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MFG301

Architecting a modern MES on the cloud

Steve Blackwell

Tech Lead/Head of Specialists SA, Manufacturing
Amazon Web Services

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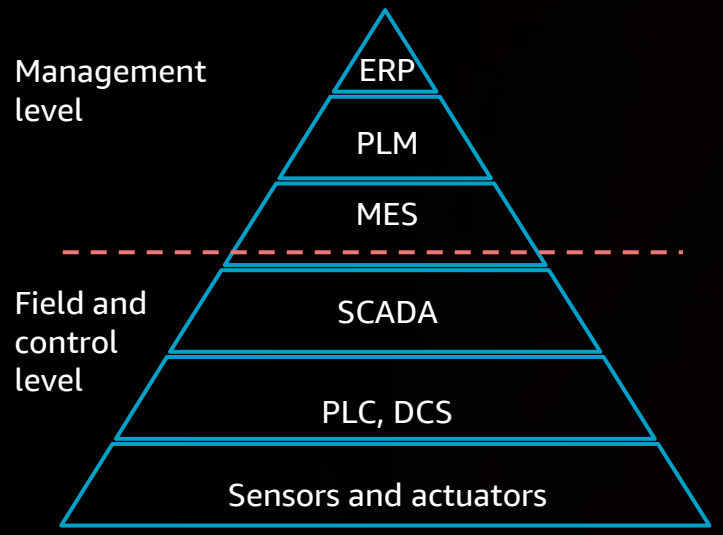
Agenda

- Why a modern MES on the cloud
- Architecture patterns
- Let’s whiteboard

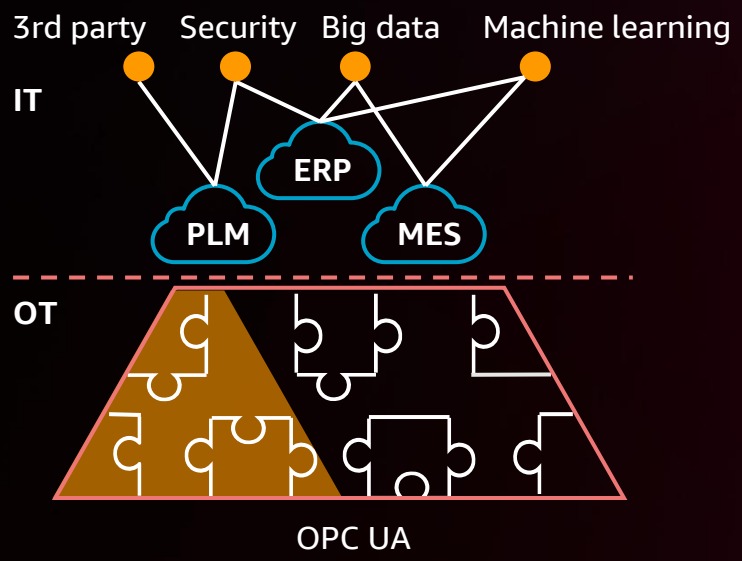
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Evolving ISA95 for data transparency

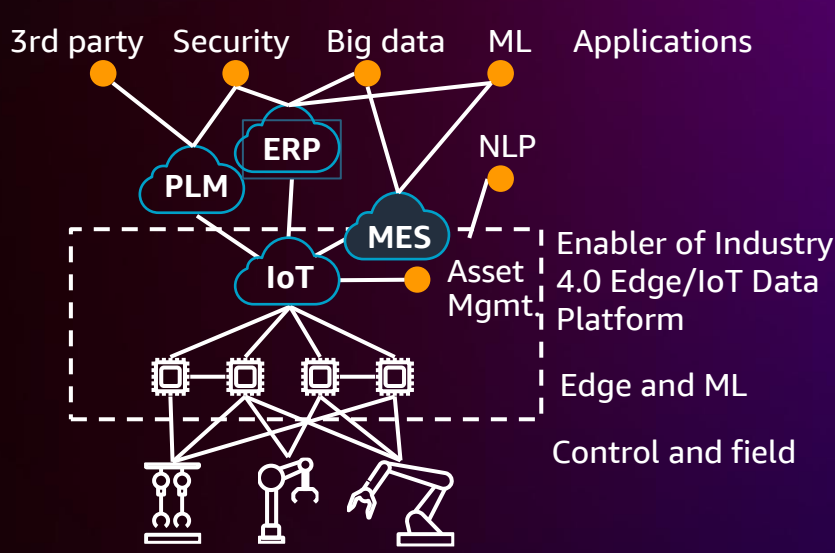
Today



Today/tomorrow



Near future



Monolithic pyramid

- Standalone applications
- Data silos
- Poor upstream/downstream communication
- Disparate proprietary protocols

Converging IT and OT

- Cloud computing revolutionized IT
- Flexible shop floor connectivity
- Descriptive protocols
- System integration

Smart factory

- IT–OT border is gone
- Any-to-any communication
- Data transparency
- Edge/cloud hybrid model

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Modern MES

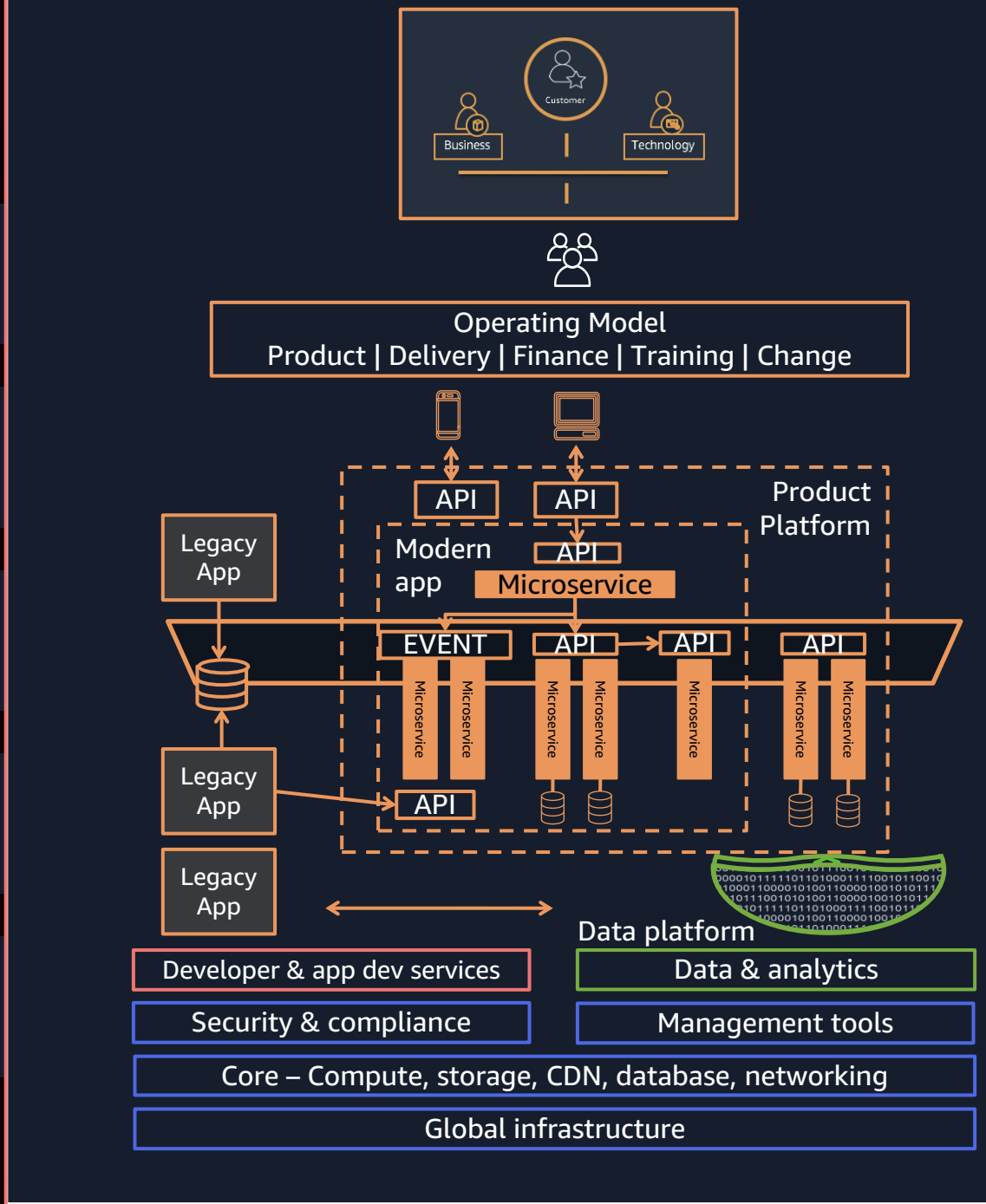
Organizational focused

Hybrid architecture

Ubiquitous access to data

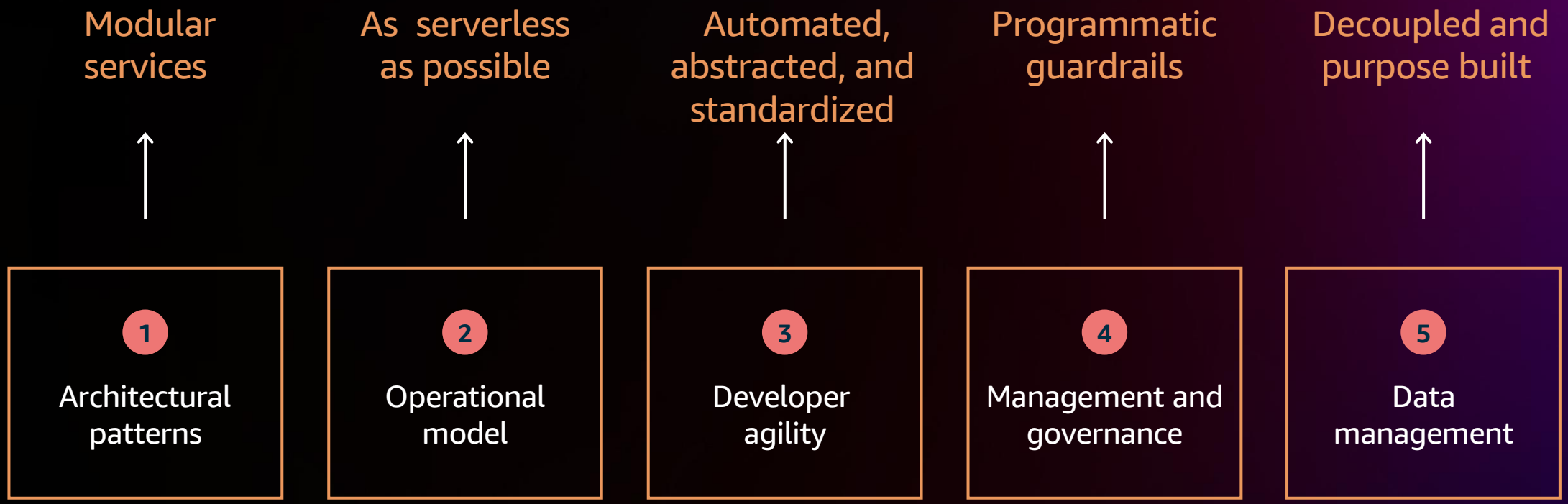
Built for the use case

Infrastructure automation



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How to build a modern application?



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Benefits of microservice architecture

Reduction of complexity

- Each service is independent and enables modularity

Independent development

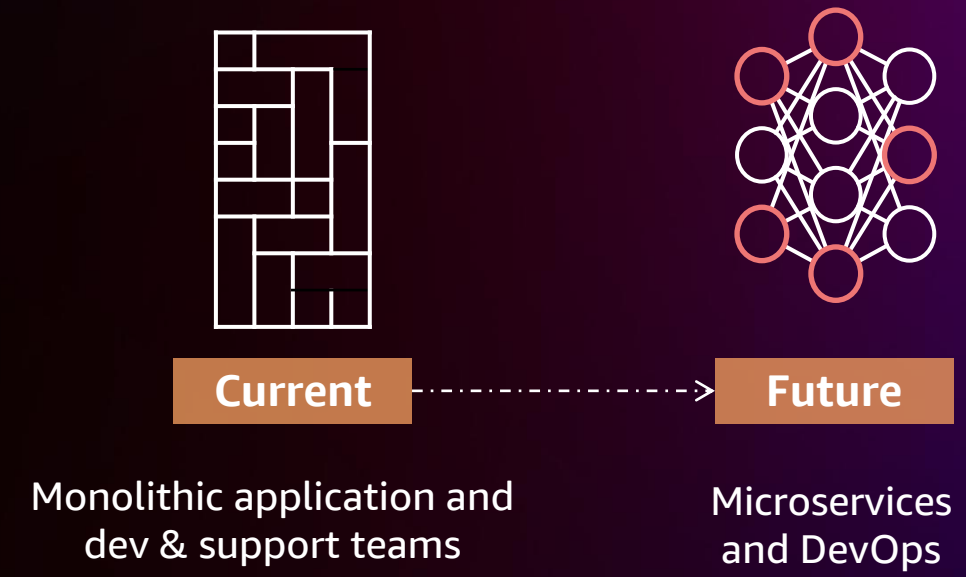
- Service independence and flexibility

Independent deployment

- Changes have no hard dependencies

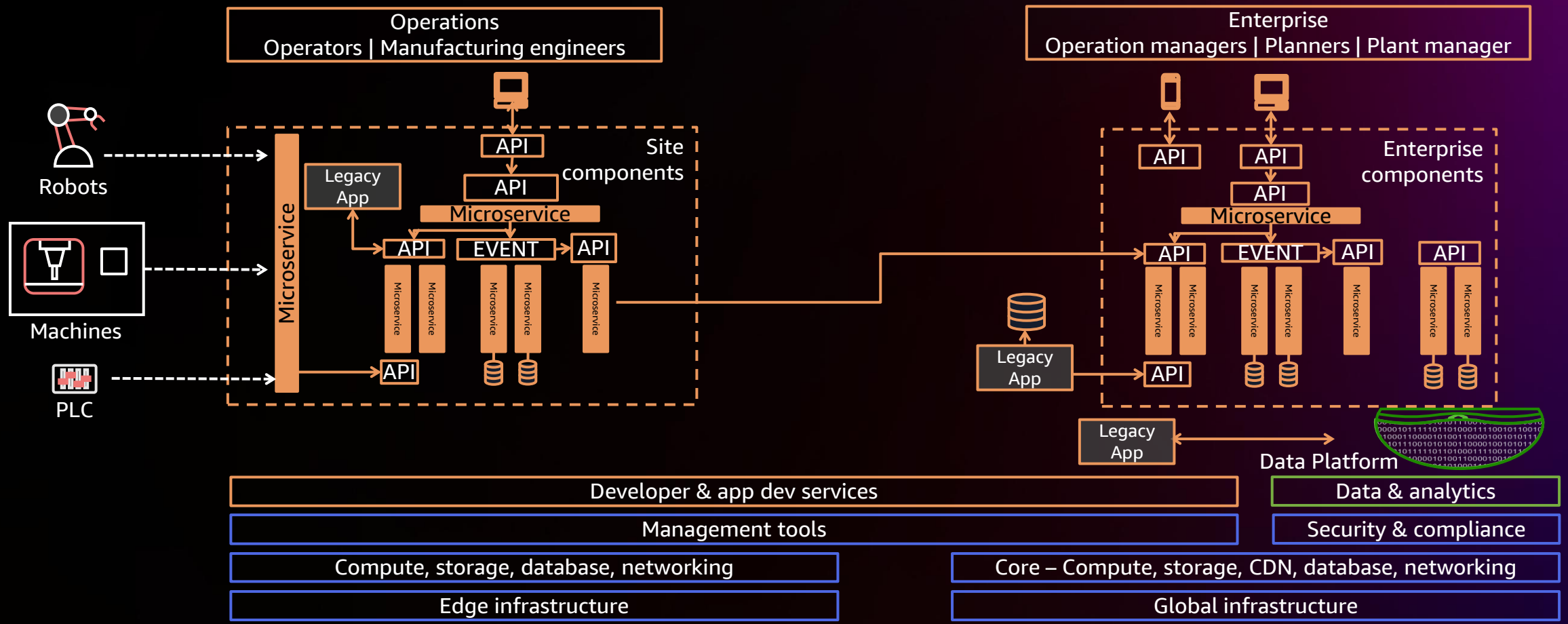
Independent scalability

- Each service can scale to meet capacity and availability



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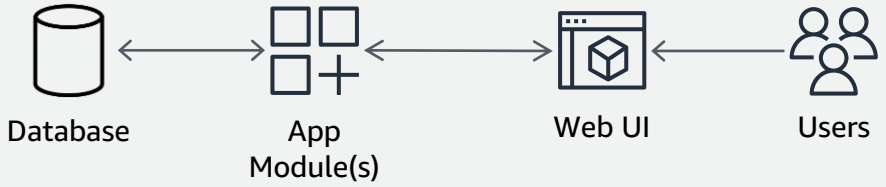
Modern MES architecture

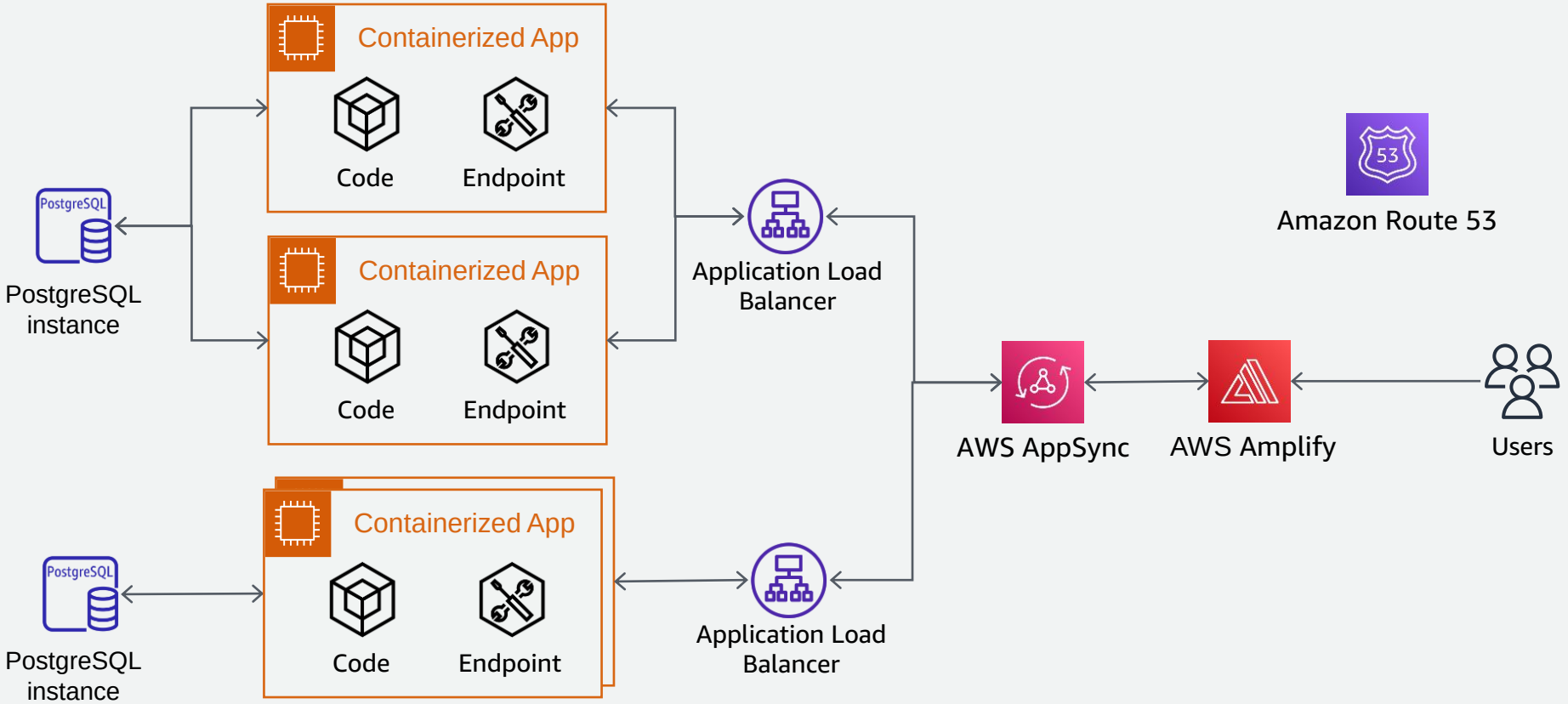


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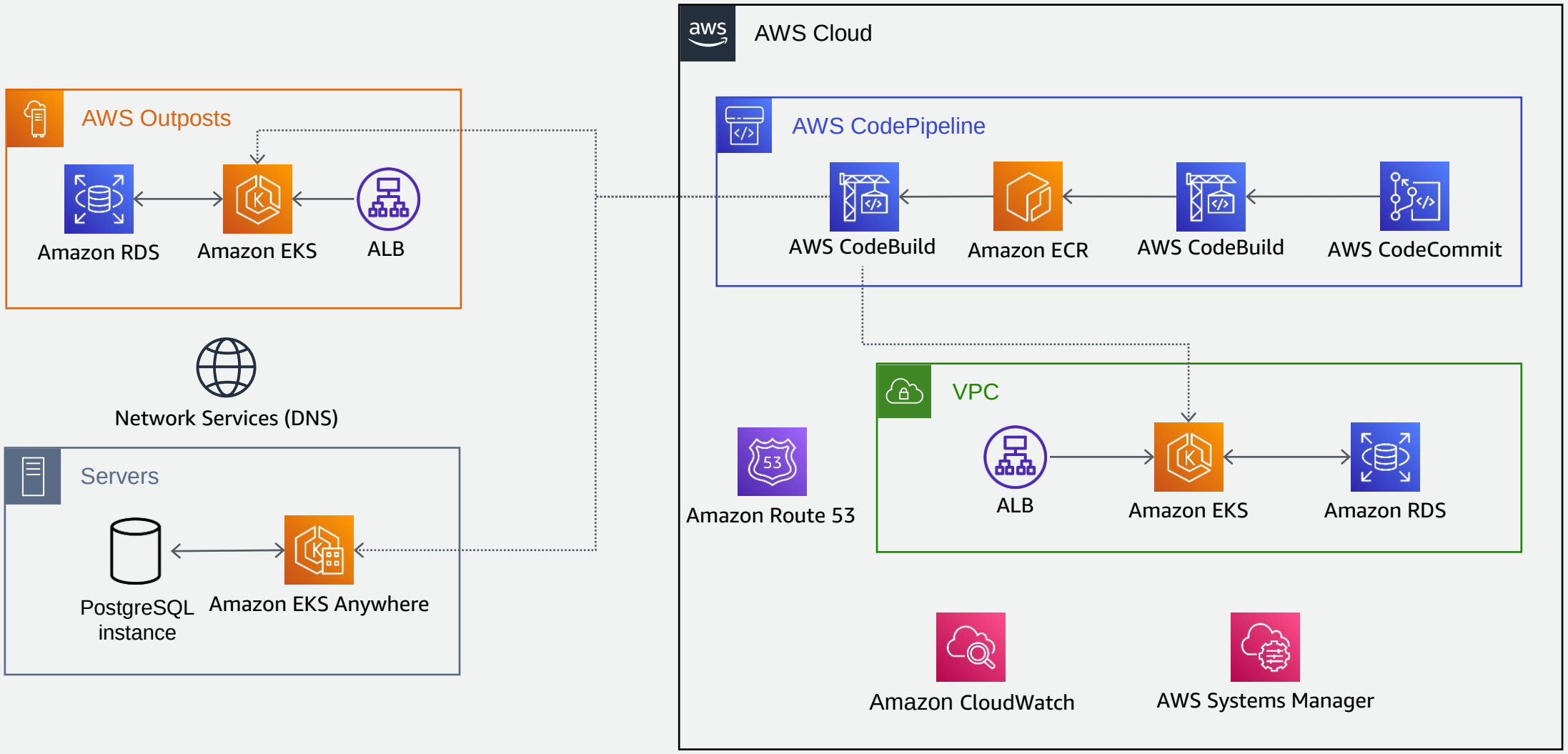
Whiteboarding time

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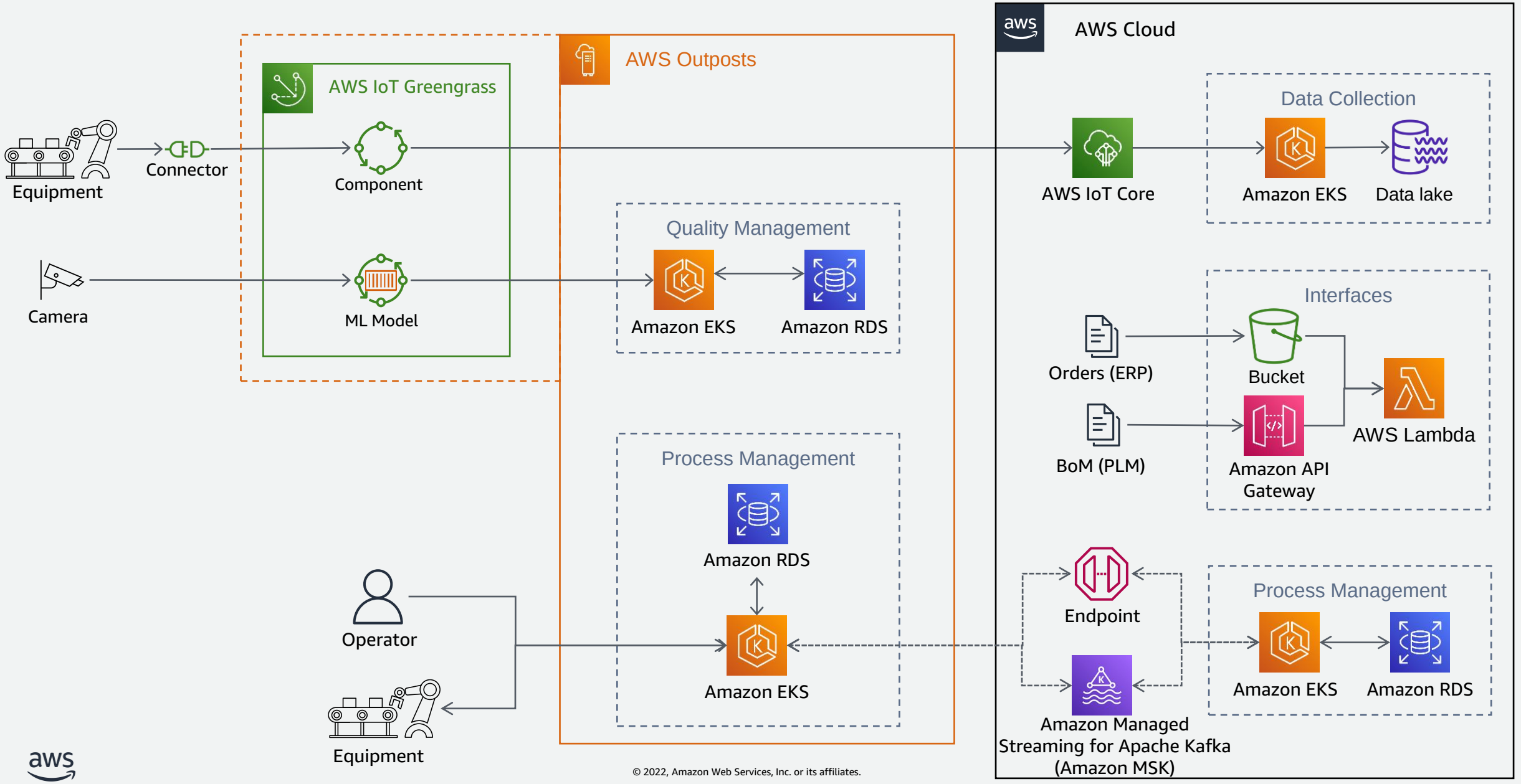




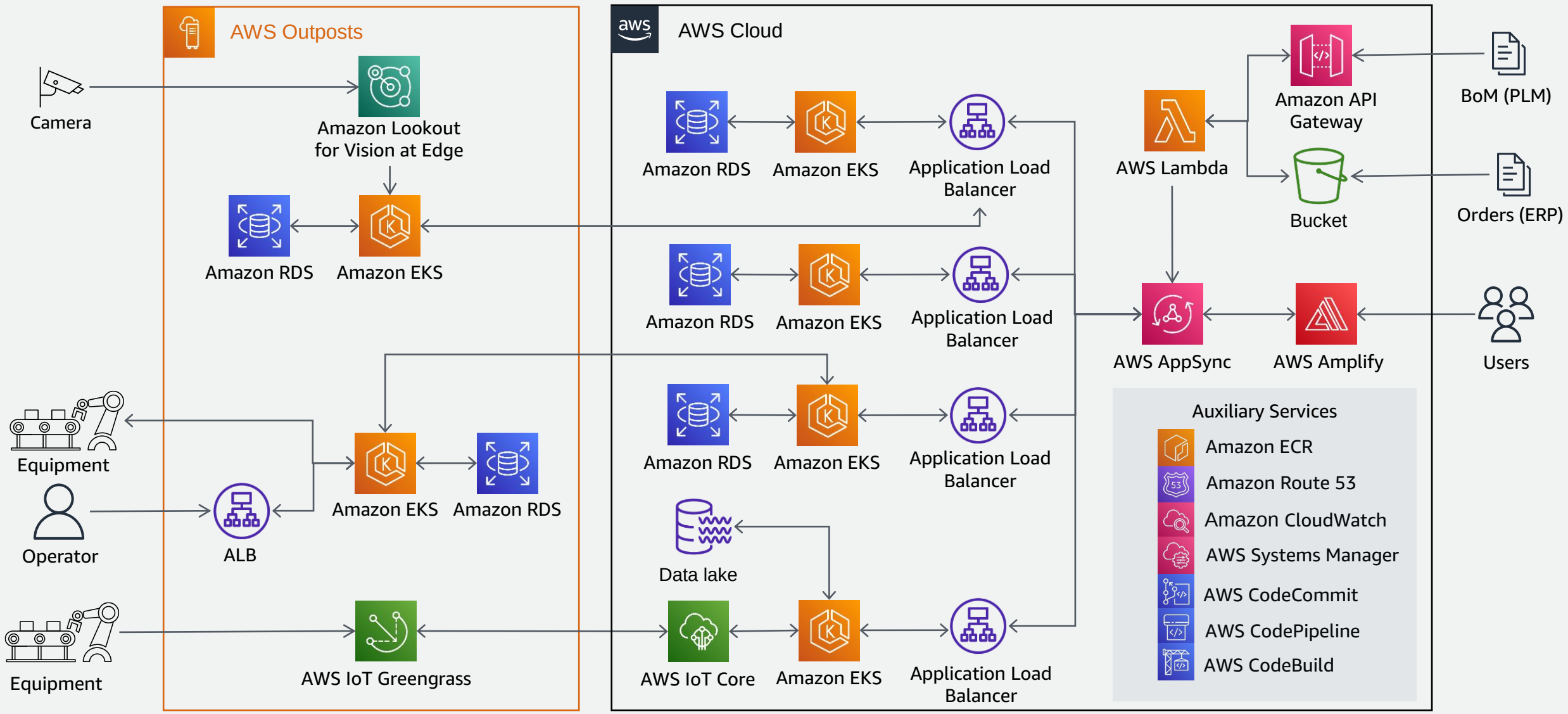
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Thank you!

Steve Blackwell
stevbla@amazon.com
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