



BERLIN | MAY 11-12, 2022

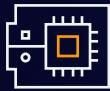
# Using serverless IoT to drive sustainable transformation

René Penkert (he/him)  
Cloud Infrastructure Architect  
AWS

Mario Pilz (he/him)  
Program Manager Industrial IoT  
Siemens Energy

# Sustainability Transformation

# AWS Sustainability journey highlights



Graviton processors provide better performance per watt than any other AWS processor



Renewable energy to power data centers



Water stewardship: evaporative cooling, recycled water, and onsite water treatment

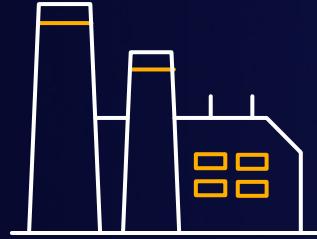


Launch of Well-Architected for Sustainability Pillar

# IoT adoption is rapidly accelerating



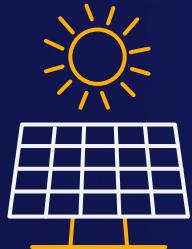
# Drive sustainability transformation with IoT



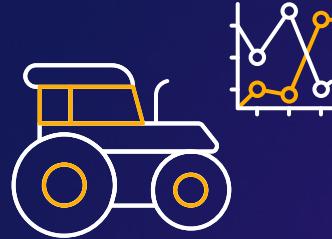
Improve the performance and productivity of industrial processes



Efficient warehouse operations



Manage energy resources more efficiently



Grow healthier crops with greater efficiencies



Build smarter products & user experiences in homes, buildings, and cities



# How does IoT support Siemens Energy on its way to climate-neutral internal operations?

# We want to become the sustainability leader in our industry



Low- or zero-emission power generation



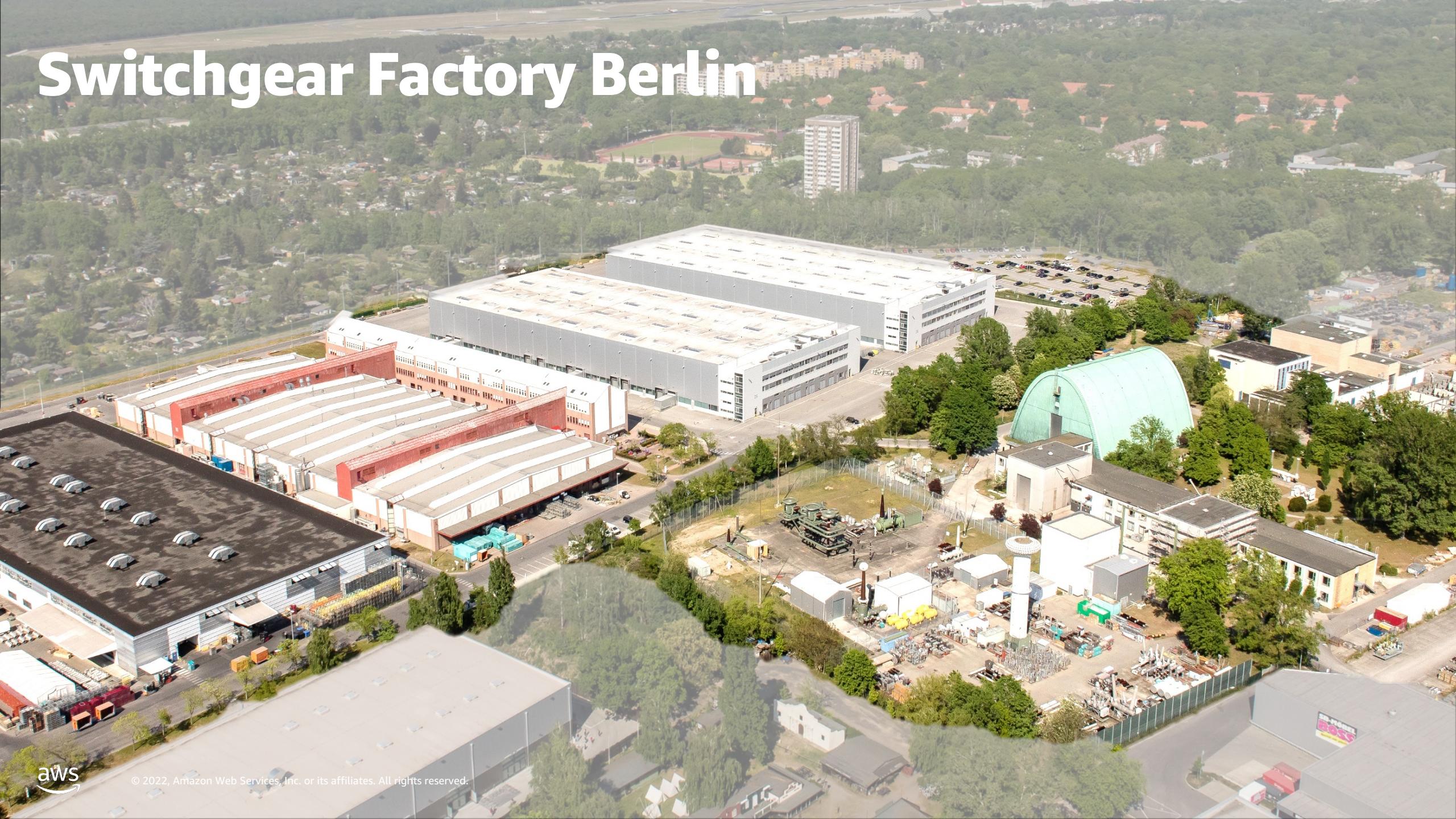
Transport and storage of energy



Reducing CO<sub>2</sub> footprint and energy consumption in industrial processes



# Switchgear Factory Berlin



# Switchgear Factory Berlin

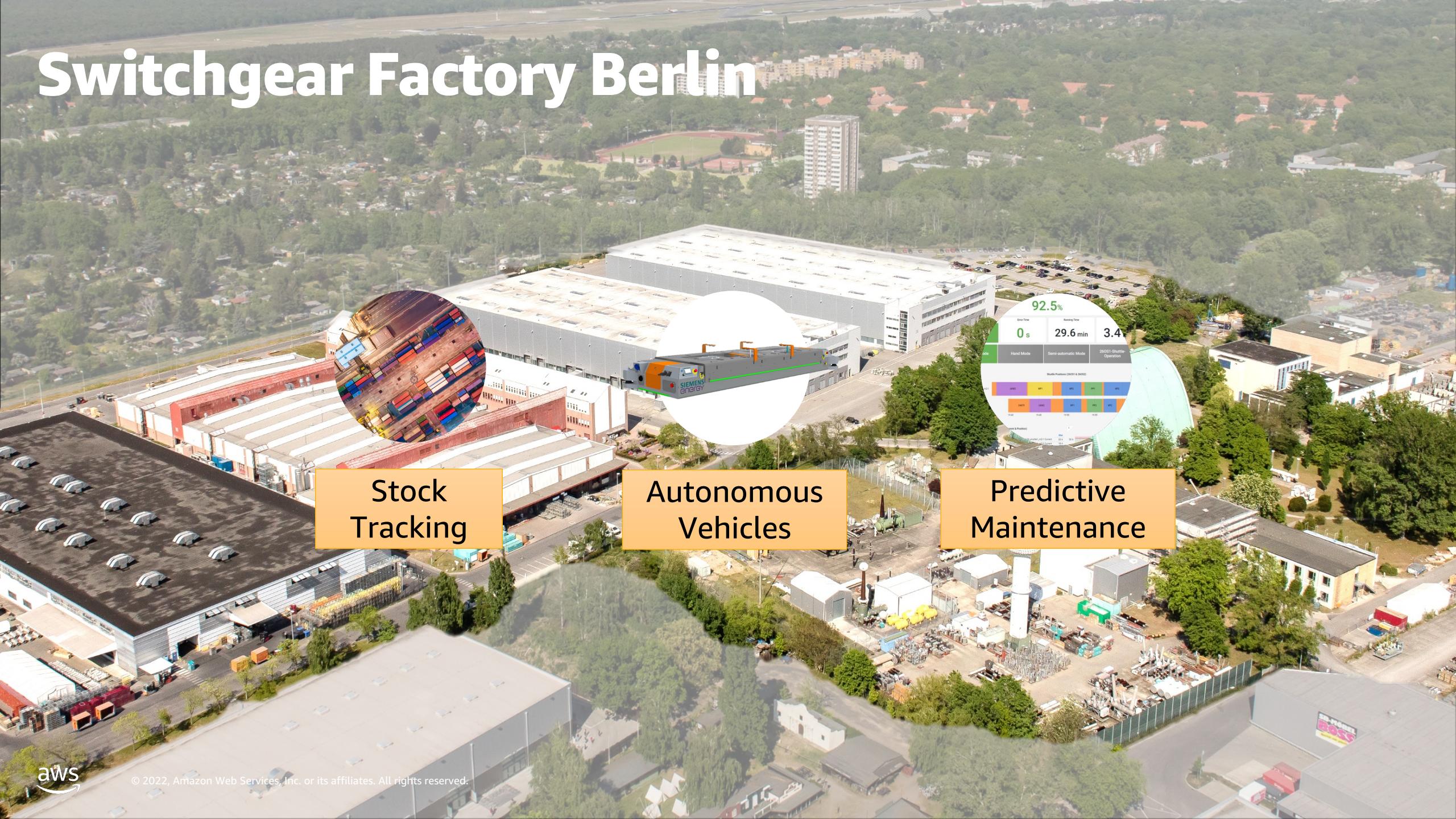


Renewable  
Energy



Blue  
Products

# Switchgear Factory Berlin



# Switchgear Factory Berlin



# Sustainability Transformation with Industrial IoT



REMOTE  
DIAGNOSIS



**EFFICIENCY**

Condition based service

PROCESS  
OPTIMIZATION



**AGILITY**

Faster adaption on market needs

LOCATION & STOCK  
TRACKING



**TRANSPARENCY**

Manage complexity

PRODUCT STATUS  
MONITORING



**CUSTOMER VALUE**

Enable new business models

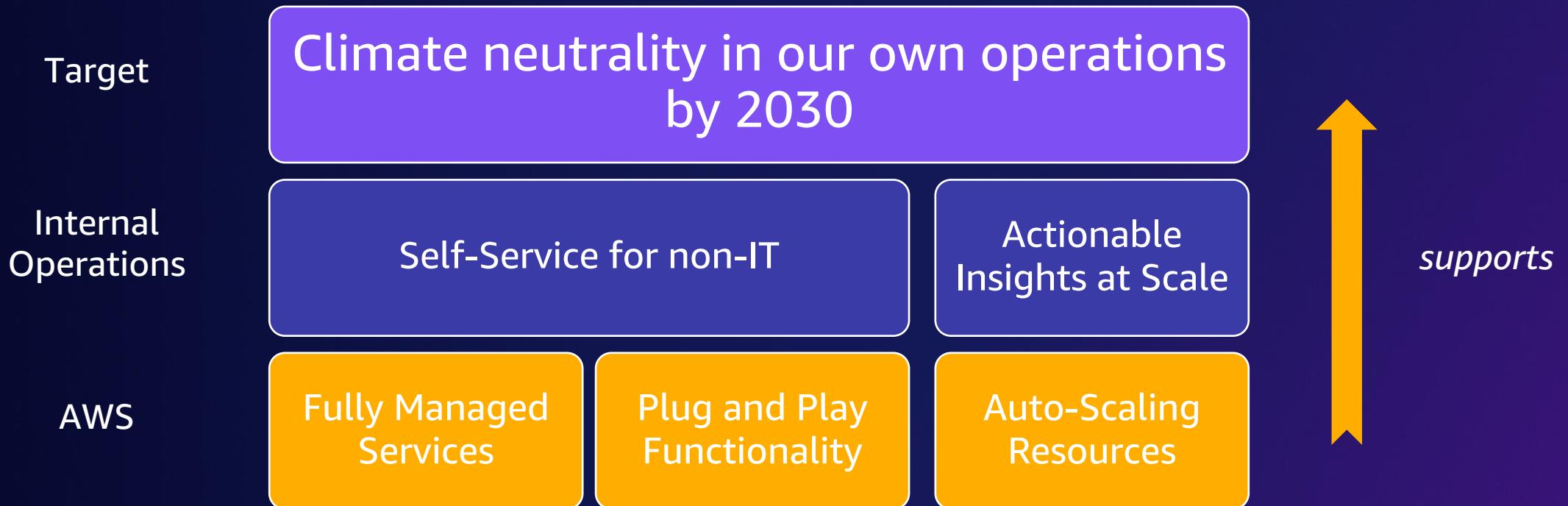
ENERGY  
MANAGEMENT



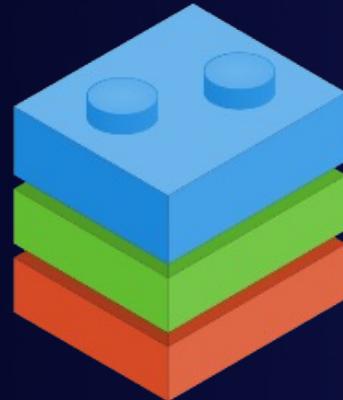
**CO2 REDUCTION**

Make energy greener

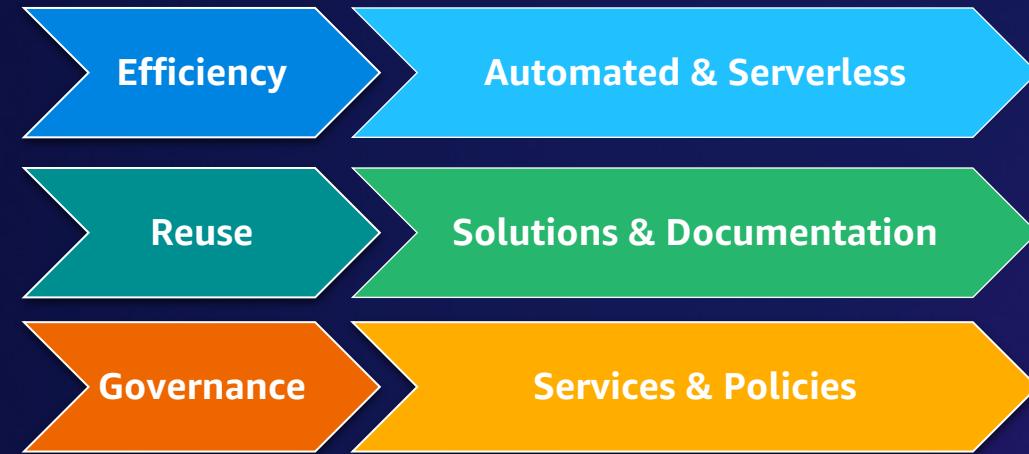
# Industrial IoT in Internal Operations



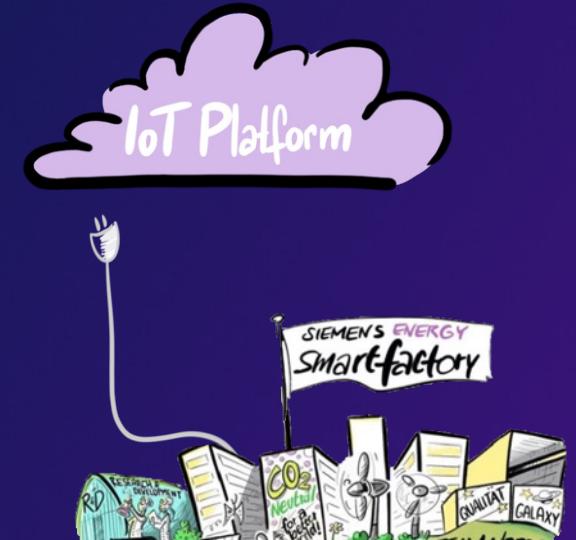
# IoT Enablement for a Global Manufacturing Footprint



Blueprint

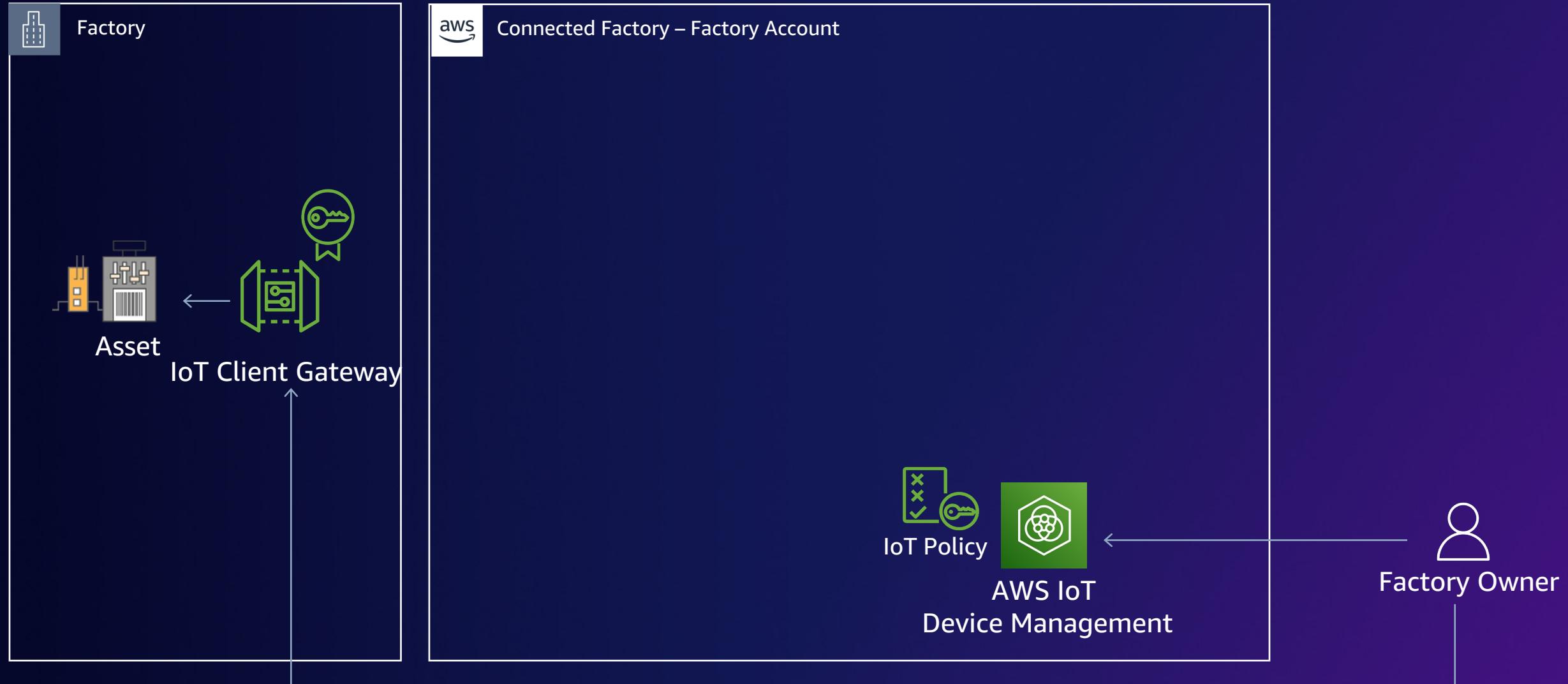


Rollout

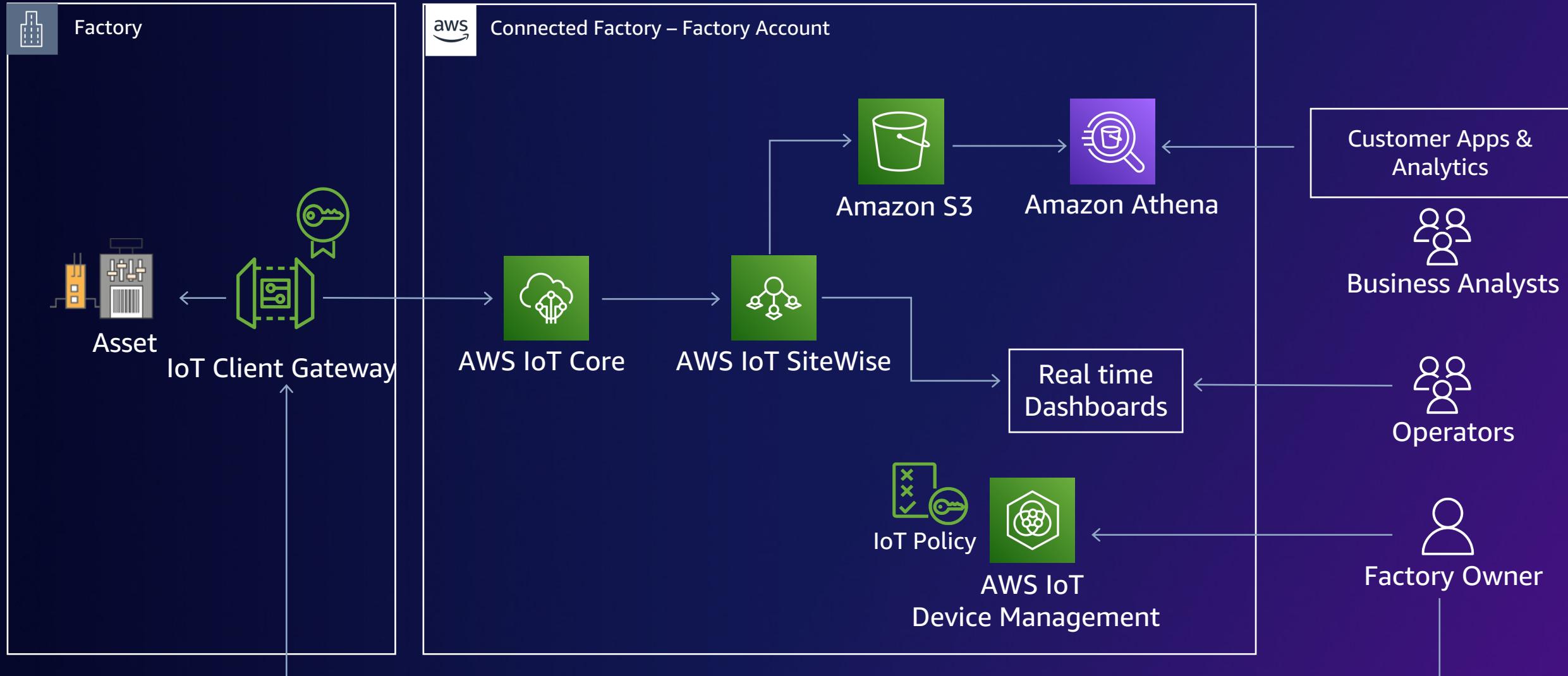


Factories

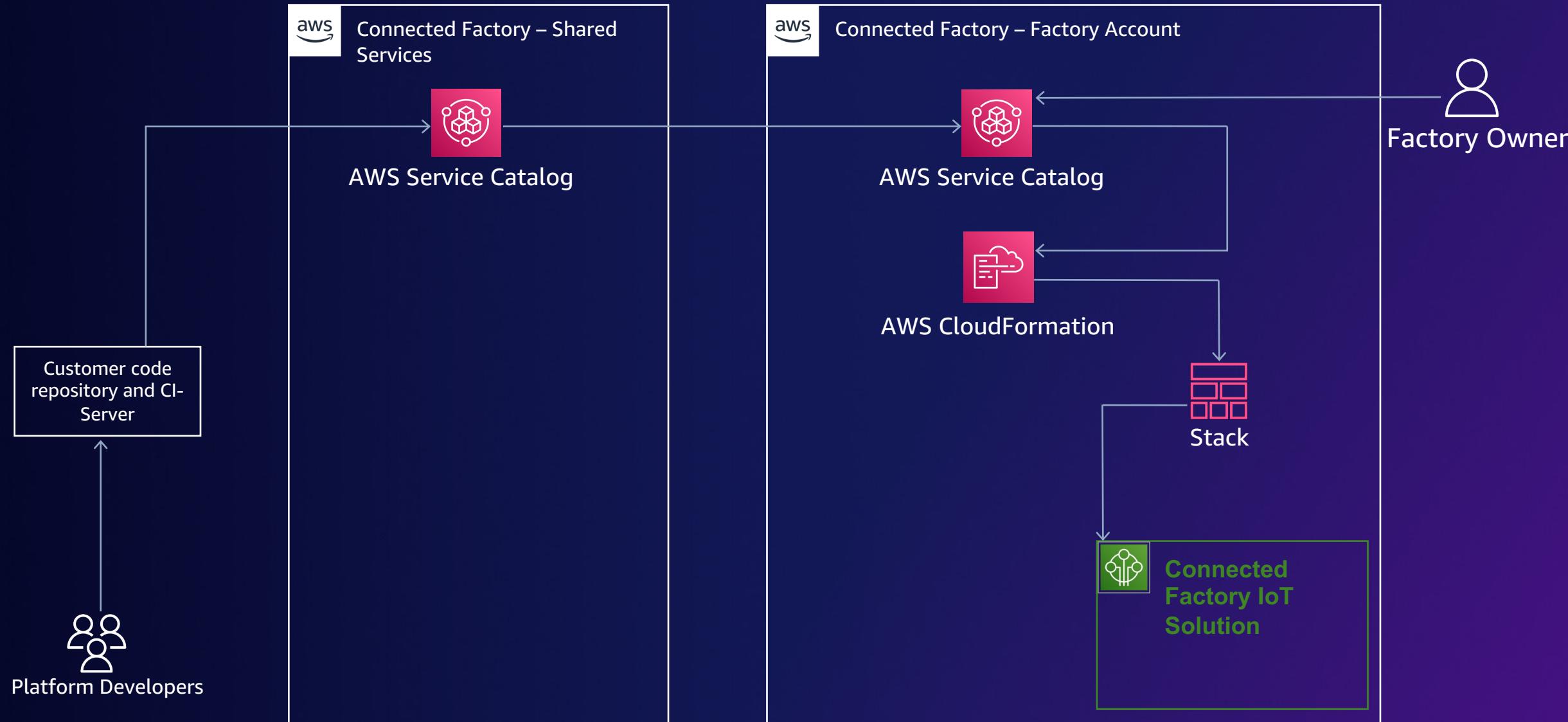
# Connected Factory - IoT platform



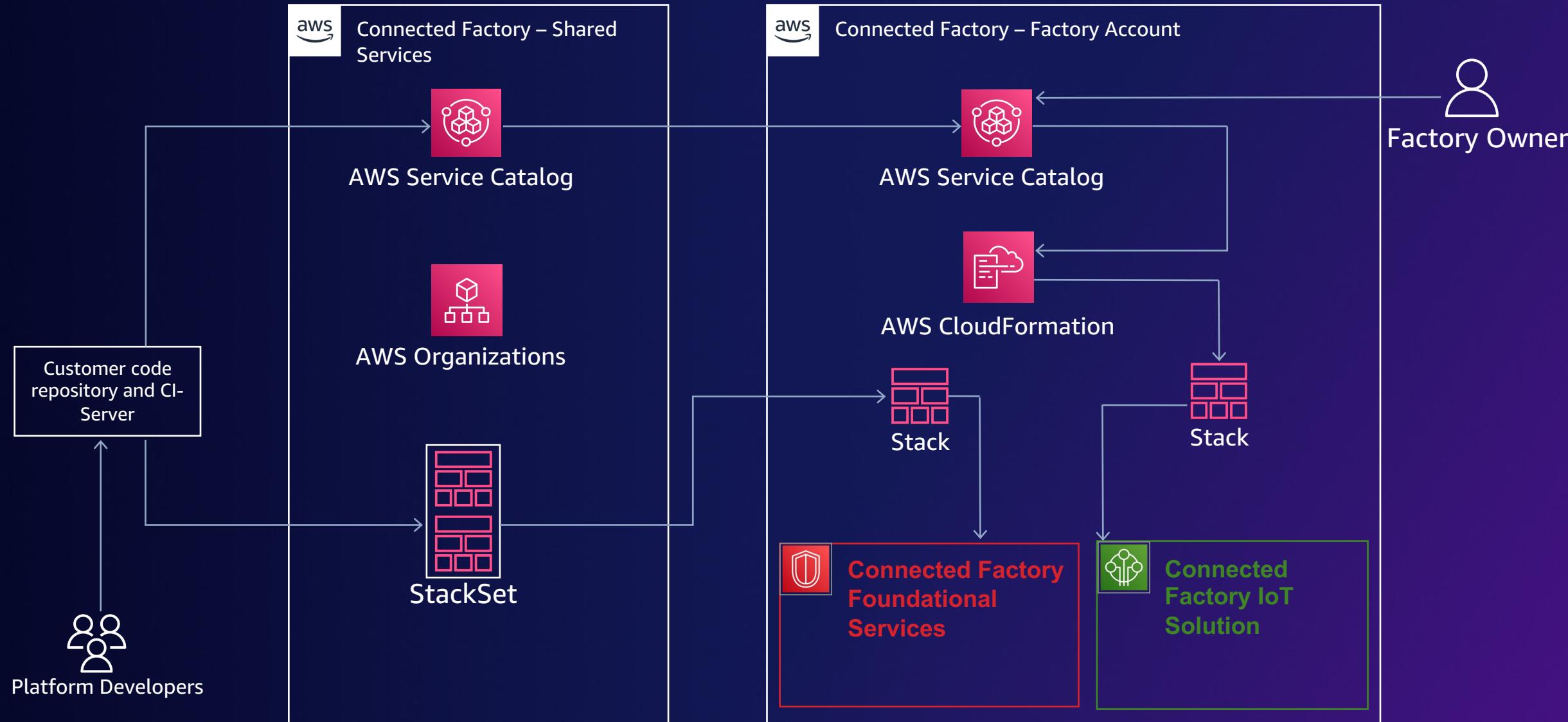
# Connected Factory - IoT platform



# Scale the IoT platform globally



# Scale the IoT platform globally



# Plug and Play IoT platform



Connectivity

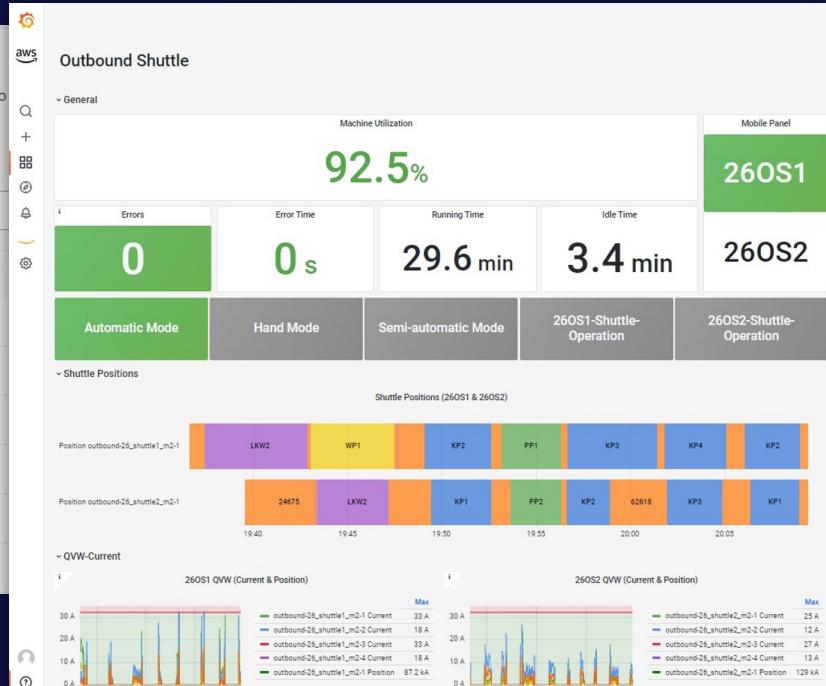
**Assets (3)**  
Assets represent industrial devices and processes that send data streams to model.

**Create asset**

**Filter top level assets**

Name	Status
outbound-25	ACTIVE
outbound-25_shuttle1	ACTIVE
outbound-25_shuttle1_if1	ACTIVE
outbound-25_shuttle1_hub1	ACTIVE
outbound-25_shuttle1_hub2	ACTIVE
outbound-25_shuttle1_hub3	ACTIVE

Virtual Assets



Analysis & Alarms on Amazon Managed Grafana

**Increased Asset availability & efficiency**

**Actionable insights on Energy consumption**

**Basis for flexible maintenance**

Learn more about **Sustainability** use cases on  
**AWS** & think about use cases in **your industry & organization**



# Check out other sessions



[Accelerating your sustainability transformation with the cloud](#)

[Resolving manufacturing bottlenecks with AWS IoT Greengrass and Amazon Quicksight](#)



Learn more about  
Sustainability at Siemens  
Energy

Watch [Climate Next docu-series](#) with Werner Vogels  
featuring AWS customers

# Thank you!

René Penkert

[linkedin.com/in/renpen](https://linkedin.com/in/renpen)

Mario Pilz

[linkedin.com/in/mpilz](https://linkedin.com/in/mpilz)



Please complete  
the session survey