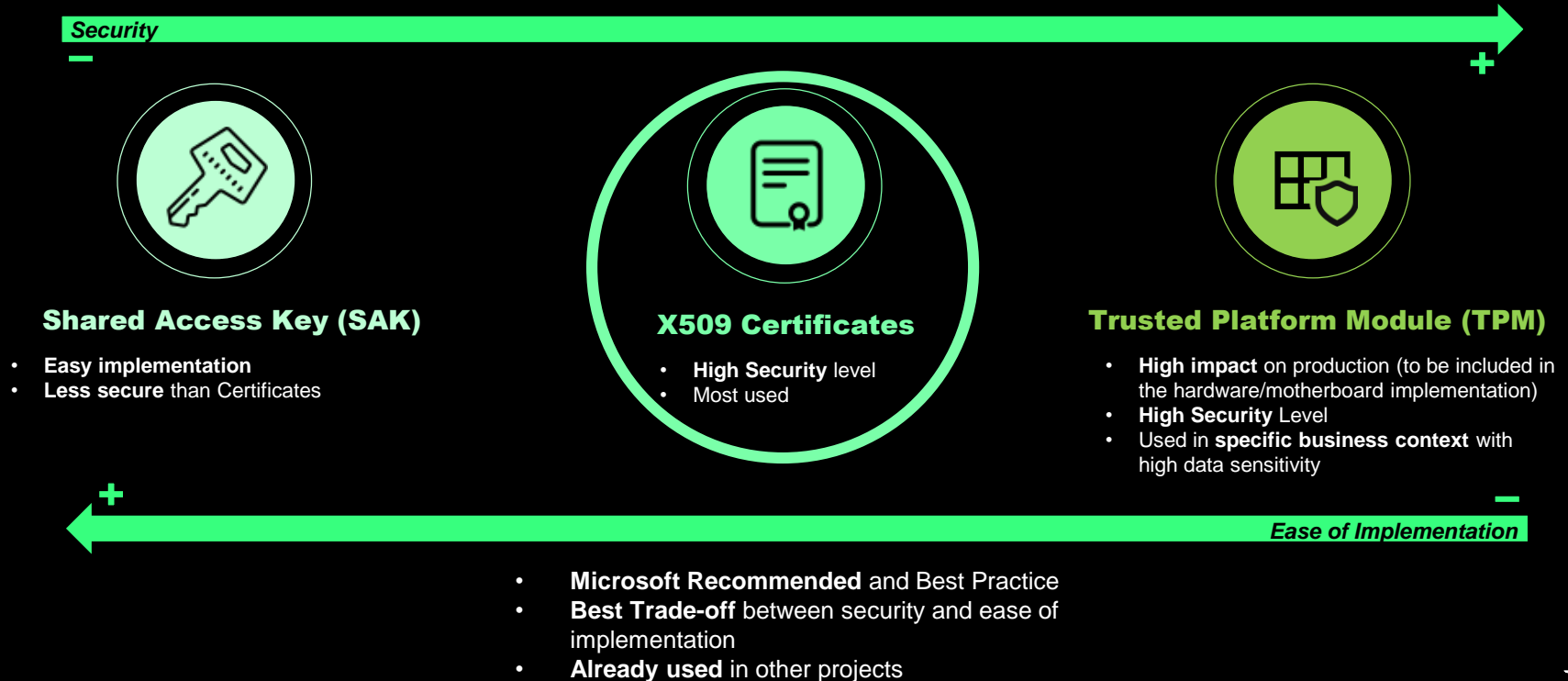
Scale Up & Down

- To **adjust** the platform depending on the increasing/decreasing number of users/devices and adjust **capacity** and **performances**
- to adjust resources and **calibrate** running costs depending on the **real** need



CONNECTED PRODUCT SOLUTION

SECURE COMMUNICATION WITH DEVICES



CONNECTED PRODUCT SOLUTION

PLATFORM SECURITY

Azure IoT Hub Connector

- **Secure communication** with devices (Certificates, Shared Access Key, etc.)

Azure Security Center

- Security posture management and **threat protection**
- **AI** and **automation** to cut through false alarms, quickly identify threats, and streamline threat investigation
- Central management of **security policies**

Azure Defender

- **Protect data** and **detect** unusual attempts to access Azure Storage
- **Protect** Azure **Kubernetes** Service instances
- **Safeguard** Windows **servers** and **clients**
- **Monitor** the security state of workloads via one console.



Azure Multi-Factor Authentication

- **Additional** form of **identification** during user sign-in process (e.g. to enter a code, to provide a fingerprint scan)
- **Safeguard access** to data and applications while maintaining simplicity for users

Azure DDoS

- **Protect** Azure resources from denial of service threats
- **Automatically mitigate** the attack as soon as it's detected.
- Get detailed **reports** and a complete summary after the attack ends

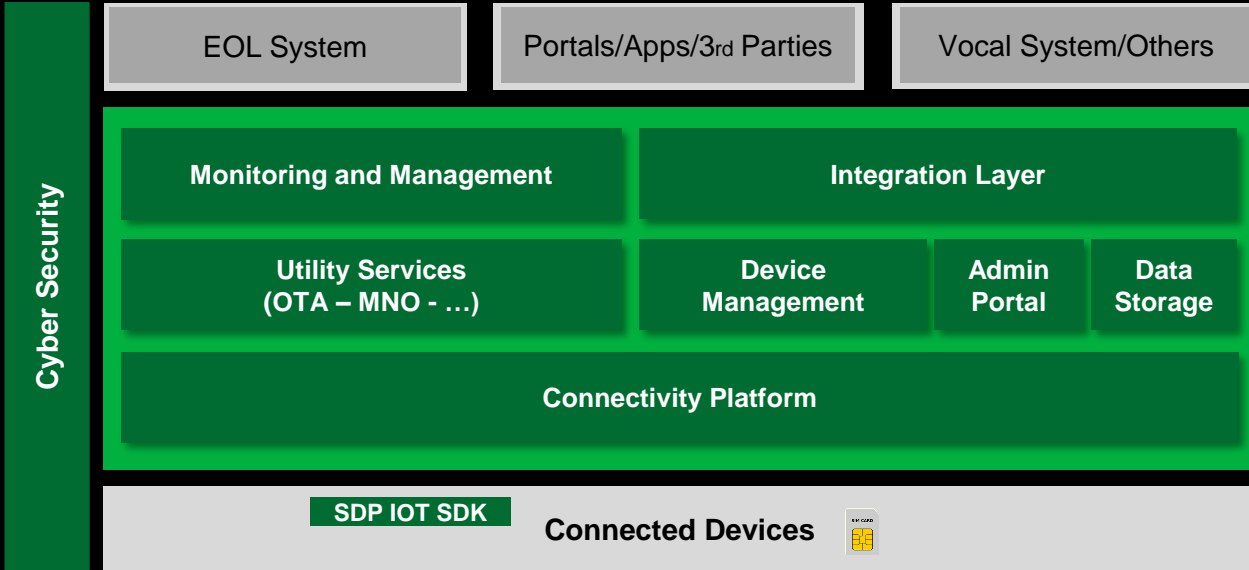
Azure Sentinel

- Smarter and faster **threat detection** and response with artificial intelligence (AI)
- Detect threats and **minimize false positives** using analytics
- **Respond** to incidents **rapidly** with built-in orchestration and automation of common tasks



CONNECTED PRODUCT SOLUTION

CORE IOT FRAMEWORK

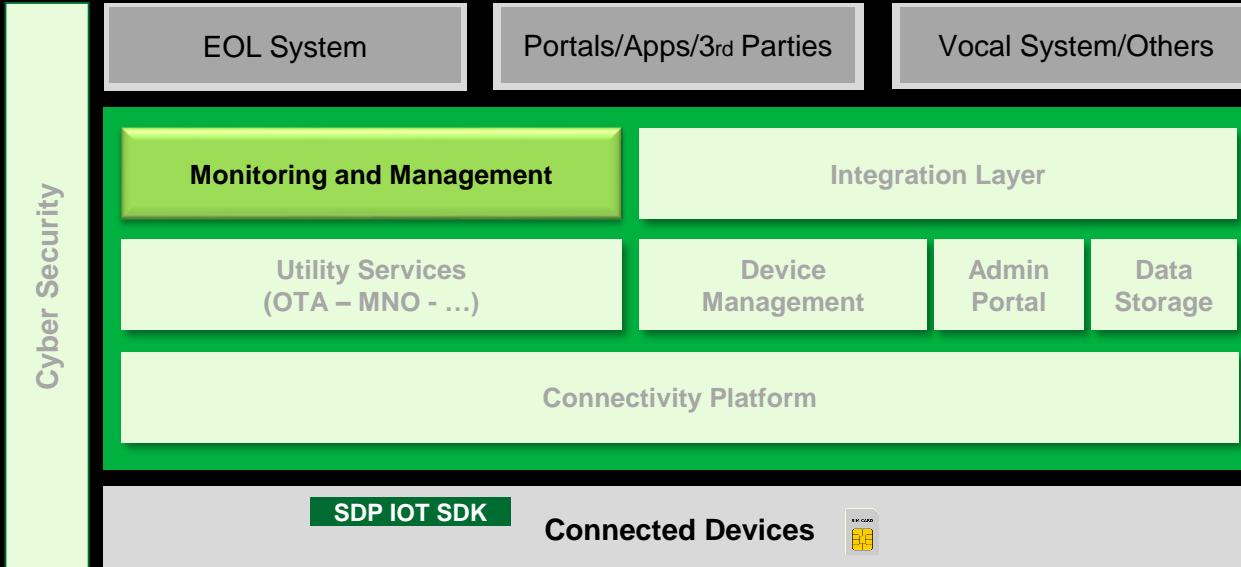


- **Pre-built in** Modules
- **Tailored** and **Flexible** Platform
- Easy to **Extend** and **Adapt**
- High **Scalability**



CONNECTED PRODUCT SOLUTION

MONITORING AND MANAGEMENT

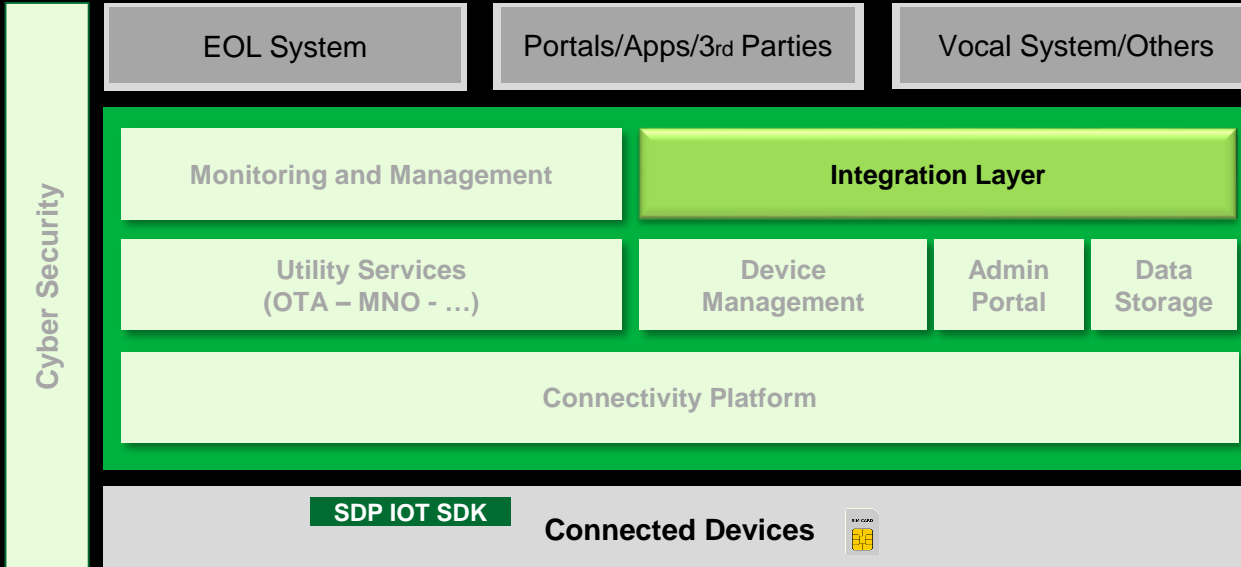


→ The **Monitoring and Management** component offers platform monitoring of all involved components and grant CI & CD processes for the IoT Platform evolution purpose



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INTEGRATION LAYER

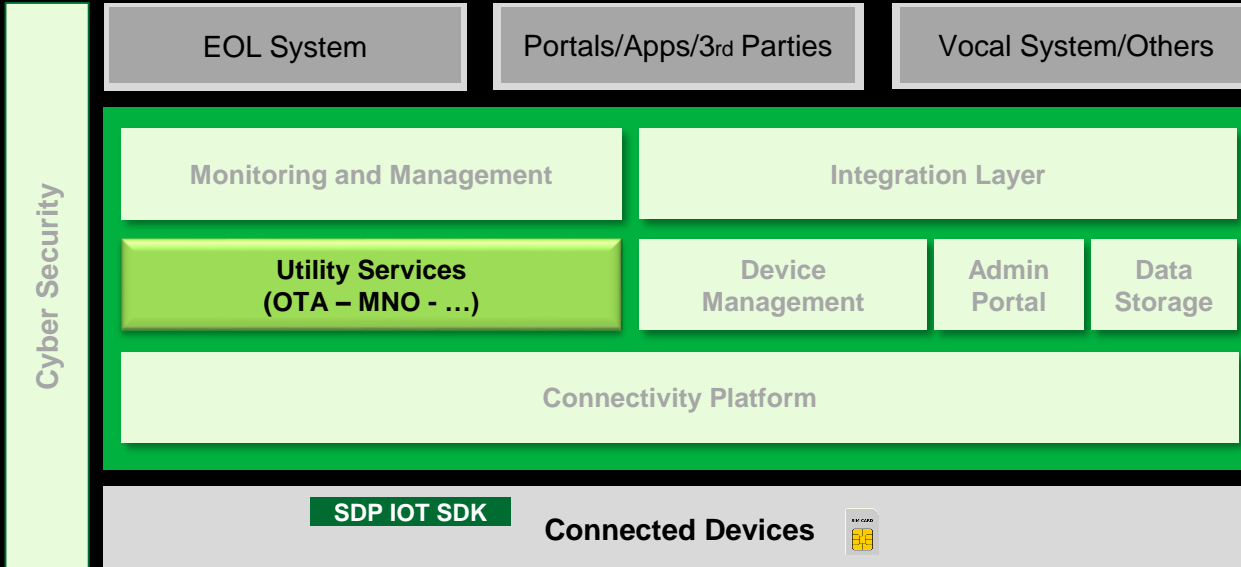


→ The **Integration Layer** offers connectivity among the platform and external Systems and other IoT platform Components too.



CONNECTED PRODUCT SOLUTION

UTILITY SERVICES

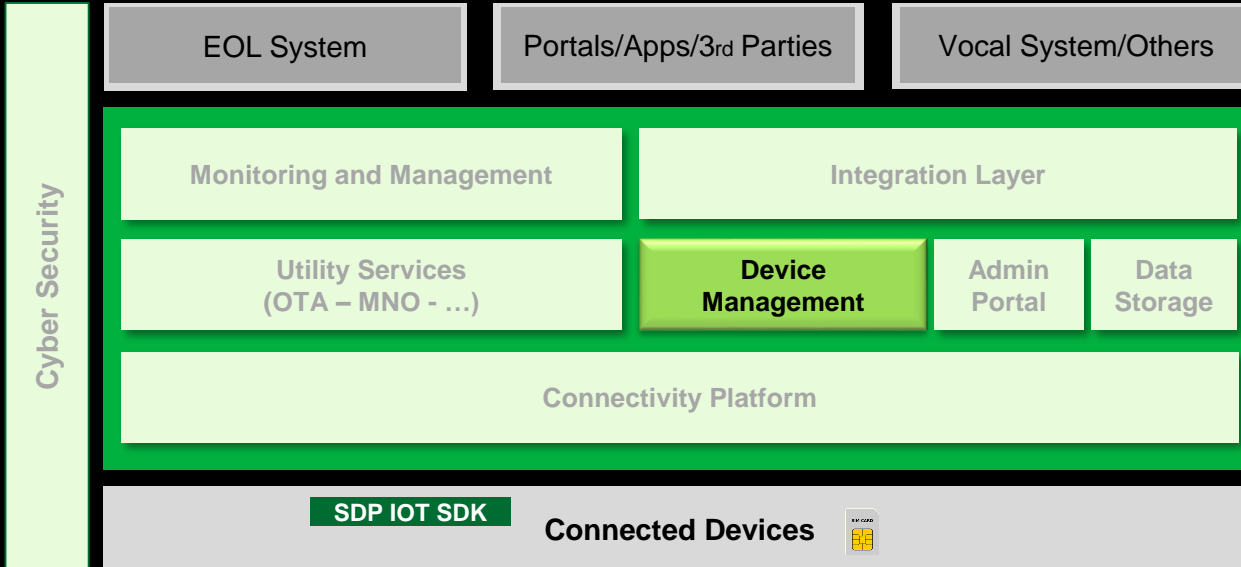


→ The **Utilities Services** complements what is provided by CP in terms of Mobile Network Operator integration, Firmware On The Air (FOTA) feature and Device Certificates management.



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DEVICE MANAGEMENT

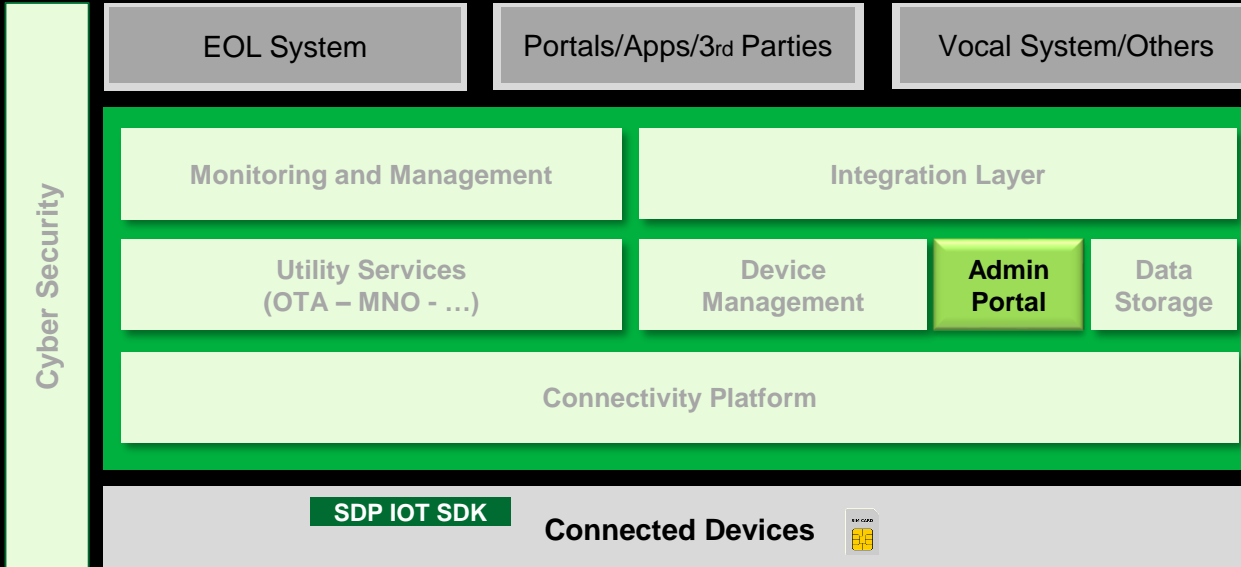


→ The **Device Management** is the component responsible to maintain information related to device managed by the IoT Platform



CONNECTED PRODUCT SOLUTION

ADMIN PORTAL

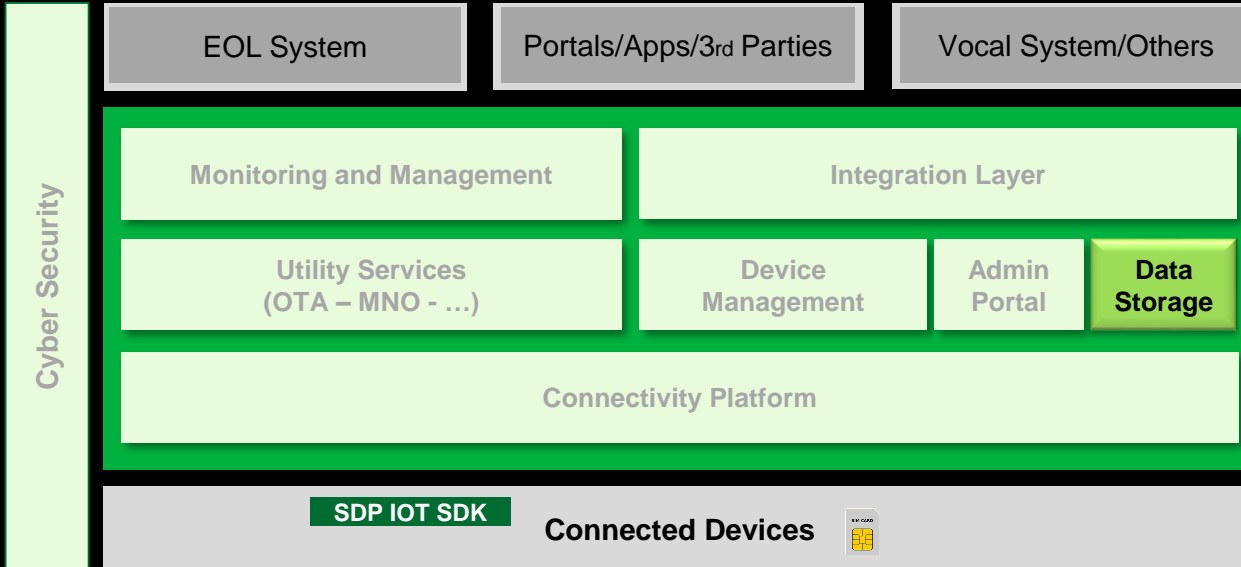


→ The **Admin Portal** is the component responsible to grant management, business logic monitoring and troubleshooting



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ENTERPRISE DATA STORAGE

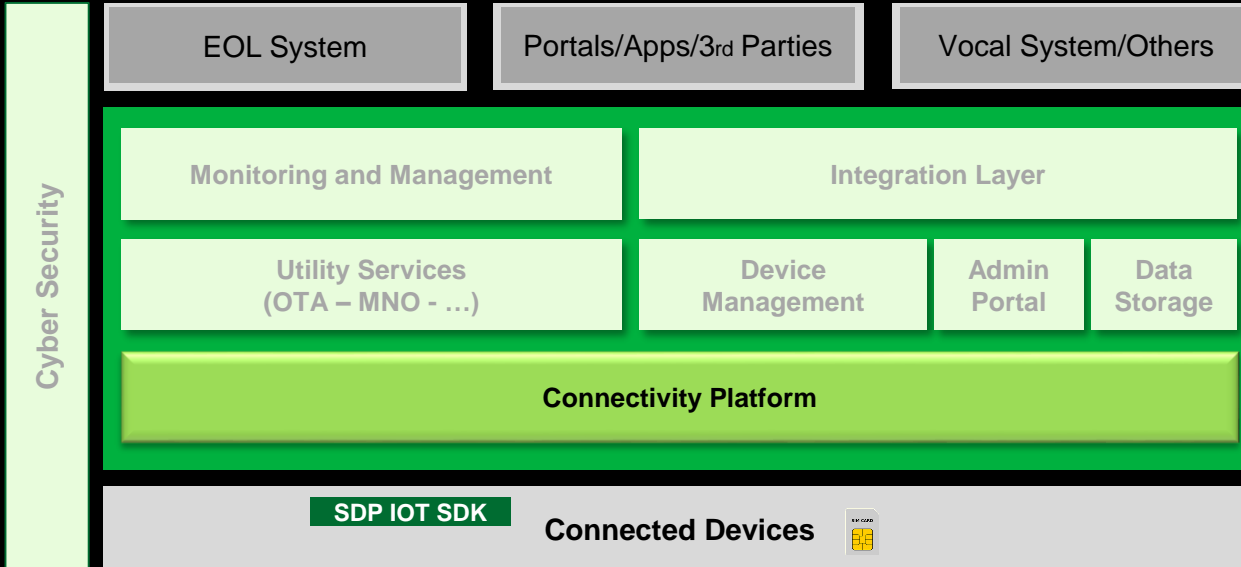


→ The **Enterprise Data Storage** is a big data module able to stream monitoring & alerting and archives telematic by data using data quality mechanism



CONNECTED PRODUCT SOLUTION

ENTERPRISE DATA STORAGE



→ The **Connectivity Platform** is the main component of the IoT Platform enabling bidirectional communication device to cloud and vice versa.



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B2B PORTAL & DASHBOARDS

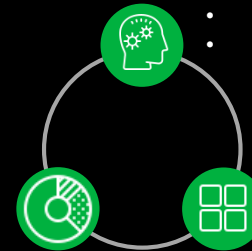
B2B Portal & Dashboard



- **Live/Remote** diagnostics and operations
- **Predictive** maintenance
- **Targeted** Customer support
- Performance and product quality **monitoring**
- Products **KPIs monitoring** and improvements
- Production and sales **forecast** and improved **planning**
- **E2E** Product **tracking**

Microsoft PowerBI

- **Ease of use**
- **Interactive reports and real-time dashboards**
- **Wide coverage of data sources**



Microsoft Azure Machine Learning Studio

- **Robust and E2E ML capabilities**
- **Rapidly build and deploy ML models using tools**

Microsoft Azure Databricks

- **Reliable data engineering**
- **Analytics**
- **Accelerate data science on large datasets**



CONNECTED PRODUCT SOLUTION

MAIN EXPECTED BENEFITS

- **New** customer experiences and **added value**
- Integration with **Voice** Assistant services or others

- **Consumption monitoring** and report generation
- **Continuous** Product development and process efficiency **improvement**

- **Higher** Service Level and customer **satisfaction**
- Guaranteed **product quality**



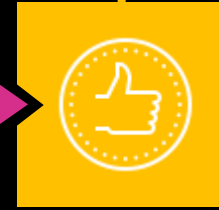
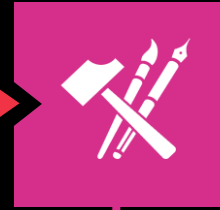
To be a **technological innovator** with respect to competitors



Relevant **Competitive Advantage**



- **Remote** configurations management
- **Real time** alerts
- Operations Cost **optimization**



THANK YOU

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