

Investing to build a better future Danfoss Smart Manufacturing

DANFOSS • 1933-2023
90
YEAR ANNIVERSARY

Tarun Chopra
Head of Manufacturing Services , Danfoss Group IT



Professional Introduction



MANUFACTURING
SERVICES



- Tarun Chopra, Head of Manufacturing Services, Danfoss Group IT
- Bachelors of Engineering – Computer Science
- Masters in Information Systems
- Work experience – 22 years
 - Continental AG
 - Samsung Electronics
 - Siemens AG
- Global Experience
 - 15 years in Germany
 - 5 years in Seoul, South Korea
 - 3 years in Melbourne, Australia
- Functional area of Expertise : Business IT Strategy, Merger & Acquisitions, E2E Supply Chain, Manufacturing IT & Shopfloor systems
- What drives me – Disciplined consistency, Strategy , Execution and Family

Danfoss at a glance

Three strong business segments with leading positions

Danfoss Power Solutions

1933

Long track record
within innovative
engineering

Danfoss Climate Solutions

Worldwide sales in
more than
100 countries

Danfoss Drives Power Electronics and Drives

+42,000
employees

97
Factories in 20 countries

Preferred partner in **helping our customers** decarbonize



Three business segments



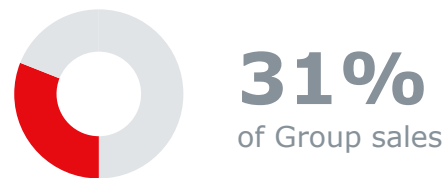
Danfoss Power Solutions

- 5.1bn EUR annual sales
- 18,535 employees
- 52 factories
- 3 Application Development Centers



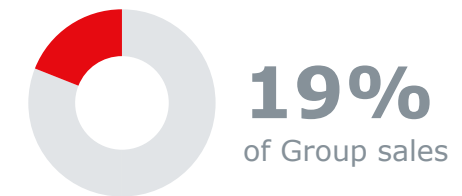
Danfoss Climate Solutions

- 3.2bn EUR annual sales
- 10,331 employees
- 31 factories
- 4 Application Development Centers



Danfoss Power Electronics and Drives

- 1.9bn EUR annual sales
- 7,875 employees
- 17 factories
- 4 Application Development Centers



Our world – sectors we serve

Danfoss Power Solutions



Construction



Industry

Danfoss Climate Solutions



Residential Heating

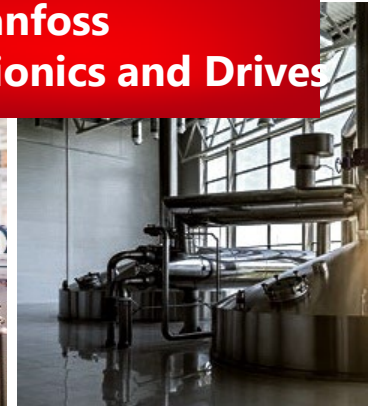


Cooling

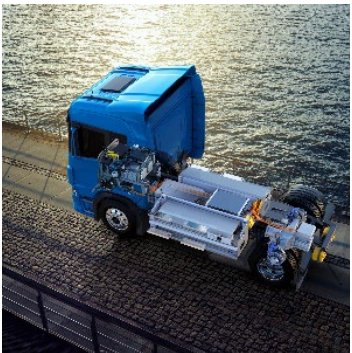
Danfoss Power Electronics and Drives



Industry



Brewery



On-Highway



Agriculture



District Heating



Air Conditioning



Automotive



HVAC

With transformational growth, **Danfoss is a different company** with sales above EUR 10bn and 42,000 employees

2022:
~EUR 10.3bn

2021:
EUR 7.5bn

2017:
EUR 5.8bn

+36%

Reported
growth
in 2022

+15%

Organic
growth
in 2022

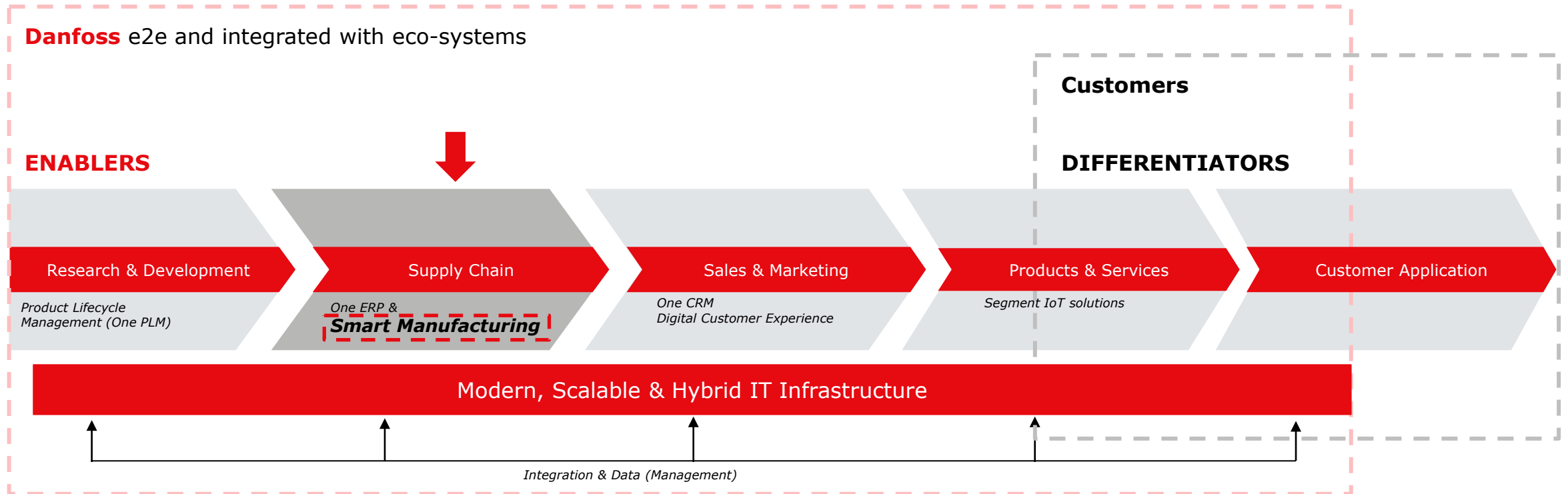
+26%

EBITA
in 2022

+16%

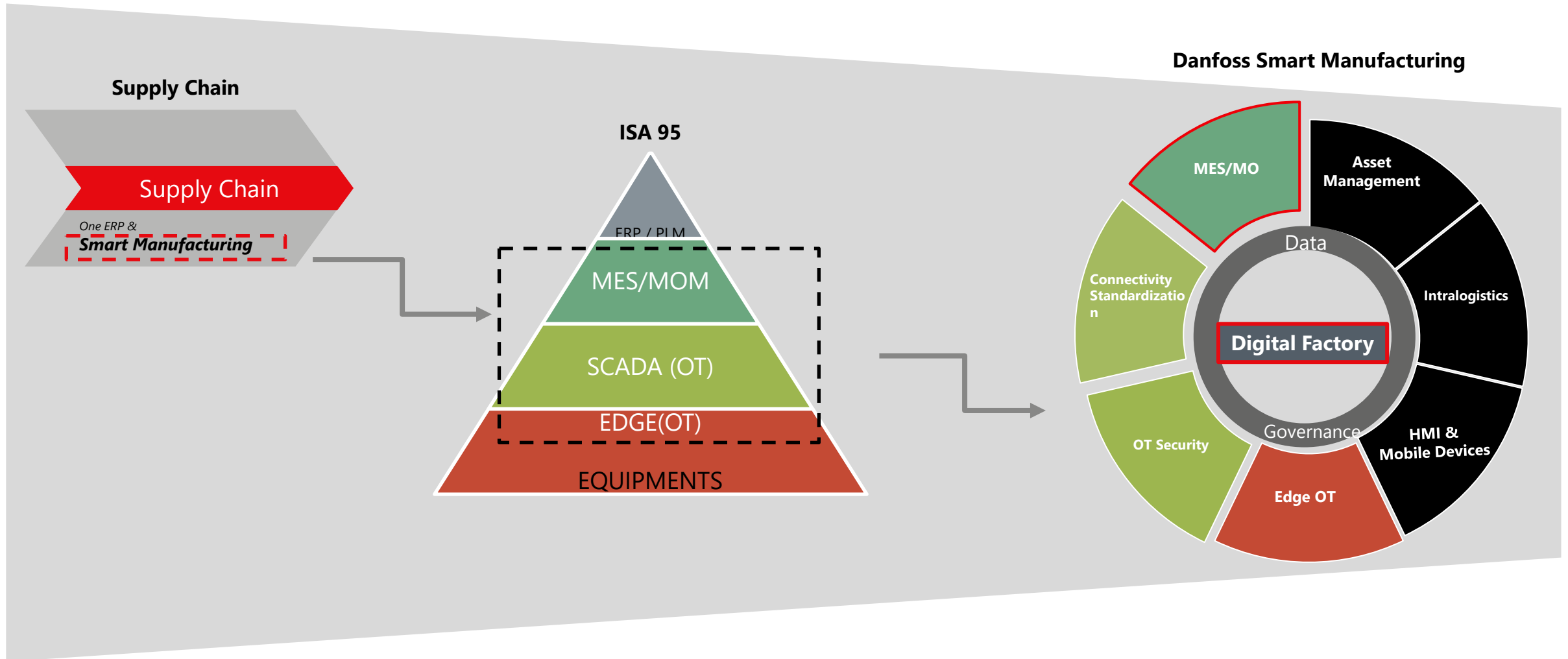
Cash
flow
in 2022

Working towards **one strong digital platform** for **Danfoss and our customers**



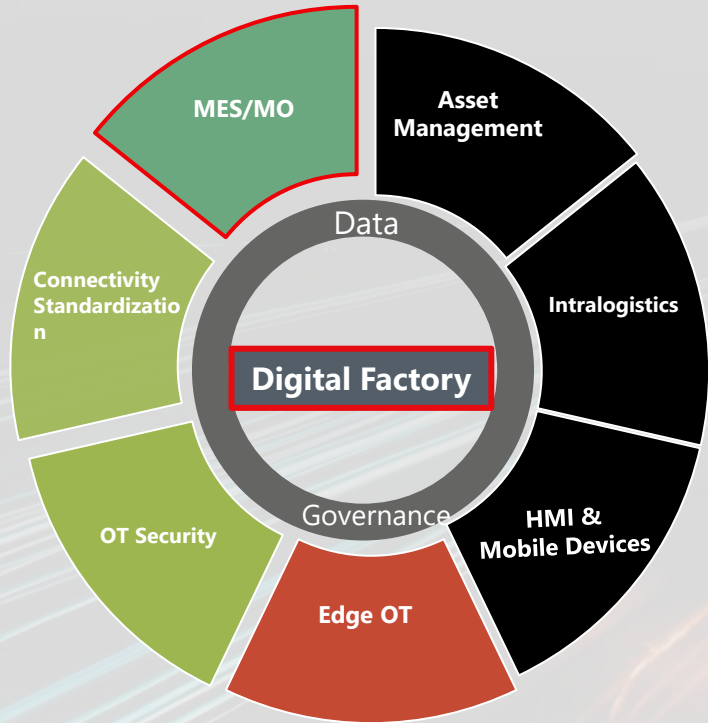
We are **executing** a digital **transformation** of our entire **value chain**

Supply Chain value stream Dissecting 'Smart Manufacturing'



Smart Manufacturing Journey

Initial Focus areas – Delivering on GMM Commitments



MES/MOM

- ☑ Execute on MOM Platform(s) in Danfoss
- ☑ OEE Solutions
- ☑ Predictive Maintenance

Connectivity and Standardization

- ☑ Flexible – ISA Layer 3 Agnostic
- ☑ Interconnected systems via APIs

OT Security

- ☑ Risk assessment and build Standard
- ☑ Prepare and start rollouts
- ☑ Train the trainers

BUSINESS VALUE

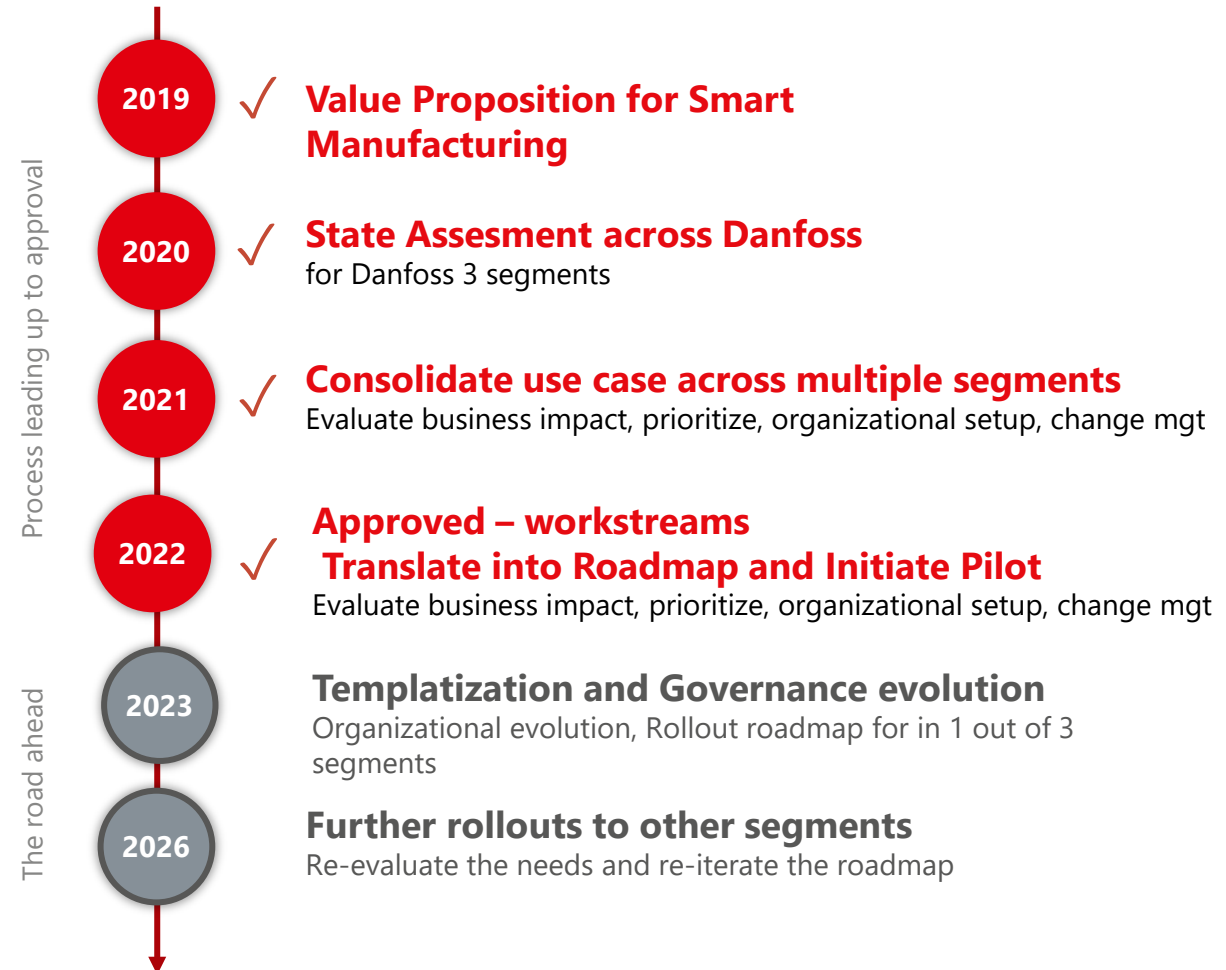
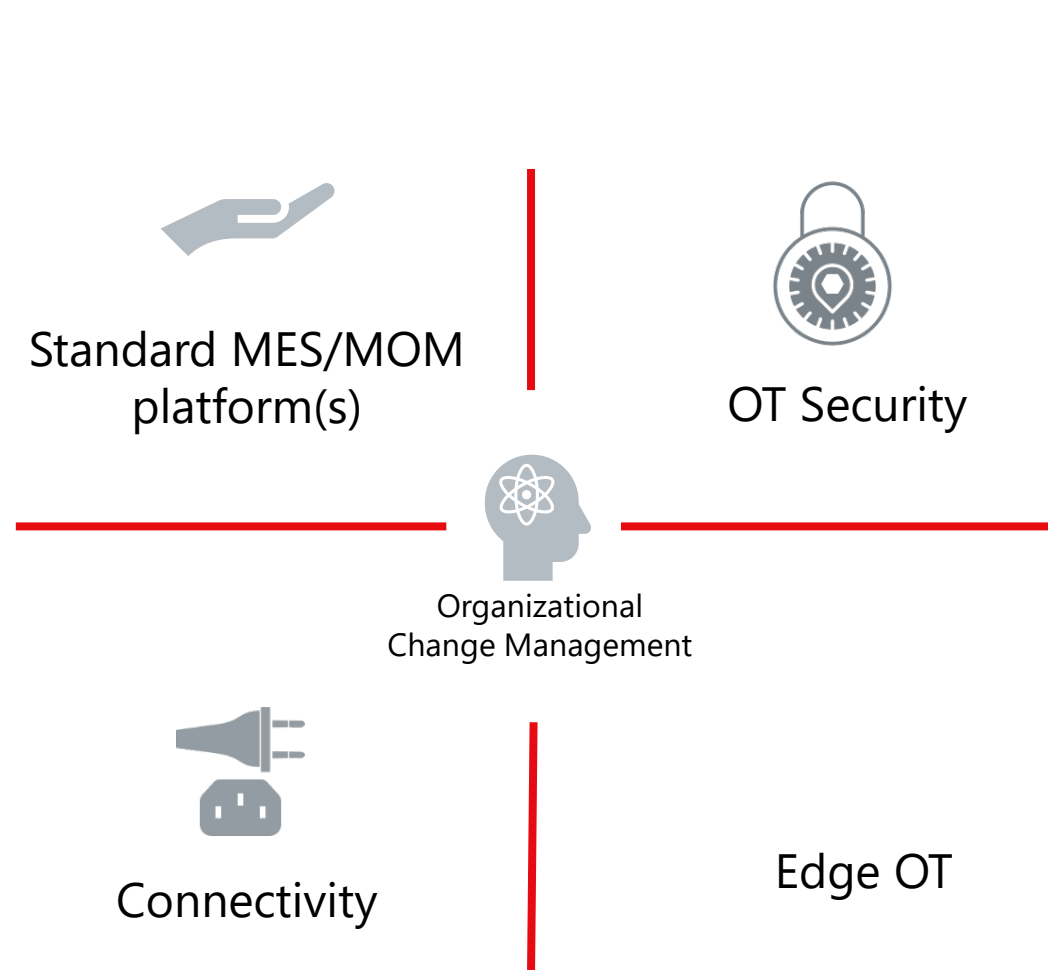
1 High Quality Data -30 %

2 No Touch Processes- 10%

3 Improved Salaried Productivity (10-15%)

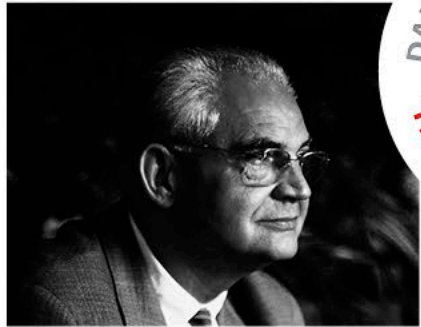
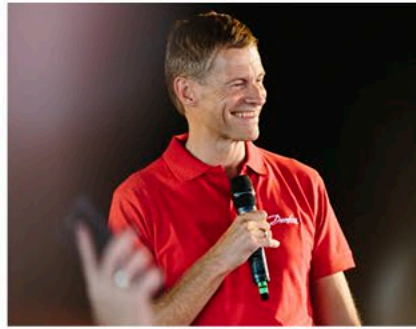
4 Enabler for e2e Process automation

Smart Manufacturing Journey – First 4 focus areas



Learnings

- Top down and bottom up buy in
- Find your own sweet spot – Balance between ambition and need of the hour
- This is a 'Journey' – Re-evaluate every step/project – Business value
- Know your strengths and weakness - be bold to pause , re-iterate and re-restart
- Build a strong partner network



90 years
and ready
for the future



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#DanfossMoment on
danfossmoment.com



**ENGINEERING
TOMORROW**