
AWS
re:Invent
NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

MFG302-R

Dive deep into architecting a factory of the future

Andreas Björshammar (he/him)

Director Core Platforms
Northvolt

Matthijs Kok (he/him)

Engineering Manager Platform
Northvolt

Jan Metzner (he/him)

Specialist Solutions Architect, Manufacturing
AWS

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Agenda

What do we see in architecture patterns for factories?

Which AWS services can help drive this?

Dive deep into the factory architecture from Northvolt

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Manufacturing industry challenges



Create new revenue sources



Improve OEE and optimize production



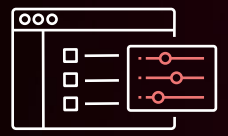
Optimize supply chain, reduce inventory



Worker attrition and training



Protecting and securing production and IP



Liberating data and revealing insights

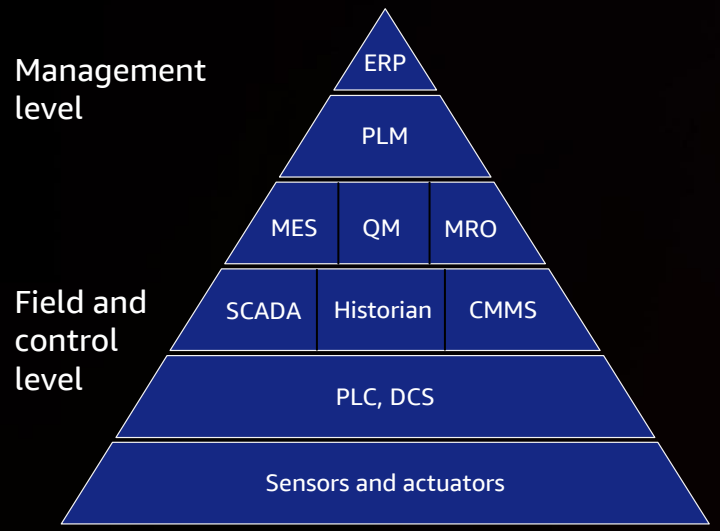


Cost reduction

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Next-gen manufacturing software

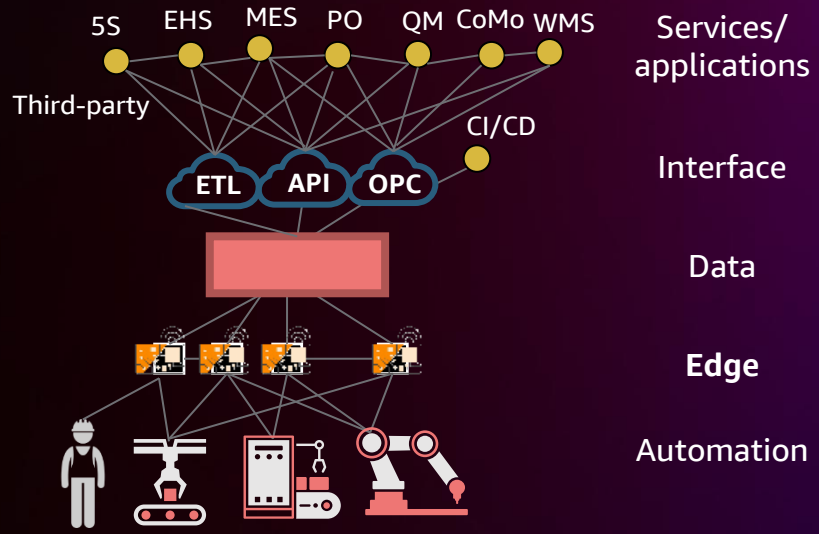
Today



Monolithic pyramid

- Standalone applications
- Point-to-point integration
- Data silos
- Poor upstream/downstream communication
- Proprietary protocols

Tomorrow



Joint architecture

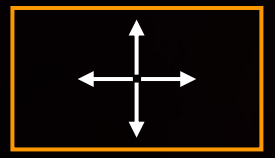
- Redefining manufacturing software landscape
- OPC-UA backbone
- Data platform open API
- Edge/cloud hybrid model
- Data-driven manufacturing

aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

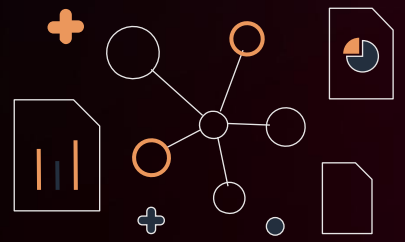
Recurring patterns in smart factories



Containers for portability



(Bi)directional communication



Contextualization

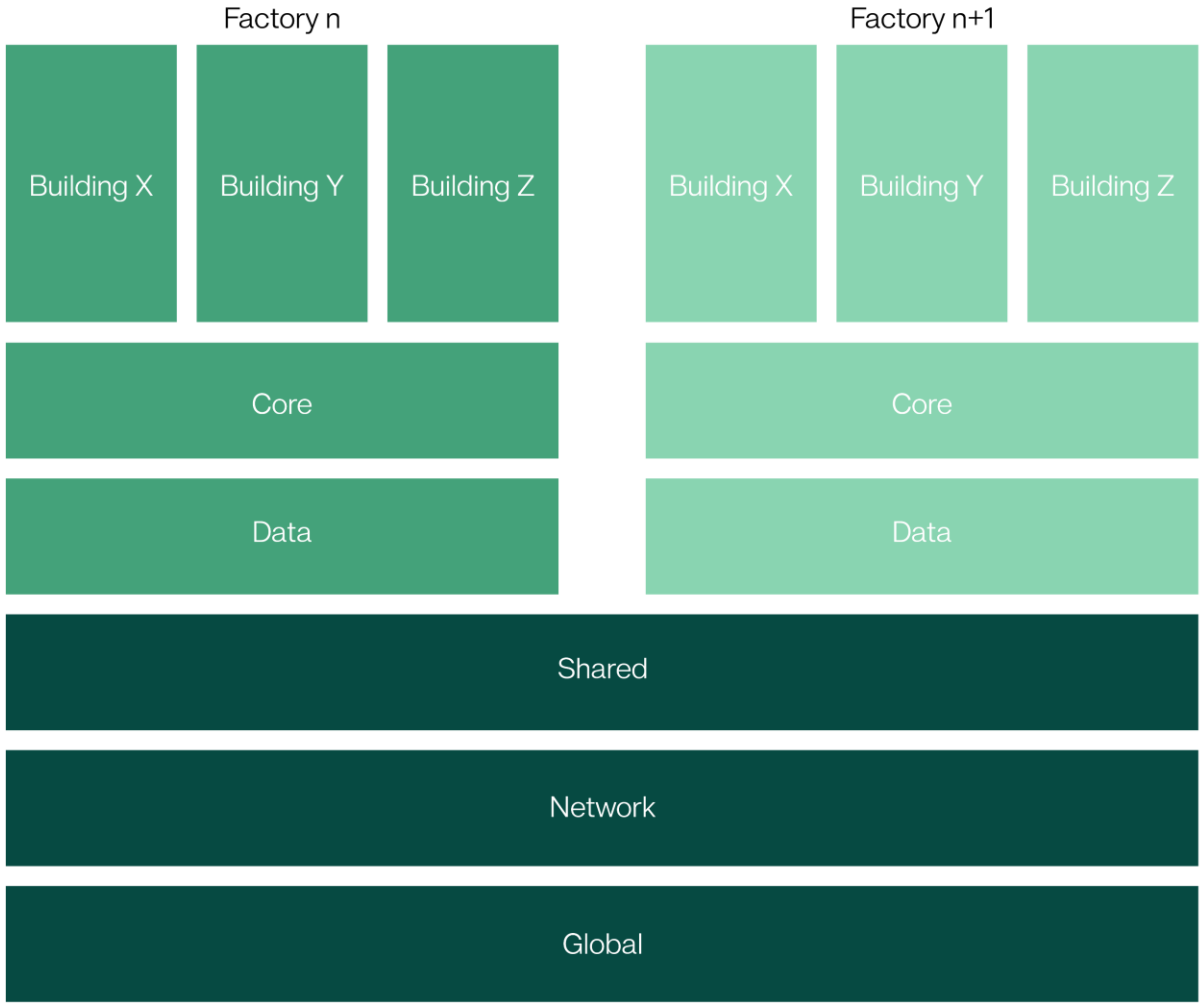


#OneNetwork

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.


northvolt

Scalability Strategy



AWS Blogpost



Whiteboard: Northvolt’s factory architecture

Thank you!



Please complete the session survey in the **mobile app**

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.