

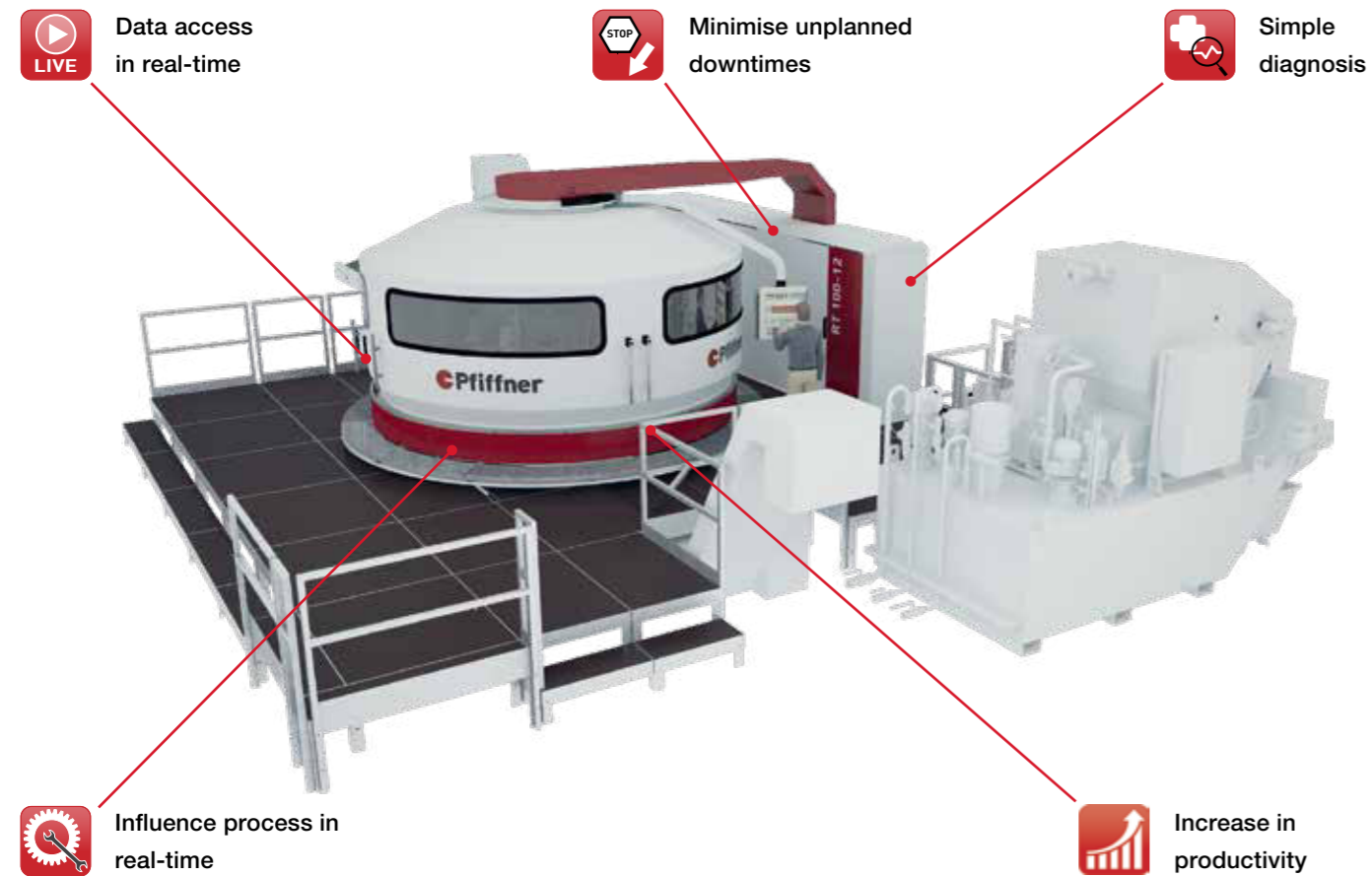
## Industry 4.0 The Challenge within Production

### The fourth Industrial Revolution

In recent years, production has been oriented towards the principles of lean production, increased flexibility and therefore the achievement of significant success with regard to productivity and supply capability. With Industry 4.0, modern production is on the cusp of a radical upheaval. As the leading rotary transfer machine manufacturer, Pfiffner is ready to take this step into the future together with its customers and implement key new developments.

### Information in the right place, at the right time

For Pfiffner, this primarily means making use of modern comprehensive information and communication technology in order to increase productivity. Requirements such as real-time capability of production data and simple production system diagnoses can be smartly and intelligently implemented. With Pfiffner production systems, the "fourth Industrial Revolution" is practically within reach!

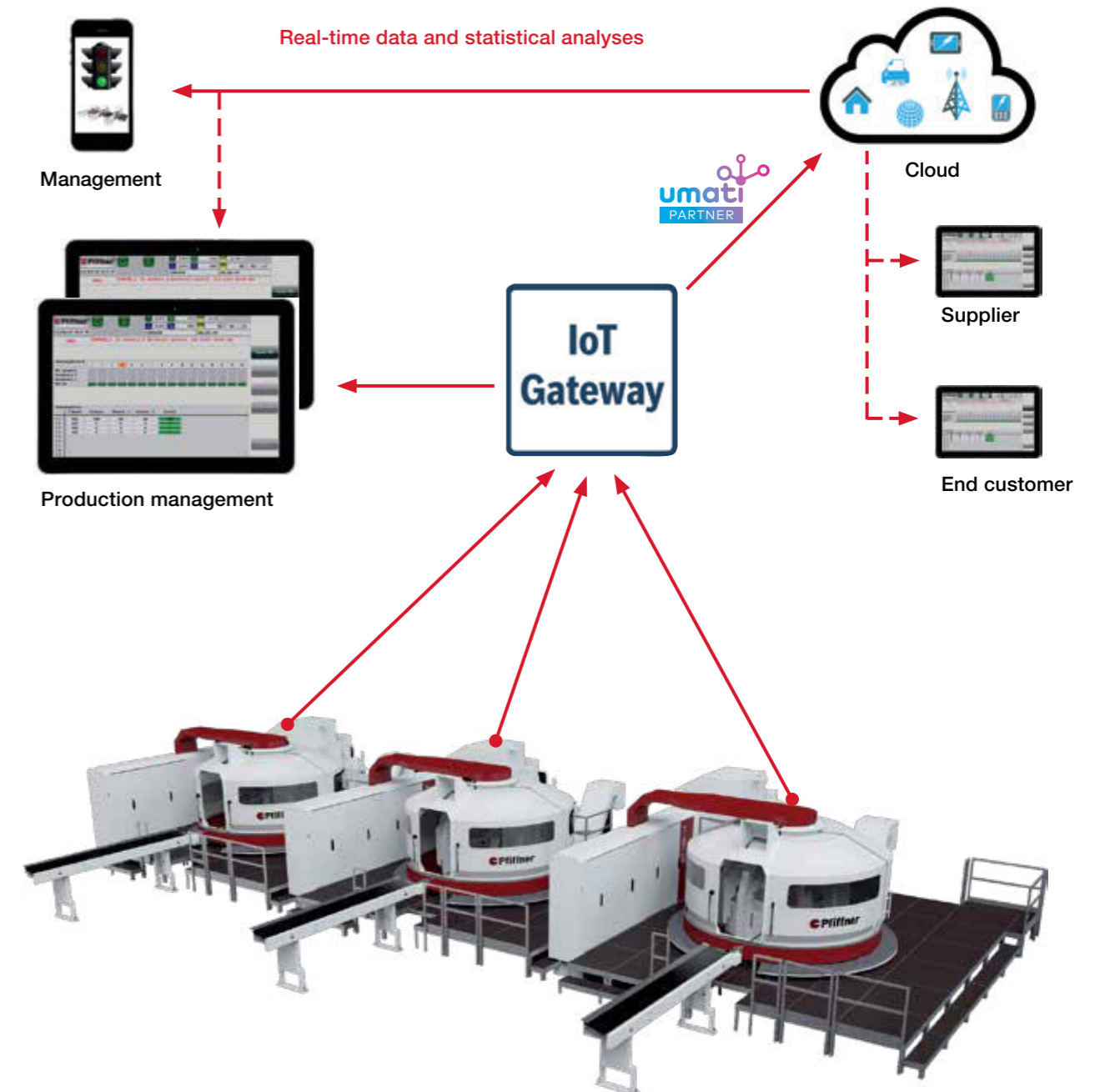


The Pfiffner concept for Industry 4.0 is the use of the IoT Gateway from Bosch Rexroth for machines with IndraMotion MTX. Data is made available via the umati (universal machine tool interface) interface. umati is an initiative of VDW (German Machine Tool Builders' Association). It is a uniform interface that allows the secure, smooth and effortless integration of machine tools and plants into customer and user-specific IT ecosystems.

The control, drive and sensor data is recorded via OPC-UA and pre-processed. Selected data can optionally be displayed via a web interface. In the end, the data for other IT systems (MES, PPS, data analytics...) is made available via an umati server using OPC-UA<sup>1</sup>.

<sup>1</sup> Uniform language for the "real-time coupling" of machines

## Industrie 4.0 Our Approaches for your Benefit and Added Value



### Compiling and recording data

- ▶ Recording and analysis of machine data
- ▶ Web-based visualisation
- ▶ Use of standardised interfaces

### Machine state monitoring

- ▶ Working mode, cycle times and counter
- ▶ Machine availability

### Machine diagnostics

- ▶ Predictive maintenance

### Safer remote access

- ▶ Use of proven IoT cloud security
- ▶ Safer access via current Internet connection