

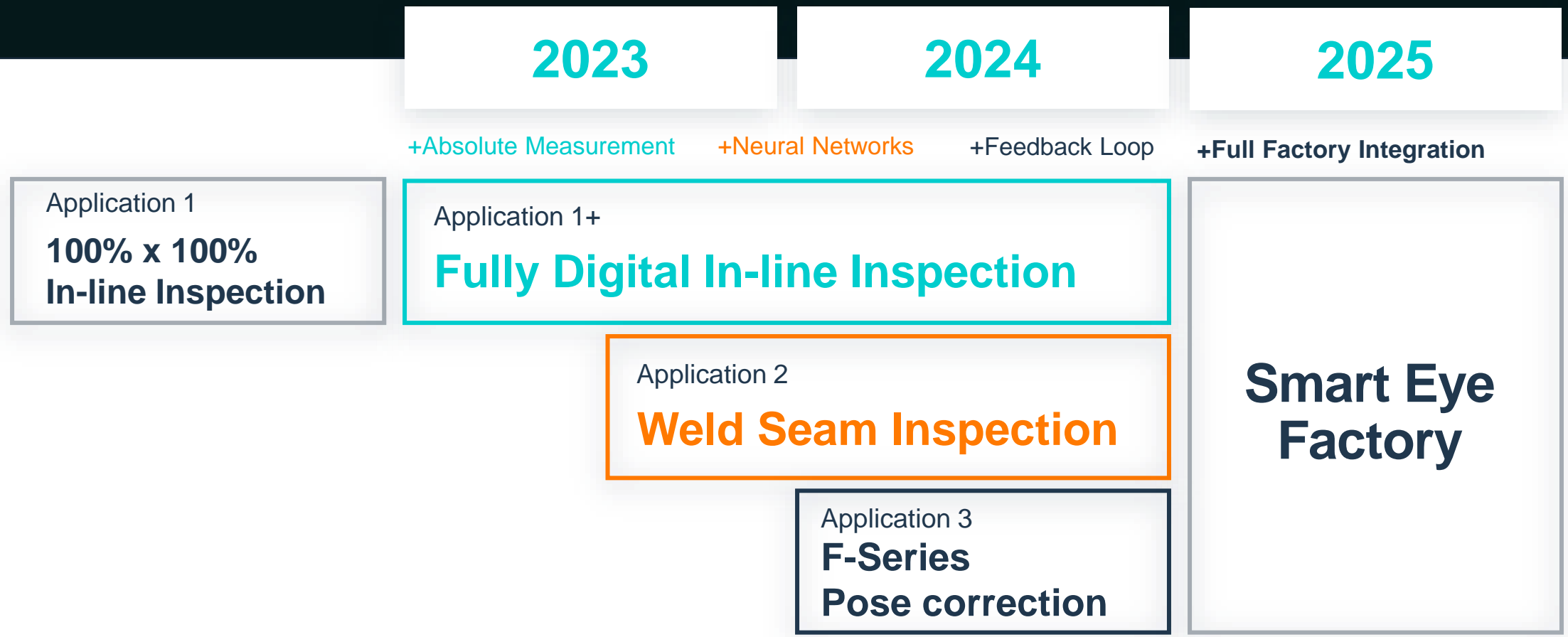
One-click Flexibility and Instant Control
For Truly Fixtureless Manufacturing

Introducing **Mapvision** F-Series

May 11, 2023 | Mapvision F-Series

The Eyes of Smart Factories

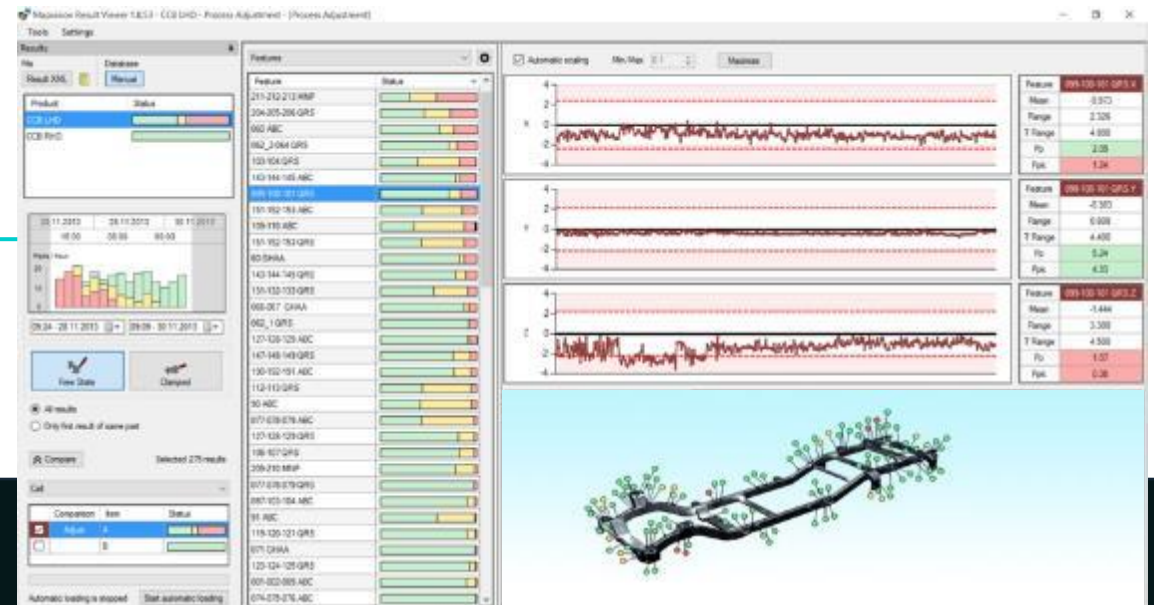
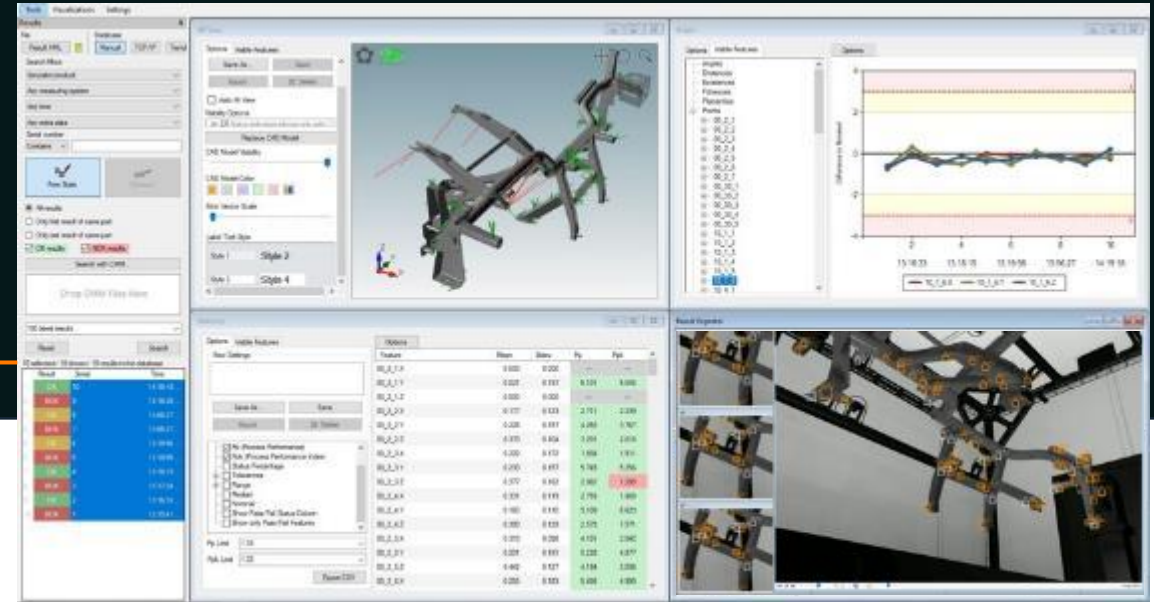
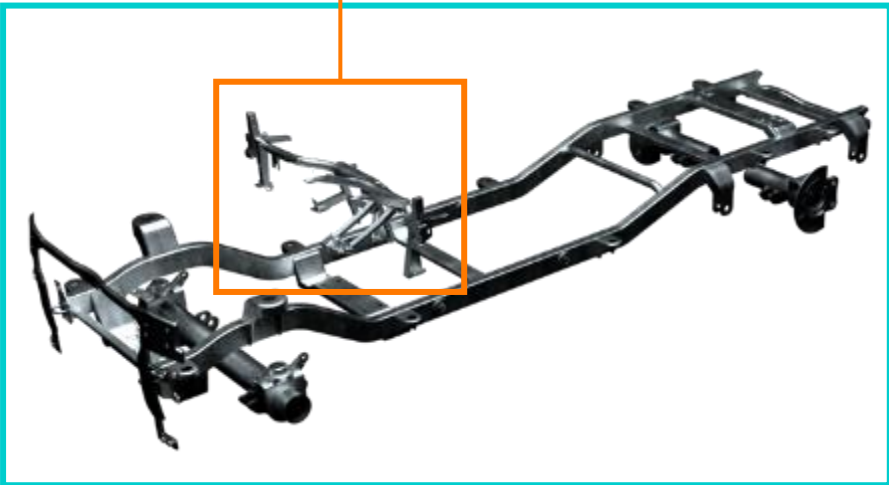
How Mapvision Will Revolutionize Manufacturing



The Core: Multi-camera technology in one coordinate system enables a visual memory of production

— Capabilities

Deep Quality Inspection and Analytics – Even for the Most Complex Components



— Global Footprint

A Technology Recognized Worldwide by Global Manufacturers

250+

Systems Operational
Worldwide

600+

Parts and Variants Being
Inspected by Mapvision
Systems

88%

of Customers Already Have
Made Repeat Purchases



Mapvision HQ

Helsinki, Finland

Mapvision GmbH

Munich, Germany

Mapvision Inc

Ohio, USA

Mapvision Ltd

Shanghai, China

Mapvision F-Series

The Eyes of Smart Factories

One-click Flexibility and Instant Control for Truly Fixtureless Manufacturing

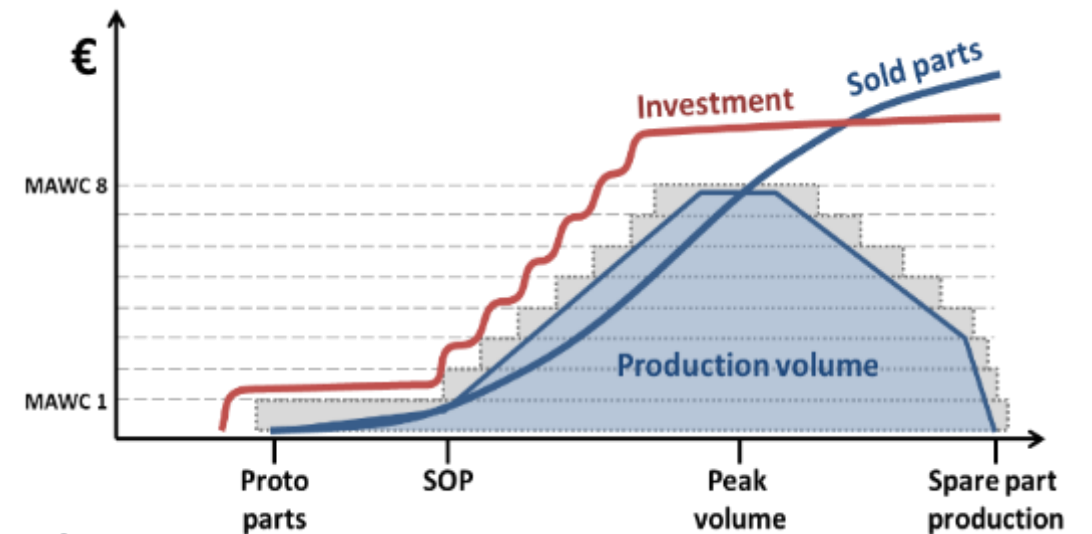
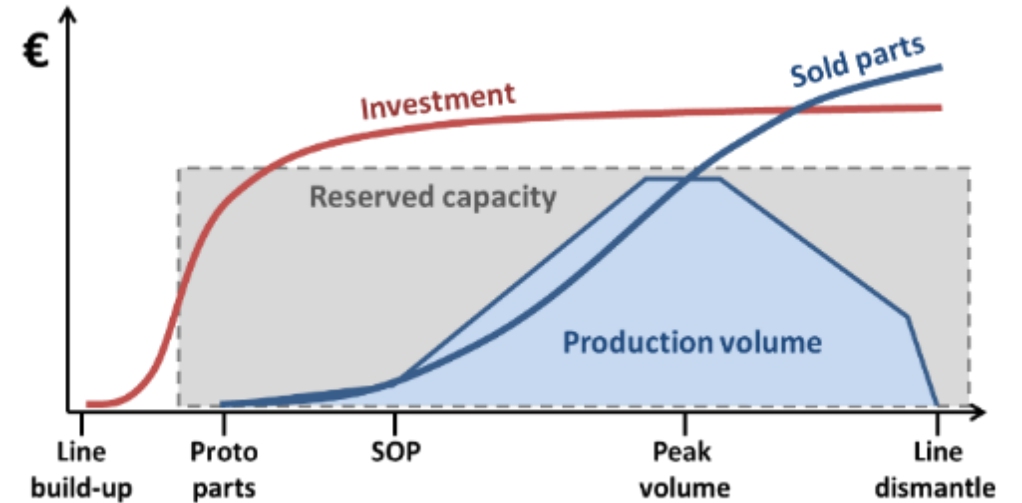
- Enables production of different parts in the same cell with only SW changes.
- Pose correction for gripper errors.
- Secondary correction for the welding assembly.
- Instant production adjustment to compensate for manufacturing variations.
- Integrated quality inspection.
- Creates a image database of all production parts, a visual memory of production.



Solution Benefits

100% utilization and 100% quality

- A network of Measurement-Aided Welding Cells → maximum capacity utilization
- One-click part switch, ultimate flexibility without fixtures
- Factory level flexible capacity, OPEX reduction and just-in-time CAPEX
- Completely virtually supported
- Integrated quality inspection → minimum waste
- Full traceability



Pilot cell

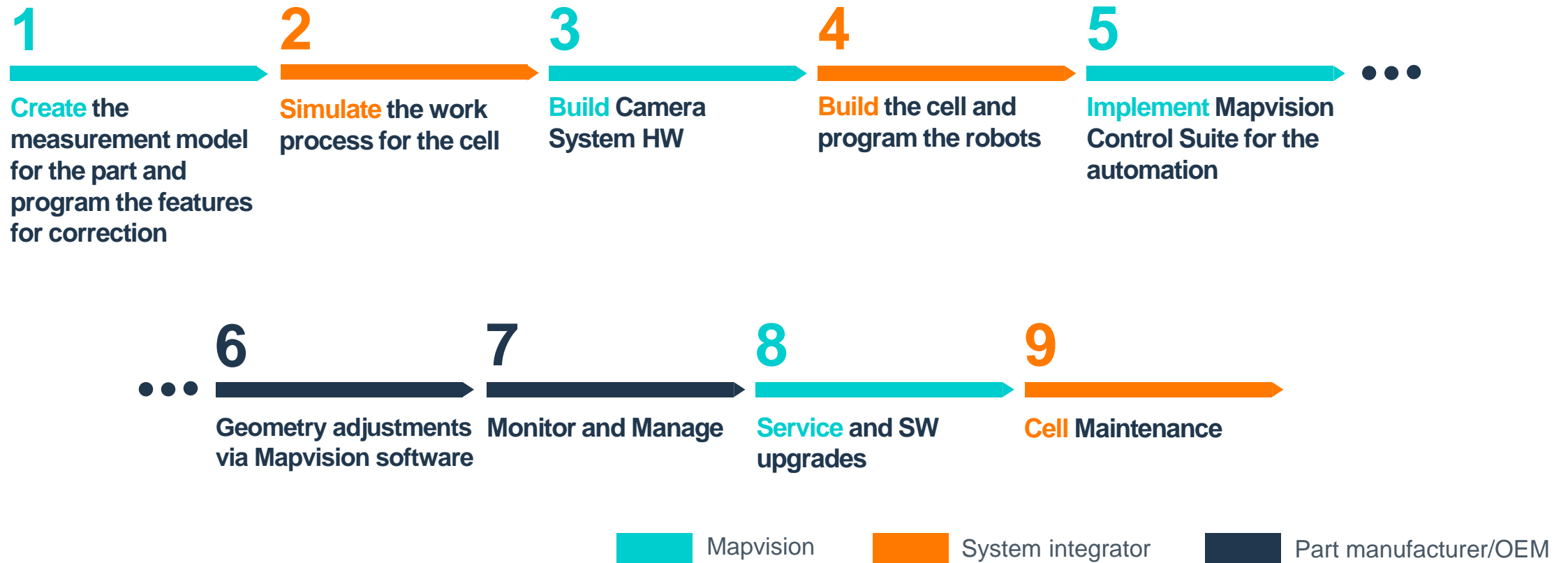
Valmet Automotive
Finland

[VIDEO LINK](#)



How it works

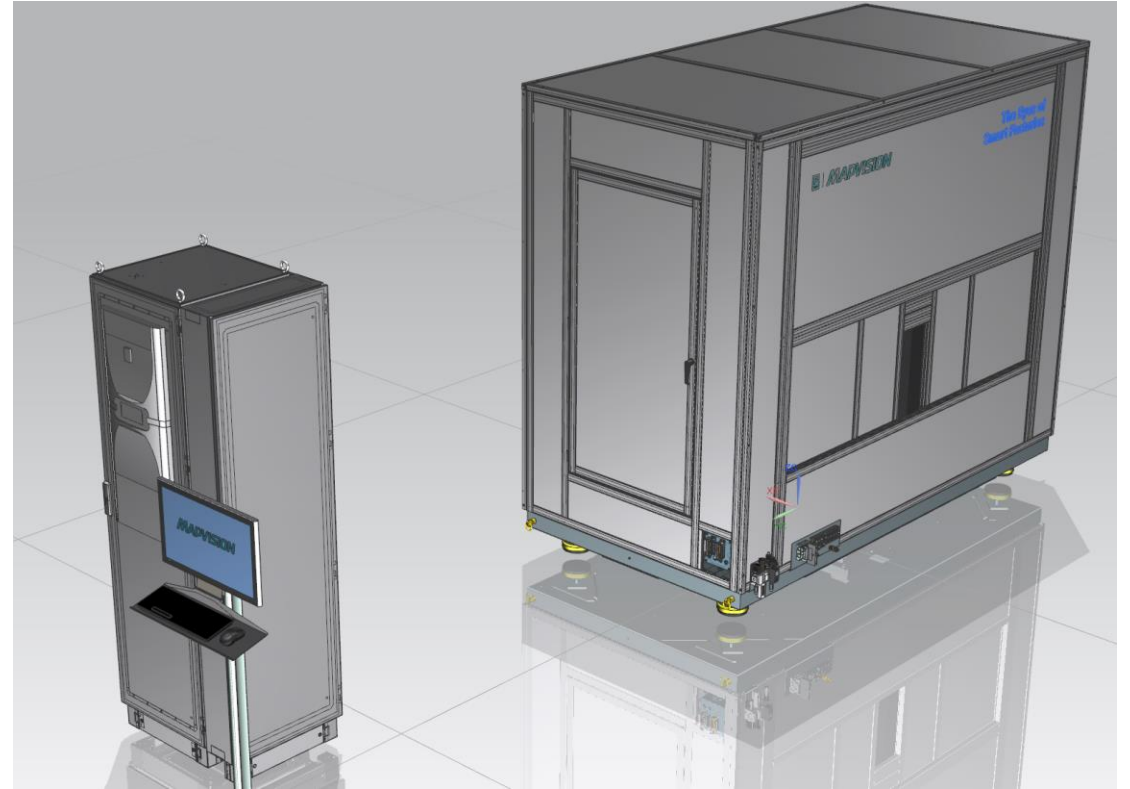
Measurement-aided fixtureless welding cell
for flexible closed-loop manufacturing.



Current solution

Control cabinet automation and computing

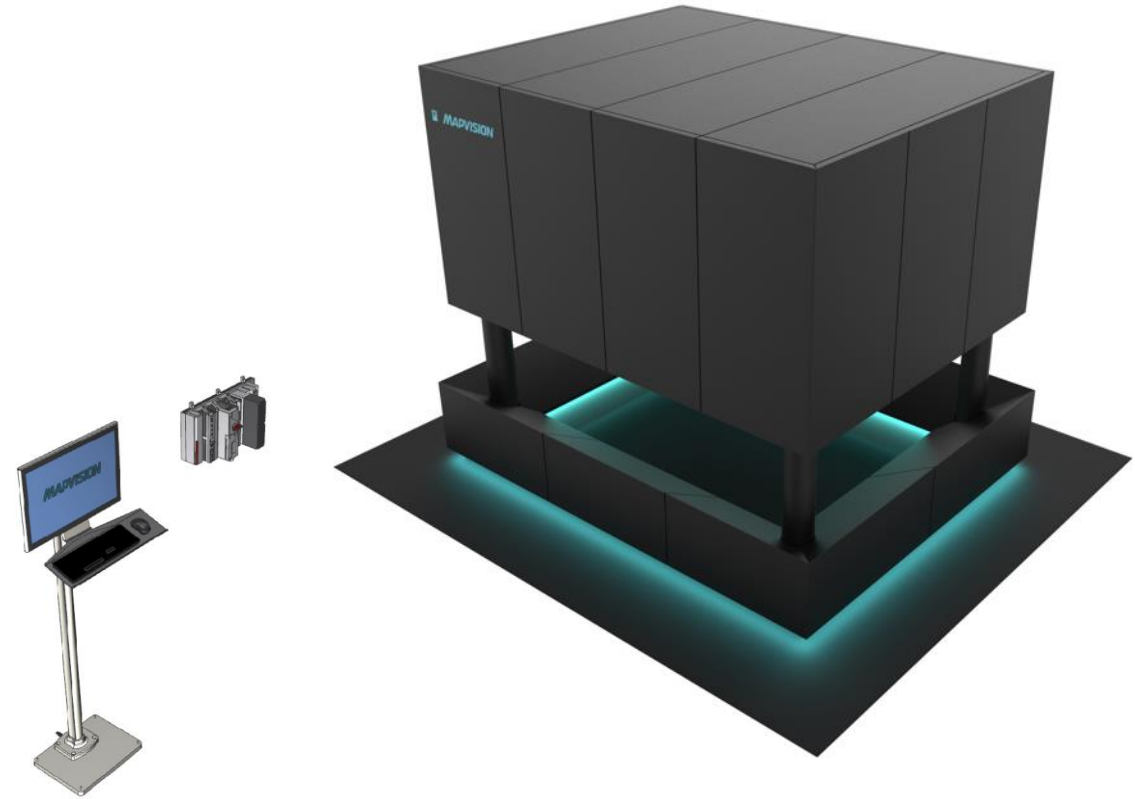
- System main components
 - Closed enclosure for measuring
 - 30 cameras
 - 4 lights
 - Control cabinet
 - Light control automation
 - Communication to factory line via Profinet
 - 2 x computer
 - 16TB database
 - Cooling unit
 - Operator UI panel
 - Beckhoff CP3924-0010



Plan for the future

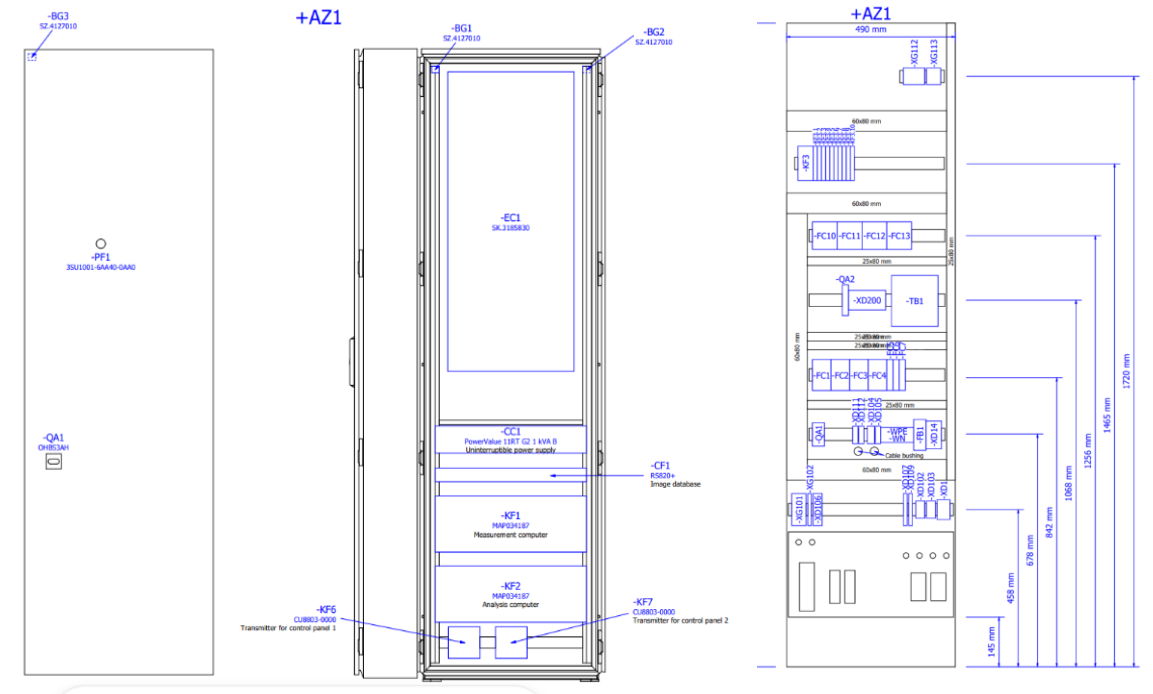
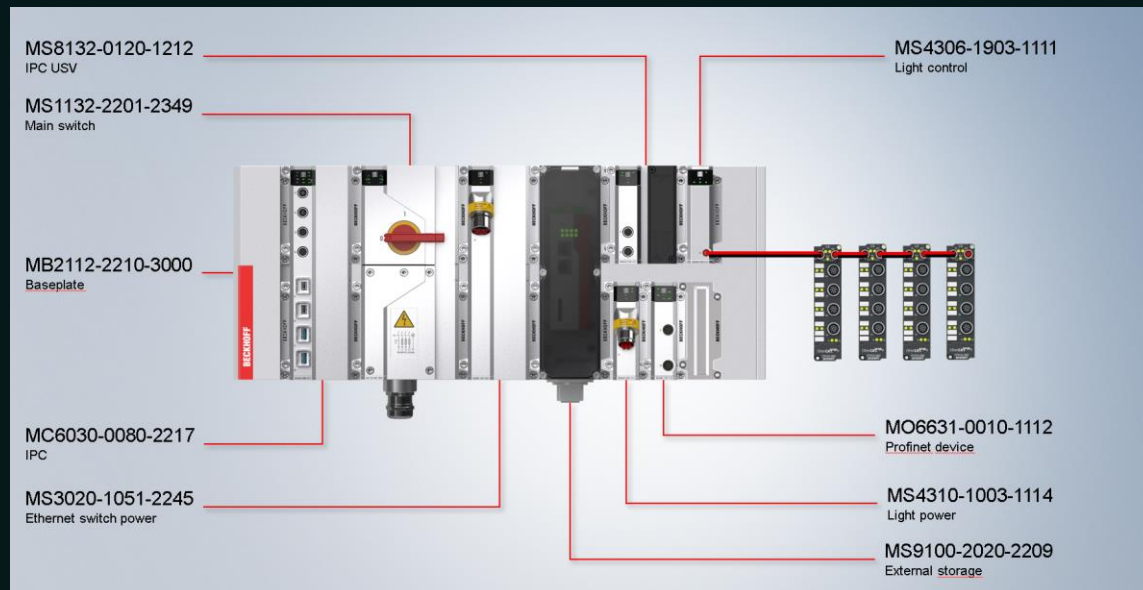
Beckhoff MX-system and computing

- System main components
 - Partially open enclosure for measuring
 - Max 48 cameras
 - Max 16 lights
 - Beckhoff MX-system integrated automation and computing
 - Light control automation
 - Communication to factory line via Profinet
 - 1 IPC with i7 processor
 - Database
 - Operator UI panel
 - Beckhoff CP3924-0010



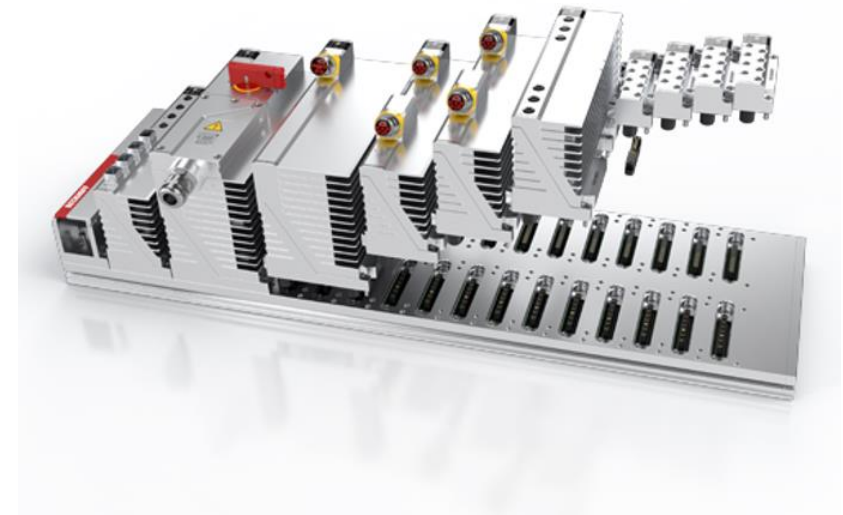
Comparison

MX-system vs current solution



Benefits from the MX-system

- All internal connections ready from the stock
 - No possibility for wrong wiring, labelling etc.
 - Faster setup time
- Open software interface / Closed mechanical design
 - If system certificates and technical specifications fulfils customers specifications out of the box, It will support easier delivery process
- Integrated diagnostics tools
 - Easy to diagnose and monitor system via remote access
- No licenced electrician needed in-house for build or maintenance





MAPVISION

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THE EYES OF SMART FACTORIES

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