



# Engineering, Construction & Operations Solution Map

**Edition 2004**

# Engineering, Construction & Operations

|   |   |  |   |  |   |                           |
|---|---|--|---|--|---|---------------------------|
| <b>Enterprise Management</b>                  | <b>Strategic Enterprise Management</b>      | <b>Management Accounting</b>           | <b>Financial Accounting</b>                   | <b>Corporate Governance</b>            | <b>Financial Supply Chain Management</b>            | <b>Business Analytics</b> |
| <b>Project Management</b>                     | <b>Planning &amp; Scheduling</b>            |  | <b>Contract Management</b>                    |  | <b>Controlling</b>                                  |                           |
| <b>Business Development &amp; Acquisition</b> | <b>Portfolio Planning</b>                   |  | <b>Project Development</b>                    |  | <b>Opportunity Management</b>                       |                           |
| <b>Design &amp; Engineering</b>               | <b>Basic Design &amp; Engineering</b>       |  | <b>Detail Engineering</b>                     |  | <b>Collaboration</b>                                |                           |
| <b>Procurement &amp; Materials Management</b> | <b>Request for Quotation &amp; Awarding</b> |  | <b>Subcontracting &amp; Purchase Orders</b>   |  | <b>Expediting &amp; Tracking/Quality Inspection</b> |                           |
| <b>Fabrication &amp; Assembly</b>             | <b>Planning</b>                             |  | <b>Execution</b>                              |  | <b>Quality Assurance</b>                            |                           |
| <b>Construction Management</b>                | <b>Site Planning &amp; Scheduling</b>       | <b>Site Management &amp; Execution</b> | <b>Fleet Equipment &amp; Tools Management</b> | <b>Punch List &amp; Warranty</b>       | <b>Commissioning/Startup /Handover</b>              |                           |
| <b>Facility &amp; Plant Operations</b>        | <b>Space Management</b>                     | <b>Facility Lease out/in</b>           | <b>Maintenance &amp; Operation of Assets</b>  | <b>Service Sales &amp; Marketing</b>   | <b>Service Operations</b>                           |                           |
| <b>Business Support</b>                       | <b>Compliance Management</b>                | <b>Customs Management</b>              | <b>Fixed Asset Management</b>                 | <b>Employee Transaction Management</b> | <b>Workforce Deployment</b>                         |                           |



# Engineering, Construction & Operations

## Enterprise Management

| Strategic Enterprise Management   | Management Accounting  | Financial Accounting   | Corporate Governance   | Financial Supply Chain Management  | Business Analytics   |
|---|--|--|--|--|--|
| <ul style="list-style-type: none"> <li>● Stakeholder Relationship Management (S22)</li> <li>● Strategy Management (S22)</li> <li>● Performance Measurement (S22)</li> <li>● Strategic Planning &amp; Simulation (S22)</li> <li>● Business Consolidation (S22)</li> <li>▶ M&amp;A Pre-Deal Management (S68)</li> <li>▶ M&amp;A Post-Deal Integration Planning and Execution (S68)</li> <li>▶ M&amp;A Organization Restructuring (S68)</li> </ul> | <ul style="list-style-type: none"> <li>● Profit Center Accounting (S60)</li> <li>● Cost Center &amp; Internal Order Accounting (S60)</li> <li>● Project Accounting (S60)</li> <li>● Investment Management (S60)</li> <li>● Product Cost Accounting (S60)</li> <li>● Profitability Accounting (S60)</li> <li>● Revenue &amp; Cost Planning (S60)</li> <li>● Transfer Pricing (S60)</li> </ul> | <ul style="list-style-type: none"> <li>● General Ledger (S60)</li> <li>● Accounts Receivable (S60)</li> <li>● Accounts Payable (S60)</li> <li>● Fixed Assets Accounting (S60)</li> <li>● Bank Accounting (S60)</li> <li>● Cash Journal Accounting (S60)</li> <li>● Inventory Accounting (S60)</li> <li>● Tax Accounting (S60)</li> <li>● Accrual Accounting (S60)</li> <li>● Fast Close (S60)</li> <li>● Financial Statements (S60)</li> <li>● Parallel Valuation (S60)</li> </ul> | <ul style="list-style-type: none"> <li>● Audit Information System (S60)</li> <li>● Management of Internal Controls (S60, S55)</li> <li>● Business Risk Management (S60)</li> <li>● Whistle Blower Complaints (S60)</li> <li>● Transparency for Basel II (S60)</li> </ul> | <ul style="list-style-type: none"> <li>● Credit Management (S22, S8)</li> <li>● Electronic Presentment &amp; Payment (S22, S8, B10, B23, S60)</li> <li>▶ Collections Management (S22, S8)</li> <li>● Dispute Management (S22, S8)</li> <li>● In-house Cash (S22, S8)</li> <li>● Cash &amp; Liquidity Management (S22, S8)</li> <li>● Treasury &amp; Risk Management (S22, S8)</li> </ul> | <ul style="list-style-type: none"> <li>● Customer Relationship Analytics (S14, B12)</li> <li>● E-Analytics (B12)</li> <li>● Supply Chain Analytics (S51, B12)</li> <li>● Financial Analytics (S60, B12)</li> <li>● Human Resource Analytics (S61, B12)</li> <li>▶ Product Lifecycle Analytics (S34, B12)</li> <li>● Project Portfolio Management (S70)</li> <li>● Resource Management (S70)</li> </ul> |

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- Future Focus

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## Project Management

### Planning & Scheduling

- Maintain Master Data, Contract & Project Structure (S62)
- Cost Estimation (S62)
- Project Budgeting (S62, S60)
- Organizational Setup (S62, S61)
- Job/Activity Planning (S62, S64)
- Resource Planning (S64, S70, S62)
- Risk Management (B12, S22)
- Detail Scheduling (S62)

### Contract Management

- Contract Development & Administration (S59, S62)
- Change & Claim Management (S62)
- Lot Management (S126)
- Pricing (S59)
- Billing (S60, S59)
- ▶ Down Payment Chains (S126)
- Surety Bond Management (S62)

### Controlling

- Costing Structure (S60, S62, B12)
- Cash Flow Planning (S60, S62, B12)
- Cost Planning (S62, S60)
- Performance Notification & Work in Progress Analysis (S62)
- Joint Venture Management (S158)
- ▶ Financial Statement by Project (S126, S158)

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## Business Development & Acquisition

### Portfolio Planning

- Market Surveys (S60, S14, S59)
- Product Analytics (B12)
- Business Planning & Simulation (S14, S59, B12, S22)
- Portfolio Planning (S14, S22, B12)

### Project Development



- Market Potential (S14, S60, S59)
- Land Pilot Survey (S201)
- Land Acquisition (S126)
- Rough Planning & Budgeting (S62)

### Opportunity Management



- Marketing Planning/Budgeting (S14, S59, B12)
- Competitive Analysis (B12, S22, S14)
- Customer Database (S59, S14)
- Key Account Management (S59, B12)
- Proposal (S59, S14)
- Bid Database (S14, S59)
- Community Configuration (S126)

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## Design & Engineering

|  <b>Basic Design &amp; Engineering</b>  |  <b>Detail Engineering</b>  |  <b>Collaboration</b>  |
|--|--|---|
| <ul style="list-style-type: none"> <li> Basic/Front end Engineering &amp; Design (S62, P14)</li> <li> Technical Specifications (S62)</li> <li> Project Functional Requirements (S62)</li> <li> Prepare Material/Equipment/Service Specifications &amp; Requirements (S62)</li> <li> CAD Integration (S62, S35, S39, P14)</li> </ul> | <ul style="list-style-type: none"> <li> Documents &amp; Drawings Management (S62)</li> <li> Configuration &amp; Change Management (S62)</li> <li> CAD Integration (S62, S35, S39, P14)</li> <li> Plant Design/Modeling (S62, S34, P14)</li> <li> Work Packages (S62)</li> <li> Spare Parts (S62, S126)</li> <li> Develop Design Documents (S62, S34, P14)</li> <li> Develop Construction Specifications (S62, S34, P14)</li> <li> Develop Procedure Manuals (S62)</li> <li> Develop Operation &amp; Maintenance Manuals (S62)</li> <li> Constructability Review (P58, P14, S34)</li> <li></li> </ul> | <ul style="list-style-type: none"> <li> Hierarchical Structuring (S62)</li> <li> Authorization Concept (S62)</li> <li> Document Versions (S62)</li> <li> Backend Integration (S62)</li> <li> Notifications (S62)</li> <li> Redlining/Markup (S62)</li> <li> Datasheet Handling (S62)</li> <li> Status Management (S62)</li> </ul> |

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## Procurement & Materials Management

| Request for Quotation & Awarding  | Subcontracting & Purchase Orders  | Expediting & Tracking/Quality Inspection  |
|---|---|---|
| <ul style="list-style-type: none"> <li>● Catalog Management (S62)</li> <li>● Approval of External Partners (S63)</li> <li>● Evaluations &amp; Selection of External Partners (S63, B12)</li> <li>● Negotiation of External Partners (S63)</li> <li>● Requests for Information/Quotations/Proposals (S63)</li> <li>● Aggregated Procurement (S63)</li> <li>● Collaboration of Documents/Drawings (S62)</li> <li>● Develop Bid Evaluation Criteria (S63, B12)</li> <li>● Bid Evaluation (S63, B12)</li> </ul> | <ul style="list-style-type: none"> <li>● Value Subcontracts (B12)</li> <li>● Quantity Subcontracts (S63)</li> <li>● Procurement of Materials (S63)</li> <li>● Invoicing/Billing (S63, S60, S59)</li> <li>● Preliminary Purchasing (S63)</li> <li>● Management of Subcontractors (S63, B12)</li> <li>● Subcontractor Collaboration (S62)</li> <li>● Procurement of Services (S63)</li> <li>● Site Procurement (S63)</li> </ul> | <ul style="list-style-type: none"> <li>● Purchase Requisition &amp; Order (S63)</li> <li>● Expediting (S62, S6, S51)</li> <li>● Receiving (S63)</li> <li>● Quality Issues &amp; Punch List (S62, S63)</li> <li>● Delivering (S63)</li> <li>● Acceptance Test (S62)</li> <li>● Shipping &amp; Tracking (S63, B12)</li> </ul> |

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## Fabrication & Assembly

### Planning

- Production Planning (S51, S64)
- Detailed Scheduling (S51, S64)
- Materials Requirements Planning (S64, S51)

### Execution

- Shop Floor Manufacturing (S64)
- Manufacturing & Assembly (S64)
- Batch Management (S64)
- Material/WIP Tracking (S151)
- Scrap/Offcut Management (S51)
- Tooling Management (S64)
- Order Progress Monitoring (S64, S62)

### Quality Assurance

- Set Inspection Requirements (S62, S63)
- Quality Issues & Punch List (S62, S63)
- Delivering (S63)
- Shipping & Tracking (S64)





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## Construction Management

| Site Planning & Scheduling   | Site Management & Execution   | Fleet Equipment & Tools Management   | Punch List & Warranty  | Commissioning/Startup/Handover  |
|--|---|--|--|---|
| <ul style="list-style-type: none"> <li>● Detailed Scheduling (S62)</li> <li>● Milestone &amp; Execution Plan (S62)</li> <li>● Job/ Activities Planning (S62)</li> <li>● Resources Requirements (S62, S61)</li> <li>● Prefabricated/Production Work (S62, S64, S63)</li> <li>● Adjustment of Cost Estimation (S62)</li> <li>● Mobilization &amp; Demobilization Plan (S62)</li> </ul> |  <ul style="list-style-type: none"> <li>● Time Recording &amp; Confirmation (S61)</li> <li>● Claim/Change Management (S62)</li> <li>● Quality Inspection (S62)</li> <li>● Interest Calculation (S60)</li> <li>● Securities Management (S61)</li> <li>● Earned Value &amp; Result Analysis (S60, S62, B12)</li> <li>● Target &amp; Actual Comparison (S62, B12)</li> <li>● Outstanding Accounts (B12)</li> <li>● Multi-Project Controlling (S60, B12)</li> <li>● Loan Draw Requisition (S60)</li> <li> Quantity Take-Off (S126)</li> <li>● Down Payment Chains (S126)</li> </ul> | <ul style="list-style-type: none"> <li>● Master Data (S127)</li> <li>● Requirements Specification (S127)</li> <li>● Planning/Scheduling/Dispatching (S62, S127)</li> <li>● Journey Management (S127)</li> <li>● Counter Measurements (S127)</li> <li>● Maintenance &amp; Overhaul (S62)</li> <li>● Warranty Management (S62)</li> <li>● ATA Codes (S127)</li> <li>● Operating Statistics (S127, B12)</li> <li>● Billing &amp; Settlement (S127, S60, S59)</li> </ul> |  <ul style="list-style-type: none"> <li>● Entry of Warranty Request (S62)</li> <li>● Evaluation of Warranty Request (B12)</li> <li>● Defect Analysis (B12)</li> <li>● Defect Elimination (S34)</li> <li>● Site Closing (S62, B12)</li> <li>● Project Closing (S62, B12)</li> <li>● Maintenance Setup (S62)</li> <li>● Retention Handling (S60, S62, B12)</li> </ul> |  <ul style="list-style-type: none"> <li>● Commissioning (S62)</li> <li>● Initial Startup (S62)</li> <li>● Startup (S62)</li> <li>● Handover (S62)</li> </ul> |




































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## Facility & Plant Operations

| Space Management   | Facility Lease out/in  | Maintenance & Operation of Assets  | Service Sales & Marketing   | Service Operations  |
|--|--|--|---|---|
| <ul style="list-style-type: none"> <li> Master Data &amp; Structuring (S62, S60, S201)</li> <li> Relocation Planning (P14)</li> <li> Utilization Planning (S201)</li> <li> CAD/CAFM Interface (P14)</li> </ul> | <ul style="list-style-type: none"> <li> Lease Out External (S60, S201)</li> <li> Lease Out Internal (Corporate Use) (S60, S201)</li> <li> Lease In (S60, S201)</li> <li> Service Charge Settlement (S201)</li> <li> Real Estate Controlling (S60, S201, P3)</li> <li> Real Estate Business Analytics (S60, S201, B12)</li> </ul> | <ul style="list-style-type: none"> <li> Fault Based Maintenance (S34)</li> <li> Preventive/Predictive Maintenance (S62)</li> <li> Maintenance Request Processing (S62)</li> <li> Work Approval Process (S34)</li> <li> Work Order Management (S62)</li> <li> Maintenance Execution (S62, P54)</li> <li> Tagging/Lockout (S62, S45)</li> <li> Warranty Management (S59, S14)</li> </ul> | <ul style="list-style-type: none"> <li> Marketing &amp; Campaign Management (S14)</li> <li> Lead Management (S14)</li> <li> Territory Management (S14)</li> <li> Account &amp; Contract Management (S14)</li> <li> Activity Management (S14)</li> <li> Opportunity Management (S14)</li> <li> Customer Interaction Center (S14, S59)</li> <li> Service Quotation &amp; Order Management (S14, S59)</li> <li> Service Contract Management (S14, S59)</li> </ul> | <ul style="list-style-type: none"> <li> Service Planning &amp; Forecasting (S14)</li> <li> Service Scheduling &amp; Optimization (S14, S59)</li> <li> Service Execution (S14)</li> <li> Mobile Service (S14, B26)</li> <li> Lifecycle Planning (S64, S51, S1)</li> <li> Warranty Management (S14, S59)</li> <li> Escalation Management (S14, S59)</li> <li> Service Billing (S14, S59)</li> </ul> |

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## Business Support

| Compliance Management   | Customs Management  | Fixed Asset Management   | Employee Transaction Management  | Workforce Deployment  |
|---|---|--|--|---|
| <ul style="list-style-type: none"> <li>● Sanctioned Party List Screening (S56)</li> <li>● Export Control (S56)</li> <li>● Import Control (S56)</li> </ul> | <ul style="list-style-type: none"> <li>● Product Classification (S57)</li> <li>● Duty Calculation (S57)</li> <li>● Trade Document Service (S57)</li> <li>● Customs Communication Service (S57)</li> </ul> | <ul style="list-style-type: none"> <li>● Capital Investment Budgets (S60)</li> <li>● Capital Investment Planning &amp; Analysis (S60)</li> <li>● Capital Investment Measure Controlling (S60)</li> <li>● Fixed Asset Accounting (S60)</li> <li>● Fixed Asset Inventory Management (S60)</li> <li>● Employee Self Service for Fixed Assets (S61)</li> <li>● Simulation Functions (S60)</li> </ul> | <ul style="list-style-type: none"> <li>● HR Administration (S61)</li> <li>● Organizational Management (S61)</li> <li>● Expatriate Management (S61)</li> <li>● Benefits Management (S61)</li> <li>● Time &amp; Attendance (S61)</li> <li>● Global Payroll (S61, S52)</li> </ul> | <ul style="list-style-type: none"> <li>● Project Resource Planning (S14, S61)</li> <li>● Resource &amp; Program Management (S23, S70)</li> <li>● Call Center Staffing (S59, S21)</li> <li>▶ Retail Scheduling (S59, S21)</li> </ul> |

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# Solution Map Product Table

| Key | Description   |
|-----|---|
| B10 | J2EE  |
| B12 | SAP NetWeaver: SAP Business Intelligence                                |
| B23 | SAP Java Connector  |
| B26 | SAP NetWeaver: SAP Mobile Infrastructure                                |
| S1  | Advanced Planning & Scheduling (applies to mySAP SCM)                   |
| S6  | Event Management Engine (applies to mySAP SCM)                          |
| S8  | SAP Financial Supply Chain Management (applies to mySAP ERP)            |
| S14 | mySAP Customer Relationship Management                                  |
| S21 | mySAP Customer Relationship Management: SAP Workforce Optimization      |
| S22 | mySAP Financials  |
| S23 | mySAP Human Resources   |
| S34 | mySAP Product Lifecycle Management                                      |
| S35 | mySAP Product Lifecycle Management: SAP AutoCad Integration             |
| S39 | mySAP Product Lifecycle Management: SAP I-DEAS Integration              |
| S45 | mySAP Product Lifecycle Management: SAP Work Clearance Management       |
| S51 | mySAP Supply Chain Management   |
| S52 | mySAP ERP: SAP Payroll Processing                                       |
| S55 | SAP Compliance Mgmt for Sarbanes Oxley Act                              |
| S56 | SAP Global Trade Services: SAP Compliance Management                    |
| S57 | SAP Global Trade Services: SAP Customs Management                       |
| S59 | SAP R/3 Enterprise / mySAP ERP / mySAP Customer Relationship Management |
| S60 | SAP R/3 Enterprise / mySAP ERP / mySAP Financials                       |

# Solution Map Product Table

| Key  | Description   |
|------|---|
| S61  | SAP R/3 Enterprise / mySAP ERP / mySAP Human Resources                  |
| S62  | SAP R/3 Enterprise / mySAP ERP / mySAP Product Lifecycle Management     |
| S63  | SAP R/3 Enterprise / mySAP ERP / mySAP Supplier Relationship Management |
| S64  | SAP R/3 Enterprise / mySAP ERP / mySAP Supply Chain Management          |
| S68  | SAP xApp Mergers and Acquisitions                                       |
| S70  | SAP xApp Resource & Program Management                                  |
| S126 | SAP for Engineering & Construction                                      |
| S127 | SAP for Engineering & Construction: SAP Equipment & Tools Management    |
| S151 | SAP for Mill Products   |
| S158 | SAP for Oil & Gas: SAP Joint Venture Accounting                         |
| S201 | SAP Real Estate Management  |

# Solution Map Partner Interface Table

| <b>Key</b> | <b>Description</b>  |
|------------|---|
| <b>P3</b>  | <b>Activity Based Costing Interface</b>                     |
| <b>P14</b> | <b>Computer Aided Design</b>                                |
| <b>P54</b> | <b>Plant Maintenance - Process Control System Interface</b> |
| <b>P58</b> | <b>Product Data Management</b>                              |

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