A Depot Management System – Why?

- High penalty for cancelled blocks
- Uncertainty about vehicle condition and location
- Ease of work for dispatchers
- Cost for shunting operations too high
- Away from paper-based orders to digitised processes
- Need of monitoring multiple depots
A Depot Management System – Why?

- Shortage of resources, in particular among employees
- Restrictions / requirements for certain assignments
- Lack of transparency and flexibility
- No optimal use of the parking spaces
- Unexpected events / tasks disturb processes
<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
<th>Description</th>
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<tbody>
<tr>
<td>Less refuelling tasks</td>
<td>40+</td>
<td>Due to intelligent refuelling management</td>
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<td>Savings per incident</td>
<td>4000+</td>
<td>Due to avoidance of cancelled trips</td>
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<tr>
<td>Time savings/ day</td>
<td>10+</td>
<td>Due to avoidance of redundant refuelling tasks</td>
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<td>Time savings</td>
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<td>Working yrs due to automated driver sign-in</td>
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<td>Time savings/ year</td>
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<td>Hours due to no wast of time to search vehicles</td>
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<td>Time and cost savings/ day</td>
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<td>Due to less shunting</td>
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PSItraffic/DMS-Modules for the best possible utilization of all resources

Depot

PSItraffic/DMS

- Charging management
- Cloud capability
- Driver information
- Quality management
- Vehicle identification and localisation
- Automatic vehicle allocation to parking lots
- Workshop and maintenance
- Vehicle allocation to blocks

23.10.2020
PSIebus: The strength when combining Depot- und Charging Management
Vehicle identification and localization – Precise determination of position

- Various positioning systems (manufacturer independence)
- Precise, meter-accurate localisation
- Interface to various switch control systems
- Positioning/switch control system reports arrival and location of vehicles
- FMS-data from the vehicle
- Control of preconditioning
- Graphic overview for all users

Example
- Without a localization system, dispatchers spend 2-4 hours a day searching for vehicles
- Average time saving through DMS:
  5 depots x 3 hours x 365 days = **5,475 hours / year**
Automatic allocation to parking lots – Optimized parking

- Automatic allocation to parking spaces according to vehicle status
- Automatic control of tramways (switch control)
- Information of parking space: display, board computer, tablet
- Fast arrival of vehicles without waiting times (gate control)
Dispatching of workshop tasks – Efficient planning of operations

- Fault detection (manually, via AVMS)
- Automatic import of FMS data
- Import of master data and orders from ERP (SAP/workshop management system)
- Scheduling of repair works
- Visible for all users
- History of faults, workshop and maintenance tasks
Dispatching of maintenance tasks – Efficient vehicle supply

- Refuelling optimization
- Interface to tank data/kilometre data collection systems
- Charging management
- Use of special terminals
- Documentation of all necessary supplies
Automatic block assignment – Dynamic, flexible and very fast

- Optimisation / Qualicision with artificial intelligence – always finds a solution
- Dispatching within seconds, considering all operational conditions
- Flexible configuration of all dispatching criteria
- Semi-automatic, fully automatic and manual assignment of available vehicles to blocks
- Notification if blocks can not be served (vehicle shortage notification)
- Graphic overview of block assignment
- Dispatching of all modes of driving
Information – Current status at the depot

- Current operational information in real-time
- Operator file, vehicle file, parking space file, block file with current and historical data
- Immediate notification of critical operating conditions to responsible persons
- Basis for operational decisions and control
Allocation of driver information – Comprehensive, clear and up-to-date

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- Screens and driver information terminals
- Information about trips, services, vehicle conditions
- Supervision of service attendance and departure checks
Integration into your IT landscape – Interfaces

- Timetable and duty roster planning (VDV 452 & 455)
- Charging management (VDV 463)
- ERP system
- Switch control system
- AVMS (VDV 461)
- Gate control system
- Positioning system
- Fuelling data system
- Kilometre data recording