

## Solution Brief

SAP Dispatching and Planning  
by PROLOGA

Fleet and staff are the two significant elements – and costs – for waste disposal companies. By supporting accurate and transparent route planning, SAP Dispatching and Planning by PROLOGA can help you make the best possible use of these valuable resources.



# ROUTE AND DISTRICT PLANNING IN THE WASTE DISPOSAL INDUSTRY

## PLAN LOGISTICS PROCESSES INTERACTIVELY AND TRANSPARENTLY

Cost control and satisfied customers are major success criteria in the waste disposal industry. But what exactly makes customers satisfied? The answer: processes and deadlines that are fulfilled to the letter. The prerequisite for this is reliable operational route planning. All the required information has to be instantly available in a clear format – especially for ad hoc orders. You also must take into account a wide range of restrictions, such as capacities, company agreements, and statutory regulations.

The result of your planning will not be optimal, however, if you analyze individual restrictions in isolation. SAP Dispatching and Planning by PROLOGA can bring you to the next level of route planning. The application replaces heterogeneous planning tools and makes error-prone interfaces a thing of the past. Instead, you can plan your routes quickly and accurately with the aid of a digital map and use visual tools that support your planning scenarios to make well-founded decisions. This planning also helps you comply with statutory regulations on how to properly handle and dispose of waste, address intermittent customer work orders, and optimize scheduling, ultimately improving overall customer satisfaction and reducing carbon emissions.

### Interactive Route Planning

The SAP Dispatching and Planning application enhances the planning functionalities in the SAP Waste and Recycling application and supports your short-term, medium-term, and long-term route planning.

How does it work? The planning types – route and district planning, capacity planning, and operational planning – are mapped in a single solution. This transparency supports easier service-based billing. And because the application is integrated into the SAP ERP application on the back end, you can use existing master data and transaction data without the need for an interface.

### Work Visually with a Digital Map

You can perform route planning using a digital map. The map is enhanced by geocodes for locations, waste disposal facilities, and depots, and it is linked to business and logistics data. You can use the map information to undertake requirements planning for vehicles and waste disposal orders, as service locations, depots, and facilities are all displayed accurately on the map. In short, the digital map allows you to work interactively and do the following:

- Display and select elements
- Calculate routes and print them in list format (route directions)
- View planning scenarios and routes at a glance

### Long-Term Route Planning

Container service, street cleaning, and winter service all affect routes only periodically. Therefore, because some routes change only rarely, you can plan them on a long-term basis. The route and district planning functionality allows you to plan for a horizon of six to twelve months. You can create and maintain alternative routes using support for planning scenarios. You can then compare these scenarios with one another and activate the route plans for key dates.

With this approach, you can calculate the ideal route before the vehicle leaves the depot. You can also do the following:

- Define service catalogs such as for vehicle groups, crews, and service areas, and use this information to determine the order pool that you need to plan
- Create route districts and assign planning segments to them, such as neighborhoods, streets, and locations
- Define, calculate, and display key performance indicators
- Modify service dates – for example, change a Monday service date to a Tuesday – for all planning objects
- Clearly map planning objects on a digital map and intuitively assign them using drag and drop

You can define route districts using support for various scenarios for the individual planning areas without the need to change existing master data, which is in operative use. In addition, you can assign planning segments and the related containers at their respective locations to the corresponding route districts. Key planning figures such as the capacities of a route district or the length of a route section are calculated for a planning scenario by the application as required. Once you have run multiple variants and decided on an optimal planning scenario, all you have to do is activate a specific key date. The routes are automatically modified or new routes are created, and service frequencies are assigned to container locations.

### Medium-Term Route Planning

Sometimes you need to add new orders, such as bulky waste, at short notice to certain standard routes. The capacity planning functionality, which has a planning horizon of between one and four weeks, lets you do this. This functionality enables you to define capacity types in order to map similar resources, such as vehicles and crews. You can also do the following:

- Assign planning horizons and capacities to a capacity type and calculate daily capacities
- Define threshold values and warning levels for the planning horizon and daily capacity
- Assign orders to a planning horizon (unspecified target day) and thus obtain an overview of overall utilization
- Assign orders to a target day and obtain an overview of daily utilization
- Assign planning objects by drag and drop

With the capacity planning functionality, you can assign waste disposal orders to the capacities together with the corresponding waste disposal order items. If you assign a waste disposal order to multiple capacities (for example, to a capacity type on a weekly and a daily basis), the order is replicated among the capacities. You can also use capacity planning to obtain an overview of the utilization of entire service areas. It is thus a valuable reporting tool and information source that helps you to achieve optimal customer service.

The SAP Dispatching and Planning by PROLOGA application enhances the planning functionalities in the SAP Waste and Recycling application and supports your short-term, medium-term, and long-term route planning.

### Operational Route Planning

The operational planning functionality helps you undertake requirements planning on a daily basis – that is, with a planning horizon of one to two days. This is extremely useful for your trash container service, for example. This functionality enables you to do the following:

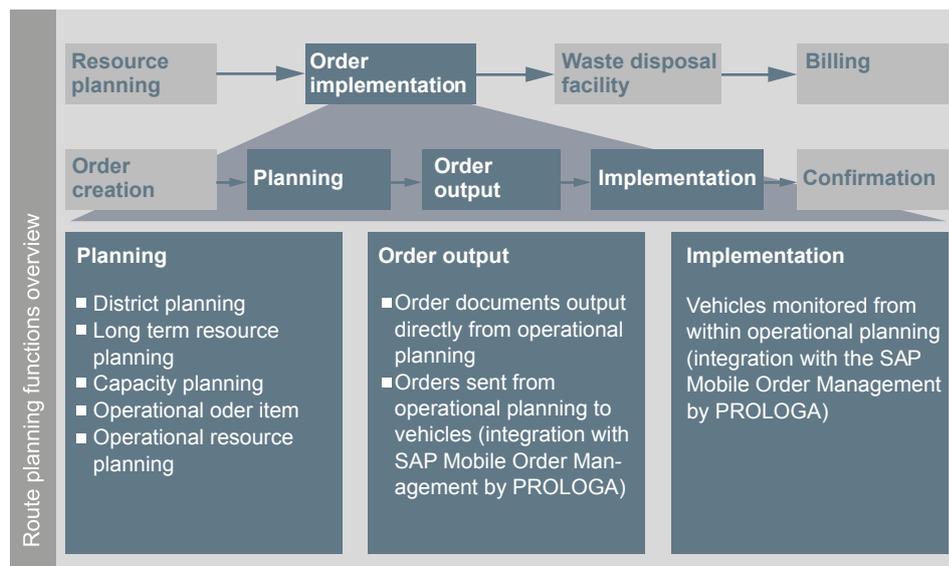
- Assign vehicles to order items and waste disposal orders
- Calculate order volumes and route sections
- Display on the digital map waste disposal facilities, depots, service locations, and so on
- Display vehicle and order statuses in the form of an icon in the general overview
- Map planning objects in a clear format on the digital map or move them using drag and drop

After selecting a date, the planner is given an overview of all vehicles for a specific key date in the form of a hierarchy tree grouped by vehicle, for example. This icon-based visualization gives the planner instant information on the following, among other things:

- Availability of vehicles from the plant maintenance viewpoint
- Any existing assignments of a vehicle to a route or to a waste disposal order
- Availability of the assigned staff
- Planned and unplanned orders
- A map view of the address associated with each order

Waste disposal orders and waste disposal order items for the vehicles are also shown. You can rearrange or reassign these using the drag-and-drop function. The orders and order items are grouped by service area and service type in the display so that you get a quick overview of unplanned services. Once the data is saved, the required routes, service intervals, and waste disposal orders are automatically created on the basis of the planning data. And this requires no further work on the part of the planner. Moreover, the information is readily available for quick response to customer queries.

SAP Mobile Order Management by PROLOGA connects directly to the onboard computers in your vehicles and works with SAP Dispatching and Planning. This gives you a way of recording waste disposal orders and operational data from the vehicles.



**Figure: The Mobile Order Management Application: A Strong Partner**

You can configure the communication between the SAP software and the onboard computers in accordance with your requirements and with the technical functionalities of the onboard computer systems. These could be Global System for Mobile Communications, wireless LAN, Universal Mobile Telecommunications System, and so on.

The SAP Mobile Order Management application gives you a number of options for recording key performance indicators in line with the vehicle types and order types. Depending on the type of communication that has been set up with the vehicles, the application can also record and call up data on current vehicle positions or the processing status of individual order items. This data is then visible to the planner on the digital map.

### Business Benefits

With SAP Dispatching and Planning, you can:

- Optimize use of your vehicles and staff
- Provide a transparent view of the execution of planned routes and thus gain easier service-based billing
- Plan routes using a digital map
- Develop alternative, optimized route plans and plan resources quickly and efficiently
- More quickly respond to customer queries

### Find Out More

Want to know more about how SAP Dispatching and Planning can support you with planning your logistical waste disposal processes? Contact your SAP representative, or visit us online at [www.sap.com](http://www.sap.com).

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## Summary

Route planning is the central element in the management of logistics processes for waste disposal companies. SAP Dispatching and Planning by PROLOGA is an ideal tool for you to plan and monitor your orders and routes. It enables you to plan and control your resource use and service delivery, assign resources to orders, and compare different utilizations, all closely integrated into your enterprise's core processes.

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## Business Challenges

- Develop practical service provision plans
- Reduce CO2 emissions by using resources efficiently
- Ensure high-quality customer service
- Meet deadlines
- Provide reliable operational route planning

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## Key Features

- **Planning and scheduling** – Assign orders to vehicles for improved long-term route planning
- **Route planning** – Compare and analyze routes using support for different scenarios in a map-based planning tool
- **Resource management** – Enable optimal resource utilization
- **Fleet management** – Record all relevant work processes, as well as route and service data from the fleet, in conjunction with SAP Mobile Order Management by PROLOGA

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## Business Benefit

- **Reduced costs** through optimized use of your vehicles and staff, along with optimized use of master data and other information from your enterprise system
- **Improved customer satisfaction** thanks to faster processing of customer queries
- **Enhanced responsiveness** due to the development of alternative, optimized route plans and the ability to plan resources quickly and efficiently
- **Easier service-based billing** as a result of the transparent view of the execution of planned routes

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## SAP price list material no.

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## More Information

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