

MWM DIGITAL POWER

MWM Remote Asset Monitoring

Digital and efficient



More transparency, more value with MWM Remote Asset Monitoring

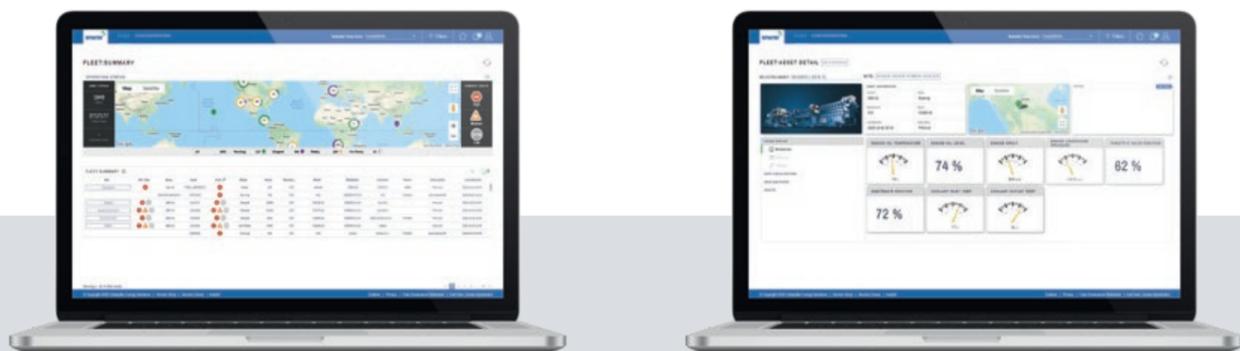
Remote Asset Monitoring (RAM) is the new digital MWM application that enables you to continuously monitor your plant. The system shows the status of your MWM fleet in a well-structured, transparent manner, enabling you to react proactively to any issues.

Focus on security and reliability: The RAM application is built on the Caterpillar cloud technology that allows you and your team secure access to the application.



What is RAM?

- ✓ RAM is an online monitoring system that is optimized for MWM sites
- ✓ RAM enables the continuous high-frequency streaming and analysis of plant data
- ✓ RAM provides an easy overview of your sites and enables a proactive service approach
- ✓ RAM can be accessed from everywhere and all around the clock using any modern internet browser



Everything under control

The new MWM RAM application provides numerous features for optimizing the operation of your site.

- ✓ Access to 13 months of data history
- ✓ Live display of all site parameters (engine, generator, plant peripherals)
- ✓ Up to 1,000 parameters with a sampling rate of 1 Hz (1 value/second)
- ✓ Customizable event notifications (e.g. alerts, warnings, etc.)
- ✓ Extensive data analysis functions (data discovery, customizable time series)
- ✓ Generation of reports (e.g. power, operating hours, etc.)
- ✓ Proactive service and maintenance using algorithms and comprehensive analysis
- ✓ Map view of the entire fleet (including traffic light view for alerts, warnings, messages)
- ✓ Site P&ID diagrams
- ✓ Unlimited number of users
- ✓ Integration of external data sources possible

Benefits



Real-time streaming

Full transparency about the site status and all operating parameters.



Reduce unscheduled downtime

Monitor site data, alarms and warnings in order to minimize unscheduled downtime.



Improved operational efficiency

Benefit from shorter reaction times, proactive responses as well as more efficient service and support processes.



Increase site availability

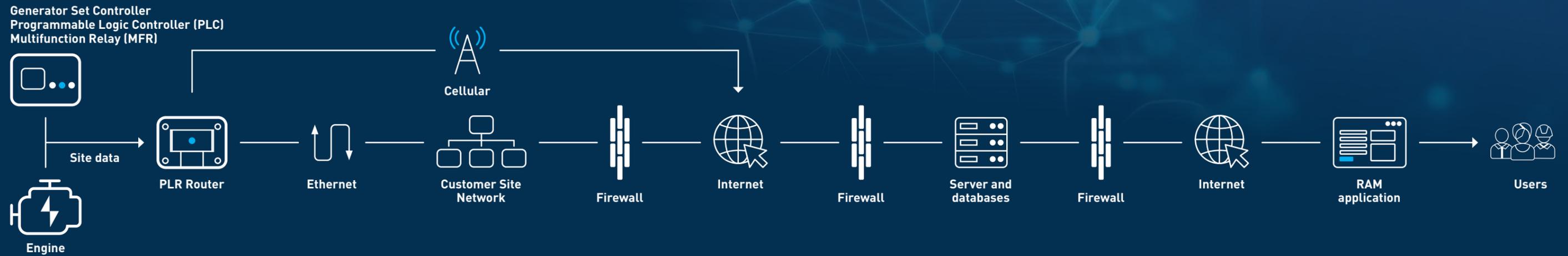
The availability of the generator set can be increased through continuous monitoring and analysis of the key operating parameters.



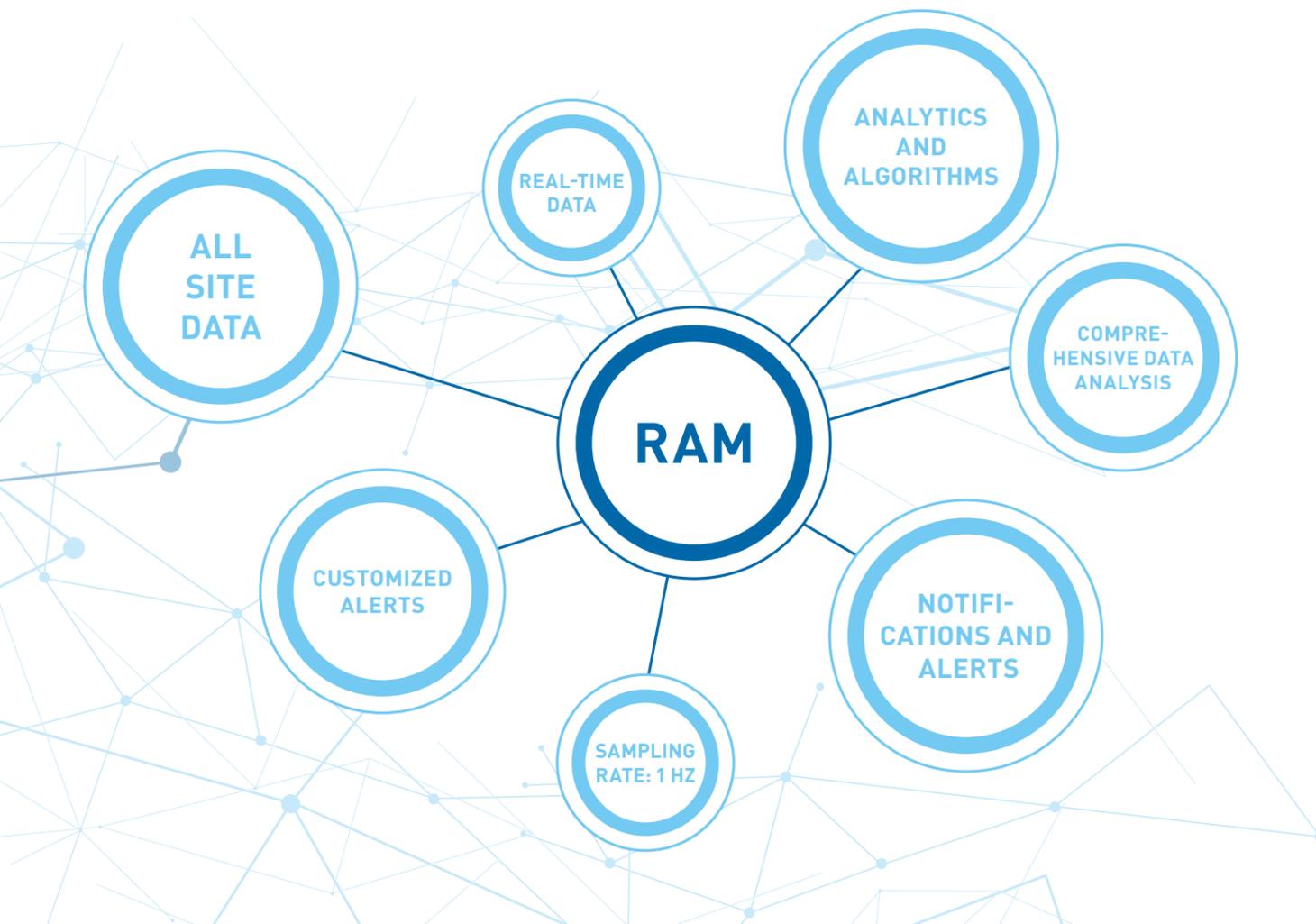
Better maintenance planning

Improved scheduling of planned maintenance activities and the corresponding resources (technicians, spare parts, etc.)

A typical RAM architecture at a glance



Highlights at a glance



Highest security standards

The technology for MWM RAM's end-to-end system is designed with multi-layer security controls and safeguards to protect against unauthorized access and disclosure.

High-level security safeguards include, but are not limited to:

- ✓ Cryptographic security controls to protect against unauthorized software changes
- ✓ Encrypted and authenticated remote connection
- ✓ Only outbound remote connection, initiated by the PLR is allowed. The device does not participate in or respond to general internet traffic
- ✓ Caterpillar IT infrastructure secured utilizing generally accepted information security principles and practices
- ✓ Secure web application connection with user login authentication and role-based access controls



Caterpillar Energy Solutions GmbH

Carl-Benz-Str. 1

68167 Mannheim, Germany

T: +49 621 384-0

F: +49 621 384-8800

E: service@mwm.net

www.mwm.net

For further details or if you have any questions, please feel free to contact your MWM service partner.