Benefits of Configuration

- Achieve operational excellence
- Enhance customer experience
- Drive revenue growth
Key Trends and new Business Models

Efficient Product Management & Engineering

- Achieve operational excellence
- Drive revenue growth
- Extend insight to configurable products

Multi-Channel Selling & Mass Customization

- Enhance customer experience
- Mobility

Product Configuration

Business Transformation - Solution Provider, Business Networks

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SAP Product Configuration supports a mixed use of configuration approaches end-to-end

<table>
<thead>
<tr>
<th>Tools</th>
<th>Laser Machines</th>
<th>Medical Equipment</th>
<th>Power Plant</th>
</tr>
</thead>
</table>

Share of Customer Specific Engineering

0% to 100%

Make-to-Order  80%  20%

Variant Configuration

20%  80%

Engineer-to-Order  80%  20%

Project
SAP’s Configuration Offering Covers Manufacturers Processes End-to-end

Integrated Sales and Operations Planning

- Demand & Supply Planning for Configurable Products
- Sales and Opportunity Planning
- Customer Service / Retention
- Billing
- Installation & Start-up
- Installation & Start-up
- Demand & Supply Planning
- Account and Opportunity Management
- Quote and Order Configuration
- Mobile
- Web Channel
- Ineraction Center / Back Office
- Partner Channel
- Technical Verification
- Engineering
- Order Engineering
- Engineering Change
- Manufacturing Planning
- Manufacturing
- Determine Delivery Date
- Manufacturing Execution
- Shipping
- Shipping
- Outsourced Manufacturing for Configurable Products
- Make-to-Order Manufacturing
- Engineer-to-Order – Project Manufacturing

Providing 360° insight into the complete customer life cycle

Configuration Integration in Planning, Sales, Engineering, Manufacturing, Procurement, Global Trade, Service

Solution & Performance Selling

Solution & Performance Selling
SAP offers integrated End-to-End Processes around Product Configuration
SAP Solutions for Industrial Machinery & Components enable Product Configuration Excellence

Sales
- Sales of Configurable Products
- Solution Selling

Product Development
- Integrated Product Development for Configurable Products

Supply Chain
- Demand & Supply Planning for Configurable Products

Manufacturing
- Make-to-Order Manufacturing
- Outsourced Manufacturing for Configurable Products
Maximize Revenue for Configurable Products

SAP provides an integrated platform offering end-to-end sales configuration processes to enable better customer intimacy and service levels in order to maximize revenue from configurable products.

Solution enabled by SAP

- Sales planning integrated with customer, supplier and supply chain planning. Integrated account and opportunity processing.
- Use of graphical, product specific sizing and product configuration.
- Standardization of configurable products, available in all sales channels (mobile, e-selling, interaction center/back office, channel partners).
- Seamlessly integrated quote, order management, engineering, manufacturing and planning systems based on one configuration model.
- Low TCO scenario to save investment into ERP sales with smaller CRM footprint possible: CRM processes and UI running directly on ERP quote/order.

Key benefits

- Better planning
- Larger, more accurate sales pipeline
- Improved customer intimacy
- Reduced quote cycle time
- Better win rate
- Higher sales efficiency
- Low sales and service lead time

Customer examples

- Enhanced efficiency by 8%
- Solid functionality – engineer-to-order integration and product configuration support for sales orders
Sales of Configurable Products – Differentiators

- Faster sales cycles with more accurate quotes by leveraging **product configuration for automatic feasibility check and pricing** without detailed technical knowledge.

- Reduced delivery lead time for custom products using **deep integration of product configuration through sales front office, back office, engineering, demand and production planning**.

- Increased sales force productivity by **360 degree insight into complete customer life cycle**, including sales and opportunity planning and analytics for better decisions.

- Drive revenue growth by leveraging **multi-channel optimization** for the sales front office – mobile, e-selling, interaction center, back office and channel partners.

- Faster sales cycles by high adoption of sales configurator based on enterprise SOA enabled **individual quote/order configuration processes and user interfaces**.
Sales of Configurable Products is An End-to-end, Cross-functional Process

Customer
- Plan Equipment Investment
- Request for Quotation
- Detail Requirements
- Quote Evaluation, Simulation
- Contact Negotiation, Purchase Order Processing

VP of Sales and Service
- Sales and Opportunity Planning
- Pipeline Performance Management

Sales Front Office
- Account and Opportunity Management

Sales Engineer/Service Engineer
- Structure and Configure Solution
- Quotation Processing
- Quote Detailing, Delivery Date, Costing
- Generate Proposal, Approve Quote

Back Office
- Sales Order Management

Sub-System Supplier
- Supplier Capacity Planning
- Configure Supplier Sub-System
- Order Processing for Sub-System
Sales of Configurable Products is An End-to-end, Cross-functional Process

Sales of Configurable Products enables better customer intimacy and service levels in order to maximize revenue from configurable products.

Quotation Management for Configurable Products

- Structure and Configure Solution
- Analyze Customer Requirement
- Develop Solution Concept/Structure
- Graphical Product Selection, Solution Sizing/Configuration
- Configure Products
- Quote Detailing, Delivery Date, Costing
- Process Quotation
- Tech. Verification and Detailed Configuration
- Determine Delivery Date
- Quotation Costing, Pricing, Monitoring
- Generate Proposal, Approve Quote
- Generate Drawing
- Generate Quote Output / Proposal
- Quote Approval

Order Management for Configurable Products

- Sales Order Management
- Contract Negotiation
- Sales Order Processing
- Engineering
- Demand & Supply Planning, Manufacturing
- Billing
- Sales Analytics
- Opportunity Analysis
- Sales Quotation and Order Analysis
- Contract Analysis
Configure Products

Weight
- 2350 kg
■ 2375 kg
- 2385 kg

Control rack
■ Yes
- No

Load
- 420 kg
■ 450 kg
- 500 kg

Arm Length
- 1025mm
- 1525mm
■ 1725 mm

Price List

<table>
<thead>
<tr>
<th>Extra charge</th>
<th>Control Rack</th>
<th>9,000 USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra charge</td>
<td>Arm 1725</td>
<td>3,000 USD</td>
</tr>
<tr>
<td>Total price</td>
<td></td>
<td>124,000 USD</td>
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</table>

Super BOM

Super Routing
One configuration model – used in all processes and sales channels

**Configure Products**

- Efficient management of multiple product variants – reduction of master data
- One product model integrating all areas - sales, engineering, planning, production, service
- Fast quotation without detailed technical knowledge
- Automatic feasibility check and pricing
- Configuration can be used in all sales channels: **Mobile, web channel, interaction center / back office, partner channel**

**Business Benefits**

- Faster sales cycles with more complete and accurate quote specifications and prices
- Reduced delivery lead time and engineering effort – move from ETO to MTO
CRM Web UI for ERP Quote, Order

Enhanced End-to-End Process

- ERP documents in CRM UI integrated with SAP CRM processes
- Key features such as product proposals, product configuration, and product catalog enabled for ERP documents
- Full multi-channel enablement
- Scenario with lower CRM footprint for processes with tighter backend integration (order costing, engineering, project mgmt)

Business Benefits

- Improved sales efficiency
- Reduced quote-to-order cycle time
- Enhanced customer experience
- Streamlined synchronization between CRM and ERP
Quote/Order BOM – Move from CTO to ETO when required

**Quote/Order BOM and Routing**

- Post-processing of result of product configuration in case customer has specific requirements
- Otherwise fast release of the sales order to the shop floor
- Can be triggered from sales to engineering by status or workflow
- Detailed configuration of complex sub-assemblies
- Edit, add, delete components
- Copy order BOM from existing material or order BOM
  - XXXX

**Business Benefits**

- Easily add custom specific requirements starting with result of product configuration
- Integration of order BOM to costing, supply chain processes

Order BOM and Order Routing used in MRP planning
Order Engineering Workbench

Intuitive user interface for Configurable Order BOM – multi-level tree, drag & drop, context menu, configuration

New function: Versioning of order BOMs including Configuration, copy from old versions (drag&drop)

Re-use of old sales orders / projects including configuration – drag & drop copy of trees/subtrees

Refurbishment / up-selling of old machines

Recent enhancements
– Support of order routings
– Support of as built / as maintained
– Configure assemblies before sales order exists – build library of pre-configured assemblies

Business Benefits

Reduce order processing cost in CTO/ETO

Increase revenue with better win rate and customer satisfaction by shortening quote cycle time and delivery lead time

Improve margins by creating more exact quote configurations
Quotation Costing, Pricing & Monitoring

- Product cost estimates for quotation or order specific BOMs (CTO/ETO)
- Costing can be triggered automatically – in ERP or in CRM UI for ERP quote
- Post-processing of product cost estimate is possible with unit cost estimate to add costs not represented in BOM / routing
- Pricing to determine machine price based on product cost and profit margin

Business Benefits
- Automatic product costing for complex machinery depending on configuration and quotation / order specific BOM
- Flexibility through post-processing with unit cost estimate
Enabling Insight: Packaged Offering for Configuration Analytics

Configuration Analytics – Packaged Offering

- Package combining extraction functionality, BW content, Business Objects Explorer for visualization with a pre-defined implementation offering
- Business Objects Explorer available for PC or iPad
- Insight into sold configurations, e.g.
  - What is the order volume, revenue, profitability for a particular option or combination of options?
  - What are my “Top N” or “Bottom N” selling combinations or configurations?
  - What combinations or configurations are not being ordered at all?
  - Do any regional variances exist?

Business Benefits

- Leverages best in class BI Analytics Platform
- Provides companies with actionable insight into configurable product sales
- Short Time-To-Value
A flexible approach to deliver an Analytics solution for configurable products

VC Sales Analytics Tools
- Visualization
- Exploration
- Data Connectivity
- Integration

SAP BusinessObjects BI Solutions
- Data warehouse
  - Datasources, InfoProviders
  - Universe, Queries, etc.
- Extraction
  - Data sources

Rapid Deployment Services
- SAP BusinessObjects BI suite
- Short Implementation Cycle
- Implemented by SAP Consulting

SAP Sales Analytics for Configurable Products
Packaged Solution
Graphical Configuration 2D/3D – Partner Offering

Graphical Configuration 2D/3D

- Generate 3D view of configurable product while entering sales configuration
- UI modeling tool to build individual UIs – embedded to SAP sales process and SAP configuration engine
- Partner solutions enabled by SAP interfaces
- Integration of SAP Visual Enterprise viewer (Right Hemisphere) with SAP sales configuration
- Offered by itelligence, Sybit, eSpline…

Business Benefits

- Reduced effort for quote / order generation
- Faster time-to-market for ETO / custom design
- Automated CAD data generation for customer or internally for assembly
- Add design data to your configuration models without redundancies
Standalone Configuration – IPC APIs for Custom User Interfaces

**Standalone Configuration**
- Build custom/graphical interactive UI to replace the standard IPC UI in online scenarios
- Use to replace IPC UI in SAP CRM process or use standalone / in custom quote/order applications
- IPC RFCs have been reworked & documented, unit tests are available showing the usage
- IPC RFCs will be released and supported to be used by customers and partners

**Business Benefits**
- Individual, graphical sales configuration UI offers better presentation of products to customer, boosts usage of configuration tools in the sales force
CAD Drawing Generation – Partner Offering

CAD Drawing Generation
- it.cadpilot – automatically create 3D CAD drawings according to configuration in quote
- Automatic storage or CAD model in SAP PLM document management
- Extendable to proposal documents – quote, description including graphical representation
- CAD model as customer documentation or as starting point for additional engineering

Business Benefits
- Reduced effort for quote / order generation
- Faster time-to-market for ETO / custom design
- Automated CAD data generation for customer or internally for assembly
- Add design data to your configuration models without redundancies
Configuration on Mobile Devices

- Enable configuration scenarios on mobile devices
- Make Configuration Engine API accessible from mobile devices
- Offer configuration within sales, marketing and service processes on mobile devices
- SAP prototype – IPC Offline for Android Devices
- Different prototypes by customer Steelcase and partners ConfigAir, itelligence and EasternGraphics covering product catalogs including visualization, online and offline configuration, quote and order creation on iPad, iPhone, Android phone and tablet

Business Benefits

- Better presentation of product to the customer and to the own sales / service reps
- Higher win rate, better customer loyalty
- Better adoption of configuration tools in sales, service
Offline Configuration – SAP Center of Expertise (CoE) for Product/Solution Configuration

**Offline Configuration**

- Offline solutions are still required as online access cannot be globally guaranteed
- CoE enables Offline use of IPC7.0 for Product and Solution Configuration as well as Pricing Determination
- IPC Offline uses SAP Netweaver Mobile Infrastructure / Sybase and allows SAP ERP or legacy Systems as a backend (not only SAP CRM)
- CoE also provides Offline Quotation Client with custom UI

**Business Benefits**

- Offline quotation management with SAP compliant product master data, customer master data, Configuration data and pricing data.
- High acceptance of tailored user interface by customers and sales front office
Demo

- Sales of Configurable Products
- Web Channel with Graphical Configuration
- Configuration Analytics
Demo: Sales of Configurable Products

PETER
Sales Representative

Create Lead → Create Opportunity → Convert to ERP Quote → Complete Configuration, Cost & Price

MARK
Order Fulfillment

Convert Quote to Sales Order → Custom Order Engineering → Create Production Order → Change Management

Goods Receipt → Delivery → Billing → Payment

Demo
Demo: Web Channel with Graphical Configuration

Internet Customer

Demo
Demo: Configuration Analytics with SAP Business Objects Explorer

Search → Focused analysis → Insight → Action

JOHN
Product Manager

Demo with PC
Demo with iPad
SAP Sales Analytics for Configurable Products

Explorer: Top Selling Combinations by Region

You are currently exploring all data. Select values to narrow it down.
SAP Sales Analytics for Configurable Products

Explorer: Top Selling Combinations by Region
# SAP Sales Analytics for Configurable Products

**Explorer: Top Selling Combinations by Region**

<table>
<thead>
<tr>
<th>Measures (2/3 max)</th>
<th>Payload</th>
<th>Wrist</th>
<th>Accessories</th>
<th>Speed</th>
<th>Region</th>
<th>No Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity Sold (SUM)</td>
<td>1,151,837.27</td>
<td>1,014,114.28</td>
<td>117 Deg/sec</td>
<td>USA</td>
<td>1</td>
<td>1,706,228.29</td>
</tr>
<tr>
<td>Base Price (SUM)</td>
<td>928,294.46</td>
<td>654,326.38</td>
<td>Additional Axis</td>
<td>122 Deg/sec</td>
<td>APJ</td>
<td>2</td>
</tr>
<tr>
<td>Total Price (SUM)</td>
<td>1,014,114.28</td>
<td>703,207.39</td>
<td>Energy Supply System</td>
<td>106 Deg/sec</td>
<td>Europe</td>
<td>3</td>
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<tr>
<td>Unit Cost (SUM)</td>
<td>30 Kg</td>
<td>In Line 30</td>
<td>591,235.4</td>
<td>America</td>
<td>4</td>
<td>101,559.61</td>
</tr>
<tr>
<td>Total Sales (SUM)</td>
<td>50 Kg</td>
<td>ETO</td>
<td>654,326.38</td>
<td>122 Deg/sec</td>
<td>Europe</td>
<td>5</td>
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<tr>
<td>Total Cost (SUM)</td>
<td>1,014,114.28</td>
<td>703,207.39</td>
<td>Energy Supply System</td>
<td>106 Deg/sec</td>
<td>Europe</td>
<td>6</td>
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<tr>
<td>Profit Margin (AVERAGE)</td>
<td>30 Kg</td>
<td>In Line 30</td>
<td>591,235.4</td>
<td>America</td>
<td>4</td>
<td>101,559.61</td>
</tr>
</tbody>
</table>

**Add Calculation...**

**Robot Models:**

| 3D-K1 |

**Displaying:** Total Sales, Total Cost

**Other Values**

<table>
<thead>
<tr>
<th>Color</th>
<th>Total Sales</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purple</td>
<td>295,634.76</td>
<td>269,191.73</td>
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<tr>
<td>Silver</td>
<td>193,930.72</td>
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<td>Red</td>
<td>195,695.88</td>
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<tr>
<td>Green</td>
<td>189,977.68</td>
<td>165,819.96</td>
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<tr>
<td>Orange</td>
<td>176,203.79</td>
<td>147,920.21</td>
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<td>Brown</td>
<td>170,133.55</td>
<td>144,770.06</td>
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<tr>
<td>Charcoal</td>
<td>172,241.68</td>
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<td>Gray</td>
<td>166,480.14</td>
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<td>Black</td>
<td>162,100.16</td>
<td>143,320.98</td>
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<tr>
<td>Blue</td>
<td>161,427.11</td>
<td>140,044.92</td>
</tr>
<tr>
<td>Yellow</td>
<td>151,849.03</td>
<td>134,160.01</td>
</tr>
<tr>
<td>Lime Green</td>
<td>125,210.9</td>
<td>104,406.24</td>
</tr>
</tbody>
</table>

Total (12): 2,105,981.03 | 1,060,090.53
# SAP Sales Analytics for Configurable Products

**Explorer: Top Selling Combinations by Region**

<table>
<thead>
<tr>
<th>Payload</th>
<th>Speed</th>
<th>Accessories</th>
<th>Region</th>
<th>Color</th>
<th>Custom</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Kg</td>
<td>117 Deg/sec</td>
<td>Energy Supply System</td>
<td>USA</td>
<td>Blue</td>
<td>21,145.11</td>
</tr>
<tr>
<td>50 Kg</td>
<td>152 Deg/sec</td>
<td>Bulk Tension Measures</td>
<td>Europe</td>
<td>Gray</td>
<td>18,507.6</td>
</tr>
<tr>
<td></td>
<td>106 Deg/sec</td>
<td>Additional Axis</td>
<td>APJ</td>
<td>Brown</td>
<td>17,947.71</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td>Yellow</td>
<td>15,947.71</td>
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<td></td>
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<td>Lime Green</td>
<td>16,228.29</td>
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<td></td>
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<td>Red</td>
<td>9,600.27</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Charcoal</td>
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<td>Purple</td>
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<td></td>
<td>Green</td>
<td>6,512.32</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Orange</td>
<td>1,092.09</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Black</td>
<td>334.67</td>
</tr>
</tbody>
</table>

### Measures (2/3 max)
- Quantity Sold (SUM)
- Base Price (SUM)
- Total Price (SUM)
- Unit Cost (SUM)
- Total Sales (SUM)
- Total Cost (SUM)
- Profit Margin (AVERAGE)

### Data Analysis
- **Payload:** Options include 30 Kg and 50 Kg.
- **Speed:** Options include 117 Deg/sec, 152 Deg/sec, and 106 Deg/sec.
- **Accessories:** Includes Energy Supply System, Bulk Tension Measures, and Additional Axis.
- **Region:** Options include USA, Europe, APJ, Mfg, and Eng.
- **Color:** Options include Blue, Gray, Brown, Yellow, Lime Green, Red, Charcoal, Purple, Green, Orange, and Black.

### Graphical Representation
- Bar chart showing sales and cost by color.
- Total sales range from 21,145.11 to 1,092.09.
- Total cost range from 17,745.55 to 304.25.

---

**Note:** The data and images are for illustrative purposes only and may not reflect current sales data or configurations.
SAP Sales Analytics for Configurable Products

Explorer: Top Selling Combinations by Region
**SAP Sales Analytics for Configurable Products**

**Advanced Analysis: Top, Bottom, and Non-selling combinations**

<table>
<thead>
<tr>
<th>Analysis 2 - Key Figures</th>
<th>Cal Year/Quarter</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Q1 2010</td>
</tr>
<tr>
<td>Overall Result</td>
<td>Target quantity</td>
</tr>
<tr>
<td>Plunger pump</td>
<td>Target quantity</td>
</tr>
<tr>
<td>Rotary pump</td>
<td>Target quantity</td>
</tr>
<tr>
<td>Wet pit pump</td>
<td>Target quantity</td>
</tr>
<tr>
<td>Wing pump</td>
<td>Target quantity</td>
</tr>
</tbody>
</table>

**Analysis 2 - Sub-Analysis 2**

- Plunger pump / Target quantity
- Rotary pump / Target quantity
- Wet pit pump / Target quantity
- Wing pump / Target quantity

For Q1 2010, Q2 2010, Q3 2010, Q4 2010.
SAP Sales Analytics for Configurable Products

Advanced Analysis: Top, Bottom, and Non-selling combinations
SAP Sales Analytics for Configurable Products

Advanced Analysis: Top, Bottom, and Non-selling combinations

<table>
<thead>
<tr>
<th>Analysis 2</th>
<th>Cal. Year/Quarter</th>
<th>Q1 2010</th>
<th>Q2 2010</th>
<th>Q3 2010</th>
<th>Q4 2010</th>
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<tbody>
<tr>
<td>Key Figures</td>
<td>Target quantity</td>
<td>36 PC</td>
<td>36 PC</td>
<td>41 PC</td>
<td>14 PC</td>
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</tbody>
</table>

Data Layout and Analysis:
- Key Figures: Target quantity, Net value
- Rows: Mode, Model of the pump, Pump Lift, Pump Pressure, Pump type, Rotation direction, Sold to party, SD Document Category, Cal. Year/Quarter
- Background

Analysis 2: Key Figures - Mode Bottom 3, Color 0 sales, Sheet 3
SAP Sales Analytics for Configurable Products

Advanced Analysis: Top, Bottom, and Non-selling combinations

<table>
<thead>
<tr>
<th>Mode</th>
<th>Key Figures</th>
<th>Cal Year/Quarter</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Overall Result</td>
<td>Target quantity</td>
<td>26 PC</td>
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<tr>
<td>Electric</td>
<td>Target quantity</td>
<td>15 PC</td>
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<tr>
<td>Manual</td>
<td>Target quantity</td>
<td>21 PC</td>
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<tr>
<td>Water Powered</td>
<td>Target quantity</td>
<td>24 PC</td>
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<tr>
<td>Not assigned</td>
<td>Target quantity</td>
<td></td>
</tr>
</tbody>
</table>

Analysis 2
SAP Sales Analytics for Configurable Products

Advanced Analysis: Top, Bottom, and Non-selling combinations

<table>
<thead>
<tr>
<th>Model of the pump</th>
<th>Key Figures</th>
<th>Cal. Year/Quarter</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Q1 2010</td>
</tr>
<tr>
<td>Overall Result</td>
<td>Result</td>
<td>15 PC</td>
</tr>
<tr>
<td>Adjustable</td>
<td>Target quantity</td>
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<tr>
<td>Electric</td>
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<tr>
<td>Manual</td>
<td>Target quantity</td>
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<tr>
<td>Water Powered</td>
<td>Target quantity</td>
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</tr>
<tr>
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<tr>
<td>Fixed</td>
<td>Result</td>
<td>21 PC</td>
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<tr>
<td>Electric</td>
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<tr>
<td>Manual</td>
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<td>21 PC</td>
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<tr>
<td>Water Powered</td>
<td>Target quantity</td>
<td>21 PC</td>
</tr>
<tr>
<td>Not assigned</td>
<td>Target quantity</td>
<td>21 PC</td>
</tr>
</tbody>
</table>
SAP Sales Analytics for Configurable Products

Advanced Analysis: Top, Bottom, and Non-selling combinations
### IMC VC Pump Sales Analysis

**Columns**
- Key Figures

**Rows**
- Cal. Year/Quarter

**Free characteristics**
- Color of housing
- Material
- Mode
- Model of the pump
- Pump for...
- Pump Lift
- Pump Pressure
- Pump type
- Rotation direction
- SD Document Category
- Sold-to party

<table>
<thead>
<tr>
<th>Cal. Year/Quarter</th>
<th>Target quantity</th>
<th>Net value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 2010</td>
<td>36</td>
<td>36,000,00</td>
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<tr>
<td>Q2 2010</td>
<td>36</td>
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**Last Data Update:** 01.10.2011 14:58:48
### SAP Sales Analytics for Configurable Products – BEX: Top N Selling Characteristics

#### IMC VC Pump Sales Analysis

<table>
<thead>
<tr>
<th>Model of the Pump</th>
<th>Mode</th>
<th>Rotation direction</th>
<th>Color of Housing</th>
<th>Cal. Year/Quarter</th>
<th>Target Quantity</th>
<th>Net Value</th>
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<td>Result</td>
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</tbody>
</table>
### SAP Sales Analytics for Configurable Products –
**BEX: Top N Selling Characteristics**

#### IMC VC Pump Sales Analysis

<table>
<thead>
<tr>
<th>Model of the pump</th>
<th>Mode</th>
<th>Rotation direction</th>
<th>Color of housing</th>
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<th>PC</th>
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</tbody>
</table>

#### Table Notes
- **Last Data Update:** 01.10.2011 14:58:48
- **Display As:** Table
- **Columns:** Model of the pump, Mode, Rotation direction, Color of housing, Cal. Year/Quarter
- **Rows:** Adjustable, Fixed
- **Free characteristics:** Material, pump for, Pump Lift, Pump Pressure, Pump type, SD Document Category, Sold-to party
SAP Sales Analytics for Configurable Products – BEX: Top N Selling Characteristics

In this step, you define the parameters for your ranked list condition. Multiple condition rows can be part of a condition. The individual condition rows are linked with a logical OR. In this way, you can display the top 3 and bottom 3 products simultaneously, for example.

Key Figures: Target quantity
Operator: Top N
Value: 3
To:

Add Row
SAP Sales Analytics for Configurable Products –
**BEX: Top N Selling Characteristics**

IMC VC Pump Sales Analysis

Exceptions | Conditions | Data Provider | Table | Chart
--- | --- | --- | --- | ---
No conditions are defined
Add | Details | Toggle State | Delete

Define Condition

Set condition type | Set condition parameter | Set characteristic assignment | Set properties
--- | --- | --- | ---
In this step, you can specify a default deviation characteristic assignment. You can find examples for the individual options in the online documentation.

- **All characteristics in drilldown independent**
  - This option is optimized for range list conditions, but can also be used for threshold values with relative values.

- **Detailed characteristic along the Rows**
  - This option is optimized for threshold conditions. The condition is applied to the most detailed characteristic of the specified axis.

- **Individual characteristics and characteristic combinations**
  - Material | Color of housing | Mode | Model of the pump | pump for... | Pump Lift | Pump Pressure
  - Check Pump type | Rotation direction | Sold-To party | SD Document Category | Cal. Year/Quarter

With this option, you can select any characteristic or characteristic combination.

Result
---
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
<th>Count</th>
<th>Amount</th>
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<tr>
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<td>Q2 2010</td>
<td>8</td>
<td>5 000.00</td>
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</tbody>
</table>

Back | Next | Cancel | Finish
## IMC VC Pump Sales Analysis

**Last Data Update:** 01.10.2011 14:58:48

### Columns
- **Key Figures**
- **Rows**
  - Model of the pump
  - Mode
  - Rotation direction
  - Color of housing
  - Cal. Year/Quarter

### Free characteristics
- Material
- Pump for....
- Pump Lift
- Pump Pressure
- Pump type
- SD Document Category
- Sold-to party

### Table: Top N Selling Characteristics

<table>
<thead>
<tr>
<th>Model of the pump</th>
<th>Mode</th>
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</tbody>
</table>
SAP Sales Analytics for Configurable Products

Analytic Visualization with Right Hemisphere
SAP Solutions for Industrial Machinery & Components enable Product Configuration Excellence

**Sales**
- Sales of Configurable Products
- **Solution Selling**

**Product Development**
- Integrated Product Development for Configurable Products

**Supply Chain**
- Demand & Supply Planning for Configurable Products

**Manufacturing**
- Make-to-Order Manufacturing
- Outsourced Manufacturing for Configurable Products
Solution Provider Network: From Product Configuration to Solution Configuration to Solution Selling

**Characteristics Solution Provider Network**

- Solution provider mindset
- Delivering turnkey solutions
- System integration expertise
- Leveraging new technologies
- Leveraging ecosystem
- Life cycle economics
- Solution business as new growth opportunity related to core business
- Grow highly profitable aftermarket sales and services business

### Solution Provider Network

**Product Configuration**

- Robot/Manufacturing Cell
  - Foundry
  - Arc Welding
  - Palletizing
  - Mechanical Cutting

**Solution Configuration**

- Complete systems in press automation, painting, assembly for the automotive industry

**Solution Selling**

- Hardware/Products
- Software
- Services, Contracts
- Components
- Systems/Solutions
- Solution Bundles

**Solution Bundle tailored to customer requirements**

- Pre-defined solution bundles can include configurable products with automated consistency and costing/pricing check

Derive products/services best suiting customer requirements. Optional and alternative items are suggested depending on requirement and chosen products (Hardware, Software), services and configurations. Integrate products and services of manufacturer with products and services delivered by other partners.
Solution Selling

Maximize Life-cycle Revenue for Solutions and Performance based Contracts

SAP provides an integrated platform that enables end-to-end sales processes across multiple divisions and partners enabling better customer equipment performance and lower TCO in order to maximize life-cycle revenue in sales and service.

Solution enabled by SAP

- Sales planning integrated with customer, supplier and supply chain planning. Integrated account and opportunity processing.
- Standardization of product packages including hardware, software, installation, service contracts.
- Seamlessly integrated quote, contract management, fulfillment and planning systems across multiple divisions and partners.

Key benefits

- Better planning
- Larger, more accurate sales pipeline
- Improved customer intimacy
- Reduced quote cycle time
- Better win rate
- Higher sales efficiency
- Low sales and service lead time

Customer examples

- Improved quality of offers by using standard contract types
- Flexible contract management combining hardware, service contracts, leasing
Solution Selling - Integrated end-to-end, cross-functional and cross company
Manufacturers create a bundle quotation by adding the appropriate products and services to their core product. The generated items are processed in different follow-up documents.
SAP Solution Sales Configuration

- Manufacturers move from product to systems/solutions business – leverage solution configuration capabilities in SAP IPC
- SAP Solution Sales Configuration enables bottom-up configuration of multiple configurable products to a complex solution

**Business Benefits**
- Fast front office initiated sales processes with high information re-use in back office
- Increased margins by moving from product towards systems/solutions business
- High acceptance of tailored user interface by customers and sales front office
SAP Solution Sales Configuration – Focused Business Solution (FBS) available since November 2011

Solution Configuration Engine
• Robust and scalable Configuration Engine optimized for Solution composition in a Bottom-Up approach.
• Knowledgebase Orchestration allowing easier model maintenance and better engine execution performance

Solution Modeling Environment
• Eclipse Plug-In for high productivity and collaboration based model maintenance

Sales and Service Process Integration
• Seamless integration in SAP Sales and Service processes - SAP CRM, E-Commerce or ERP SD

Analytics
• Solution configuration data extractor allowing solution data sales analytics

Business Benefits
• Increased margins by moving from product towards systems/solutions business
• Fast front office initiated sales processes with high information re-use in back office, even for complex systems and solutions
Solution Selling
Links to Collaborative Engineering, Outsourced Manufacturing

Customer

Accept quote

Sales Rep
Create quote

Sales Rep
Release quote – triggers sales order, service order, contract creation

Service Technician
Install products

Billing Clerk
Perform billing

Sales/Service Department

Manufacturing

Manufacturing
Manufacture, deliver products

Collaborative engineering

External Engineering of Custom ETO Robot Wrist

Outsourced manufacturing
Outsourced Mfg of ETO Robot Wrist

Solution Selling Links to Collaborative Engineering, Outsourced Manufacturing

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External Engineering of Custom ETO Robot Wrist

Outsourced manufacturing
Outsourced Mfg of ETO Robot Wrist

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Solution Selling
Maximize life-cycle revenue for solutions and performance based contracts

Package Definition
Package Quote
Order Fulfillment
Installation Service
Extended Demo

Solution Selling with Outsourced Manufacturing

Maximize life-cycle revenue for solutions and performance based contracts

Package Definition
Package Quote
Outsourced Manufacturing
Delivery
Service Order
SAP Solutions for Industrial Machinery & Components enable Product Configuration Excellence

Sales
- Sales of Configurable Products
- Solution Selling

Product Development
- Integrated Product Development for Configurable Products

Supply Chain
- Demand & Supply Planning for Configurable Products

Manufacturing
- Make-to-Order Manufacturing
- Outsourced Manufacturing for Configurable Products
Configurable Product Model Maintenance – Enabling Agility for our Customers

Improved Product Model Maintenance

- Graphical definition of dependencies
- Drag & drop to create dependencies for a combination of characteristics values
- Enhanced simulation capabilities
- New user interface for engineering BOM with multi-level product structures
- 3D Visualization of Configured BOM – during development process or to visualize product configured in quote or sales order

Business Benefits

- More efficient product development – bring new products and product changes to market faster
- Easy way for business users to maintain configuration rules
- Support for modularization for increased efficiency in engineering and manufacturing
Product Modeling Environment (PME- VC) – Central Access to all Elements of a Product Model

Transparency through Model Tree – Navigate from everywhere to anywhere for the complete model

Wizards to create dependencies easily, drag and drop to create selection conditions, simulation of VC or IPC

Configurable Product (model entry point)

Class structure

Characteristics
- Product options
- Dependencies

Bill of materials
- Items
- Selection conditions

Dependencies on model level (configuration profile)
- Procedures
- Constraints
- Tables
- Functions
Product Modeling Environment for Variant Configuration

PMEVC – Purpose

- Is a modeling tool for interactive configuration
- Provides an integrated environment ("model" view), which facilitates navigation & overview as well as easy maintenance of dependencies
- Works on existing product models
- It coexists with traditional maintenance transactions and does not require any migration effort or customizing changes
- Is covered within the standard user license and available since ECC 5.0 (limited scope).

How to try it out?

- Enable PLM business function (EA-PLM)
- Enter transaction PMEVC or go via SAP menu
PMEVC – Functional Overview

- Browse the model tree – all objects at a glance
- Access favorite objects in the work set
- Maintain all dependencies with the context-sensitive dependency editor
- Simulate interactive configuration
- Maintain content of variant tables
- Table constraint wizard
- Configuration profile
- Intuitive maintenance of interface design (characteristic grouping)
- Maintain variant condition keys
- Create IPC runtime versions
- Not supported: Maintenance of classes, characteristics, BOMs, routings, materials
Product Modeling Environment for Variant Configuration
Overview of Continuous Improvements since 2009

Improvements for ERP 6 EhP5
Simulation with reference characteristics in VC or IPC
Add characteristic values, maintain short/long texts
Drag & drop – create dependencies, add/assign c’stics
View BOM headers, items, maintain BOM dependencies

Improvements for ERP 6.0 for all EhPs – based on input from customers, delivered via notes* for fast adoption
Check tool for configuration models – consistency, integration, performance, knowledge base, custom checks
Where used-lists, error highlighting, copy dependencies, copy large amounts of data, drag & drop to sort procedures, intervals and multiple values in variant tables, characteristics maintenance

Business Value
Better and easier maintenance of product models
Faster time-to-market for new products and upgrades

* Notes ERP 5.0 and ERP 6.0: 1590962, 1610489. Notes ERP 6.0: 1537346, 1614360, 1621104, 1625629, 1641340, 1644312, 1658479, 1688548
Maintain multi-level Product Structures:

- Engineering structures in early phases of Product Development
- Supporting functional structures and views
- Integrated Variant Configuration and Simulation
- Supporting change management both with date and parameter effectivity
- Working with templates for product structure creation is supported
Dependency Maintenance Table:

- Variant Configuration directly embedded in Product Structure Management
- Tabular Maintenance of Selection conditions based on Checkmarks
- Automatic syntax generation
- Visual overview about differences for variants
- Color Coding for Characteristic Values
Automated, graphical definition of module selection rules: Generate dependency for “Very Fast”
Product Structure Management with generated module selection rule (dependency)

Selection condition (dependency) was generated automatically
Guided Product Configuration with Configuration UI Designer – Enhanced Sales Experience

Simulation Mode

Drop Down Selection

Characteristics Grouped onto Named Pages

Grouping by “Use”

All options listed

Higher priced Options First

Image Added

Step-by-Step Wizard

Simulation Mode

Product model HT_C_PC was saved before simulation

Model Simulation

Connectivity  Storage  Multi Media  Performance  Software

1  2  3  4  5

Campus PC 3000

Hardware

- Hard Disk 40GB 5400RPM

Accessory

- Flexible Disk
- 5 gig optical drive
- 100 MB DAT drive
- 100 MB ZIP drive
- 1,44 MB Floppy disk drive
- CD Device
- Creative 8-4-32 Rew. Int. KIT
- Hitachi 12/40 DVD ATAPI
- Cyberdrive 48 ATAPI

Previous  Next
Guided Product Configuration with CRM UI Designer – Adapt Configuration UI for Sales Needs

WYSIWYG (What you see is what you get) editor for the product configuration user experience – individual Guided Product Configuration for different user groups (sales, marketing, customer, …)

- Wizard-based navigation
- Components, groups, attributes split onto multiple pages
- Create page labels and add images to pages
- Move options up and down
- Change look and feel of option (radio button, drop down, texts, images)

[Diagram showing product model configuration interface]
SAP PLM for Discrete Industries - The Big Picture

Engineering Change Management

Product Structure Management

eBOM

Concept Structure

Upper Level Structure

Variant Structure

Lower Level Structure

Assemblies

Assemblies & Materials

PLM

mBOM

Guided Structure Synchronization

Manufacturing

Engineering Desktop

(M-CAD, E-CAD, CAE, EDA, …)

Authoring Tools

Design

Define

Calculate

Execute
Transition from Engineering to Manufacturing – Guided Structure Synchronization Workbench

Function versus assembly sequence
Engineering version versus effectivity in manufacturing
Organizational separation of development and manufacturing
Manufacturing differences at different sites
End-to-End Process – Integrated Product Development for Configurable Products

Shorter time-to-market and more efficiency in product development

Product Development
- Idea
- Requirement
- Concept
- Manage Product Model
- Design - Geometry
- CAD Integration
- Design - Documents
- Design – Engineering BOM
- Design - Dependencies
- Design Validation

Manufacturing Planning
- Process Planning
- Process Planning
- Process Validation

Development Collaboration

Function / Requirement
- Product Model
  High level Configuration

CAD
- CAD Interface
- Bill-of Docs

Engineering BOM
- Dependencies / Low-level Configuration

Structure Handover
- Mfg BOM Routing

Product Development with Product Structure Management as Engineering BOM
- Product Structure Management (PSM)
- Product Modeling Environment (PMEVC)
- CAD 3rd Party
- Engineering Desktop
- Document Management (DMS)
- Product Structure Management (PSM)
- Product Modeling Environment (PMEVC)
- Guided Structure Synchronization (GSS)
- Mfg BOM
- Routing

- CAD Interface
- Graphical Maintenance of Dependencies

Shorter time-to-market and more efficiency in product development
Demo

- Extend Configuration Model
- Graphical Product Model Maintenance
- 3D Simulation of Configuration BOM
SAP Solutions for Industrial Machinery & Components enable Product Configuration Excellence

Sales
• Sales of Configurable Products
• Solution Selling

Product Development
• Integrated Product Development for Configurable Products

Supply Chain
• Demand & Supply Planning for Configurable Products

Manufacturing
• Make-to-Order Manufacturing
• Outsourced Manufacturing for Configurable Products
Demand and Supply Planning for Configurable Products - Integrated end-to-end, cross-functional, cross company

Demand and Supply Planning for Configurable Products connects processes across departments to enable a timely, profitable response to customer demand for complex configurable products.

<table>
<thead>
<tr>
<th>COO</th>
<th>Sales/Supply Chain</th>
<th>Supply chain</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Demand Management for Configurable Products</td>
<td>Network Supply Planning</td>
<td>Sales and Operations Planning</td>
</tr>
<tr>
<td>Sales</td>
<td>Sales Forecast Collaboration</td>
<td></td>
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</tr>
<tr>
<td>Supply chain</td>
<td>Demand Capture and Integrated Master Data Maintenance</td>
<td>Characteristics Based Demand Planning</td>
<td>Supply Network Planning for Complex Products</td>
</tr>
<tr>
<td>Operations: Manufacturing</td>
<td></td>
<td></td>
<td>Production Planning</td>
</tr>
<tr>
<td>Operations: Procurement</td>
<td></td>
<td></td>
<td>Procurement planning</td>
</tr>
</tbody>
</table>

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Why is Demand and Supply Planning for Configurable Products different?

**Standard Product**
- **Toaster**
  - Forecast
  - Stock

**Configurable Product**
- **Pump**
- **Pressure**
  - 100 PSI
  - 150 PSI
  - 250 PSI*
- **Material**
  - Bronze
  - Stainless Steel
- **Flow**
  - 25 GPM
  - 50 GPM
  - 100 GPM
- **Rotation**
  - Clockwise
  - Counter-Clockwise

36 Characteristic Values Combinations

**CTO/ETO**
- **Forecast (variant)**
- **Stock (variant)**

**Linchpin**
- **Shaft**
- **Casing**
- **Bearing case**
- **Ball Bearing**

**Stock**

**B**
- **A**

**B**
- **A**

**B**
- **A**

**Stock**
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Make-to-Order Manufacturing is An End-to-end, Cross-functional Process
Project Driven Manufacturing – Sense & Respond Approach for Adaptive Manufacturing

Production Planning and Optimization Run

Monitor Alerts on Projects, Main Assemblies

Interactive Scheduling to reduce late orders and capacity overload

Manufacturing & Procurement Execution – Changes, Exceptions

Simulate and compare alternative solutions, execute decision
Configurable Product Model Maintenance – Enabling Agility for our Customers

Improved Product Model Maintenance

- Graphical definition of dependencies
- Drag & drop to create dependencies for a combination of characteristics values
- Enhanced simulation capabilities
- New user interface for engineering BOM with multi-level product structures
- 3D Visualization of Configured BOM – during development process or to visualize product configured in quote or sales order

Business Benefits

- More efficient product development – bring new products and product changes to market faster
- Easy way for business users to maintain configuration rules
- Support for modularization for increased efficiency in engineering and manufacturing
Production Planning with Optimization and Backlog Resolution

• MRP - Multi-level order explosion
• Backlog resolution - considering capacity constraints for current orders
• Optimization - considering capacity constraints in the short term
• Infinite optimization - mid/long term

Business Benefits
• Capacity feasible plan and stable sequence of orders in current week
• Capacity optimized plan in the short term
• Infinite plan with least delay and orders with buffers for flexibility in mid-term, where it is easy to shift/extend capacity
Production Scheduling

Monitor alerts on projects / main assemblies
- Pegging – automatic matching of demand and supply
- Visualization of complete order context
- Alerts - Early warning system late orders, bottlenecks
- Filter on alerts in order context, sort late orders by delay

Interactive scheduling to reduce late projects, orders
- Detect critical path for order context
- Reduce buffers on critical path
- Reduce duration of project order operations
- Multi-level forwards/backwards scheduling

Interactive scheduling to reduce capacity overload
- Evaluate resource utilization, filter on overload
- Alternative work centers, sequences, production versions
- Switch to external procurement, subcontracting
- Work overtime, run additional shifts

Adaptiveness and Simulation
- What-if simulation, compare alternatives
Determination of Delivery Date

- Online check – components, spare parts, machinery
  - Available-to-promise (ATP)
  - Capable-to-promise (CTP)
  - Multi-level, rules-based check for alternative locations, components

- Batch - determination of delivery date for machinery with higher complexity

Business Benefits

- Immediate delivery date if required
- Comprehensive planning and optimization for high complexity machinery date
Engineering Change Management (ECM)  
Order Change Management (OCM)

- Customer
  - Report change notification / claim
  - Check status

- Design Engineer
  - Review change notification / claim
  - Engineering Change Order

- Industrial Engineer
  - Order Change Management
    - Simulation of changes
    - Apply changes to production
ETO Manufacturing: Engineering – Project BOM/Order
BOM, Release Assemblies to Execution

**Engineering in SAP ERP**

Order/Project
BOM/Routing

Transfer Order/
Project BOM / routing
to SAP SCM

**Project Structure in SAP ERP Project System (PS)**

Transfer

Transfer Network
to SAP SCM

→ Production Planning & Scheduling
for Assemblies

Controlling

Schedule

Material
Components
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Multi-Tier Outsourced Manufacturing of Configurable and Engineered Assemblies

Enhanced collaborative outsourcing shortens the quote-to-cash cycle lead time and improves accuracy.

Contract Manufacturer

Supplier

Customer

My Company

Parts shipment

Direct shipment

Config. BOM/Order BOM/Project BOM

Production/Shipping Status

3rd party Sub Contract PO

Drawing

PO Parts

Sales Order

1

2

3

4

5

6
Demos

Sales of Configurable Products

Web Channel Sales of Configurable Products

Solution Selling

Sales Analytics for Configurable Products with Business Objects Explorer

Integrated Product Development for Configurable Products
  • Extend Product Model
  • Graphical Product Model Maintenance
  • 3D Simulation of Configured BOM
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Proven customer value through SAP

Customers are realizing substantial value with SAP’s Solution and Performance Selling solution

- Efficient collaboration on quotes, enhanced product selection and configuration
- Improved sales pipeline visibility

- Caterpillar dealers reduced processing time per order by integration with Caterpillar’s CTO and Design to order quote process via multiple channels

- Enhanced efficiency by 8%
- Solid functionality – engineer-to-order integration and product configuration support for sales orders
Customers Drive Value with ‘Sales of Configurable Products’

<table>
<thead>
<tr>
<th>Tangible Benefits</th>
<th>% impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
</tr>
<tr>
<td>Increase order volume</td>
<td>6-8%</td>
</tr>
<tr>
<td>Increase in cross sell/up sell rate</td>
<td>10-20%</td>
</tr>
<tr>
<td>Increase in close rate</td>
<td>8-10%</td>
</tr>
<tr>
<td><strong>Operating cost</strong></td>
<td></td>
</tr>
<tr>
<td>Decrease average sales cycle time</td>
<td>10-20%</td>
</tr>
<tr>
<td>Reduce order-to-delivery cycle time</td>
<td>10-20%</td>
</tr>
<tr>
<td>Increase productivity of sales personnel</td>
<td>10-30%</td>
</tr>
<tr>
<td><strong>Improve Quality</strong></td>
<td></td>
</tr>
<tr>
<td>Reduce order entry errors</td>
<td>20-30%</td>
</tr>
<tr>
<td>Increase forecasting accuracy</td>
<td>30-40%</td>
</tr>
<tr>
<td>Increase customer information accuracy</td>
<td>50-60%</td>
</tr>
<tr>
<td><strong>Working Capital</strong></td>
<td></td>
</tr>
<tr>
<td>Reduce receivables</td>
<td>10-15%</td>
</tr>
<tr>
<td>Increase inventory turns</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

- Bosch-Rexroth increased cross-selling while reducing the quoting time with considerably decreased sales expenses
- Bosch Rexroth reduced time spent by field sales reps on non-value added tasks by 30%
- Caterpillar dealers reduced processing time per order by integration with Caterpillar’s CTO and Design to order quote process via multiple channels
- Frankotyp Postalia improved the quality of offers by using standard offers with configurable pricing with contract types flexibly combining hardware, service contracts and leasing
- Lennox enabled efficient collaboration on quotes, enhanced product selection and configuration and improved sales pipeline visibility
- Wilson Tool enhanced efficiency by 8% and reduced outstanding receivables by better visibility
- Wilson Tools is able to grow the business without increasing staff while improving customer service with reduced order errors and returns
More than 2000 Leading Complex Equipment Manufacturers Use SAP Configuration
Greenheck Fans Itself with Business Benefits by Using SAP Software

QUICK FACTS

Greenheck Fan Corporation
- Headquarters: Schofield, Wisconsin
- Industry: Manufacturing
- Products and services: Air movement and control equipment
- Revenue: US$500 million
- Employees: 2,700
- Web site: www.greenheck.com
- SAP® solutions and services: Variant configurator in the SAP ERP application, SAP NetWeaver® technology platform
- Implementation partners: itelligence Inc., Rapidigm Inc.

Challenges and Opportunities
- Create ability to quote, sell, and manufacture configurable products in an environment of high sales and short lead times
- Support lean manufacturing of complex, multidimensional products
- Aim for field-to-factory next-day orders

Objectives
- Enable electronic flow of configuration data directly to the shop floor
- Minimize disruption to business operations during go-live
- Develop ready-to-go templates to accelerate future rollouts

Why SAP
- For manufacturing, the ability of the variant configurator in the SAP® ERP application to configure complex make-to-order and dimensional products
- For sales, the availability of product and pricing configurators for Greenheck’s independent sales force
- For customers, the ability to drive the configuration process using a full-fledged artificial intelligence configuration engine

Benefits
- Increased order velocity by more than 400%
- Reduced order-entry errors by 38%
- Improved distribution productivity and on-time shipments by 20%
- Increased responsiveness with electronic confirmations of complex orders sent in seconds
- Increased efficiency with electronic flow of manufacturing data directly to shop-floor machines

“For a make-to-order company, there are no better solutions than those from SAP. Configuration is huge for Greenheck, and SAP delivers the best-in-class solutions for MTO [make-to-order] manufacturers.”

David Loomans
Manager, Engineering and Manufacturing Systems
Greenheck Fan Corporation
Francotyp-Postalia improves Solution and Performance Selling with SAP

**Quick Facts**

**Francotyp-Postalia AG**
- Location: Birkenwerder, Germany
- Industry: Industrial machinery and equipment
- Products and services: Franking machines, services and supplies
- Revenue: €148 million (FY 2005)
- Employees: 890 (FY 2005)
- Web site: www.francotyp-postalia.com
- SAP® solution and services: mySAP™ Customer Relationship Management application (interaction center and mobile sales and service functionalities) and the mySAP ERP application
- Partner: SAP Consulting

**Key Challenges**
- Secure market share
- Provide excellent service while improving productivity
- Simplify and decentralize order taking capabilities
- Improve call center performance and reduce customer wait times
- Expand after-sales business, strengthen existing customer ties, and profit from attractive margins

**Why SAP**
- Strong functionality that supports the postal equipment business, including flexible configuration of products
- Integration with existing SAP software landscape
- Security of IT investment
- Efficiency of acquiring software and consulting from one source

**Implementation Highlights**
- Minimized disruption to existing business
- Realized quick time to value
- Established steering committee with members from executive management
- Leveraged standard ASAP methodology

**Low Total Cost of Ownership**
- Eliminated multiple legacy systems
- Adhered to budget
- Minimized change management costs
- Rapid and on-time implementation phases

**Why SAP**
- Planned internal rate of return of 24.5% and payback period of 2.9 years
- Defended market share, increased contribution margin from service
- Implemented flexible contract management with usage-based billing

**Benefits – Financial and Strategic**
- Planned internal rate of return of 24.5% and payback period of 2.9 years
- Defended market share, increased contribution margin from service
- Implemented flexible contract management with usage-based billing

**Benefits – Operational**
- Achieved full visibility of service-related orders and reduced associated errors and duration of billing cycle
- Streamlined call center processes - reduced call center agents use from 3 to 1
- Enabled call center agents and sales staff to view all prices and configure orders
- Improved high-level scheduling and efficiency of field service technicians

"We were seeking a standardized, company-wide overview of all customer-related processes. This would allow us to seamlessly handle every task, improve service, and enhance customer retention."

Ulrich Willms
Project Manager
Francotyp-Postalia AG
KRONES, Germany – Market Leader for Filling and Packaging Systems

Comprehensive multi-level configuration structure

Several thousand materials and hundreds of configurable assemblies are processed through a six-level BOM structure

Configuration with up to 2000 characteristics

Using set structure in sales order, order BOM, order BOM costing, Project Systems configurable networks for fulfillment
SAP Sales Configuration Delivers Value
Nokia Siemens Networks

• Nokia Siemens Networks is one of the largest Telco infrastructure companies with operations in 150 countries and revenue of 17B Euro
• Leverages SAP OM platform for configure to order products/solutions

Consolidated 5 different product configuration tools and 27 different order processes onto the SAP Order Management platform
Increased customer satisfaction through higher offer-order accuracy
Reduced order lead times by 20%
Configuration Work Group (CWG) – User Group for Product Configuration

**Group**
- Independent international user group focused on SAP Product Configuration
- **Fast growing organization 540+ member companies, 2500+ active members**
- SAP customers & prospects, SAP partners, SAP product management and development

**Purpose / Goals**
- Forum for knowledge sharing between member companies
- Enable and improve usage of product configuration
- Feedback to / influence SAP development for product configuration

**Activities**
- Two semi-annual conferences – Europe (spring), US (fall) with presentations and workshops
- Regional Groups and Focus Groups with year round activity
- CWG web portal: [www.configuration-workgroup.com](http://www.configuration-workgroup.com) – Public area, discussion forums, special topic articles meeting presentations

**Benefits**
- Knowledge sharing and education
- Direct access to other customers, partners, SAP product management and development
- First look at SAP strategic direction and influence
SAP Services: Extending the Value of SAP’s Configuration Capabilities

- Implementation consulting
- Application training
- Support services

- Configurable product focus
- Expert analytics services
- Demand & portfolio management

- Standard SAP Services

- Performance & Insight Optimization

- Center of Expertise Product & Solution Configuration

- Business Transformation Services

- Expert planning services & development support
  for highly unique configuration requirements

- Specialized services
  Transition to solution provider network model
SAP Product Configuration Differentiators

**Functional Highlights Differentiating SAP Product Configuration**

Feasibility, Pricing, BOMs and routings are calculated automatically

Margin and profitability calculation based on configured BOMs and routings

Promise date calculation (Standard or Global ATP)

Better sales planning and demand analytics including configuration options

Support for engineering and order change management driven by workflow

Seamless transition from sales configuration to engineering configuration to order engineering to manufacturing – mix of MTS, MTO, ETO with easy transition if required

Configuration in quote/sales order is integrated throughout all applications
  - BOM, routing, costing, MRP, planned orders, production orders, quality management
  - Purchase orders, outsourced manufacturing for configured, MTO and ETO parts
  - Projects, equipment/installed base (as-sold, as-built, as-maintained)
  - Demand planning and sales analytics

State-of-the-art multi-channel sales configuration support based on one product model – mobile, e-selling, interaction center / back office and channel partners

User interface very easy to use and highly flexible – sales/marketing can easily adapt the user experience without development, easy to add partner 2D/3D graphical configuration tools

Highly scalable configuration engine – for both high volume low product complexity (millions of configurations/year) as well as low volume high product complexity (Multiple BOM levels with 100s of configurable assemblies, 1000s of characteristics and constraints in one model)

SAP enables efficient product development and easy product modeling - from CAD to configuration to engineering with 3D simulation to manufacturing for production ramp-up
SAP Product Configuration Differentiators

Industrial Manufacturers run better with SAP Product Configuration

2000+ manufacturers use SAP Product Configuration to successfully run and grow their business across MTS, MTO and ETO manufacturing models

The ecosystem around SAP Product Configuration offers the highest value across the complete life cycle

SAP Product Configuration business processes are supplemented by an unreached offering of implementation, analytics, business transformation and development services by SAP and partners

With the Configuration Workgroup (CWG), SAP has built an ecosystem that brings together SAP customers, partners and SAP for knowledge sharing, education and to drive constant improvement to the product according to customers needs, allowing customers to grow with product upgrades
Thank You!

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