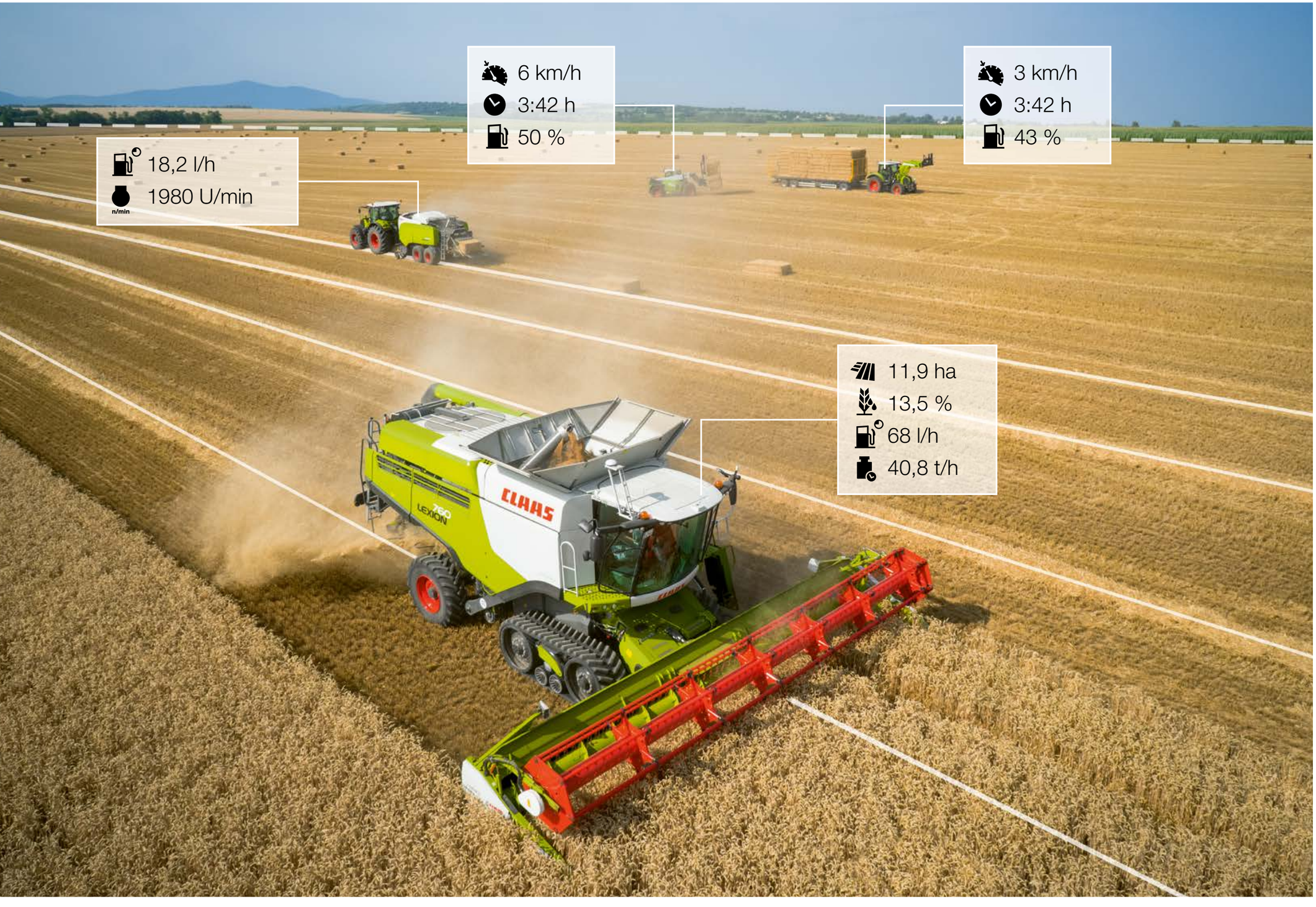

# Connected machines

## Remote Service

## TELEMATICS

# Connected machines.








connected-machines.claas.com

# Connected machines.
# Your modular building blocks.[1]

We believe that you can get even more out of your CLAAS machines than ever before. Size and power aren't the be-all and end-all. Intelligence is a key factor in achieving greater efficiency.

That's why we connect our machines.

Our machines today are already equipped with networking technology for tomorrow. The internet of things has been part of everyday life in the agricultural machinery sector for some years now. With TELEMATICS, it has long been possible for you to use your machine data online. You can achieve more with less effort by making the latest technology work for you.

CLAAS offers different modules which you can combine to suite your needs. CLAAS covers the cost of the Remote Service basic module for the first five years. We also include a selected TELEMATICS license for the first year.
**So you can spend more time on the things that really matter.**

**Remote Service.**

**CLAAS covers the cost for 5 years.**

**Remote Service.**
- Service partner has direct access to specific data from your machine for maintenance and servicing purposes

**Benefits of Remote Service:**
- Easier to plan
- Increased machine availability
- Fast, direct service

**TELEMATICS basic.**

**TELEMATICS basic.**
- Essential information for field logistics
- Machine position and track are shown on the map, along with operating status and diesel level
- Upload or plot field boundaries

**Benefits of TELEMATICS basic:**
- Effortless coordination of your fleet
- Compliance with reporting requirements and simplified invoicing
- Direct navigation to the job site and machine

**TELEMATICS advanced.**

**TELEMATICS advanced.**
- Package with full machine data, enabling you to monitor and optimise current processes
- Access to all key agronomic data such as throughputs and yields
- Yield mapping option

**Benefits of TELEMATICS advanced:**
- Optimise work processes in real time
- Improve machine efficiency based on daily reports
- Detailed machine monitoring

**TELEMATICS professional.**

**TELEMATICS professional.**
- For users who want access to all possible data, especially large farms and contractors
- Analysis functions to optimise your machine or fleet deployments
- Full functionality and all reports available

**Benefits of TELEMATICS professional:**
- Improve machine efficiency in the long-term based on campaign reports
- Perform specific analyses
- Full evaluation of all machine data

Automatic documentation[1]

[1] Please note that not all TELEMATICS modules are available in all countries.

Detailed information about TELEMATICS licenses can be found on pages 24-25.

# The best service, free of charge for five years.

## Remote Service.
## Your gateway to the connected world of CLAAS.

We know you want more performance and less downtime. Our mission is to offer you the best service as well as the best machines.

Enter a new service era with us, made possible by new technologies.

Benefit from intelligent networking of CLAAS machines. This allows your sales and service partner to access your machine and your specific data directly for a faster and more immediate response to your maintenance and servicing needs.

And the great thing about it is that CLAAS covers the cost of Remote Service for five years. All you have to do is give your consent.

## How you benefit from Remote Service.

**Faster troubleshooting.**
- Machine identifies fault and informs the operator
- Machine sends error message to the service partner
- Service partner identifies the fault remotely

**How you benefit:**
Immediate troubleshooting as the spare part can be delivered and installed on site.

**Proactive service planning.**
- Machine informs the service partner of upcoming servicing requirement
- Service partner suggests appointment time for the service
- Service partner orders CLAAS ORIGINAL consumables in advance according to the service scope

**How you benefit:**
Servicing is completed without delay.

## Register now.

At CLAAS, our customers' business security is paramount in everything we do. We therefore follow a simple rule – with CLAAS Remote Service the customer is always in full control:
- You own your data
- The communications link used meets the highest security standards
- No yield data is transmitted – only data relating to machine status and performance, diagnostics and operating conditions is shared

**How to obtain Remote Service.**

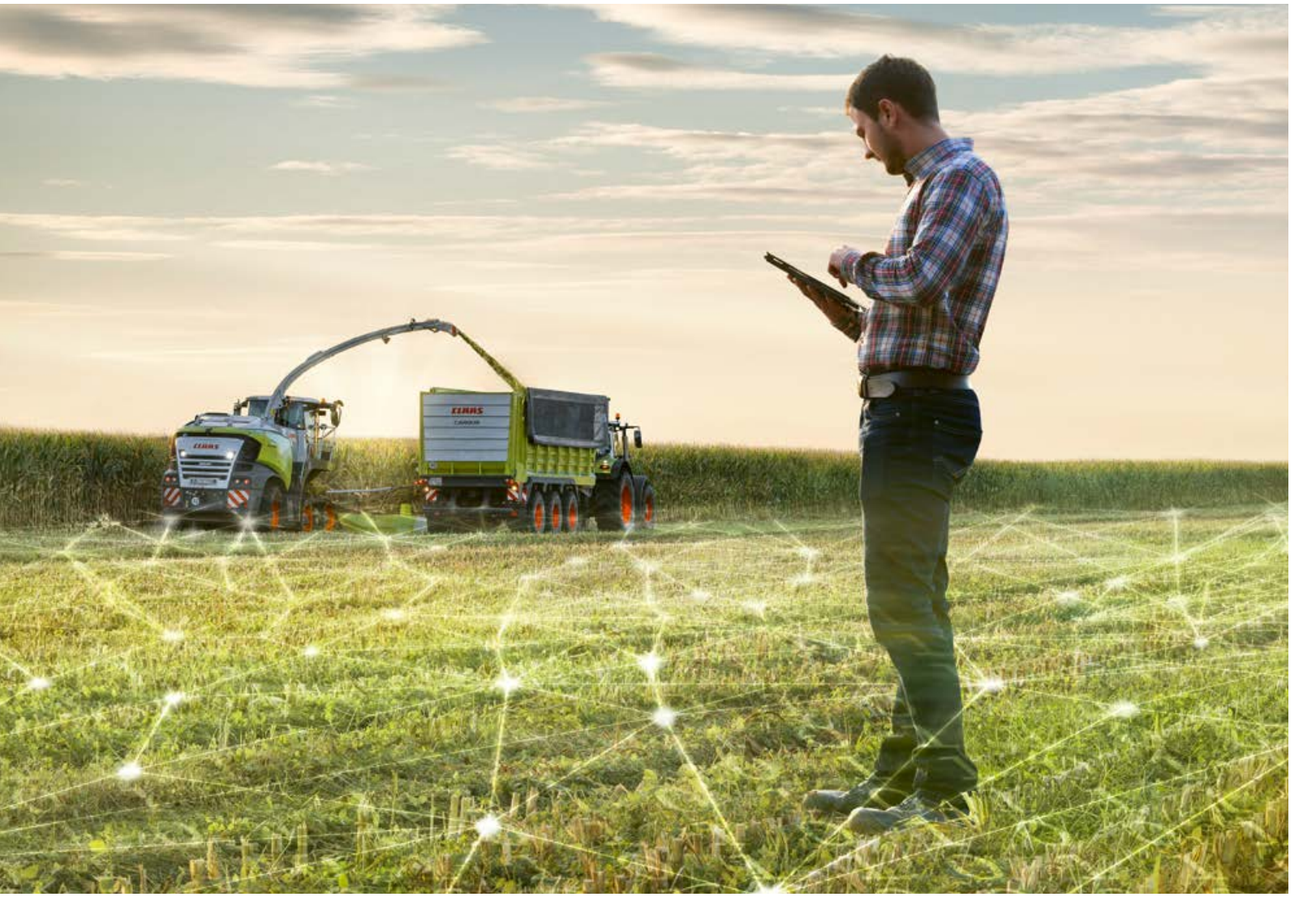
Give your consent on purchase or handover of the machine

If you are already a TELEMATICS customer: approval via the TELEMATICS portal at claas-telematics.com

EASY Shop:
Order online at easyshop.claas.com[1]

[1] Not available in all countries.

# TELEMATICS.
# Save money. Gain time.

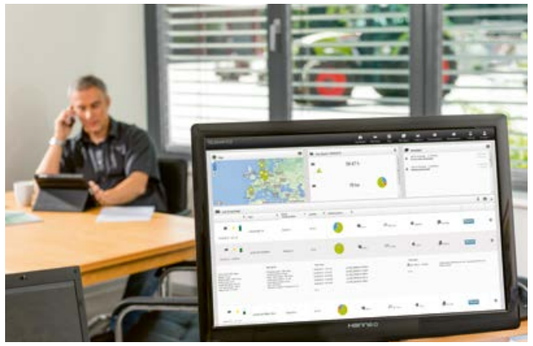


## Work more efficiently.
## Work with your data.

A certain degree of business acumen is crucial for successful farming – it's essential to maximise potential in all areas, optimise processes and utilise resources more effectively. CLAAS TELEMATICS offers intelligent solutions to support you in your work.

The main aim is to reduce costs, and TELEMATICS has four different functions for achieving this: inform, analyse, optimise and document.



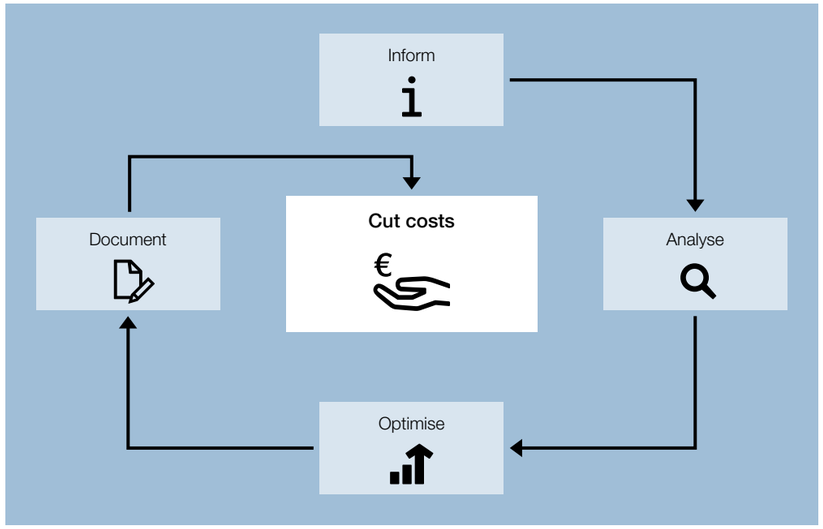


## TELEMATICS – an overview.

TELEMATICS is a digital data transfer system which continuously retrieves and records work data, tracks and yield data from connected combine harvesters, forage harvesters and tractors. All data are transmitted via the mobile phone network from the machines to the server, where they are processed and stored. You can access and evaluate your data online in real time or retrospectively on the TELEMATICS portal[1] using your farm PC, laptop or smartphone or export them to any common farm management software program for further processing.

[1] www.claas-telematics.com

The "automatic documentation" add-on module automatically assigns recorded data to the fields which have been worked, provided that the field boundaries have been exported to the TELEMATICS server. If no field data are available, TELEMATICS also allows you to plot the field boundaries straight on to the aerial photograph.



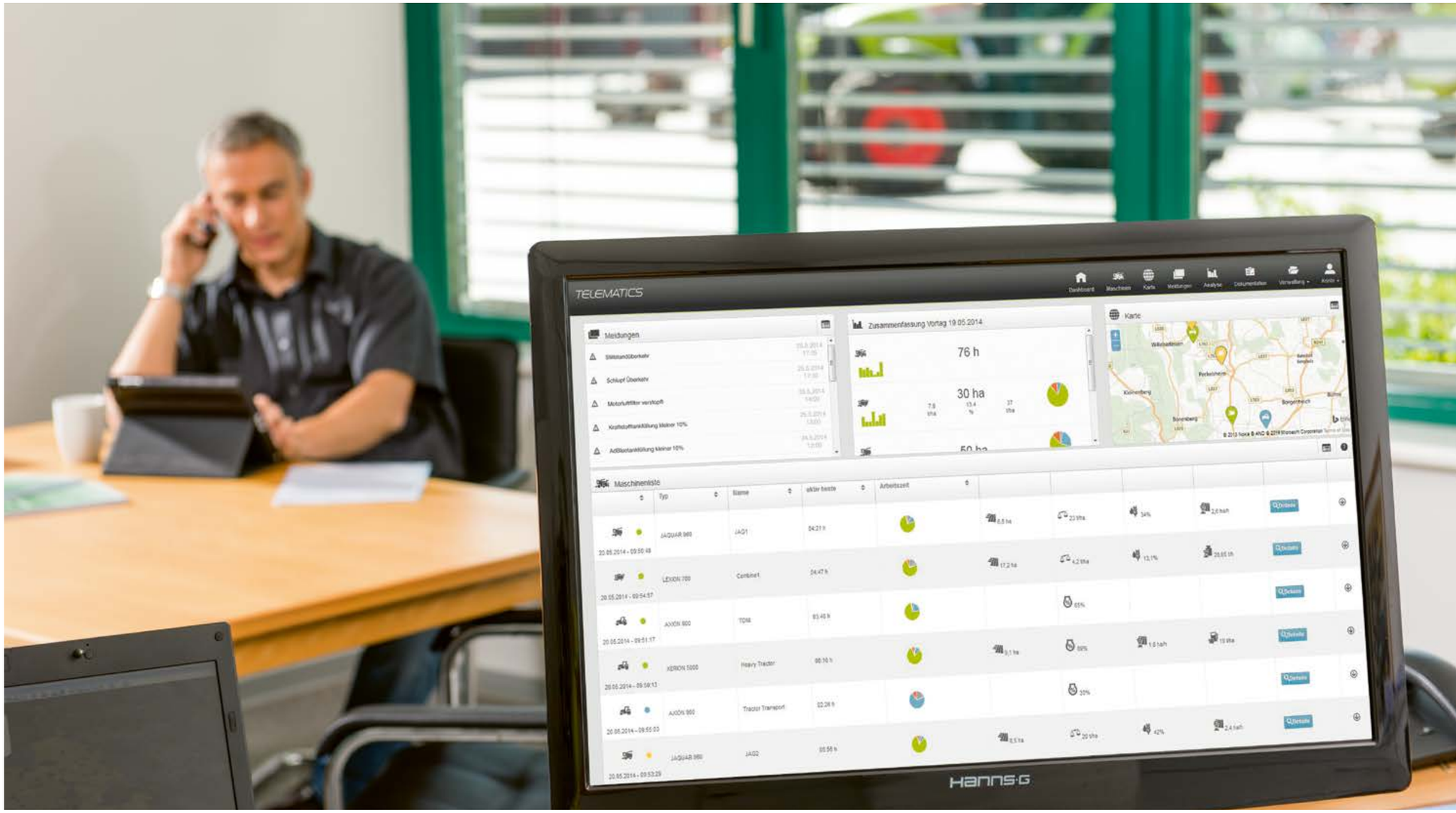
# Inform.

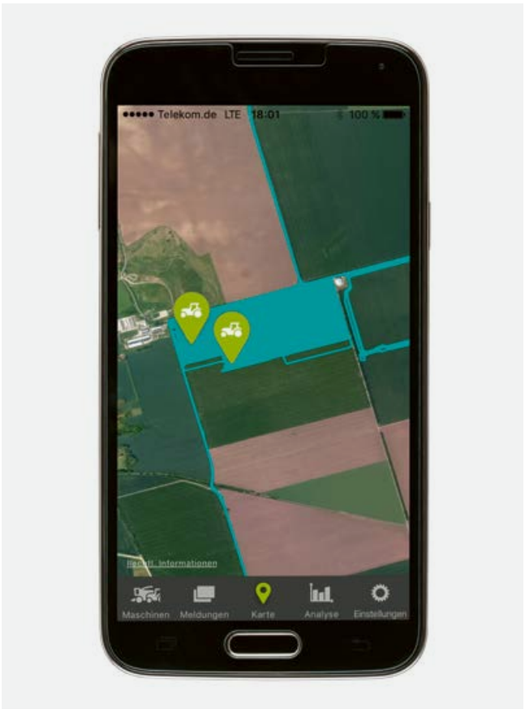
## Keep track of your machines.

The aim is to keep track of the whole fleet
by ensuring that all key machine data are readily available
at any time.

Whether you want to know about
– fuel consumption
– remote location
– operating status
– remote service
or other machine parameters: you always get the full picture.
And not just for one machine, but for almost all tractors and harvesting machines.

Accessing the data is quick and easy. From your office PC you can view the entire fleet on the TELEMATICS portal. You can also access the most relevant machine information on the move via the app.



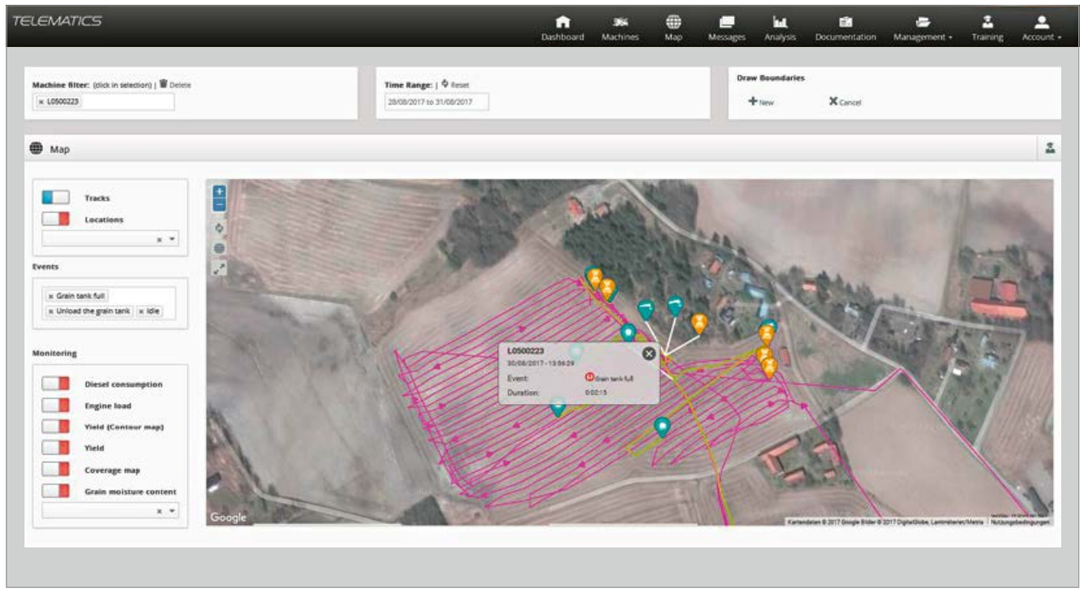




## Always up-to-date.

Machine data are collected and sent at least every 5 minutes (TELEMATICS) or 5 seconds (FLEET VIEW) to a secure German server. If the mobile phone connection is interrupted, the TELEMATICS data will be temporarily stored for up to ten working days and sent when the connection is reinstated.

So TELEMATICS provides a fast and simple means of checking the machine settings and status without the need for time-consuming phone calls. This reduces the burden on the machine operator and gives you an unusually high level of transparency – even if you can't always be on the spot.

# Analyse.




## Keep an eye on your resources.

The analysis functions available with the TELEMATICS professional licence gives you accurate data about where, when and how your machines are working. Optimisation of operating procedures, harvest technology and machinery logistics provides comprehensive information which helps you to achieve significant improvements in the overall performance of your machines. But how exactly does TELEMATICS help you optimise your operations?

Say you need to check how well your resources are being utilised. To obtain an accurate picture, you have to know how your machines are performing or whether your employees need help to make the most efficient use of the machines. And you want to detect problems in good time so they can be quickly resolved.

## Spot opportunities.

With TELEMATICS you can spot opportunities, analyse and understand processes and identify setting errors (e.g. with QUANTIMETER) before it's too late. It is also possible to compare machines and ascertain how efficiently your machines are being used compared with other machines of the same type. TELEMATICS provides a range of different analysis functions. The first is operating time analysis, which gives a quick overview of machine efficiency. With TELEMATICS professional you can even compare the performance of several of your machines.

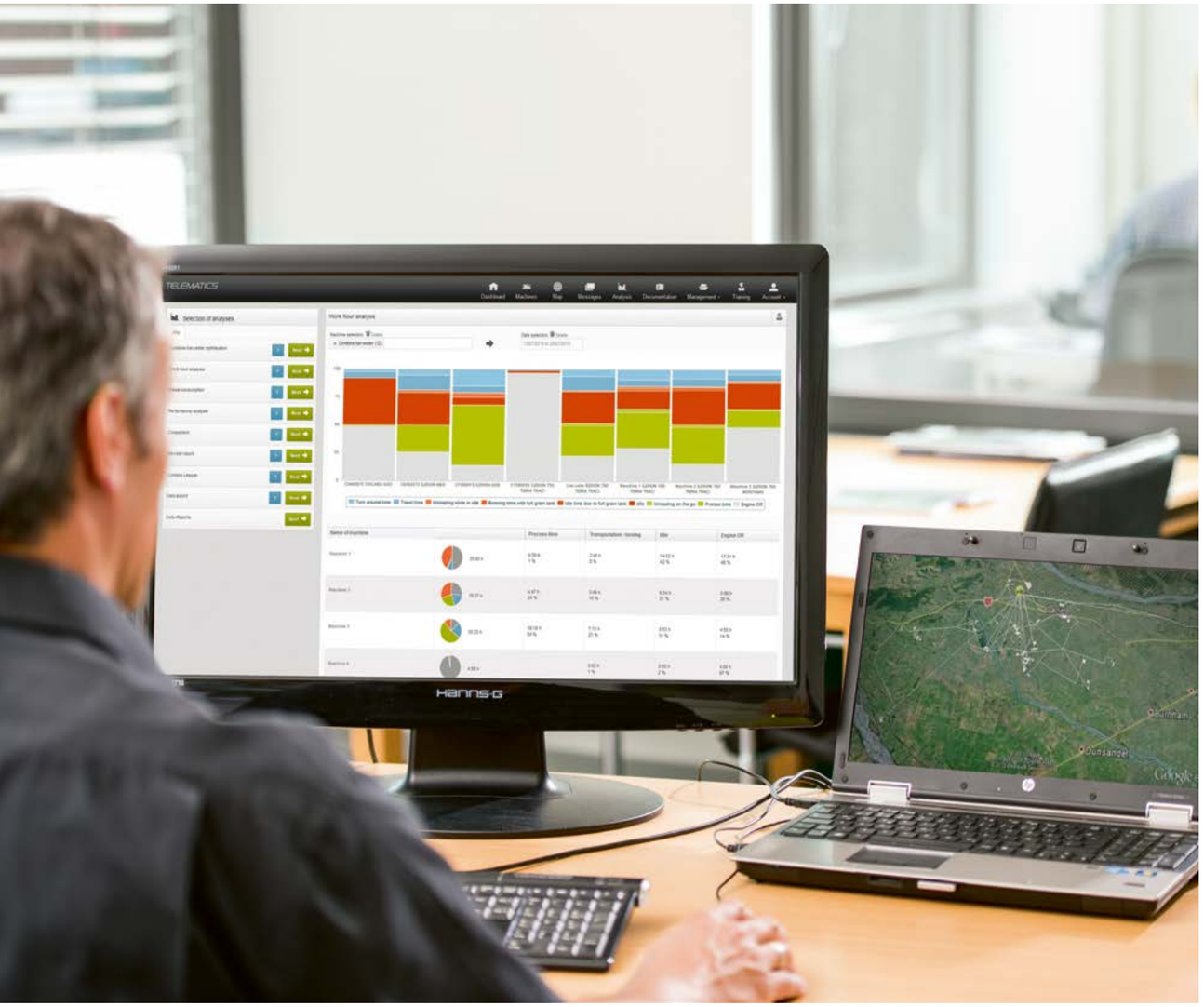
Map view gives you an equally rapid overview which is still up-to-date (every 5 minutes). It allows you to see the current work status of the machine and also monitor operations such as "empty grain tank", etc.

Other functions include performance analysis, yield coverage map, Combine League and campaign or daily reports.

The reports also incorporate the implement management data. You can easily export the data collected as a CSV, AFT or Excel file for use in other software programs.

We provide various training options to help you get the best out of TELEMATICS. You can choose to sign up for a training course provided by your distributor, do web-based training or watch a YouTube video to pick up TELEMATICS tips.

# Optimise.




## Use resources more efficiently.

TELEMATICS helps to pinpoint areas where you can make cost savings. With TELEMATICS you can identify weak points and take corrective action. You can learn to improve work processes and reduce fuel consumption. With machine comparisons you can draw on your experience to gain valuable insights which help you optimise your processes.

Performance analysis and diesel consumption analysis are the classic TELEMATICS tools for this task. They enable you to compare different performance data and periods with great accuracy.

With combine harvester optimisation you can check the efficiency of your machines over different periods and use the information to help your employees optimise machine performance. The Combine League allows you to view the experiences of other machine operators and transfer selected settings to your machines. In addition, you can obtain daily reports or use the map view to visualise the information.

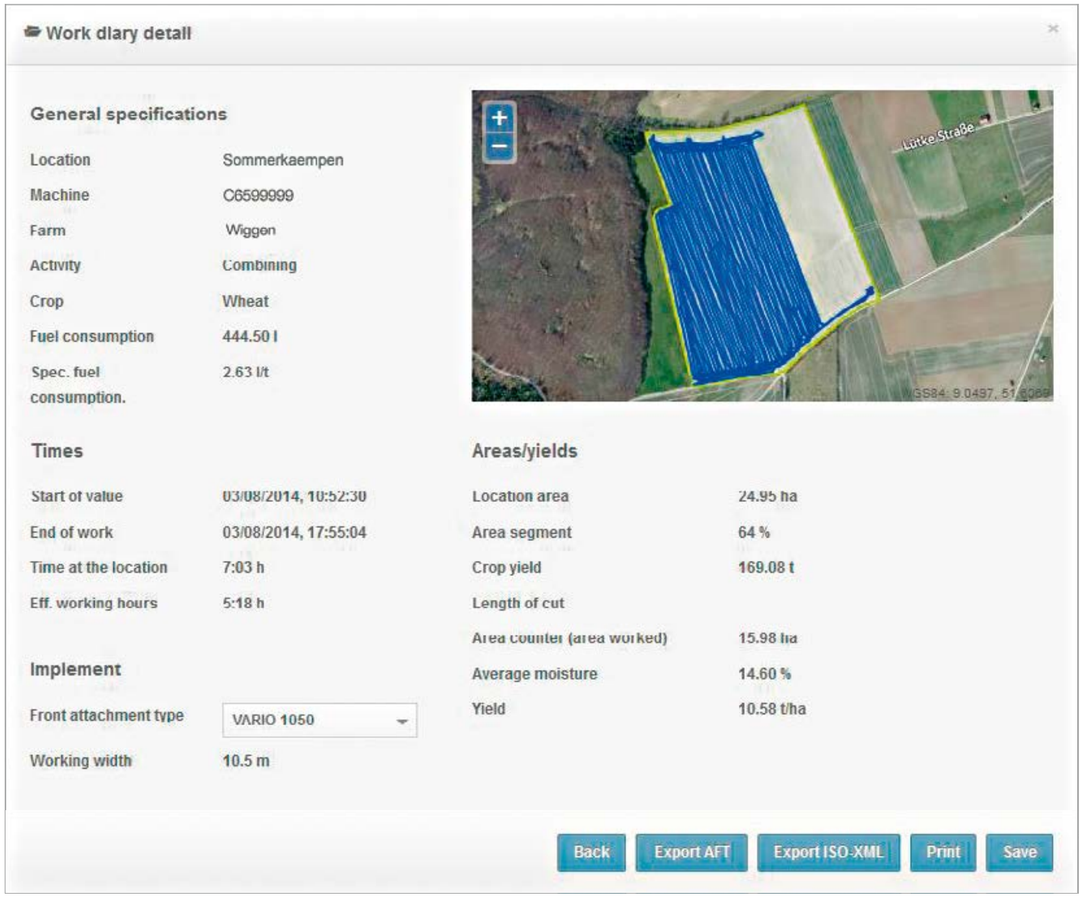
As farm manager, you can have individualised daily reports sent to your email address to obtain an initial overview of the previous day before logging in to the TELEMATICS portal. Many practitioners use these reports as a basis for planing and optimising the next day's work.


## Cut costs.

The main aim of using TELEMATICS is to cut the cost of day-to-day machine deployment. The analysis functions give you the tools you need to identify opportunities for optimisation.

With TELEMATICS you can discover how to boost efficiency or find out why the machine's performance capabilities are not being fully utilised. At the same time you can help your operators work even more efficiently so that they can achieve more in the same time with the same resources. Saving you time and money.

# Document.




## Your farm at a glance.

TELEMATICS reliably documents your fields. When used in conjunction with a farm management software program, you can obtain all the information required for your own field data collection virtually automatically. In addition, you can access all the information needed for printing high-quality delivery notes and invoices quickly and easily.

It also gives you a clear overview of your operating costs and enables you to track work that has been done and view it comparatively at any time. TELEMATICS documents:

- Working times
- Work processes
- Diesel consumption
- Machine positions
- Agronomic data (crop yield, application rate, etc.)

## The road to automatic documentation.

TELEMATICS can of course combine machine-related data with agronomic data, analyse the results and map them.

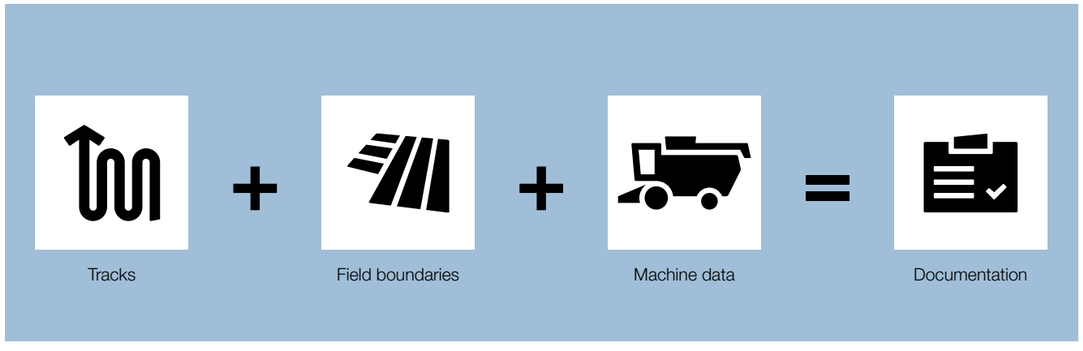
**Document machine performance.**
TELEMATICS offers various options for documenting the performance of your machines. If your machine has CEBIS, jobs from CEBIS can be viewed and processed directly in TELEMATICS. Daily reports are an even easier way of obtaining clear machine documentation and can be created for each separate machine. Alternatively, you can use the campaign report for all machines.

**Document yields.**
The contour map in the TELEMATICS portal provides an initial overview of yield distribution. For even more accurate results, you can import each individual weight log from the farm weighing scales to TELEMATICS so that JAGUAR yield data and maps are automatically corrected. The scales must be capable of exporting data in CSV or Excel format to do this.

**Automatic documentation.**
"Automatic documentation" is the most convenient means of documentation. This module reduces your workload while improving the reliability of data handling. Once the field boundaries have been stored in TELEMATICS, the system automatically identifies the field where a machine is working and produces field-specific documentation for each job based on the field boundaries and recorded tracks.

You can even change the sequence in which jobs are carried out. Work data is automatically transmitted to the TELEMATICS server at the same time. Data are exported as ISO-XML files or in other formats which can be imported into field files and all other popular farm management and invoicing software packages.

Automatic documentation with TELEMATICS is worthwhile right from the start. Input and transmission errors are eliminated because drivers no longer have to start and stop jobs manually or carry out any data collection tasks. Faster, automatic data collection significantly reduces the amount of office work required. Farmers / farm managers receive accurate documentation data, which enables them to maintain a complete field file.



# The complete tractor-machine combination at a glance. CEBIS and TONI.


TELEMATICS can record and analyse data from attached implements in addition to the tractor data to give a complete overview. There are three ways of transmitting data from the machine to TELEMATICS:

## 1. The new CEBIS and TELEMATICS.

Tractors equipped with the new CEBIS terminal benefit from integrated implement management. This function automatically transfers the following implement data from the CEBIS to the TELEMATICS portal:

- Name of implement
- Working width
- Work status
- Area counter status
- Total area counter

The implements are stored in the TELEMATICS portal as "CEBIS implement". The name and the working width of the implement can then be changed. If the operator changes the name of the implement in CEBIS, a new implement is automatically created in TELEMATICS.

**Benefits:**

- By transferring the work status to TELEMATICS, you obtain better coverage maps and area calculations
- Automatic documentation of implement data




## 2. TONI for implements with ISOBUS.

TONI is a function which records the work data from attached implements in addition to the tractor data. TONI is currently available for CLAAS QUADRANT 5300, 5200 and 3400 large square balers and CARGOS dual-purpose wagons. TONI uses the ISOBUS tractor and implement communication interface to collect and record implement data. In QUADRANT balers, for example, data are collected on the number of bales per field, bale moisture content and other QUADRANT-specific parameters.

CLAAS tractors in the AXION, ARION and XERION series are TONI-enabled when they leave the factory, provided they are equipped with TELEMATICS. Furthermore, many partner companies such as Amazone, Zunhammer and Horsch now ensure that their machines and implements are TONI-compatible. Please contact your respective dealership to check whether these third-party implements are TONI-enabled.

TONI is incorporated into the official ISOBUS standards. In conjunction with TONI, TELEMATICS is the only telemetry system to offer real-time visualisation, documentation and optimisation for the complete tractor-machine combination regardless of manufacturer.

**Benefits:**

- Automatic documentation of implement data
- Optimum utilisation of many implements
- Future-proofed through standardisation

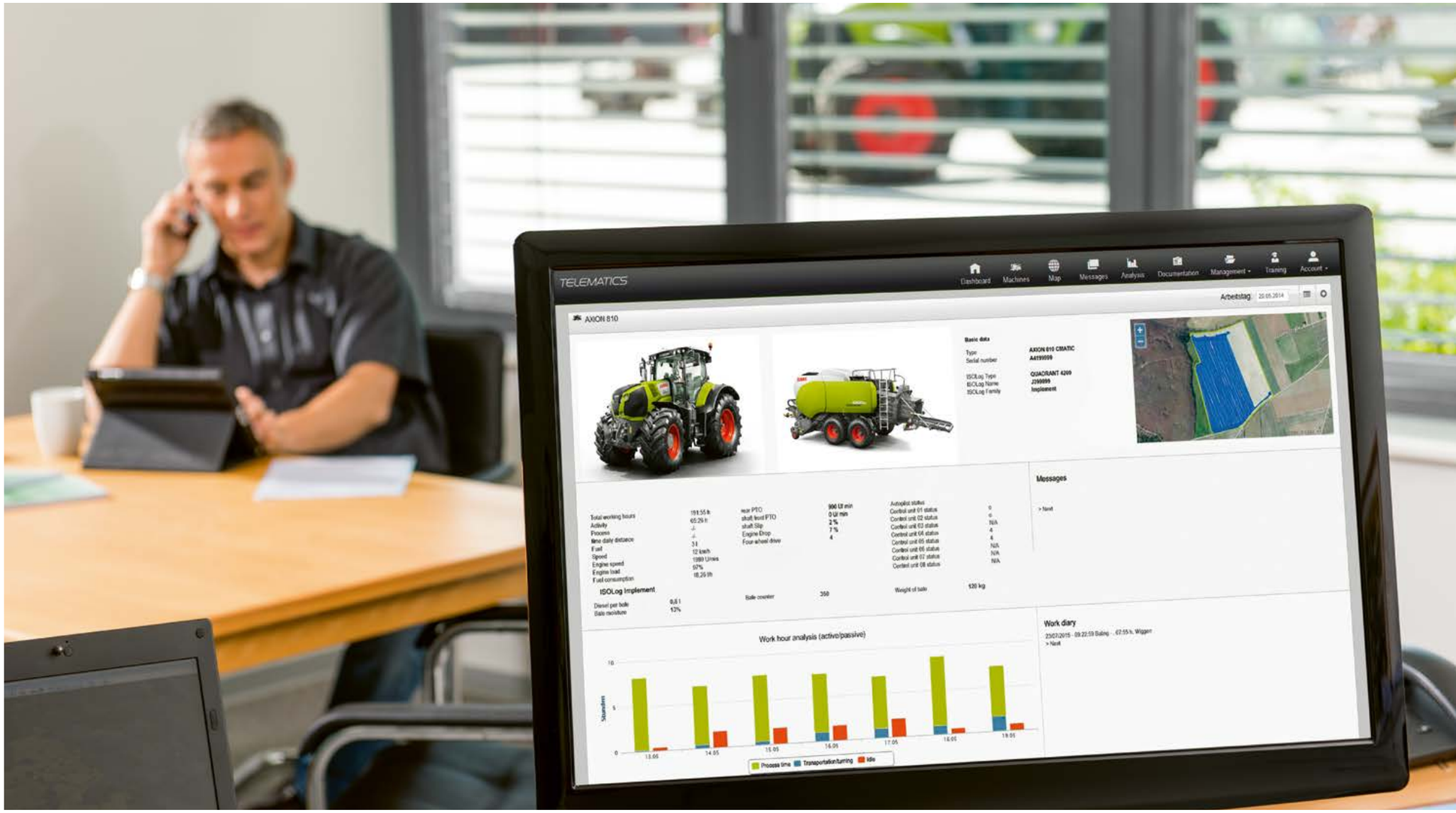
# The complete tractor-machine combination at a glance. 365ActiveBox.


## 3. 365ActiveBox for implements without ISOBUS.

Not all implements are TONI-enabled and equipped with the ISOBUS interface. But it is still possible to visualise these implements in TELEMATICS and track their activity.

To do this you need an iBeacon, or more specifically an 365ActiveBox, which transmits a constant Bluetooth signal and can be connected to many bluetooth-enabled smartphones.

The box is mounted to the respective implement and then assigned to the TELEMATICS app and named. You can connect the app to the iBeacon each time you attach/hitch the implement to your tractor.




This allows you to view the tractor data in TELEMATICS, see which implement has been deployed and so ensure that each job is perfectly documented.

It goes without saying that the implement is also displayed in the automatic documentation or the job map. As an alternative to bluetooth detection, it is possible to log a tractor-implement combination via the TELEMATICS portal so that activity data can be used to enhance automatic documentation, analysis and reports.

# TELEMATICS app and FLEET VIEW.

## App for mobile use.

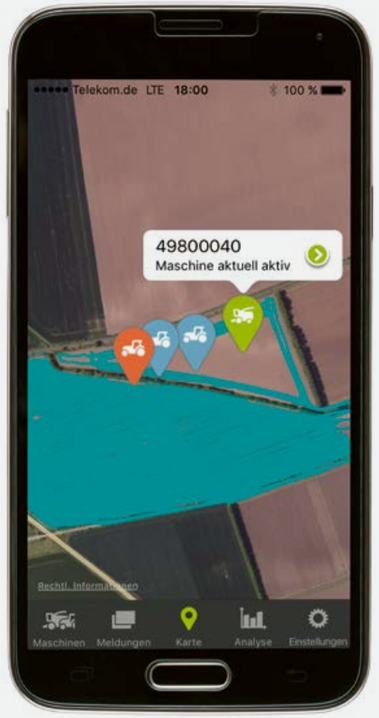
To enable you to use TELEMATICS when you are out and about, CLAAS offers an app for iOS and Android operating systems. The operating philosophy behind the app is the same as for the TELEMATICS portal and guides you through the three steps in modern fleet management: inform, analyse, optimise. An integrated navigation function also shows you the shortest routes to your machines. App users can view different summaries and statuses in the "automatic documentation" module as well as machine data. This makes it easy for farm managers in particular to keep an eye on work progress when out and about.

The app is free to CLAAS customers who already use TELEMATICS. Potential users who want to find out about the app with no obligation can download a free demo version from the App Store or Google Play.

**Benefits:**

- Simple and intuitive – can be used any time, anywhere
- No additional costs
- Vital information about the work process
- Easy to see work and tasks documentation

**"Inform, analyse and optimise" with the TELEMATICS app.**





Laden im App Store

JETZT BEI Google Play

Keep track of your CLAAS machines from any location with the TELEMATICS and FLEET VIEW App

## FLEET VIEW.

The FLEET VIEW app from CLAAS enables you to coordinate the grain transport team in your harvesting fleet so that your combine or forage harvesters can keep on working without downtime. The app continuously informs all the drivers in a logistics chain about the positions of the harvesters and transport vehicles in the fleet and their current grain tank fill levels.

FLEET VIEW provides vital support in field logistics, especially in large fields where visibility is difficult and when several machines are in use. Drivers of transport vehicles no longer have to rely on their experience or visual and radio contact. The FLEET VIEW app provides an optimum picture of all combine and forage harvester positions, so for example drivers can tell from data on grain tank fill levels which combine harvester they should go to next or when a forage harvester has no transfer vehicle nearby.

Downtime and unnecessary driving are eliminated. As a result, you use your combines to full capacity, cut costs by reducing diesel consumption and alleviate soil compaction. The LEXION, TUCANO or JAGUAR transmits data to your smartphone or tablet, bringing massive improvements in the efficiency of field logistics. The FLEET VIEW app from CLAAS significantly reduces the stress on drivers, especially during long working days.

# TELEMATICS licences.



| TELEMATICS | basic | advanced | professional |
|---|---|---|---|
| **Inform** | | | |
| Machine status, operating status and diesel level | ● | ● | ● |
| (Realtime) track | ● | ● | ● |
| Field management | ● | ● | ● |
| Mobile app with basic functions<br>(machine position, track, field boundaries, implement management) | ● | ● | ● |
| Machine parameters<br>(fuel consumption per unit area, diesel consumption per hour, engine load, speed, engine droop, daily fuel consumption, other machine parameters) | – | ● | ● |
| Harvest parameters<br>(grain moisture / dry matter content, throughout per hour, area output per hour, area output per day, other machine parameters) | – | ● | ● |
| Display of alarm and maintenance messages | – | ● | ● |
| Mobile app with advanced functions<br>(machine parameters, machine messages, harvest parameters) | – | ● | ● |
| **Analyse and optimise** | | | |
| Supports the optimisation of all current work processes in near real time<br>(machine parameters, harvest parameters) | – | ● | ● |
| Operating time analysis of the previous week | – | ● | ● |
| Mapping of yields and other parameters | – | – | ● |
| Comprehensive analysis tools<br>(operating time analysis, diesel consumption, performance analysis, machine comparison, campaign report, data export) | – | – | ● |
| **Document** | | | |
| Availability of historical data | Unlimited during licence period | | |
| Standard daily reports | ● | ● | ● |
| User-defined daily reports | – | ● | ● |
| Work diary | – | ● | ● |
| Automatic documentation<br>(CEBIS jobs in TELEMATICS; interpolated yield maps downloadable as Shape file) | ○ | ○ | ○ |

● Standard ○ Option – Not available

## TELEMATICS basic.[1]

"TELEMATICS basic" is part of the standard specification on many newly supplied machines. This licence includes the key information required for field logistics – the machine's position and track on the map, operating status and current fuel level. If you want to use the field management function, you can upload field boundaries from an external system or plot them on an aerial photograph directly in TELEMATICS. Use of the TELEMATICS app, specifically the main basic functions and field navigation, is also included. With this licence you can view all historical data. The "automatic documentation" function with data export can be purchased as an add-on.

## TELEMATICS advanced.

If you want more than the basic functions of "TELEMATICS basic" you can simply add the "TELEMATICS advanced" package. This licence contains all the functions and advanced machine data which enable you to monitor and optimise current processes. With "TELEMATICS advanced" you can, for instance, access performance parameters such as tracks, throughputs, yields and many other parameters which allow you to optimise machine operation in real time. With this licence you can view all historical data. "Automatic documentation" can also be added to this package.

[1] Not available in all countries.

## TELEMATICS professional.

For users who would like access to all possible data, especially large farms and contractors, CLAAS recommends the "TELEMATICS professional" licence. This package goes beyond the "TELEMATICS advanced" functions to provide analysis functions which enable you to optimise your machine or fleet deployments, as well as advanced analysis functions which are capable of answering highly specific questions. The full range of historical data can be used in the analyses. The TELEMATICS app is naturally included in this package. The "automatic documentation" function can also be purchased as an add-on.

TELEMATICS basic

TELEMATICS advanced

TELEMATICS professional

# Features.

## Efficiency.

- Reduced maintenance times and increased reliability
- Detailed analysis of performance and adjustment parameters
- Operating time analysis for improved work processes

## Service.

- Access to service information
- Error analysis without machine downtime
- Proactive service planning
- Rapid troubleshooting

## Mobile access.

- Access key information anytime, anywhere
- Integrated navigation function to locate machines
- Available for iOS and Android

## Control.

- View performance and machine data from any location
- Identify costly downtime and potential bottlenecks in transport logistics

## Documentation.

- Field-specific documentation for each job
- Eliminate input and transmission errors with "automatic documentation"

## Implement management (TONI).

- Record and document implement data
- Wide range of partner companies ensure TONI compatibility
- Future-proofed through standardisation

# Ensuring a better **harvest**.

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365FarmNet enables you to manage your entire agricultural business by means of a single, non-proprietary software solution. Interfaces to intelligent applications created by partners in the agricultural sector offer expert support for your business 365 days a year.
CLAAS is a 365FarmNet partner.

www.365farmnet.com

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