

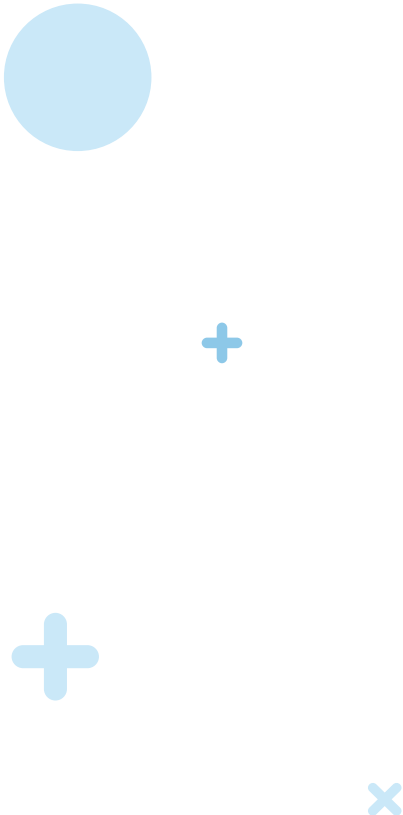
The background image shows a harbor scene at sunset or sunrise. On the left, there are several tall, modern apartment buildings with balconies. In the center, a large white wind turbine stands in the water. To the right, there are industrial buildings and a large white structure, possibly a crane or part of a ship. The water is calm, reflecting the sky and the buildings. A blue diagonal overlay is on the left side, containing technical drawings and the text.

# Home of Industrial Ideas


Smart Production Day 2021

Wim Anthierens

# Our purpose



Our industrial ideas  
empower our customers  
to grow and drive society  
forward. This is how we  
create a better tomorrow.



## Our purpose





# Adding value to people everywhere



The world  
**needs food**  
and **medicine**

















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## Renewable energy for a sustainable future









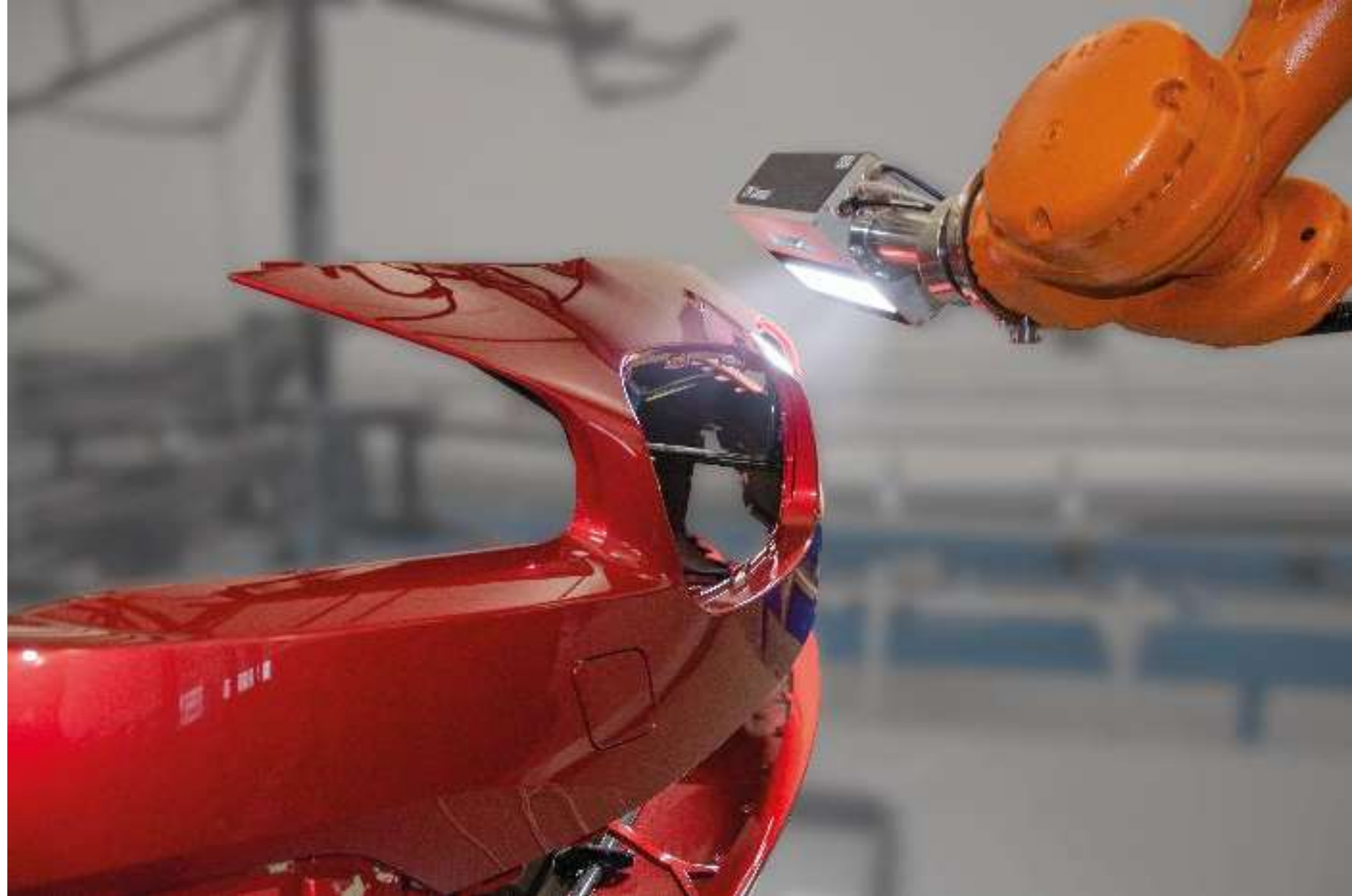


—

# Innovative products require innovative processes











# Sustainable cities connected by safe transport systems











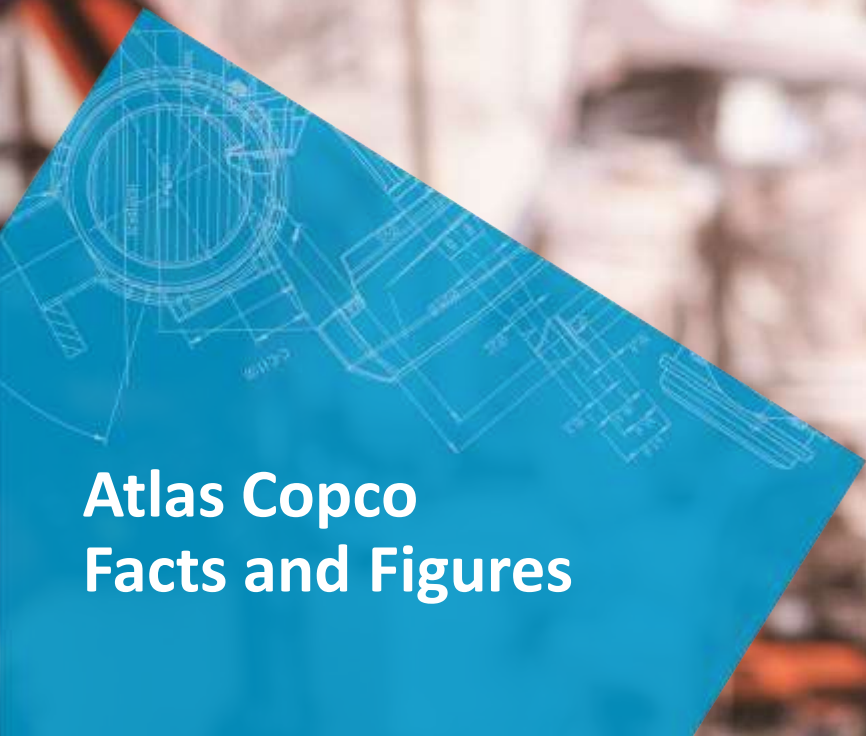
## Protecting marine wildlife











# Atlas Copco Facts and Figures



# This is Atlas Copco



Customers in **184** countries



**40 000** employees in **71** countries



Established in **1873** Stockholm, Sweden



Turnover of nearly **100** BSEK / **10** BEUR



Operating margin of **19.2%**



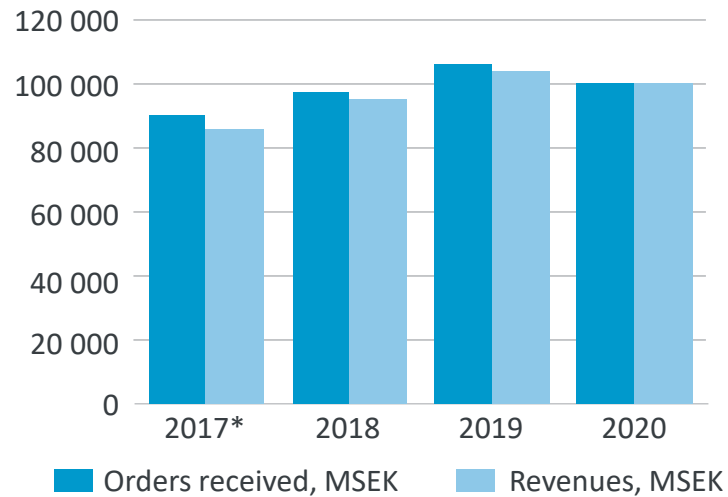
# Atlas Copco in 2020

Revenues  
**100 BSEK / 10 BEUR**

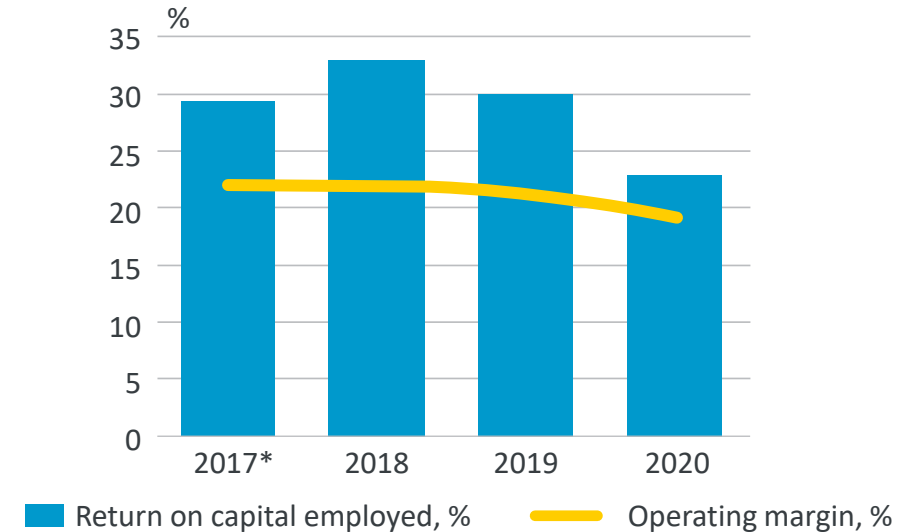
Operating margin  
**19.2%**

Return on capital employed  
**23%**

Orders received  
and revenues

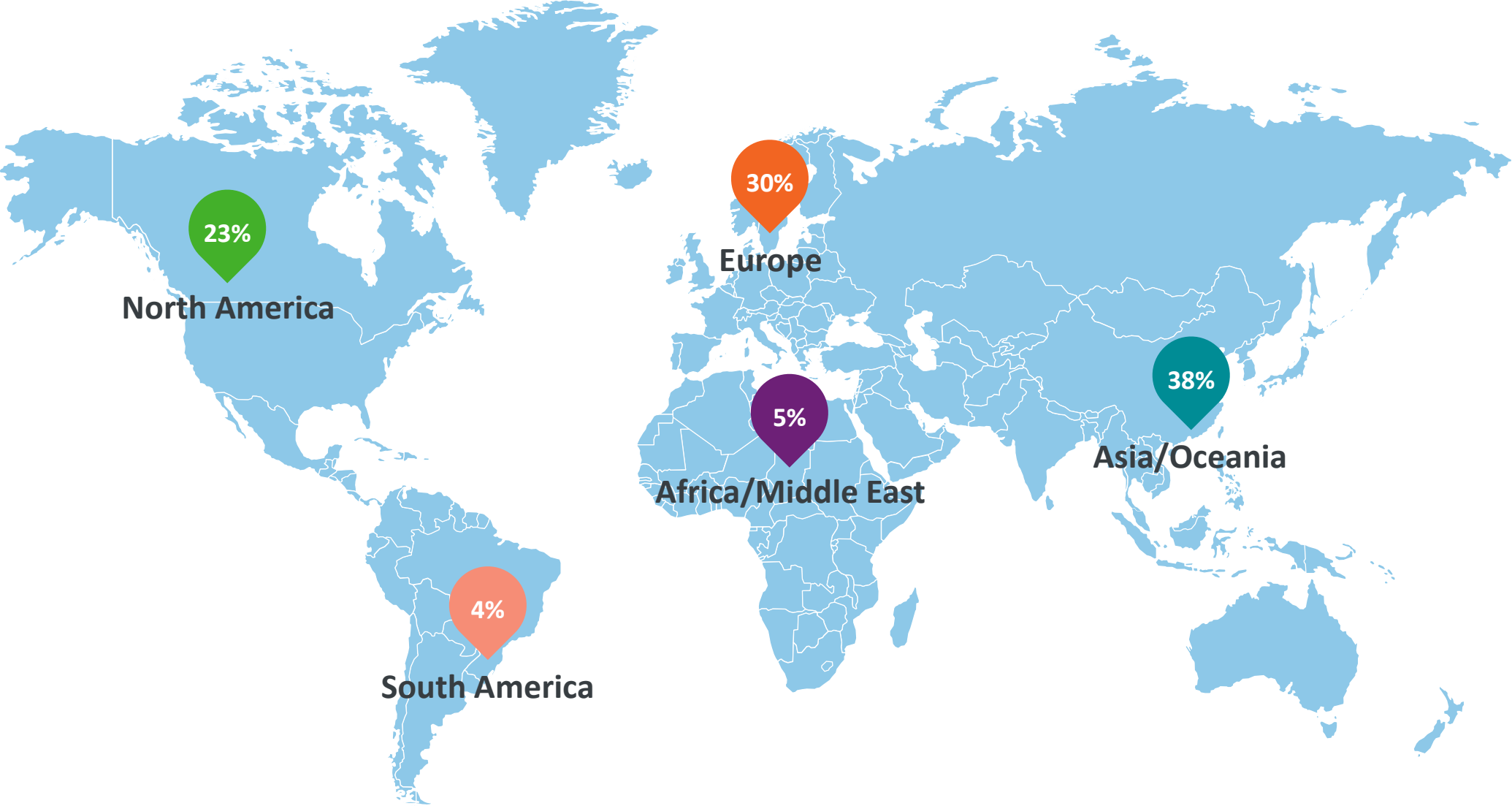


Return on capital employed and  
operating margin



\* Figures for 2017 are restated for IFRS 15 and refer to continuing operations after the distribution of Epiroc in 2018.

# Orders received by region





# A very global presence

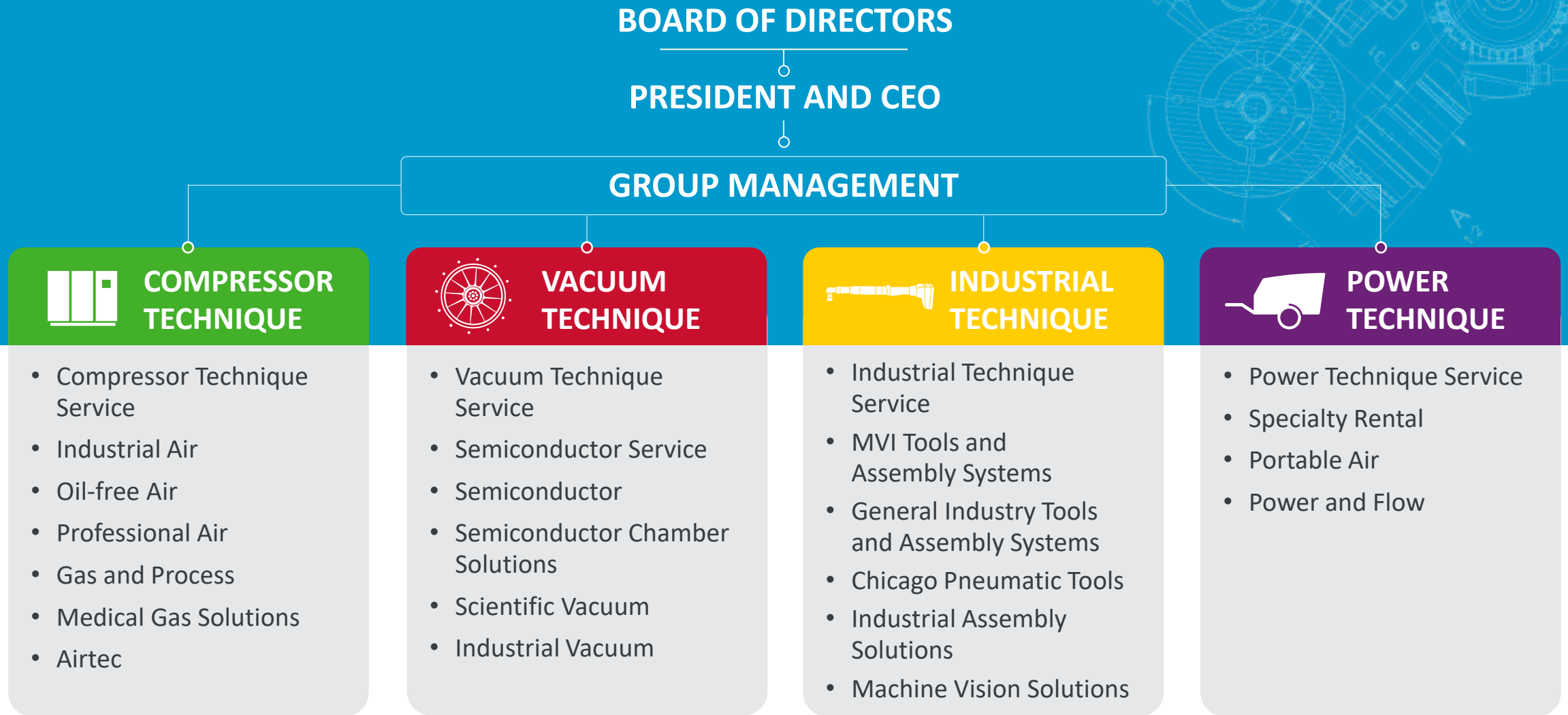


# A portfolio of strong brands





# A decentralized Group



# Atlas Copco Airpower Belgium







# Lean Journey in Antwerp

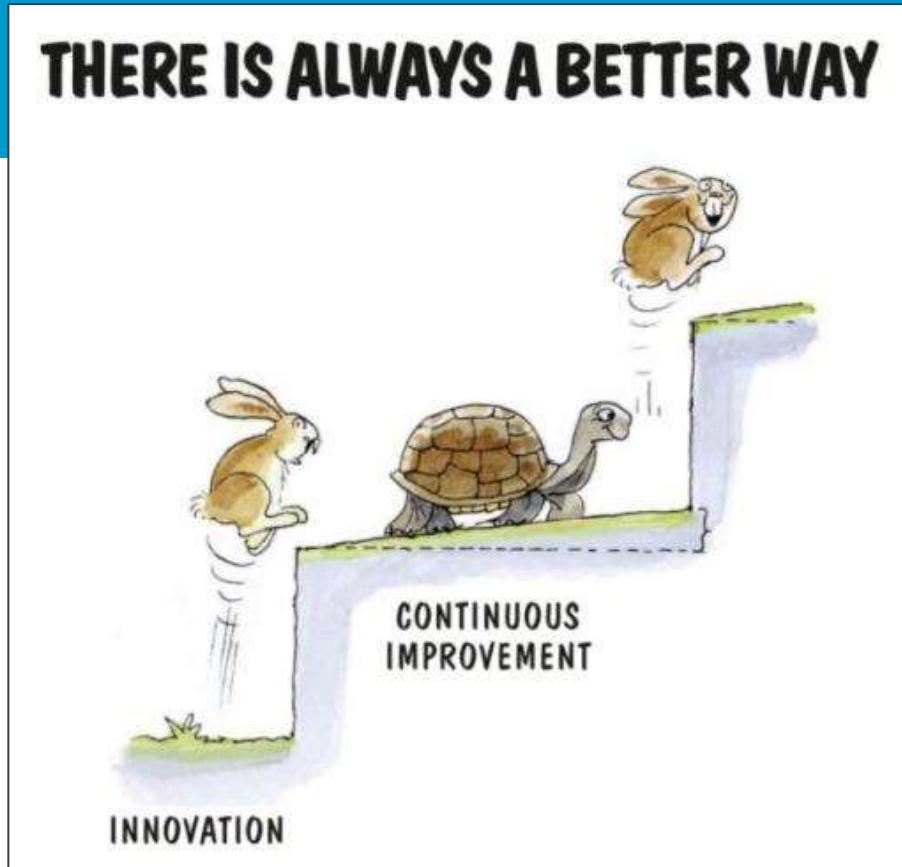
Wim Anthierens

Productiemanager

Atlas Copco Industrial Air Antwerpen

# < 2011

## World Class Manufacturing



- Assemble-to-order
- Short lead times
- Kanban
- JIT
- Material at the line (no warehouse)
- Quality at the source
- Line balancering



# 2011

## Lean Basics

- LEAN als concept
  - Flow
  - Takt
  - Pull
  - Zero Defect
- LEAN projects
  - Shorten Throughput time
  - Eliminate waste
  - Split Assembly from Logistics
- Countering dogmas

A clear difference of the production layout can be recognized

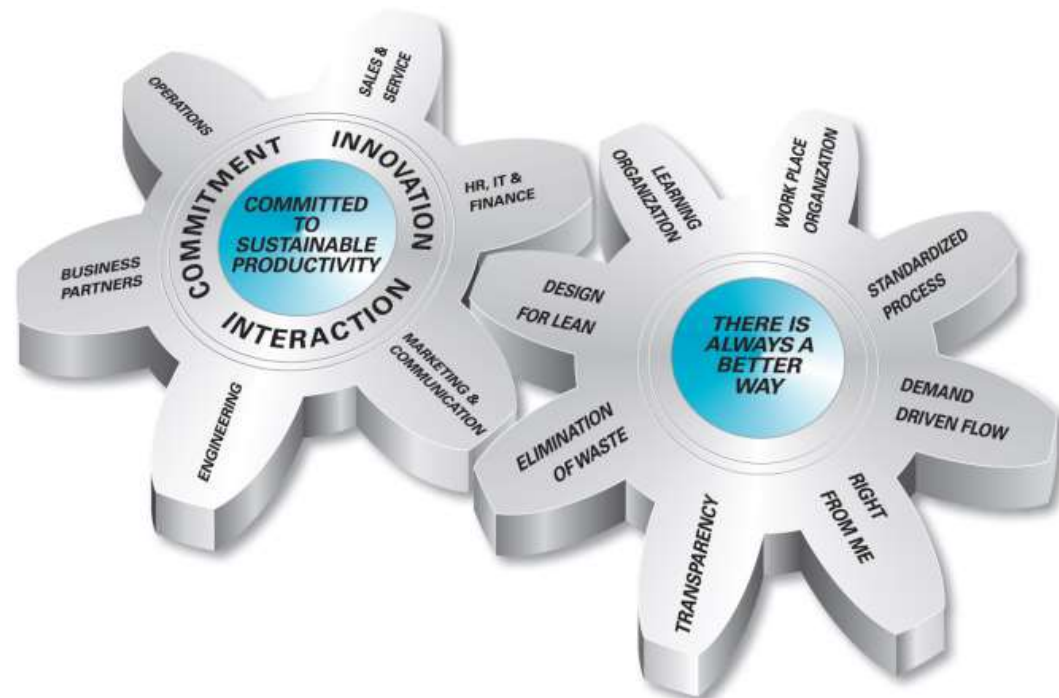
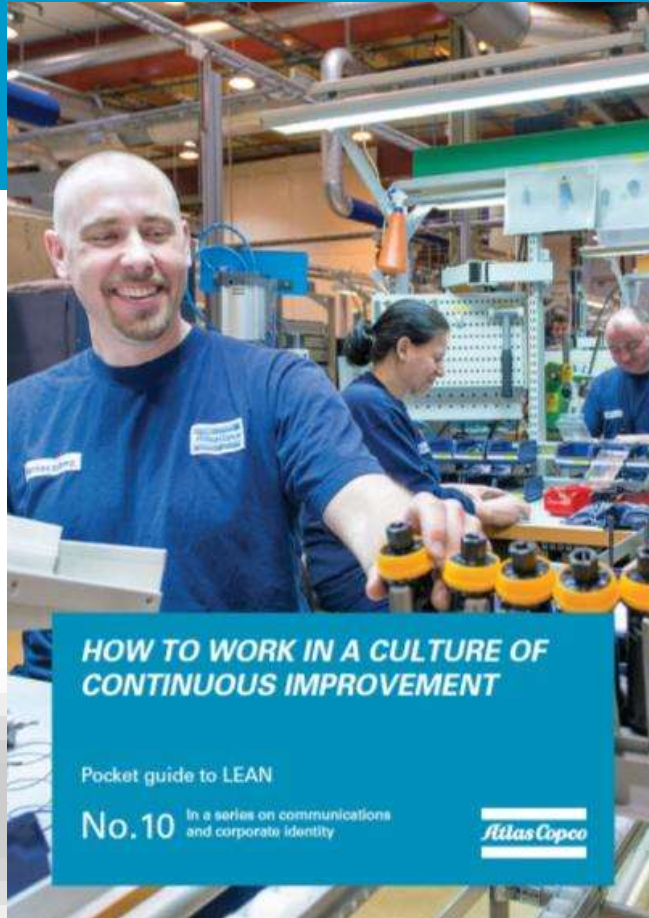


### Impressions



# 2014

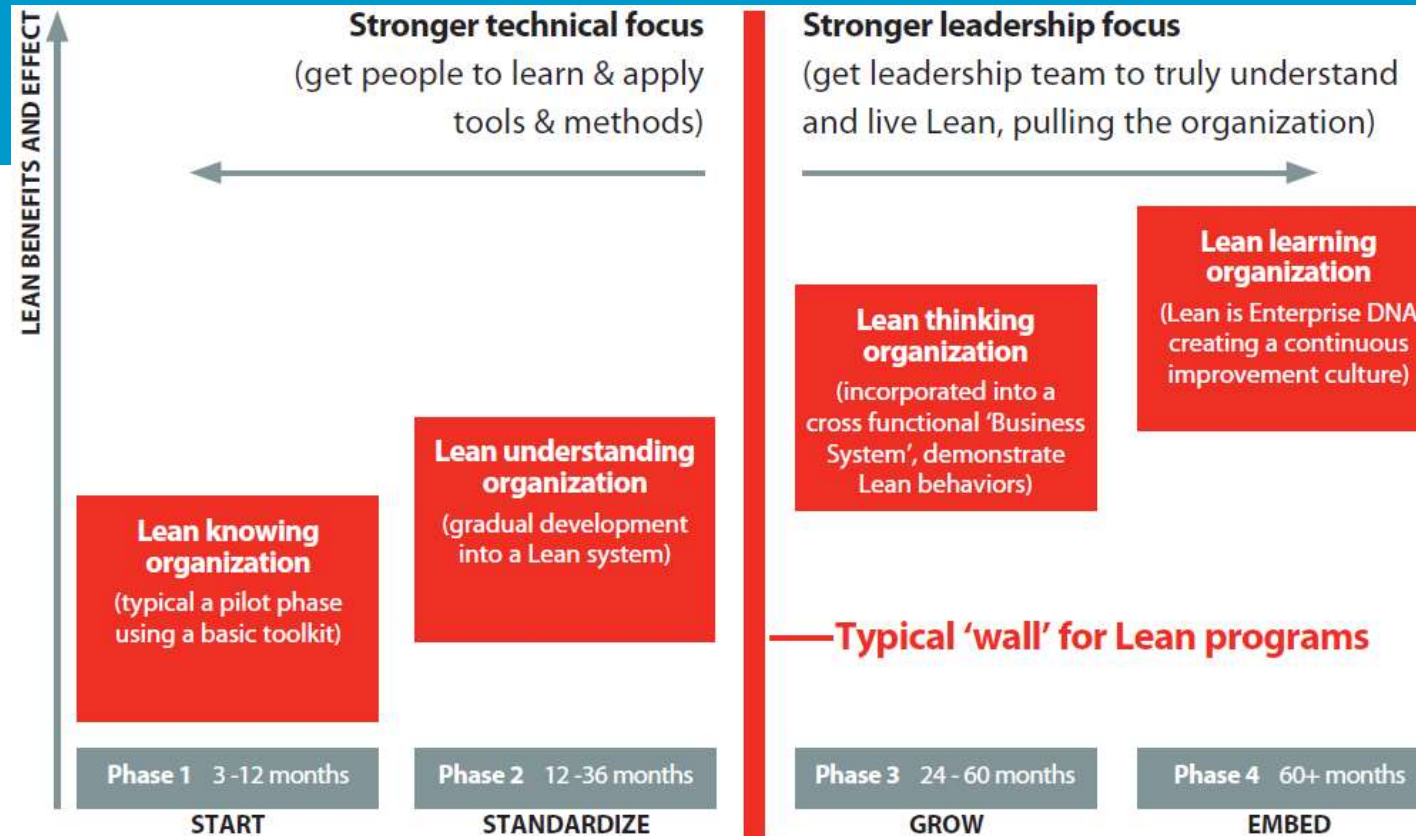
## Pocket guide to LEAN





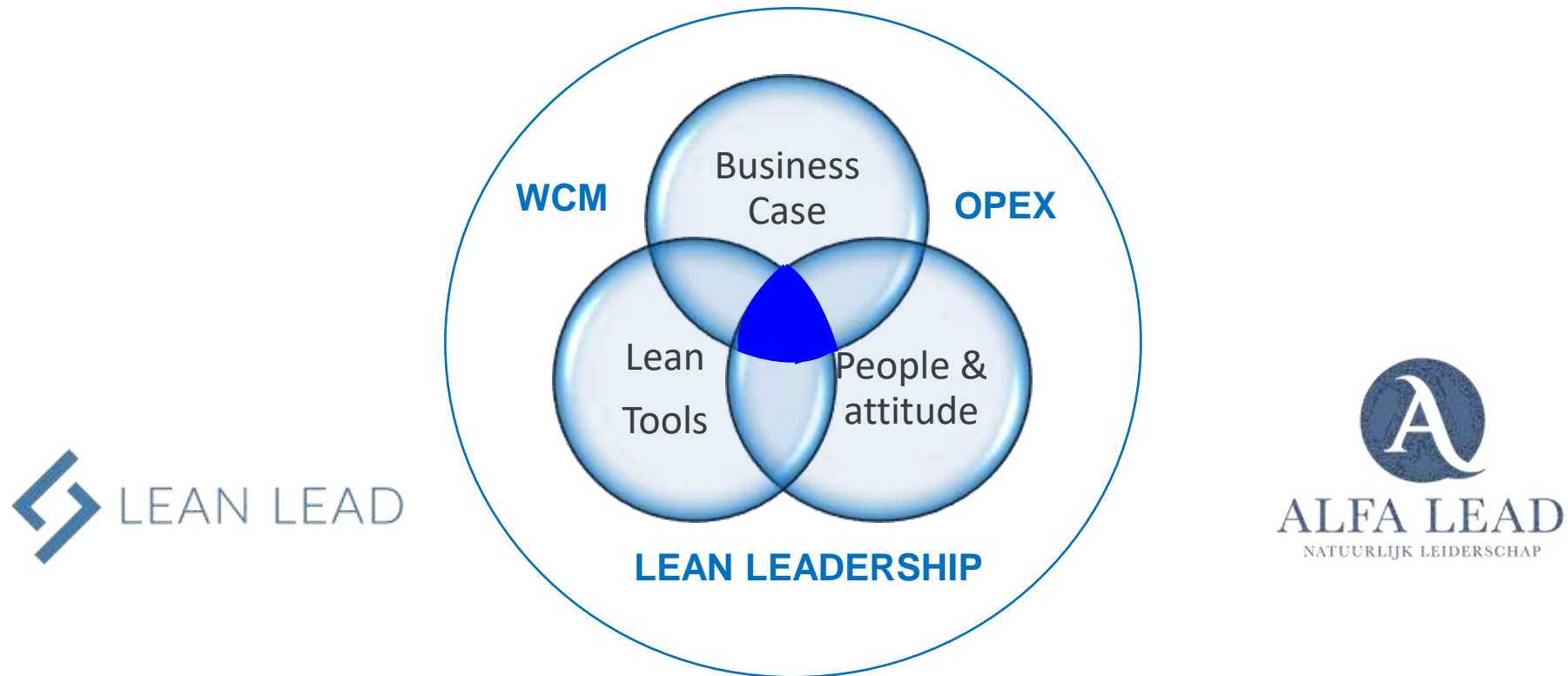
# The wall

## From LEAN projects, to a sustainable LEAN organisation



Hitachi Consulting's Lean Leadership Maturity Model™

# 'Word lean.. samen met uw medewerkers'



**Uitdaging :**

**Medewerkers gaan samen voor hun toekomst !**



# LEANLEAD kick off

## Learn from a humble position

FIRMA	ACTIVITEIT	STERK VOOR ANDEREN	LEREN VAN ANDEREN
	Productie en montage van schokdempers & Componenten	Cel concept Process design problem solving Coaching /share knowledge	Teamleader development
Atlas Copco	Productie en montage van compressoren	Assemblagetechnieken Planning systeem en methodewerk	Cultuurimplementatie Target setting
	Projectie, Displays (LED & LCD) en Connectiviteit (netwerk & collaboratie oplossingen)	Operator betrokkenheid door focus 8ste W Kaizen methodiek vertrekkende vanuit 7 W Verschillende 5S realisaties en Visualisaties	Transformatie naar Factory of the Future Lean in een technologische omgeving (lean industrialiseren & industrialisatie van een lean proces) VSM voor top down continu verbeteren
	Performance polymers & Teflon Coatings (Vespel Paris)	Dupont production system : Management deployment Mindset , behavior & coaching Ideeënproces (bottom up)	Digitaliseren VPM ipv borden SMED Shiftoverdrachten
	Metaalbewerking en montage-werk	Factory of the future QRM (quick response MFG) Digital POLCA (planning )	Theorie -> praktijkconcepten-> volgende stappen





# 3 level meeting structure

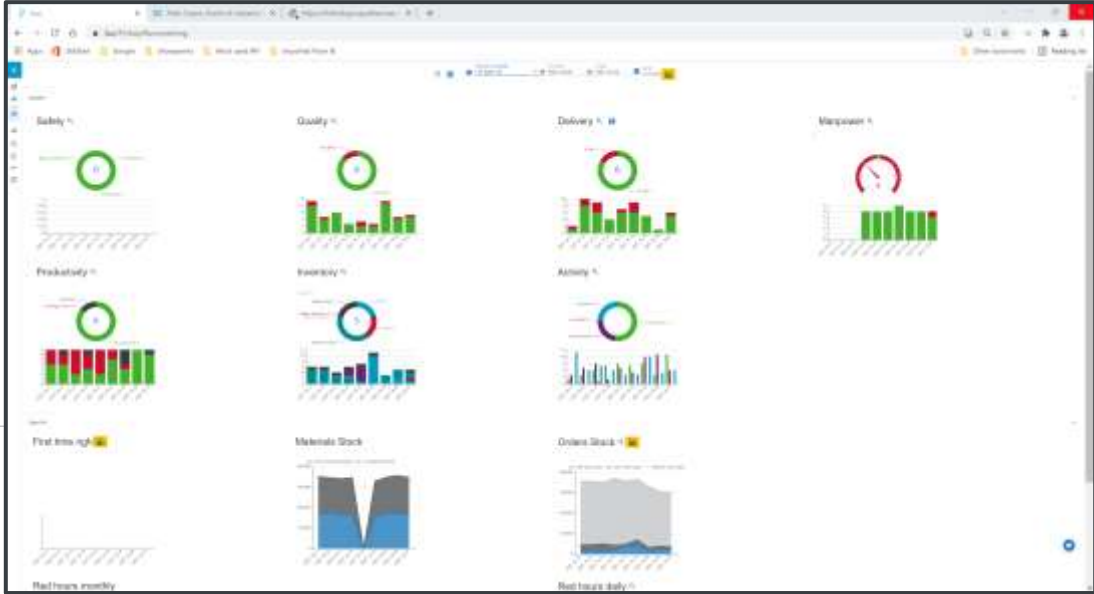
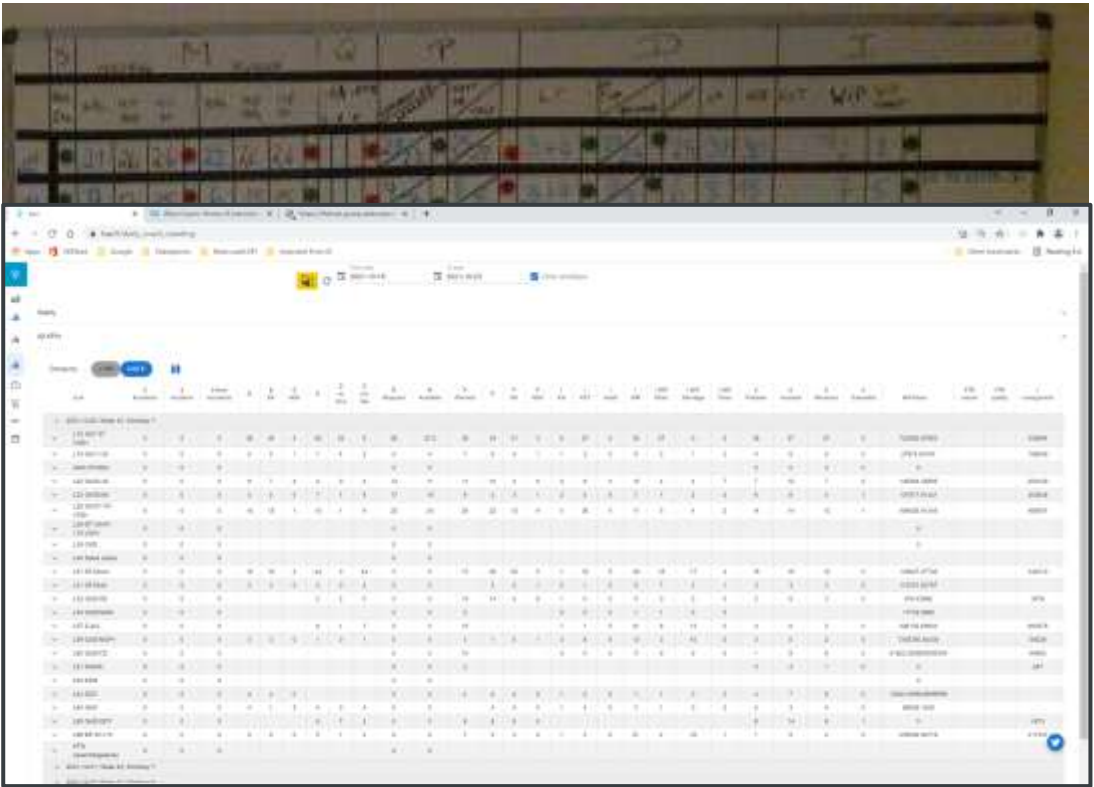
## SMQPDI

Daily communications meeting

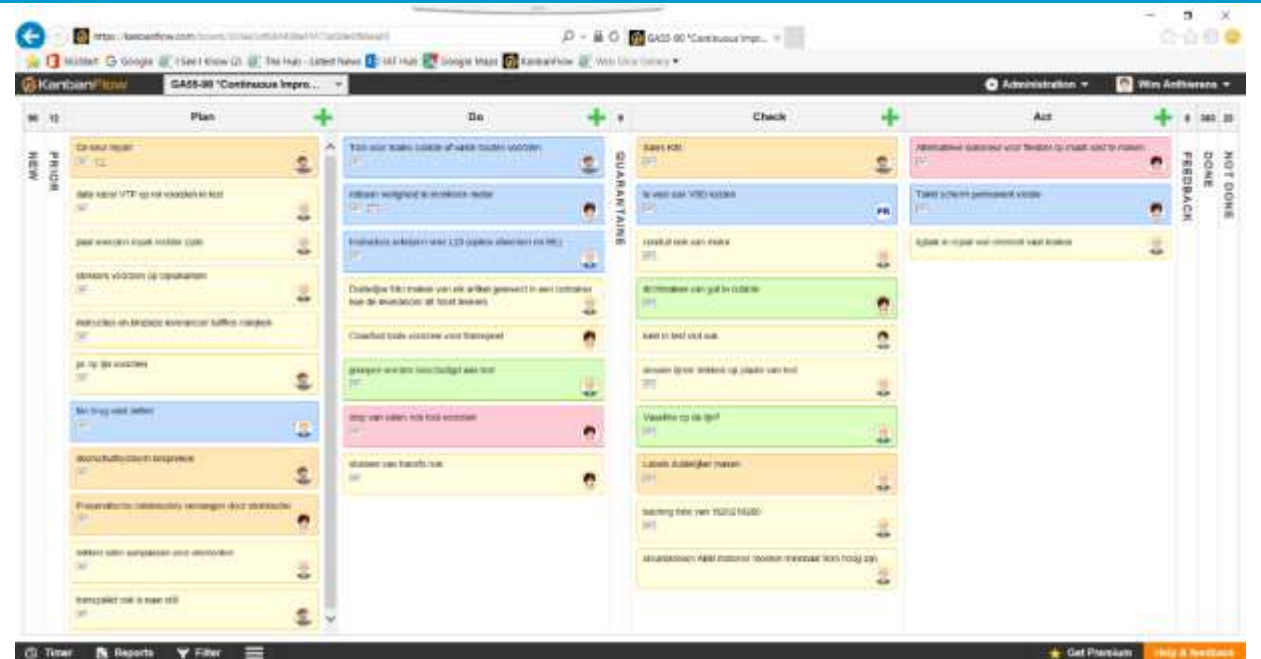
Shopfloor meeting

Toolbox meeting

Prod mgr & Team coaches	9u00
Team coach & Flow team	8u30
Foreman & operators	7u15



# PDCA follow up of ideas in C.I.





# Monitors , our drivers in C.I.

- Most experienced operators
- Main tasks
  - Drive continuous improvement by implementing the ideas from and with the operators
  - Train and qualify new operators
  - Build Prototypes to give early feedback to design
  - Replace foreman
- Learn from each other



# Training : Gurukul, on the job & ISeeIKnow



Atlas Copco: Home of Industrial Air  
https://thehub.group.atlascopco/...  
iKnow.com/user/practice/index.php#questionArea

Startpoints: ☐ Moot seed API ☐ Imported From E

Cases: 1 / 16 Score: 0%

Wat is er fout gelopen bij de montage van deze transportbout?

- A Te hard aangespannen waardoor de rubber te hard is ingedruwd en mogelijk beschadigd.
- B Wegens dat het frame niet genoeg weerstand biedt, daardoor kan deze niet op de juiste waarden worden vastgezet (tooling blijft doorgaan tot hij zijn waarde heeft bereikt).
- C Er is een tooling gemist waardoor de knop niet goed kan worden vastgezet bij de klant.**
- D Er is geen blokkering voorzien, de rubber is te ver ingedrukt.

Defining beëindigen

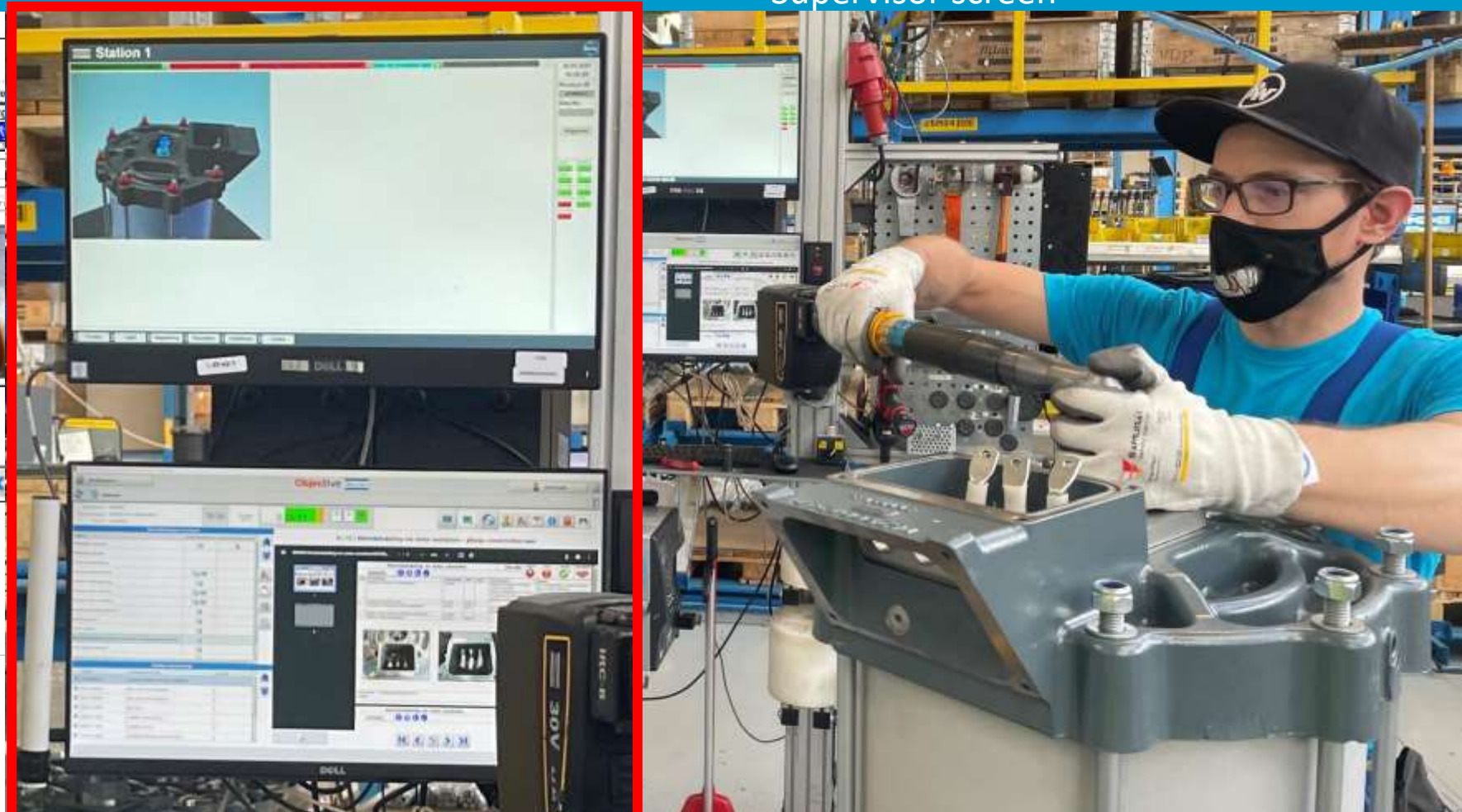


# MOMS / MES Manufacturing execution system

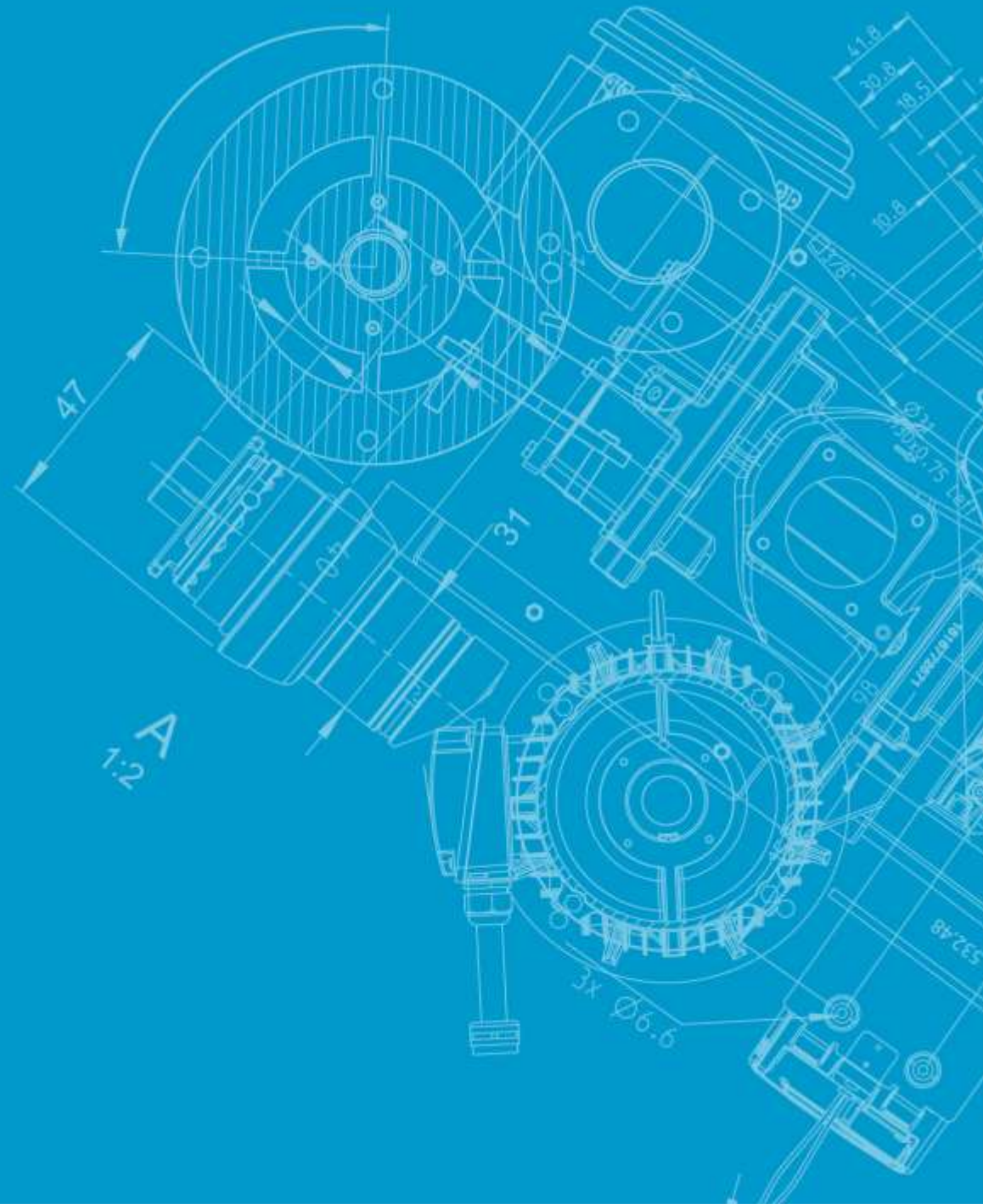
Operator screen



Supervisor screen



**From LEAN Tools  
to continuous improvement  
to operational excellence**





# Learn from LEANLEAD

## Gemba TIPS

- 5S is van verschillend niveau (schaduwborden oa borstels)
- Aandacht voor 5S in de voorbereidingszone naast de lijn
- Gebruik foto's voor en na : geven duidelijk de grote verandering op korte termijn weer
- Onderwaardering van de logistieke sterkte /kracht bij Atlas copco
- Teveel kit-karren (tijd over ?)
- Performance management niet up to date
- Niet starten zonder dat alle onderdelen binnen zijn
- Standaard voor werkposten einde shift herbekijken
- Gebruik een materiaal wisselsysteem met IN en UIT boven elkaar voor plaats te besparen
- Non Q-cost tgv leverancier opvolgen
- Aandacht voor afvalsortering en ophaling
- Takt nu op aantal units en niet op arbeidsinhoud
- Positie van de werklocatie visueel maken
- Aandacht voor impact van de leverancier op jullie systeem , ga voor 1 component leverancier systeem
- Testing trachten eerder in de lijn te integreren om repair en gevolg kosten te verminderen

# Februari 2018 : Walk the Talk

## *Uit presentatie voor middle management seminar 2018*

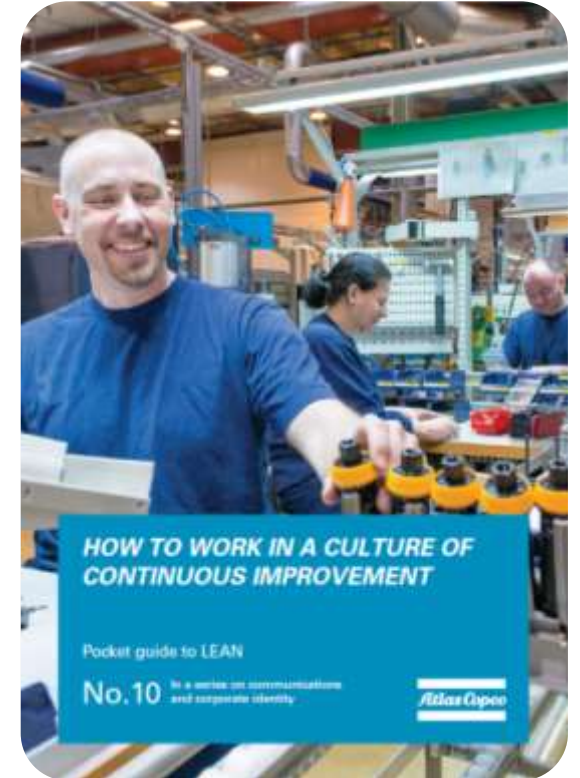
- CI – LEAN – 1pFLOW
- Better = easier, better quality, faster, cheaper
- Samen
  - Betrek alle operatoren
- Opleiding on the job
  - Proactief problemen vermijden (veiligheid, kwaliteit)
  - En kweken van experts die tot verbeteringen komen
- Eigenaarschap (van een zone, proces,...)
  - Betrokkenheid
  - Verantwoordelijkheid
  - Kans om te groeien en je te bewijzen
- Leiderschap:
  - train,
  - support,
  - follow up,
  - challenge

A B C

Operational  
Excellence

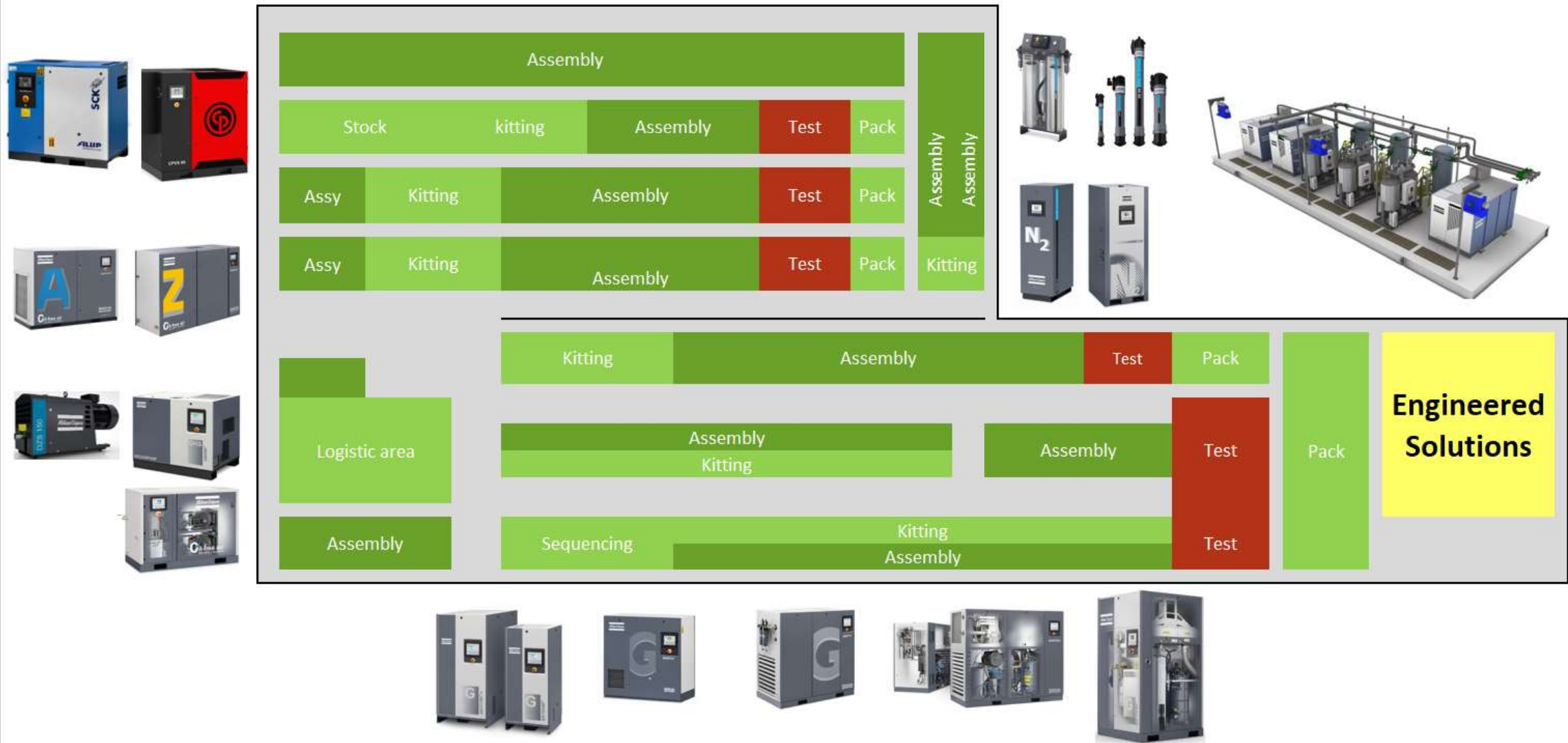
C.I.

LEAN





# The Factory, a playground for experiments



# C.I. For all



Sharing realizations  
with other teams



Share

Coaching and  
Appreciation for the team

Gemba



Create involvement  
through zoneownership



Ideas

Mini Gemba



Coaching the zone owners  
At the station





# Don't forget to celebrate !



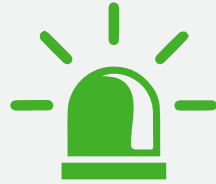

# Going Global



# W2OX – The Program

## Improve operational excellence

- **Mission**  
Enable IAT Product Companies to improve their level of Operational Excellence
- **Current Condition**
  - OpEx level differs over Product Companies
  - Missing OpEx Knowledge and Experience
  - Limited learning within and across Product Companies

What?		How?
		
1. Build knowledge	<>	1. As need training
2. Culture of CI	<>	2. Coaching
3. Learn within PC and from others	<>	3. Build learning network
4. KPI transparency	<>	4. KPI dashboard

# W2OX Kick-off and Follow-up

Coaching, coaching, coaching, ..

## Training and Coaching of local PC (4-5days)



- Basic training
- Coaching Improvement Kata
- Local operational ownership
- TL Cross-learning

## Remote Follow-up



- Min. bi-weekly
- Through CI Leader
- Next challenge
- Remote O365 collaboration
- BRM reporting

## O365 IT Structure



- “Teams” for Collaboration
- NeMo (Sharepoint) for knowledge
- IAT Sharepoint structure for operational follow-up

## Yearly OpEx Event



- Getting to know fellow IAT PC's
- Interaction
- Learning
- OpEx Innovation
- Networking

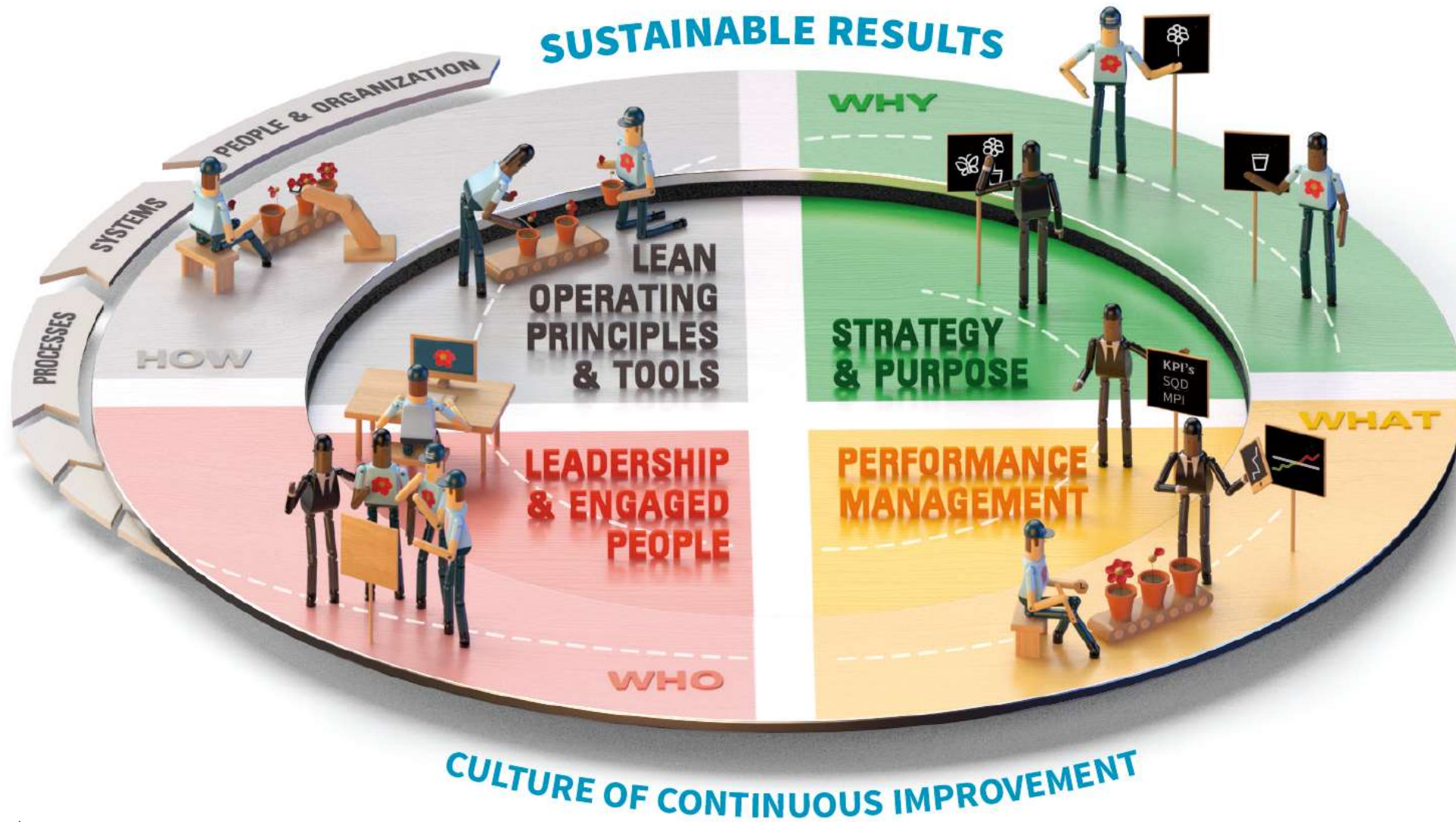


# Kaizen Event

## Preparation and Timeline



# The Way to Operational Excellence





# Global Operational Excellence Network

SharePoint

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Coronaproof W2OX Focus Week in PC API!



The Way to Operational Excellence Program

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26/10/2021  
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