

## WAGO Cloud

Simple and Open: Universal IoT Solutions  
for Machines, Systems and Buildings



**Users** **CLOUD**  
Security Cloud connectivity  
**System data** Measurement data  
**Automation** **WAGO**  
Machine data **Simple** User-friendly  
**Data security** Cloud connectivity **Benefits**  
SaaS **WAGO** Digitization  
**Controller status** **CLOUD** **Software**  
**Users** **Remote access**  
**Software** User-friendly  
**Energy savings** **IoT solution**  
**Open** **Flexible** **From a single source**



# WAGO Cloud

WAGO Cloud enables you to centrally collect and analyze data from various machines. It also allows WAGO Controllers to be easily managed and monitored along with their data and applications. Combining simplicity with usability, WAGO Cloud was developed so that even people without IT experience can use it. It is hosted on Microsoft's Azure Cloud.

## How Does Machine Data Get to the WAGO Cloud?

A WAGO PFC Controller serves as a gateway, collecting and sending data to the WAGO Cloud either cyclically or event-driven. Users log into their user interface on the Web portal, where they can use various applications and have access to functions like visualizations, controller and user management, as well as controller status monitoring. Furthermore, users can activate alarm functions and data can be graphically visualized, evaluated and exported if necessary.

## Do You Need to Restrict the Data You Send to the Cloud?

No problem! Configure the WAGO PFC Controller and specify what data to send to the cloud or not via PLC programming.

### Your Benefits:

**User-friendly:** Simple operation without IT expertise

**Flexible:** Individually scalable solutions – you pay only for what you use

**A single source:** Get software, infrastructure and services all from WAGO

# An Overview of WAGO Cloud Functions

## Manage Your PFC Controllers

Connect your WAGO Controllers to WAGO Cloud within minutes and associate them with customers, sites and systems. Monitor the current connection parameters and process data. Respond promptly to exceptions via alarm and notification functions.

## Analyze Your Data Centrally

Centrally visualize and compare your machine and system data in WAGO Cloud. Represent your measured data over time graphically, e.g., as trend graphs, bar charts and pointer elements. Get a graphical overview of your controllers' locations and their connection status.

## Access Local Configurations and Visualizations via Remote Access

Remotely access your WAGO Controllers without time-consuming configuration of the IT infrastructure. Use the Web browser to easily set up, control and monitor your systems.

## Always Stay Updated

Provide your controllers with the newest firmware in just a few clicks. Distribute your existing functional application to multiple controllers in a few seconds. You can choose between updating your firmware automatically from the cloud or manually on site.\*

## Export Your Data Easily and Flexibly

Want to use your data with additional individual tools and software besides WAGO Cloud? WAGO Cloud offers easy and flexible access thanks to various interfaces (RESTful API, CSV).

\*Availability: End 2nd Quarter 2019





# Trust WAGO Cloud

Based on the established Microsoft Azure cloud platform, WAGO Cloud offers the following advantages:

**Consistent performance:** Microsoft Azure is highly scalable in terms of computing power, data storage, transactions, availability and security standards.

**Securely hosted:** In the Microsoft Data Center

**Guaranteed security and data protection:**  
Transnational certifications and controls

**Always up to date:** A constantly expanding selection of tools and services, as well as regular security updates

## Fast access:

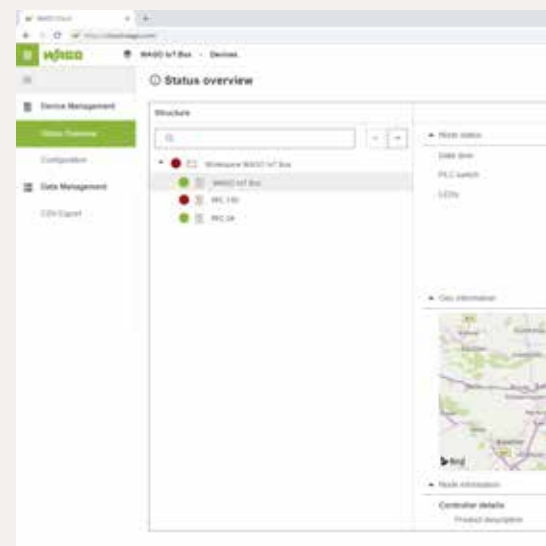
Quickly discover what you are looking for because all of your workspaces are in view.

## Relevant functions:

Only see the functions that are immediately available.

## Simple application:

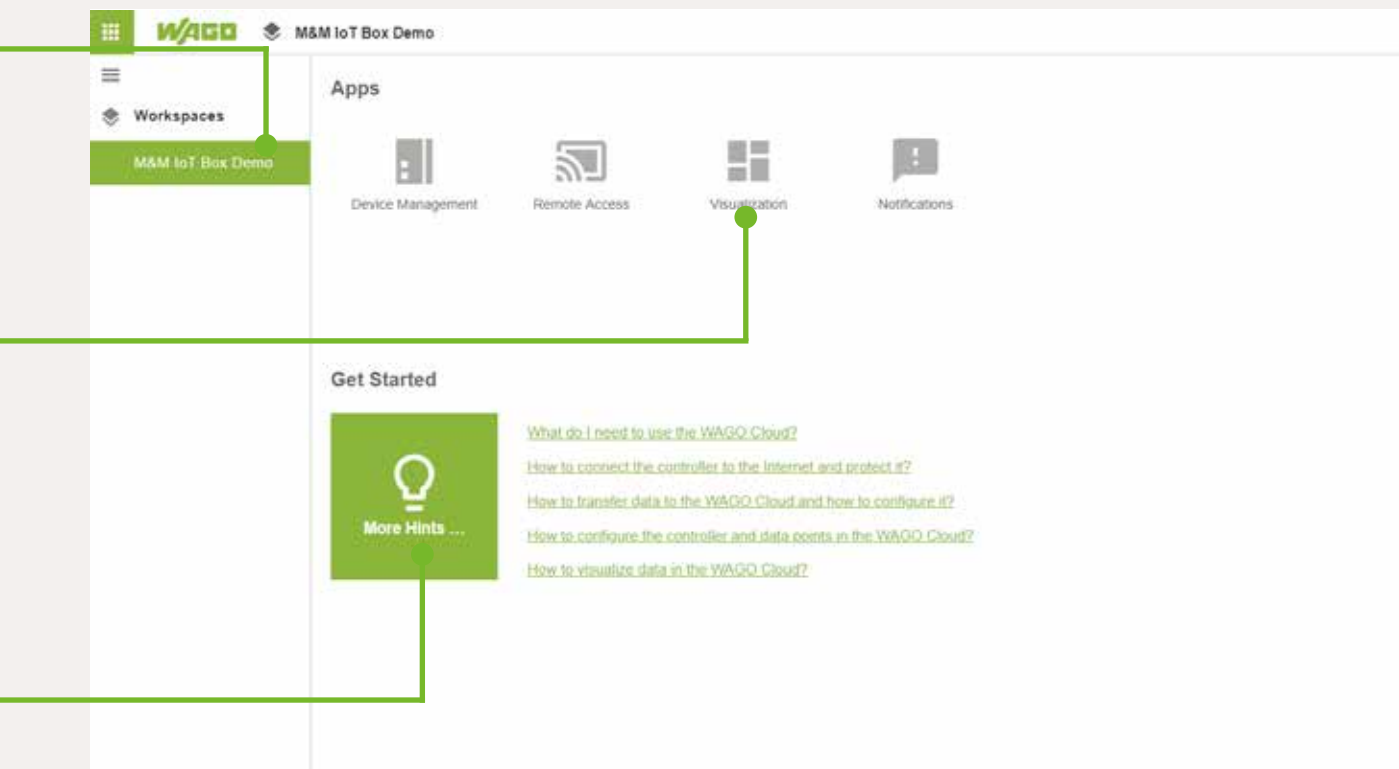
Let us guide you in creating cloud projects.



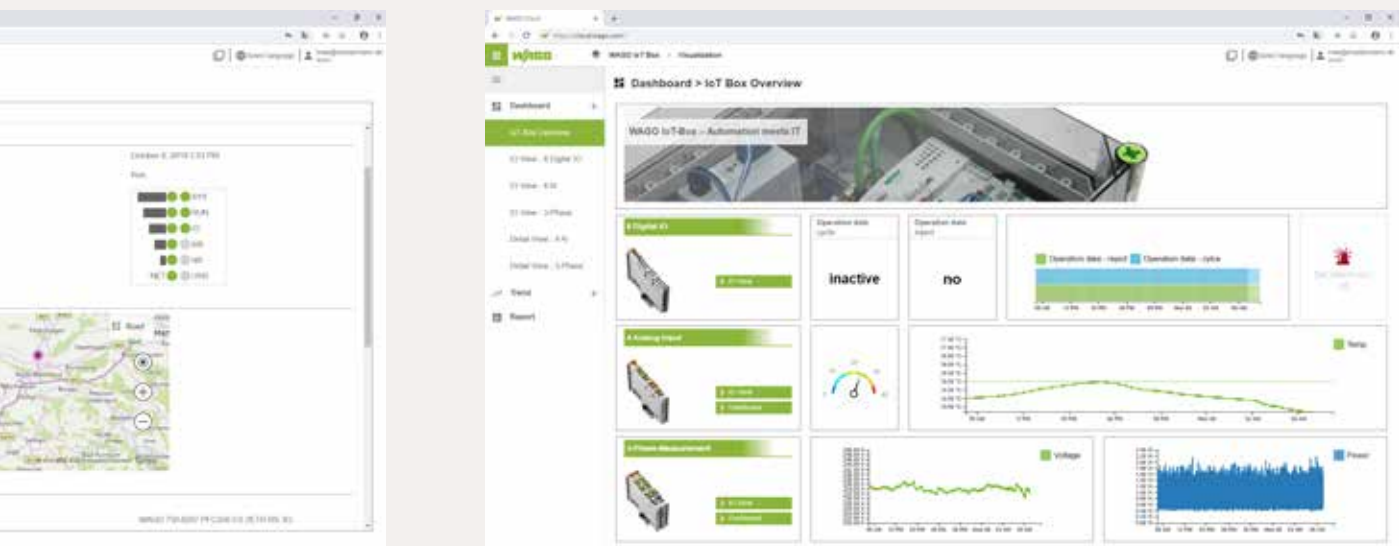
**Controller status overview:** See your controllers, as well as relevant connections



## All Functions at a Glance Thanks to an Intuitive App Structure



## Get Every Detail at a Single Glance



connected and disconnected  
on details.

**Dashboard:** Create your own custom dashboard,  
use both graphics and trends.



# Getting Started is Easy: Register and Make Your Way to the Cloud!

Register at <https://cloud.wago.com> for a free 30-day, no-obligation trial

WAGO Cloud offers you complete IoT device management which, together with WAGO's PFC Controller family, easily connects to new or existing

machines and systems. You can use WAGO Cloud for free for the first 30 days. During this period, you have full access to the entire selection of services.



# License Model

## Paid Functions

- Free 30-day evaluation phase (100 test points)
- Transparent license use management in WAGO Cloud
- Billing based on accessible points model (WAGO Cloud's license points)

Cloud Functions		Contents
Data Management	Data packets	<ul style="list-style-type: none"><li>• Connect PFC Controllers to WAGO Cloud</li><li>• Transmit data to WAGO Cloud</li><li>• Monitor devices and data</li><li>• Storage time: 1, 2 or 5 years</li></ul>
	Data export	<ul style="list-style-type: none"><li>• Data export via REST API or CSV export for other cloud services or customer systems</li></ul>
Device Management	Firmware and application updates*	<ul style="list-style-type: none"><li>• Install firmware and application updates on your PFC Controller from the cloud</li></ul>
	Remote access	<ul style="list-style-type: none"><li>• Remote access to the local Web visualization and the controller's Web-based management</li></ul>

\*Availability: End 2nd Quarter 2019

Want to estimate how many points you will need?

Test our online calculation tool: [www.wago.com/cloud-calculator](http://www.wago.com/cloud-calculator)

- 100 WAGO Cloud's license points: Item No. 2759-1061/0621-0010
- 500 WAGO Cloud's license points: Item No. 2759-1061/0621-0050
- 1000 WAGO Cloud's license points: Item No. 2759-1061/0621-0100



# Direct IoT Connection via Cloud Connectivity

Besides software, we also supply the right hardware: PFC Controllers and WAGO Touch Panels 600 with cloud connectivity.

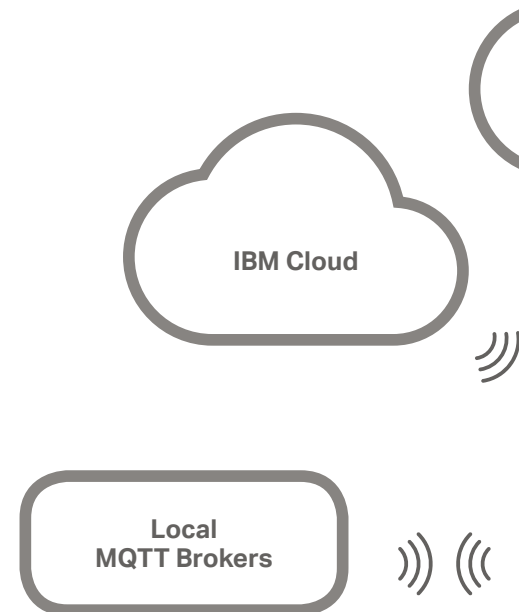
Record, digitize and link data profitably – this is the core concept behind Industry 4.0. Both the WAGO-I/O-SYSTEM 750 and 750 XTR connect to the field level, and a WAGO PFC Controller or Touch Panel 600 sends data to the cloud or to a local MQTT broker, where it can be aggregated and used for analysis. This capability creates true added value for your company – whether for increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services.

## Future-Ready

Existing systems also become IoT-ready, making them sustainable into the future. Communication between PFC Controllers and cloud suppliers is performed via the MQTT protocol and encrypted via TLS 1.2. The cloud connection data is configured via Web-Based Management (WBM). With the appropriate library, which is a standard feature in WAGO's **e!COCKPIT** Engineering Software, the variables to be transferred to the cloud can be defined in the PLC program, allowing the PLC programmer to maintain complete control. Controller information, such as run/stop, connection status and device information can also be transferred to a cloud solution via cloud connectivity or distributed by an MQTT broker.

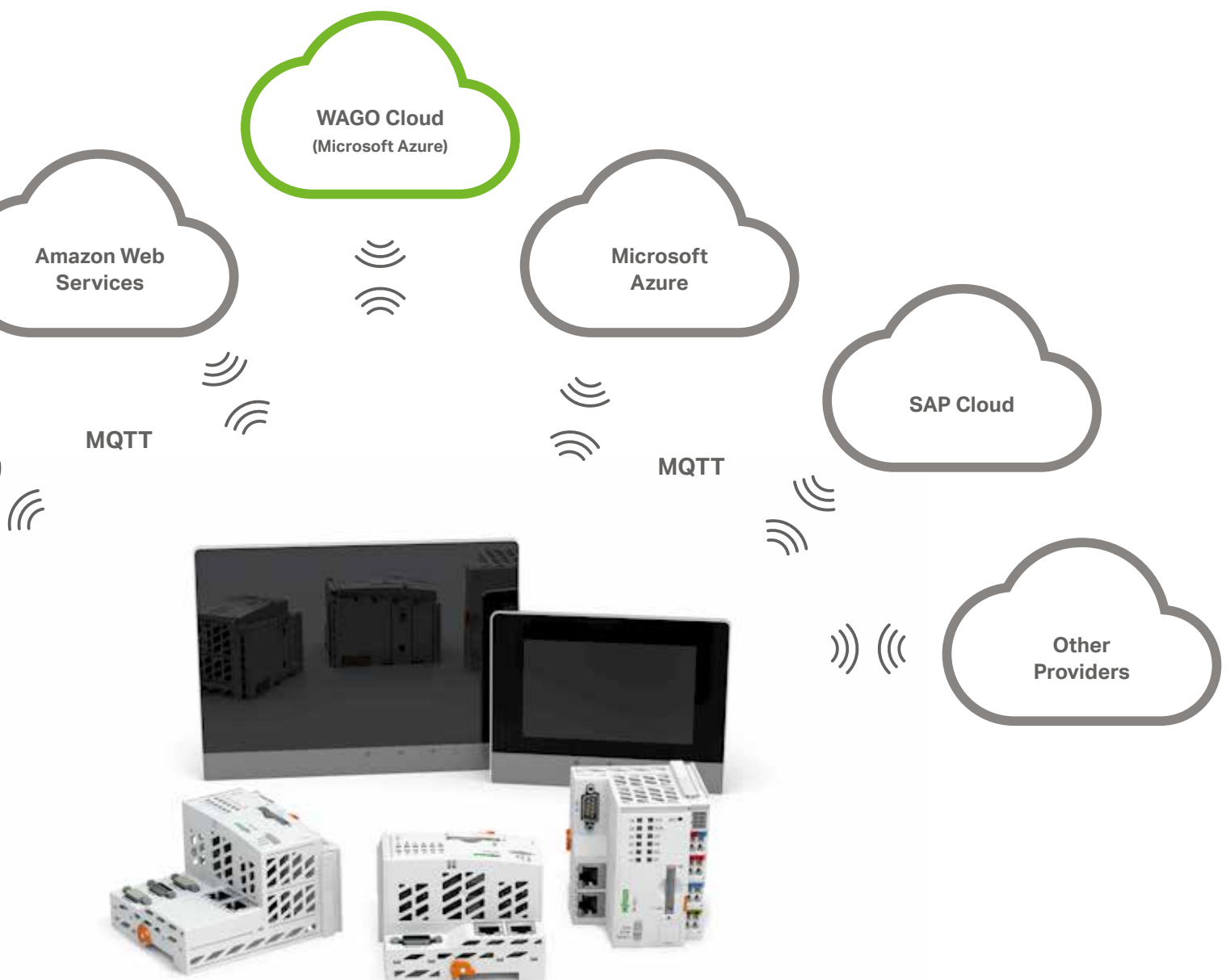
## Interfaces

With their wide variety of interfaces, the WAGO Controllers also offer the perfect foundation for an IoT gateway. They can collect numerous field signals, communicate in a large number of industrial protocols and even enable cloud connection of sensors and actuators that themselves have no Web interface. Thanks to the standardized MQTT protocol, it is possible to connect to cloud providers such as Microsoft Azure, Amazon Web Services, IBM Cloud or SAP Cloud. Of course, other MQTT brokers or solutions such as WAGO Cloud can also be connected. Cloud connectivity has been a standard feature of the PFC Controller since firmware version V1.1; the required library has been included in **e!COCKPIT** since version V1.4. With firmware version V1.2 and higher, WAGO's Touch Panels 600 deliver the connection; from version V1.5 onward, **e!COCKPIT** contains the required libraries.



## Your Benefits at a Glance:

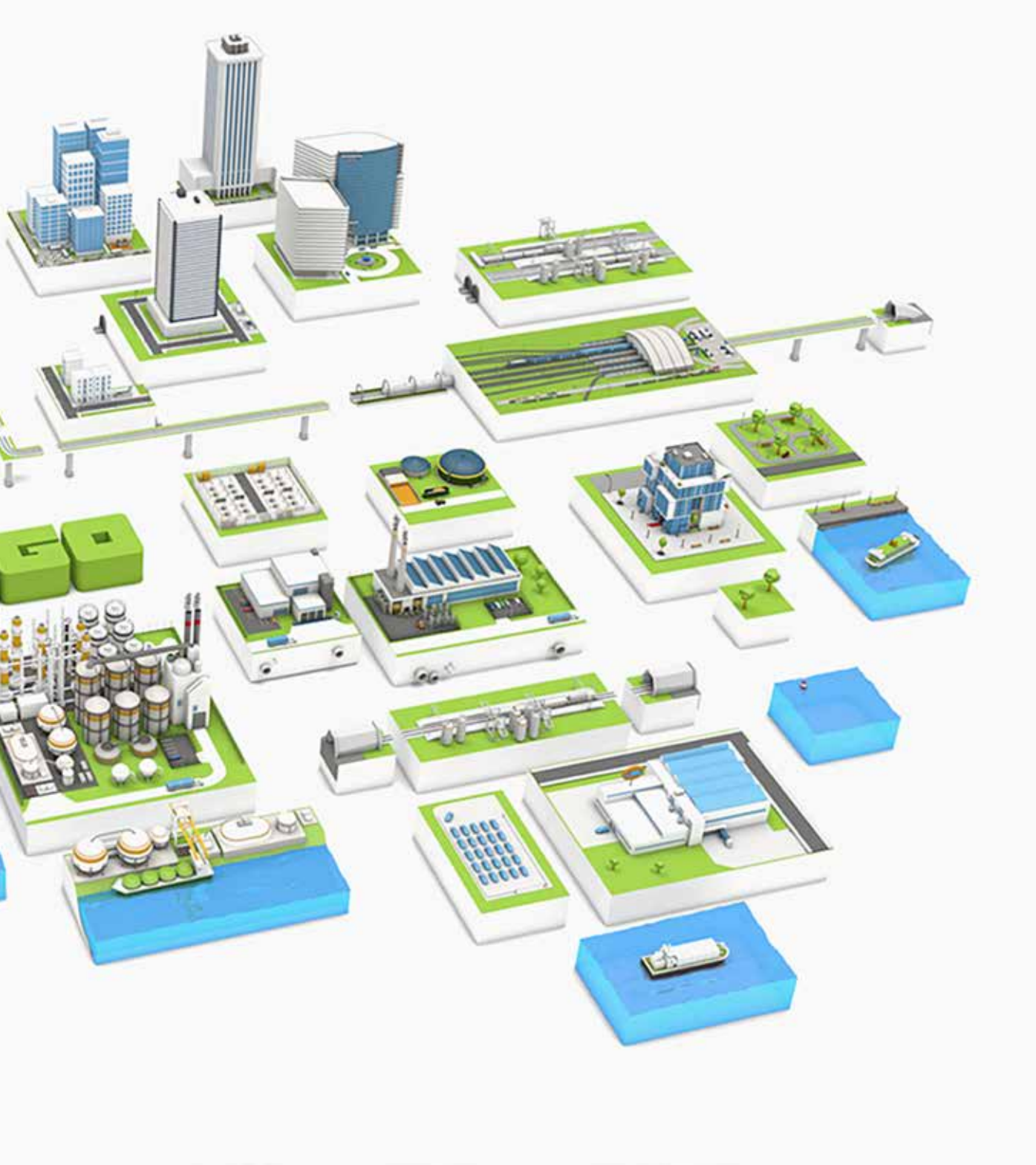
- Direct connection from the field level up to the cloud
- Expansion of existing systems with the PFC and control panel as an IoT gateway
- Distributed data acquisition and visualization from anywhere
- Connection to Microsoft Azure, Amazon Web Services, IBM Cloud or other MQTT brokers via standardized MQTT protocol
- High level of security thanks to TLS encryption





# WAGO Cloud, Customized

With M&M as a member of the WAGO Group, WAGO has a partner for integrated development of industrial and technical software solutions.



As your partner, we examine the individual requirements of your company together to find the appropriate solution for you. Because the WAGO Cloud serves as the base platform, the actual expansion can start immediately. Based on Microsoft's Azure Cloud, the WAGO Cloud has a rapidly expanding number of services and tools to provide you with the perfect foundation for implementing application-specific

solutions. We're always ready to help. Please find additional information at:

<https://mm-software.com>

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



*»The WAGO Cloud solution developed for us is a tailored solution that is scalable at will.«*

Lars Baumann

Asset Management Team Leader  
Avacon Natur GmbH

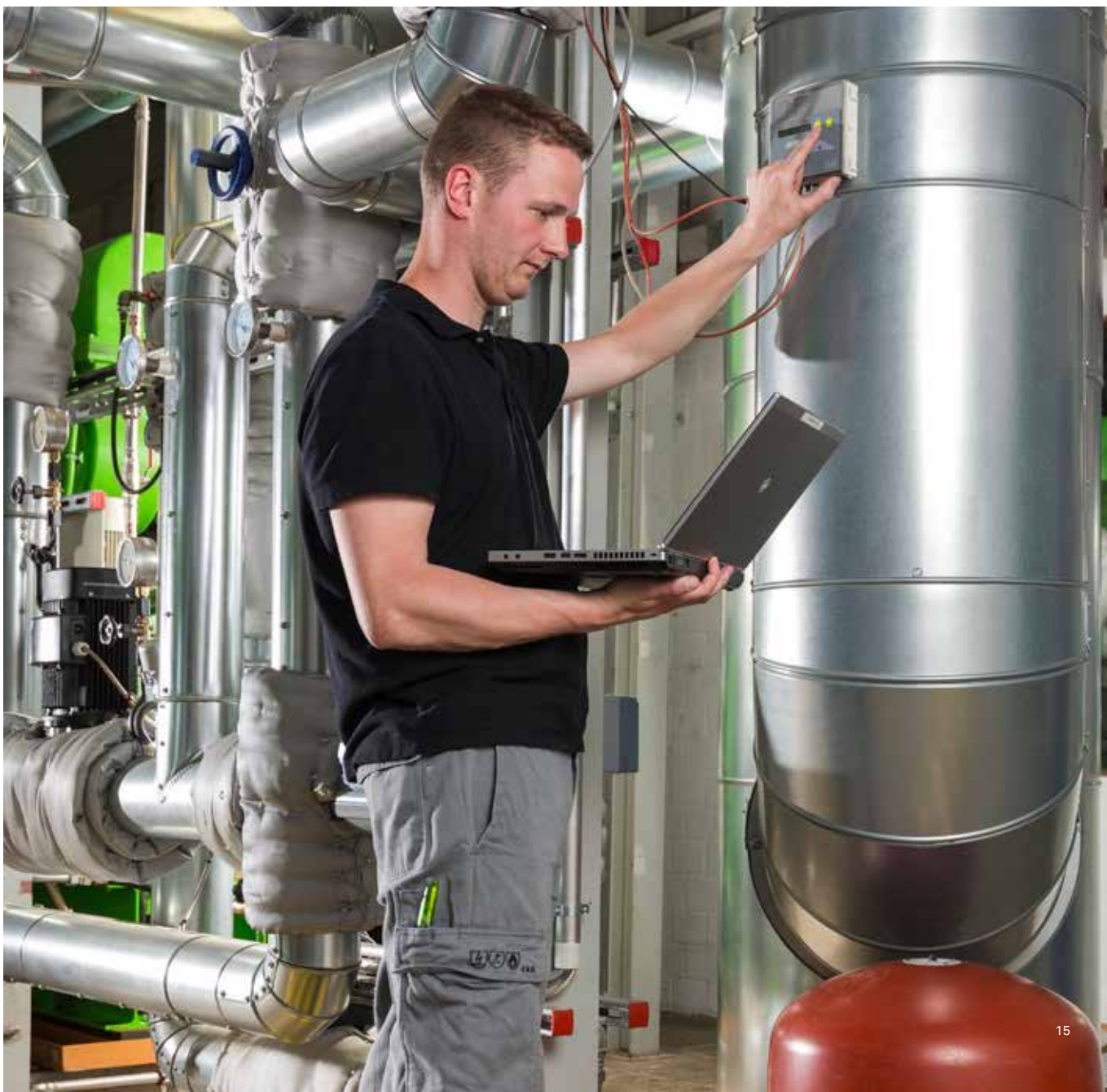
# WAGO Cloud Successful in Use

## Avacon Natur GmbH

Avacon Natur GmbH uses WAGO Cloud for data analysis of its energy systems and heating networks. The cloud stores all measurement data and provides the interface to Avacon Natur's existing energy data management system, which also runs on the Microsoft Azure platform. The PFC200 Controller collects both measurement data (heat quantities, flow rates, supply/return temperatures) and motor data of the

CHP plants. Both employees at company headquarters and local service technicians use this to monitor the energy systems.

Avacon Natur GmbH is an energy service provider and operates CHP plants, heating networks and heating service systems and has a wide range of systems for the generation of renewable energy.





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