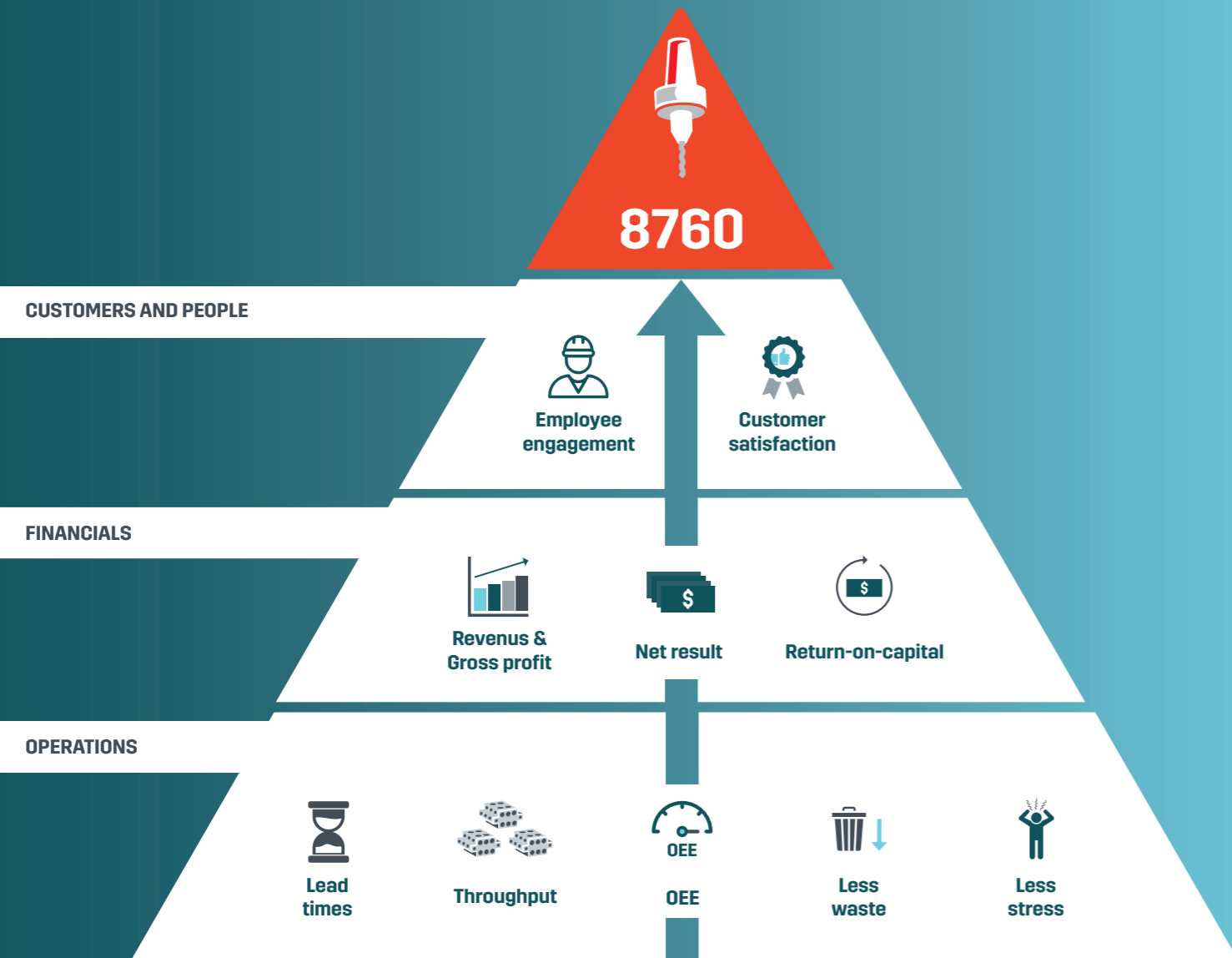


Intelligent CNC Automation

# Unleash the Full Potential of Your Manufacturing





# 10 REASONS TO AUTOMATE

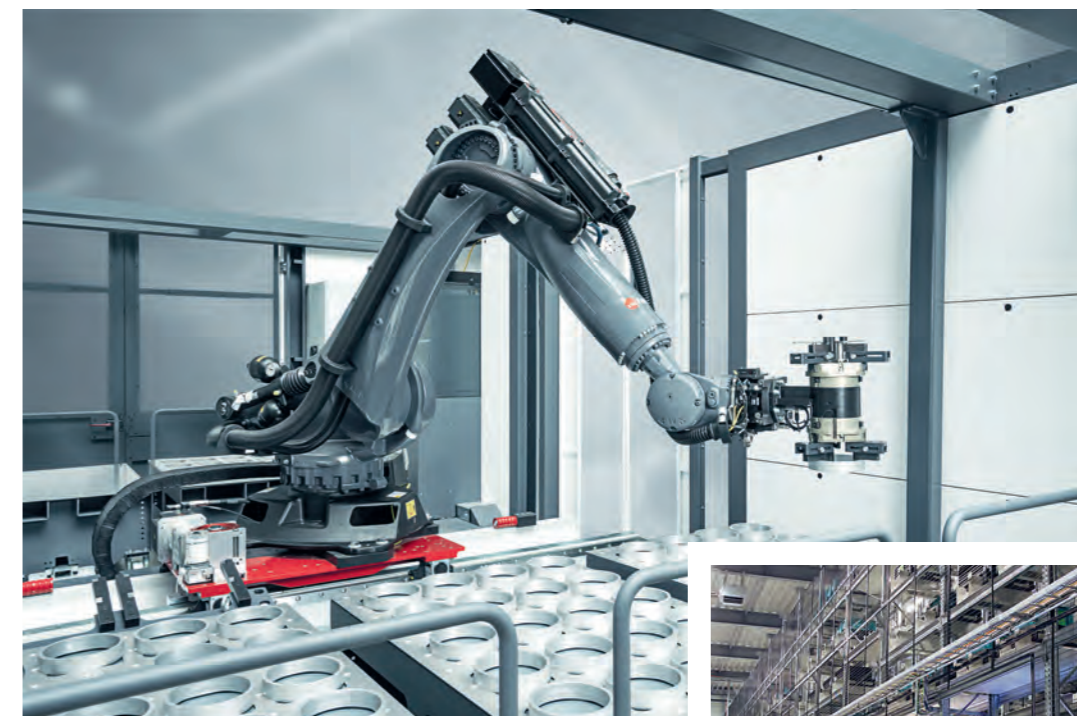
## Fastems Intelligent CNC Automation

**We solve the fundamental challenges and inefficiencies around variable batch production, experienced by all industrial manufacturers from local machine shops to global enterprises.**

Fastems automation concept is simple yet unique: we automate the movement of workpieces, pallets or cutting tools but even more importantly, we automate the production planning and resource management of variable batch manufacturing.

This is made possible by our Manufacturing Management Software (MMS) that enables flexible, efficient and transparent production that automatically adapts to any changes. We also integrate various machining supportive processes like finishing, measuring, marking or washing to our systems increasing quality, unmanned production capacity and shortening lead times. The scope of our systems range from one to over a dozen of CNC machines, used by local job shops as well as global enterprises.

Our mission of 8760 is to enable our customer's manufacturing only to do the right things at the right time - all the time. We understand production as teampay between people, data systems, machinery and other equipment. Fastems' goal is to make them all work as ONE.



### FASTEMS AT A GLANCE:

**40+** years of CNC automation / over **550** employees / integrating over **100** different machine brands / Core business in automation with over **4,500** systems worldwide / **8,000+** yearly spindle hour record.

Rethink productivity

# Reach Your Full Potential

Your company is different from any other. You have your own machinery setups, systems, manufacturing processes and ways of doing things.

However, you are likely to share similar challenges and ultimately the same goal with others: To be in control of your production, utilize your capacity well and deliver the required quality on time.

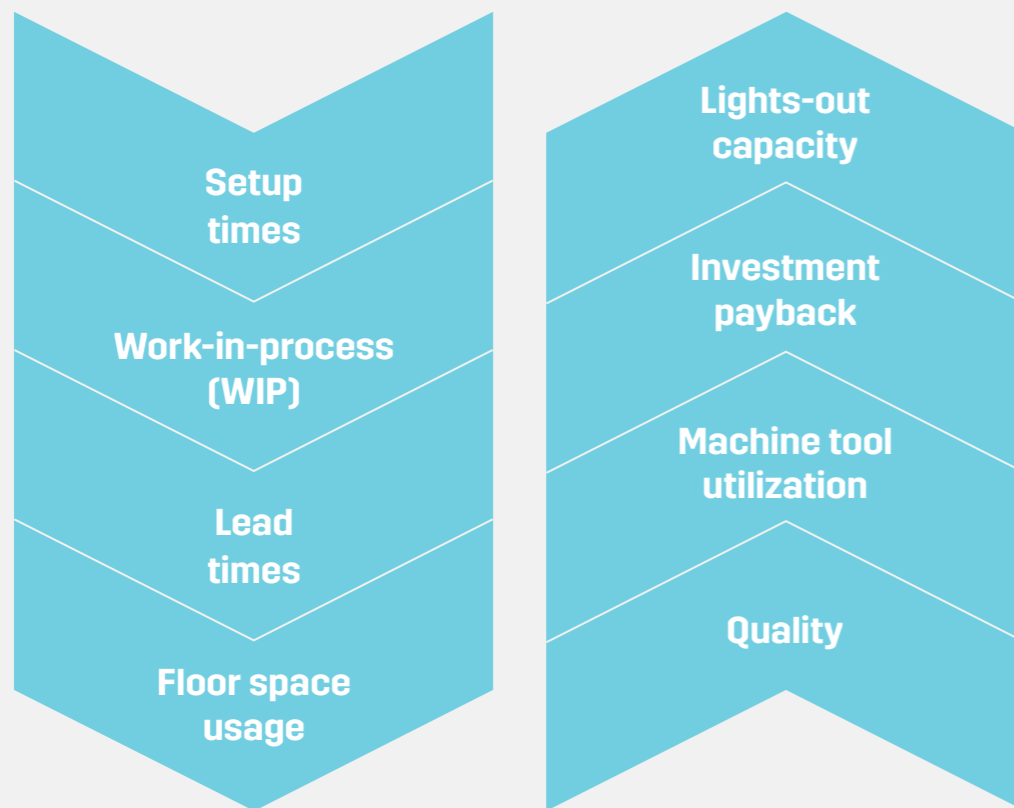
## THE FORMULA IS SIMPLE:

Our automation helps you do the right things at the right time – all the time.

Helping you get the most out of your production machines. Improving your lead times and consistency of quality, minimizing waste and delays in your processes.

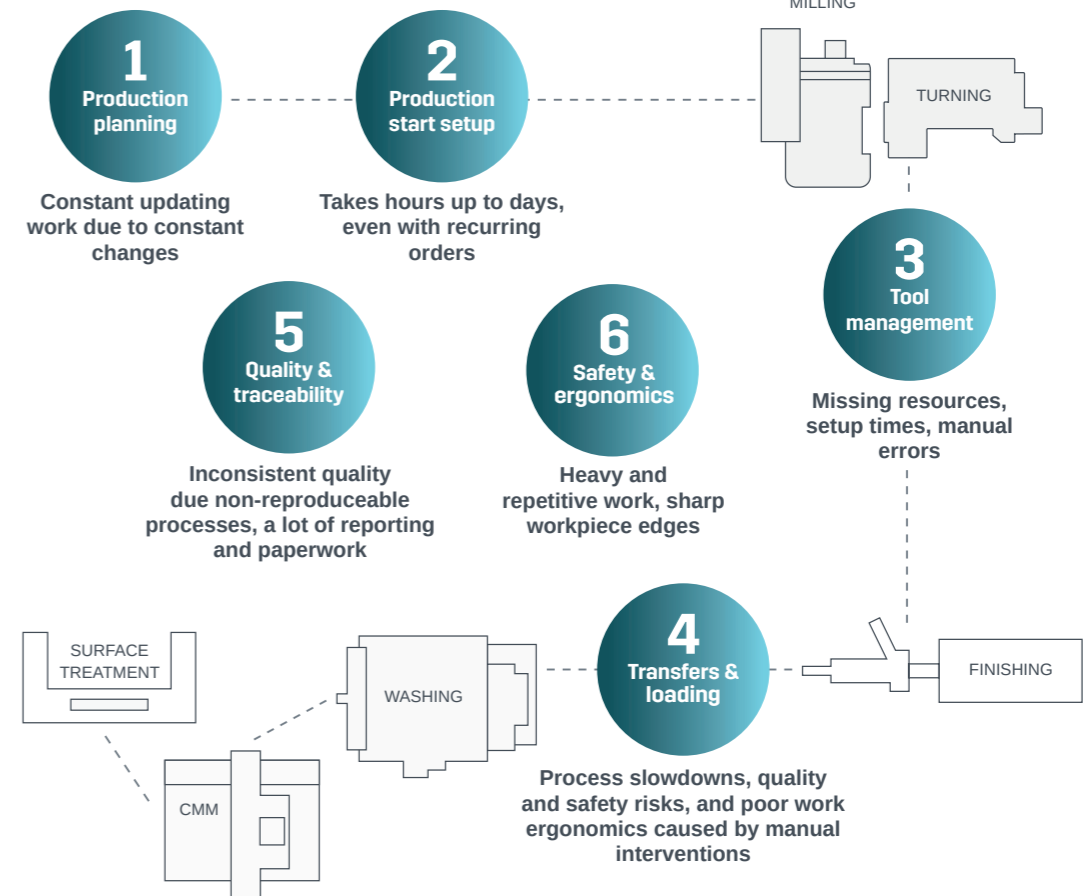
## Improve the right numbers:

Improvement in these numbers reduces costs and increases efficiency and revenue.



You don't need large production volumes to gain the benefits of automation. It makes perfect sense from a batch of one to a batch of thousands.

## Solving shop floor challenges



## Rethink productivity through automation

	no automation	with automation
Investment cost 3 machine tools *	1,200,000 €	1,200,000 €
Investment cost automation	0 €	400,000 €
Machine tool utilization rate	40 %	85 % **
Machining hours/year ***	4,800 h	15,300 h
Total income per year (machining selling price 100 €/h)	480,000 €	1,530,000 €

What are your production needs?

\* calculated with 3x5-axis HMC

\*\* unmanned night shift + no spindle time loss due manual setup changes

\*\*\* 50 weeks, 5 days per week, 2 manned shifts (+ 1 unmanned with automation) per day

The radical idea behind Fastems MMS

# What if Your Production Would Do Only the Right Things, at the Right Time – All the Time?



**What if you could always produce only and exactly what your customer ordered?**

▶ Deliver it precisely when needed, reliably at the right quality and price?

**What if you could erase all unnecessary manual intervention from the process?**

▶ And give people the resources to be more productive – and motivated – at work?

**What if you could multiply your production capacity and utilization rate of your machine tools?**

**What if you had no more scheduling problems?**

▶ And no delays due to missing tools, urgent orders and unexpected machine stops?

**What if you had real-time visibility for material stock?**

▶ And materials were automatically delivered when needed?

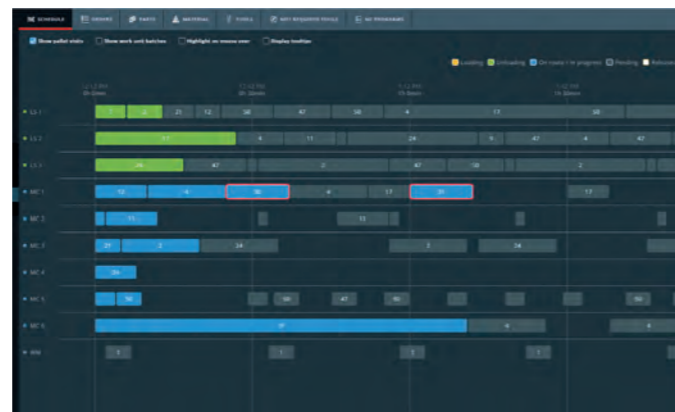
## No more what ifs!

Fastems Manufacturing Management Software is like no other on the market. It is the brains and nervous system of truly intelligent factory automation.

### MMS UTILIZES REAL-TIME DATA AND FEATURES:

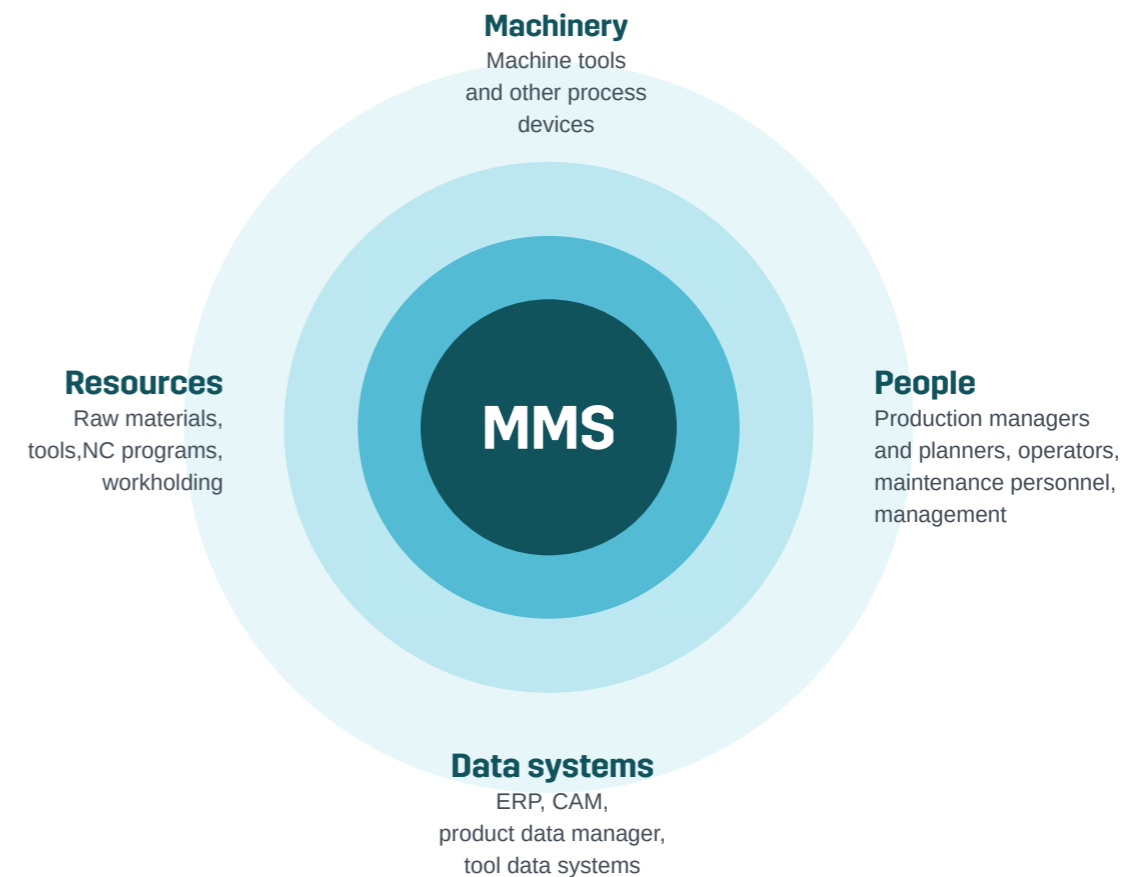
- Predictive scheduling
- Adaptive production planning
- In-advance warnings on missing resources
- Visibility over whole production with KPI reports

Predictive scheduling adapts to all changes caused by e.g. missing tools, urgent orders, unexpected machine stops, and incorrect NC program revisions.

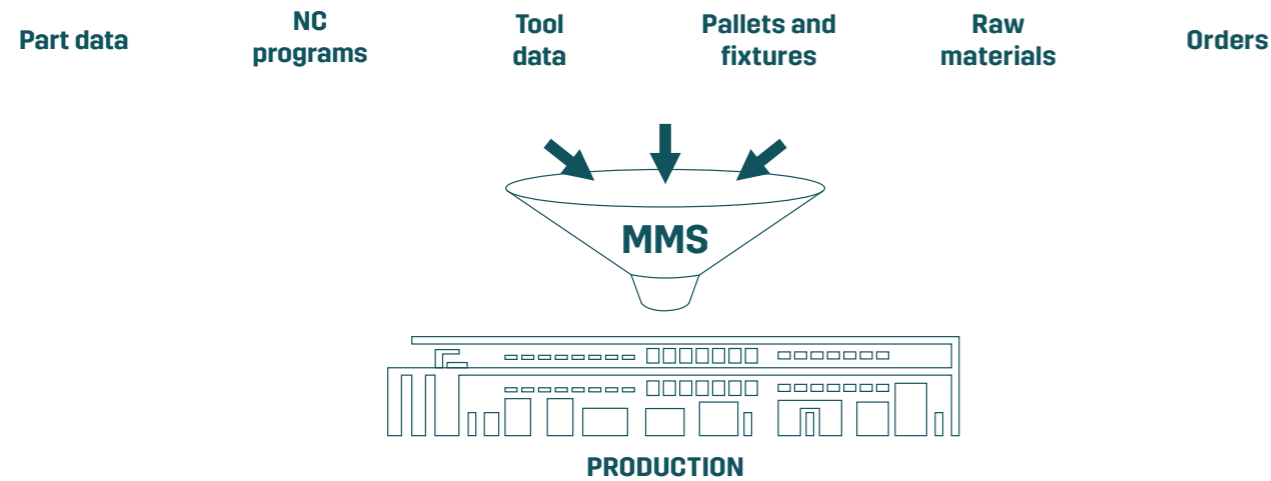


## MMS – Manufacturing Management Software

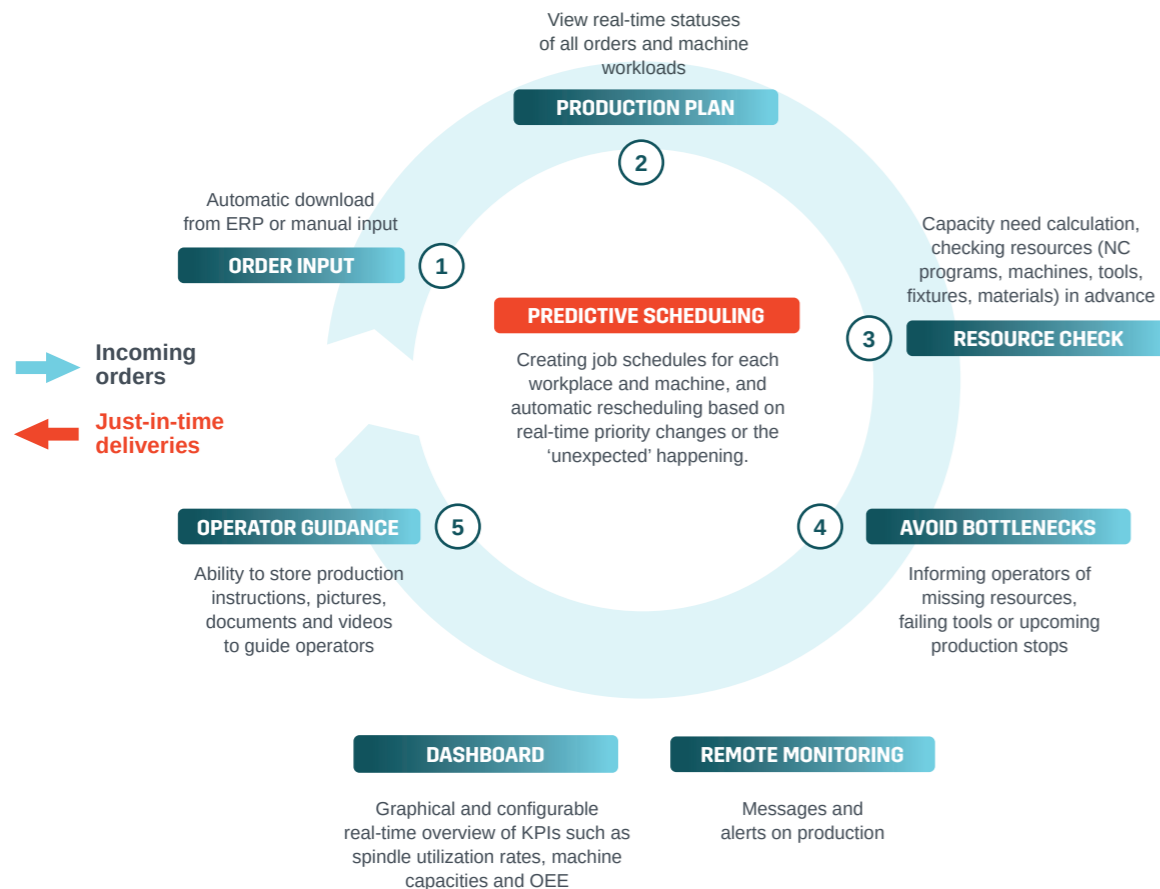
By integrating people, machinery and data systems from shop floor to top floor, Fastems MMS enables seamless production teamwork.



## MMS manages all the resources for your automated manufacturing in one place.



## MMS Streamlines your production



## The domains of Fastems MMS

# Managing Various Machine Types

<b>Pallet handling</b> <b>MMS Pallet Handling</b>	<b>Part handling</b> <b>MMS Part Handling</b>	<b>Stand-alone operations</b> <b>MMS Work Cell Operations</b>
<p>For pallet-based automation systems.</p> <p>Pallet transfers carried out by a stacker crane or a transfer robot.</p> <p><b>TYPICAL APPLICATIONS</b></p> <ul style="list-style-type: none"> <li>Horizontal machining centers</li> <li>Robotic deburring cells</li> <li>Automated machining pallet loading cells</li> </ul>	<p>For robotic part handling applications where parts are loaded directly into the machine tool.</p> <p>Possibility for automated setup changes.</p> <p><b>TYPICAL APPLICATIONS</b></p> <ul style="list-style-type: none"> <li>Turning centers</li> <li>Machine centers without automatic pallet changers</li> </ul>	<p>For managing capacity, work queues and resources of the standalone machines and manual work cells.</p> <p>Can be used as a standalone solution or together with Pallet or Part automation.</p> <p><b>TYPICAL APPLICATIONS</b></p> <ul style="list-style-type: none"> <li>Stand-alone-machine tools</li> <li>Quality and inspection operations</li> <li>Assembly</li> </ul>
<p align="center"><b>Different domains can be brought together, enabling factory-wide:</b>  <b>FINE SCHEDULING – RESOURCE MANAGEMENT – MONITORING</b></p>		

# Make a Future Proof Investment

With Fastems you don't need to commit to any particular machine tool brands. We believe in openness and modularity. Our systems keep all your options open for the future.

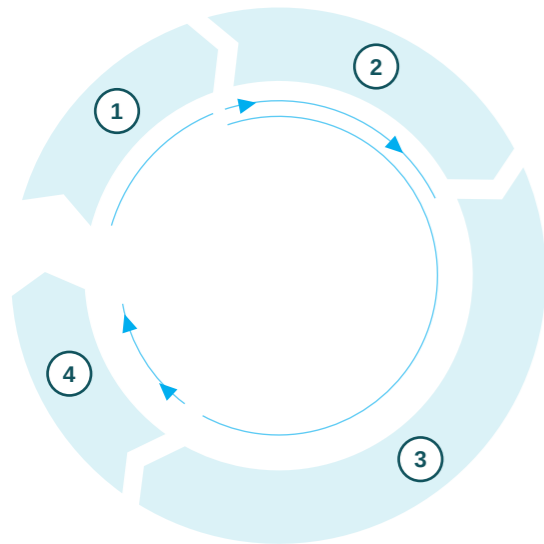
It's remarkably easy to upgrade and extend your system if – and when – your needs change. 80% of our customers do so. And you have the freedom to choose precisely the machinery and functionalities your business needs.

No matter how diverse your production needs, how small or big your batch, or how complex your production line, Fastems takes your competitiveness and service to the next level.

**Stand clear.  
We're about to shatter a common misconception.**

## Bringing value throughout the lifecycle

Local and global technical teams with experience from thousands of automation projects make sure the investment remains profitable through the whole lifecycle.



### 1 PLAN & INVEST

**Profitable concept**  
Individually designed, with ROI calculations

### 2 IMPLEMENT

HW Engineering  
SW Engineering  
Commissioning

### 3 UTILIZE & IMPROVE

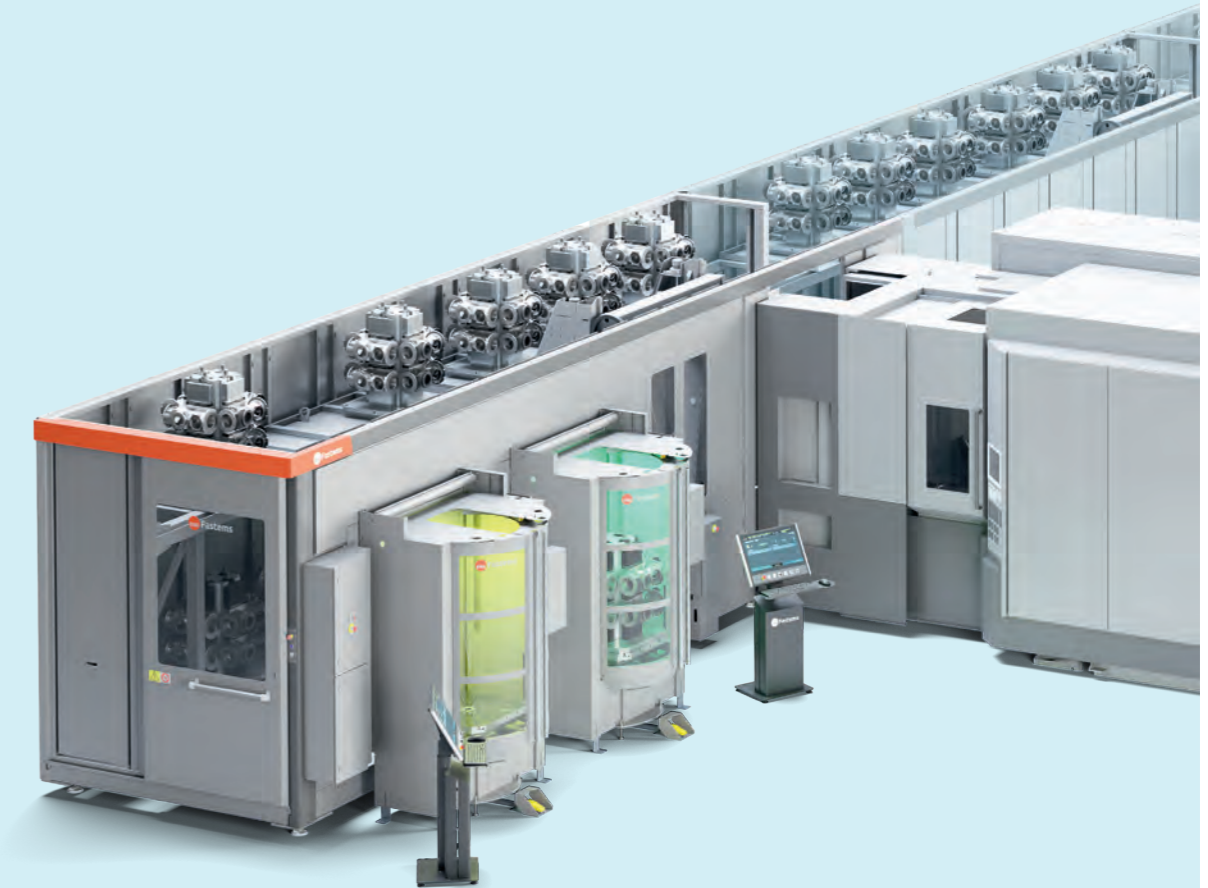
**Competence services**  
Helping the customer build relevant knowledge through on-site or remote trainings and distance learning.

**Advisory**  
Identifying risks and bottlenecks and applying best practices to customer's production for continuous performance improvement.

**Software services**  
Ensuring the control software is up to date and that it meets the changing production needs.

### 4 FUTURE

**Adapting for new needs**  
Modernizations, extensions, relocations



## Fastems Systems Grow with Your Business

- Multiply the utilization rate of your machinery
- Better performance, service and profitability
- Produce any batch size from one to thousands with the same unit cost
- Open integrator – over 100 machine tool and device brands
- Modular system – update and extend easily
- Integrate additional process phases like washing, robotic deburring and CMM
- Choose only the functionalities you need
- From standalone work cells to complex automated production systems



Experience Fastems offering virtually: [fastems.com/living-factory/](https://fastems.com/living-factory/)



Find out more: [fastems.com/offering/automation-systems/](https://fastems.com/offering/automation-systems/)

Product category

Tool automation

Other processes

Payload

## Fastems Automation Systems Solution for Your Need

Fastems' industry-leading portfolio of automation systems offers the right solution for practically any need a machine shop might have. We provide you with highly flexible and process-safe solutions for any workpieces and batch sizes.

### PALLET HANDLING SYSTEMS

Fastems supplies automation for pallet and zero-point plate machines tools in payloads of 50 – 10,000+ kgs (with pallet).

These are typically 3-5 axis milling machines, machining centers, grinding machines or vertical turning machines. We offer everything from small modular systems for 1-3 machine tools to large tailored solutions with 10+ CNC machines of different kind.

### PART HANDLING SYSTEMS

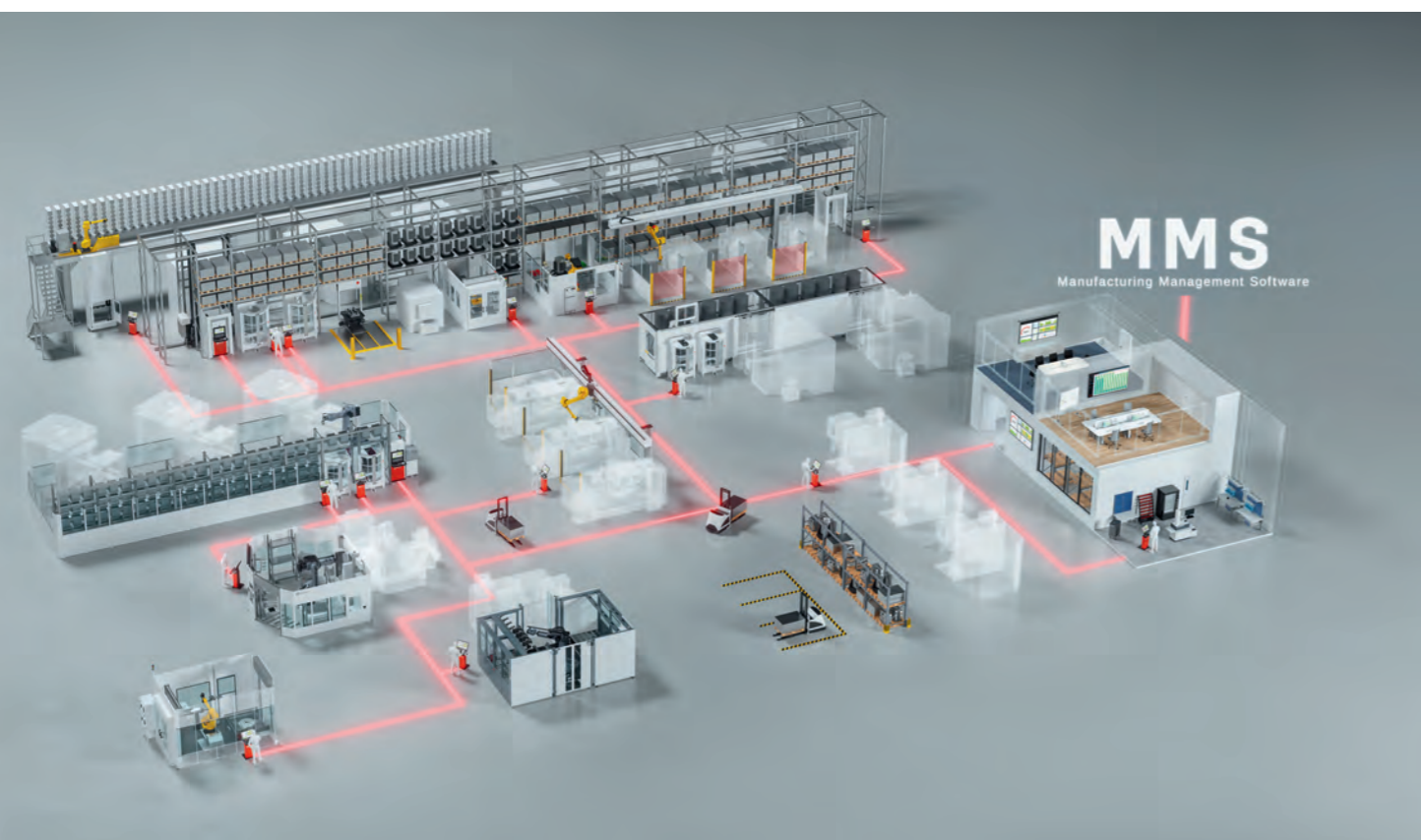
Fastems supplies part handling automation systems in payloads of 1 – 500+ kgs.

Typical automated CNC machines are single or dual spindle lathes, turn/mills, 5-axis milling machines, grinding or honing machines and more. We offer smaller systems for 1-2 lathes all the way to complex agile manufacturing systems with 10+ machines.

### CNC SUPPORTIVE PROCESSES

Integrating more processes and devices can increase the total productivity and quality.

Fastems integrates and automates measuring, washing, marking, finishing and various other devices or processes to be part of our intelligent CNC automation systems. We also offer deburring and robotic finishing cells and robotic systems for automated part loading to/from pallets.



## Solution Finder Find the Right Solution

Fastems automation solutions are suitable for diverse production needs, scaling up from simple standalone work cells to highly advanced automated production systems.

Whatever your manufacturing set-up, we have the right Fastems system to make it more productive and more profitable for your business.

MAIN CATEGORY	PRODUCTS
Manual operations	MMS Work Cell Operations
Milling (APC*)	FPT Flexible Pallet Tower FPC Flexible Pallet Container FMS ONE Flexible Manufacturing System MLS Multi Level System
Milling (no APC*)	FPT Flexible Pallet Tower RoboFMS ONE RoboFMS
Turning	RCO RoboCell ONE AMC Agile Manufacturing Cell AMS Agile Manufacturing System
Other processes	CTS Central Tool Storage GTS Gantry Tool Storage TSC Tool Service Cell RFC Robotized Finishing Cell ALD Autoloading Cell Other auxiliary processes



Product category —

Tool automation —

Other processes —

Payload —

Find out more: [fastems.com/work-cell-operations/](https://fastems.com/work-cell-operations/)

MMS Work Cell Operations (WCO)

# Automation Beyond Machine Tending

With the **Work Cell Operations (WCO)**, it's possible to bring all familiar MMS benefits and functionalities to manual manufacturing operations and stand-alone machines.

The software has flexible connection and integration options that enable combining various different non-automated and automated equipment under same control – including any Fastems automation that you might have.

**WCO BENEFITS**

- Automatic production scheduling based on real orders
- Prioritized work lists
- Resource need calculations
- Material flow management
- Different levels of machine interface functionalities

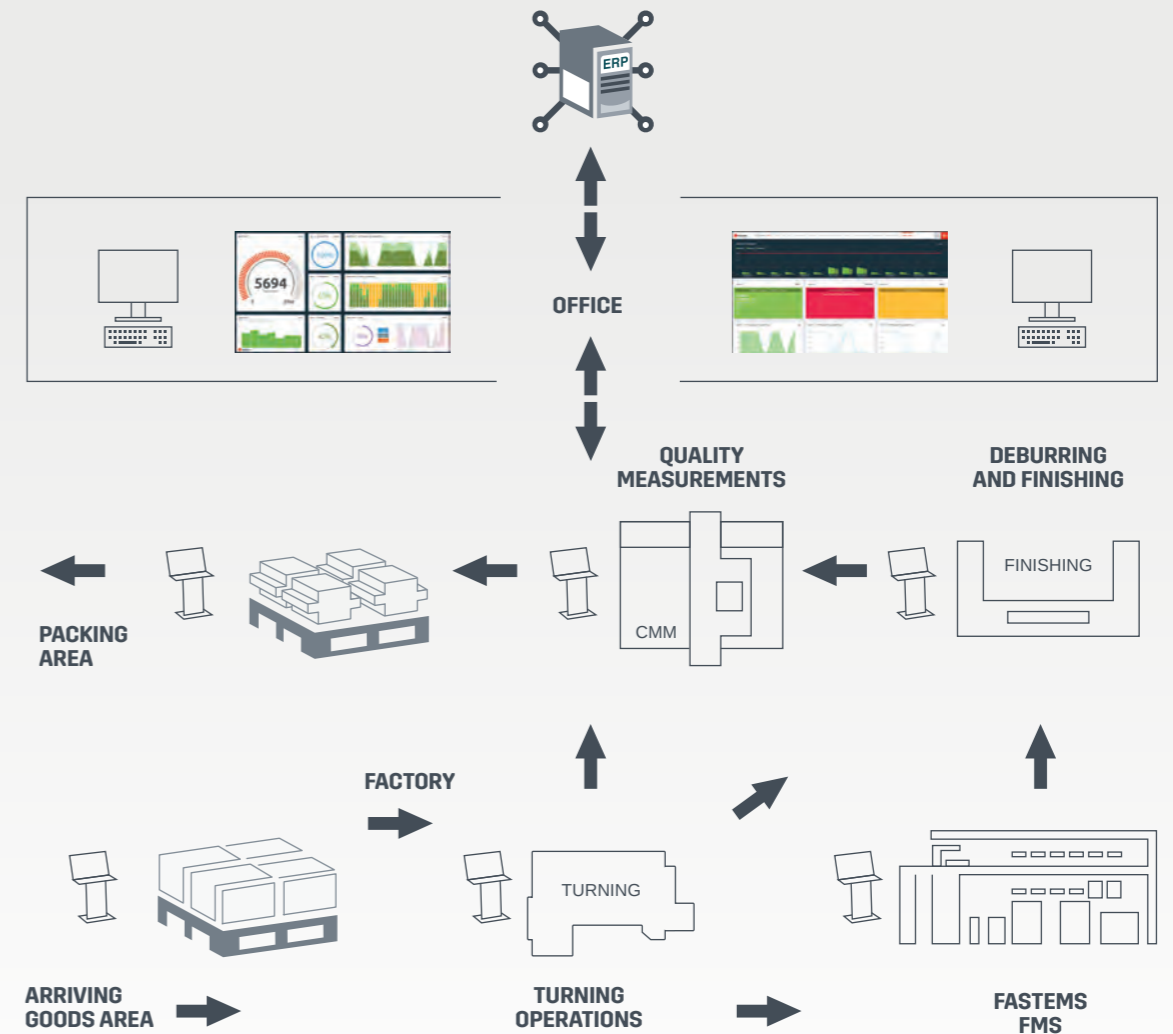
Order	Part	Operation	Qty	Ready	WIP	Scrapped	Setup	Material	Programs	Tools
5879455	DDK45551 Drill shaft	20 Turning	10	5	5	0	OK	-	OK	OK
5879455	DDK45551 Drill shaft	20 Turning	10	0	0	0	Start at 11:04	OK	40 / 10	OK
5879455	DDK45551 Drill shaft	20 Turning	10	0	0	0	Start at 17:14	OK	40 / 10	OK
5879455	DDK45551 Drill shaft	20 Turning	10	0	0	0	Start at 23:24	OK	40 / 10	OK
5879455	DDK45551 Drill shaft	20 Turning	10	0	0	0	Start at 17:04/2020	OK	40 / 10	OK
1562455	PDK13301 Shaft assembly frame	20 Turning	50	0	0	0	Start at 17:04/2020	OK	5 / 10	Not OK
1562455	PDK13301 Shaft assembly frame	20 Turning	50	0	0	0	Start at 18:04/2020	OK	5 / 10	Not OK
1562455	PDK13301 Shaft assembly frame	20 Turning	50	0	0	0	Start at 19:04/2020	OK	5 / 10	Not OK
1562455	PDK13301 Shaft assembly frame	20 Turning	50	0	0	0	Not scheduled	OK	5 / 10	Not OK

“WCO has brought transparency into our production: as a door-to-door MES solution, it helps us in identifying and tackling our production bottlenecks, and puts focus on the right things in order to excel in delivery performance.”

Production Manager  
Sandvik Mining and Construction



## Example of WCO managing a workshop production flow based on orders from ERP.



**COMPLEMENT YOUR MOM SYSTEM WITH MMS WCO**

The MMS WCO can be integrated to a wider MOM system and provide an excellent and comprehensive production planning and execution program that complements the overall software architecture of your company. Fastems has wide integration capabilities to many ERP and other IT systems that are usually at the core of MOM architectures.

MOM projects are evaluated case by case, so true connectivity and suitability are reviewed together with Fastems and your IT personnel.





Product category  
Pallet handling

Tool automation  
No

Other processes  
No

Payload  
500–1,000 kg

Find out more: [fastems.com/product/fpt/](https://fastems.com/product/fpt/)

FPT – Flexible Pallet Tower

# Compact CNC Automation for 4 and 5 Axis

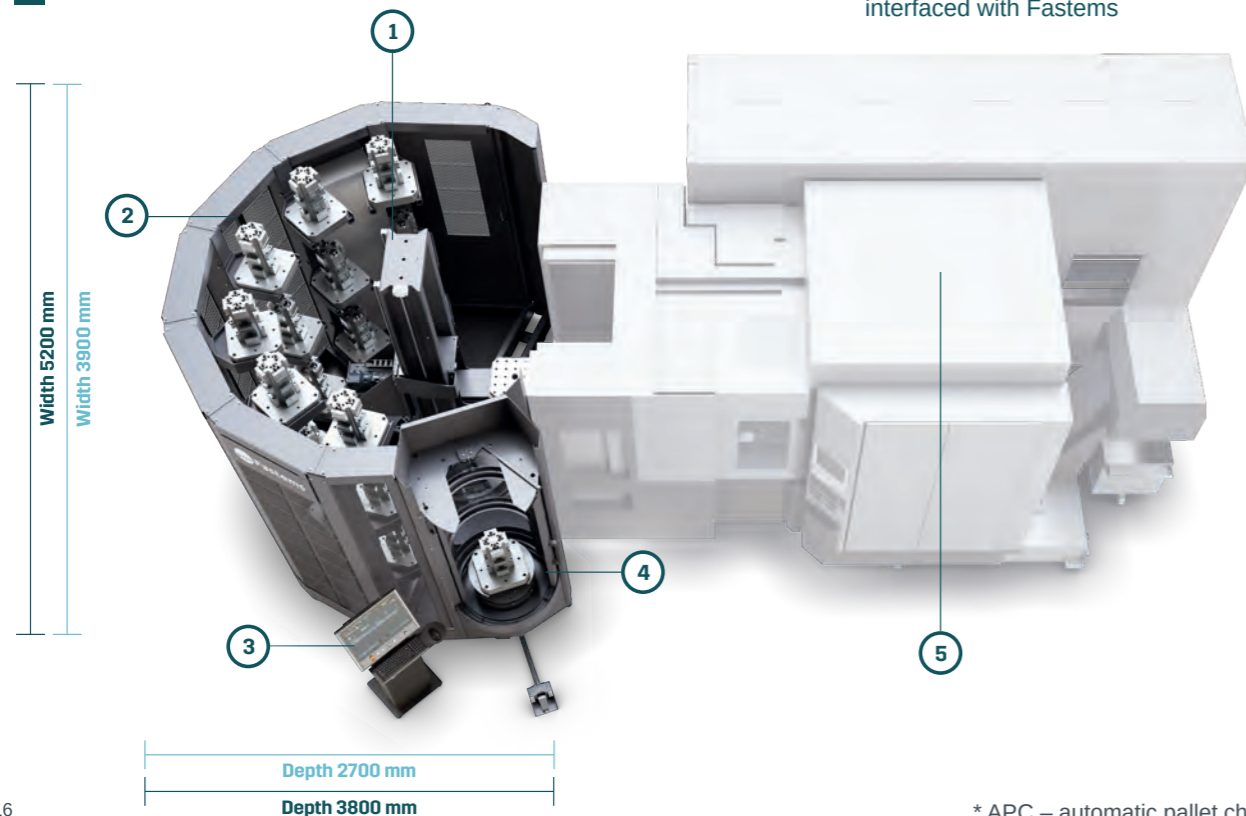
FPT is a compact pallet automation for a single machine tool with or without an automatic pallet changer (APC). FPT features a height configurable 2 to 4 level storage for up to 24 pallets, allowing also for two load heights in one system.

**BENEFITS:**

- Fast delivery and plug-and-play installation for 90+ machine tool brands
- Higher machine utilization and extended lights-out production capacity
- Compact footprint with configurable storage for 300-630 mm pallets
- Single-view user interface with drag-and-drop production order

- 1 Stacker crane**  
- Pallet transportation
- 2 Pallet storage**  
- Configurable from 2 to 4 levels  
- Ask for two load heights optimization!
- 3 Cell Controller**  
- Touch operating panel  
- Ergonomic with adjustable height
- 4 Loading station**  
- Ergonomic operation  
- Clamping and unloading the parts  
- At a glance system status
- 5 Machine tool**  
- With or without automatic pallet changer  
- 300 to 360 mm pallets  
- Over 90 brands already interfaced with Fastems

FPT-500  
FPT-1000



“We can fit 18 pallets in 9 square meters, and keep our machine fed efficiently.”

CEO at Alfa Kvalitetslego  
<https://www.fastems.com/case/alfa-kvalitetslego/>

**Plug-and-play automation for 300-630 mm pallets**



## Milling (APC\*)



Product category  
Pallet handling

Tool automation  
No

Other processes  
No

Payload  
750–3,000 kg

Find out more: [fastems.com/product/fpc/](https://fastems.com/product/fpc/)

FPC – Flexible Pallet Container

# Easy & Extendable Pallet Automation

A compact and versatile Flexible Pallet Container for 1 to 3 machine tools is fast to deploy, easy to use and can be extended cost-efficiently.

### WHY CHOOSE FPC OVER JUST AN AUTOMATIC PALLET CHANGER OR A PALLET POOL?

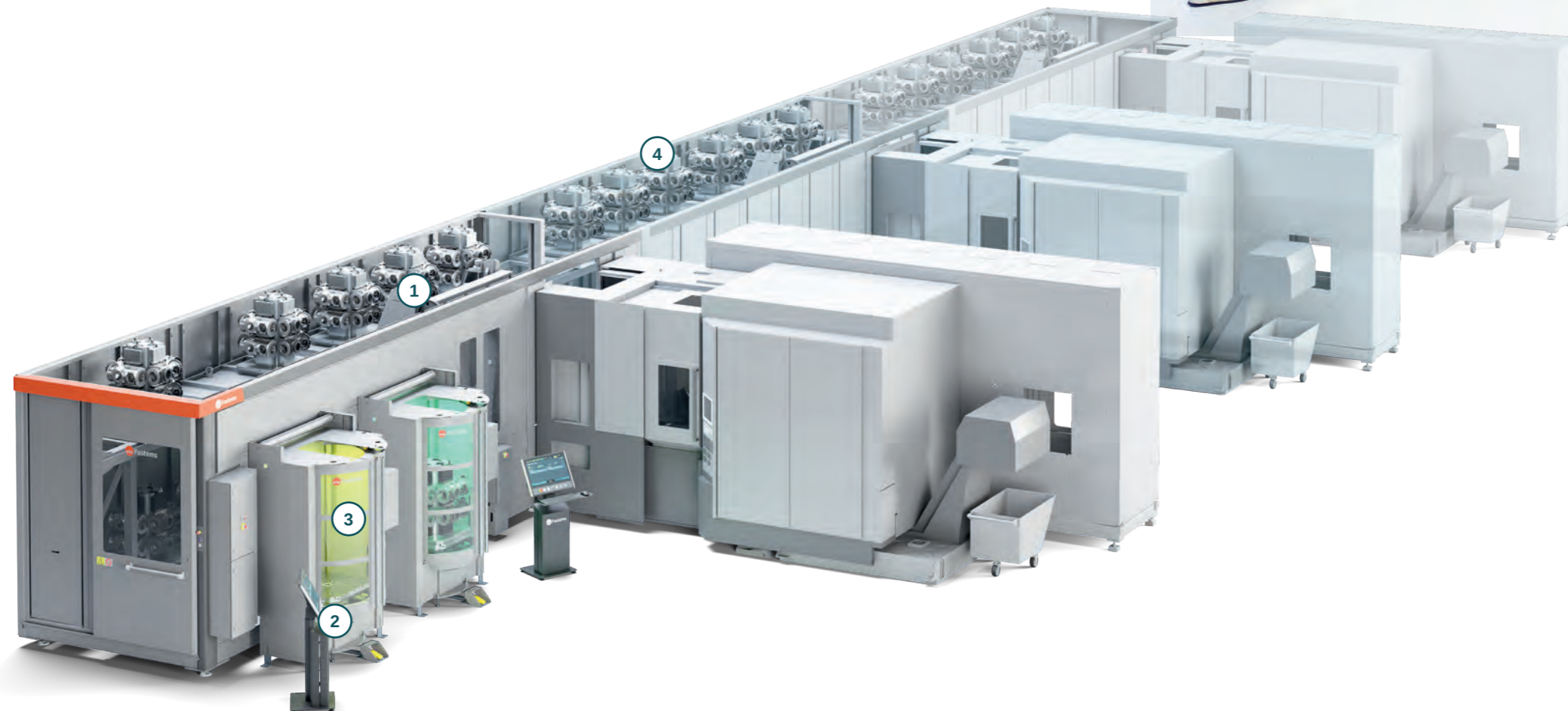
- Run various parts with all machines
- 1 operator can run up to 3 machine tools
- Reduced floorspace need
- Higher spindle utilization per machine tool  
– less machines with a lower initial investment

- 1 Stacker crane**
  - Transports pallets within the system
  - Decreases factory floor forklift traffic
- 2 Cell controller**
  - Control of multiple machine tools
- 3 Ergonomic loading stations**
- 4 Pallet storage**
  - Buffer storage for up to 36 pallets
  - High pallet capacity – high potential for lights-out production



“We have achieved a daily effective machining time of 1,420 minutes, meaning that the machine tool utilization rate is 98.6 percent.”

Managing Director, Sant Hydraulic  
[fastems.com/case/sant-hydraulic-technology/](https://fastems.com/case/sant-hydraulic-technology/)



Product category  
Pallet handling

Tool automation  
No

Other processes  
No

Payload  
500–3,000 kg

### Milling (APC\*)



Find out more: [fastems.com/product/fms-one/](https://fastems.com/product/fms-one/)

### Milling (APC\*/no APC\*)

Product category  
Pallet handling

Tool automation  
Yes

Other processes  
Yes

Payload  
500–11,000 kg



Find out more: [fastems.com/product/mls/](https://fastems.com/product/mls/)

## FMS ONE

# The Best Practices of Flexible Manufacturing

FMS ONE is a standardized combination of the best features and practices of flexible manufacturing for up to 10 and even more machine tools – created through decades of production development experience utilizing standard models for reducing engineering hours and investment level.

### FMS ONE BENEFITS

- Excellent floor-space utilization
- Automation solution for every 3 to 5 axis machine tool
- Easy and straightforward extendability
- Extended lights-out manufacturing
- High pallet transfer per hour -capacity
- Integrated material management
- Range of capacities to suit 400x400 to 800x800 pallet machines

#### 1 Stacker crane

- Transports pallets within the system
- Decreases factory floor forklift traffic

#### 2 2–5 level pallet and material storage

- Storage for machining and material pallets
- High pallet capacity
- Potential for long lights-out periods

#### 3 Cell controller

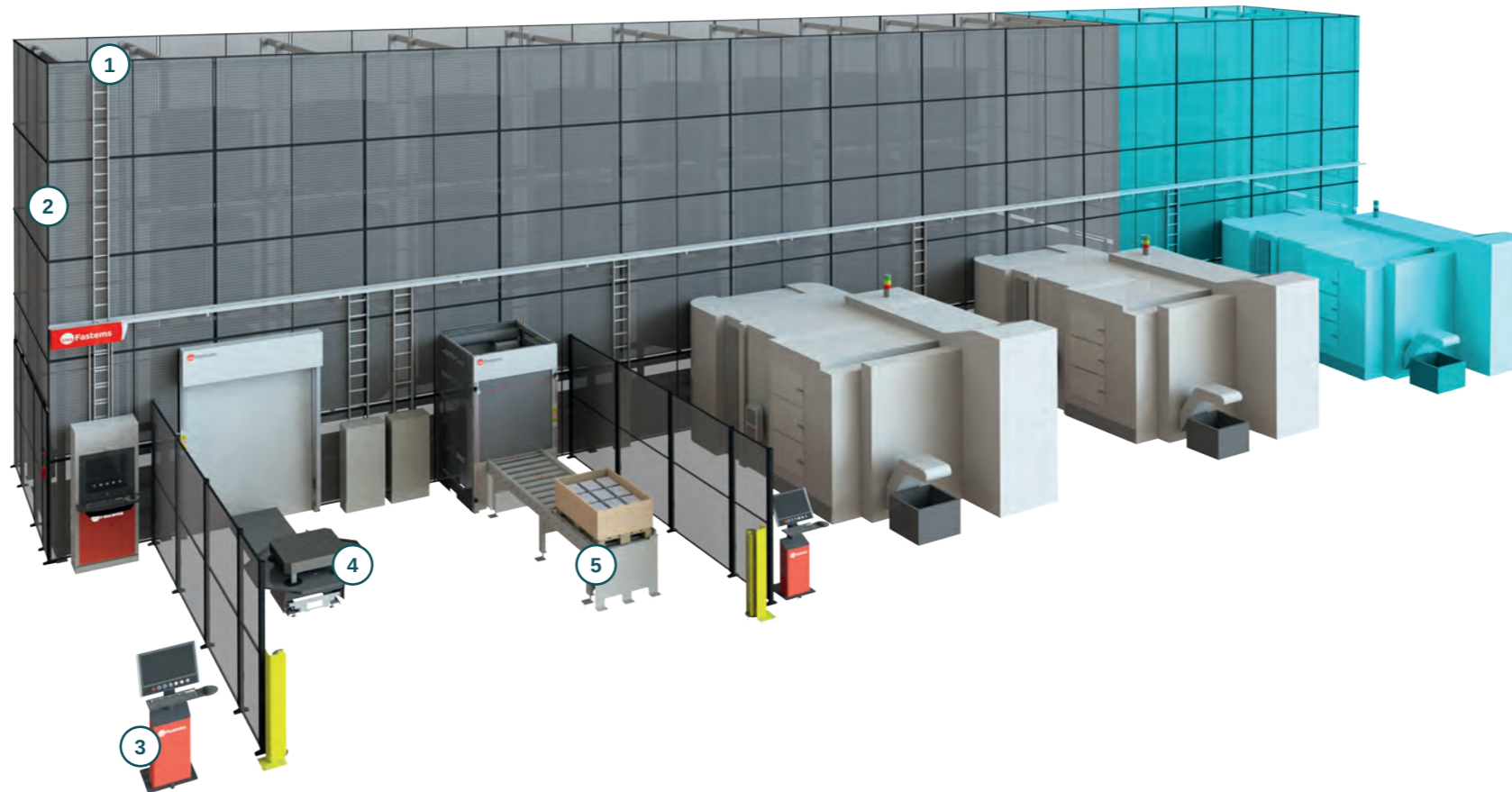
- Control of multiple machine tools

#### 4 Loading station

- Part and fixture setups
- Variety of ergonomic options

#### 5 Material station

- Input of raw materials
- For different material pallet sizes



## MLS – Multi Level System

# Customized for More Advanced Processes

Fastems MLS is the customized and most advanced version of FMS. It handles even the most demanding and complex manufacturing settings. This includes managing tools, finishing processes, CMM, automatic fixture loading (and manual machine tool scheduling). MLS comes with a wide range of loading and material stations, and is able to handle extremely heavy payloads.

### FMS MLS BENEFITS

- Integrate tool automation, finishing, washing, CMM and surface treatments into your automation solution
- Multiple machine tool types in the same system – also non-APC\*
- Ready for robotic applications
- Customizable for all needs



„Once the jobs are in FMS, they’re there permanently. That makes re-running of a job like gravy.”

President, Mach Machine [fastems.com/case/horizontal-machining-mach-machine/](https://fastems.com/case/horizontal-machining-mach-machine/)

## Milling ( no APC\* )



Product category  
Pallet handling

Tool automation  
No

Other processes  
No

Payload  
0–275 kg

Find out more: [fastems.com/product/robofmsone/](https://fastems.com/product/robofmsone/)

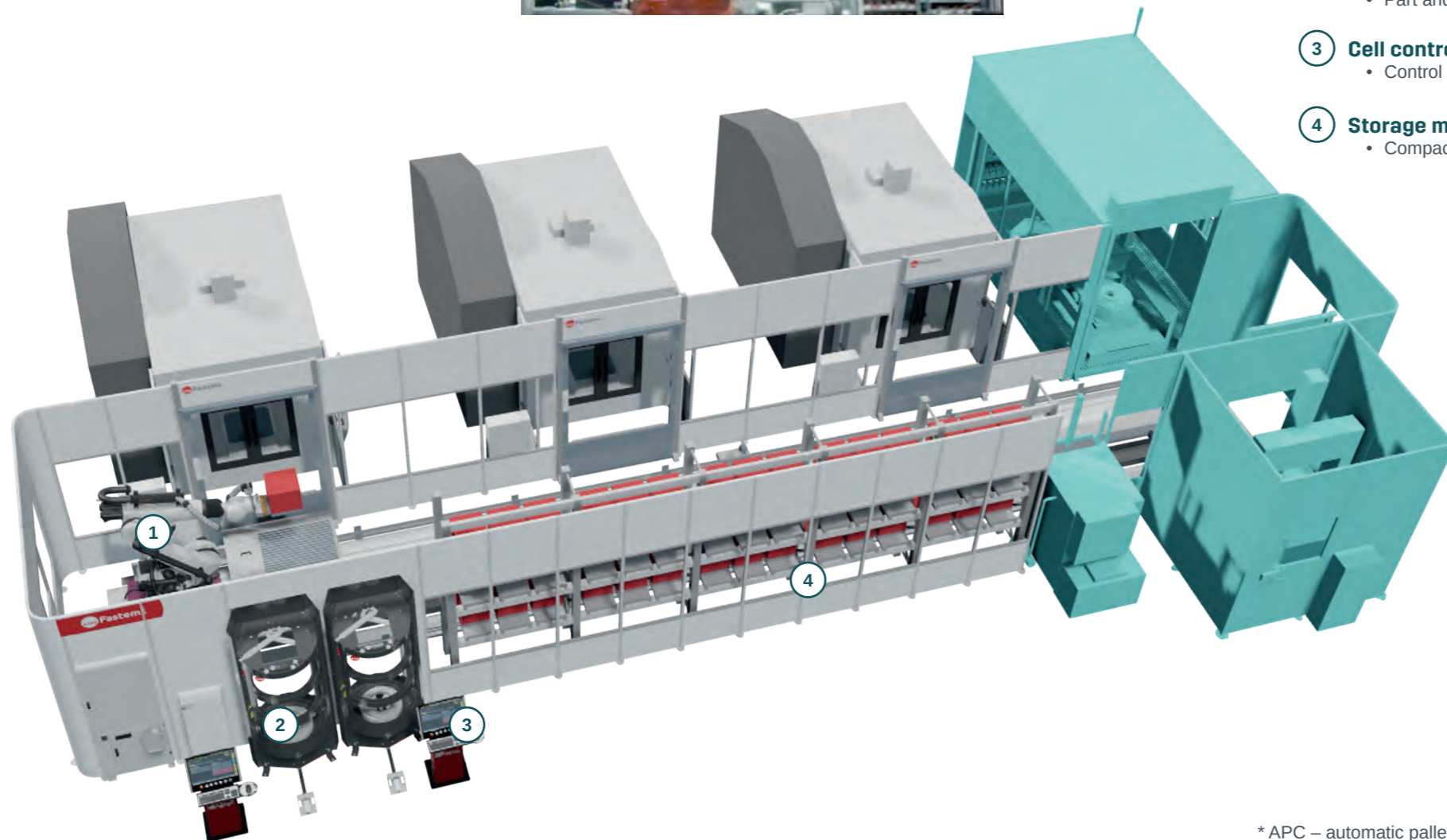
RoboFMS ONE

# Flexible Automation from 3 to 5 Axis

RoboFMS ONE is a standardized combination of the best features and practices of robotic flexible manufacturing.

### ROBO FMS ONE BENEFITS

- Pallet automation for new-generation 5-axis universal mills and vertical milling machines
- Zero-point pallet handling
- Pallet handling possible for machine tools that don't have APC
- Possibility for operator area in front of the machine tool



## Milling ( no APC\* )



Product category  
Pallet handling

Tool automation  
Yes

Other processes  
Yes

Payload  
0–1,000 kg

Find out more: [fastems.com/product/robofms/](https://fastems.com/product/robofms/)

RoboFMS

# Customized for More Advanced Processes

Fastems RoboFMS combines the benefits of an industrial robot and flexible manufacturing system. It brings new flexibility to automating machine tools, with or without automatic pallet changers, and makes integrating washing machines, marking machines, measuring devices and other process equipment simple and cost effective.

### ROBO FMS BENEFITS

- Multiple machine tool types in the same system
- Integrate tool automation, finishing, washing, CMM and surface treatments in your automation solution
- High layout flexibility
- Easy to extend

- 1 Robot**
  - Transfers pallets within the system
- 2 Loading station**
  - Part and fixture setups
- 3 Cell controller**
  - Control of multiple machine tools
- 4 Storage modules**
  - Compact and spacious



“We are now able to produce for an entire weekend unmanned, even in batch sizes of 1.”

Global Process Development Manager,  
SKF Aeroengine [fastems.com/case/skf-aeroengine-france/](https://fastems.com/case/skf-aeroengine-france/)

## Loading and Material Stations for FMS For Any Workpiece

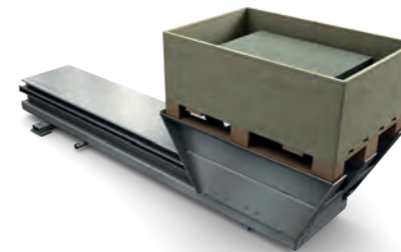
	LST	LSL	LSM	LSC	LSB	MSB	MSC	MSP	IOC
FPC				○	○				
FMS ONE			○	○	○		○		○
MLS	○	○	○	○	○	○	○	○	○
RoboFMS ONE				○					
RoboFMS				○					

### ERGONOMICAL WORK ENVIRONMENT FOR EVERYONE

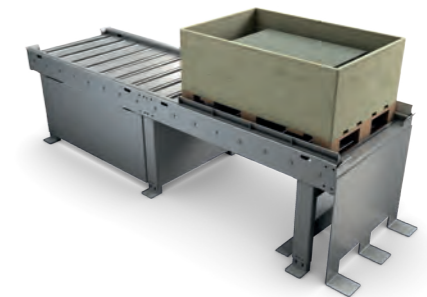
The operator's work area is the heart of the FMS operation. Fastems provides a variety of loading and material stations for ergonomic and efficient manual operations. Feel free to select the type that complements your fixturing and workpieces, while also minimizing unnecessary work. All loading stations can also be equipped with automatic, hydraulic or vacuum powered feed-through for automated workholding. The iconic Fastems Touch OP complements the loading cell and puts the operator in control. These stations can also be installed to the system afterwards as a modification when your manufacturing needs evolve.



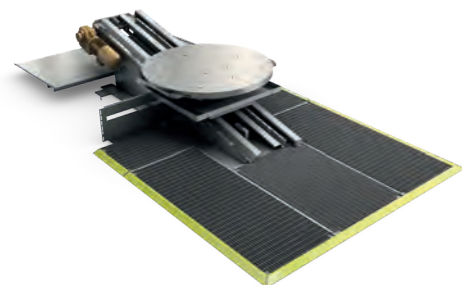
LST | Tilting loading station



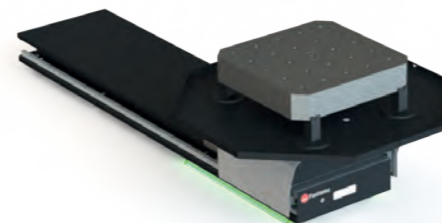
MSB | Basic material station



MSC | Conveyor material station



LSL | Lifting loading station



LSM | Moving loading station



MSP | Picking material station



IOC | In-out-conveyor material station



LCS | Compact loading station



LSB | Basic Loading Station



Product category  
Part handling

Tool automation  
No

Other processes  
Yes

Payload  
Max. 80 kg

Find out more: [fastems.com/product/roboCELL-one/](https://fastems.com/product/roboCELL-one/)

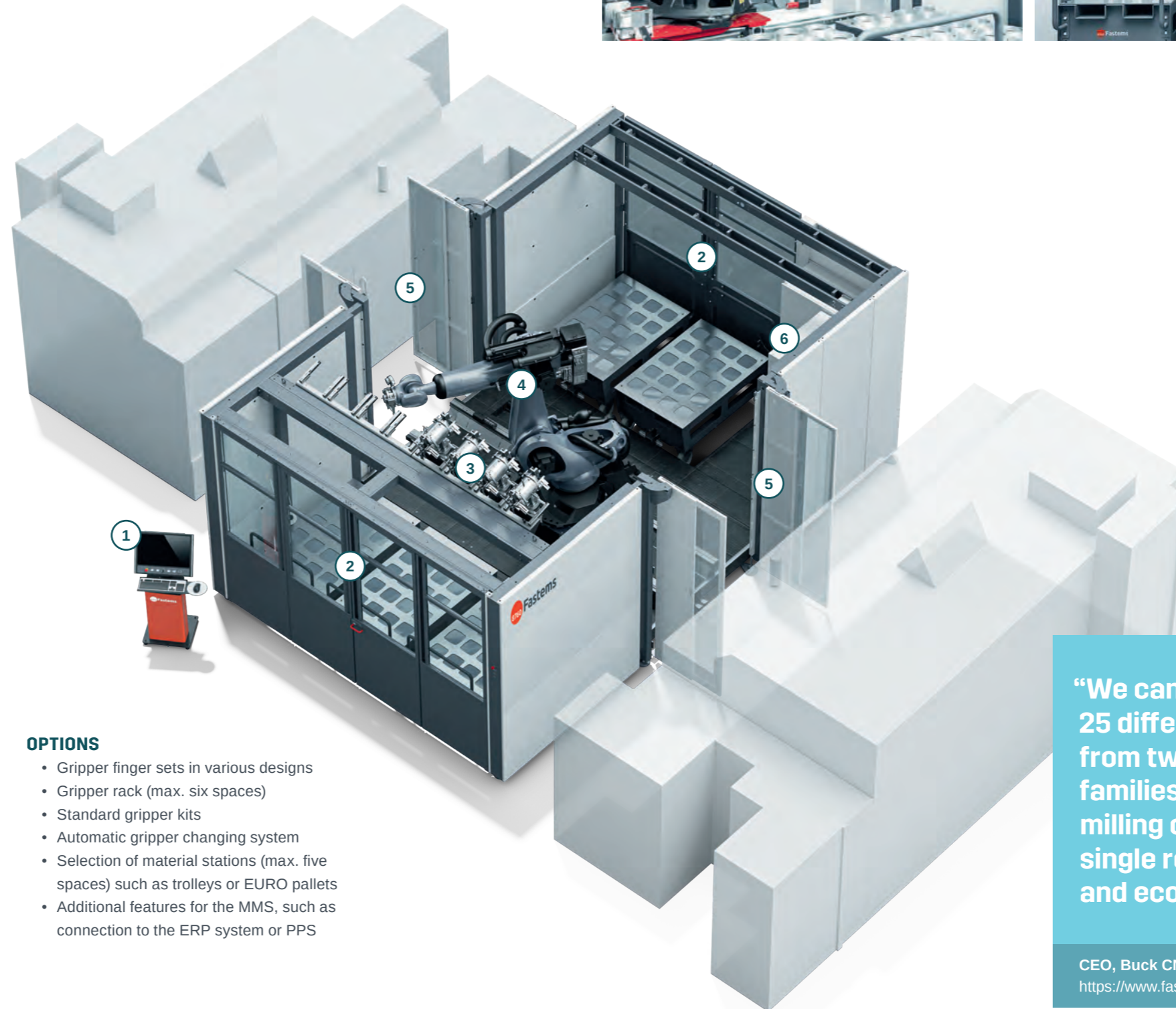
## RCO RoboCell ONE

# For Heavy Workpieces and Varying Batch Sizes

Fastems RoboCell ONE is a standardized solution for order driven, flexible batch manufacturing of a couple of product families with several variants per family. It is an easy automation of up to two machine tools of the same type (lathe or milling machine) with only one robot. This solution is perfect for heavier workpieces up to 80 kg.

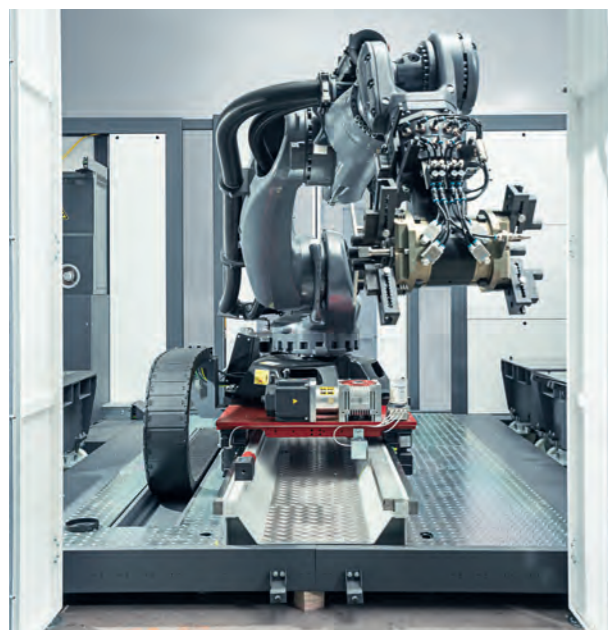
### ROBOCELL ONE BENEFITS

- Easy accessibility of machine tools and tool magazine for manual operations thanks to flexible cell layout
- Connection of a second machine to the cell possible at a later time
- Easy to uncouple either of the two machine tools without disturbing the ongoing process
- Configuration during the primary processing time with out special knowledge of robots
- Thanks to MMS, you can expect a reduction of lead times, lower production costs per workpiece and an optimal machine utilization even with a diverse range of orders



### AT A GLANCE

- 1 Touch Operation Panel
- 2 Access doors to the five material stations
- 3 Gripper exchange station
- 4 Robot on linear axis
- 5 Access doors to the machine tools
- 6 Robot control and integrated switch cabinet



### OPTIONS

- Gripper finger sets in various designs
- Gripper rack (max. six spaces)
- Standard gripper kits
- Automatic gripper changing system
- Selection of material stations (max. five spaces) such as trolleys or EURO pallets
- Additional features for the MMS, such as connection to the ERP system or PPS

**“We can produce 25 different components from two different part families with two turning/ milling centers and a single robot cell, flexibly and economically.”**

CEO, Buck CNC Technik  
<https://www.fastems.com/case/buck-cnc-technik/>

## Turning / Milling (no APC\*)

Product category  
Tool handling

Tool automation  
Yes

Other processes  
Yes

Payload  
1–1,000 kg



Find out more: [fastems.com/product/amc/](https://fastems.com/product/amc/)

## Turning / Milling (no APC\*)

Product category  
Tool handling

Tool automation  
Yes

Other processes  
Yes

Payload  
1–1,000 kg

### AMC – Agile Manufacturing Cell

# For Cost Effective Manufacturing of Small Batches

Fastems Agile Manufacturing Cell is a solution for order driven, flexible batch manufacturing of several different parts up to several product families. AMC is a partly modular solution that can be customized for very different needs, making production efficient from batch size of one to large batches of thousands.

#### AGILE MANUFACTURING CELL BENEFITS

- It is an agile automation of one or more machine tools with a single robot
- Long unmanned periods through extended storage and automatic batch change over
- Indication of required user actions and resource need for minimized system downtime
- Integration of auxiliary manufacturing processes for increased added value
- Possibility to run in several different machine sequences on the machine tool depending on the part
- Freely configurable part route in cell and parametric part handling programming



“At the moment, our robot cell runs at a capacity of 90 percent, producing 32 different components unmanned in 2 ghost shifts.”

Operations Manager, ALLMATIC  
[fastems.com/case/allmatic-Yeskob-spansysteme/](https://fastems.com/case/allmatic-Yeskob-spansysteme/)

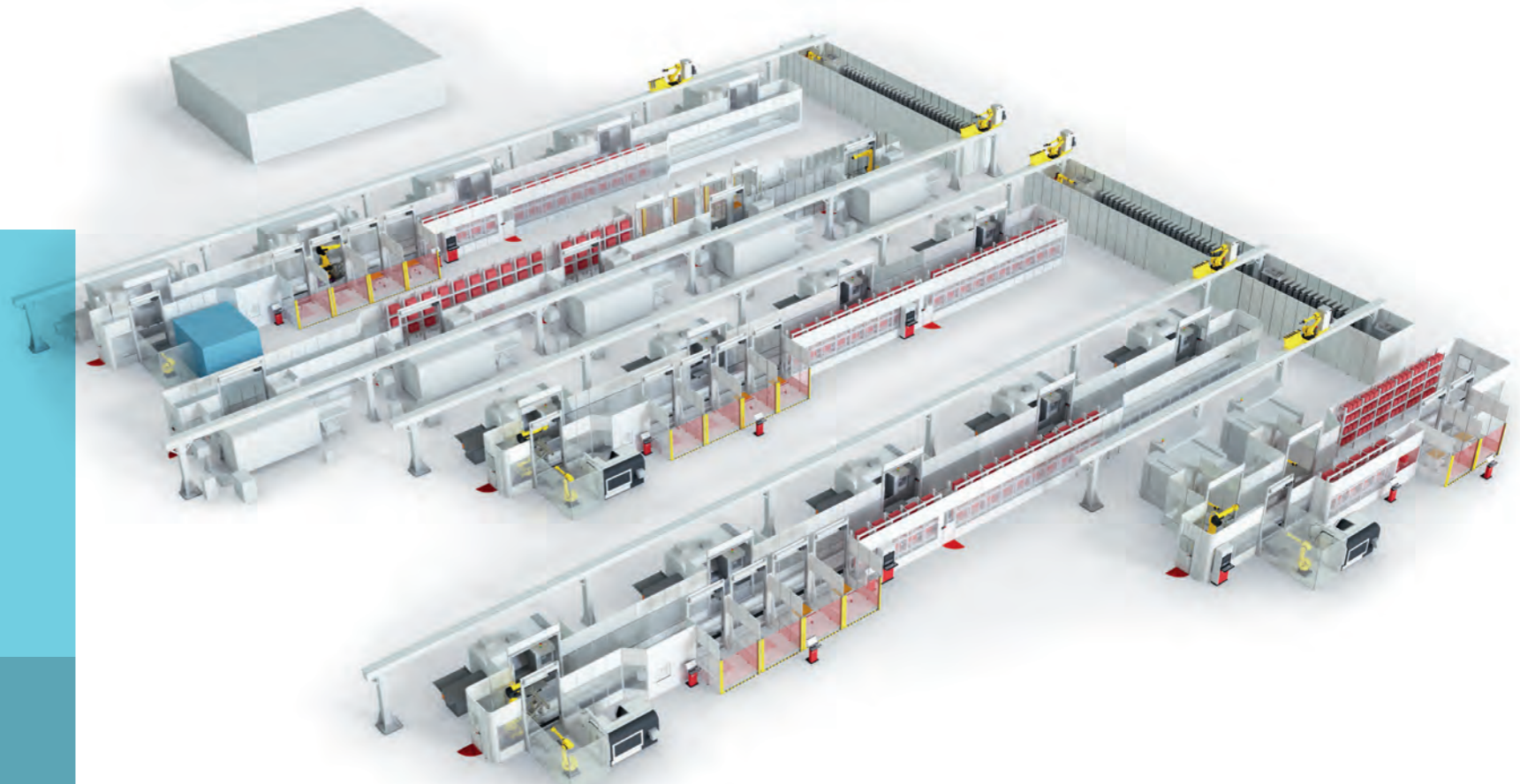
### AMS – Agile Manufacturing System

# For Extensively Integrated Manufacturing Processes

AMS is a customized and factory wide software and hardware solution for automating complete manufacturing chains. It can consist of any configuration of Fastems automation hardware and unautomated machines, and they are all controlled with MMS.

#### AGILE MANUFACTURING SYSTEM BENEFITS

- Factory level control for the manufacturing process
- Short lead times as the control constantly pushes the produced forward in the manufacturing chain
- Clear overview of the current manufacturing situation
- Possibility to predict the future workload based on the current order statuses
- Integrations to top level IT systems done only once
- Clear overview of the current amount of WIP parts
- Automates the fine planning for the whole factory





Find out more: [fastems.com/product/toolautomation/](https://fastems.com/product/toolautomation/)

## GTS – Gantry Tool Storage & CTS – Central Tool Storage

# Further Utilization for High Tool Consumption

Fastems tool automation solutions give visibility over coming tool needs, reduce tool loading errors and spindle breaks, and automate tool set up changes, replacement of worn-out tools and tool sharing between many machines. Tool automation can increase machine tool utilization even above 95% while reducing the need for sister tooling and large machine tool magazines.

### TOOL AUTOMATION BENEFITS

- Know in advance which tool is needed, where and when
- Consistent quality and zero spindle breaks with no tool loading errors
- Long unmanned periods and even above 95% machine tool utilization
- Reduced need for sister tools
- Smaller machine tool magazines needed

#### 1 Centralized tool storage

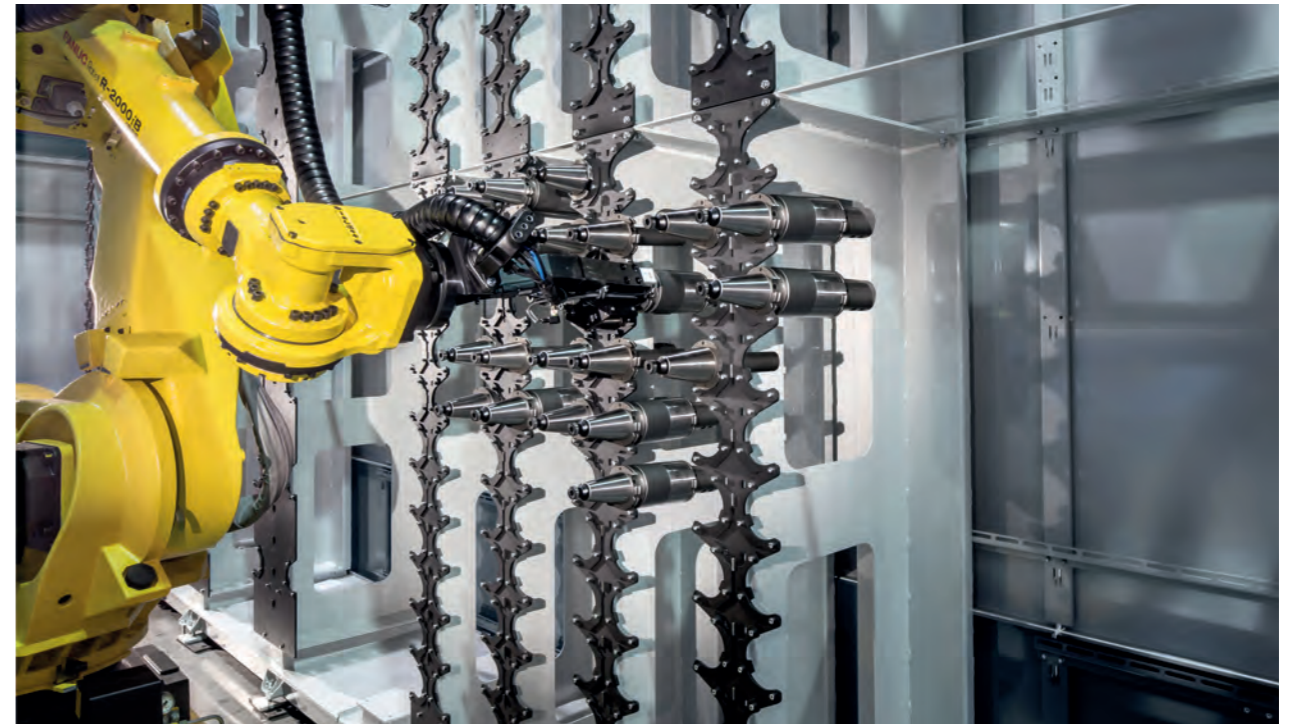
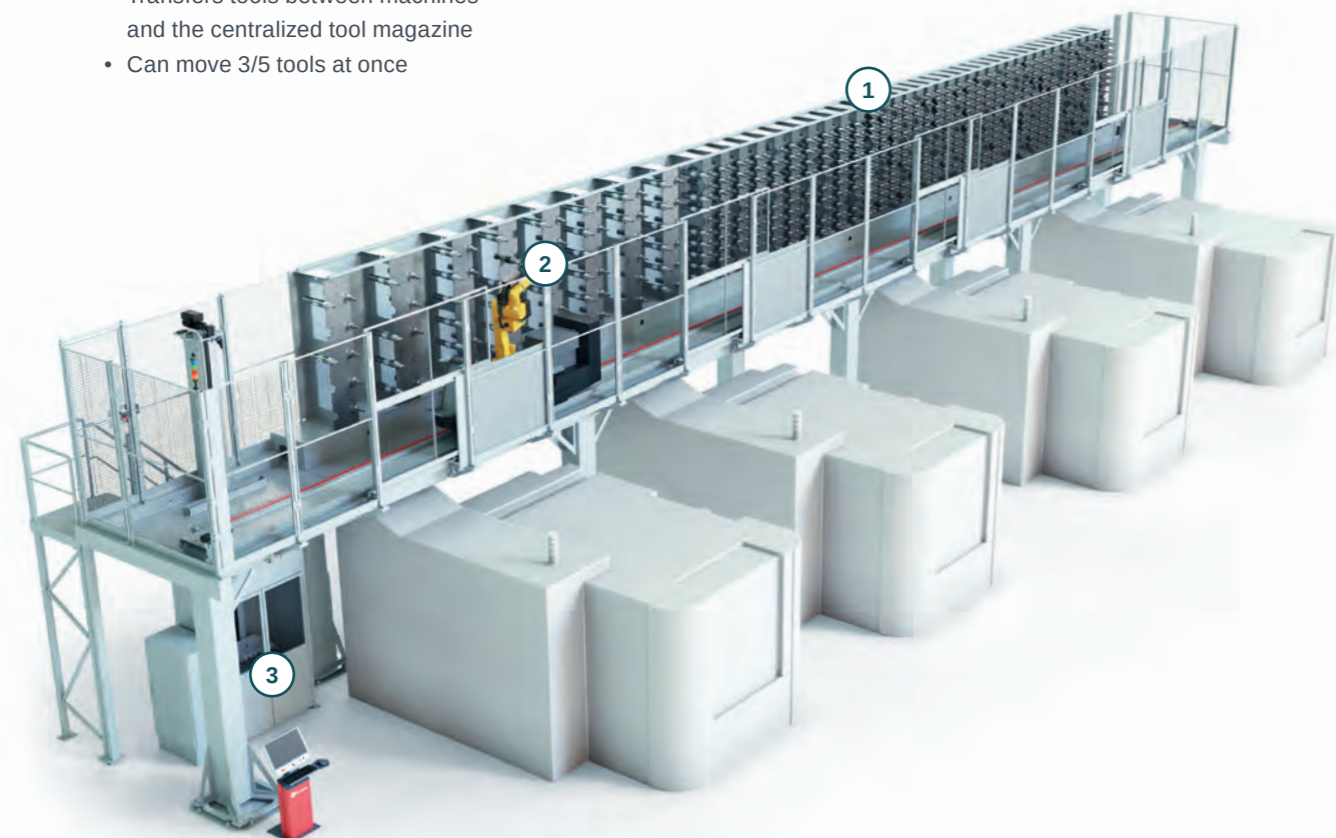
- Can be positioned on the floor or to save floorspace, on a gantry above machine tools

#### 3 Tool setup elevator

- For bringing the broken or worn out tools to setup

#### 2 Industrial robot

- Transfers tools between machines and the centralized tool magazine
- Can move 3/5 tools at once



“Our retooling times are 0.0 minutes, which means that every component always has the same price for our customers, regardless of whether they order ten of them or a hundred.”

CEO, Kempf CNC-Technik  
[fastems.com/case/kempf-cnc-technik/](https://fastems.com/case/kempf-cnc-technik/)





Find out more: [fastems.com/product/tool-service-cell/](https://fastems.com/product/tool-service-cell/)

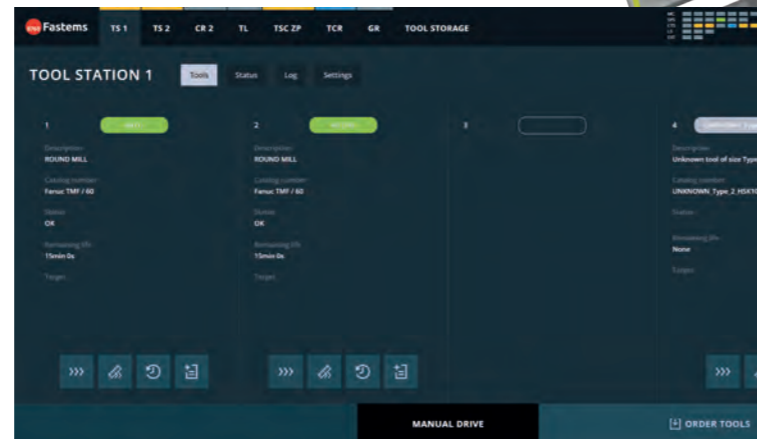
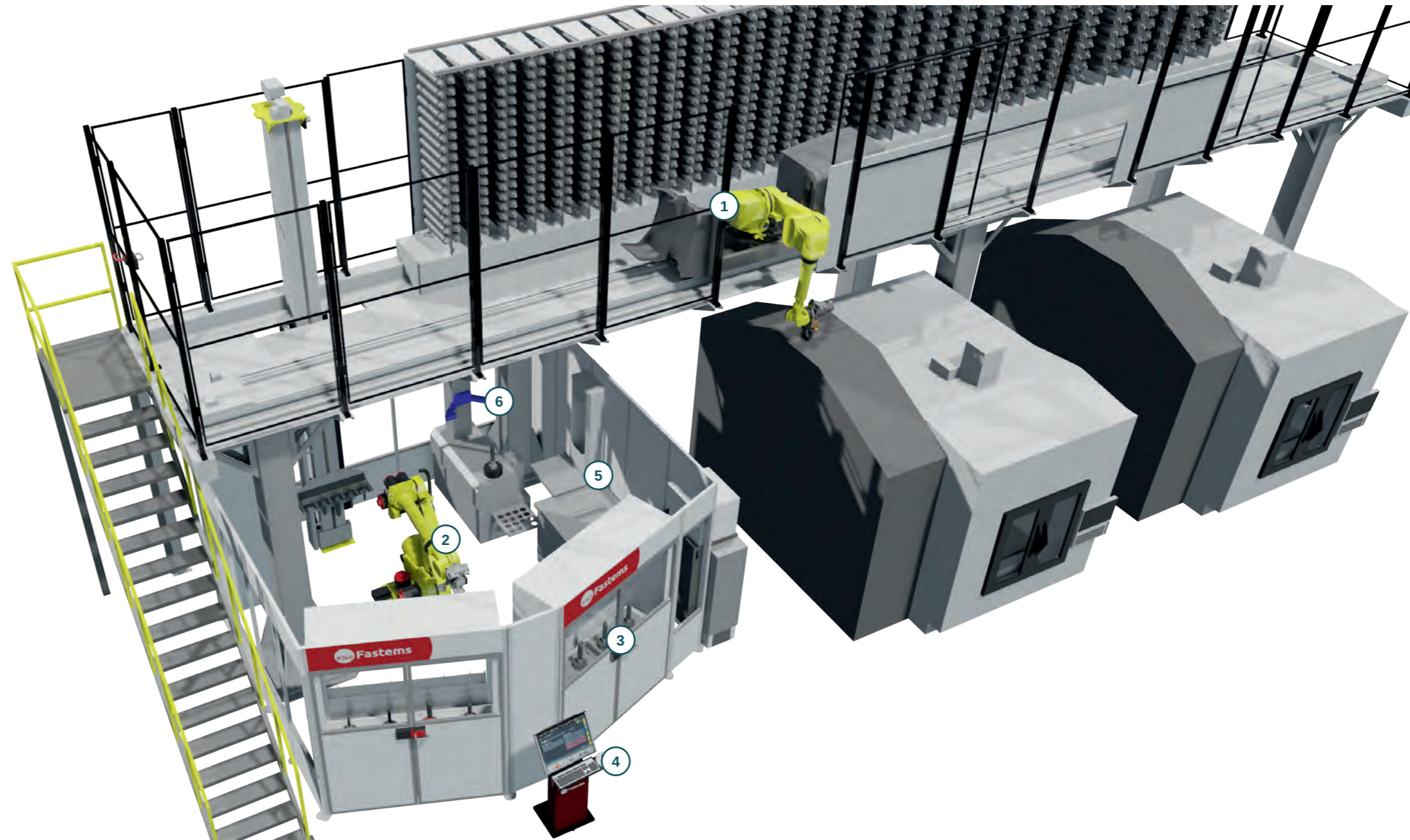
TSC – Tool Service Cell

# Save Time from Tool Setups

If the tool lives are extremely short and demand for renewed tools is high, tool automation can be extended to optimize the tool setup process. Tool Service Cell (TSC) integrates with centralized tool storage, and makes tool reworking significantly faster, reduces need for manual work and improves operator ergonomics even further.

**TSC – TOOL SERVICE CELL BENEFITS**

- timely and automated tool reworking
- save time from manual work
- great ergonomics without heavy lifts
- integrates with GTS/CTS - automatic delivery and return of tools needing a rework



**AT A GLANCE**

- 1 Centralized Tool Storage system delivers tools automatically to Tool Service Cell
- 2 Industrial robot moves tools through the reworking process
- 3 Tool loading station allows ergonomical and fast tool inserting for up to 4 tools at once
- 4 MMS calculates and guides the optimal order for tool reworking
- 5 Washing and drying
- 6 Tool presetter

## Other processes

Product category —

Tool automation —

Other processes —

Payload —



Find out more: [fastems.com/product/rfc/](https://fastems.com/product/rfc/)

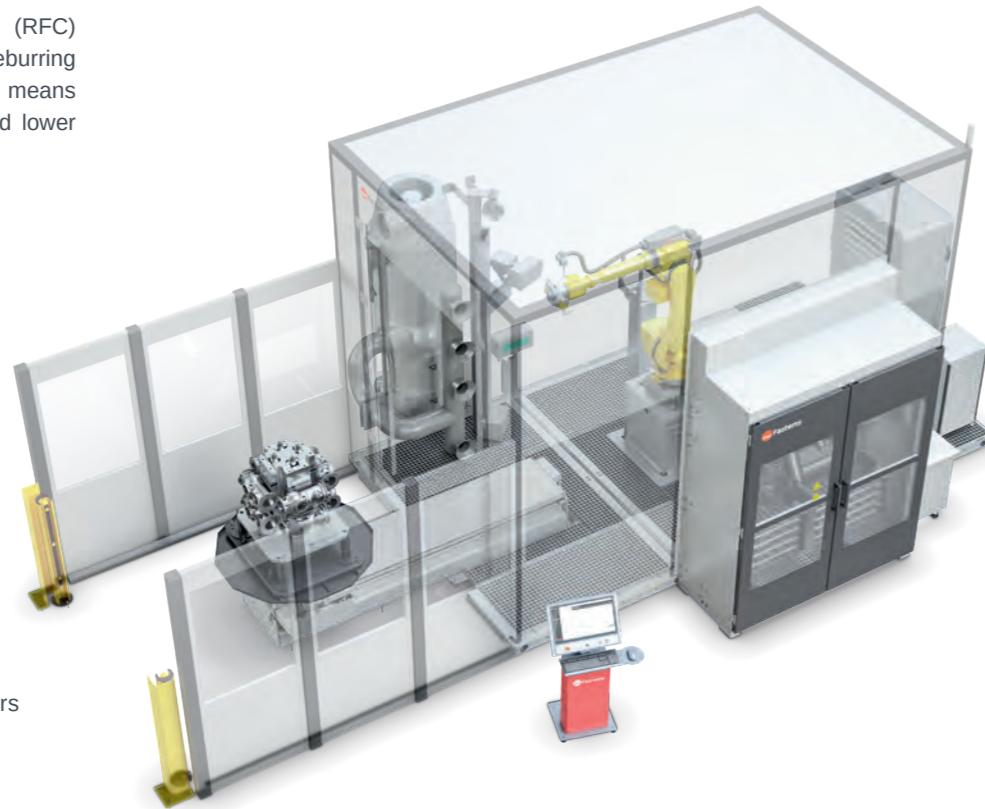
### RFC – Robotic Finishing Cell

# Next Level Quality with Automated Finishing

Fastems Robotic Finishing Cell (RFC) automates your grinding, polishing, deburring and other finishing processes. This means stable quality, smooth processes and lower costs.

#### WHY CHOOSE FASTEMS RFC?

- Modular solutions available for FMS integrated or standalone use
- Large variety of process tools can be implemented – both pneumatic and electric
- Tool lifetime tracking through MMS technologies
- Constantly higher quality with standardized finishing processes
- Improved safety and ergonomics for finishing operators
- Longer lights-out operation and increased productivity

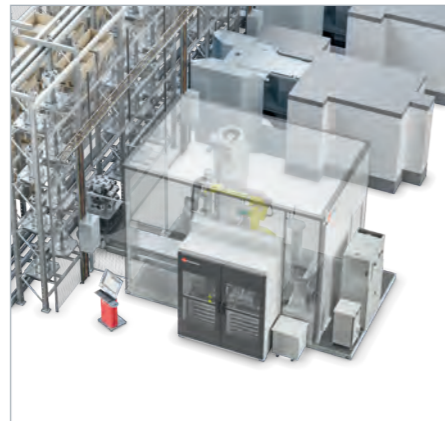


#### ROBOTIC DEBURRING SERVICES

- Professional analysis how to automate your deburring process
- Evaluate the quality and automation level of your workpiece with test services using our RFC test center located in Finland

#### FASTSIMU – OFFLINE ROBOT PROGRAMMING

- Easy new workpiece programming
- Realistic simulation of work cycles
- Significantly reduced on-line programming time



## Other processes

Product category —

Tool automation —

Other processes —

Payload —



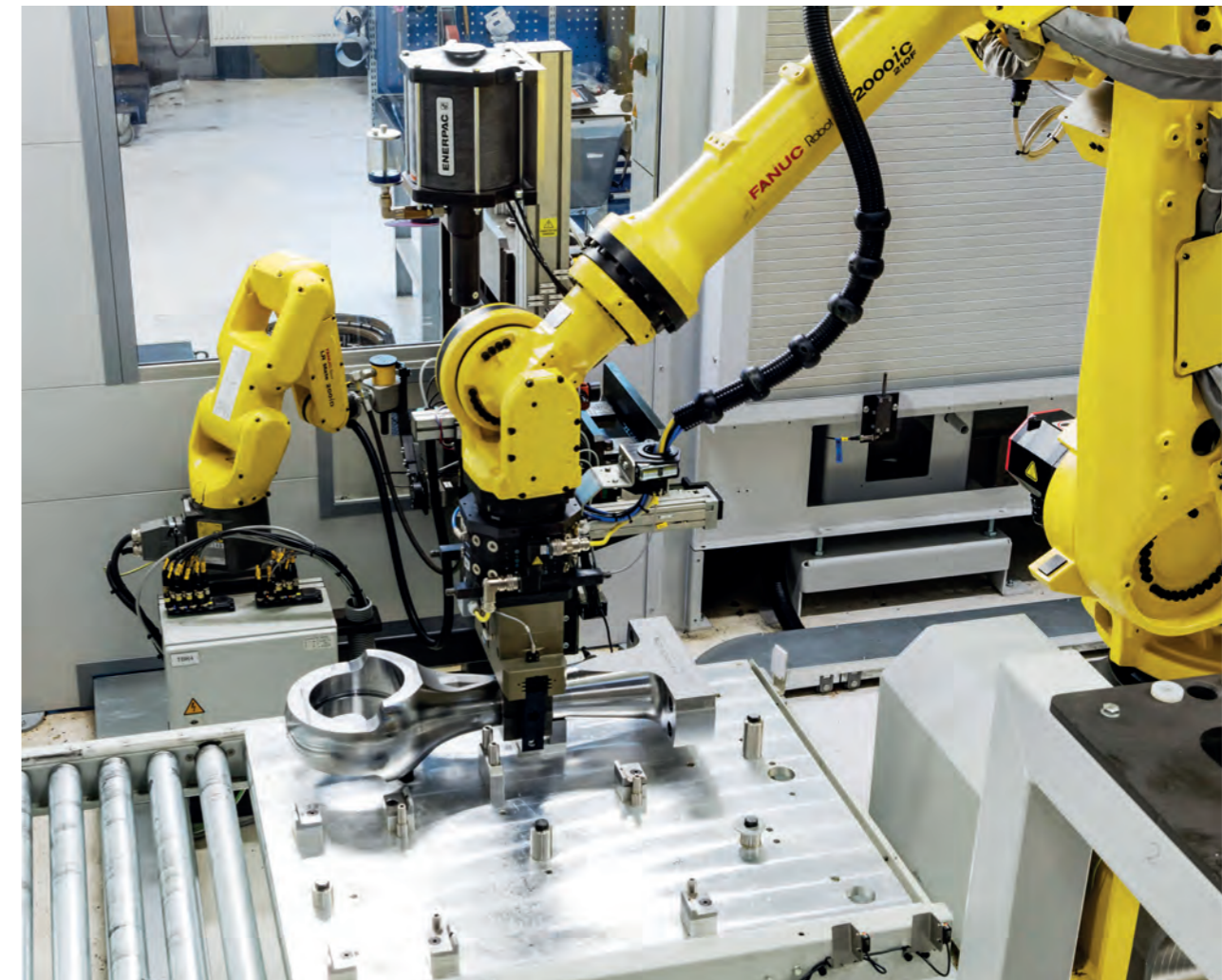
Find out more: [fastems.com/product/ald/](https://fastems.com/product/ald/)

### ALD – Autoloading Cell

# For Highly Automated Production

Want to unleash the full potential of your FMS?

Fastems ALD optimizes your production through automated raw material loading and ready part unloading with a robot. This improves quality and lengthens unmanned production periods while bringing cost savings by reducing the number of fixtures.



## Life Cycle Services

Product category  
Services

Tool automation

Other processes

Payload



Find out more: [fastems.com/offering/services/](https://fastems.com/offering/services/)

## Life Cycle Services

Product category  
Services

Tool automation

Other processes

Payload



Find out more: [fastems.com/offering/services/](https://fastems.com/offering/services/)

Easy and efficient start to CNC automation

# Let's Take the First Steps Together

We help you to take a flying start on your CNC automation journey. With over 40 years of working together with manufacturers of big and small, we make sure you:

- Learn to use your new system efficiently even before the deployment
- Reach high system availability by maintaining the system at the right time, the right way
- Get technical support and advice 24/7 when you need it
- Get onboarded to myFastems service portal for flexible and easily accessible services

### MYFASTEMS PORTAL – TAKE THE MOST OUT OF YOUR SYSTEM

#### We are 1 click away

- Contact our 24/7 support easily
- System error codes sent automatically with support request

#### Get alerted

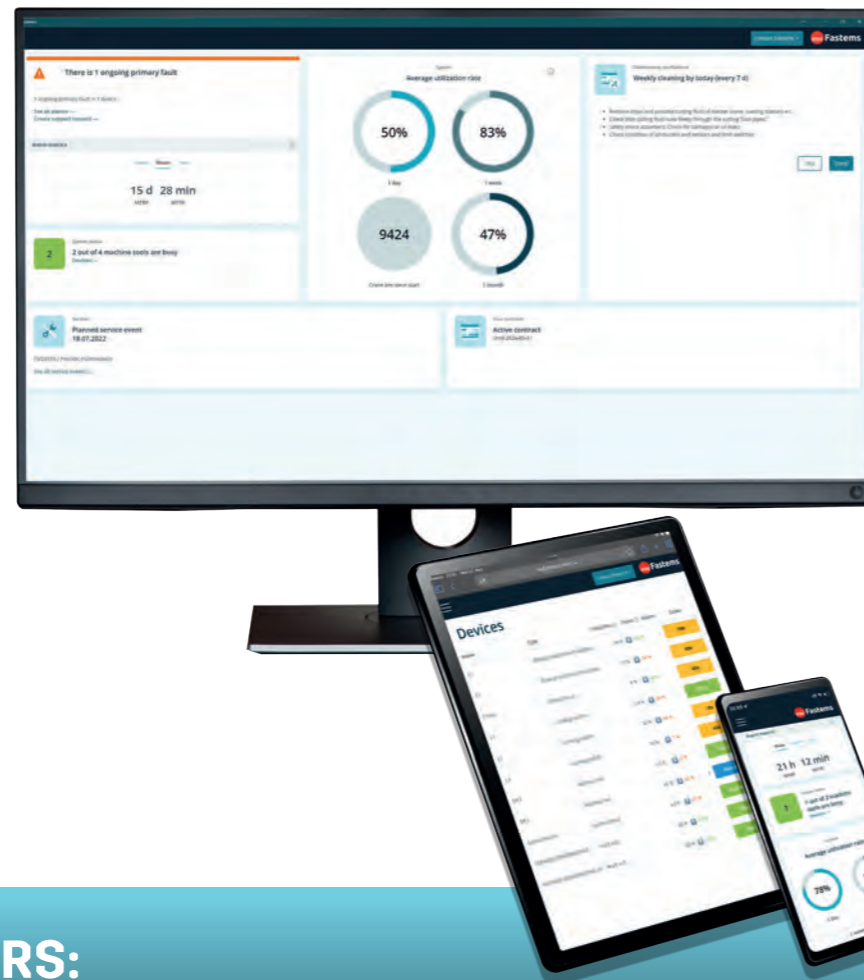
- Automatic notifications of unexpected events
- First-aid tips and recovery instructions in problem situations

#### Easy system maintenance

- Service history & contracts
- Spare part replace suggestions and order tool

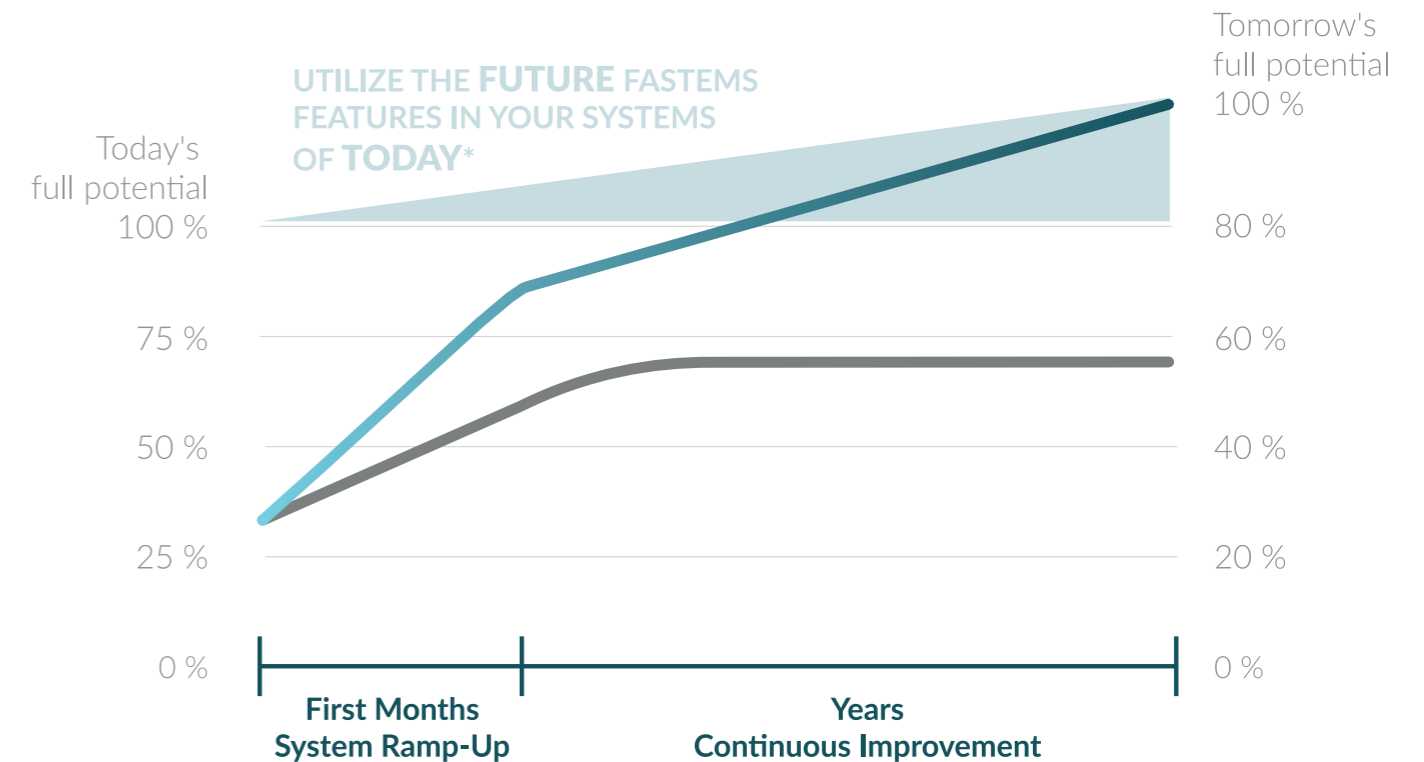
#### Follow your service KPIs

- Utilization rate
- OEE
- MTBF and MTTR



## Machine Tool Utilization with Proactive Life Cycle Management vs. Reactive Maintenance

■ Proactive Life Cycle Management ■ Reactive Maintenance



## 100 % productivity today is only 80 % of tomorrow's Go Beyond Your Full Potential

You want your automation be profitable and sustainable - long-term.

- Collect and use production data for continuous improvement – and let our experts help you with it
- Be extended, relocated or modernized if and when your needs change
- Be upgraded with the new productivity-enhancing features we continuously develop
- Be connected to our intelligent cloud services for unique service experience

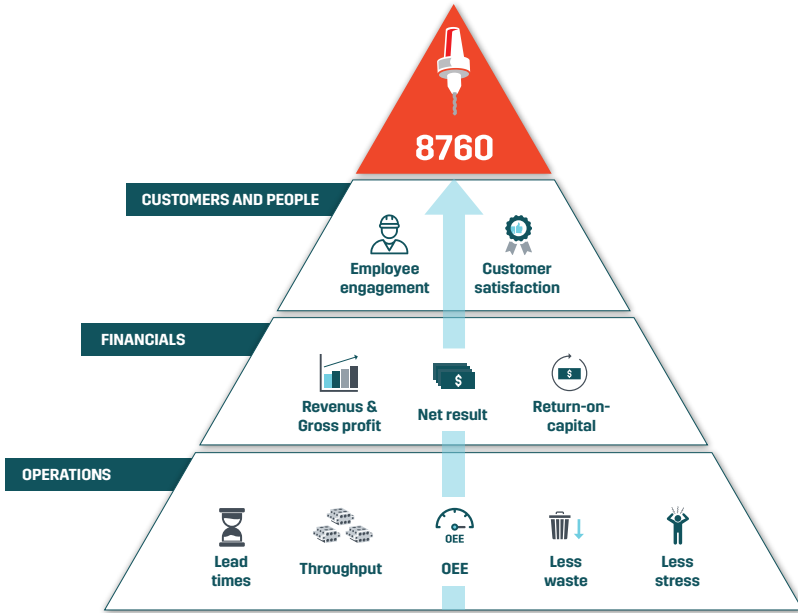
\* Enabled by new software features, system extensions and modernizations.

## SERVICE IN NUMBERS:

**+80 %** of customers extend their systems / **4.5★** customer satisfaction / **1980** first system installed – run for 40 years / **+90 %** of cases solved remotely

# Plan Your System


# Plan Your System

Production is a team play. We help you to integrate your data systems, machines and people to work as ONE. By doing so you reduce costs, increase revenue, improve lead times and ensure consistent quality while minimizing waste, WIP and delays.

Fastems supplies intelligent automation and digitalization solutions for high-mix-low-volume CNC manufacturing. We are an open integrator and a family-owned business with 40 years of automation experience, over 4,500 installations and main markets in Europe, North America, and Asia. Read more at [fastems.com](https://fastems.com).



**Free guide to learn more on CNC automation**

