

# Fastems

AUTOMATION **SUCCESS**





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FORUM

8760 Fastems

# Automated Intralogistics in Discrete Manufacturing

Seppo Pyykkö

# Fastems & yours truly



Seppo Pyykkö: Head of Automation Platforms at Fastems

Creating solutions for highly productive machining automation.

Over two decades in industrial automation, manufacturing and logistics process consulting. Promoting both hardware- and software-driven manufacturing solutions.

A father, an engineer, a tinkerer, an alfisti. Almost born in a machine shop

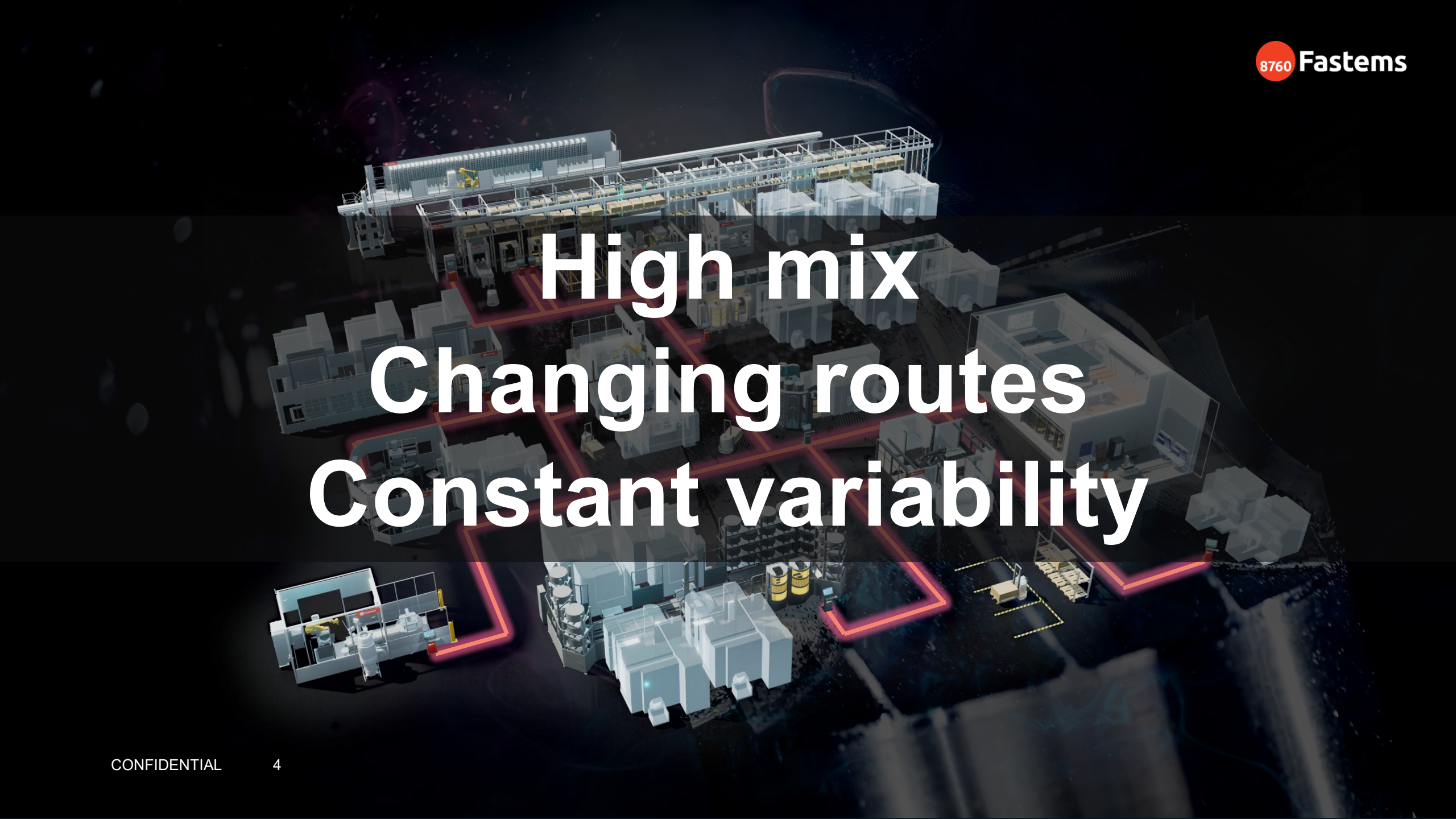


Fastems automates chip cutting processes in variable mix environment. FMS's, Industrial robotics and software

Automation deliveries since 1982

Family-owned business employing over 450 people globally and 90M in revenue. HQ and factory in Tampere/Finland

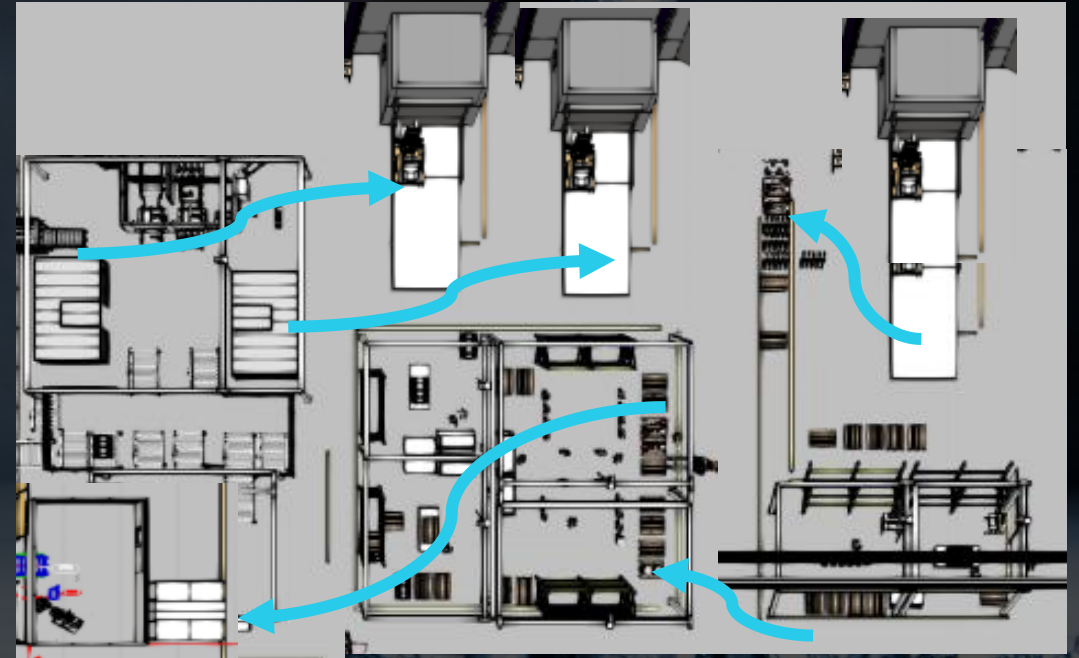
Customers vary from huge OEM's (Lockheed Martin, SKF, AGCO...) to local machine shops and everything in between

A 3D digital rendering of a complex industrial factory floor. The scene is filled with various pieces of machinery, workstations, and storage units, all depicted in a semi-transparent, light blue-grey style. Overlaid on this scene are several glowing red lines that trace a path through the facility, indicating a specific material flow or production route. The background is dark, with some faint, glowing particles or light effects, giving it a futuristic or high-tech appearance.

# High mix Changing routes Constant variability

# Clear flow = easier automation

- Line-type processes are predictable and have little variance
- AMRs often behave like “conveyorless conveyors”
- This is why AMRs are easier to take into use in final assembly
- Same applies often to pure intralogistics applications
  - IT system maturity typically also higher allowing more complex processes





**Median number of processed  
order rows**

**/**

**Logistics personell work hours**

# In manufacturing environment, where does the business case come from?

- Allows lights-out manufacturing
- Smaller automation cells due to lowered buffer (costs of automation drops)
- Smaller WIP, less capital tied on inventory value
- Improved flow, smaller batch size, towards one-piece-flow
- Faster throughput, improved service capability, business increases



Hardware is solved



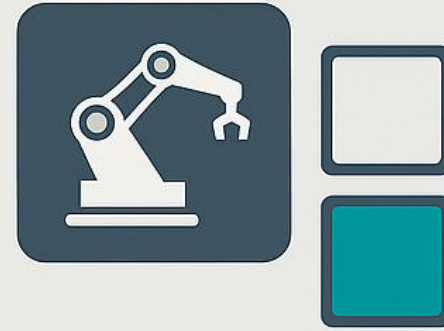
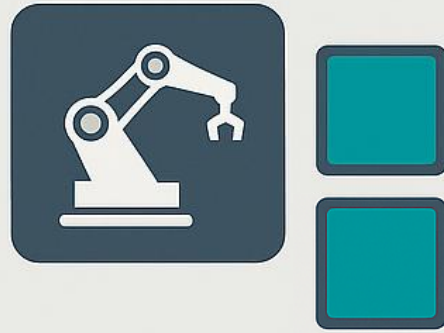
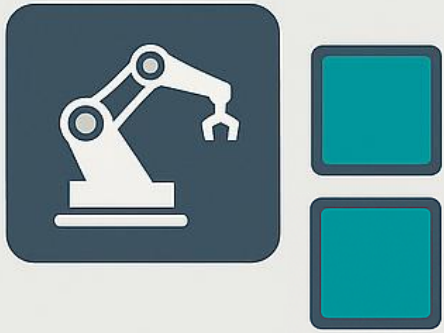
**Does some IT system know,  
what the forklift driver knows**

# AMR's need decisions Not just destinations

# Who connects the dots?

What's needed:

- Inventory awareness at storage-location / transfer unit (pallet or bin) level
- Knowledge of transfer unit (pallet/bin) type, size and capacity
- Understanding what's on the transfer unit
- Knowledge of the properties of the AMR's (in case there are different)
- Item is not the same if it's in a different operational status
- Physical properties of each storage location, what transfer units can be stored
- If the target is an automation cell, also clear part coordinates and orientation on the transfer unit + interface to the automation cell control
- Combined with the situational awareness of the manufacturing status and -plan
  
- Not MES alone, not WMS alone—something in between



AMR's are the worst possible buffers



# Safety to be assessed through the whole process, not just for individual devices



# Fastems way

# Stay tuned!

**Intralogistics of a factory is  
not about moving things**

**It's about managing the flow**

# Time for discussion

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