The electronic key: With connect:ac access control, you can control access to your fleet. You always know who drove what vehicle and when.
You always know who is behind the wheel of which vehicle because the drivers have to identify themselves by means of a PIN or using an RFID chip. With connect:ac access control, you make using your fleet safer and more transparent.

The benefits at a glance:

- **Unauthorized use** of vehicles no longer possible
- **Access can be controlled** based on the person, a period of validity, driving permission, and the vehicle
- **Evidence of vehicle usage** available anytime
- **Driver-specific vehicle settings** e.g. speed throttler
- **Loss of keys** no longer possible
- **Drivers are more aware** of how they use vehicles
- **Contactless identification** by means of an RFID transponder or PIN entry via a numeric keypad
- Also available as a **retrofit solution**
Electronic pre-shift check: The connect:ac pre-operational check and associated smartphone app simplify the vehicle check before every shift.
The electronic vehicle check enables you to ensure that the vehicle can only be started when the check has been carried out and the vehicle is fully operational. The connect:ac pre-operational check improves safety on your premises and keeps up-to-date on the condition of your vehicles.

The benefits at a glance:

- **Increased operational safety** because vehicles can only start after a check has been carried out
- **Simplified pre-shift check** with digital test results
- Vehicle condition is **regularly inspected**
- **Automatic email report** in real time in the event of vehicle damage or irregularities
- **Photographic record** of vehicle damage or irregularities possible
- **Great flexibility** because the fleet manager can freely define questions in the checklist configurator
- **Recording** of all defined questions and answers
- App works on all **mobile Android devices** with NFC technology
- Available as **retrofit solution**
The electronic damage monitor: connect:dt crash detection notifies you of collisions and major shocks incurred by the vehicle. The cause of damage or the person behind the damage can be determined.
Was there an accident? Is there somewhere in the company grounds that’s uneven? Is a driver not driving cautiously enough? With connect:dt crash detection, the time and magnitude of major shocks that may result in damage to a vehicle are logged.

The benefits at a glance:

- **Identification of dangerous spots** or damaged surfaces in the company grounds
- Identification of the driver in the case of intentional misuse or rough driving
- Reduction of damage caused by inappropriate treatment
- Reduction in the **cost of repairs**
- Early **detection of vehicle damage**
- Automatic speed throttling can be set for the driver
- Individually adjustable **recording threshold**
- **Identification of the driver** in the case of an accident or damage to a building
- Drivers are more aware of how they use vehicles
- Greater safety in the **company grounds**
- Also available as a **retrofit solution**
The digital driver’s logbook: With connect:dt operating hours, you document your vehicles’ hours in service. At all times, you know how long your forklifts or warehouse equipment have been in use.
Is a vehicle rarely used? Is a vehicle at risk of exceeding the hours in service as agreed with the leasing partner? With connect:dt operating hours, your vehicles’ hours in service are regularly recorded – giving you an overview of how your fleet is used at all times.

The benefits at a glance:

- **Hours in service** are automatically logged and transmitted
- Individually adjustable **reading interval**
- **No workload** caused by manually logging hours in service
- **No operational disruptions**
- **Greater transparency**
- Improved **usage planning** and optimized fleet capacity utilization
- Maintenance intervals are **easier to plan**
- Unnecessary **vehicle outages** are avoided
- **Early identification** of bottlenecks
- Warning if a **number of hours in service** is exceeded
- **Reduced overuse** of vehicles
- **Reports available** for individual vehicles
- **Data transfer** via cell phone network, no additional infrastructure needed
- Also available as a **retrofit solution**
The automated error code transmitter: connect:dt trouble codes notifies you of vehicle errors before more serious damage can occur.
Does a wearing part need to be replaced? Does a vehicle need to be taken out of service to avoid more severe damage? With connect:dt trouble codes, you are provided with qualified information regarding vehicle errors – including errors that do not immediately limit the vehicle’s functionality or performance.

The benefits at a glance:

- Early detection of malfunctions or damage
- Makes preventative maintenance possible
- Reduced vehicle outages
- Improved vehicle availability
- Optimized service processes with shorter repair times
- Transparency regarding the sources of errors
- Automatic notification of the service organization is possible
- Automatic e-mail reports
- Also available as a retrofit solution
The digital usage analyzer: With connect:an usage analysis, you can keep an eye on just how your vehicles are used. You are constantly kept up to date on your vehicles’ capacity utilisation.
What is the split between a vehicle traveling and lifting items? Does its usage tally with the vehicle’s performance profile? With connect:an usage analysis, you can examine your fleet’s capacity utilisation in detail, keeping you abreast of vehicle usage, idle times, and maintenance at all times.

The benefits at a glance:

- An overview of vehicle availability
- Shows the actual fleet performance
- Easy identification of underused vehicles
- Potential for improvement within the fleet is brought to your attention
- Buying new vehicles or using replacement vehicles can be avoided
- Fleet usage transparency
- Inferences about driver behavior are made possible
- Data transmission possible via various communication technologies
The digital battery manager: With connect:an battery management, you can monitor your vehicles’ batteries. You then always know whether batteries are being handled correctly.
Is a battery being serviced correctly? Are batteries often charged when it’s too soon or already too late?
The state of a battery is assessed on the basis of the parameters recorded and incorrect usage is identified.
With connect:an battery management, you can keep your fleet’s power cells in good shape.

The benefits at a glance:

- Avoid damage and loss of performance caused by incorrect charging or servicing
- Increased **vehicle availability**
- Avoid unnecessary **maintenance or acquisition costs**
- **Battery parameters** presented transparently at a glance
- Notification when **limits are reached**
- **Energy consumption** made clearly quantifiable
- **Incorrect usage** can be ascribed to the driver(s) in question
- **Identification** of rarely used or overused batteries
- **Raises drivers’ awareness of** energy management
LINDE CONNECT:ZI TRUCK MAPPING

GPS based digital tracking of trucks all over the world

The Linde module connect:zi Truck Mapping delivers GPS-based vehicle tracking in outdoor applications and leverages fleet monitoring opportunities. On the basis of the Linde connect:portal sales organizations and network partners can easily detect and track the position of any truck to enhance service and availability.

Sample Applications
Worldwide monitoring of fleets or single trucks

Scale-down to dedicated areas or countries

Customer Benefits

→ Worldwide monitoring of fleets and trucks in outdoor applications
→ Scale-down to defined areas or countries
→ Company-wide tracking of trucks

→ Accurate GPS based position tracking
→ Vehicle position tracking with +/- 5 meter accuracy
→ Visualization of trucks on the basis of Google Maps and Google Satellite view

→ Easy tracking of truck positions for service technicians
→ Reduced times for searching trucks (in case of repair or maintenance issues)
→ Lays the technical foundation for remote access of the truck
LINDE CONNECT:ZI SPEED ZONING

Digital zone configuration and management – enhanced safety for people, assets and environment

The Linde module connect:zi Speed Zoning is a further step towards enhanced safety in our customers’ environment. The module allows end-customers to define safety zones on the basis of the fleet management Linde connect.

Sample Applications

At crossings

Near pedestrian ways

In narrow roads

In wide areas

Customer Benefits

Safety

→ Assignment of multiple speed limits in the same warehouse or hall layout
→ Protection of pedestrians
→ Protection of narrow roads and crossings
→ Wide area protection

User-friendliness

→ Simple upload processes for warehouse layouts
→ Self-explanatory configuration and set-up of speed zones
→ Easy adjustment process based on an easy user interface in Linde connect:desk

Accuracy

→ Precise adjustment of speed limits to defined zones
→ Accuracy of 15 cm
→ Precise reduction of speed as soon as a truck enters a zone

Technology

→ UWB technology is the technical foundation for indoor localization
→ UWB technology allows signal transmission through walls and shelves

1 Valid for typical intralogistics facilities, examination within the scope of consulting.