Waste and Recycling Management with SAP

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Agenda

Introduction

Waste and Recycling Management with SAP
• Customer Engagement and Commerce
• Fleet Planning, Waste Collection, Truck Scale Application
• Recycling and Raw Material Trading
• Treatment and Disposal

Solution Variants for Waste and Recycling Management with SAP

Summary: Waste and Recycling Management with SAP
Introduction
Sales, Waste Collection

- acquire customers with the required services and equipment (containers)
- calculate cost for treatment of waste and service execution
- Run field services and waste collection

Processing/Recycling

- create recycling (production) plan according to resource availability
- provide input waste material in required quality and quantity

Inbound Material

- execute and automate weighing
- monitor inbound quantities
- identify inbound qualities
- assign storage locations

Dispense Residues

- find and manage best recycling/disposal possibilities for residues
- Manage energy-from-waste and landfills

Trading

- Sell raw material from stock
- plan your output schedule
- monitor outbound deliveries
Cash Flow and Material Flow in Waste and Recycling Management

classical production company

supplier

cash flow

material flow

procurement

sales

cash flow

material flow

consumer

waste and recycling management company

waste generator

(citizen/production company)

cash flow

material flow

sales (services)

sales (trading)

procurement

sub contractor

raw material buyer/residue disposer

cash flow

cash flow

material flow

cash flow

material flow

non-valuable material

valuable material
Waste and Recycling Management with SAP
Industry Value Map for Waste and Environmental Services
Prevent - Reuse - Recycle - Recover - Dispose

Asset Management
- Capital Portfolio and Project Management
- Fleet and Container Asset Management
- Infrastructure Asset Management
- Real Estate Lifecycle Management
- Asset Risk, Safety, and Incident Management

Waste and Environmental Services Operations
- Fleet Planning, Logistics, and Mobile Order Management
- Weighing, Treatment and Disposal
- Production Execution and Trading
- Waste Compliance and Stakeholder Engagement

Customer Engagement and Commerce
- Strategic Marketing
- Omnichannel Commerce
- Smarter Selling
- Customer Service Excellence

Human Resources
- Core Human Resources and Payroll
- Talent Management
- Time and Attendance Management
- Workforce Planning and Analytics
- Travel and Expense Management

Finance
- Financial Planning and Analysis
- Accounting and Financial Close
- Treasury and Financial Risk Management
- Collaborative Finance Operations
- Enterprise Risk and Compliance Management

Procurement
- Strategic Sourcing and Supplier Management
- Direct Procurement
- Self-Service Procurement
- Contingent Workforce Management
- Services Procurement

Information Technology and Platform
- Enterprise Technology
- Analytics Technology
- Mobile Technology
- In-Memory Technology

Solution Explorer

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Sales, Waste Collection

Customer Engagement and Commerce

Waste and Environmental Services Operations

Fleet Planning, Logistics, and Mobile Order Management

Inbound Material

Waste and Environmental Services Operations

Weighing, Treatment and Disposal

Inbound Weighing

Material Collection

Entrance control

Customer Facility

Production

Weighing

Customer Engagement and Commerce

Waste and Environmental Services Operations

Weighing, Treatment and Disposal

Dispose Residues

Waste and Environmental Services Operations

Production Execution and Trading

Trading

Waste and Environmental Services Operations

Output order

Output control

Production Execution and Trading

Public
Customer Engagement and Commerce
Digital Customer Experience Drives Everything
Technology has changed the game but customers have changed the rules

Customers demand simple, seamless, personalized experiences across any channel – anytime and anywhere. With the SAP Customer Engagement and Commerce platform, you now can ensure seamless digitization of the customer experience.

- Orchestrate business processes across marketing, commerce, sales, service
- Deliver personalized experiences
- Create a single, harmonized experience
- Be prepared to engage your customers on the channels they choose

Master Data Management for Customer Engagement & Commerce

Infrastructure, Platform, Integration
Digital Customer Experience Drives Everything
Technology has changed the game but customers have changed the rules

Industries

Commerce
- SAP hybris Commerce
- SAP hybris Web Content Management (WCMS)
- SAP hybris Product Content Management (PCM)/Customer Experience
- SAP hybris Order Management System (OMS)

Billing
- SAP hybris Billing (fka SAP Billing and Revenue Innovation Management/BRIM)
- SAP ERP Order Management (SD)
- SAP hybris Configure, Price, and Quote (CPQ)
- Resells e.g. Vistex, Vendavo

Marketing
- SAP hybris Marketing (fka CEI, SeeWhy)
- SAP CRM Marketing
- SAP hybris Profile

Service
- SAP Cloud for Customer (Service)
- SAP CRM (Service & IC)
- SAP Contact Center (fka Business Communication Management)
- SAP ERP (CS)
- SAP Multi Resource Scheduling (MRS)
- Resells e.g. PROLOGA, ...

Sales
- SAP Cloud for Customer (Sales)
- SAP CRM (Sales)
- SAP ERP (SD)

Master Data Management for Customer Engagement & Commerce

Infrastructure, Platform, Integration
Cash Flow and Material Flow in Waste and Recycling Management

classical production company

supplier

procurement

sales

cash flow

material flow

consumer

waste and recycling management company

waste generator (citizen/ production company)

cash flow

material flow

sales (services)

sales (trading)

procurement

cash flow

material flow

raw material buyer/ residue disposer

valuable material

non-valuable material

sub contractor
SAP hybris Commerce: Best practices for Customer Portal
Shop Accelerators, Mobile Apps, Assistant Service Module, Industry-Specific Demos
SAP Cloud for Customer: SAP’s Cloud-based CRM
Sales, Services, Customer Interaction Center
Fleet Planning, Waste Collection, Truck Scale Application
Operational Excellence with SAP Waste and Recycling
Detailed solution description

SAP Logistics for Waste and Recycling
This component enables industrial waste collection, including field services like street cleaning or the management of waste-to-energy and recycling facilities.

Key Capabilities:
• Order management – transparent, fast, and precise
• Waste-specific and field-service-specific master data including master data for additional planning software
• Container management – knowing the inventory, using it efficiently
• Customer services, such as street cleaning, snow removal service, rodent service
• Simple transactions for waste facilities, including weighing, operations log, material movement

SAP Planning and Dispatching for Waste and Recycling by PROLOGA (Solution Extension)
The dispatching and planning solution supports the planning and monitoring of orders and routes. It enables the planning and control of resource use and service delivery, assignment of resources to orders, and comparison of different utilizations, all closely integrated into the enterprise’s core processes.

Key Capabilities:
• Create route districts and assign planning sections
• Create and compare planning scenarios for long-term planning
• Enable short-term operational planning, including the calculation of optimal routes and printing of route sheets
• Route planning and management using efficient digital mapping technologies
• Display labor times graphically
• 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 for Waste and Recycling by PROLOGA (on-board units)
SAP Dispatching and Planning and SAP Mobile Order Management for Waste and Recycling by Prologa (Solution Extension)
SAP’s Integrated Weighing System – Data Consistency Ensured!

- cash journal
- reverse document
- check weigh man, shift date
- waste material
- weighing, calibration borders, scale load management
- physical weighbridge
- multiple weighing positions
- waste manifest, waste code, dangerous goods/ADR

IT (security, data privacy and archiving, usw.)
yard list, operations log
equipment
truck, driver, equipment
customer, one time customer, bad payer status
facility data
storage data
contract, pricing, order, order line item, invoice
sales unit e.g., bales

samples, QM, entrance control
Barrier/traffic light

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Recycling and Raw Material Trading
Recycling and Raw Material Trading with SAP

Lightweight Recycling Stations
- SAP Waste & Recycling

Advanced Raw Material Production
- SAP Production Planning
- SAP Solutions for EHSQ Management
- SAP Enterprise Asset Management
- SAP HCP Internet of Things
- SAP Yard Logistics

Production Analytics
- SAP Controlling
- SAP Solutions for Enterprise Performance Management

Trading Customer Engagement
- SAP Solutions for Customer Engagement and Commerce
- SAP Business Networks (SAP ARIBA)

Trading Planning and Execution
- SAP Global Trade Mgmt. (GTM)
- SAP Waste & Recycling
- SAP Commodity Management
- SAP Global Trade Services (GTS)

Trading Analytics
- SAP Controlling
- SAP Solutions for Enterprise Performance Management
Treatment and Disposal
Treatment and Disposal: Waste-to-Energy

SAP supports Waste-to-Energy processes – customer references:

- Biogas Power Plant in Berlin/Germany
- Waste To Energy in Netherlands
- Refuse-Derived Fuel Power Plant in Bernburg/Germany
- Waste To Energy and other Power Plants in Bremen/Germany
Solution Variants for Waste and Recycling Management with SAP
Waste and Recycling Management with SAP

Other Solution Variants: One Size Doesn’t Fit All

<table>
<thead>
<tr>
<th>Product Line</th>
<th>Industry Solution</th>
<th>Supply Chain Management</th>
<th>SAP Business One “for subsidiaries”</th>
<th>SAP ByDesign “for subsidiaries”</th>
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<tbody>
<tr>
<td>SAP Waste &amp; Recycling (W&amp;R)</td>
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<tr>
<td>ISB Waste Recycling One</td>
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<tr>
<td>SAP Value Map for Waste &amp; Environmental Services</td>
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<td>SAP Value Map for Trucking</td>
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<tr>
<td>Core: Waste and Recycling Management Operations</td>
<td>• SAP ERP</td>
<td>• SAP ERP</td>
<td>• SAP Business One (B1)</td>
<td>• SAP ByDesign</td>
</tr>
<tr>
<td></td>
<td>• SAP Waste &amp; Recycling (W&amp;R)</td>
<td>• SAP Transportation Management (TM)</td>
<td>• ISB Waste Recycling One</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PROLOGA W&amp;R Solution Extension</td>
<td>(optional)</td>
<td>• ISB Smart1World</td>
<td></td>
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<tr>
<td>Core: Headquarters</td>
<td>• SAP Business Suite (optional)</td>
<td>• SAP Business Suite (optional)</td>
<td>• SAP Business One (optional)</td>
<td>• SAP ByDesign (optional)</td>
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<td>• SAP Business Suite (optional)</td>
<td>• SAP Business Suite (optional)</td>
</tr>
<tr>
<td>Digital Ecosystem</td>
<td>• SAP W&amp;R (Master Data, Table UI)</td>
<td>• PROLOGA (Map)</td>
<td>• 3rd party (at the moment)</td>
<td>• SAP ByDesign</td>
</tr>
<tr>
<td>Rounds Planning</td>
<td>• PROLOGA (Map)</td>
<td>• 3rd party</td>
<td>• ISB Waste Recycling One</td>
<td>• 3rd party</td>
</tr>
<tr>
<td>Workforce and Vehicle Planning</td>
<td>• SAP W&amp;R (Master Data, Table UI)</td>
<td>• PROLOGA (Map)</td>
<td>• SAP Transportation Management</td>
<td>• ISB Waste Recycling One</td>
</tr>
<tr>
<td>On-Board Unit App</td>
<td>• PROLOGA</td>
<td>• SAP HCP Mobile Services, …</td>
<td>• ISB Smart1World</td>
<td>• SAP HCP Mobile Services, …</td>
</tr>
<tr>
<td>Truck Scale Application</td>
<td>• SAP W&amp;R</td>
<td>• SAP Yard Logistics</td>
<td>• ISB Waste Recycling One</td>
<td>• 3rd party</td>
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<tr>
<td>Smart Bins, Telemetry</td>
<td>• SAP MM/WM/W&amp;R (lightweight)</td>
<td>• SAP MM/WM/EWM (lightweight)</td>
<td>• SAP Business One (B1)</td>
<td>• SAP ByDesign</td>
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<tr>
<td>Recycling</td>
<td>• SAP Manufacturing (advanced)</td>
<td>• SAP Manufacturing (advanced)</td>
<td>• SAP Business One (B1)</td>
<td>• 3rd party</td>
</tr>
<tr>
<td>Completion Confirmation</td>
<td>• SAP W&amp;R / SAP W&amp;R</td>
<td>• SAP TM</td>
<td>• SAP Business One (B1), ISB Waste Recycling One</td>
<td>• 3rd party</td>
</tr>
<tr>
<td>Waste Law</td>
<td>• PROLOGA</td>
<td>• SAP TM (SAP Environment, Health and Safety)</td>
<td>• ISB</td>
<td>• 3rd party</td>
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Summary
Summary: Waste and Recycling Management with SAP

- SAP and its partners offers a strong à la carte portfolio for Waste and Recycling Management
- All options leverages SAP’s best of breed solution portfolio and integrates into existing SAP landscape. Recommendations about cross-industry business processes are valid also in this segment
- SAP industry solution SAP Waste and Recycling contains the processes for specialized waste collection companies and energy-from-waste industry segment

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Thank you

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