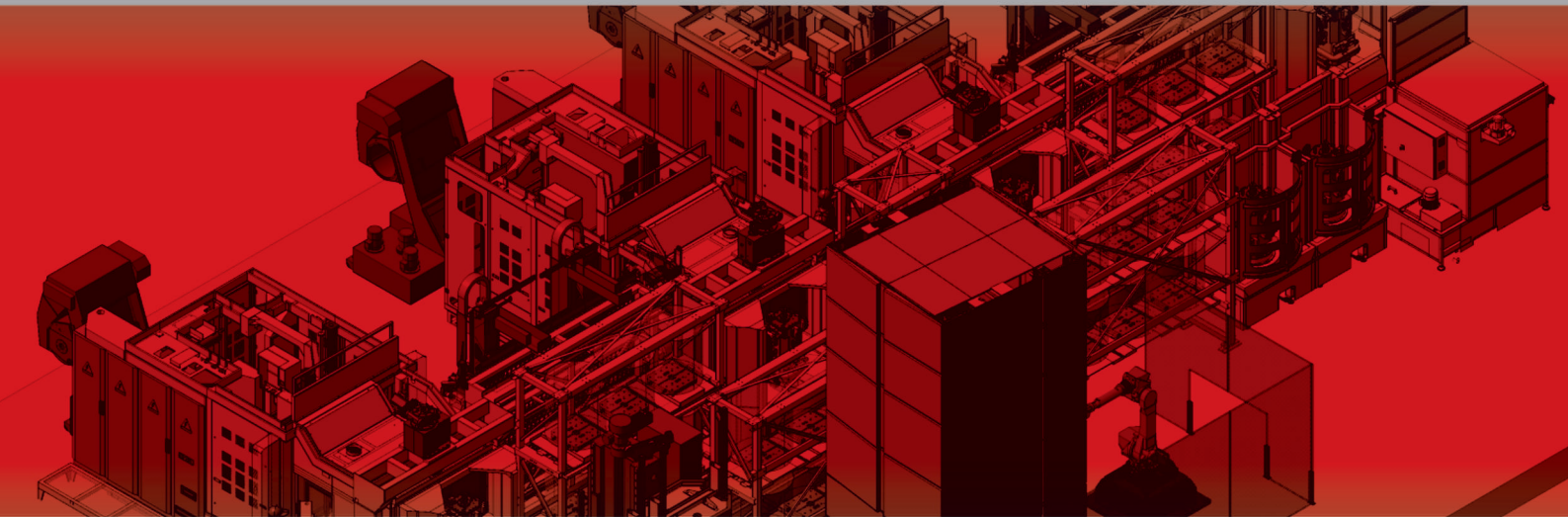


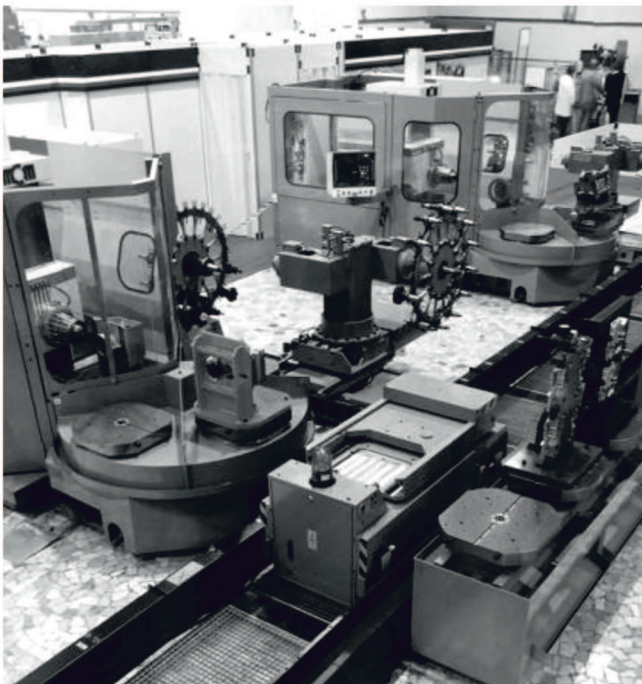
Flexible Solutions for the **FMS**



FMS since 1984



MCM designs and manufactures every building block of an FMS – tool magazines, pallet shuttles, automation rails, storage places, loading/unloading stations and overturning stations – providing to the customers the advantage of **working with one single partner** to carry out the entire project. Inside MCM, all of the know-how can be found for designing, manufacturing and commissioning complex production systems, fully managed by the **jFMX Supervision Software** developed by **MCE** – the Software Division of MCM. Since the founding year 1978, **85% of the MCM machines went to become flexible manufacturing systems.**



8 Action machines / 44 storage places / 800x800mm pallets



Flexibility Provider



Nowadays all industrial sectors face the challenge of maintaining **high productivity in a flexible production** setting following a general **increase of the production mix**. At the same time, labour cost increases all around the world, further accelerating the transition to **unmanned production**. With more and more frequent **integration with enterprise management systems and web connectivity**, the FMS becomes the cutting edge of the 21st century production systems and a strategic investment for the future.



4 Tank.G machines / 80 storage places / 1000x1000mm pallets



12 Tank machines / 112 storage places / 800mm diameter pallets



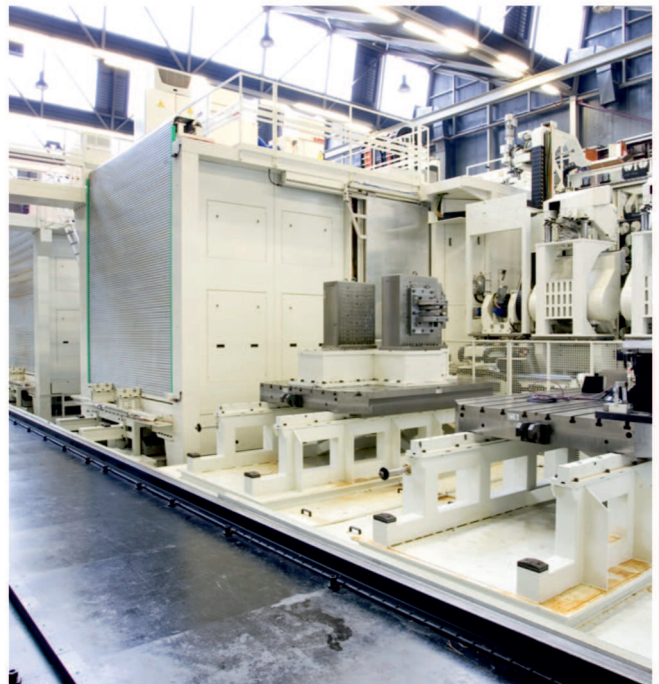
Flexibility Provider +



With the **modular design of every building block of the FMS**, MCM offers unparalleled flexibility for the customer to **freely define the FMS layout and its extension by steps**, which is the ideal investment model to deal with the current market's uncertainties.



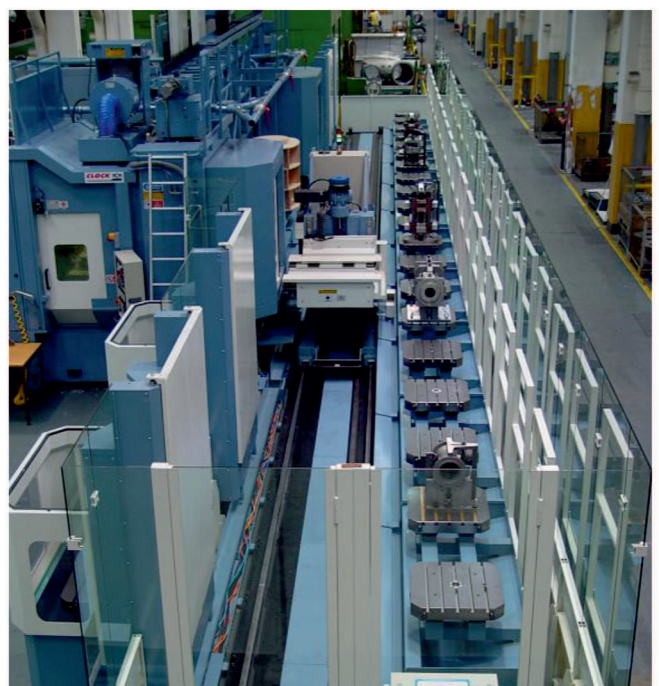
2 Tank machines / 24 storage places / 1250mm diameter pallets



4 Jet Five machines / 6 storage places / 2000x2500mm pallets



2 Jet Five machines / 6 storage places / 2000x3000mm pallets



2 Clock 1200 machines / 24 storage places / 630x630mm pallets



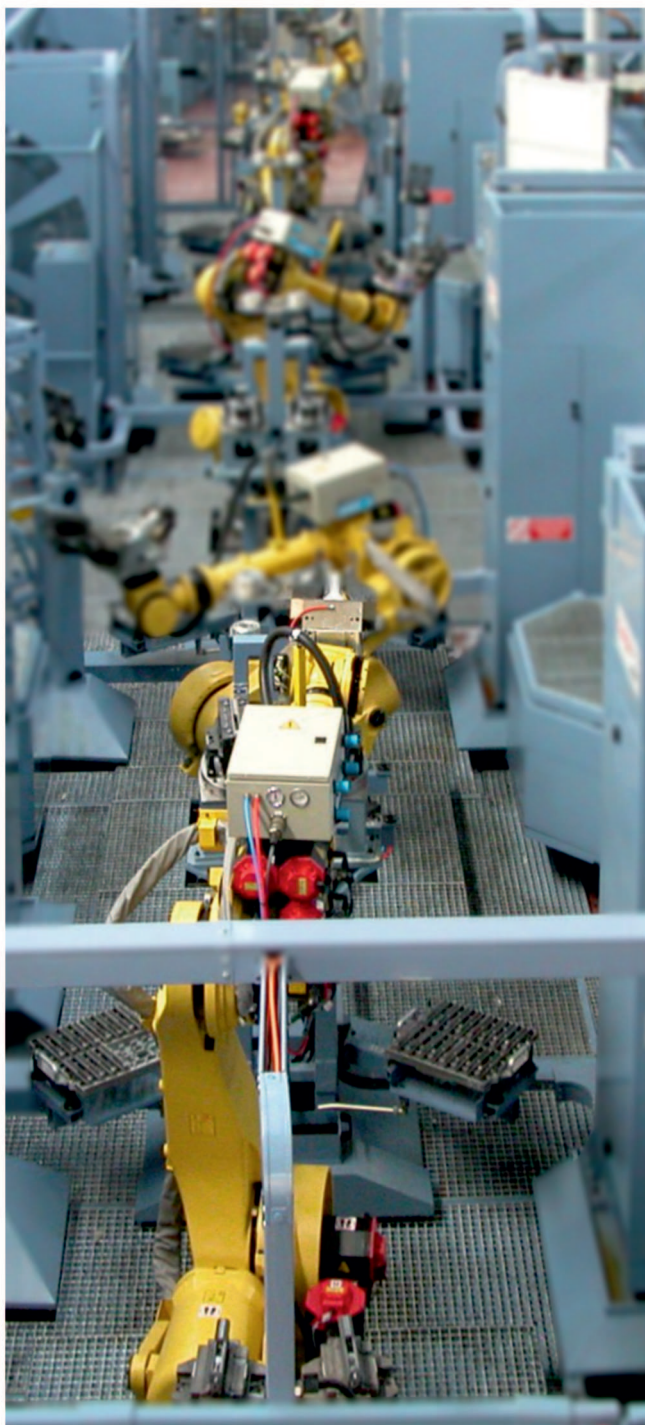
FMS with Focused Flexibility

+

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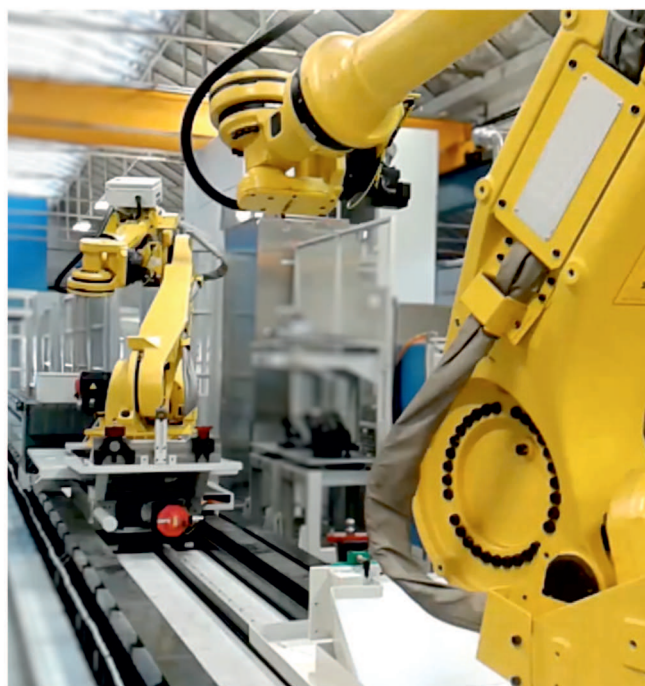
A special type of FMS solution exploiting the capability of managing high flexibility to modulate an extremely effective production system.



10 Clock 500 machines / 6 robots in FMS / 80 storage places
CAPTO C8 pallets



6 Clock-Cyclops / 6 robots in FMS



Production system with 15 process units

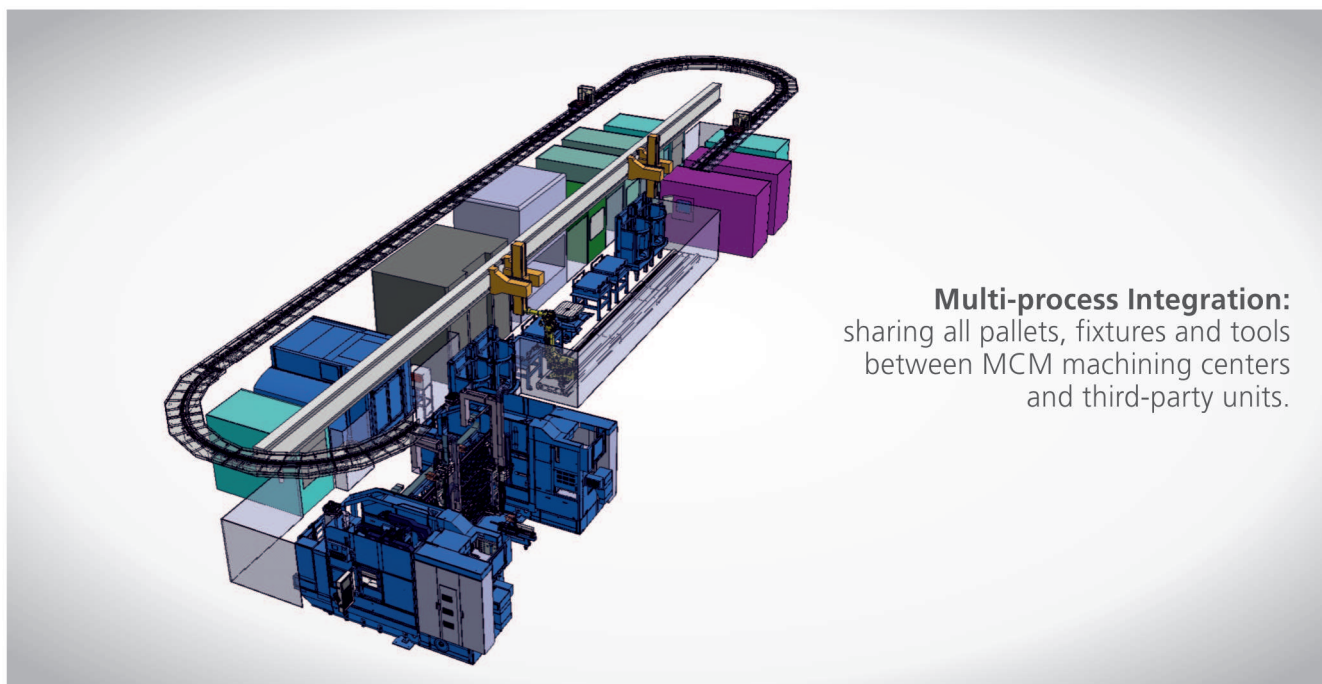
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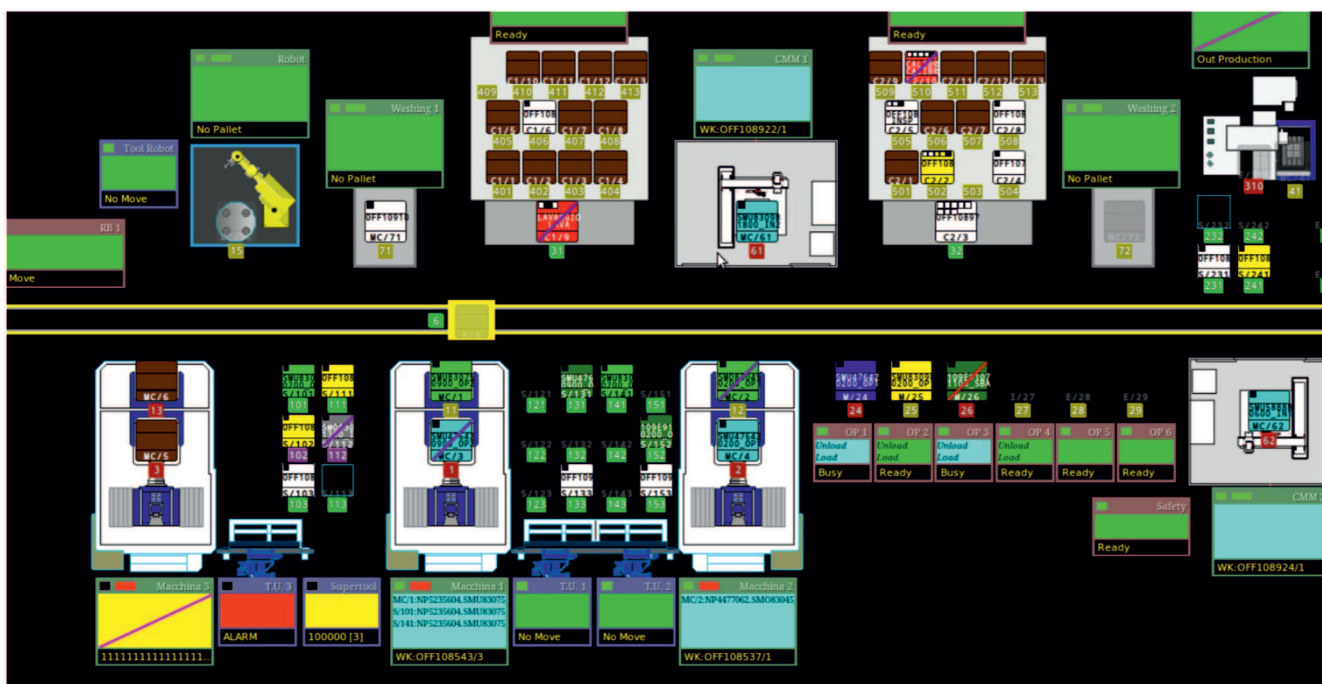
Multi-process FMS

MCM – A single partner to integrate all machines and processes

MCM offers to the customer the certainty of interfacing with **one single reliable and competent partner** for designing, manufacturing and commissioning of extremely versatile and complex FMS, **integrating different process technologies and third-party machines** into a single production system.



jFMX – A single software platform for every building block of the production system

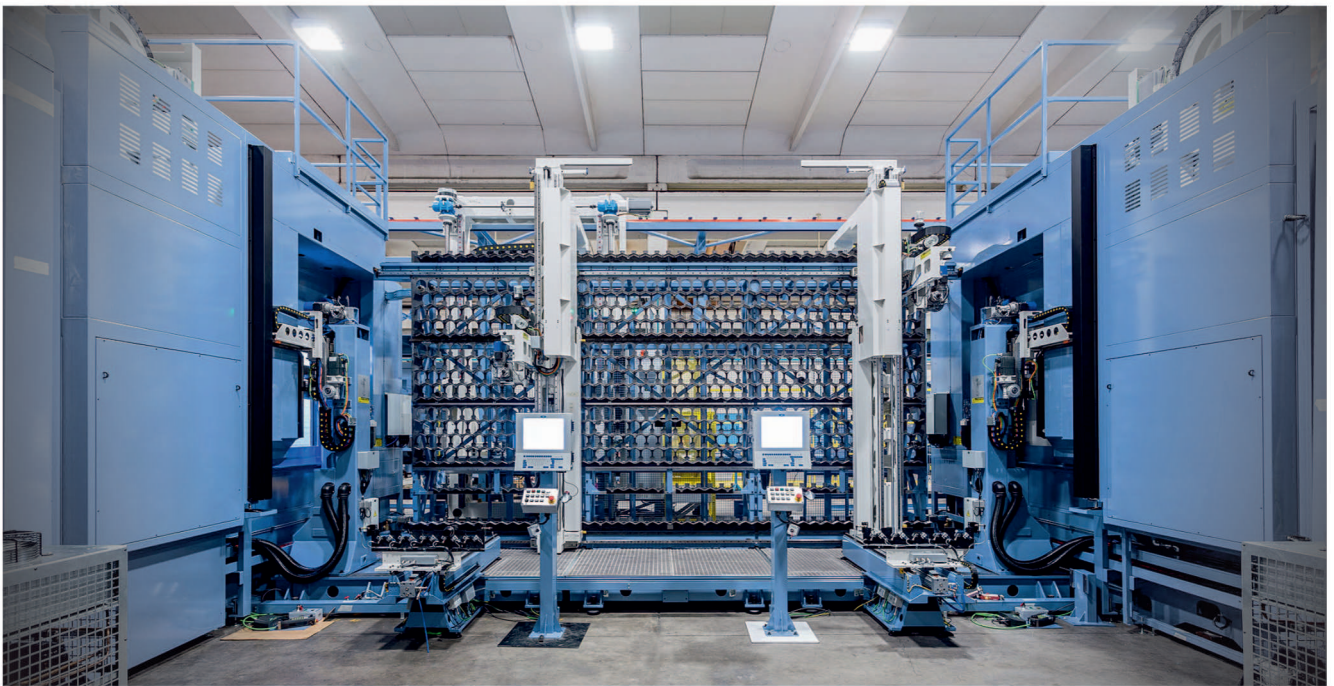


Complete management with the jFMX Supervision Software

Tool management in an MCM FMS



Sharing the same tools on two or more machines allows to reduce the quantity of expensive tools equipping the FMS, and if needed, a machine can retrieve the tools previously assigned to another machine, guaranteeing **greater production autonomy and less downtime** for an overall higher system availability. The sharing of all tools on an FMS system creates the condition for the ultimate flexible production, in which each machine of the FMS is able to complete all the required operations.



Human-machine interface in the MCM FMS: loading/unloading stations "HUMAN CENTERED MANUFACTURING"

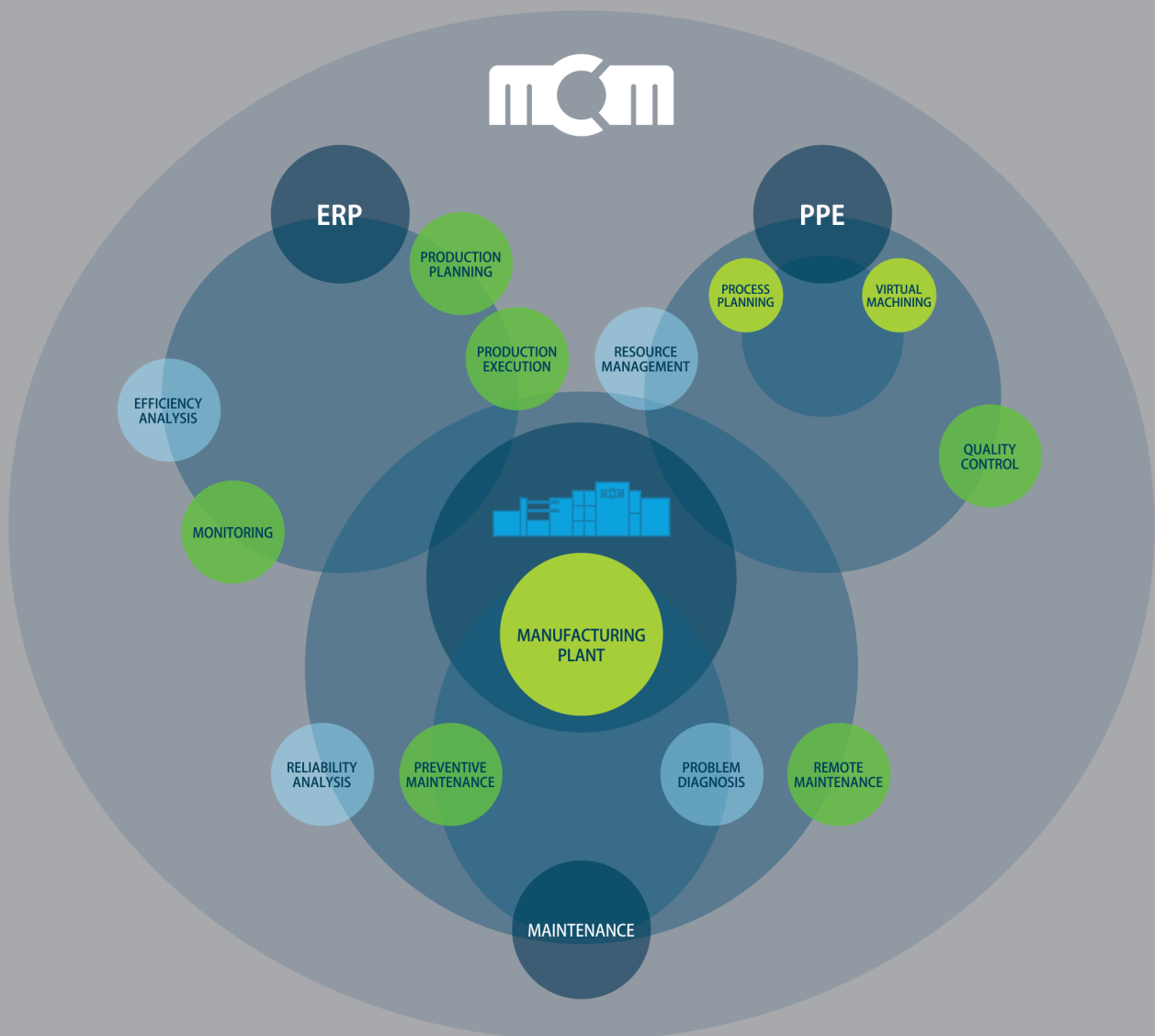
In the concept of Human Centered Manufacturing, MCM elevates the regular loading/unloading station to **ergonomic and multi-function units**, where the operator has full control over the entire production system.



jFMX – java powered Flexible Manufacturing eXecutive

Pioneering in Industry 4.0 and Smart Factory

Every FMS made by MCM is managed by the **jFMX Supervision Software**, fully developed by **MCE** – the Software Division of MCM – for coordinating production resources and processing the data generated by the machines and the enterprise management systems, creating an encompassing software platform from CNC to ERP, allowing to maintain the productivity at the highest levels in spite of complex production mixes and variable production plans. The technology being implemented here is the consolidation of the experiences deriving from the strategic choices anticipated by MCE in the late 1990s, confirmed today as essential requirements of **Industry 4.0 and of the Smart Factory**.



● Advanced Company Operating Systems (Customer)

MCM Presence ● MCM Products ● MCM Services

MCM Spa - Machining Centers Manufacturing

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