



AUTOMATION & DIGITALIZATION

15 APPLICATIONS FOR METRIS PLANT INSIGHTS

**A HOLISTIC VIEW OF THE MANUFACTURING
PROCESS THROUGH DATA**



ANDRITZ

ENGINEERED SUCCESS



Turning Data into Information, and Information into InSights!

Welcome to this e-book dedicated to Metris Plant InSights. Within these pages, we will introduce you to 15 pivotal applications that comprise the core of our product. Each application is engineered to address key aspects of plant optimization, providing you with the essential tools and data insights to enhance efficiency and productivity.

This guide aims to provide practical insights into how Metris Plant InSights can transform your approach to managing industrial facilities. We will also dive into how these applications can refine your operations, deliver valuable insights, and ultimately contribute to the success of your pulp and paper mill.

We invite you to explore into the following sections, where you will discover more about the functionalities and potential applications of each of these 15 tools.



Data Analytics



For your day-to-day analysis.



Strategic objectives

- Operational efficiency
- Quality control
- Asset Management Optimization

Features

- Various data visualization modes
- Tag lists for faster data access
- Calculated TAGs
- Pivot table for advanced filter features

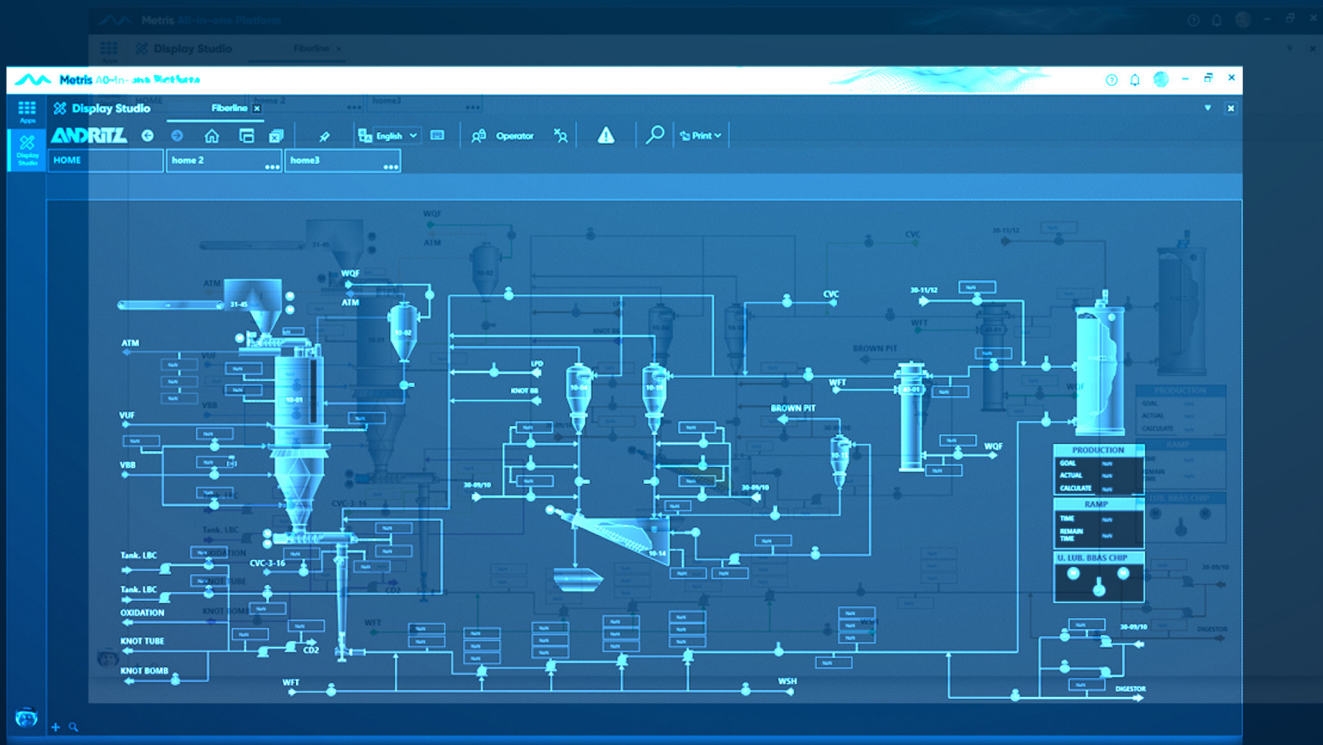
Benefits

- Guard personnel health and safety
- Manage risks
- Maximize situational awareness

Process Display



Be sure that information flows smoothly through the whole working day.



Strategic objectives

- Operational efficiency
- Digital transformation

Features

- Menu Manager for fast access
- Manual data entry
- Straight access to historical data
- Real-Time data
- Dashboards

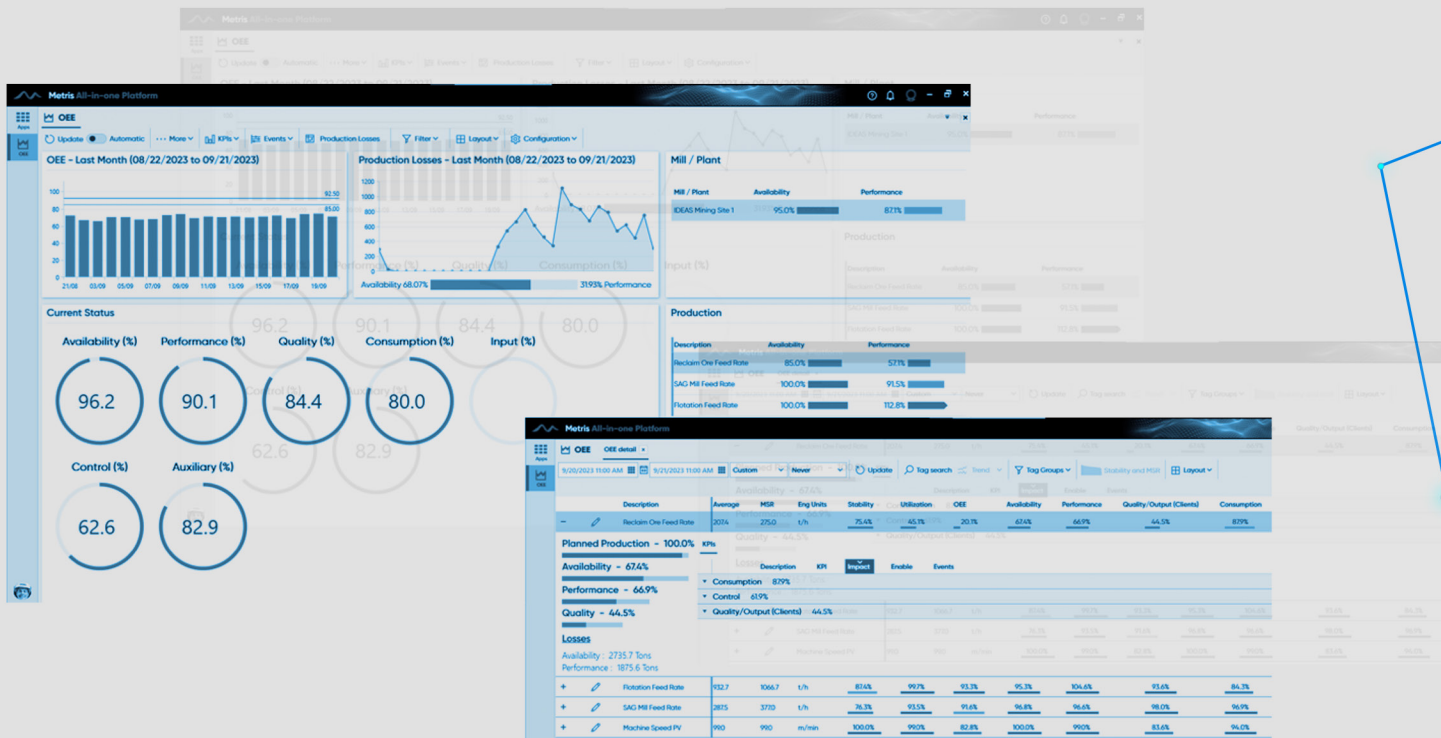
Benefits

- Operator friendly environmental
- More intuitive data search
- Tailor made process and management screens

OEE



How healthy is your process, or your mill?



Strategic objectives

- Asset Optimization
- Cost Reduction
- Risk Management

Features

- OEE based on best practices
- Visualizations for easier opportunities identification
- Covering from equipment to mill
- MSR based on real data

Benefits

- Track major production losses
- Uncover hidden losses and defects
- Real-time monitoring



Statistical Process Control



Strategic objectives

- Operational efficiency
- Digital transformation
- Risk Management

Features

- Assessment of Key Variables Performance
- Events Notification
- Gap Identification
- Save different scenarios

Benefits

- Discover hidden Opportunities
- Ensure full operation potential
- Product specification on target

Reports



Turn your reports digital and enjoy interactive features.



Strategic objectives

- Asset Optimization
- Cost Reduction
- Risk Management

Features

- OEE based on best practices
- Visualizations for easier opportunities identification
- Covering from equipment to mill
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Benefits

- Track major production losses
- Uncover hidden losses and defects
- Real-time monitoring



Alarm Management



Concentrate in what really matters.



Strategic objectives

- Risk management
- Operational efficiency
- Digital transformation

Features

- Treemap for visual identification of abnormal scenarios
- KPI for flooding, chattering and bad actors
- Alarms ranked by priority

Benefits

- Prevent meaningless alarms
- Increase alarms reliability
- Enhance operator awareness

Product Tracker



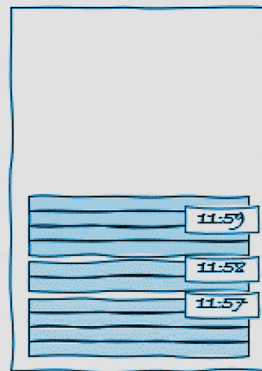
Track your production from end-to-end.



$3m^2/min$

Timestamp	Retention Time
12:00	3 min.

$10m^2$



$3m^2/min$

Strategic objectives

- Quality control
- Cost management
- Carbon Footprint awareness

Features

- Dynamic compensation of delays
- Process data synchronized to a chosen parameter
- Process value on storage elements

Benefits

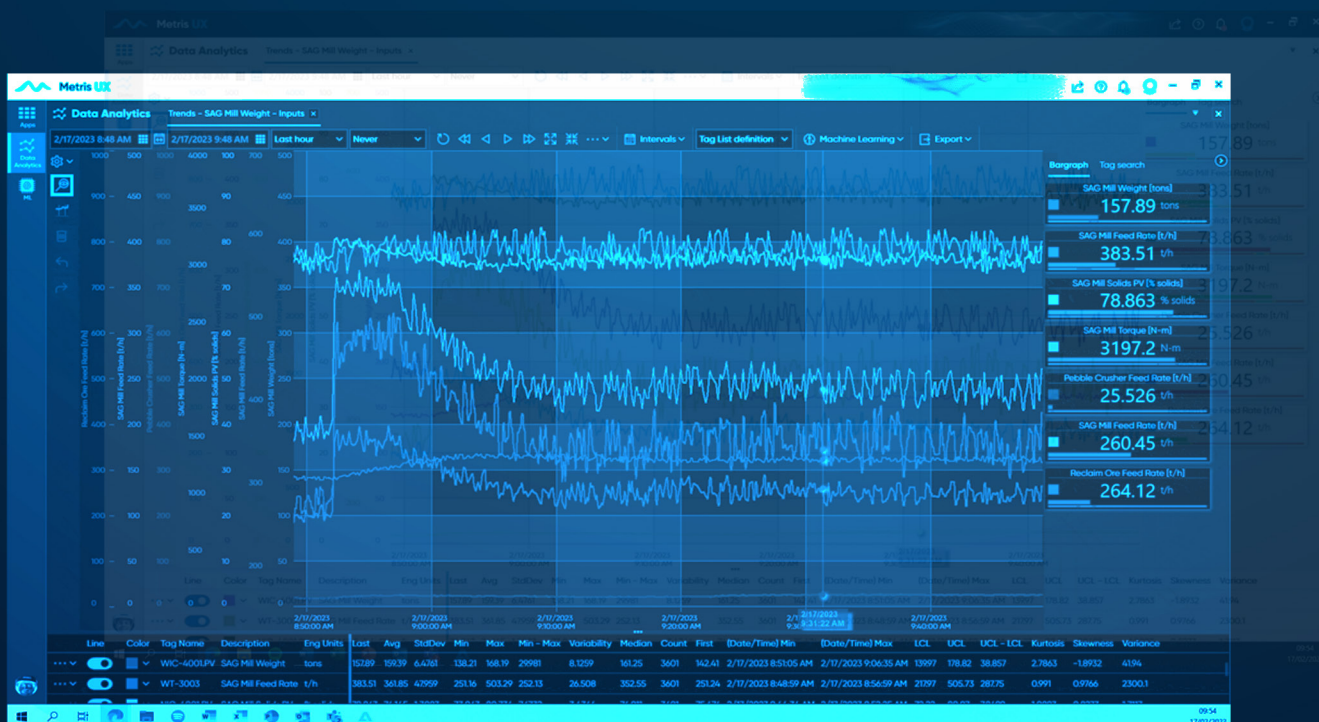
- Easier cause and effect analysis
- Process history tracked by product
- Enable overall mill optimizations



Machine Learning / Data Mining



Latest data analysis resources tools in a friendly way.



Strategic objectives

- Operational efficiency
- Digital transformation

Features

- Access to the new and most used libraries used in data science
- Creation of soft-sensors
- Validation of online measurement
- Possibility to work with python notebooks

Benefits

- Faster trouble shooting
- Does not requires programming skills
- Better overview of you data

Machine Learning / Notebook



Latest data analysis resources tools in a friendly way.

```
In [2]: base_uri = 'http://localhost:9000'
token = lambda: '1d5b2994-a25d-4900-b53d-6a43b0618333'

#Tags --> first tag is target and the others the inputs. Check notebook 200 to get the tag names and token
tag_ids = [22791, #'Bleaching_AT_Weissgrad_D1A_Stufe(Target)'
           22795, #'Bleaching_AT_CLO2_Dosierung'
           22797, #'Bleaching_AT_Weissgrad_EOP_Stufe'
           22799, #'Bleaching_AT_Produktion_Bleicherei'
           #22801, #'Bleaching_AT_pH_D1A_Stufe'
           ]

#Tag names - give a label for each input and for the target
label_names = ['target']
feature_names = ['carga', 'alvurain', 'prod']

#Time interval from the data
start='2019-07-04'
end='2019-07-24 12:00:00'

#Interpolation Time
h=0
m=2
s=0
```

Strategic objectives

- Operational efficiency
- Digital transformation

Features

- Access to the new and most used libraries used in data science
- Creation of soft-sensors
- Validation of online measurement
- Possibility to work with python notebooks

Benefits

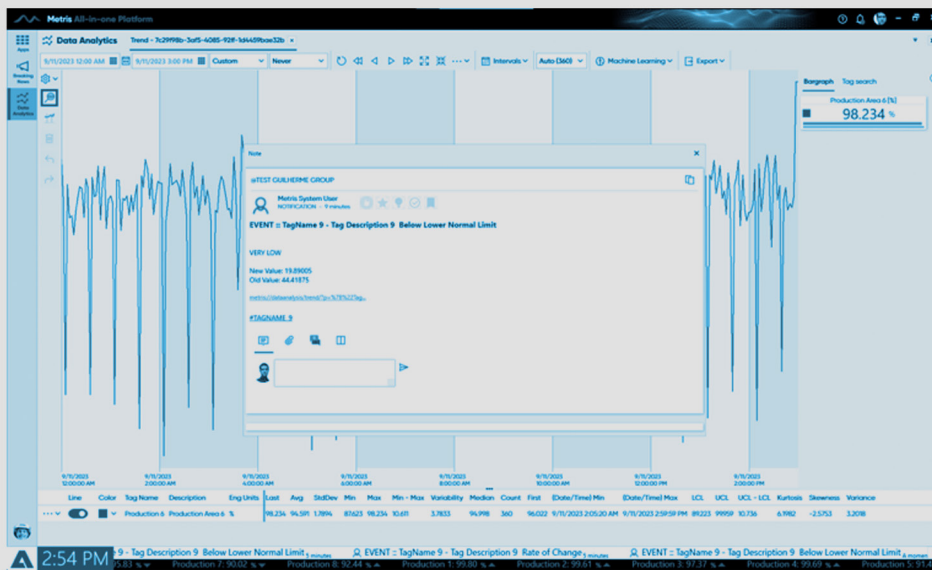
- Faster trouble shooting
- Does not requires programming skills
- Better overview of you data



Breaking News



Know about any event from any Metris screen.



Strategic objectives

- Open communication
- Operational efficiency
- Digital transformation

Features

- Real-time event notification
- Availability through whole platform
- Most relevant KPIs available

Benefits

- Information leveling
- KPI always within sight
- Straight access to the post or trend



Logbook



Be aware of every event taking place on mill floor.



Strategic objectives

- Open communication
- Operational efficiency
- Digital transformation

Features

- Real-time event notification
- WEB enable application
- Integrated into other APPs
- Multiple Groups Management

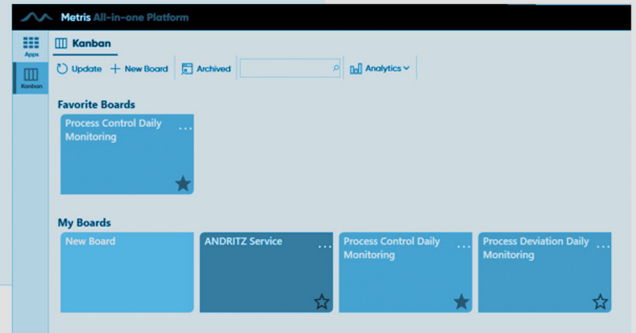
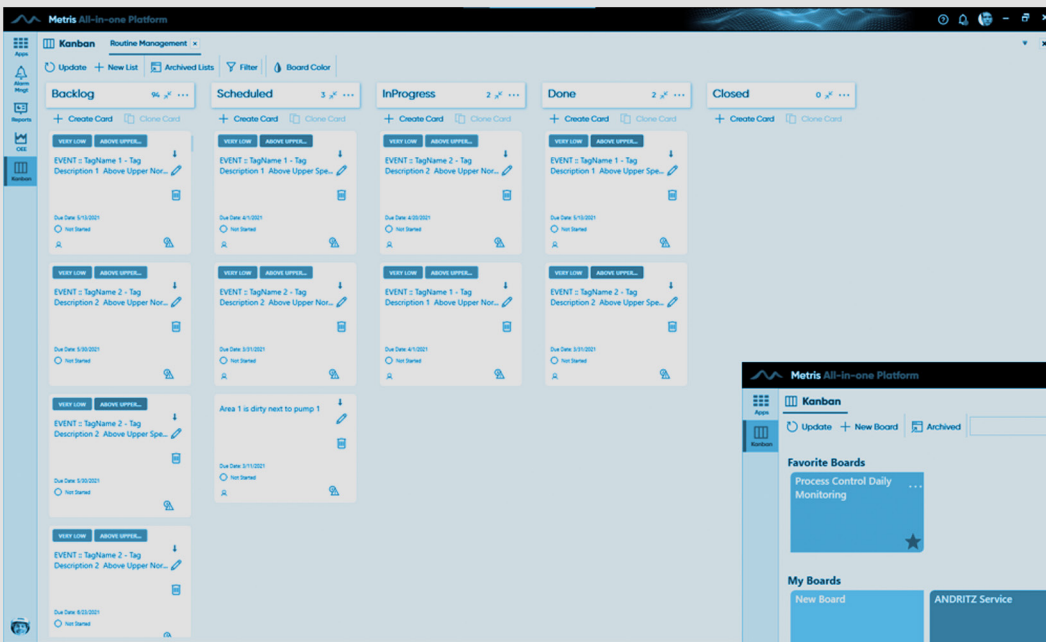
Benefits

- Information leveling
- Content Sharing
- Single source for news

Kanban



Keep your continuous improvement processes updated and visual.



Strategic objectives

- Lean management
- Operational efficiency
- Digital transformation

Features

- Track of cards activities
- WEB enable application
- Integrated into other APPs
- Multiple Boards

Benefits

- Workflow management
- Easier progress follow-up
- We aware of changes by notifications (mail)



Shift Management



Be sure that information flows smoothly through the hole working day.

Strategic objectives

- Lean manufacturing
- Operational efficiency
- Risk management
- Digital transformation

Features

- Maintenance request follow-up
- Production losses report
- Shift main events
- On-going field activities

Benefits

- Mitigate loss of information
- Faster shift change procedure
- Information stored

Carbon Footprint



Know it by process area or into your final product.

Strategic objectives

- ESG strategy
- Operational efficiency
- Digital transformation

Features

- CF through your process steps
- Fully linked with Energy Mgmt
- CF tracking support by Product Tracker features

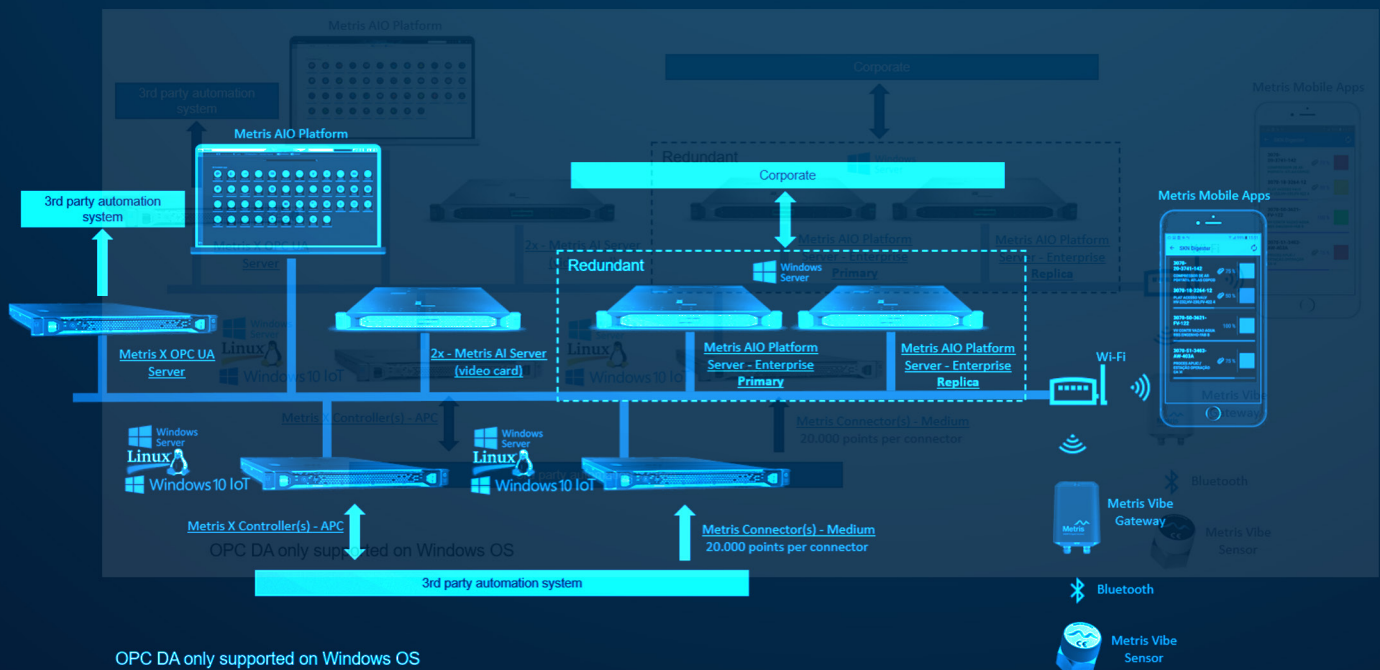
Benefits

- Know your Carbon Footprint
- Identify generators and consumers
- Plan process improvements based on data



Metris Connector

Collecting data from a specific process or application suite.



Strategic objectives

- Digital transformation

Features

- Driver for different platforms: OPC DA, OPC UA, Profinet, etc
- Real-Time values
- Collection service monitored
- Off-line connector

Benefits

- Buffering
- Redundancy

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