

DIGITALIZATION@ UNITED GRINDING

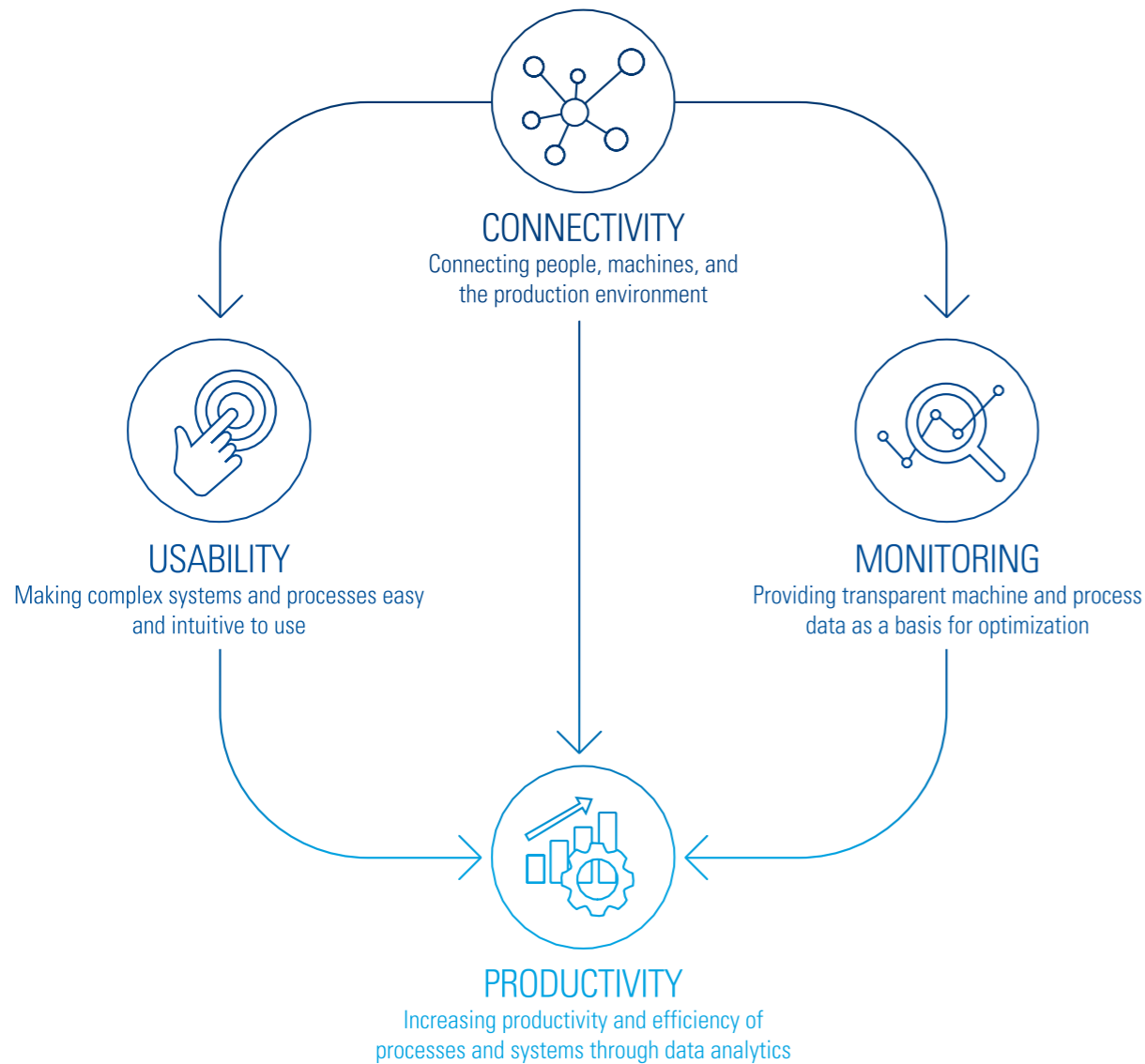


DIGITALIZATION – VISION AND GOALS

The future of industrial production is connected; machine connectivity is the key phrase: Machines communicate with each other, exchange data, and even manage and regulate one another. Processes become more efficient and productivity increases. This is the vision and goal of the digital future.

The requirement for this is connectivity – in other words: networking. This involves networking between humans and machines, for example via intelligent HMIs (Human/Machine Interfaces) and also the networking between machines. In this context, one also speaks of IoT applications (Internet-of-Things).

Under the umbrella of digitalization, we are continuously developing new products and solutions for the four key fields CONNECTIVITY, USABILITY, MONITORING, and PRODUCTIVITY. On the one side, these create the basis for networking in your production. On the other, they also enable you to harness even greater potential inherent to digitalization. Our goal is to make your working life easier, increase your productivity, and ultimately make you even more successful with our digital solutions.



DIGITALIZATION – SIMPLE AND SECURE

Interested in harnessing the potential of digitalization and learning how you can make your machinery fit for our digital products? Whatever your current situation is, we can help find a solution.

Digital Solutions

- Digital assistance systems that make your everyday work easier
- Runs on all equipped machines

C.O.R.E.-Technology

- Enables Digital Solutions products to run directly on the machine
- No hardware upgrade required

New machines
New machines can be equipped by request with the Digital Solutions package. Our UNITED GRINDING Digital Solutions™ products come pre-installed on machines with C.O.R.E. technology. No retrofitting is required to activate the licenses.

Existing machines
UNITED GRINDING Retrofit makes it easy to retrofit your machine. Our Digital Solutions products can then be used without any issues.

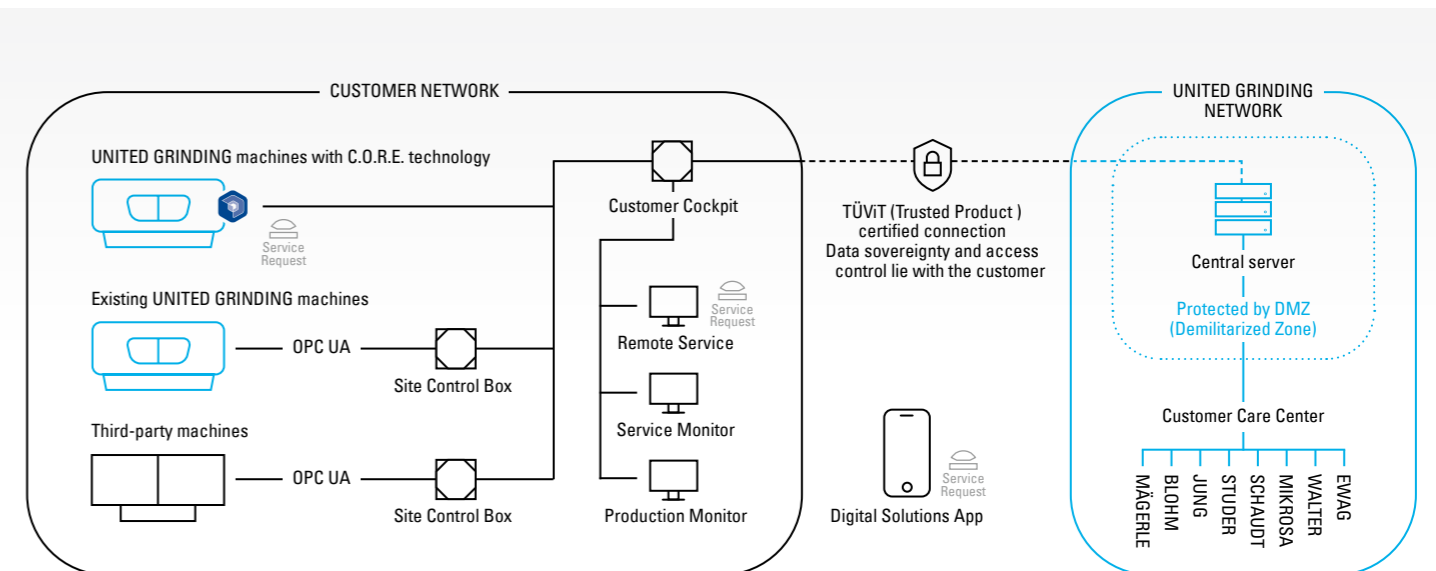
Third-party machines
Even third-party machines can be easily integrated into our Digital Solutions products if they are equipped with an umati interface (Universal Machine Technology Interface).

And thanks to the simple and modular architecture of our Digital Solutions platform, you can approach digitalization in manageable steps. So nothing stands in the way of your first step into digitalization. Let us advise you.

IT SECURITY

UNITED GRINDING Digital Solutions™ works completely and autonomously in your own network. Online access to your machine takes place exclusively on your invitation via a Service Request. That means that no data is ever exchanged without your consent, and even then only the

specific data we absolutely need to be able to supply the desired support. And to ensure that your data remains protected against unauthorized access, we use a connection certified by TÜVIT (Trusted Product).



C.O.R.E. – CUSTOMER ORIENTED REVOLUTION

C.O.R.E. helps us make your production fit for the digital future.

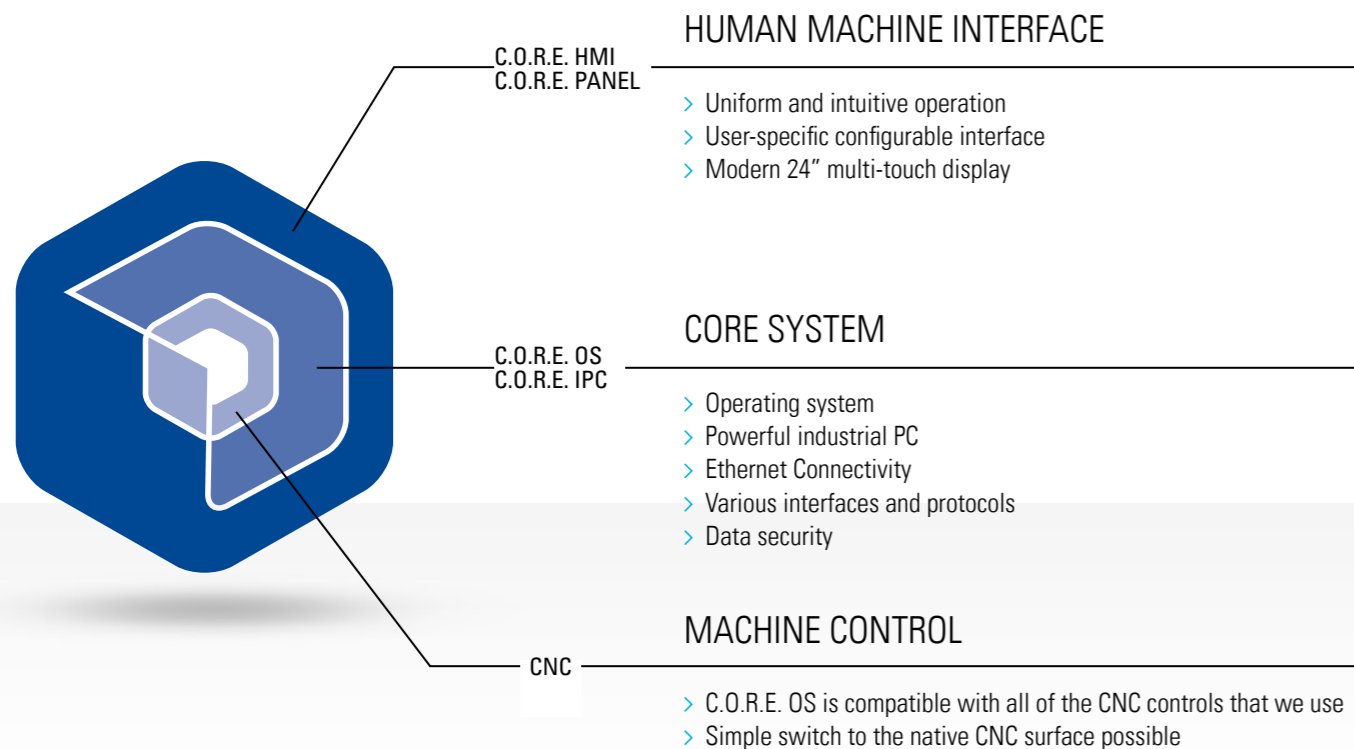
Its based on a new operating system, C.O.R.E. OS that equips the machine with intelligence.

Thanks to the uniform C.O.R.E. software architecture, exchanging data between UNITED GRINDING machines is easy. The integrated umati API can be used to communicate with third-party systems as well. It also offers access to UNITED GRINDING Digital Solutions™ products directly on the machine. C.O.R.E. not only establishes the technical foundation for this and other IoT and data applications, it also forms the basis of revolutionary yet uniform operation.

What does this mean for you?

- The user-friendly, intuitive, and uniform operation makes work easier for machine setters, machine operators, and maintenance staff
- Standardized data collection and intelligent processing of data creates transparency and supports process optimization
- The uncomplicated and consistent use of modern digital software solutions is guaranteed – directly on the machine
- The technical platform for the use of modern IoT and data applications has been established

C.O.R.E. ELEMENTE



C.O.R.E. PANEL – THE FUTURE OF OPERATION

Intuitive

Thanks to intuitive design with self-explanatory icons, navigation through the machine menu and process steps is quick and easy. Instead of buttons, the user is presented with a modern and clearly arranged multi-touch display.

User-friendly

Each user configures their own user interface individually. This is called up automatically with the RFID chip after logging in. When the user leaves the machine, the panel switches to «Dark Factory Mode.» Production progress and the machine state are also clearly visible from a

distance. And thanks to the ergonomic design, the panel can be tilted and individually adjusted easily.

Efficient

The uniform and intuitive operating philosophy reduces training time. The configurable and role-specific interface helps prevent errors and increases the efficiency and quality of programming. Information can be exchanged quickly and in real-time via the front camera and Bluetooth headset. UNITED GRINDING Digital Solutions™ products can be used directly on the panel.

INDUSTRIAL
MULTI-TOUCH DISPLAY

INTEGRATED
FRONT CAMERA

SELF-EXPLANATORY
ICONS

USER-CONFIGURABLE
DISPLAY

STANDARDIZED
FUNCTION KEYS

ERGONOMIC
OVERRIDE SWITCH



UNITED GRINDING DIGITAL SOLUTIONS™

We develop solutions to support you in simplifying processes, boost your machines' efficiency and increase overall productivity under the UNITED GRINDING Digital Solutions™ brand.

Production Monitor – Your Digital Overview

The Production Monitor gives you immediate access to your current production status – independent of time and place.

Production benchmarks such as operating and non-productive times, production quantities, and downtimes are displayed in real-time. This allows you to uncover potential optimizations.

- Keep track of your production
- Uncover potential optimizations and increase productivity

Remote Service – Your Digital Helpline

Remote Service offers prompt, system-specific support by our service experts: efficiently and with maximum security.

Relevant machine information is automatically transmitted with your consent. This saves time and clarification effort. Your machines are available again faster and productivity is increased.

- Request help, quickly and easily
- Save time and increase the availability of your machines

Service Monitor – Your Digital Maintenance Manual

The service monitor knows when maintenance work recommended in the operating manual is due and informs you of this reliably and on time – clearly arranged for all connected machines.

Economical for you: Only necessary maintenance work is displayed – through structured maintenance scheduling based on machine operating hours.

- Keep an overview on necessary maintenance work
- Increase the availability and working life of your machines thanks to optimum care

Digital Solutions App – Your Mobile Control Center

The Digital Solutions app is your digital hub and allows you to use the Production Monitor and generate service requests conveniently while on the go.

If necessary, help can be easily requested from a mobile device. And monitoring your production metrics and machine conditions allows you to react quickly from anywhere, anytime.

- Stay in control, even when on the go
- Stay informed and able to act at all times



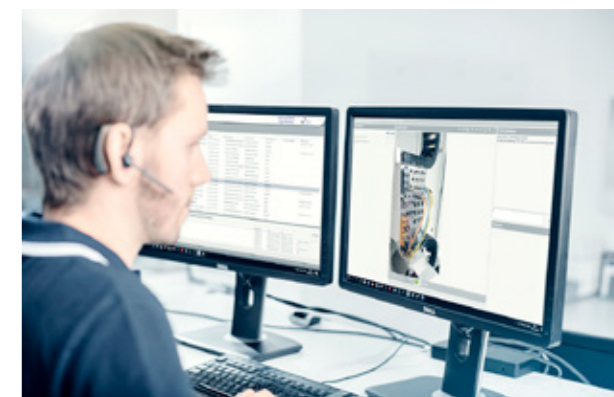
The Production Monitor is available on a PC, directly on the C.O.R.E. panel, or, using the Digital Solutions app, also on mobile devices. Service requests can also be conveniently triggered anywhere – directly at the machine, in the office, or mobile via smartphone.

THE BASIS FOR UNITED GRINDING DIGITAL SOLUTIONS™

The Digital Solutions assistance systems require only a few basic functions to function properly.

Customer Cockpit – Your Mobile Command Center

The Customer Cockpit is the foundation for all UNITED GRINDING Digital Solutions™ products. It gives you access to all connected machines at a given site as well as the central user management.



DIGITALIZATION MEANS ACTIVELY SHAPING THE FUTURE.

We promise you, we will stay on top of it! Actively shaping the digital future is our goal, which is why we are continuously working on new solutions – solutions that make you even more successful.

UNITED GRINDING Group

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STAY CONNECTED

More information on C.O.R.E., our Digital Solutions products, IT security, technical requirements, and interfaces can be found on our website at grinding.ch/digitalization. Or contact us directly. We are always glad to answer your questions.

