

# AFRY Improve

A suite of applications for production efficiency improvements

# We bring human and technology together towards an efficient and sustainable industry

AFRY has provided advanced solutions for productivity improvements to the process industry for over 100 years. Our tailored software applications are based on that experience.

By combining data from various sources, the decision-making process for improvements of customer operations becomes easier and users can correlate technology with business information.

AFRY Improve creates intelligence from data, makes it accessible to everyone at the plant, which creates a team spirit to work with continuous improvements.

AFRY Improve's suite of applications are offered as a subscription with a yearly fee, where support and upgrades of installed base are included. The implementation is a fixed-price project.



## OUR APPLICATIONS

The applications are web-based and can be used on phones, tablets and PC's. Operator rounds can, for example, be managed on a phone with a camera to add images.

Data capture is a key function to work with production efficiency. The data is read from the DCS-systems via the OPC-UA secure protocol. A database for historization of all read data can also be offered.

The applications are usually installed "on prem" but can also be installed as a cloud-solution.

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## PROTAK OEE PRODUCTIVITY EFFICIENCY



- Optimize productivity with OEE (Overall Equipment Effectiveness)
- Visualization of events in real time — stops, speed and quality
- Diary for operators to comment production losses and other events
- Maintenance requests
- Operator rounds with QR-codes
- Morning meetings with scheduled reports
- Document/link management

## ENERGY EFFICIENCY



- Optimize the energy consumption
- Normalization to compare consumption with changes in production or seasonal variations
- Identify consumption that deviates from the expected
- Set targets and visualize outcome
- Historical analysis and heatmap
- ISO 50001 compliant

## TARGET EFFICIENCY



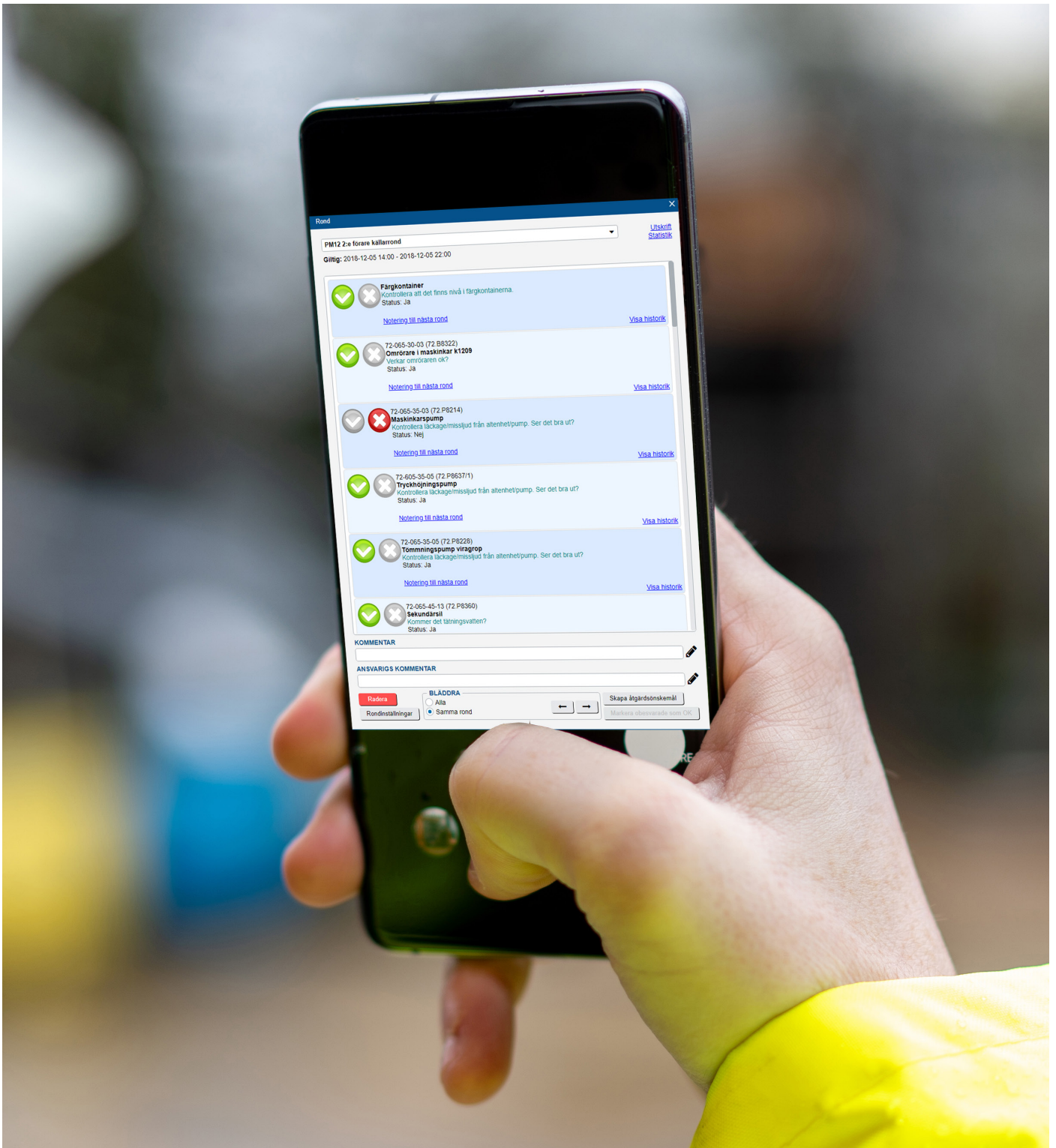
- Create your own dashboards
- Evaluate and visualizing KPI's
- Target fulfilment evaluation
- Deviation reporting
- Operator involvement
- Instructions and recommendations

## AI & MACHINE LEARNING EFFICIENCY



- Executions of machine learning models to make operations more efficient in reality
- AFRY AI-teams collaborates with our process experts and customers operations knowledge to create models of your need What-If analyses, predictive maintenance and software sensors are all examples of useful implementations of the models
- The result is continuously calculated based on a model and the state of the process



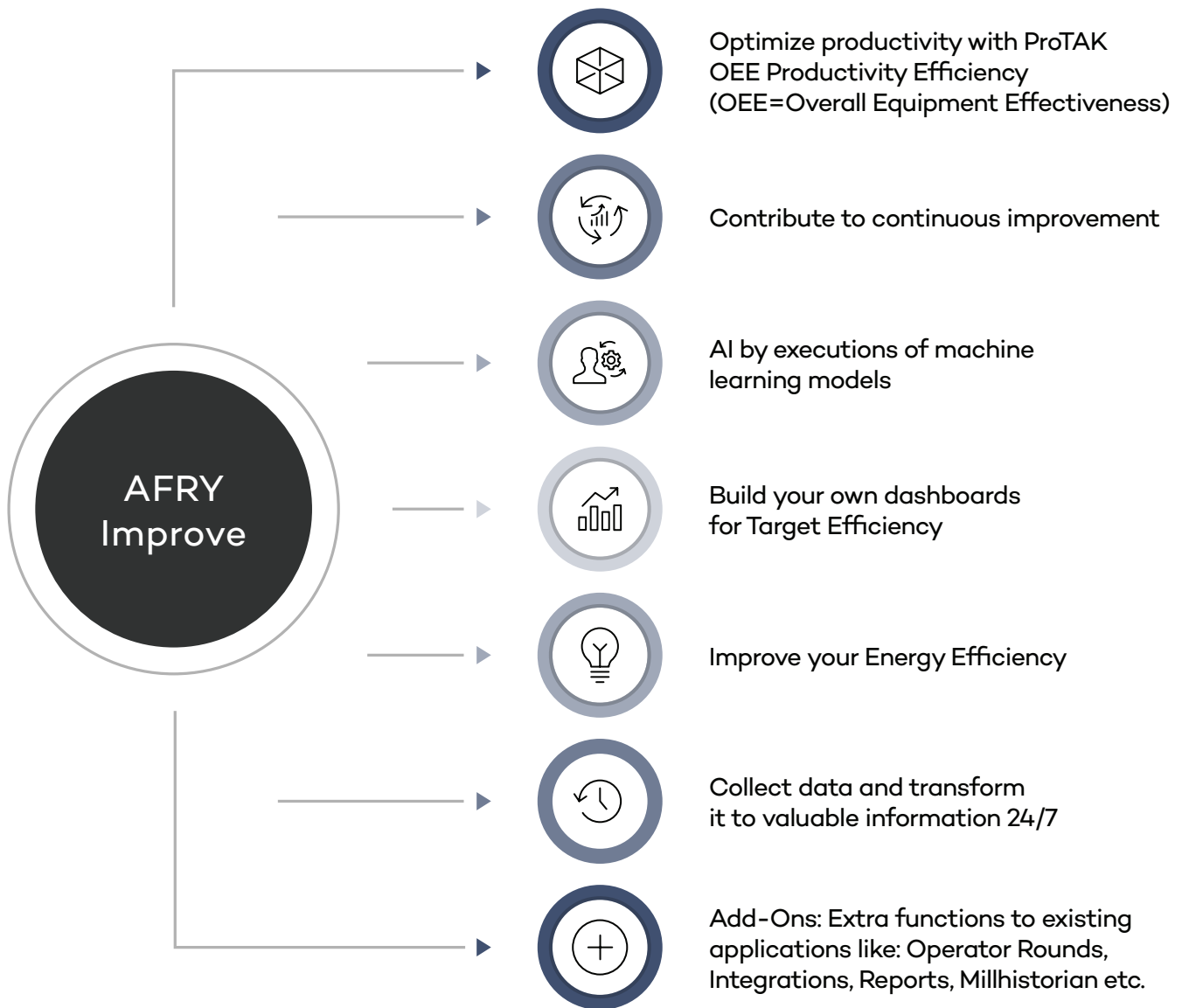


## ADD-ONS



- Integrations: Maintenance, claims, roll handling, camera, plant register, purchase and warehouse systems
- Operator rounds
- Reports
- API / Data control management
- Messages and Meetings
- Mail (SMTP)
- Alarms and warnings
- Millhistorian
- Planning
- Laboratory
- BatchDNA

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Information transparency and functions for all levels at the plant.  
Inspires teamwork and improves profitability.

