

Press release

Flexible microservices architectures are the future in manufacturing management, replacing monolithic systems

25 years of iTAC: from a traceability expert to a MOM player

Montabaur, September 20, 2023 – An MES (Manufacturing Execution System) is among the most important software when it comes to monitoring, controlling and optimizing production processes. However, its traditional monolithic approach is reaching its natural limits in the networked and digitalized world and is being replaced by the advantages of a MOM (Manufacturing Operations Management) system with microservices architecture. iTAC Software AG (www.itacsoftware.com), which is celebrating its 25th anniversary this year, is encouraging this change. Therefore, the iTAC.MES.Suite has been further developed into the iTAC.MOM.Suite. The MOM solution functions as a holistic, flexible manufacturing management system and offers functions for controlling, optimizing and forecasting production processes.

The factory of the future is highly flexible and adaptable. MES solutions are an important building block for intelligent factories and digital manufacturing. However, as a stand-alone proprietary system and in its classic scope of functions, the MES no longer meets the requirements of the increasingly networked factory.

"The future challenges can only be solved with open software solutions and microservices architectures," explains Martin Heinz, board member of iTAC Software AG, and continues: "Flexible systems are required in order to be able

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to react quickly to changes. A traditional monolithic software architecture is too limited in this respect. This is because the components are in part interconnected and interdependent. Modern production therefore needs a holistic manufacturing management system, a MOM."

Where the MES reaches its limits – that's where the MOM begins

A MOM system is a further development of an MES – designed for predictive production that makes use of the latest IIoT technology. It brings previously separate worlds together. The iTAC.MOM.Suite has all the necessary functions for networking and automating processes. It is modular and scalable and, thanks to its openness, can be seamlessly integrated into a company's digital platform strategies. The microservices architecture makes it possible to provide functionalities tailored to specific requirements.

The MOM solution enables real-time control, optimization and prediction of production processes using AI. It combines the typical MES functions with solutions for control, planning and analytics as well as IIoT capabilities. The MOM system functionally covers all processes that take place on the shopfloor, i.e. in the area between the machines and the ERP system. In addition, it offers the connection of interfaces to upstream systems of factory planning and design (such as APS, operational floor space planning, etc.) as well as to higher-level systems (ERP, PLM, etc.).

The software is designed for discrete manufacturing – from single piece to batch to mass production – and can be run on-premises, hybrid or in the cloud. It is used globally by companies in a variety of industries, including automotive manufacturers/suppliers, electronics/EMS/TC, medical, metalworking, and energy. Even in new markets such as e-mobility, iTAC's MOM solution maps the entire production process end-to-end.

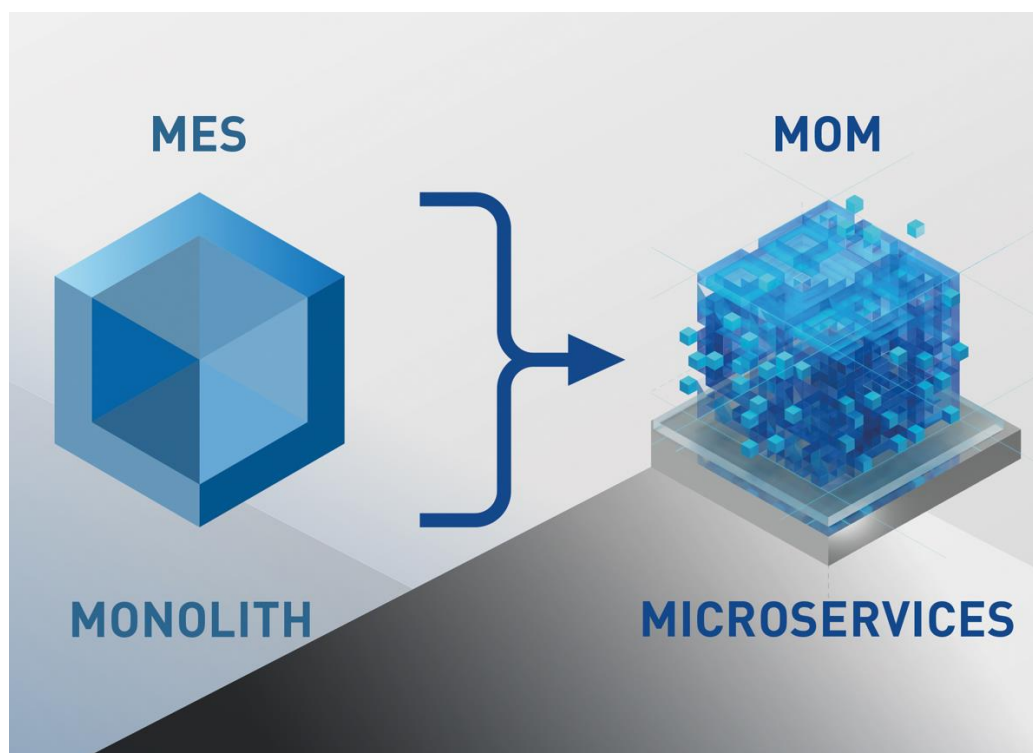
25 years of experience lead to MOM

iTAC Software AG is a global IT and software company with a 25-year history and has developed from a traceability expert for discrete production processes to a global MOM player for a wide range of industries. Martin Heinz says: " For many years, we have been solving classical requirements such as traceability

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and production management in the conventional MES, but today it is also important to link production processes and to digitalize them in an agile manner. With the MOM, we have created a holistic platform for this. The functionalities for traceability, production planning or control are still essential, but are extended by new applications with AI and low-code applications, among others, and form a flexible, yet highly standardized system that is also fully scalable and easy to roll out due to the template characteristics."



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Image source: iTAC

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About iTAC

iTAC Software AG, an independent company of the mechanical and plant engineering firm Dürr, provides internet-enabled information and communication technologies for the manufacturing industry. Founded in 1998, the company is one of the leading MES/MOM providers. The iTAC.MOM.Suite is a holistic Manufacturing Operations Management that is used worldwide by companies in different industry sectors such as automotive, electronics/EMS, telecommunication, medical engineering, metal casting and energy. Additional services and solutions for implementing IIoT and Industry 4.0 requirements complete the portfolio. iTAC Software AG is headquartered in Montabaur, Germany and has offices in the USA, Mexico, China and Japan and has a worldwide partner network for sales and service. iTAC's philosophy is to connect people, data and systems.

The Dürr Group is one of the world's leading mechanical and plant engineering firms with extensive expertise in automation, digitalization and energy efficiency. Its products, systems and services enable highly efficient and sustainable manufacturing processes in different industries. The Dürr Group primarily supplies the automotive industry, producers of furniture and timber houses as well as the chemical, pharmaceutical, medical devices and electrical engineering sectors. It generated sales of €4.3 billion in 2022. The company has about 19,000 employees and 123 business locations in 32 countries.

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