

TOYOTA

MATERIAL HANDLING

TMHMS

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Manager – Project & Tool Design

Production Engineering

Oct 2021



TMHE Supply - footprint

TMHE Supply

Kristian Björkman has been appointed new Senior Vice President for TMHE Supply, adding to his role as MD for TMHMS, a position Kristian will continue to hold. With the new appointment, Kristian Björkman will take over as chairman in the Board of Directors for both TMHMI and TMHMF. In his continuous role as MD for TMHMS, Kristian will report to Matthias Fischer, who becomes the chairman of the Swedish Supply unit. Kristian also remain MD for TMH Logistics Solutions, reporting to Matthias Fischer, chairman of Logistics Solutions. The appointment as well as related changes are valid from April 1, 2019.



Mjölby, (TMHM Sweden)

2.3 billion EUR

total net sales in FY18

> 10,000

employees across Europe

130 million EUR

Earning before tax in FY18

5 Factories

3500 employees



Ancenis, (TMHM France)



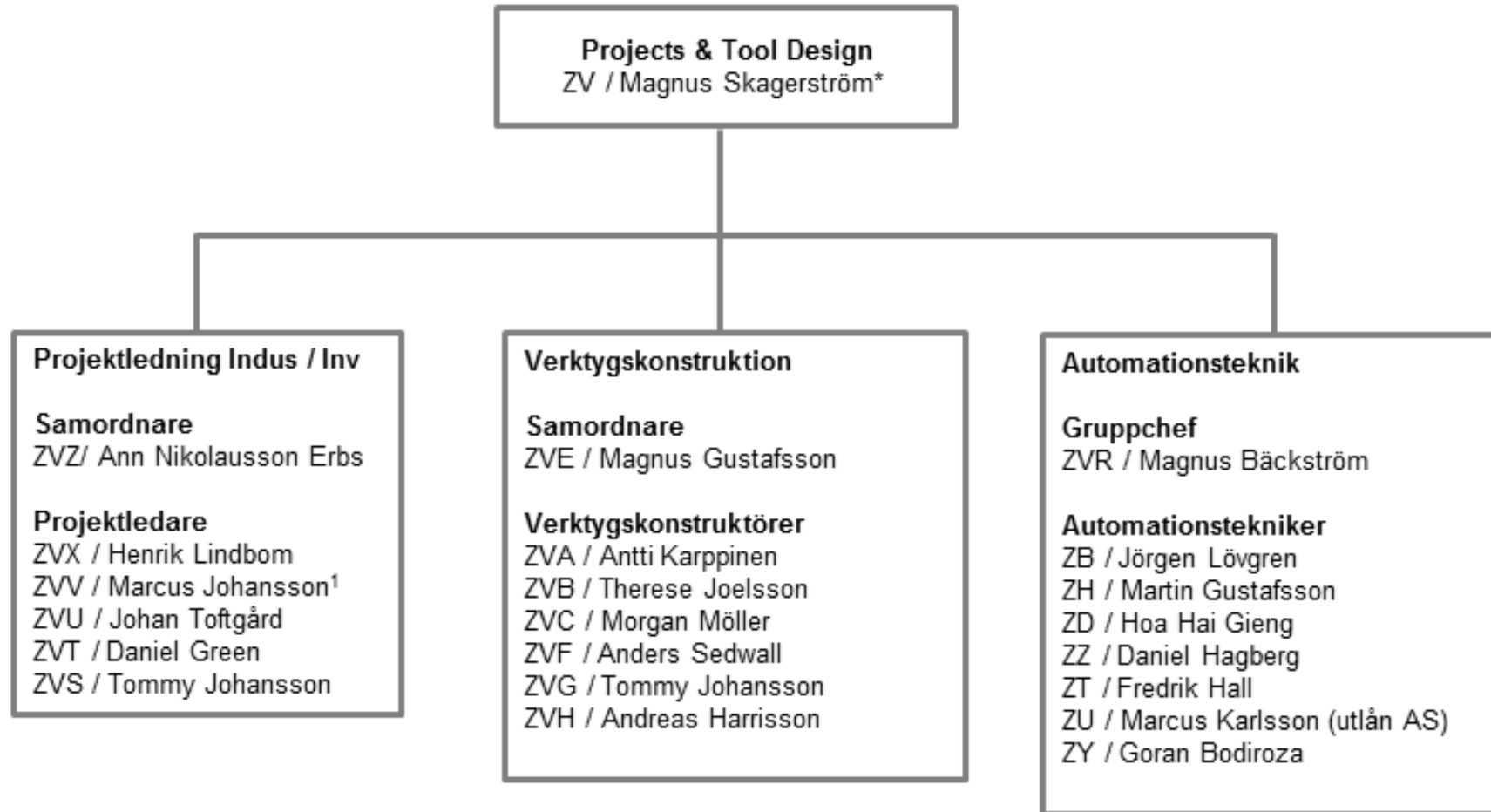
Milano, (SIMAI Italy)



Bologna, (TMHM Italy)



Ferrara, (LTE Italy)



1: Miljöledare

Manufacturing outline

Sheet Metal Components

- Laser Cutting & Press Brake
- Operations: 3 Shift
- Plate thickness 3-12 mm
- Bystronic (3) / Trumpf (5)
- Handling Robots (2)

Welded Components

- Welding processes
- Operations: 2-3 Shift
- Robot and manual
- Yaskawa (42) / ABB (50) / Fanuc (8)

Paint Components

- Powder Painting
- Operation: 2-3 Shift
- Robot Painting (12)
- No solvents

Customization

- 12% Special Design Request (SDR)
 - 8% SDR in standard production processes
 - 4% SDR need additional final production @ SP after standard production processes

Mast Mfg

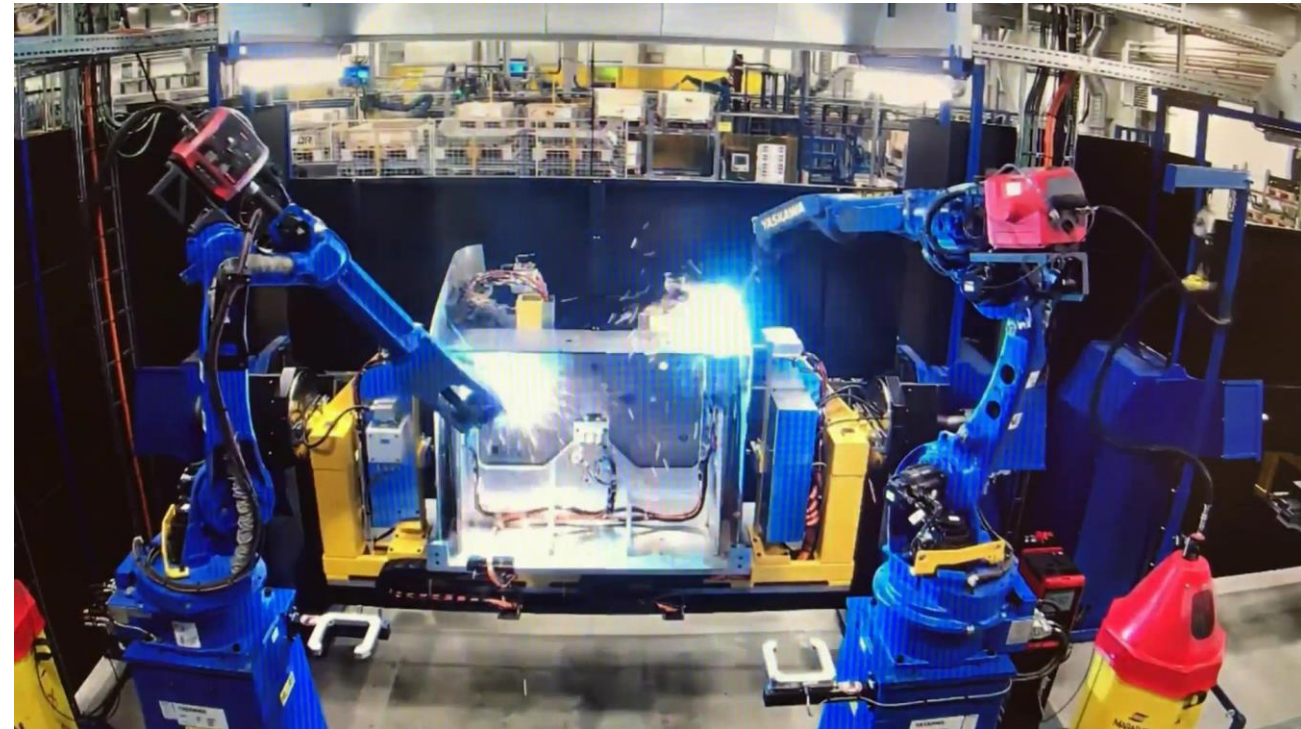
- Mast Rail Machining
- Operations 3 Shift
- Automatic handling (2)

Assembly

- Takted Assembly Lines
- Operations: 2 Shift
- Cont. driven lines (3)
- Takt Time: 4-16 min

Logistics

- Daily Sequence Planning
- Material Handling by AGV
- Connected Takt Time
- Digital Parts Preparation



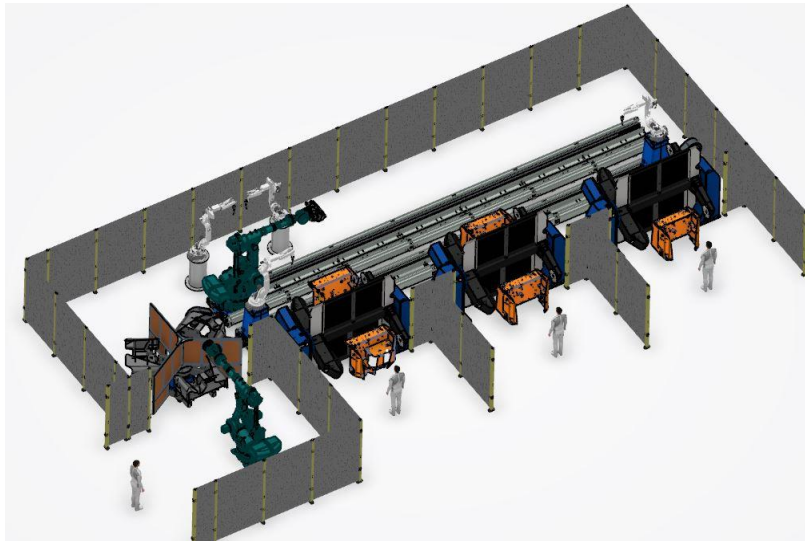
New Reach cabin Welding cell

Supplier: Yaskawa / TMDI (Fixtures)

Capacity: >350 units/week in 2 shift operations

Line Off: November CY2019

Technology: SAT welding, Jiggles, Man-Robot interface in Q-gate



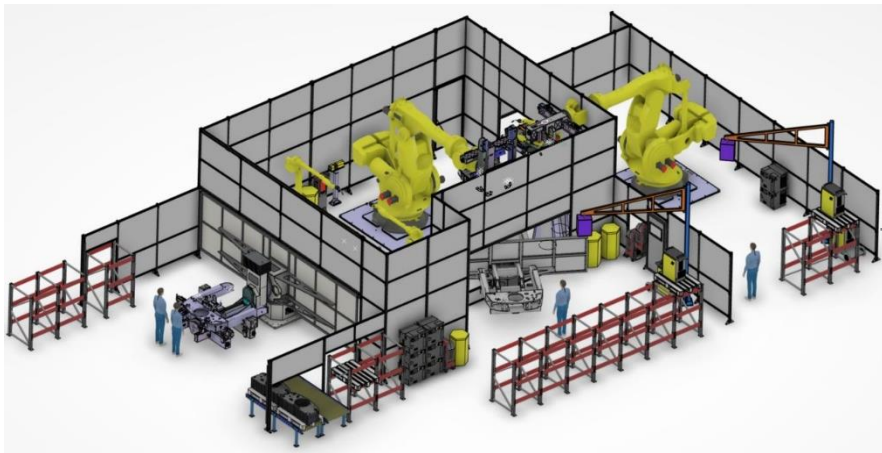
New Reach Support arm Welding Cell

Supplier: TMHMS / Fanuc / TMDI (Fixtures)

Capacity: >350 units/week in 2 shift operations

Line Off: January CY2021

Technology: SAT welding, Jiggles, Man-Robot interface in Q-gate



3D Experience, Delmia - simulation and off line programming in concept phase, finally Robot Cells in action.

