

FLEET MANAGEMENT TRANSFORMS
DATA INTO SOLUTIONS TO MAXIMISE
YOUR OPERATING TIME, LOWER YOUR
COSTS AND HELP YOU TO WORK MORE
EFFICIENTLY. ALL WITH THE GOAL OF
INCREASING YOUR PROFITABILITY.

The demands on project management grow as the complexity of construction projects increases. Every construction site has three things in common - costs, quality and challenging deadlines. WITOS, the telematics platform from the WIRTGEN GROUP, is a perfectly coordinated package of solutions for anyone wishing to increase productivity and improve their future prospects. Thanks to system-supported preparation, transmission, visualisation and evaluation of machine and positioning data, you have a precise overview of your fleet at all times. With WITOS FleetView, you can make the day-to-day operations of your machines even more efficient.

WITOS is a system infrastructure that brings together a variety of different components. In addition to the FleetView fleet management solution, this also includes process management and documentation modules.

THE WITOS FLEET VIEW INTELLIGENT TELEMATICS SYSTEM FROM THE WIRTGEN GROUP SUPPORTS FLEET MANAGEMENT FOR MACHINES FROM WIRTGEN, VÖGELE, HAMM AND KLEEMANN.

As of now, WIRTGEN GROUP machines can also be integrated into the JDLink telematics system from JOHN DEERE. The system from JOHN DEERE can also compare and visualise performance data from the machines. We would be pleased to check whether a system change would be an advisable and helpful solution for you.

For more information, please contact your local WIRTGEN GROUP Sales and Service organisation.

ANY QUESTIONS? YOU CAN FIND MORE INFORMATION ON OUR WEBSITE



> www.wirtgen-group.com/telematics

WITH WITOS FLEET VIEW, YOU CAN
KEEP TRACK OF THE LOCATION AND
OPERATIONAL STATUS OF YOUR
MACHINES AT ANY TIME AND
FROM ANYWHERE.\*



# **YOUR BENEFITS**

#### **CUSTOMERS**

- > COMPREHENSIVE FLEET MANAGEMENT from a single source
- > HIGHER MACHINE UTILISATION RATES thanks to fast machine status identification
- > REDUCTION OF DOWNTIMES thanks to monitoring of fuel and water reserves
- > OPTIMAL MACHINE SCHEDULING thanks to GPS positioning and machine status data
- > MACHINE MONITORING for prevention of unauthorised access
- > HIGHER MACHINE UTILISATION RATES thanks to proactive maintenance scheduling
- > ANALYSES of machine utilisation rates

#### **CUSTOMER SERVICE**

- > PROACTIVE SCHEDULING of maintenance work
- > EMAIL NOTIFICATION when servicing is due
- > PRIORITISATION of maintenance operations
- > FASTER REMOTE TROUBLE-SHOOTING thanks to error messages from machines
- > TARGET-ORIENTED preparation of servicing tasks thanks to fault localisation
- > PRECISE INFORMATION on machine location for service technician deployment

## RENTAL COMPANIES

- > PRECISE TRACKING of machines
- > ANALYSES of machine utilisation rates
- > CHRONOLOGICAL OVERVIEW of machine handling history
- > CLEAR BASIS FOR CALCULATING machine rental terms

The benefits of our telematics system

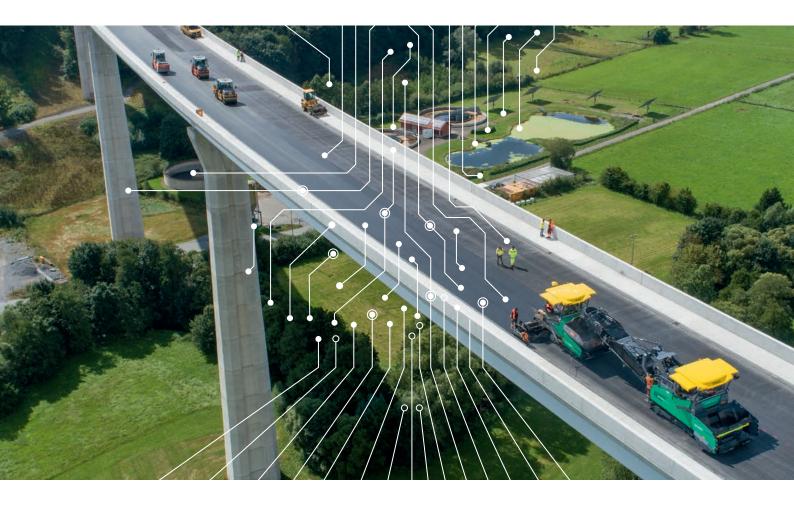
# WHAT DOES WITOS FLEET VIEW OFFER?

- > Reduction of potential downtimes
- > Lower operating costs
- > Optimisation of machine utilisation rates
- > Optimisation of maintenance scheduling
- INTUITAVE MMI. HUMAN-MACHINE-INTERFACE > Simplification of machine scheduling FLEKTBLE CONTROL PANEL CONCEPT FOR MAXIMUM MAKETHE CONTROL INFORM<mark>ateve Me</mark>t – WIRTGEN PERFORMANCE TRACKER CONTROL PANEL WITH FAVORITES BUTTONS PANELS FOR LEVELING FIELD-TESTED WITOS FLEETVIEW TELEHATICS SYSTEM PANELS AN IMPORTANT INFORMATION OPTIONAL ADDITIONAL EQUIPMENT MPT FOR CLEAR DOCUMENTATION OF MILLING PERFORMANCE HEAVY-DUTY, HIGH-QUALITY CAMERA/MONITOR SYSTEM AUTOMATICALLY GENERATED MEASUREMENT REPORTS JOB SITE TRACKING VIA SATELLITE MAP DISPLAY MEARING DIAGNOSTIC CONCEPT DOCUMENTATION OF CONSUMABLES TO CALCULATE OPERATING COSTS IT. RELIABLE CAN NETWORK LIABLE VANDALISM PROTECTION SAVING SERVICE AND MAINTENANCE CONCEPT

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Persuasive arguments with regard to

# SCHEDULING, MAINTENANCE AND COSTS

#### **CONVINCING ARGUMENTS**

- > Easy and proactive scheduling of maintenance work
- > Machine monitoring for prevention of unauthorised access
- > Precise tracking of machines and optimal scheduling thanks to GPS positioning and machine status data, even when ignition off, e.g. when transporting the machine

#### > REDUCTION OF POTENTIAL DOWNTIMES

Efficient scheduling and handling of service appointments reduce machine downtimes. Knowledge of the precise machine location enables service technicians to rapidly complete scheduled on-site servicing at specified intervals.

#### > LOWER OPERATING COSTS

The analysis of machine utilisation assures most productive machine utilisation, faster response times in the event of faults and an overall simpler maintenance process - all of which result in lower operating costs. As a machine rental company, your costing processes are based on clear figures and hard facts. Particularly important in this are the analyses of machine utilisation rates.



#### **INTUITIVE HANDLING**

The WITOS FleetView software suite is easy to use, fast and efficient. The telematics system can be used directly, without extensive instruction or training.

Use the Fleet Overview to plan the scheduling of your machines. Keep an eye on the operating status and arrange deployment schedules. And even if you forget something under stress, the comprehensive features of WITOS FleetView will remind you of service intervals, when maintenance is due, send you error messages and fault codes from your machines and notify you about attempts to access them without authorisation.

Even the analyses are quickly done, and the reports can be viewed almost immediately in the form of interactive graphic displays. These show you the distribution of operating hours within a specified period of time. In addition, the reports show fuel consumption, rate of consumption, engine speed, engine coolant temperature and engine load.

#### > OPTIMISATION OF MACHINE UTILISATION RATES

The last project has been completed, the machine is under way and the next contractor needs the machine on-site asap. Thanks to precise tracking, you can easily reroute the machine to the next job. The ability to quickly review the status of the machine makes it available for rescheduling even faster.

#### > OPTIMISATION OF MAINTENANCE SCHEDULING

Detailed and targeted analyses of the operational and utilisation behaviour of machines facilitate maintenance and service and guarantee sustained value retention of the machines. Customer Support can help you with the interpretation of error messages and fault codes on the phone and help you find the cause by means of remote diagnostics.

#### > SIMPLIFICATION OF MACHINE SCHEDULING

Thanks to clearly laid-out scheduling and planning processes and an intuitive user-interface, the telematics system makes machine scheduling many times simpler than ever before.

ANY QUESTIONS? YOU CAN FIND MORE INFORMATION ON OUR WEBSITE



www.wirtgen-group.com/telematics



### From data to analysis

## WITOS FLEET VIEW FEATURES

#### **FLEET MANAGEMENT**

- > Positioning data
- > Machine identification
- > Operating status
- > Fuel filling level
- > Machine data

#### MONITORING

- > Position monitoring
- > Time window monitoring
- > Maintenance monitoring
- > Movement monitoring
- > Fault monitoring
- > E-mail notification

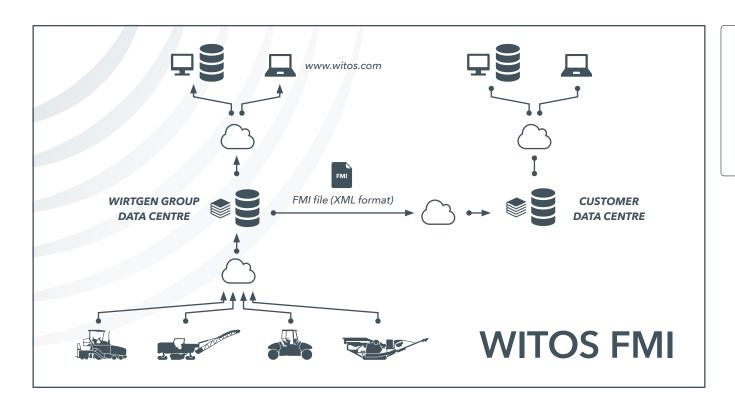
#### MAINTENANCE MANAGEMENT

- > Maintenance plans
- > Status display
- > Maintenance entries
- > Maintenance histories

#### **DIAGNOSTICS**

- > Machine warning messages
- > Machine fault code messages
- > Engine messages
- > Message histories





Various standard interfaces enable customers to export data from WITOS FleetView and import it into an own or third party system.

#### STANDARD INTERFACE OPTIONS

- > WIFMS (WIRTGEN GROUP Fleet Management interface)
- > AEMP v1.2
- > ISO/TS 15143-3 (aka AEMP 2.0)

WITOS FleetView remains available via an API interface. Data can be imported into existing systems. This also applies if you wish to use JDLink in the future.

As per standard definitions, the machine data can be accessed from the WITOS Server and imported and evaluated in an own telematics or ERP system.

The WITOS FleetView telematics system complete with WITOS FMI includes the WITOS control unit (TCU), access to the web-based fleet management system as well as website updates and wireless communication costs.

Please contact your local Sales and Service organisation if you are interested in retrofitting your machines.



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WIRTGEN GROUP telematics solutions

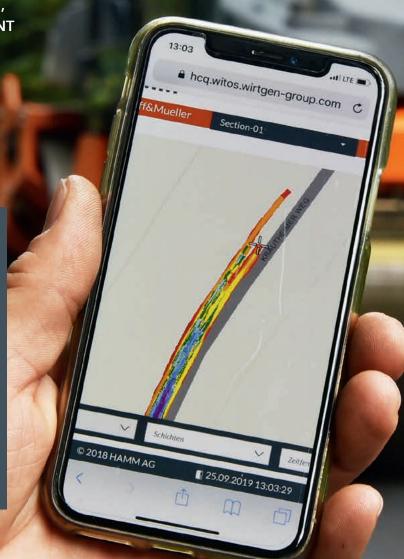
# PROCESS MANAGEMENT AND HIGH QUALITY THANKS TO A DIGITALLY CONNECTED CONSTRUCTION SITE

WITOS IS A SYSTEM INFRASTRUCTURE THAT BRINGS TOGETHER A VARIETY OF DIFFERENT COMPONENTS. IN ADDITION TO THE FLEET VIEW FLEET MANAGEMENT SOLUTION, THIS ALSO INCLUDES PROCESS MANAGEMENT AND DOCUMENTATION MODULES.



#### **YOUR BENEFITS**

- FLEET OVERVIEW: View information about machine operating status at any time and from anywhere
- > REDUCED WORKLOAD: Optimised scheduling and planning processes to avoid unnecessary transportation
- > TRANSPARENCY: Simplified maintenance through detailed analyses of machine operating and usage patterns
- > SPEED: Short response times in the event of faults/ malfunctions
- > EFFICIENCY: Minimisation of downtimes through optimised scheduling of service appointments



The WIRTGEN PERFORMANCE TRACKER (WPT) enables a direct exchange of information between a cold milling machine, a recycler/ soil stabiliser, the operator, the service workshop and the scheduling office. By means of satellite-based geo-positioning technology and precise machine sensor systems, WPT determines the exact area and volume performance and the quantity of aggregates required for recyclers/ soil stabilisers. After completion of the construction project, a report with all relevant performance and consumption data is automatically generated in PDF format and sent to the machine owner by email. Alternatively, this information can be sent in real-time by Performance Monitoring or API interface during the ongoing process.

The full version of WITOS Paving Plus is the software-based process management solution from VÖGELE for asphalt paving. It connects all processes and equipment involved, from the asphalt mixing plant to the paver operator, and consists of a total of five modules: construction site planning, production of mix, transportation of mix, asphalt paving and subsequent analysis of the processes. The sharing of data and information between all contractors working on a project leads to greater transparency of construction processes and sustainable optimisation of the overall paving process chain.

WITOS Paving Docu offers construction contractors a smart solution for the digital documentation and analysis of asphalt construction sites. With this system, the road paver acts as a server and is responsible for sharing data between the machine and a smartphone app via a Wi-Fi connection. Using the app, site managers and paver operators can start paving projects with WITOS Paving Docu via the machine terminal and log a wealth of machine and paving data such as the working width, paving speed, stops and the effective paving time.

With the **Smart Compaction** product family, HAMM has developed a whole range of smart and simple solutions for compaction processes. These solutions concentrate on digital interfaces between the operator and the machine: Smart Doc is a tool for comprehensive measurement and documentation of compaction in asphalt paving and earthworks. Smart Compact is a digital compaction assistant that actively assists the roller driver with the determination and automatic regulation of the required compaction force in both drums.

PLEASE CONTACT YOUR LOCAL SALES AND SERVICE \_ \_ \_ ORGANISATION TO FIND OUT WHICH OF OUR STANDARD AND EXTENDED TELEMATICS SOLUTIONS ARE THE MOST SUITABLE FOR YOU AND YOUR MACHINE FLEET.



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