

AVEVA PI WORLD

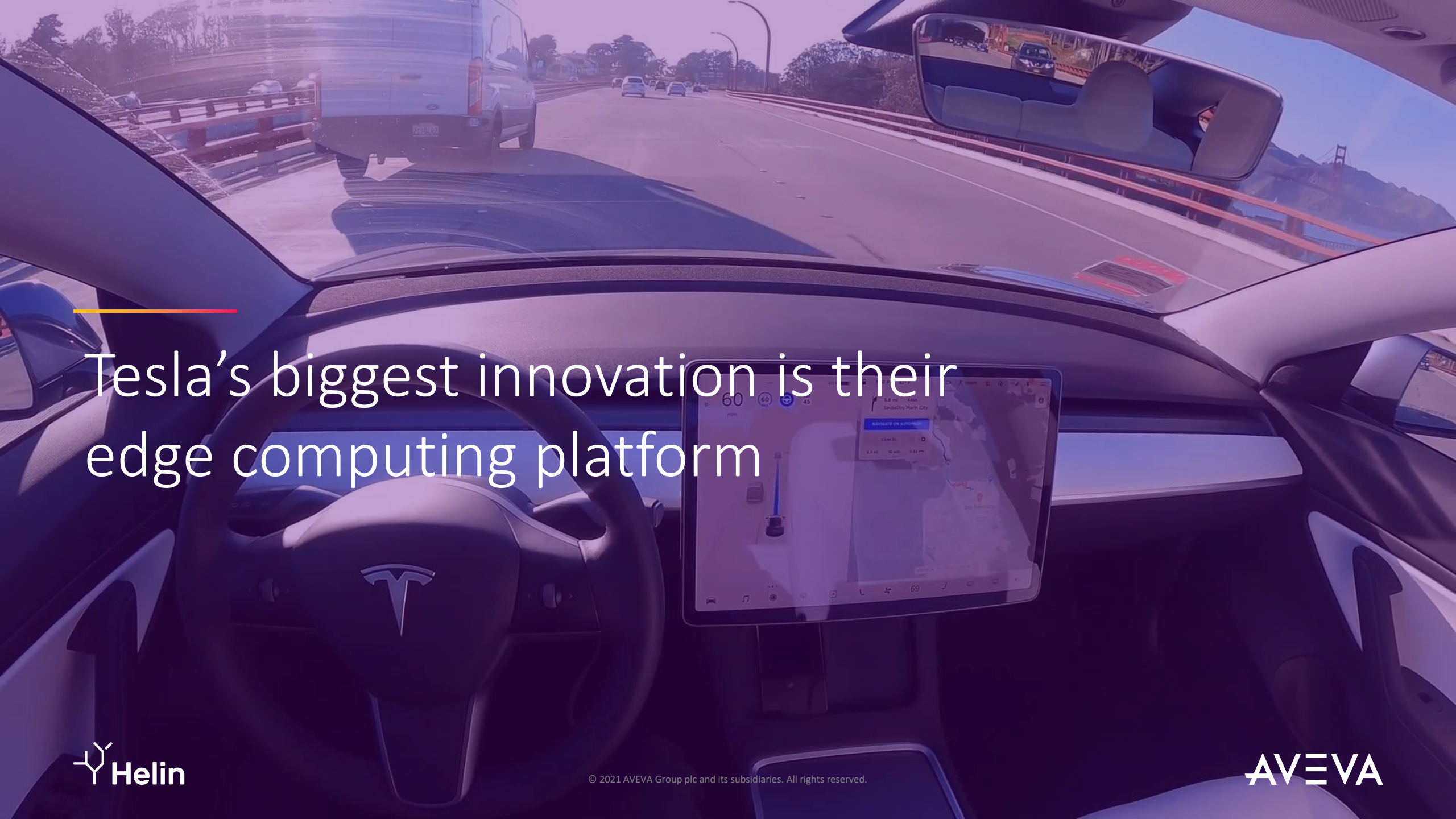
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# The future of marine digitization lies at the edge

With cloud being the big orchestrator

Presented by: Martijn Handels





Tesla's biggest innovation is their  
edge computing platform





# Edge computing for marine

## Combining three major components

### Edge infrastructure

Standardized edge computing infrastructure to enable edge applications deployment

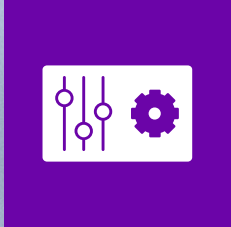
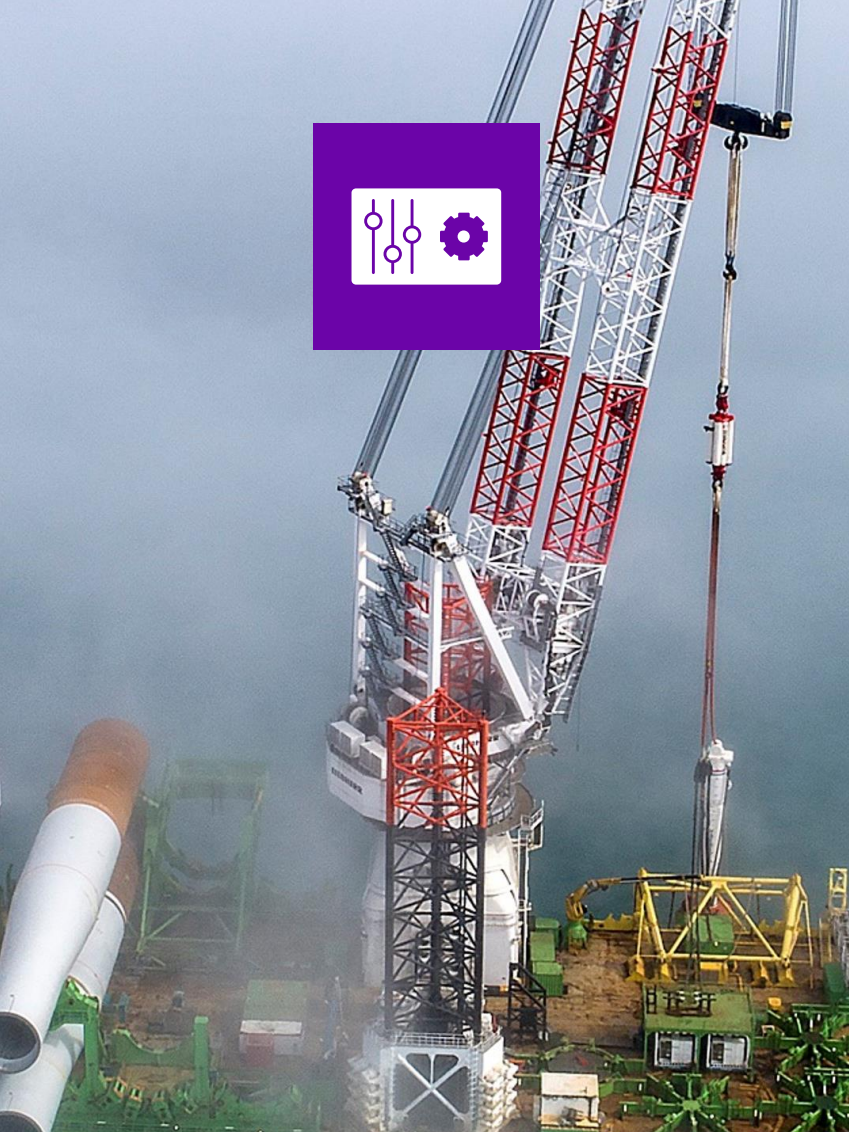
### Edge app store & digital twins

Deploy edge applications on vessels when needed; use digital twins to simulate best practices

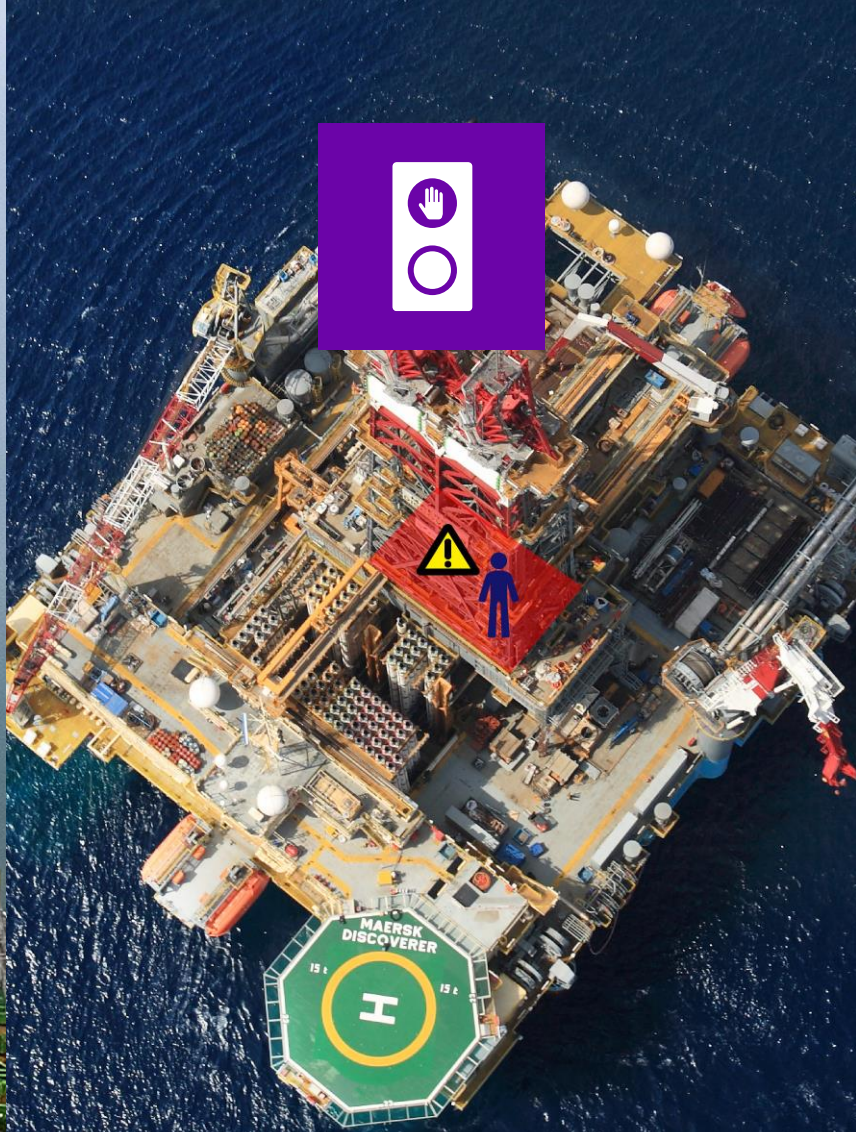
### Continuous integration & deployment

Implementing standardized edge-to-cloud infrastructure to enable any edge app





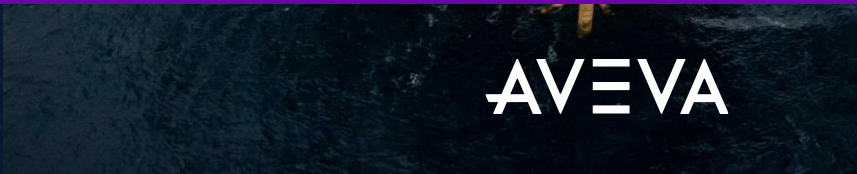
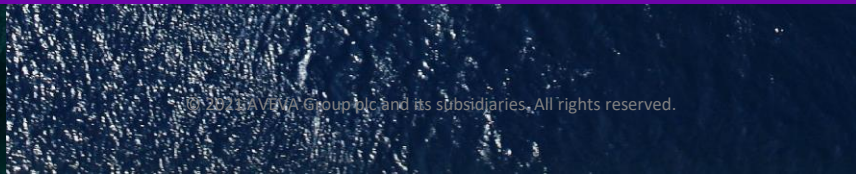
Piling Optimization



Red Zone Management



MPD Monitoring



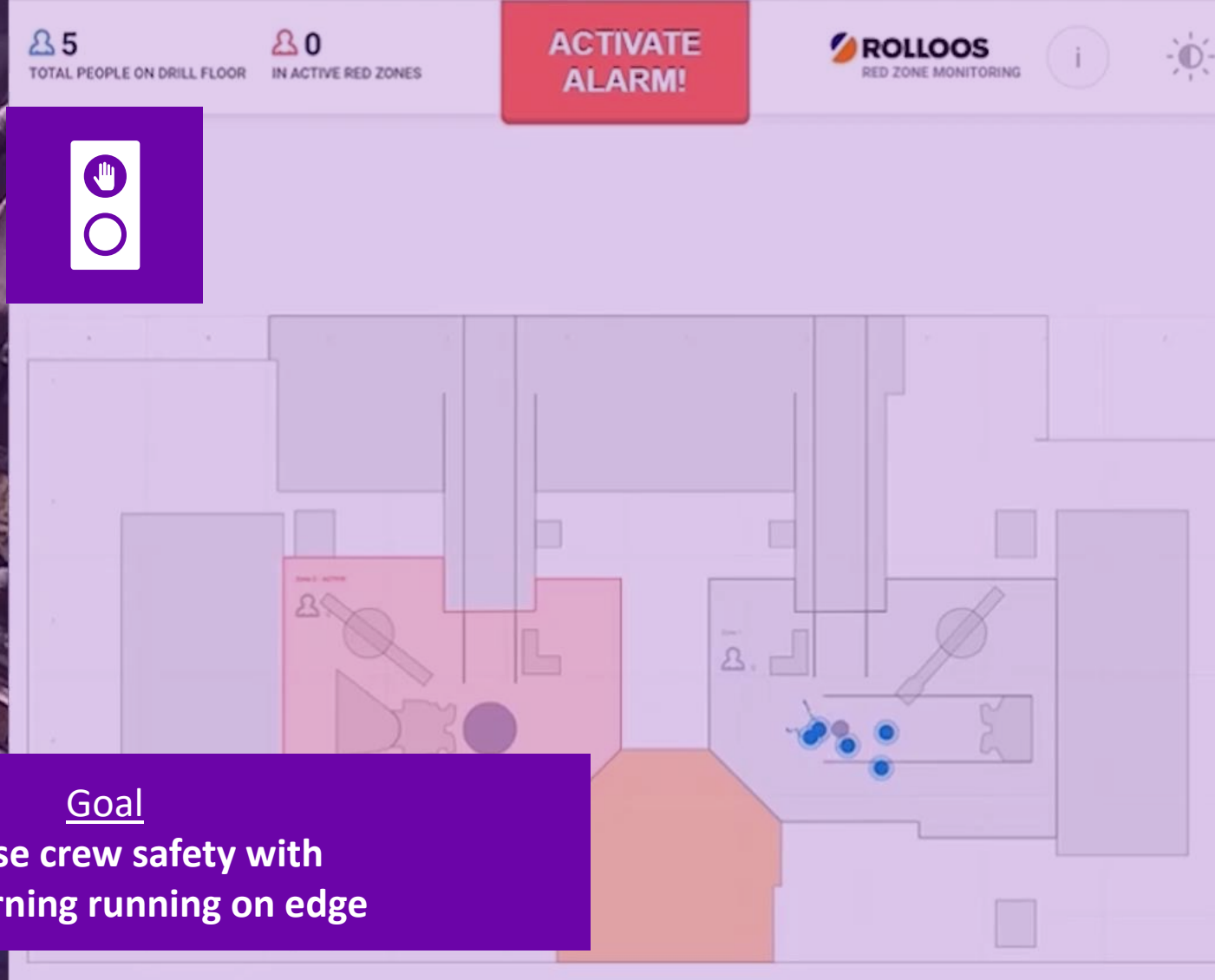
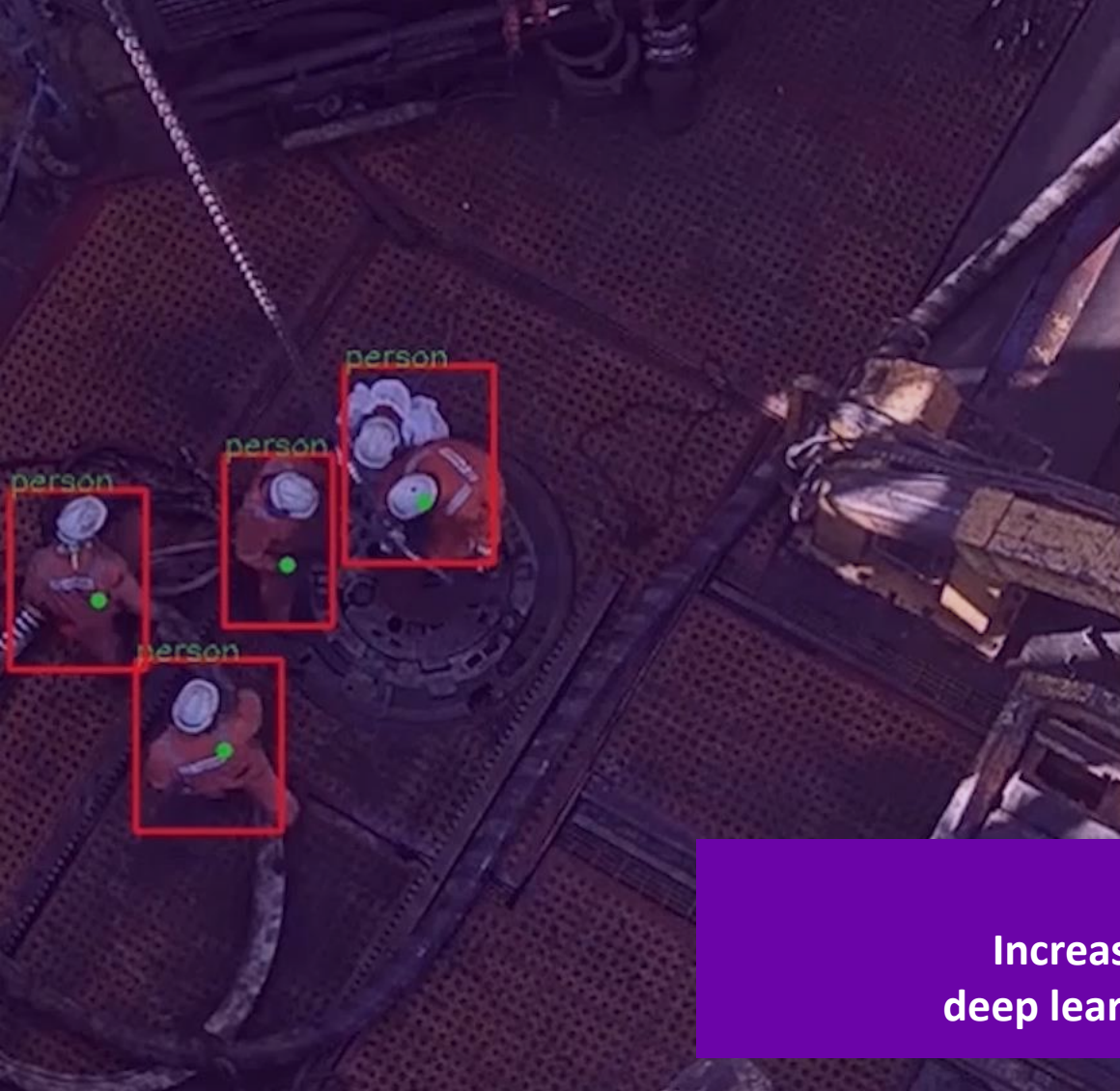




### Goal

**Increase performance by enabling  
remote configuration of process & controls**

## **Piling Optimization**



Goal  
Increase crew safety with  
deep learning running on edge

## Red Zone Management



### Goal

**Increase uptime by implementing proactive advisory tool with integrated seal wear analysis**

## **MPD Monitoring**





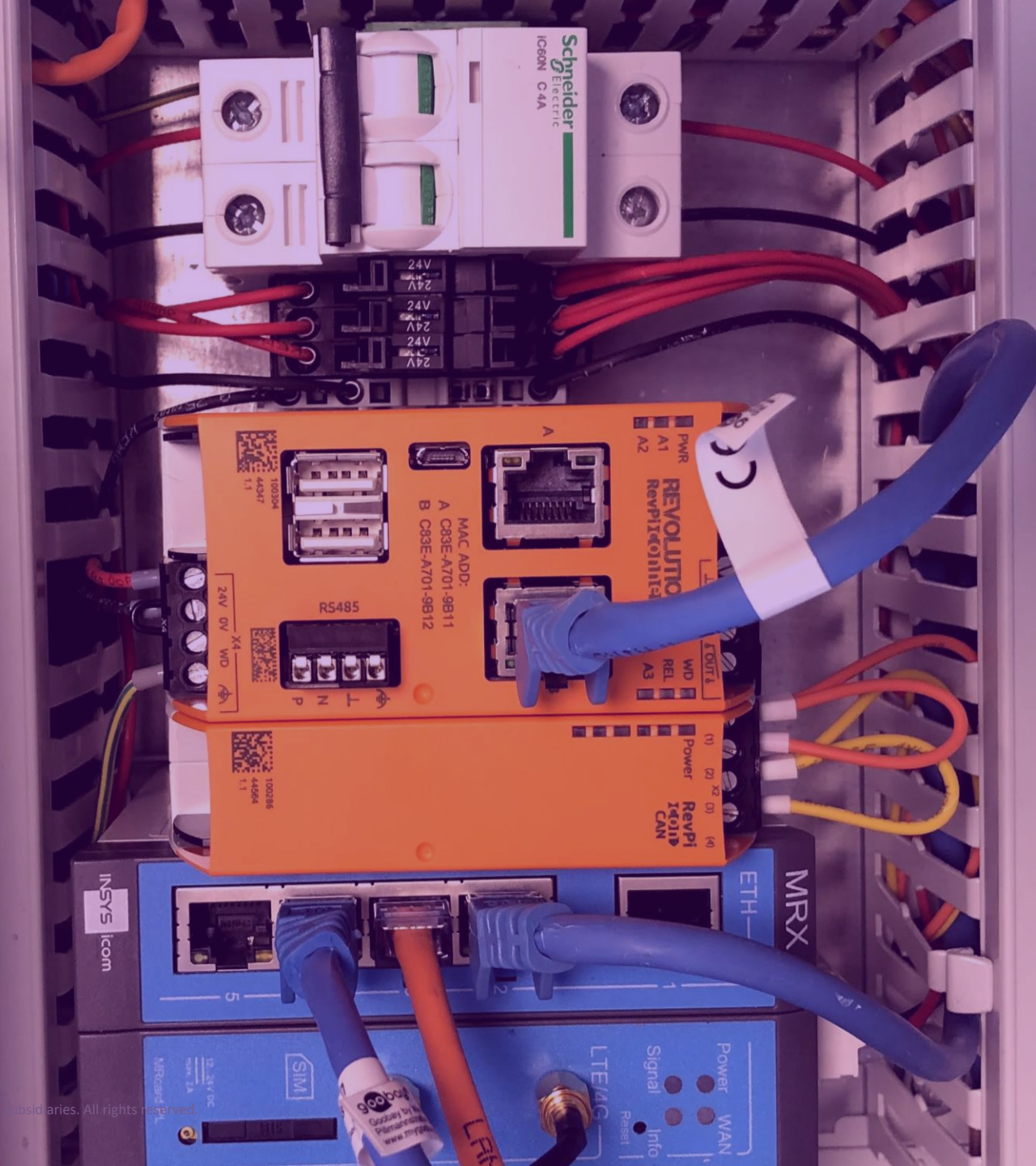
## Bringing cloud features to the edge

## Standardized building blocks

## Integration & unification

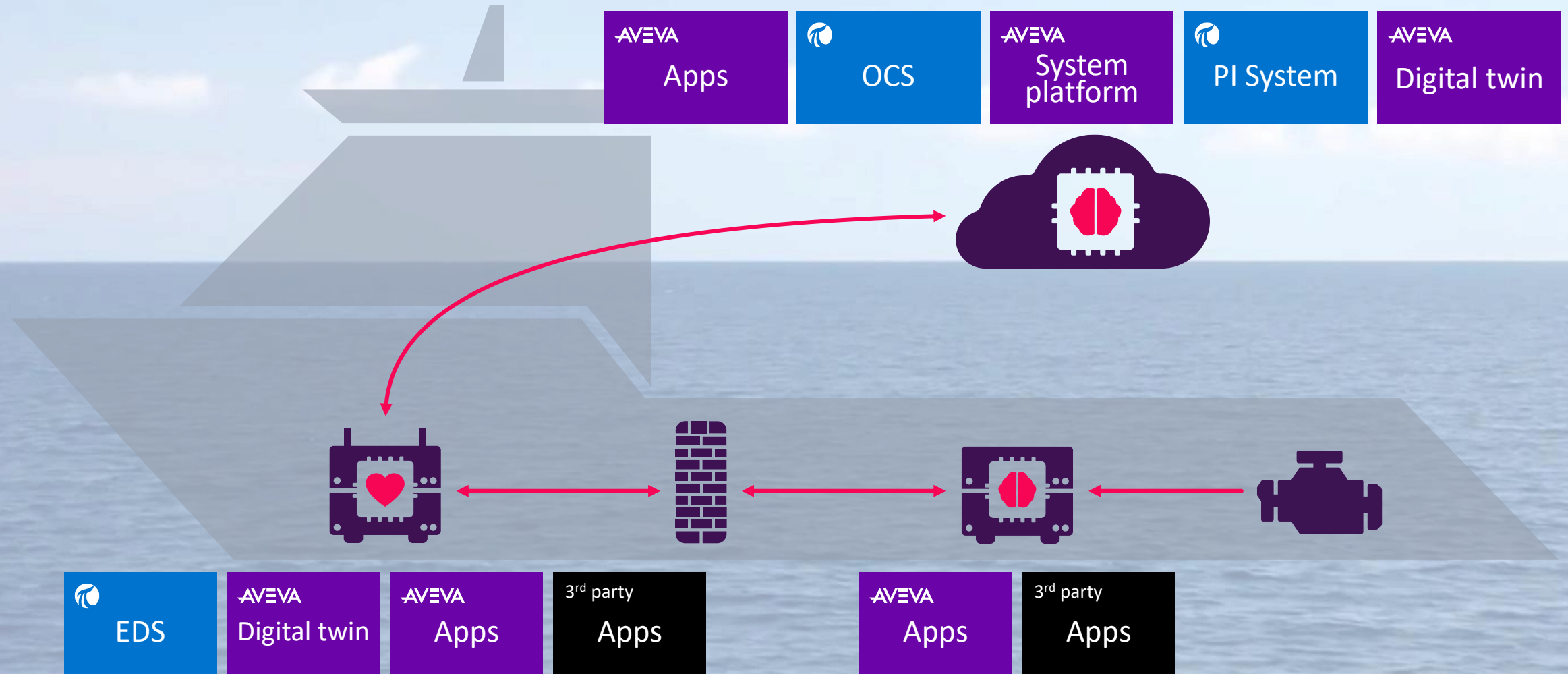
## Layered security & provisioning

## Common data protocol





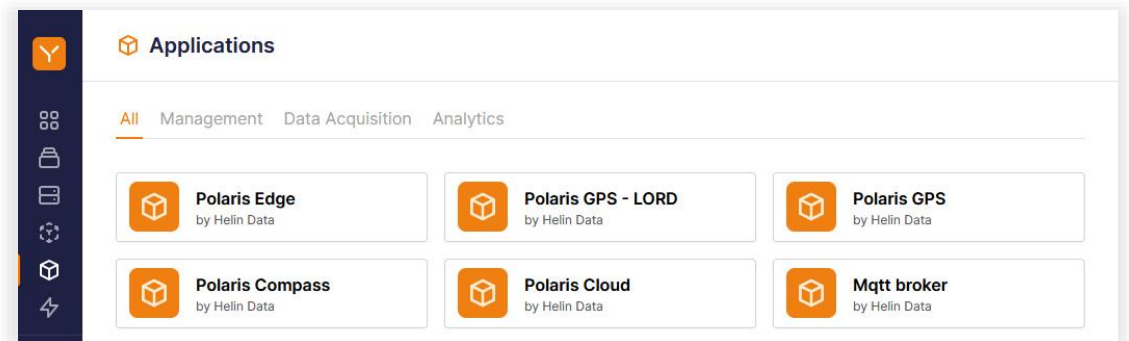
# Illustrative edge computing architecture



# Edge app store & Digital twins

## Advanced features & analytics on the vessel

- Industrial app-store for dedicated features
- Digital twins for design, construction & operation
- Secure exposure of data & compute to 3<sup>rd</sup> parties

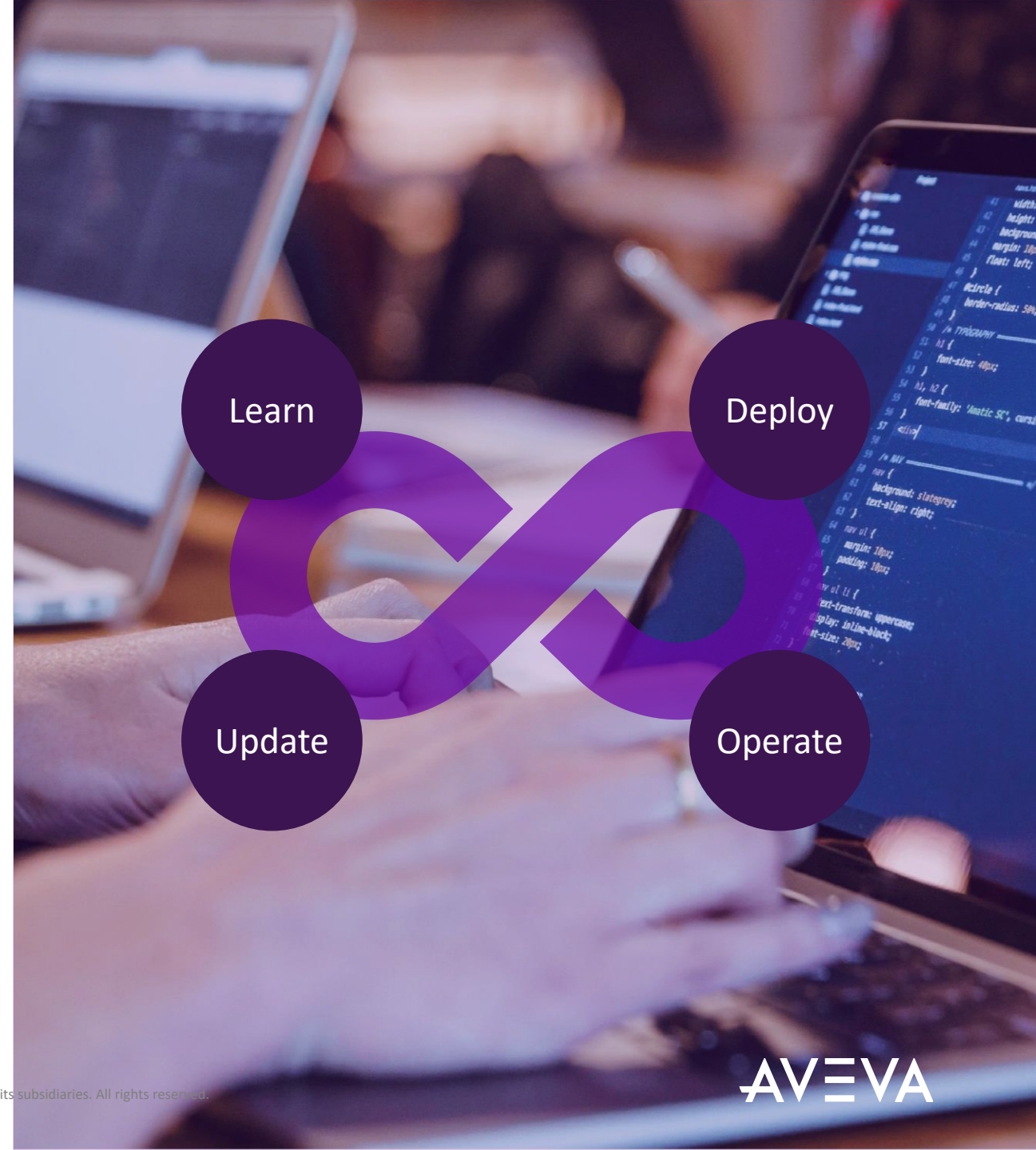




# Continuous integration

## Optimization of the life-cycle

- Data quality assurance
- Real-time simulation threads
- Continuous DataOps & MLOps
- Training in cloud & deployment at edge



# Helin delivers simplicity in advanced edge computing



**Standardized edge  
infrastructures**

**Advanced analytics  
applications**

**Dedicated  
global support**



# “The Edge Will Eat The Cloud.”

Thomas J. Bittman, Distinguished VP Analyst Gartner



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