Intelligent Maintenance in Food, Feed & Advanced Materials Processing

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Every day, billions of people come into contact with Bühler.
Good Maintenance Practices help to become more sustainable

Our target for sustainable value chains.

50% less
Industry Needs

- Maximize Yield
- Optimize energy costs
- Optimize Maintenance costs
- Raw Material Supply
- Spare Part Stock
- Production Schedule
- Asset Management
- Planning Security
- Compliance
- Unplanned Downtime
- Optimize OEE
- Consistent Quality
- Optimize energy costs
- Industry Needs
- Raw Material Supply
- Spare Part Stock
- Planning Security
- Compliance
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- Optimize OEE
- Consistent Quality
- Industry Needs
Intelligent Maintenance

TOTAL COST OF MAINTENANCE VERSUS NUMBER OF PREVENTIVE JOBS

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McQuade 2020
Maintenance in Practice – Combined Strategy

Percentage of plants with recorded maintenance jobs in a specific category
A Computerized Maintenance Management System (CMMS) Features and Functions.

- Preventive Maintenance
- Corrective Maintenance
- Notification
- Planning
- Execution
- Finishing
- Warehouse Management
- Maintenance Jobs Corrective Tasks
- Job cards
- History
- Parts used and history
- Documents

Bühler and non-Bühler Machines
Analytics as enabler for Intelligent Maintenance

Source: Gartner
Benchmarking based on actual Maintenance Data from CMMS

Mean days between Preventive Maintenance Jobs vs Fleet average
Replay data.
Process optimization enabled by billions of observations.
‘Process-Condition-Monitoring’ for Plant Optimization

Example: Distribution of dosing accuracy over one month

![Graphs showing distribution of dosing accuracy over one month](image)
Malfunction Prognostics for Key Components in Die Casting
Summary

- Various needs relating to Intelligent Maintenance beyond uptime optimization
- Industry is looking for a hollistic approach to Intelligent Maintenance
- Different data sources & types of analytics are combined to add value
- A hollistic maintenance strategy will include different types of maintenance: Reactive, preventive, predictive, prescriptive & the human maintenance manager
- We are currently only scratching the surface of data-enabled Intelligent Maintenance.
- We expect much more to come in the future.