LOGISTICS AND MAINTENANCE - PROCESS OPTIMISATION THROUGH A HOLISTIC SOFTWARE SOLUTION

WHETHER IT IS A SHUNTING SERVICE WITHIN A FACTORY OR A CONNECTING ONE, A SHUNTING LOGISTICS SPECIALIST HAS TO DELIVER WAGON TRANSPORTS ON TIME AND SAFELY, WHILST USING RESOURCES IN AN OPTIMUM WAY.

The quality of this type of service is rated by orientating on a smooth planning and execution of the logistics chain.

Condition for this is the availability of railway infrastructure, locomotives and wagons. The software specialist ZEDAS GmbH has combined this approach of a holistic consideration of logistics management and asset management in its product suite. The disposition software for shunting services zedas®cargo facilitates and automates not only operational but also commercial processes. zedas®asset is a software for the asset management of railway vehicles and infrastructure which enables predictive maintenance. This minimises unplanned failures and thus increases service life, safety and availability of the assets. By combining zedas®cargo and zedas®asset, logistics and maintenance processes are linked and coordinated.

INFRASTRUCTURE AT THE FACTORY PREMISES

In rail freight transport, connecting and factory railways form the logistical link between inbound respectively outbound trains and the on-site loading points of the companies. For this purpose, the dispatcher effectively plans and monitors shunting orders in zedas®cargo. Real-time information on track occupancy, wagon location and cargo help dispatchers in this daily business.

An important element for the integration of locomotive drivers and wagon masters are apps that are specially designed for these requirements. Independent of the central control centre, e. g. wagon information can be called up, shunting activities can be mapped, damages recorded or corrections integratedly made in digital form. The software also visualises track sections that are currently not available or will not be available in the future due to disruptions or maintenance work.

The employees can see the current utilisation of the infrastructure at any time, which means that the existing tracks can be used better and the utilisation can be further increased. This makes the operation more profitable.

OPTIMISED MAINTENANCE PLANNING

Since the data on tonnages of locomotives and wagons rolling over the infrastructure of the factory premises are stored in zedas®cargo, load-dependent maintenance planning can be derived from this information. With the help of pattern recognition, very often used sections of track are identified. Load data from the operational process control due date planning, whereby inspection intervals for track sections are automatically adapted according to load and use. Inspection cycles are thus stretched to a maximum and repair efforts are reduced to a minimum.

INVESTMENT DECISIONS

Suitable maintenance strategies and decisions for replacement investments are derived from the maintenance and load data. An important KPI in zedas®cargo is the utilisation of the tracks. This KPI indicates whether the existing track capacity should be adapted according to the development of the quantity of wagons. It is also used for maintenance planning in zedas®asset - if the utilisation increases, the frequency of maintenance measures also increases. The utilisation intensity factor also has an impact on future investment decisions and is included in the calculations of the zedas®asset Invest Manager. The scenarios described here offer the possibility to have a predictive, balanced planning for the investment in assets to replace assets or to extend the existing inventory. Benefits for the daily business are an increased availability and reliability of the assets.

SIMPLE APP - HUGE IMPACT

Damaged wagons can be recorded by the locomotive staff directly on-site using an app. The form of recording and sending damage reports by the RU is standardised in the GCU. Via interface the damage report incl. associated attachments can be transmitted automatically as a WDR (Wagon Damage Report) to the GCU broker. Afterwards, the broker forwards this data to the wagon owner.

If there is a vehicle workshop at the factory's premises, the data pool is available for the workshop, for use of further planning steps and processing. Feedback on job orders and the processing of checklists is made electronically via app, there are no media disruptions. Completion information by the workshop (ECM 4) and operational release by the fleet manager (ECM 3) are made in a digital way – consistent and in an audit-proof manner. Immediately vehicles are available again for the scheduling staff.

Efficient interaction of logistics and maintenance processes offer the possibility to use many synergies. Non-availability of the infrastructure of works railways are visible to dispatchers and shunters in real time. Data on load and utilisation of the infrastructure is automatically available for maintenance planning. Verbal coordination between the individual specialist departments is reduced. The holistic view on both shunting logistics and asset management allows to have availability of assets to be increased and operating processes and costs to be optimised.