Metris
ANDRITZ Digital Solutions

METRIS

ANDRITZ Automation | Metris Digital Solutions : Metris OPP | Asset Optimization

FORESEE DIGITALLY

ANDRITZ
ENGINEERED SUCCESS

Proactive ways to identify predictive risks of malfunctions and ensuring integrity of assets, minimizing production disruptions.

Focus are asset reliability and production availability.

Maintenance for mills is based on three factors:

- the operating process of the machines,
- the equipment and its behavior in the process
- the human

Metris OPP Asset Optimization combines technologies and expertise to support or customer in addressing this challenges.

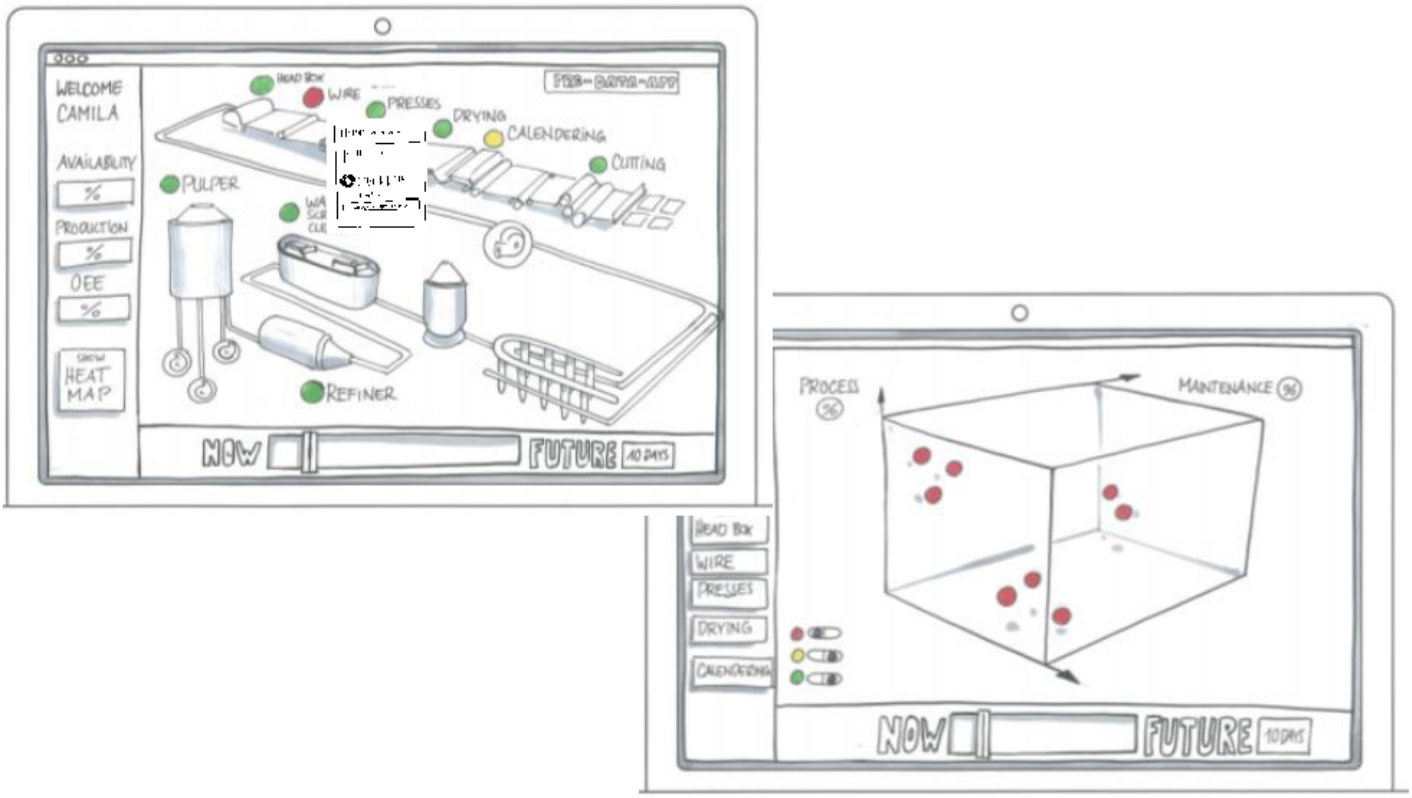
Process	Equipment	Human
• Monitoring of specification limits for each asset when compared to production	• Monitoring of risk of assets	• Recommendation of best operating ranges for operators • Productivity tools

How to reach optimized assets?

Some of the projects that can be developed during this service

Deep dive Predictive maintenance app

AI engine that processes data from production, engineering and human factors to provide performance recommendations and predictive maintenance alerts in advance.



Who is it for?

All relevant stakeholders that require a high level plant overview, i.e. Operations manager, production manager and automation manager.

Value Proposition

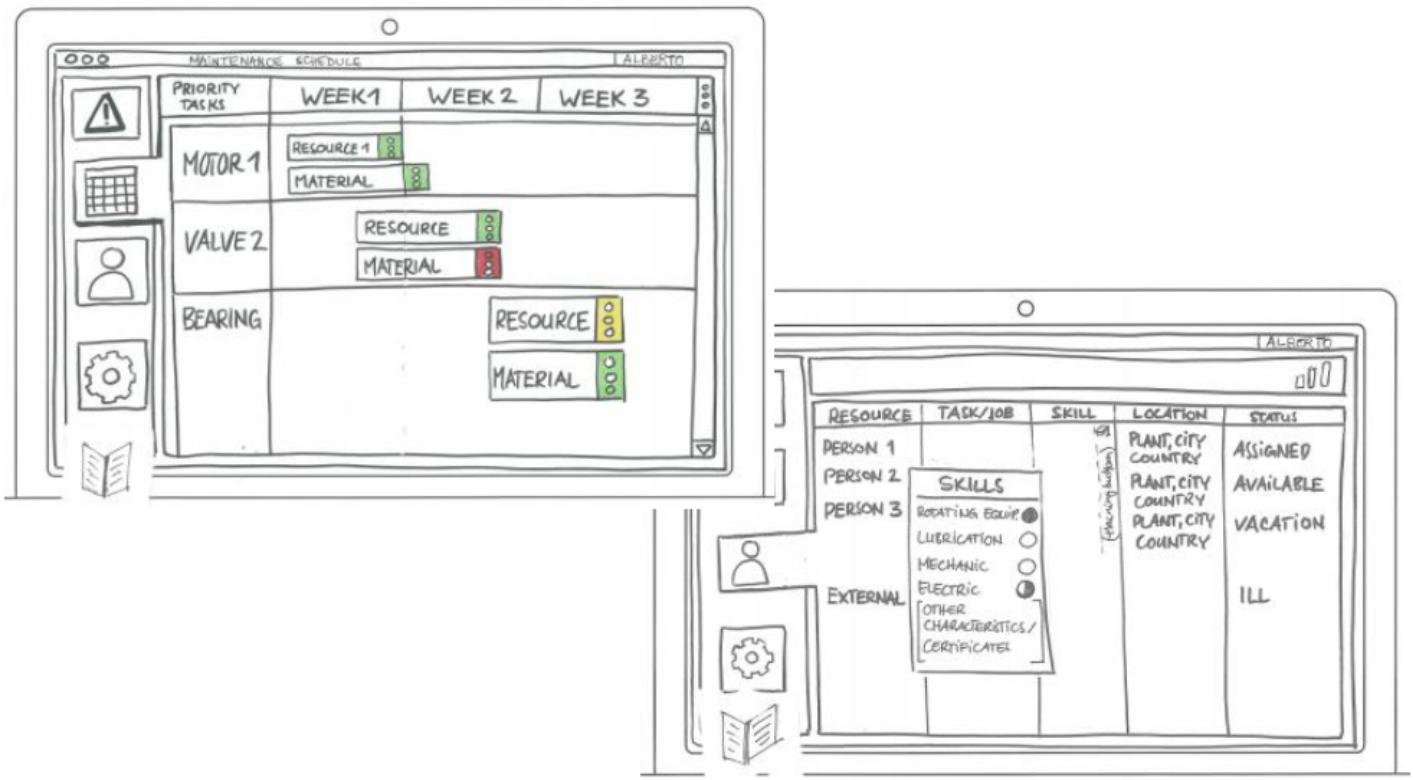
Fast, data driven and fact based decision making tool to trigger the right actions and improve interactions.

Key Features

- Overview of the mill in terms of human, equipment and process input factors and recommended actions
- Status quo and forecast of prediction failure based on AI
- Root cause analyses of human, equipment and process failure mechanisms
- Standardized reports on key assets in agreed cycles
- Display of transparent time scale ("slider")
- User centric visualization with deep dive feature
- Triggering mechanism for actions and reliable planning function
- Link between production and maintenance
- Reliable planning function

Deep dive maintenance management tool

Maintenance management system that provides fully automated maintenance schedules based on workforce skills and availabilities and spare parts availability. Automatic reporting to relevant stakeholders provided if wanted



Who is it for?

Mainly the maintenance manager for detailed maintenance scheduling and task management

Value Proposition

Simplification for the maintenance management department's working tasks to deploy resources more efficiently and get relevant information to carry out predictive tasks

Key Features

- Automatic allocation of resources to work orders
- Smart skill scheduling based on scrum
- Transparent material stock, information and delivery status and automatic ordering of spare parts
- Alert about urgent incidents
- Report and statistical data on time, cost and equipment
- Digital user centric interface
- Recommended actions
- Dashboard with improvement results

Deep dive customer onboarding and management process

Customer onboarding and management process that provides customer with support before, during and after the implementation of Andritz services based on online and offline touchpoints and an expert network

Who is it for?

Operations and automation engineers who are mainly responsible for the output quality and performance

Value Proposition

Customer relationship management offering support before, during and after using Andritz services. Further information and exchange is provided via an expert network and an exchange platform

Key Features

- Continuous guide for customers through project implementation process
- Participation in experience exchange
- Online contact to experts & decision makers
- Training on the job and via online channels
- "A Brain Club of Excellence" to create community of ambassadors
- Online community and offline events guided by ANDRITZ community manager
- Sharing of success stories and failure tendencies (other companies, universities, startups)

Metris OPP (Asset Optimization) is offered in 3 options

	Continuous Improvement	KPIs	Franchise
Focus	Continuous improvement of the reliability of the plant	Need to fulfil the annual budget in terms of availability for the plant.	Support customer to implement Metris OPP (Asset Optimization) program using either option Continuous Improvement or KPIs.
Best for	Quick identify issues in the plant and support on the diagnostic and studies for resolution.	Fulfil annual budget goals	
Customer Needs	Improve issues: • Prediction of events in advance • Number of unplanned events • Availability of equipment (i.e. machine uptime per year) • Etc.	Fulfil KPIs: • Plant Availability • Production losses due to maintenance • Cybersecurity risk • Etc.	
	• Predictive would enable to also use downtime efficiently in order to perform maintenance for other machines • At the moment, critical spare parts are on stock if predictive maintenance would be very accurate that could be eliminated • The most value adding service would be online monitoring of the "critical path", on equipment condition and what to do now and in the future with the critical equipment		
Customer Pains			
	• It is hard to see value with predictive maintenance. • It takes long time to track real impact with predictive maintenance. In the process optimization, you can see value fast. • Predictive Maintenance solutions would be valued if there is proof of the ROI • Limited resources to handle the topic in the mill • Data is split in different systems. It is hard to consolidate a summary and then react. • Pricing is typically not based on a KPI based model (make the promise and deliver on it, i.e. number of unplanned events, availability of equipment) • Instead of data, companies want to get consolidated information from someone they trust • Most of the times, process failure is caused by root causes in the process such as wrong temperature or operators who are running the process in the wrong operating window (i.e. too much speed) • Machines are run in the wrong way (too much speed, too much temperature) • There are too many machines gathering data constantly which does not provide any relevant information • We do not know exactly where to look for problems • Staff to analyze data in order to identify most critical instances is limited • Holistic analysis of issues needed: Equipment, process, human interaction		

Gain Creators			
Pain Relievers			
Pros			
Cons			
Performance Guarantee			
	Production losses due to operations, mill-balance should be excluded from KPIs. These types of production losses guarantees can be included when combined with Metris OPP Process Optimization.		Performance guarantee is optional.
Included Resources	• Metris Software for Asset Optimization • Asset Performance Management Expert(s) • Data Scientist(s) • Project Manager • Metris Performance Center		
	Flexible arrangement of resources working part-time or full-time while local at plant or remote		
Optional Resources	• Metris UX Apps that are not included in the standard package can be included individually in bundle • Metris Vibe sensors, software and Vibration Expert(s) • Equipment Expert(s) • Maintenance Expert(s) • Metris Performance Center (24x7)		
Typical contract duration	3 years	3 years	3 years
Typical Actions	• Monitoring of assets using Metris UX Asset Performance Management • Identify best operating ranges concerning asset reliability • Development of Digital Twins to predict failure in assets		
Typical ways to measure the benefits	Improve issues: • Prediction of events in advance • Number of unplanned events • Availability of equipment • Etc.	Fulfil KPIs: • Plant Availability • Production losses due to maintenance • Cybersecurity risk	
Voice of customer Typical pains and needs from our customers to be	• The biggest value of predictive maintenance is to use the rare resources on the most valuable tasks • In a mill there are only limited resources for different tasks, this is where predictive maintenance can be very		

address in this service	value adding • Companies want to get consolidated information instead of data from a person they trust • Predictive would enable to also use downtime efficiently in order to perform maintenance for other machines • At the moment, critical spare parts are on stock if predictive maintenance would be very accurate that could be eliminated • The goal is to pay for results • We don't know exactly yet where to look and what other pain points there are • The main target of customers is to achieve the production they have budgeted • Predictive Maintenance solutions would be valued if there is proof of the ROI • Predictive Maintenance would add a lot of value for equipment lifecycle management (not only maintenance but also replacement) • The most value adding service would be online monitoring of the "critical path", on equipment condition and what to do now and in the future with the critical equipment • The best thing would be a best practice exchange among providers and customers to reach next levels of excellence • Maintenance is not fully automatized yet, most decisions are still human based • Maintenance is currently conducted based on trend analyses and experience based decision making • The most important pain point predictive maintenance could solve is the prevention of unplanned events • The continuous surveillance of the plant and the machines would be value adding in order to identify more reliable trends and identify unusual patterns in advance • Data security is a critical concern and data should not be shared with other companies the fear is that the provider can use internal data to improve their services and benefit from it		
Included Metris UX Solutions			

We care about your privacy and your data stays in your premises

ANDRITZ relies on the most advanced data security systems available and its products “Metris UX” and “Metris X” are installed in a local server in our customer’s mill or customer´s cloud that are collecting data from our customer’s Control Systems (DCS/PLC), PIMS, ERP, etc.

This dedicated server with all data collected physically remains inside the customer’s mill or customer´s cloud and is thereby always accessible to the customer. In case of Remote Support that is usually requested by this kind of contract with the aim of providing fast and more efficient and effective specialized support, all data exchanged are subject to a confidentiality agreement described in our terms and conditions.

Specifically, ANDRITZ has the obligation that such data are not made available to any third parties.

Additionally, this remote support only access the server’s screen, which means that the data stays always in the customer premises (plant, headquarters, cloud, etc.) and belongs to customer.

ANDRITZ will use the data only for the purpose that is specifically agreed with the customer.

See also

- Metris OPP | Asset Optimization - Continuous Improvement
- Metris OPP | Asset Optimization - Franchise
- Metris OPP | Asset Optimization - KPIs
- Metris OPP | Asset Optimization - References