
AWS
re:Invent

ARC221-S

Spirit AeroSystems' Factory of the Future powered by AWS

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AWS re:Invent

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aws

Who is Spirit AeroSystems?

Not the airline…



The global aerostructures leader



FUSELAGE

52%



PROPULSION

26%



WING

22%

Spirit Mix



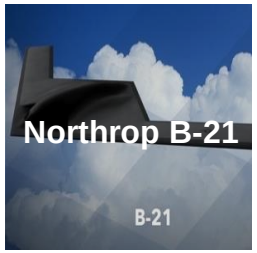
COMMERCIAL **DEFENSE**

Spirit defense programs









Spirit is the leading global aerostructures Tier 1 supplier

Source: Counterpoint

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Spirit impact video



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Overview of Spirit AeroSystems



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Broad presence on programs


Airbus A220


Airbus A320


Airbus A330


Airbus A350 XWB


Airbus A380


Boeing 737/P-8

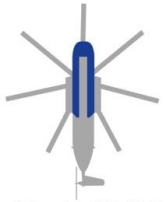

Boeing 747


Boeing 767/KC-46


Boeing 777


Boeing 787


Bell V-280


Sikorsky CH-53K


Gulfstream G650/Rolls Royce BR725


Mitsubishi MRJ



Northrop Grumman B-21



DESIGN



BUILD

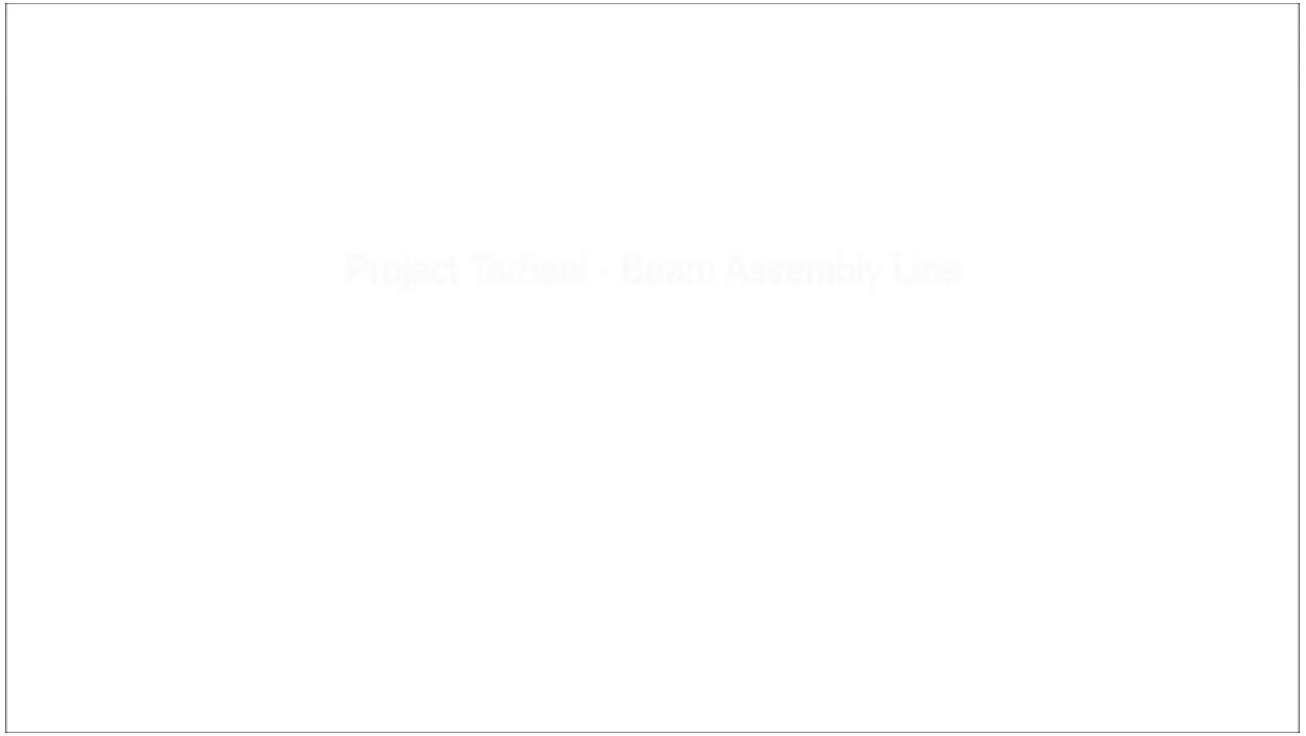


SUSTAIN

Engineered factory principles

Capitalize on production system principles and engineered factory principles to advance manufacturing efficiency, quality, and safety to a world-class level

- Takt-based flexible production line
- Orchestrated work – right part, right quantity, right time, right place
- Right size automation
- Work in the strike zone
- Digital work instruction
- Conveyance – parts, tools, information
- Integrated quality and logistics
- Visual performance to plan



Capitalizing on the principles to drive to a world-class factory

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Engineered factory principles

Automated riveting machine in the Tulsa, Oklahoma, facility

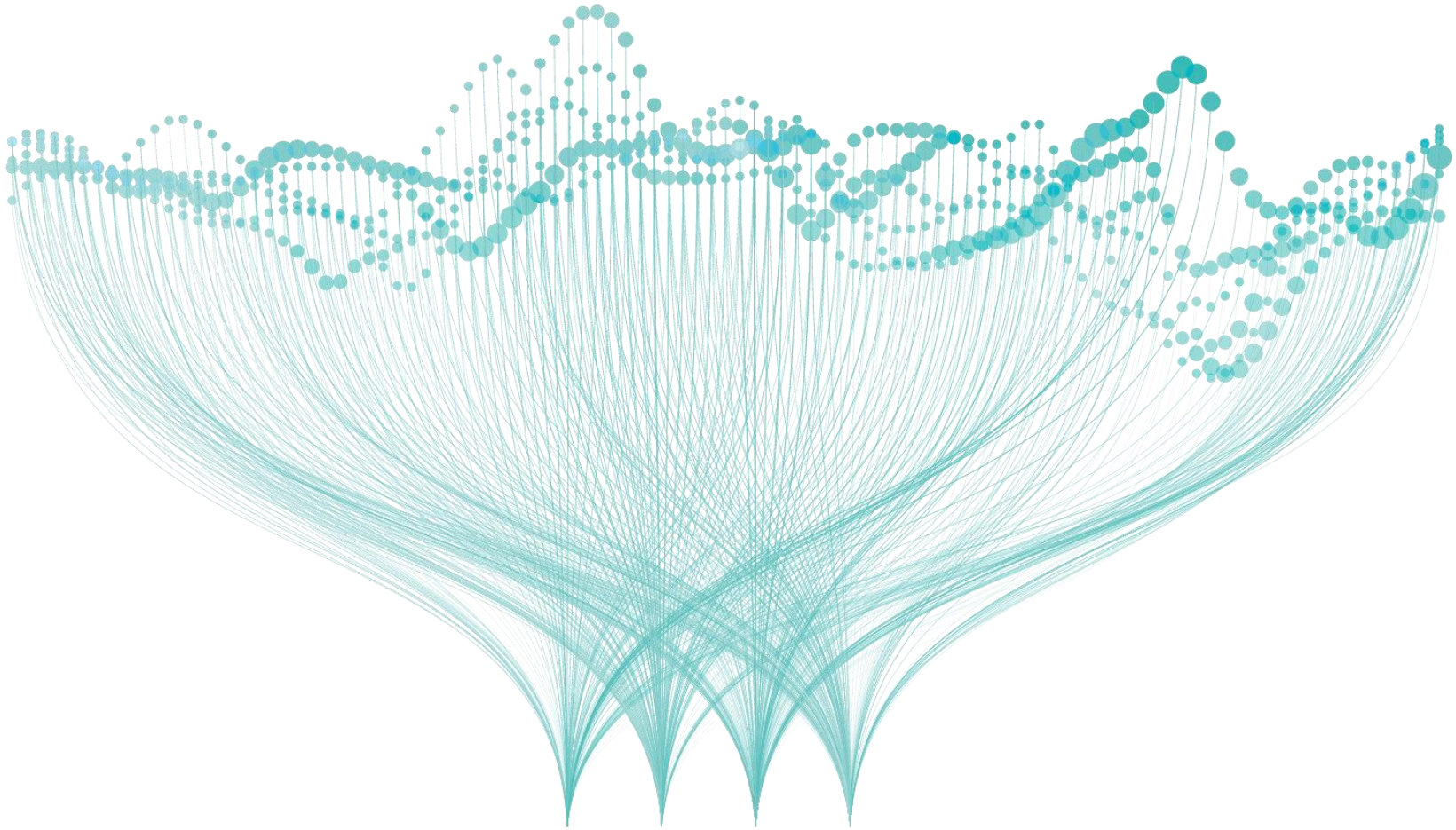


Engineered factory principles at work

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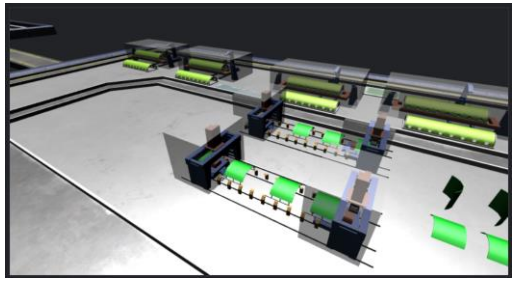
Factory of the Future

A Smart Factory Fabric story

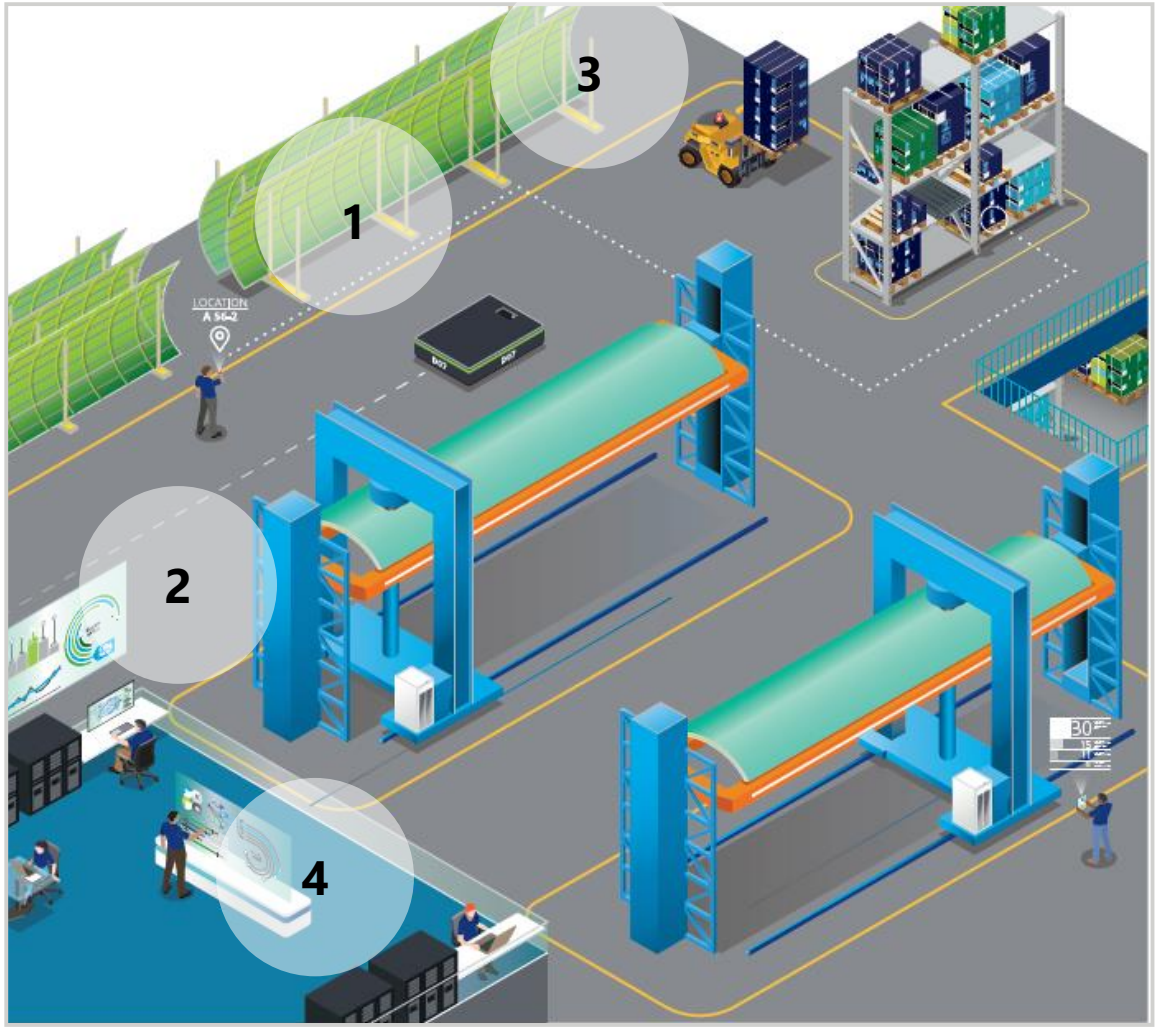


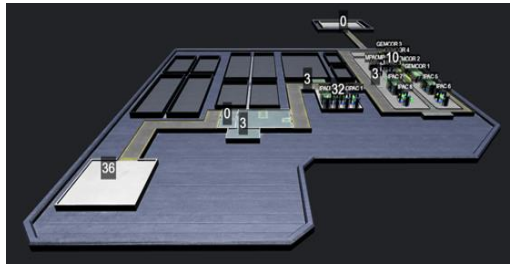
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Floorsight: Factory of the Future in action

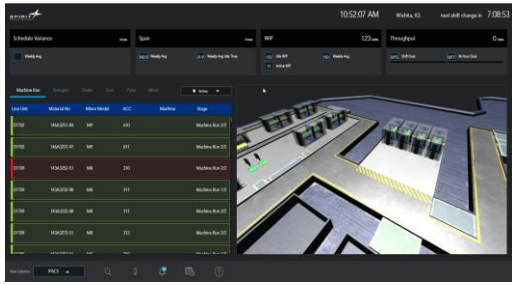


1 | Material flow and tracking





3 | Plant overview



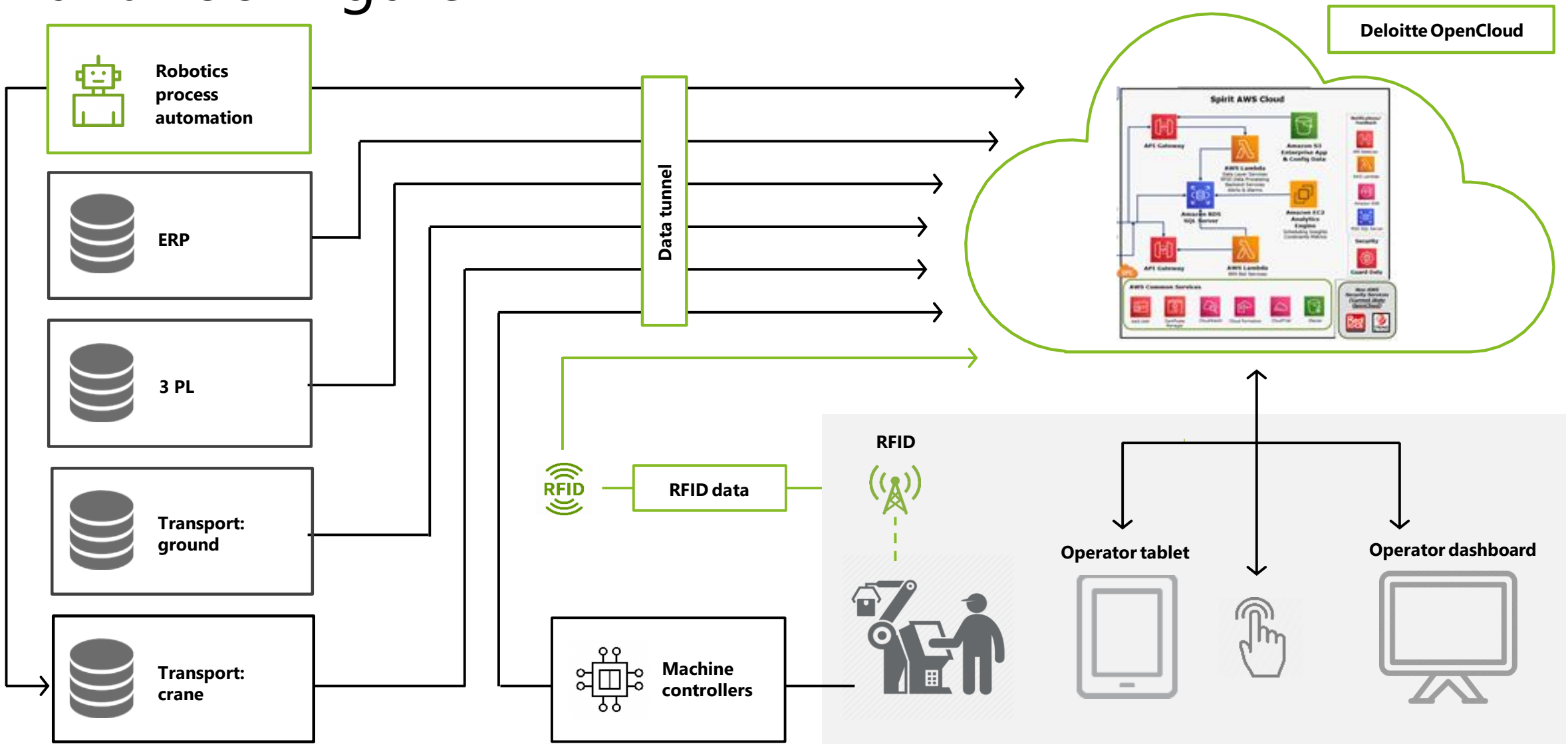
2 | Schedule optimization



4 | Machine and job sequencing

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Plant floor figure



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Smart Factory Fabric on AWS

Smart Factory Fabric is a preconfigured suite of cloud-based Internet of Things (IoT) applications built on AWS that is designed to accelerate smart factory transformations to help companies improve operational performance and reduce costs.

"Smart Factory Fabric pairs Deloitte's experience in business strategy, operations, industrial products, and technology engineering with AWS Cloud and IoT services, including its global reach, to deliver a scalable, configurable smart factory that's tailored to a manufacturer's unique needs."

—Andy Daecher

Initial solutions

COMMAND CENTER

Bird's-eye view of all factory operations and plant performance, prioritizing critical needs and allowing for enterprise analysis

MACHINE MONITORING

Connect to and view machine status, KPIs, and critical performance data

MATERIAL TRACKING AND VISIBILITY

Track location material movements in real time to improve efficiency and visibility

PREDICTIVE MAINTENANCE

Capturing real-time and historical machine health data over its lifecycle to diagnose specific issues before it causes downtime in production

ADVANCED WORKER SOLUTIONS

Advanced analytics for optimal manning and traceability of workers, dynamic crew planning, and work allocation

DYNAMIC PRODUCTION SCHEDULING

Dynamically schedule production cycles based on resource availability and requirement

QUALITY SENSING AND PREDICTION

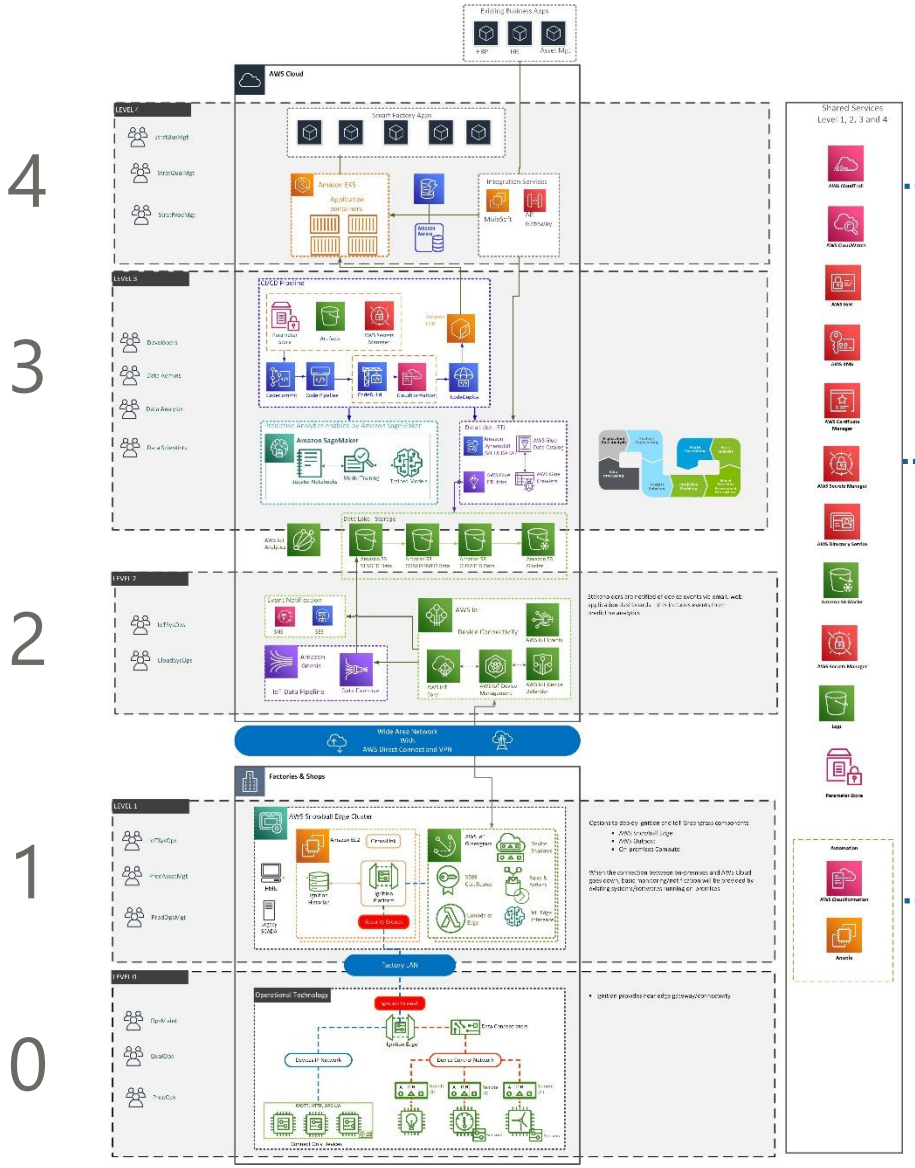
Identify potential quality issues faster and earlier in the value chain

AND MORE

Deloitte and AWS will continue to invest in building new preconfigured accelerators addressing the wider market

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AWS anchored, scalable architecture



SMART FACTORY PLATFORM

- IIoT digital factory
- IIoT cloud platform
- IIoT edge and connectivity

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Smart Factory Fabric at AWS re:Invent

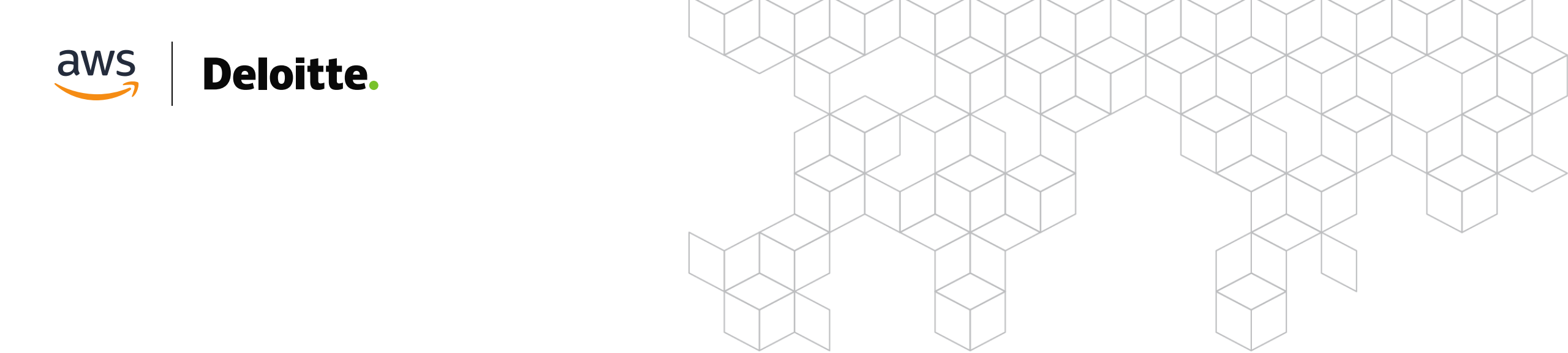


Rotational demos

in Deloitte booth #2408 in the Expo

- Smart Factory Fabric—Machine Monitoring
- Smart Factory Fabric—Material Tracking & Visibility

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