SOFTWARE **M&M**
BY PEOPLE WITH PASSION
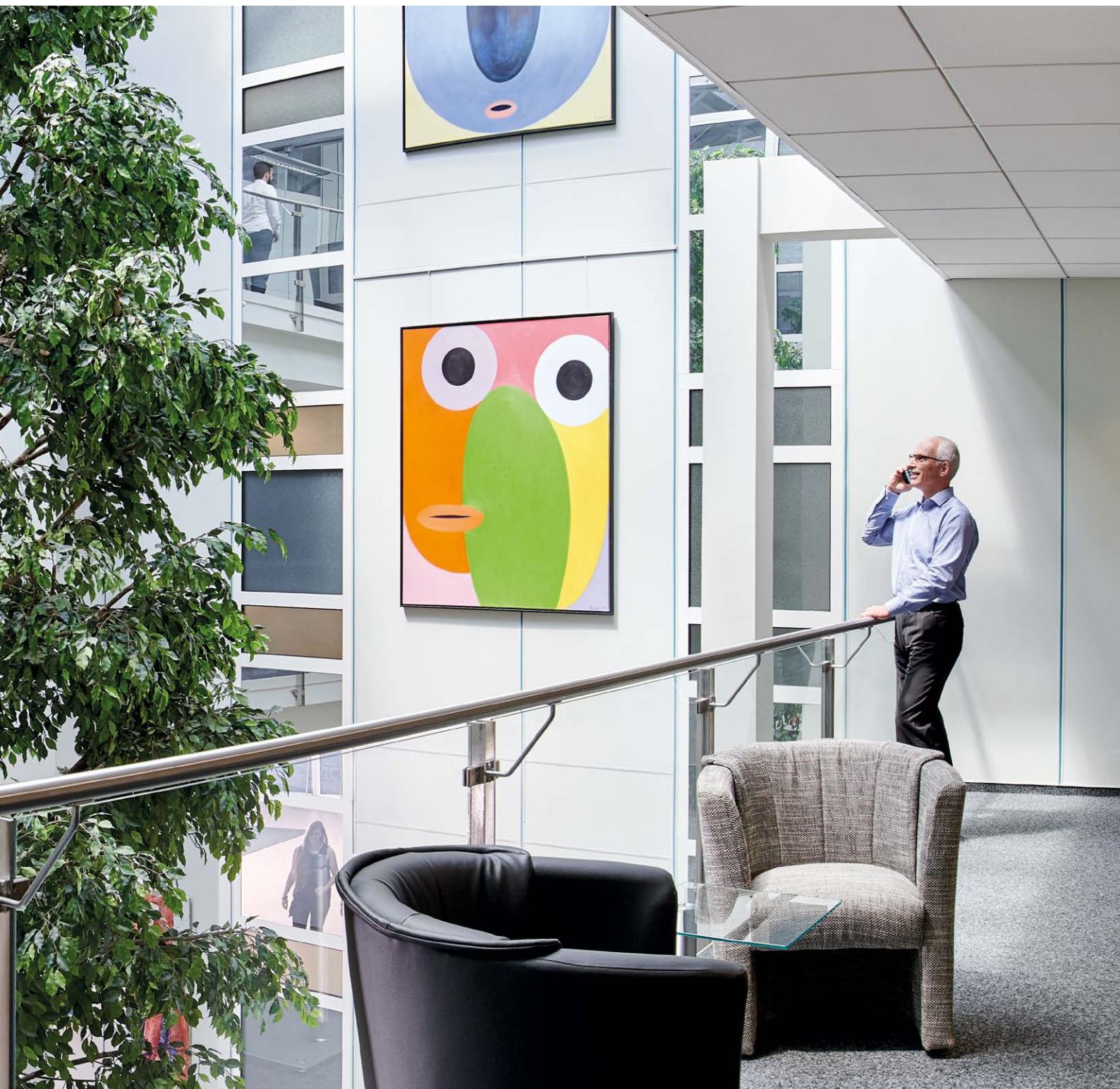
Member of **WAGO** Group

Technical software solutions
for a smart connected world

About us

M&M Software is a technology and consulting company for technical software solutions. Our range of services includes substantiated management and technology consulting, high qualified software development and maintenance as well as comprehensive quality assurance and IT services.

As a project partner for software development services, we drive the success of our customers and support them in the realization of their projects - from initial vision to the finished product. Software solutions from M&M pave the way for the future of an intelligently connected world.

More than 200 employees at the German locations in St. Georgen and Hanover as well as in Suzhou, China, convince with surprisingly simple solutions and have been inspiring for more than three decades with continously new concepts.

M&M Software is an affiliated company of WAGO Kontakttechnik GmbH & Co. KG and established as the software specialist within the WAGO Group.

SOFTWARE DEVELOPMENT PARTNERSHIP

Stable and reliable

For more than three decades M&M Software realizes customer-specific software projects for the industrial automation. To our customers we offer extensive industry expertise combined with comprehensive and well-founded process and technology know-how.

Due to our size, we can quickly and flexibly put together a project team tailored to the respective customer requirements and start with the realization of a project. Software solutions from M&M are created professionally, clearly focused on function, quality and adherence to delivery dates. We take responsibility for the projects of our customers.

With our services in the areas of consulting, development, maintenance and IT, we accompany our customers in long-term partnerships over the entire life cycle of their software products: From the first draft through professional development and sales to commissioning and the associated maintenance and support tasks.

For optimal lifecycle management, we create a tailor-made package for each customer, adapted to theirrespective requirements and actual needs. This package includes various consulting, development and maintenance services and is flexible enough to adapt to changing requirements at any time.

M&M Software offers excellent technology and process know-how and the necessary development capacities, even for larger software development projects.

Benefits of a development partnership with M&M Software:

- We add to the strength of our customers with our experience in the field of software development.

- Long-term partnerships provides our customers with planning reliability and stability.

- Follow-up costs for commissioning an external IT service provider for maintenance are omitted.

Our customer cooperation models

Full service
We develop a ready-to-use, market-ready software application according to the requirements of our customers and take care of maintenance and servicing after commissioning.

Cooperation model
Working closely with our customers' development teams, we develop software subcomponents for a larger overall system.

Agile process model
We put together a team that makes particularly tight deadlines achievable using agile methods.
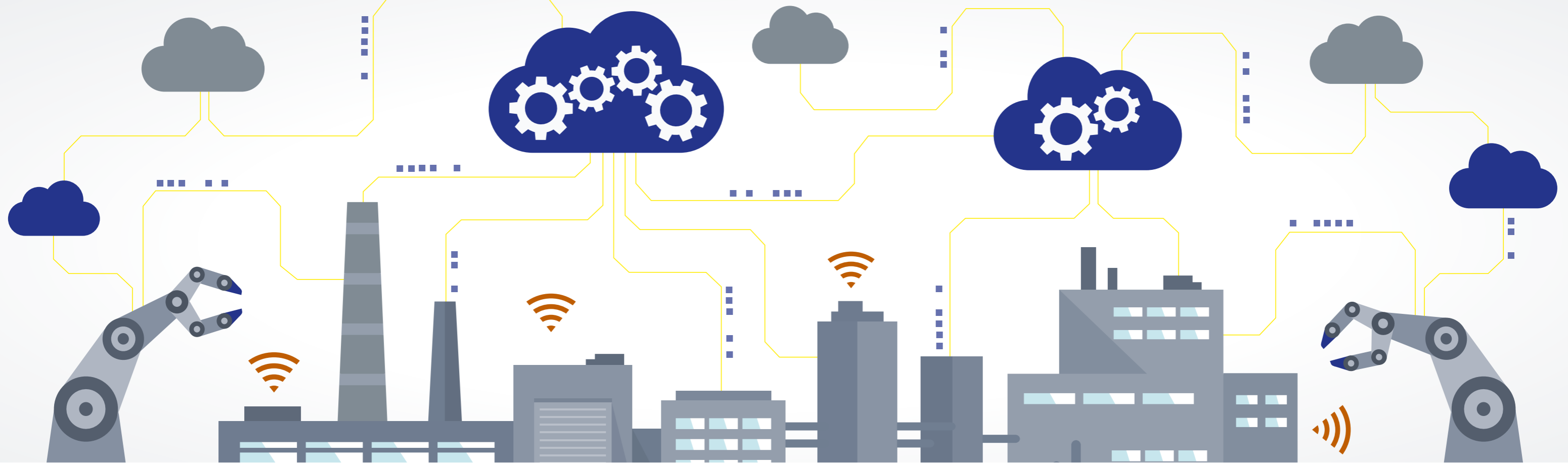
Iterative process model
We develop iteratively according to a tailor-made project plan. Each iteration is offered at a fixed price - optionally with a variable portion according by effort.

All models can be supplemented by the option „Offshore Development". Thus, we offer M&M services at more favorable conditions with equivalent quality.

CLOUD COMPUTING & INTERNET OF THINGS

Tailor-made IoT solutions

To use Big Data and IoT profitably in industrial automation, you need specialists like M&M Software.

We combine Big Data and Data Analytics with robust and secure system architectures. In this way, we create an individual platform for our customers on which they can successfully establish their digital business models or optimize existing processes to the highest performance level.

Our IoT service package includes Cloud and IoT platforms for collecting, visualizing and evaluating data (both as a basic variant with the WAGO Cloud and individually expandable to meet customer-specific requirements). We take over the complete management of the cloud applications being developed by us and take care of monitoring, maintenance and troubleshooting.

We use Microsoft Azure IoT Suite as a flexible modular system that allows our customers a quick and easy entry into the world of IoT and Big Data. If required, we deliver – together with our partners – a complete solution including hardware. Through its membership in the WAGO Group, M&M already has a strong partner at its disposal.

IoT applications from M&M:

- Visualization & Monitoring solutions

- Acquisition and provision of process/operating data

- Interfacing business software systems (SAP...)

- Business Intelligence solutions (data analysis, reporting, analysis)

- Predictive maintenance

WAGO Cloud

The WAGO Cloud is a Microsoft Azure-based IoT solution developed by M&M Software, which is perfectly tuned to WAGO hardware. With it, data from different machines and plants can be collected and analyzed centrally.

WAGO Cloud is characterized by simple and user-friendly operability and has been developed for users without in-depth IT know-how. It comes with everything the user needs for central data evaluation. Thanks to its app structure, WAGO Cloud can be operated intuitively. Many standard functions, such as visualization, remote maintenance or alarming, have been preconfigured.

Individual requirements that are not supported by the WAGO Cloud standard version can be implemented by us with WAGO Cloud Individual.

IoT solutions from M&M are preferably implemented with Microsoft Azure. We are a certified Microsoft Gold Partner for Application Development and Cloud Platform and have access to early adopter programs, the latest products and technical support from Microsoft.

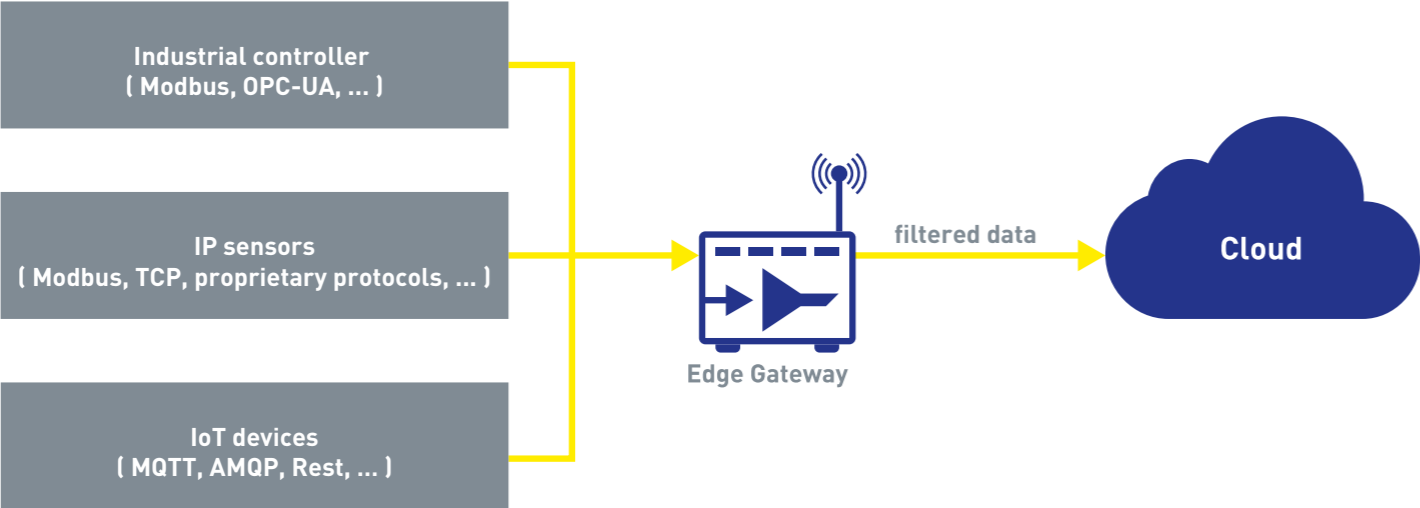# CONNECTIVITY & THINGS

Powerful and safe

Industrial Devices, such as controllers, field devices, gateways, IO modules and other industrial devices are becoming ever more powerful and intelligent. They are e.g. able to collect information necessary for its operation directly from the superordinate system (the Cloud), carry out self-diagnostics and self-remediate errors and independently communicate with other devices via the Cloud.
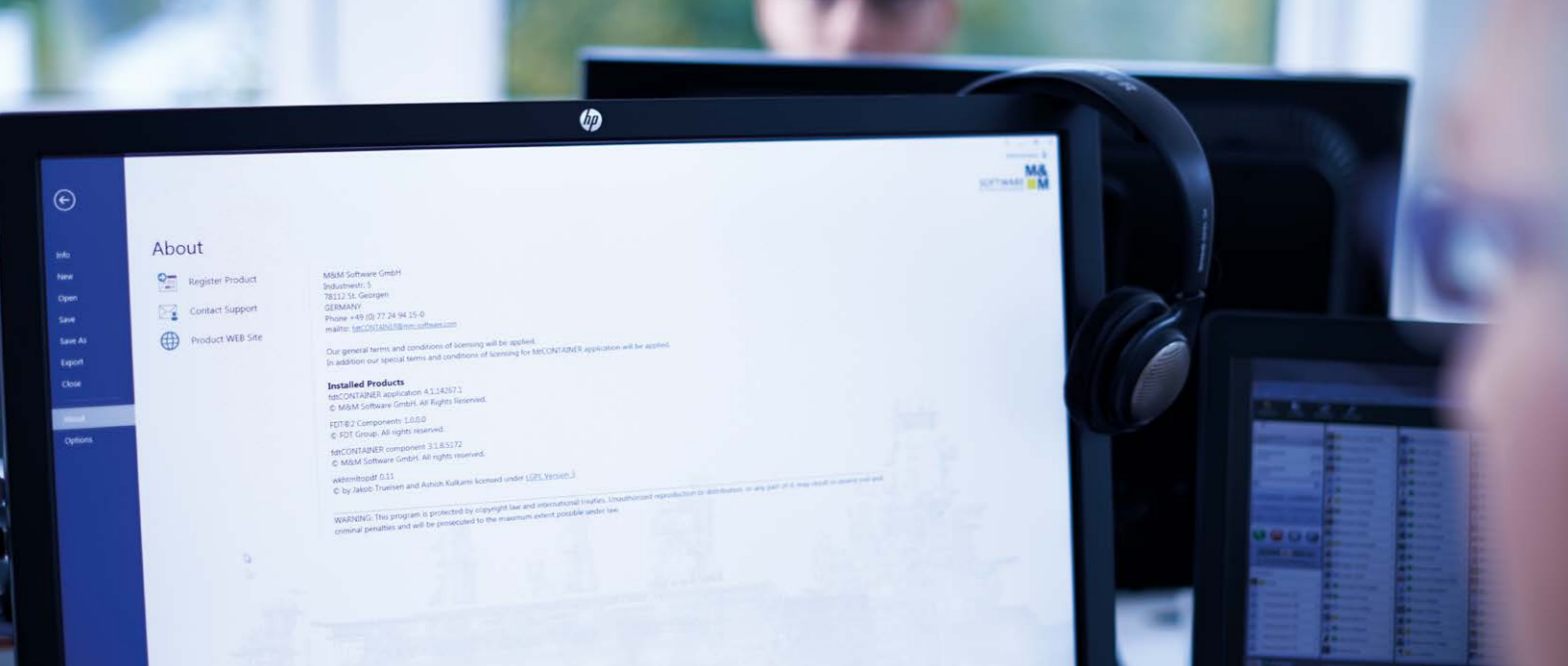
Applications that used to run on PCs are now increasingly running directly on the device. Controllers take on additional tasks, such as collecting and preprocessing data - they become so-called IoT/edge devices.

M&M develops hardware-related software solutions for embedded operating systems (Linux, Windows) in the areas of connectivity, data processing and analysis.

We are specialists for the following areas:

■ Runtime environments and toolkits (Cloud SDK, Edge Runtime), Docker

■ Cloud Communication/Device Management (Digital Twin, Edge Computing ...)

■ IoT Connectivity Solutions – Connecting „Things" to the cloud, hardware and software gateways

| Industrial controller (Modbus, OPC-UA, ...) |

| IP sensors (Modbus, TCP, proprietary protocols, ...) |

| IoT devices (MQTT, AMQP, Rest, ...) |

Edge Gateway

filtered data

Cloud

RICH CLIENT & WEB SOLUTIONS

Productive and reliable

Industrial applications developed by M&M Software are characterized by their performance and reliability. Simple, intuitive operation (usability) is one of the strengths of our solutions. Further advantages, such as offline availability, high security or individually adapted UI design round off the profile of our effective automation solutions.

M&M implements user-friendly applications, e.g. for configuration/engineering or the operation/ observation of devices, machines or plants.

Such solutions can be web or desktop applications that are used as stand-alone applications such as SCADA systems, editors, or configuration tools. In addition, it is possible to integrate these solutions as part of a larger system – for example, a cloud application.

Each application is developed individually for each customer and tailored to their actual needs. Our software development process meets highest technology and quality standards to produce unique software solutions.

Our range of services:

- Solutions for operation and monitoring
- Web based solutions
- Engineering tools
- Frameworks and software product lines
- Asset management and condition monitoring
- Collecting, archiving and evaluating measurement data
- Communication server

MOBILE SOLUTIONS

Independent from platform and browser

Through flexibility and mobility, Smart Devices offer a real advantage in the automation industry, for example in monitoring manufacturing processes. Their use changes software applications such as HMIs and engineering systems.

M&M Software develops customized mobile applications based on reliable frameworks. For our customers, this results in individual solutions that can be used platform and browser-independently and implement reliable responsive design.

Mobile applications developed by us are used in the following areas, among others:

Operation and Monitoring
For the creation of dynamic plant and process visualizations – for operating and monitoring plants, machines, equipment groups, ships and other vehicles.

Device Parameterization
Applications for parameterization and configuration of field devices and machines.

Web Editors for the creation of dynamic plant and process visualizations
Platform-independent and compatible with all commonly used browsers.

User Interfaces for Embedded Devices
Fast and clear visualization of data and configuration of devices.

Online Product Selection and Configuration
Easy selection and configuration of individual products for specialized applications.
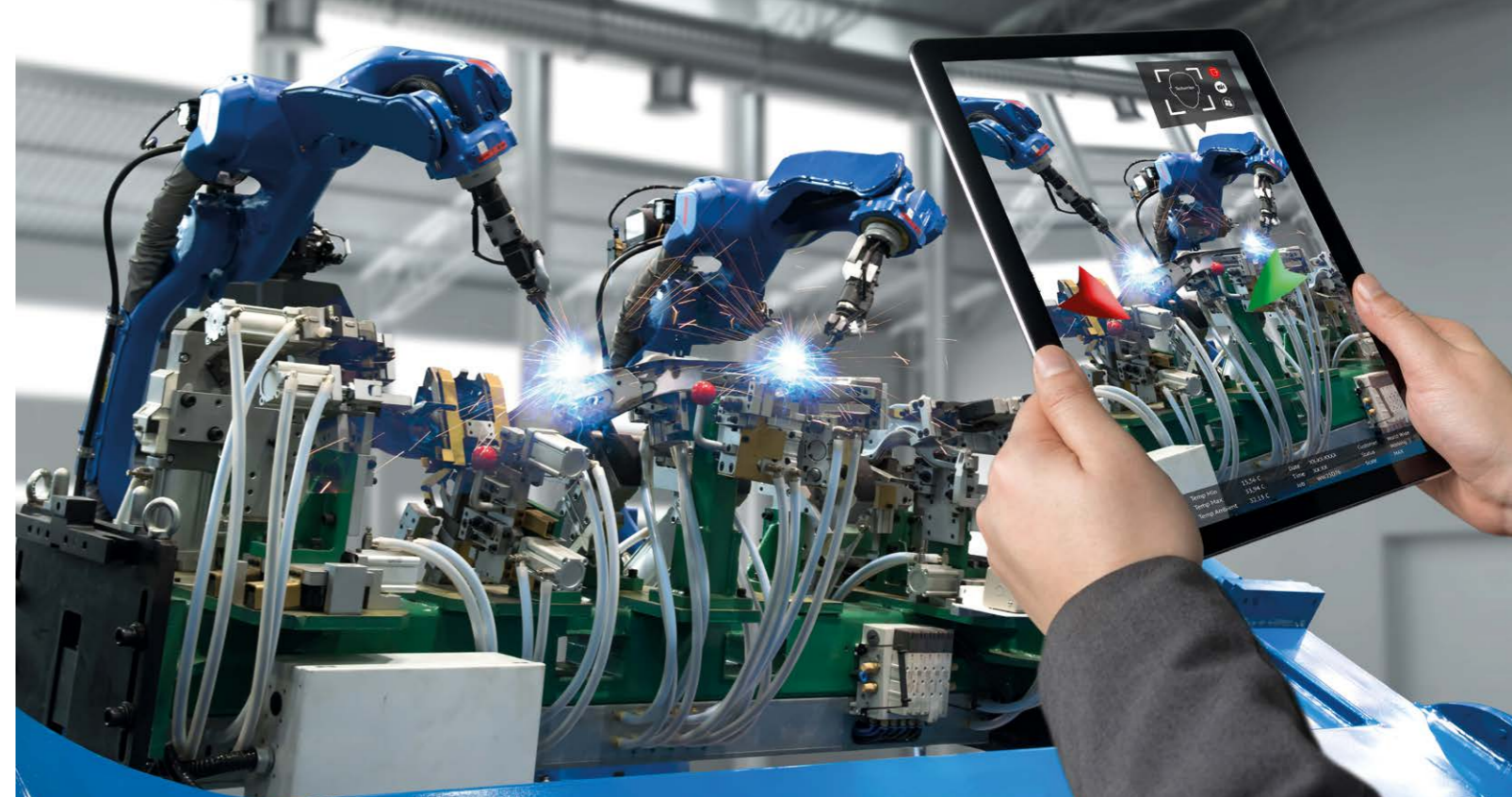
DEVICE INTEGRATION

Tailor-made and future-proof

We offer our customers comprehensive support in developing their own device management strategy. Competent advice, targeted training and workshops form the necessary basis.

Using state-of-the-art technologies and established industry standards, such as OPC UA, FDT, EDDL and FDI, we develop modern device integration solutions for field devices and communication components quickly and with low resource consumption. After completing the project, we take on future software maintenance if required.

As an active member of the FDT Group, we implement device integration strategies always under consideration of currently pending FDT technology developments, support the preparations for the certification of a DTM and take over the final official test run.

AUGMENTED REALITY

Limitless and effective

Through the use of Augmented Reality, the computer-aided extension of the perception of reality, details of complex systems, for example, can be grasped more easily. Alongside artificial intelligence and digital platforms, augmented reality is one of the industry's most promising topics for the future.

The possible combination of IoT data with real on-site visual and acoustic information makes Augmented Reality solutions unique. They have the potential to revolutionize certain industrial applications. Two of the platforms we are developing for are mobile devices and Microsoft HoloLens.

It is particularly suitable for the following fields of application:

- Assembly: step by step instructions guiding through workflows.

- Order picking: specification of parts and quantity.

- Quality inspection: specification and logging of test procedures.

- Training: Process-accompanying training with virtual information.

- Maintenance: Instructions for service and maintenance work.

Our longstanding experience in the validation and adaptation of new technologies directly flows into consulting prior to the development of a customer-specific AR solution and offers a comprehensive analysis regarding the use of a productive and advanced application.

„During the development of our software solution, we received excellent advice and support. The entire project was successfully carried out by M&M from the beginning to the end".

Jürgen Kamburg, Technical Manager Device Integration,
Schneider Electric

„The cooperation with the M&M Software Offshore Team concerning the development of our software solution saves us a lot of time and effort."

Jürgen Schrempp, Director Applications,
Endress+Hauser

„The outstanding technological know-how, the fast response times and the uncomplicated handling have impressed us during the cooperation with M&M."

Pascal Wildbolz, Team Leader Development and Project Leader Process Analytics,
HAMILTON Bonaduz AG

>30 years of experience

100% team spirit

3 locations