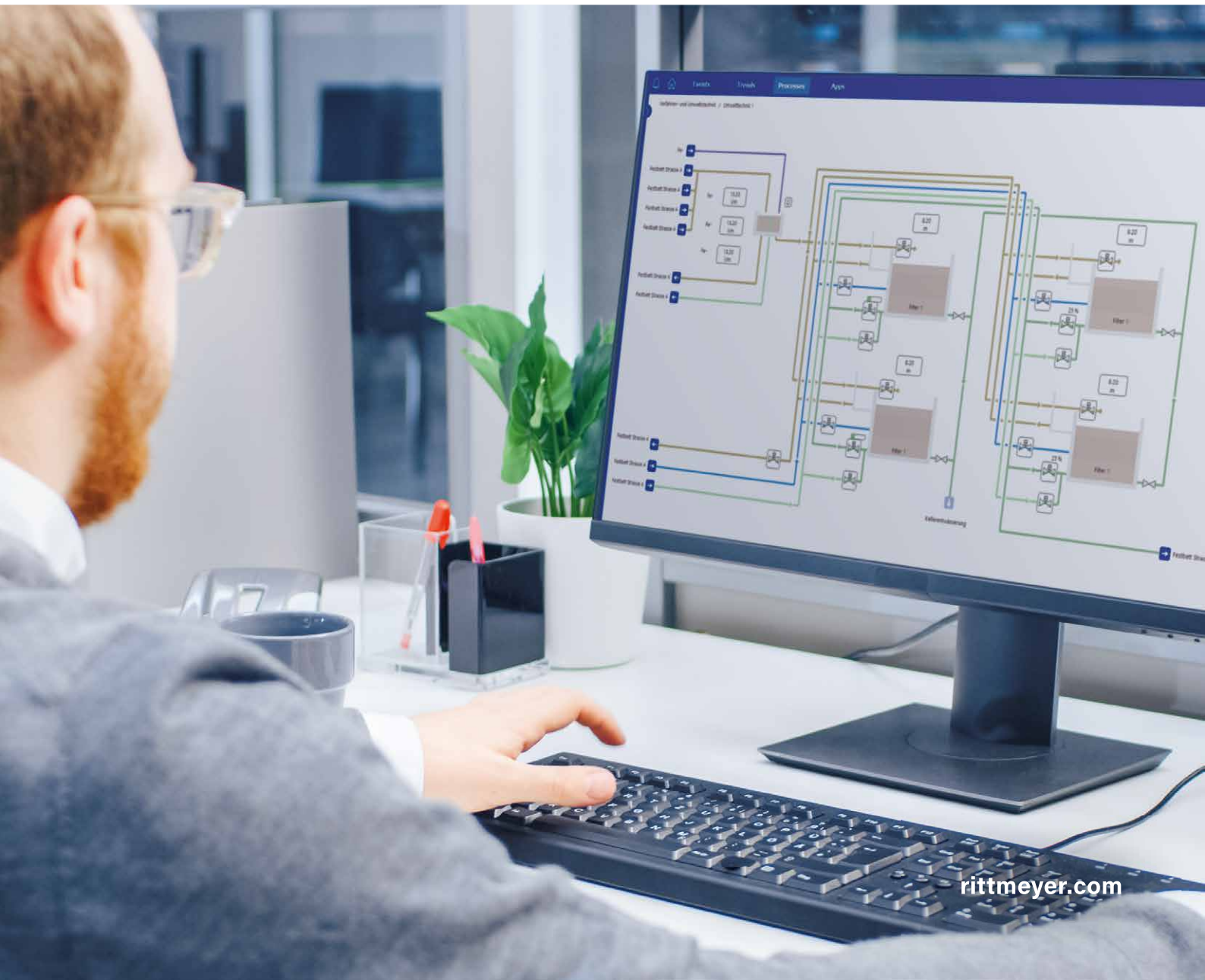


RITOP 3

The future-proof SCADA for all energy and water control systems



Custom control technology

RITOP is a flexible and sustainable SCADA solution for process control systems in the water and energy industries. Thanks to its modular design, RITOP is the right choice for any kind of system, no matter the size – from small single-user systems all the way to large systems, distributed and redundant structures with multiple servers, clients and stations.

Full flexibility

RITOP is scalable and can be adapted to meet new requirements at any time, protecting your investment in the long run. RITOP's modern system architecture enables synergies with existing IT infrastructures. Private cloud and cloud computing offer high levels of flexibility when choosing the location of the data processor.

Extensive industry experience

Rittmeyer benefits from years of experience and technical expertise in processes used in the water and energy industries, as well as in the planning, implementation, commissioning and maintenance of control systems. This know-how has been distilled into RITOP and targeted industry packages, which equip system operators to deal with tomorrow's challenges.

Ready for the future

RITOP has been continuously developed so that operators can always go about their jobs safely and to the best of their ability. The use of professional, independent hardware also simplifies procurement and the management of spare parts in future.

New versions are backwards compatible. As a result, systems can be updated to the latest version regardless of the hardware or operating system in use. RITOP process screens that have already been configured can largely be reused.

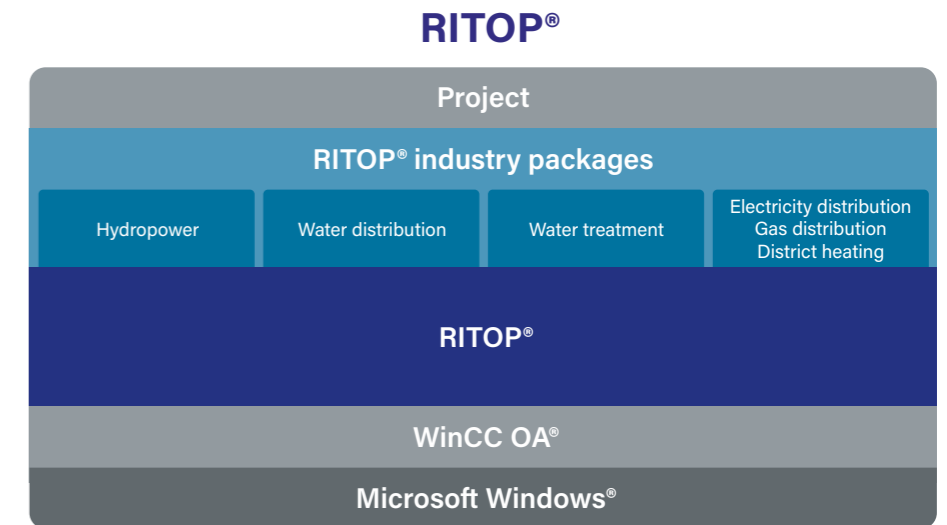
Reassuring openness

The multitude of supported communication and database interfaces that RITOP brings to the table are key for the system to operate safely; these make integration into existing IT environments simple and secure. Even connecting components from different manufacturers is significantly easier.

Communicating with the periphery (southbound) e.g. via:

- IEC 60870-5-101;104 (remote control; TCP/IP)
- OPC UA
- SNMP
- IEC 61850
- Modbus RTU/TCP, Profinet etc.

With RITOP, Rittmeyer offers an intelligent and modular solution to optimally master the challenges of the future.

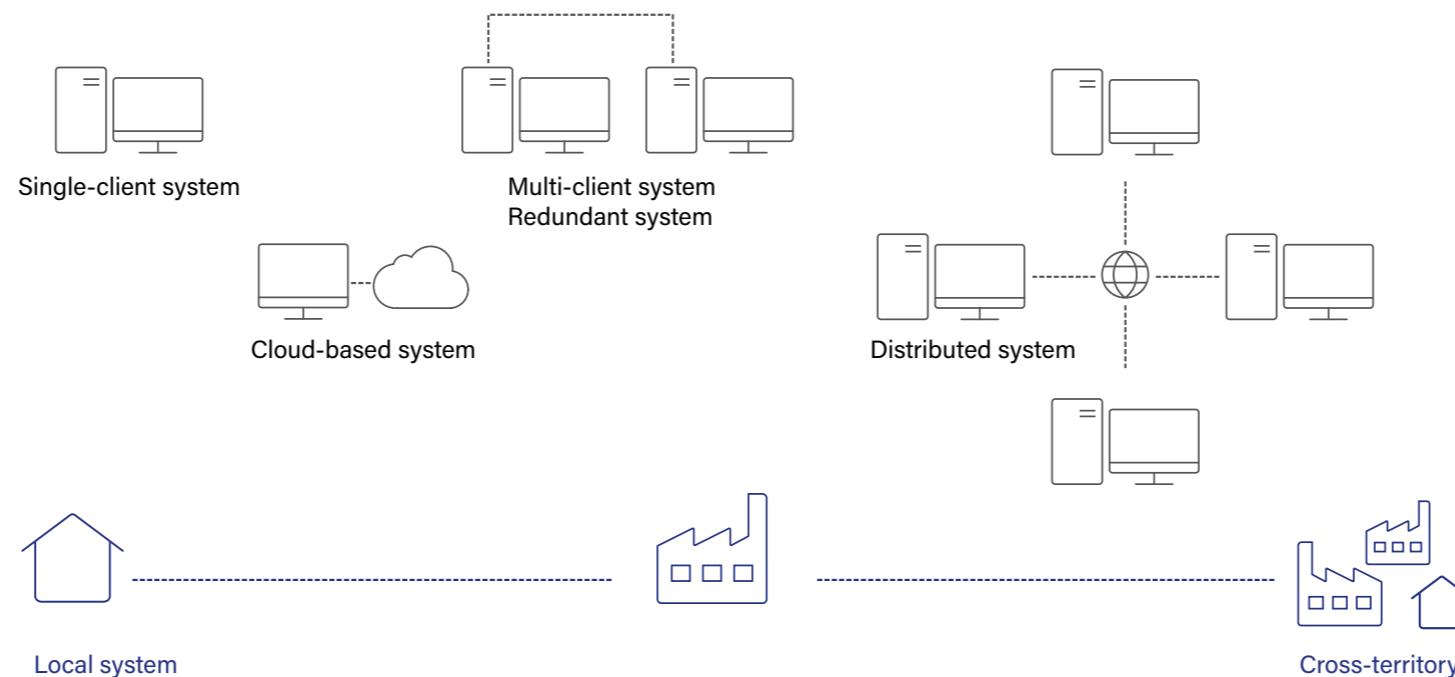


Communication with higher-level control systems, analysis tools such as RITUNE® or other external applications (northbound) e.g. via:

- XML-RPC, SOAP, REST, WebSocket, XMPP, XML, SQL etc.
- OPC UA, MQTT, SFTP

Secure connection via:

- Copper
- Fibre optics
- Mobile radio
- Plant lines
- Leased lines
- Internet



Your benefits

- Future-proof SCADA: modular and extendible system architecture, scalable for any system, no matter the size
- Tailor-made customer solutions: features and industry add-ons to tackle tomorrow's challenges
- Simple integration: extensive hardware that is independent from the manufacturer and simple upgrades
- Secure system operation: needs-based flow of information and clear signalling
- Intuitive design: minimal effort to learn the ropes, simple monitoring and analysis

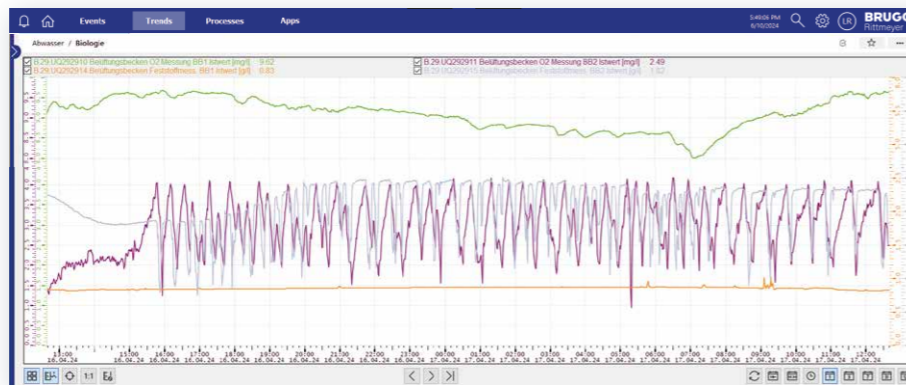
Uniform operating philosophy

An object-oriented operating system has been developed in collaboration with experienced users and software designers that enables intuitive usage even when confronted with complex system features. The new navigation feature and the intelligent search function get users where they need to be quickly, and the alarm preview provides instant information.

The areas for visualisation, operation and alarms are clearly separated. A clear, needs-based flow of information guarantees easy and safe process management. The danger of user errors and costly failures within the system's operation is significantly reduced.

Trends

Detailed analysis of how parameters progress over time, in real time and retrospectively.



Events

Monitoring of the system status and analysis of errors on the basis of the log book and message logs.

Zeit	ID	Kurzbeschreibung	Bereich	Element	Index	Wert
08.08.2024 15:38:43	02MEX0100010002	Kraftwerk	MKG MG2-Regler (MG2)	Leistungsgenerator	Bsp. ohne Wirk.	anbehaftet
08.08.2024 20:49:37	02MEX0100010001	Kraftwerk	MKG Regler (G-Sm)	Neueinspeisung Objekt	hoch	anbehaftet
08.08.2024 23:10:57	02MEX0100010001	Kraftwerk	MKG Regler (G-Sm)	Neueinspeisung Objekt	hoch	anbehaftet
08.08.2024 10:30:42	02MEX0100010001	Kraftwerk	MKG Kälteung Turb	Temperatur vor Regelobjekt	hoch	anbehaftet
08.08.2024 11:42:42	02MEX0100010001	Kraftwerk	MKG Kälteung Turb	Temperatur vor Regelobjekt	hoch	anbehaftet
08.08.2024 20:49:37	02MEX0100010001	Kraftwerk	MKG Turbinenregler	Statische Wellenschwingung 1	MKG Ausfall	anbehaftet
08.08.2024 21:16:28	02MEX0100010001	Kraftwerk	MKG Turbinenregler	Statische Wellenschwingung 1	MKG Ausfall	anbehaftet
08.08.2024 07:10:54	02MEX0100010001	Kraftwerk	MKG Gen-Schalter (MG)	Freigabe 1	MKG Ausfall	anbehaftet
08.08.2024 07:10:54	02MEX0100010001	Kraftwerk	MKG Gen-Schalter (MG)	Freigabe 1	MKG Ausfall	anbehaftet
08.08.2024 07:10:54	02MEX0100010001	Kraftwerk	MKG Gen-Schalter (MG)	Freigabe 1	MKG Ausfall	anbehaftet
08.08.2024 07:10:54	02MEX0100010001	Kraftwerk	MKG Gen-Schalter (MG)	Freigabe 1	MKG Ausfall	anbehaftet
08.08.2024 22:15:08	02MEX0100010001	Wasserversorgung	MG2-Regler (MG2)	Druck-Chemie (MG2)	Alarm	Aus
08.08.2024 22:15:08	02MEX0100010001	Wasserversorgung	MG2-Regler (MG2)	Druck-Chemie (MG2)	Alarm	Aus
08.08.2024 18:11:18	02MEX0100010001	Kraftwerk	MKG MG2 / Station 107	Wahltag einget.	anbehaftet	anbehaftet
08.08.2024 18:45:18	02MEX0100010001	Kraftwerk	MKG Schutz	MFLER M1 / Station 107	Wahltag einget.	anbehaftet

Apps

Carrying out higher-level operational tasks (e.g. setting alarm priorities), configuration specific to individual user groups and system-specific extensions.

Short name	area	building	Element	Index	Event class	Processing	Delay
Witop Server	LS	Witop	Systemstart	0000	HalfFunction #Fnc.1	active	none
Witop Server	LS	Witop	Start/stop	0000	HalfFunction #Fnc.2	active	none
RegelSystem 1	HA	RegelSystem 1	RegelSystem 1	0000	HalfFunction #Fnc.1	active	none
RegelSystem 1	HA	RegelSystem 1	RegelSystem 1	0000	HalfFunction #Fnc.2	active	none
RegelSystem 1	HA	RegelSystem 1	RegelSystem 1	0000	HalfFunction #Fnc.3	active	none
RegelSystem 1	HA	RegelSystem 1	RegelSystem 1	0000	HalfFunction #Fnc.4	active	none
RegelSystem 1	HA	RegelSystem 1	RegelSystem 1	0000	HalfFunction #Fnc.5	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.1	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.2	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.3	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.4	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.5	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.6	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.7	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.8	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.9	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.10	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.11	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.12	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.13	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.14	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.15	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.16	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.17	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.18	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.19	active	none
Test_Alarm	WV	Bauwerk	Test_Alarm	Alarm	HalfFunction #Fnc.20	active	none

Clear language

Features, operation objects and display elements in the user interfaces look the same across all operating levels, guaranteeing that users will become familiar with the system rapidly.

The base images bring important user information to the foreground thanks to their stripped-back graphics. Status

changes and alarms are depicted clearly and make it possible to intervene quickly. Features, measurement values and settings are clearly assigned to the respective module. The colours used in the depictions are very carefully thought out. Only statuses and alarms are coloured in the traffic light colours red-orange-yellow-green, according to their urgency and importance, and are clearly visible as a result.

Processes

Depiction and monitoring of systems with clear process screens, intuitive use thanks to object panels.

Integrated security

Systems that form a part of critical infrastructures are exposed to a multitude of threats posed by cyberattacks. To minimise the risk of a successful attack, weak spots that could be exploited by various threats must be eliminated. Our specialists emphasise this greatly when it comes to newly built systems and replacements and extensions of existing systems.

Many hurdles

A multi-level defence system protects against known threats and, together with comprehensive monitoring, against future risks too. It is much harder for attackers to overcome this obstacle in comparison to a single barrier as a result. Technical as well as employee measures make up this defence system. RITOP is already equipped with numerous technical safety measures.

Standardized safety measures with RITOP

Active Directory

With an active directory, network users will be organised according to the actual structure of the company and subject to access restrictions.

Segmentation and jump host

The segmentation into zones, which comprise devices with similar security requirements, uses firewalls to ensure that devices only communicate with other devices that are actually entitled to do so. A dedicated, hardened IT system – known as a jump host – controls access to different security zones.

Two-factor authentication and VPNs

Two-factor authentication and secure VPN connections using SSL encryption provide additional security for remote access.

Verified updates

Updates verified by Rittmeyer before being installed are published regularly and swiftly fill in potential gaps in security as soon as Rittmeyer is aware of them.

Data backup

Upon request, Rittmeyer can take on the responsibility for regular and efficient backup of your valuable system data by using a completely automated data backup process.

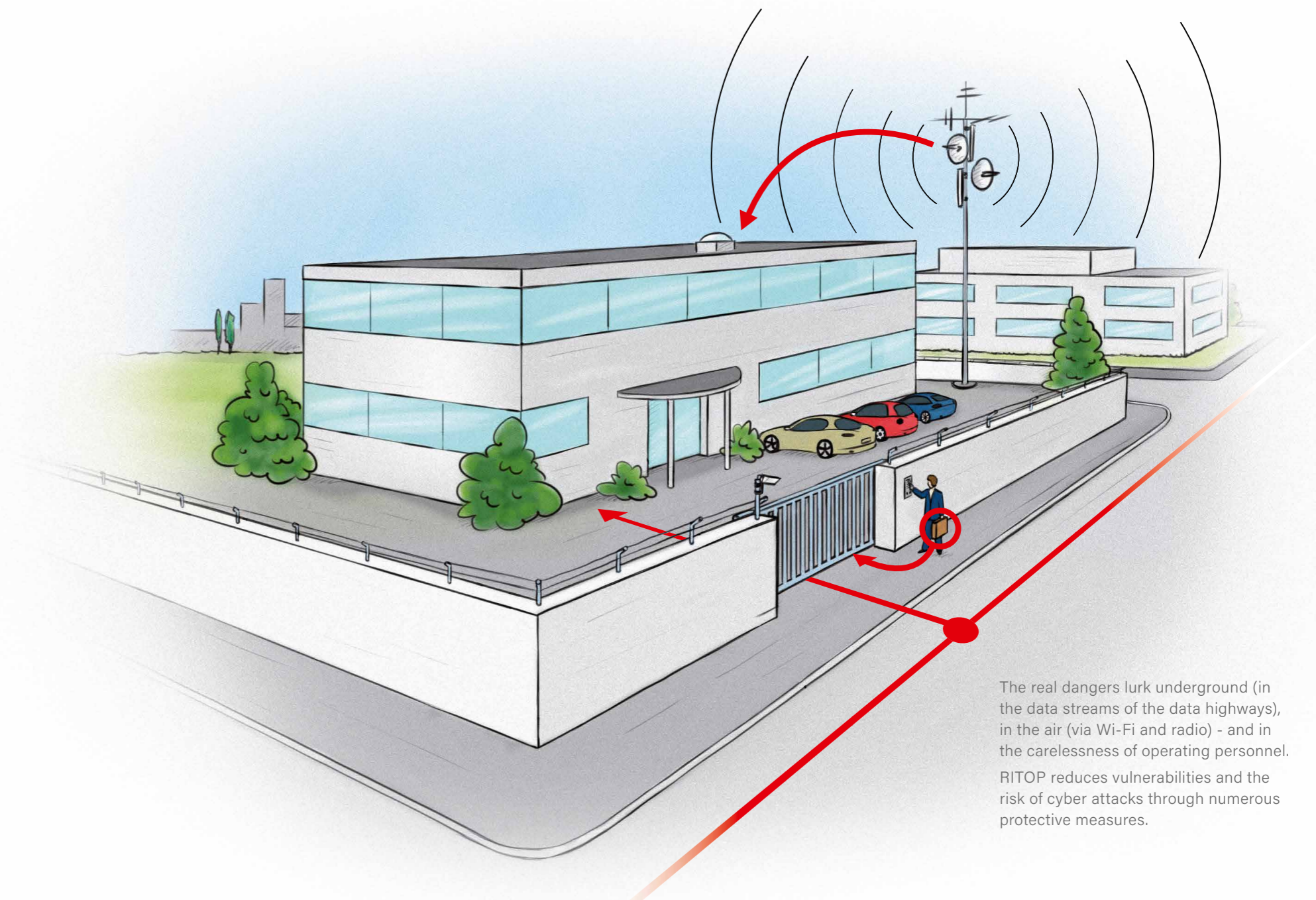
Remote monitoring

We are happy to remotely monitor your system around the clock, seven days a week and notify you of any anomalies.

Comprehensive protection

Certified Rittmeyer security experts are happy to offer the team using the system practice-orientated cybersecurity training as an extension package.

In addition, specialists can carry out an IT assessment on request so that weak spots in and threats to the system can be discovered early on. They will conduct a situation analysis of the existing IT protection measures and build on this to create an individual and structured IT basic protection plan with relevant protection measures.



The real dangers lurk underground (in the data streams of the data highways), in the air (via Wi-Fi and radio) - and in the carelessness of operating personnel. RITOP reduces vulnerabilities and the risk of cyber attacks through numerous protective measures.



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