

MOBILE ORDER MANAGEMENT FOR THE WASTE DISPOSAL INDUSTRY

INTEGRATE VEHICLE UTILIZATION DATA INTO ENTERPRISE SYSTEMS

Service vehicles are critical to creating value in the waste disposal industry. Yet, too often they are not adequately integrated into a company's IT network. SAP® Mobile Order Management for Waste and Recycling by PROLOGA can help correct this shortcoming with real-time communication and data recording.

Your service vehicles are valuable resources on wheels. They make a significant contribution to value creation in the waste disposal business. At the same time, they incur high running costs. For this reason, it is crucial that you manage their utilization in a holistic way and incorporate the utilization data into your enterprise's information flow. However, too often communication with service vehicles ceases as soon as they leave the depot. This makes it difficult for you to stay up-to-date on the current service location and vehicle availability when new orders for service come in. In most cases, you can find out how everything went on a scheduled route only once the vehicle returns to the depot. A complicating factor arises when work orders and service data are transmitted in paper form: communication problems crop up, information is lost, and errors occur. It is not hard to see how real-time communication and accurate, timely data recording represent a huge optimization potential for your business.

SAP® Mobile Order Management for Waste and Recycling by PROLOGA can unlock this potential for your enterprise by helping you to:

- Reduce costs by improving scheduling and overall fleet control and usage
- Process orders quickly and effectively
- Create transparency and thus support more efficient processes

Real-Time Communication for Better Service

By supporting a wide variety of communication methods, the SAP Mobile Order Management application can cover the entire operational side of order management. For example, it supplies imple-

mentation and service data you can use to compare and analyze routes retroactively. Through communication over general packet radio service (GPRS) and wireless local area network (WLAN) connections, the head office can exchange information with the vehicles on an ongoing basis. And with support for automated container tracking, you remain informed in real time of the movements and locations of all your inventoried containers. In addition, the application gives you the tools to analyze this data so you can optimize the usage of your fleet.

Using SAP Mobile Order Management, your everyday service performance could look something like this:

- Your head office transmits an order to a vehicle. The order is printed out in the vehicle.
- The vehicle communicates to the head office the status of the order, for example, if it was started, is in progress, or was completed.
- The vehicle's location is displayed in the head office, and utilization of the vehicle is analyzed on an ongoing basis.
- Service data – including times, kilometers driven, and weight of a load hauled on a particular route – is recorded in the vehicle as it progresses along its route.
- The data describing container movements and last-known container location is displayed on a dashboard in the head office.
- The fill level of the container is recorded.
- All information is displayed on a digital map in the head office for all vehicles and containers in the waste management fleet.



Improved Transparency for Routes and Containers

SAP Mobile Order Management gives you another option: namely to record all the relevant vehicle-related data on work processes, routes, and services and to quickly transmit this data to the SAP software. This allows you to determine, at any time and in detail, which waste disposal services were provided at what location and at what time. This makes the execution of scheduled routes a fully transparent process and has the following direct benefits for your daily operations:

- Reliable information lets you bill accurately for services rendered and respond promptly to complaints. You have access to powerful cost controlling, management, and optimization functions.

SAP Mobile Order Management provides comprehensive functions for automated data recording, which can help you compare completed routes and use the resulting data to improve your route planning.

- You can compare planned and actual route data and identify the cause of deviations. This in turn allows you to optimize fleet utilization, including route planning and use of equipment.
- GPS coordinates can be recorded for every work process so that data can be assigned to a geographical point. You can then use this data to review how incoming orders, deviations, and quantities are distributed across a particular area and adapt your business strategy accordingly.
- Because the application is fully integrated with the SAP Waste and Recycling application, you can use the powerful planning, analysis, and simulation tools of that software to identify key performance indicators and trends.

Real-Time Communication for Flexibility and Service Quality

Daily operations in waste disposal – trash container service, for example – require a high degree of flexibility in planning when changes need to be made. The person in the head office responsible for planning has to be able to assign orders to vehicles quickly and decisively. This is realized by equipping vehicles with onboard computers with which the head office can exchange data. The frequency of data transmission can be set individually, although two-minute intervals have proven to be ideal in practice. If an order changes, the head office sends modified order data along with route data and documents to the relevant vehicle. From the vehicle,

the driver can print out the disposal documents, which contain instructions on how and where to dispose of the trash, including how to handle hazardous materials. The driver can update the status of the order and send the information along with the current position and service data of an order back to the head office. This comprehensive communication between the SAP software and the driver keeps all parties consistently up-to-date on the progress of an order.

Automated Activity Data Recording

SAP Mobile Order Management provides comprehensive functions for automated data recording, which can help you compare completed routes and use the resulting data to improve your route planning. In addition, the driver or any member of the team may record events that occur on the route and transfer the information to the SAP software. Depending on the vehicle type, events may include street-specific activities such as pouring, sweeping, and spreading; container movements; clocking in and clocking out by the driver; and service times. The vehicle's current location can also be calculated and recorded at regular intervals.

All data on events and positions recorded in a vehicle can be used by the SAP software to trace the exact progress of a route on a digital map, giving the planner in the head office an ongoing overview of route progress. The planner can compare the actual

SAP Mobile Order Management gives you the option to record all the relevant vehicle-related data on work processes, routes, and services, and to quickly transmit this data to the SAP software.

route with the planned route, identify any deviations, and visually compare different routes. At a later stage, the planner can track where a particular vehicle was at a particular time, and, with this information, respond meaningfully to any queries or complaints. These functions can be used later for paperless order management, as the events recorded during the course of a disposal job serve as digital evidence of job completion.

Monitored Containers for Reliable and Accurate Status

Do you know which customers of yours have a type 1100 container, or which containers have not been moved for months? Container inventory is one logistical aspect of the business that could keep many waste disposal pro-

viders awake at night. This is where SAP Mobile Order Management comes in. It gives planners and controllers an up-to-date overview of their inventoried container stock and container movements. This puts them in a position to respond quickly to deviations and problems. Just some of the data that can be recorded for every container movement includes:

- Container number and current geographical location
- Time and activity type (collect, drop off, or empty, among others)
- Container status and fill level

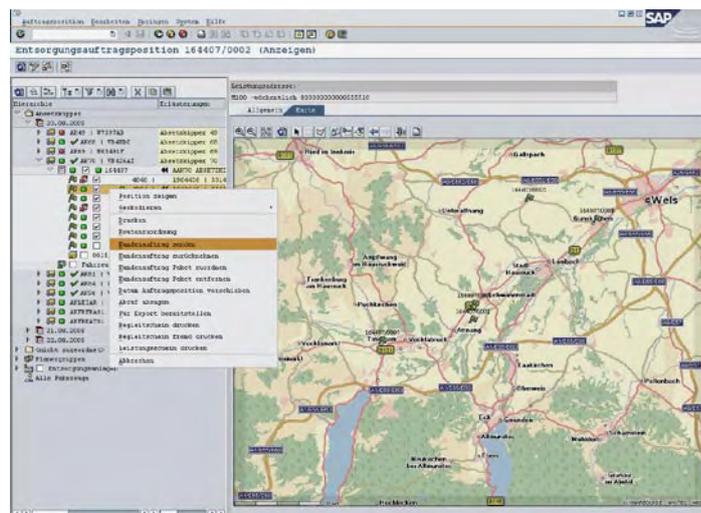
Because this information is displayed in a clear format in the head office, the planner is able to track the lifecycle of every container. He or she can view the position of the container on the map throughout its movements, and thus react appropriately to complaints or problems. The planner can open a

separate view in the application that displays the current locations of all containers, as a support for order planning.

By supporting a wide variety of communication methods, the SAP Mobile Order Management application can cover the entire operational side of order management.

Find Out More

To learn more about how the SAP Mobile Order Management application can help you integrate your waste disposal vehicles into your enterprise system, visit us online at www.sap.com/solutions/solutionextensions/wasterecycling/index.epx.



Summary

SAP® Mobile Order Management for Waste and Recycling by PROLOGA helps you integrate your vehicle fleet into your company's IT network. The real-time communication and data recording the software provides go a long way toward making your fleet utilization more efficient and your costs more transparent.

Business Challenges

- Provide up-to-date vehicle data and integrate it into the enterprise software
- Optimize resource utilization through provision of up-to-date, accurate information on vehicles, containers, and routes
- Introduce efficient cost control of vehicle fleet

Key Features

- **Fleet management** – Record all work processes and service data relevant to the vehicle fleet
- **Order management** – React speedily to service orders and bill more efficiently
- **Container management** – Maintain an ongoing overview of your inventoried container stock and container movements

Business Benefits

- **Saved time and money** with resource optimization, direct implementation of incoming orders, and quick reaction to unforeseen events
- **Faster order processing** from order receipt and on-site service provisioning to invoicing thanks to mobile communication-based processing
- **Real-time information flow** between vehicles and head office based on general packet radio service (GPRS) and wireless local area network (WLAN) communication
- **Transparent view of planned routes** for easier service-based billing
- **Improved data quality** and reduced need to revise service data in the SAP software based on the use of a single data source

For More Information

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