

FTS for flexible linking of production facilities in the smart factory

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IBG

Innovative Technologies

- Machinery and plant engineering
- Customised production systems
- Robot and automation systems
- Automated guided vehicles and mobile robotics
- Use in almost all sectors of industry Automotive, pharmaceuticals, chemicals, food, aerospace, electronics, energy, consumer goods, furniture, telecommunications, etc.



Range of services

- Concept, development, design
- Prototype construction, manufacturing
- Assembly
- Programming
- Commissioning
- Service, maintenance

Everything from one source - from feasibility studies and demonstrator applications to turnkey systems!



Exzellenzbetrieb Deutscher Mittelstand

2021  DIE DEUTSCHE
WIRTSCHAFT



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AGV by IBG

- Development of a driverless transport system as an application-perfected transport solution
- Almost unlimited customisability
- Flexible adaptation to spatial conditions as well as to requirements regarding size or weight to be transported
- Various navigation solutions
- Flexible fleet and energy management



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Classic linking of processes

- Transfer systems
- Robot transfer
- Assembly lines

Advantages

- Short changeover times
- Short cycle times
- Simple control systems

Disadvantages

- Poor expandability
- Disturbances block production
- Maintenance block production



Smart interlinked pump production

Requirements / Setup

- Manual workstations / Test benches
- Multiple and redundant workstations
- Stations spread over several halls
- Product-dependent routing
- Integration of logistics processes
- Easy extensibility

Approach

- AGV – fleet FC100
- Database – fleet manager
- OPC/UA - Interface
- Fork-Lifter for logistics
- Web-Interface



AGV – FC100

Conveyor
(pick and drop to external conveyors)

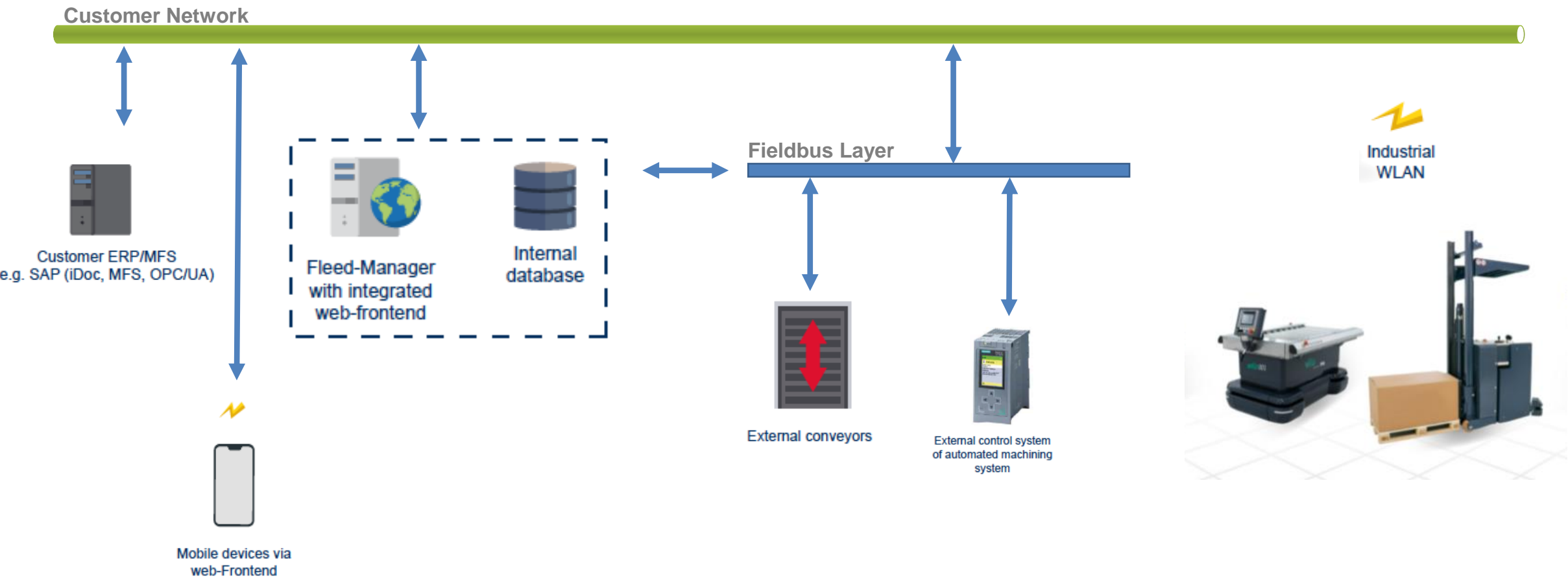
User Interface
(Operation and worker guidance)



Drive Unit
(Differential Drives, Conturbased Navigation)

Lifting Unit
(e.g. for Ergonomic working height)

Control structure



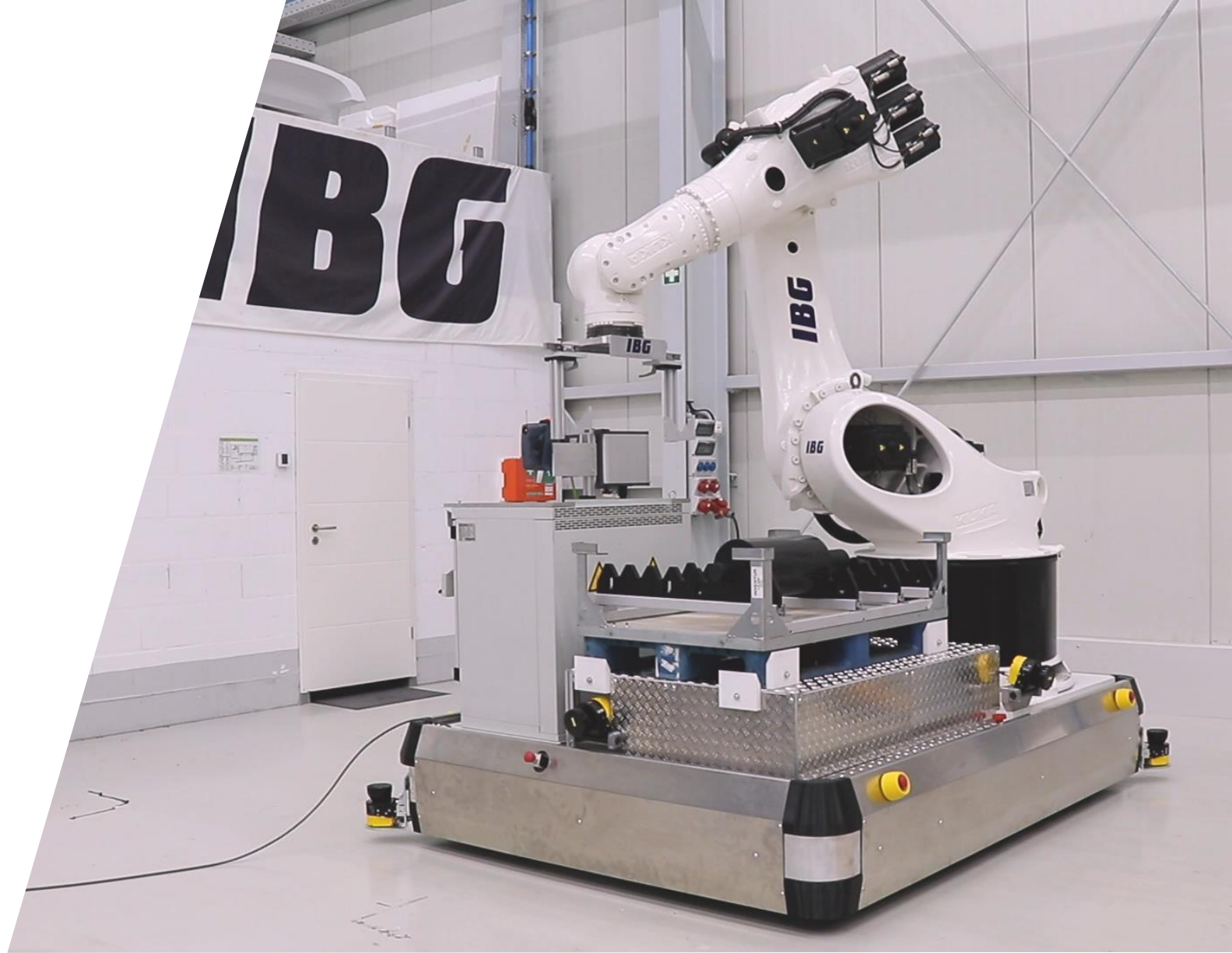
Robot AGV – Loading milling machine

- Omnidirectional AGV
- Heavy load robot
- Loading / Unloading
- Internal Transport
- Optimising machine utilisation



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MRK Robot AGV

- Logistics (e.g. Shelf restocking)
- Flexible worker support
- Loading / Unloading of machines



**Thank you
for your attention!**



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