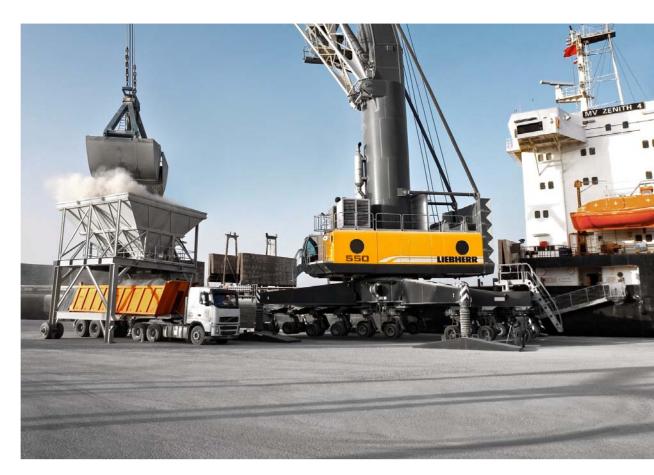
smart up your performance

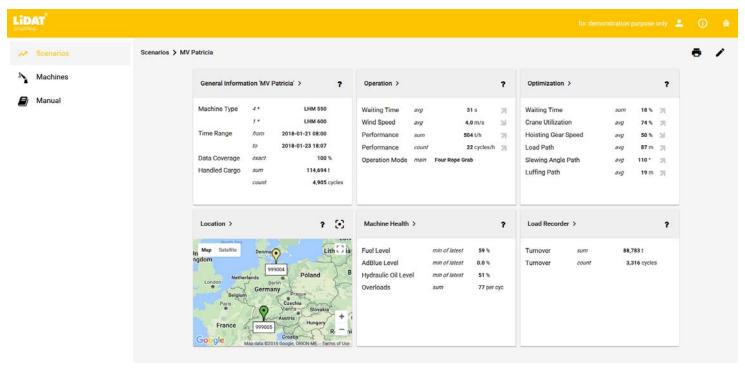


### Content

- What it is
- Technical description
- Packages
- Upgrade and Retrofit
- Business Cases
- Demo Version
- Sales Support
- Technical support



### What it is

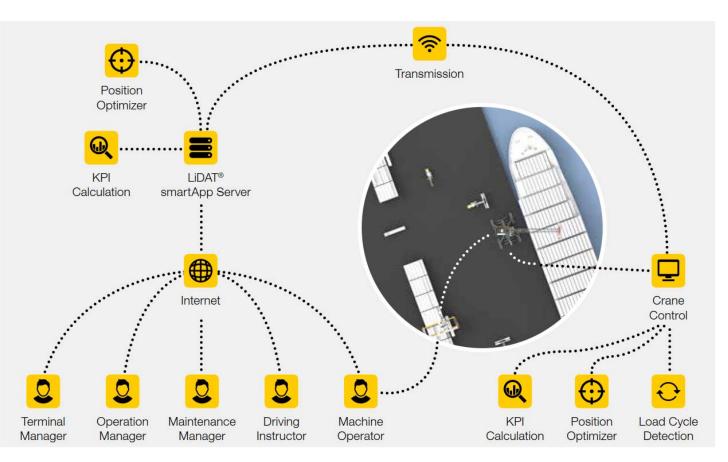


- IT-solution for analysing and optimising cargo handling processes
- Makes the processes faster, more environmentally friendly and more cost effective
- Real-time overview of the equipment status and the progress
- The Optimization Package additionally recommends specific optimisation actions.

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## Technical description



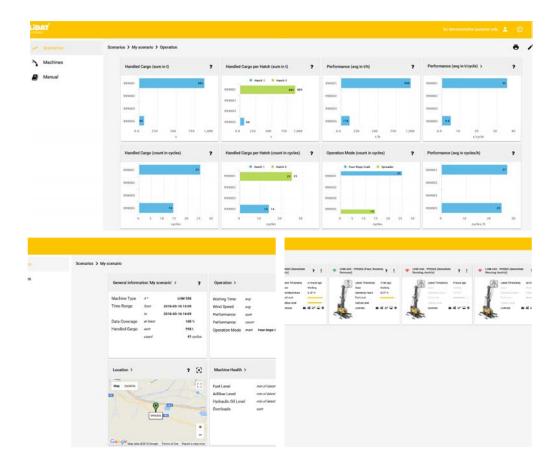
- The relevant data transmitted to the LiDAT<sup>®</sup> smartApp server
- Authorised users can access and download the processed data via LiDAT® smartApp
- Liebherr handles the setup and support of the transmission link, hosts the data and maintains the software during the active user subscription

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### LiDAT® smartApp Packages

### Basic

- Web based IT-solution
- Optimised for mobile devices
- Intuitive use
- Worldwide data recording and transmission in real-time
- Significant reports in PDF-format available as download
- Integrated user manual
- Transparency of processes by figures and charts
- Comparability of cranes and processes across locations

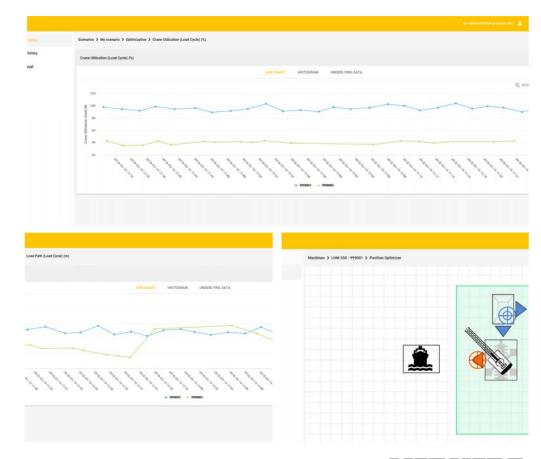


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### LiDAT® smartApp Packages

# Optimisation

- Turnover and optimisation orientated figure spectrum
- Detailed graphic representation
- Intelligent optimisation algorithm (Position Optimizer) for bulk turnover
- Load Recorder turnover analysis
- Detection of optimisation potential by additional figures and charts
- Position Optimizer
- Automatic load cycle detection
- Performance comparison inside the fleet

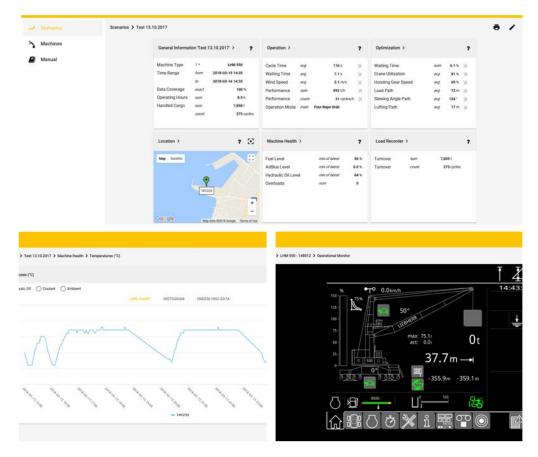


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### LiDAT® smartApp Packages

### Maintenance

- Display of important operating data (e.g. operation hours, fluid levels)
- Crane control display visible via user interface
- Enables Teleservice
- Higher machine availability by improved planning of maintenance and fill-up interventions
- Remote support by Operation Monitoring
- Reduction of service interventions by Teleservice
- Graphic presentation of machine display via mobile devices





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# LiDAT® smartApp Package overview

	Basic	Maintenance	Optimisation
Machine Data			
Current Location, Dataset and Environment	<b>*</b>		
Current Operating Hours and Resources		•	
Process Data (Scenario)			
General Information (machines, location handled cargo, operation hours, data coverage)	<b>*</b>		
Machine Health (filling levels, temperatures)		<b>•</b>	
Operation KPIs (Handled Cargo, Performance, Cycle Time, Wind Speed)	<b>*</b>		
Operation KPIs (Split of Cycle Time, Handled Cargo per Hatch)			•
Optimization KPIs (Crane Utilization, Gear Speed, Split of Cycle Times, Load Path, Outreaches, Luffing Path, Slewing Angle Path, Drive Configuration)			<b>*</b>
Machine Reports			
Dashboard Report (Location, Environment, and Dataset)	<b>*</b>		
Dashboard Report (Resources and Operating Hours)			
Machine Use	<b>*</b>		
Machine Logbook	<b>*</b>		
Safety Report	<b>*</b>		
Customer Maintenance Planner	<b>*</b>		

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# LiDAT® smartApp Package overview

	Basic	Maintenance	Optimisation
Process Data Report (Scenario)			
General Information, Operation, Data Coverage, Handled Cargo, Operating Hours, Operation Mode, Performance, Wind Speed, Cycle Time	<b>*</b>		
Machine Health		<b>*</b>	
Optimization (Split of Cycle Time, Handled Cargo per Hatch, Crane Utilization, Gear Speed, Load Path, Luffing Path, Slewing Angel Path, Drive Configuration, Outreaches, Turnover per Hatch)			•
Features			
Operation Monitoring		<b>•</b>	
Position Optimizer			•
Load Recorder			<b>*</b>
Teleservice		<b>•</b>	

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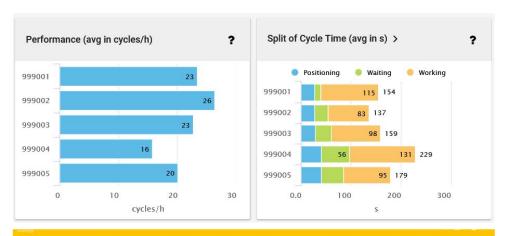
# Upgrade and Retrofit



- Upgrades from existing LiDAT® packages available
- Retrofit depending on machine software and crane generation
- For further information please contact your responsible service station or contact:

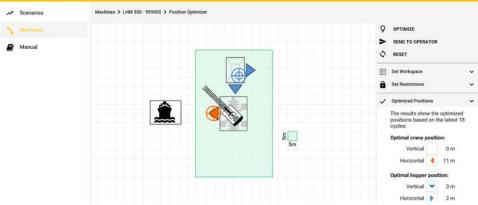
lwn-ts-itm@liebherr.com

### **Business Cases**





**Comparison:** Direct comparison of multiple cranes during definable time periods with the feature "Scenario"

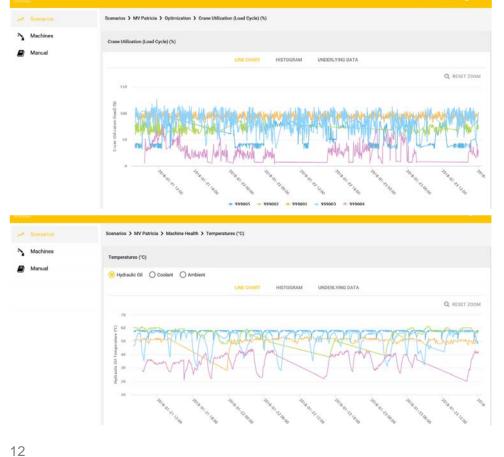




**Optimisation:** Identification of starting points for optimisation activities with the feature "Position Optimizer"

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### **Business Cases**





**Analysis:** Detailed analysis of cargo handling process in real-time.

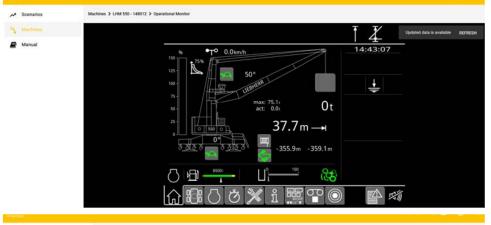


**Tracking:** Comprehensive, informative data collection on process and machine statuses

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### **Business Cases**





**Direct access**: Information obtained directly from crane control system rather than from external sensors

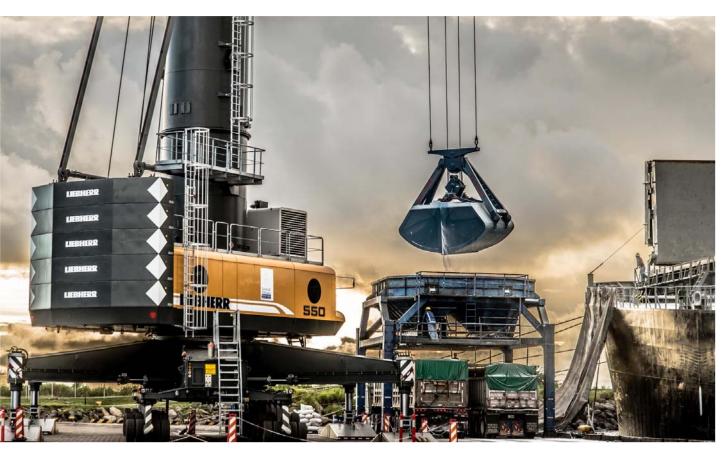




**Web app:** Intuitive web application, available for different devices

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### **Benefits**



- Increased turnover efficiency
- Cost saving
- **Eco-friendliness**
- Increased resale value
- Good process and machine overview

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# LiDAT® smartApp - Demo version



- Get your user account from: lwn-ts-itm@liebherr.com
- Login under: https://demo01-smartapp.liebherr.com/login
- Discover the possibilities

# LiDAT® smartApp Sales Support

Contact: lwn-ts-itm@liebherr.com



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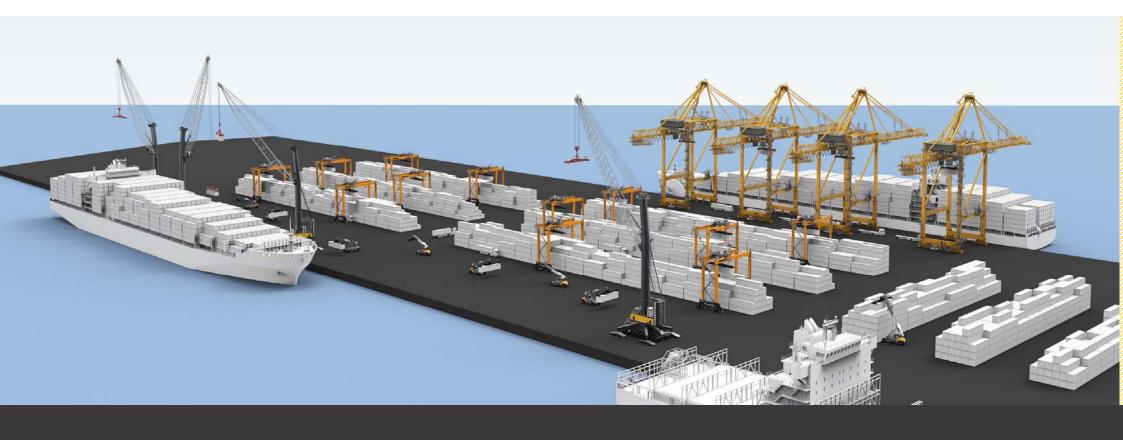


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Thank you for your kind interest