

zedas[®] cargo



Reliable. Efficient. Economical.

**The logistics software
for long-haul traffic**

 zedas

Competence all along the line

ZEDAS develops standard software products for the management of rail freight transport, vehicle fleets and railway infrastructure. Our specialisation and expertise make the difference to our customers' advantage! Leading companies in the industry have been placing their trust in us for more than 25 years.

With ZEDAS, you are choosing a high-performance partner whose products are future-proof due to consistent further development. We provide you with comprehensive support for their launch and are there for you round the clock with our 24/7 service. We will make the software available to you via the Internet through our computer centre, on request.



The right software for your requirements

Railway undertakings (RU) are under high cost and competitive pressure. In addition, there are challenges due to digitisation, the shortage of skilled workers and high demands on documentation and verification.

Companies who want to be successful in rail freight transport in the long-term don't just have to plan transport services efficiently but also keep an eye on the profitability of orders at all times. You are often confronted with these questions in everyday business life:

- How can I plan efficiently and react to deviations?
- How can I monitor and control the profitability of my orders?
- How do I integrate all employees, customers and partners into the processes?
- How can I meet my obligations to provide evidence for the authorities?
- How can I invoice services completely and quickly?

This is exactly where the integrated product concept of zedas®cargo comes in. The focus is on the entire added value of railway undertakings – from calculation, planning and scheduling to operational management, billing and post-calculation. Our modular standard software creates continuous digital information flows and provides a consistent database for all core processes in the company. The expenses for planning, monitoring, customer information and documentation are significantly decreased and error rates are reduced. Key figures and statistics are available at the touch of a button. With the help of zedas®cargo you are well prepared for the future.

Process overview long-haul traffic



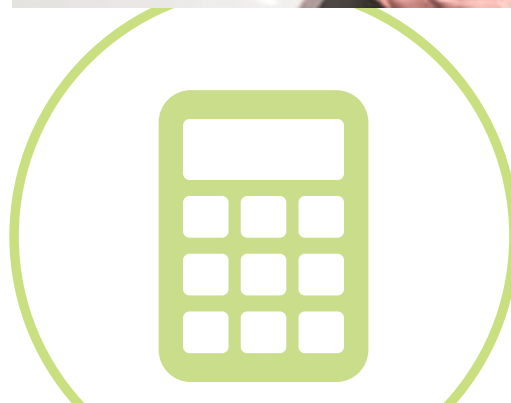
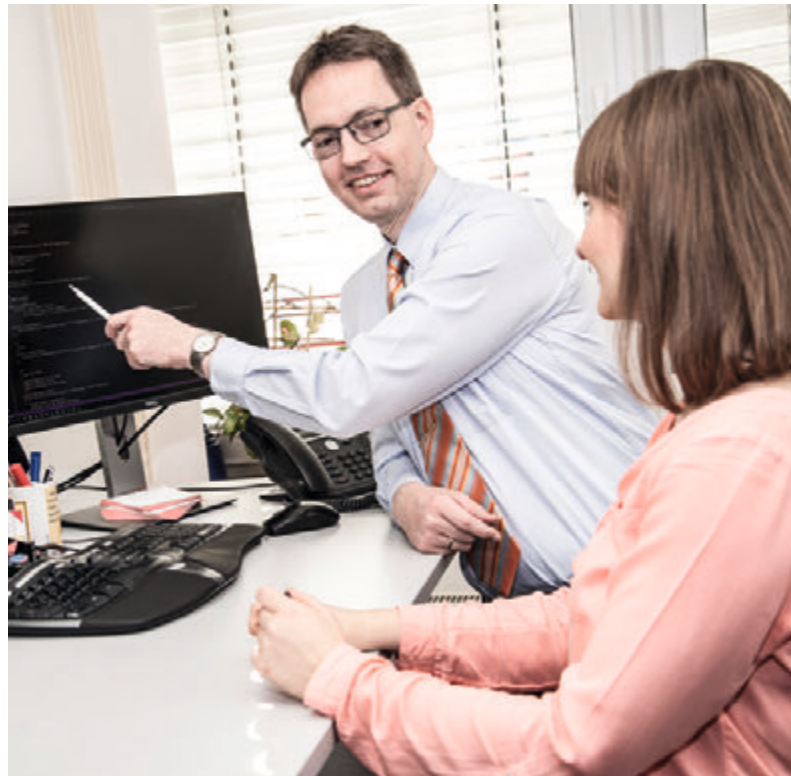


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A well thought-out service

zedas®cargo reliably supports you in calculating rail transports. The simple creation of costing variants helps you find alternatives and identify the best possible variant during the sales phase. After successful order processing, the calculated costs can be compared with the actual costs. This is the basis for solid controlling!

Contract-relevant information can be ideally captured and managed with zedas®cargo. All factors, such as the production plan, agreed delivery quantities, conditions for internal and external services and quality targets are taken into account. By defining rules for sending messages and documents, you can meet your customers' information needs. In this way messages are automatically generated during operation, for instance, for the provision of wagons, train departures, delays, etc.



Well prepared, well driven

Efficient order and resource planning runs smoothly for regular train services and ad-hoc traffic with zedas[®]cargo. Different planning horizons offer the user the option of long-term planning as well as weekly planning and daily planning. This is the basis for operations.

Thanks to clear gantt charts, planners and dispatchers are able to immediately identify planning conflicts and free capacities. All planning objects are linked so that changes, such as cancellations, delays or personnel absences, are immediately apparent in all planning views. This ensures the optimum utilisation of existing resources and efficient operational management. Extensive filter functions make operation much easier.



OPTIMISED RESOURCE PLANNING AT THE TOUCH OF A BUTTON

Thanks to the Opti Planner, zedas[®]cargo includes a powerful tool for rail freight transport. Standard planning processes are automated and optimised - a real gain in efficiency! In the case of personnel assignment for example, all services are independently identified and assigned on the basis of the applicable hard and soft factors. The software calculates alternative planning suggestions for rapid response to operational events. Planners and dispatchers are relieved, resources are used in a balanced and efficient manner.





ROUTE PLANNING

All the route's operational and technical data are recorded in the system. Timetables are automatically imported through interfaces with infrastructure managers. The data flows directly into order and resource planning.

PERSONNEL PLANNING

zedas[®]cargo allows the planning of optimum personnel tours and services in compliance with all applicable working time regulations and collective wage agreements. The basis for this are the personnel requirements that are automatically created on the basis of the entered orders and timetable data. Definable elements such as business trips and set-up times are added using drag & drop as part of the planning. Regular services and tour cycles can already be prepared in the long-term planning and therefore facilitate the daily work.

Employees are assigned to the services in the personnel scheduling. Qualifications, such as medical fitness, driving licence category, knowledge of locomotive series, route knowledge, are checked by the system. Data is added from operations, automatically creating a digital register for train drivers and route knowledge.

LOCOMOTIVE PLANNING

Similar to personnel planning, locomotive planning is based on order services that are linked to cycles using drag & drop. During the planning phase, location clashes are identified and various suitability criteria for the locomotives are checked and visualised. This also applies to locomotives that are not available, e.g. due to maintenance, rentals etc.

Efficiency in a nutshell

zedas[®]cargo makes it possible to prepare, handle, monitor and document operations in the best possible way. Employees in the control centre can see the orders, resources and train journeys at all times through various graphic views. Order changes, ad-hoc services or cancellations are incorporated on a daily basis. Interfaces to infrastructure managers enable the continuous tracking of national and international trains.

In the event of deviations from the plan, zedas[®]cargo visualises conflicts and rule violations and allows for timely and targeted intervention. Operational events, such as the removing of damaged wagons, are documented.

To minimise manual data entry, the system has various options to import wagon and loading information, such as the Rail Hub (see Info Box) logistics platform or various standard interfaces.

SIMPLE TRAIN PREPARATION THANKS TO MOBILE SUPPORT

Mobile applications for tablets and smartphones are available for operational activities actually on the train. The tasks in train preparation are supported according to international standards. These include, for example, forming the train composition, handling damaged wagons, brake calculation and creating the necessary documents.

RAIL HUB - PLATFORM FOR DIGITAL TRANSPORT MANAGEMENT

The zedas[®]cargo Rail Hub is the web-based platform for professional interaction with RU and customers. Transport orders are recorded, coordinated and released electronically. Alternatively, an Excel upload function is available. The customer can see the order status as well as the current position of the train including relative position in the portal.





SHIPMENT TRACKING & ETA ACROSS NATIONAL BORDERS

The information, THAT and HOW the estimated time of arrival (ETA) is changing, is crucial for customers. Status information generated in real time, e.g. on delays, significantly simplifies the planning of follow-up activities in the transport chain. ZEDAS has combined the data from the entire course of the transport order and the use of resources with current train-running information for this purpose. In addition to the automatic filtering of important shipment information, each customer can define how, when and which events they want to be informed about.

TAF TSI - THE NEW STANDARD FOR DIGITAL COMMUNICATION

ZEDAS already has developed interfaces on the basis of the European TAF standard. This gives our customers the option of standardised communication between railway stakeholders across national and infrastructure borders. ZEDAS is closely monitoring the further development of the TAF standard and will gradually implement any applicable requirements in future releases.



It's worth it

The contracts entered in the system form the basis for billing. All services performed in the company are assigned to the orders and automatically transferred to the billing module. Services that have not been entered or have been entered incompletely are supplemented manually. After approval comes the invoicing including cancellation and credit notes. The billing data can be transferred to a financial accounting system via interfaces.

The basis for payroll accounting is the employees' operating times and the associated surcharges recorded in the system. These are automatically posted to personnel accounts. The transfer of payroll data takes place via interfaces to the payroll accounting system.



Identifying and exploiting potential

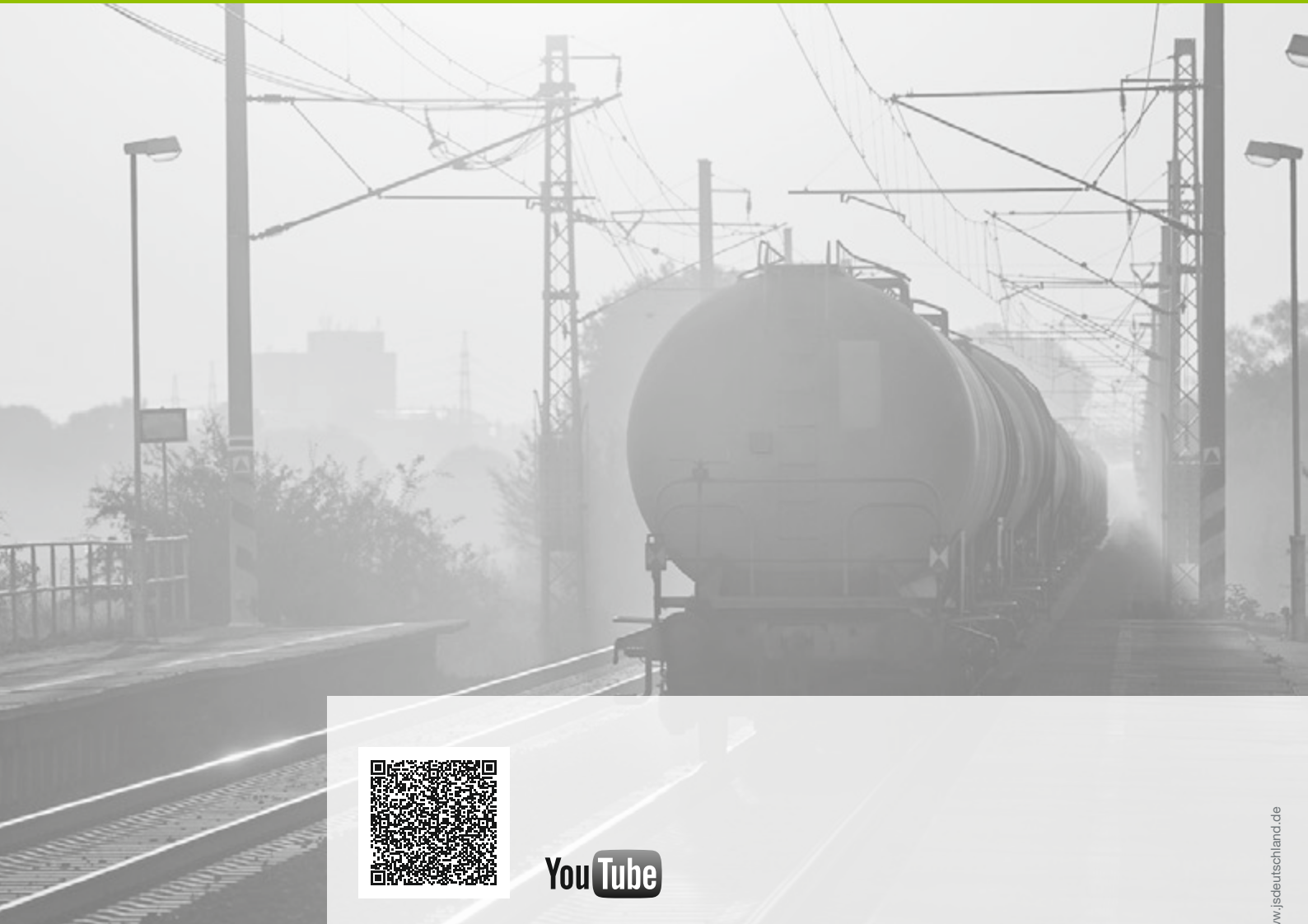
zedas®cargo offers railway undertakings various options to monitor key operational and commercial performance figures. It is possible to evaluate the economic viability of services provided and identify cost drivers at any time. This applies equally to statistics and verifications. All documents can be created time-controlled and sent automatically by email in PDF format. Data export to Microsoft Excel is also part of the standard functionality.



BETTER SAFE THAN SORRY

RUs have to comply with a number of obligations to provide verifications within the safety management system (SMS). zedas®cargo offers the rail operations manager a good basis for this. The software provides standard verifications at the click of a mouse. This specifically includes reports & documents for the personnel area, such as the monitoring of working hours, the status of qualifications and certificates as well as the acquisition or maintenance of route knowledge and local knowledge.

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YouTube

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zedas[®] cargo wagon number recognition

AI-supported train dispatching via app



In order to reduce manual input processes in logistics management, ZEDAS GmbH has developed an AI-based wagon number recognition for RUs in freight transport.

As a key technology, wagon number recognition has been integrated into the Train Check app. Train Check is an easy-to-use app for paperless train check-in directly at the train.

During the train check, a scanner for the wagon number can be opened through a button next to the text field for manual entry. If the camera is pointed at the wagon area with the UIC wagon number, the AI automatically recognises and analyses the exact position of the number, the text characters and checks the recognised UIC number. No further symbols such as QR or barcodes are necessary.

For train control, the pre-booked wagon data is automatically loaded from zedas[®] cargo and displayed in the application. The direct booking of wagons in the app is also possible. With the identified wagon number, the app then retrieves the keeper's technical wagon master data via the GCU Broker (TAF interface) and imports it into the Train Check app.

Further Highlights of the App

- automatic brake calculation
- Wagon lists and braking notes are created automatically and can be called up at any time
- future-proof thanks to TAF/TAP TSI interfaces for TCM and WDR
- AI accelerates train dispatching
- improved data quality