



## Telematics expansion brings waste disposal company on the fast lane

### Company

The company Gesellschaft für Materialkreislauf und Abfallwirtschaft mbH & Co. KG (GMA) was founded in 1972. With 385 employees, the company disposes industrial, local and private waste.

### Starting Situation

GMA was looking for a telematics-software for the branch-solution enwis) to improve the utilization of the trucks, and to reduce the work for order processing and combined transportation.

### Solution

GMA chose enwis)tel, an additional module for the branch-solution enwis). Both run with the business standard software Microsoft Navision. The decisive factor for this decision was the integration of all program areas.

### Benefit

The integration of telematics increased reaction speeds and eliminated sources of error. Planning routes optimizes and increases the utilization of vehicles and reduces processing times.

"Our employees can now analyze the utilization of the vehicles faster." Rudolf Kramer, head of IT-department Gesellschaft für Materialkreislauf und Abfallwirtschaft mbH & Co. KG (GMA)

Driving time and utilization of the trucks are the deciding determinants for the profitability in the transporting business. That is why companies like the waste disposal specialist GMA improve dispatchment of their fleet with modern technology: A telematics module as integrated part of the company-software provides optimized tour plans for combined transportation. Routes and order data are exchanged between an on-board computer and the head office with use of General Packet Radio Service (GPRS). Since the installation of the program expansion, the reaction time of the waste disposal company went down, whereas the utilization of the vehicles continuously increases. Employees no longer need local knowledge, which makes training new colleagues and manning the individual tours easier. Since order details are already available on collection, GMA is able to invoice faster and profit from cash flow advantages.

**“Thanks to more efficient processes we can invoice faster. With tough competition, the additional cash flow is an advantage.”**

Heiko Lonkwitz, head of Administration Department, GMA.

In the past years more companies have realized that waste is pure money. Established waste disposal companies like the company Gesellschaft für Materialkreislauf und Abfallwirtschaft mbH & Co. KG (GMA) located in Wangerland near Jever increasingly got under pressure. But instead of accepting their fate, the waste disposal company accepts the challenge. This includes opening up new business fields like taking care of green spaces, compost production or road cleaning. “We are not so much interested in the turnover, but rather in using existing synergies”, explains department manager Heiko Lonkwitz the strategy. The success is something to be proud of: The new business fields grew by a full 30 % last year. However, the managing directors decreed a reorganisation of the waste disposal business. Processes were tightened and reaction times shortened. One of the milestones was the introduction of a new business software.

#### **Economic Reorganisation**

Since November 2002 GMA is working with enwis), a branch-solution for the waste disposal business based on Microsoft Business Solutions-Navision, developed by the Microsoft partner tegos. The new system replaced a decentralized IT-structure, which consisted of several individual applications. “One of the most important goals was a higher utilization of our plants. We could better reach them with a centrally organized client-/server-system”, justifies Mr. Rudolf Kramer, head of the IT-department at GMA the decision. Additionally, he adds, enwis) brings branch functions and business processes together. According to Mr. Kramer, no other branch software offers this.



The idea to organize truck dispatchment more efficiently with help of a telematics-software goes back to a joint research project with a GMA associate. The main focus was a better utilization of the vehicles and the reduction of transportation- and administration expenses. At first, the waste disposal company assigned the project-office ISL in Bremen with a feasibility study and to chose the software. The first attempt to add a special carrier-software to enwis) was quickly rejected by the persons in charge. “A second software is not effective in the frantic dispatching business. Our employees would permanently have to switch between two applications. There are additionally interface problems”, explains Mr. Kramer the doubts. The higher investment costs for the integration of a telematics-module into Microsoft would soon pay off, because of the lower

### Technical Summary

Momentarily, 40 work places at the head office and at seven regional sites are connected to Microsoft Navision. The employees access the company records with CI-TRIX-Terminal-Clients. GMA uses the Microsoft Navision-modules purchase and payables, sales and receivables, general ledger, cost accounting, customer relationship management and inventory. The functions for the waste disposal business are supplied by the branch software enwis) of the Microsoft partner tegos. For telematics they use the additional module enwis)tel, and GMA uses the special solution NAPA of the Microsoft partner Haveldata for payroll. Maps from map & guide are used for route planning.

### Microsoft Windows 2000 Server

GMA values the compatibility and interaction with application programs of the Microsoft Windows Server. According to GMA, when considering the total cost of ownership, a Microsoft Windows Server doesn't cost more than an alternative based on Linux.

### Microsoft Office 2000

GMA uses Microsoft Excel and Microsoft Access to work with company records from Microsoft Navision. The data transfer is mostly done through the ODBC-interface. The flexibility of both applications makes the fast layout of ad hoc reports easier. In addition, the company uses Microsoft Word for correspondence and standard letters.

### Microsoft Visio 2000

Microsoft Visio is used by GMA's IT and management. The waste disposal company uses the flow charter to develop data flow charts and work routines.

### Route planning with help of a computer

The use of telematics is mainly aimed at optimizing driving-tours with help of the computer. Tours and transfer notes should be transmitted via GPRS with the night-job. However, the vehicles had to be prepared for this at first. GMA decided to use navigation-systems by Blaupunkt, on-board computers by the Finnish manufacturer Aplicom and mobile dot-matrix printers. "The on-board computer should be programmable and easy to use. Our goal was to limit the number of functions to those being absolutely necessary. This is why we intentionally decided not to use notebooks", names Mr. Kramer the selection criteria when equipping the trucks.

On the software side, the telematic functions were combined in the additional module enwis)tel. Since October 2004, the first 45 trucks of GMA are driving according to the routes suggested by the company software. Since then, the working method in the dispatching business fundamentally changed. "The dispatching department rarely uses their mobile phones or radio sets", says Mr. Kramer, head of the IT-department pleased. Instead, the data stream from accepting an order up to issuing invoices runs in a closed cycle – without interfaces or different systems. enwis) transmits new waste disposal orders to the telematics module. The optimization of the routes is done according to maps from map & guide. After working hours, the tours are exported in XML-format and are sent to the on-board computers of the trucks with help of the enwis)tel-proxy-server. It transmits the addresses one after the other to the navigation-system. Transporting documents like transfer notes are added. "The forms are printed with several copies and signed on the spot. This is how we fulfil legal regulations – completely without costly paperwork", emphasized Mr. Kramer the advantages of the technology.

### Short reaction times

The amount and type of waste can quite possibly be different from the original order. "Our drivers therefore have the opportunity to adjust weight, volume or quantity on collection. The changed records are immediately transmitted to the head office. This way we are able to quickly react to the new situation", praised Mr. Kramer, head of the IT-department, the shortened responding times. Above this, the information goes directly to the order processing. This is how GMA can already invoice the waste disposal service while the truck is still on its way. "In view of the tough competition, the additional cash flow is an important advantage", emphasizes manager Mr. Heiko Lonkwitz. The waste volume is, however, not the only challenge in the dispatching business. Oftentimes they receive orders, which have to be completed that same day. "In the past, we first had to contact our drivers, which did not always work, because of radio lacks in rural areas. To transmit the order confirmation, it was always necessary for the driver to call back", remembers Mr. Rudolf Kramer. Today, however, the dispatchers are permanently informed about the location of the trucks, the current status of the tours and possible obstructions of traffic. "Our employees can quickly analyze the utilization of the vehicles and immediately confirm the customer the collection", underlines the head of the IT-department the improvements with use of telematics, the basic conditions in the waste disposal warehouse management have considerably changed. "Previously we depended on the local knowledge of the employees in the dispatching department and in the trucks. In the meantime, we are able to employ inexperienced workers in both sector, without greatly reducing competitiveness", emphasizes Mr. Kramer the advantages of the technology. Above this, they were able to eliminate errors of fault like missed collection orders.

### Microsoft-Partner

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### Exact registration of volume

GMA currently equips 15 more trucks with on-board computers and navigation-system, because of the rapid success of the project. Furthermore, they are already working on a first system expansion. Dispatchers are to get a better insight into the utilization of the trucks. "To exactly capture the loading volume and weight will play a major role when invoicing local waste disposal services in the future. Most households pay an estimated charge for emptying. But soon already the actual quantity streams will be calculated", looks Mr. Kramer into the future. Above this, it will be possible to better evaluate collecting points for recyclable materials with an exact weight determination. It would be possible to better adjust the schedule for the collection of recyclable materials to the actual needs.

### Software und Services

Microsoft Business Solutions-Navision

Microsoft Office 2000

Microsoft Visio 2000

Microsoft Windows 2000 Server

Microsoft Windows 2000

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