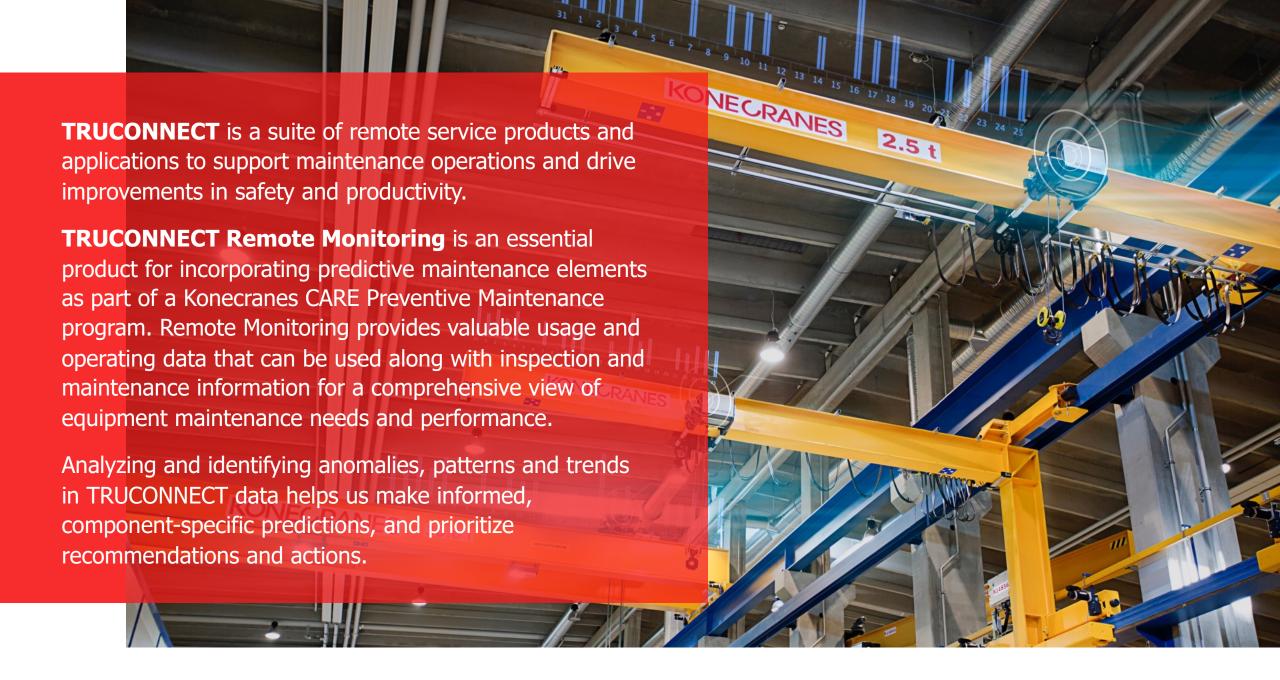
# KONECRANES® Lifting Businesses®

TRUCONNECT®
Remote Service







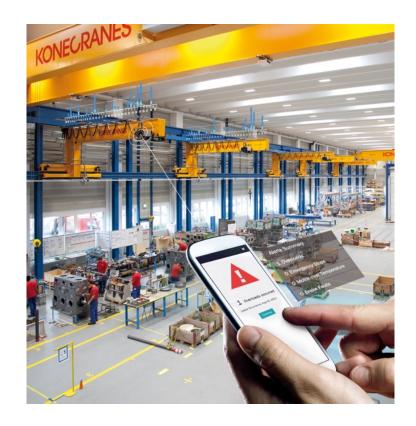
#### TRUCONNECT Remote Monitoring

TRUCONNECT Remote Monitoring collects condition, usage and operating data from control systems and sensors on an asset and provides alerts of certain anomalies. Remote Monitoring data is used in maintenance planning and in predicting possible component or equipment failure.



## TRUCONNECT Remote Monitoring benefits

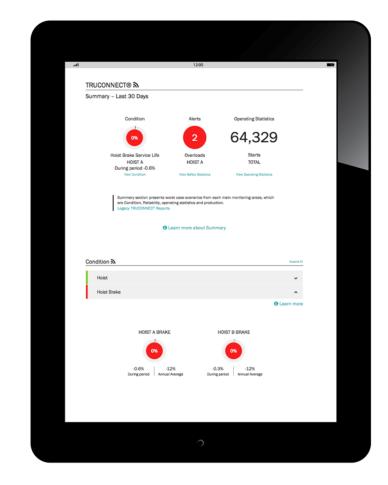
- Supports predictive maintenance
- Maintenance actions can be planned based on estimated component condition – i.e., estimated remaining life
- Provides knowledge of the remaining design working period (DWP) and remaining service life of selected components such as hoist, brakes, structures and contactors
- Provides asset usage and operating information that is used to assess crane condition and safety
- Notifies you of brake service life, hoist overloads, emergency-stops and over-temperature occurrences through text or email alerts, allowing for prompt response





### Remote Monitoring data on yourKONECRANES.com

- Safety-related occurrences, such as brake service life, over-temperatures, attempted overloads and emergency stops
- Pareto analysis of critical alerts and faults
- Operating statistics, such as load spectrum, monitoring of hoist jogging, overloads, emergency stops, work cycles and running hours
- Estimates of remaining Design Working Period (DWP) of selected components, such as the hoist, hoist brake, contactors and trolley (SMARTON)





## TRUCONNECT Brake Monitoring

TRUCONNECT Brake Monitoring uses a condition monitoring device to collect the status of brake air gap, mechanical and electrical faults from the electromagnetic disc brakes. The service provides visibility into current brake condition, estimates remaining service life and indicates brake faults.



# TRUCONNECT Brake Monitoring benefits

- Provides visibility to brake condition between normal inspection visits
- Helps minimize the risk of load drop with the detection of brake faults
- Helps you avoid unnecessary brake disassembly for inspection
- Enables predictive brake maintenance
- Assists in further optimization of maintenance activities to reduce unplanned downtime and to improve equipment safety, productivity and lifecycle value





# Brake Monitoring data on yourKONECRANES.com

- Indirect measurement of brake air gap status and friction material wear
- Alerts of electrical faults
- Alerts of mechanical faults



TRUCONNECT Wire Rope Monitoring

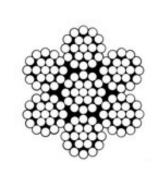
TRUCONNECT Wire Rope Monitoring is designed to provide real-time insight into the condition of a wire rope. It reveals both visible exterior defects as well as internal defects that are not detectable with a visual inspection. Specialized and patented sensors continuously monitor the wire rope while the crane is in normal operation and alerts via text or email occur when rope condition deteriorates below set limits.



# TRUCONNECT Wire Rope Monitoring benefits

- Know the condition of your wire ropes in an instant and at any time
- Helps you discover defects that are not visible in periodic inspections
- Assists in reducing the risk of load drop and other safety risks related to wire ropes
- No shutdown needed to inspect rope condition
- Offers potential to optimize rope change intervals plan ahead to have the wire rope replaced during a planned shutdown
- Less expensive than regular NDT tests
- Rope safety can be monitored remotely without interrupting crane operations









## Wire Rope Monitoring data on yourKONECRANES.com

Current condition of wire ropes (traffic light indicators)

(Green) Number of detected broken wires (loss of material) below the warning limit. No further actions needed.

(Orange) Number of detected broken wires above the warning limit, but below the discard limit. Increased safety risk. Prepare for upcoming rope replacement.

(Red) Discard limit of detected broken wires exceeded: Very high safety and/or load drop risk. REPLACE WIRE ROPE IMMEDIATELY.

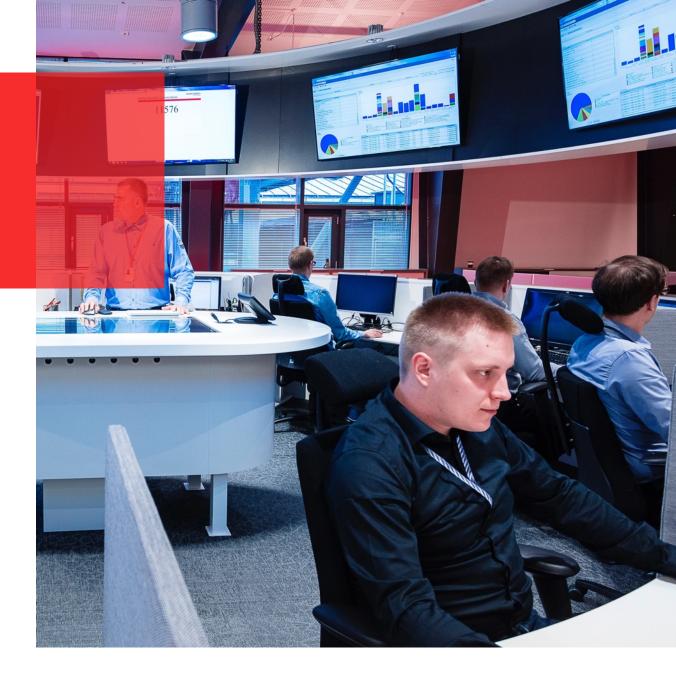
- Detailed view to locate defect areas
- Trend view to see development of defects





## TRUCONNECT Remote Support

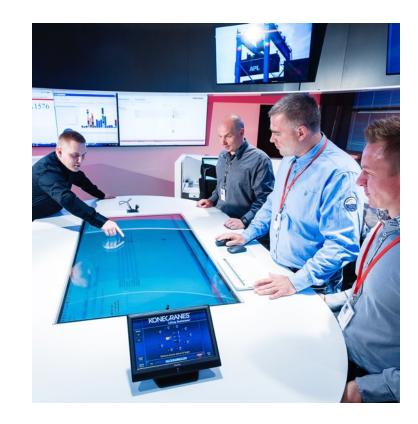
TRUCONNECT Remote Support provides 24/7 access to a global network of crane experts and specialists, offering problem solving and troubleshooting to help reduce unplanned downtime. In controlled circumstances, two-way communication with the machines and their operators can be established to expedite corrective action. Remote Support is ideally suited for extremely remote locations.





### TRUCONNECT Remote Support benefits

- Short lead time to begin troubleshooting helps minimize downtime
- Troubleshooting for problems that require high-level technical expertise
- Quick response support for even extremely remote locations
- Support 24/7 from one easy point of contact, available by phone
- Helps identify the need for corrective on-site maintenance actions and spare parts which may eliminate unnecessary site visit





# TRUCONNECT data security

TRUCONNECT and yourKONECRANES have been awarded ISO/IEC 27001:2013 certification for information security management. The ISO/IEC 27001 certificate demonstrates a commitment to proactively manage the information security of Konecranes digital services and ensure compliance with legal and customer requirements.





