

# New Innovative Solutions for State of Art production Today – Tomorrow

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# Business idea



- **Fastems'** business idea is to improve our customers' competitiveness through automation and to get the most out of the 8760 production hours that are available each year.

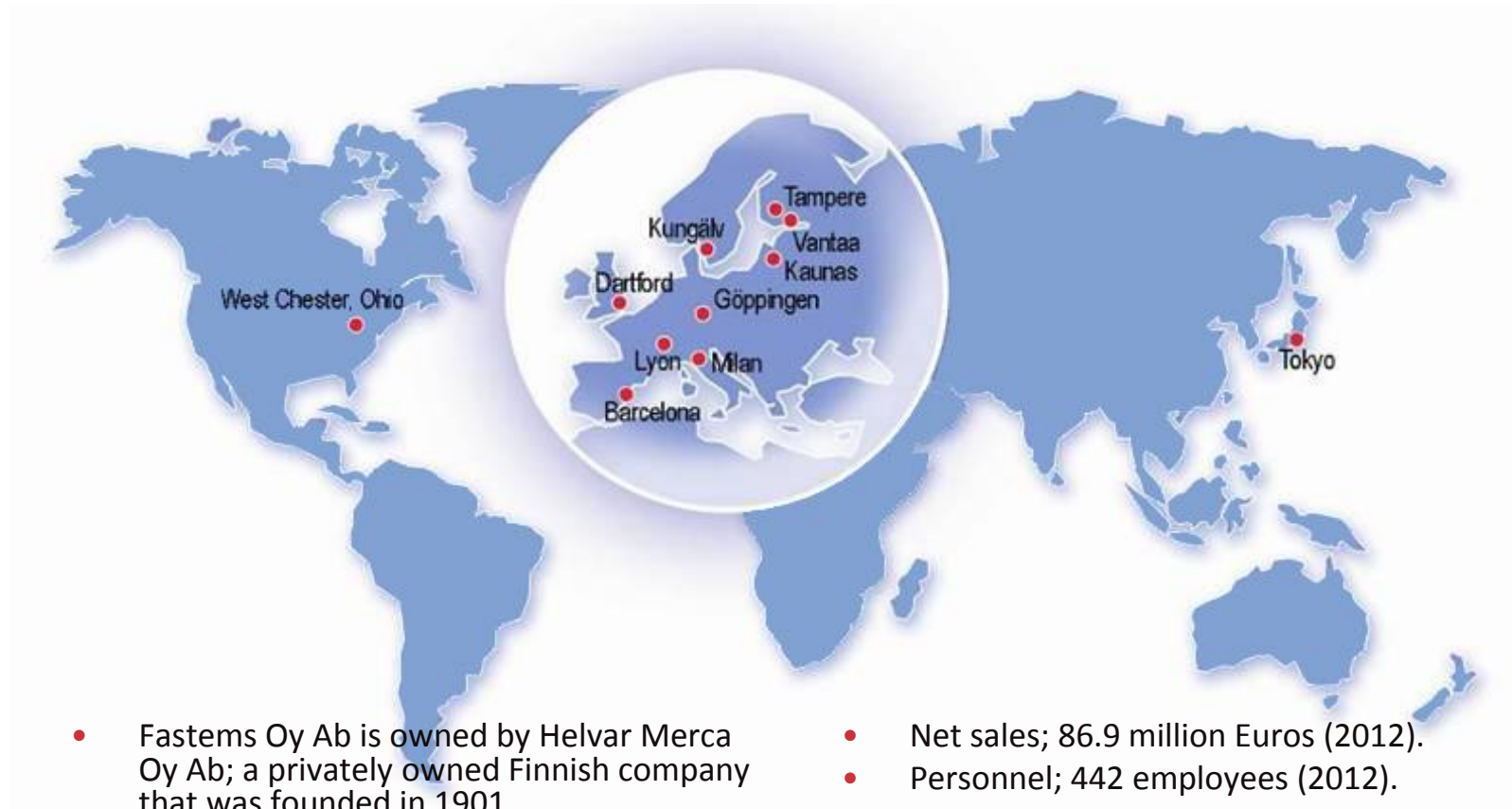
# Fastems Oy Ab



- Privately-owned Finnish company founded in 1901
- Owned by Helvar Merca Oy Ab



# Fastems Worldwide





# Situation today



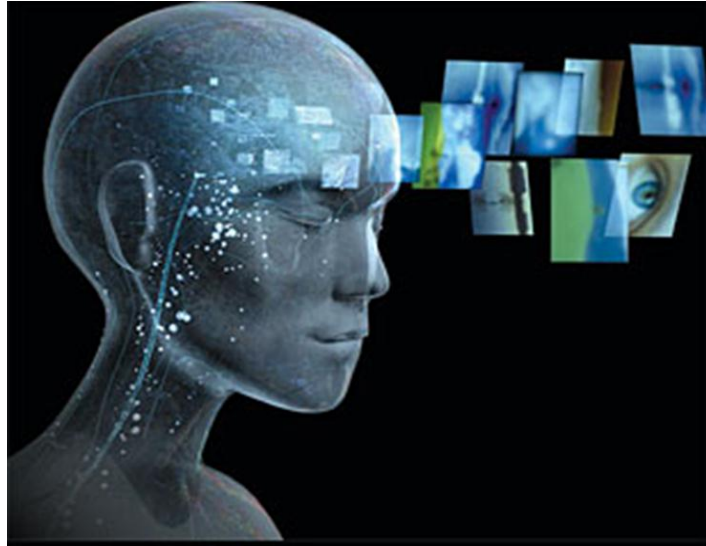
Competitive most modern solution for effective production:

- Aerospace
- General Machinery



# Tomorrow ?

- Customer needs are developing =>
  - Higher automation level is needed
    - Quality
    - Lack of skilled operators
    - Costs



- FMS-system is a very good platform to be able to meet these demands

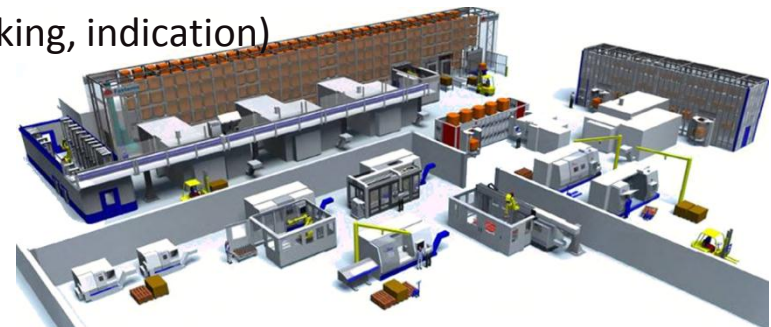
- easy to expand

- Size : MT's, pallet places, loading stations etc.

- MMS5 SW

- New processes

- Robot loading
    - Washing machines
    - Software solutions general ( ERP etc. )
    - AGV integration
    - Tool handling ( Mechanical, SW)
    - RFC/DBL
    - Vision possibilities ( quality, picking, indication)
    - Bin Picking





# Some examples of new processes





# Robotized Machine Tending



# Fastems RFC robot cell

High-end solution - electrical spindle system with automatic tool change



## Advantages – electrical spindle system

- ✓ High performance -> Shorter cycle times
- ✓ No limitations for amount of tools
- ✓ Low cost for new tool
- ✓ Low energy consumption
- ✓ Optimised process via programmable rpm
- ✓ Process monitoring



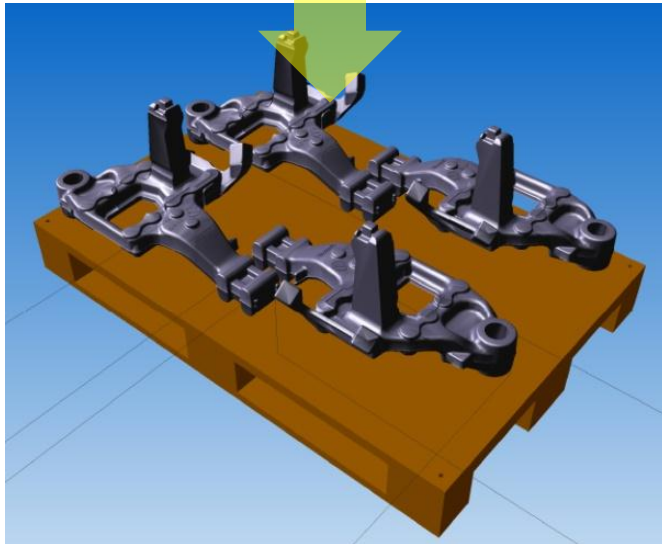


# Strong focus on aerospace industry

- Aluminum (structures, gearboxes, panels)
- Titanium (structures, landing gears, engine parts)
- Alloys (fan blades, engine parts, engine structures, blisks)
- Magnesium (gear boxes)
- Composites (structures, panels)



# Material feeding - Principle

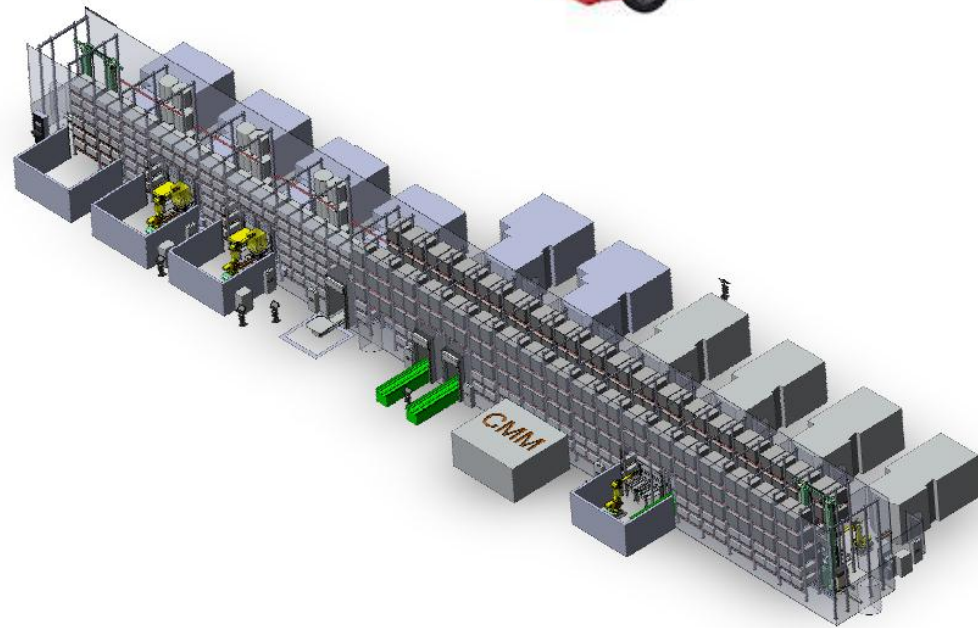
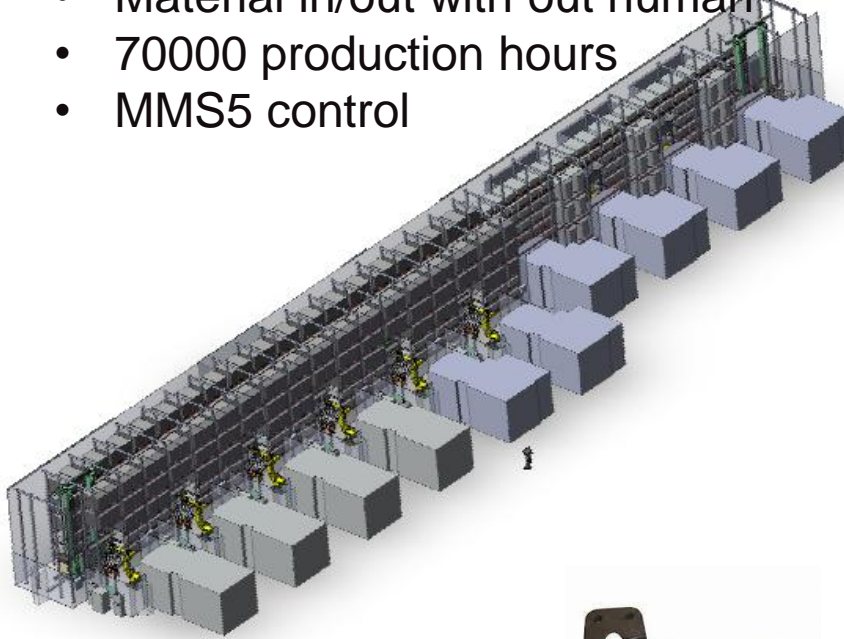


- Picking of top most part from random pile using 3D camera technology
- Part orientation and position is measured accurately for palletizing
- Pallet is sent to the FMS system for robotic loading operations
- During picking operation part is also scanned to define casting errors



# Reality today

- 10 MT's
- 60 m MLS system with 2 cranes
- 9 Robot cells
- 60 hours unmanned production
- Pin Biking with 3 D
- Quality inspection
- Material in/out with out human
- 70000 production hours
- MMS5 control





**Fastems**

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FACTORY AUTOMATION

[www.fastems.com](http://www.fastems.com)