Earned Value Management and Progress Measurement

Consulting Services for Product Lifecycle Management – Enhancement Service for SAP Portfolio and Project Management
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Earned value management and progress measurement

For successful project management, the percentage of completion as well as earned value management and progress measurement techniques are crucial elements. This enhancement service is based on official earned value standards and integrates with the earned value functionality of the project system (PS) in the SAP ERP application.

A wide range of measurement techniques is available for calculating and aggregating the percentage of completion (POC) along your project’s task hierarchy.
Earned value management and progress measurement

Our service

- An implementation-ready solution
- Implementation of the solution
- Documentation of the solution
- Optional online scoping session and presentation at your site
Earned value management and progress measurement

Functionality

An additional Web Dynpro application is provided, containing the following features:

- Different measurement methods for POC determination that you can assign through progress versions (as the default for special task types) or through custom settings at the task level
- Aggregation to the accounting object level for seamless integration with the project system in SAP ERP
- Visualization of the accumulated POC at the task, phase, and project level
- Selection between progress versions and time frames
- Visualization of budgets, costs, and earned values based on data from the project system in SAP ERP
Earned value management and progress measurement

Determination of the percentage of completion

- Calculation of percentage of completion (plan/actual) at task level only
- Support of different measurement methods:
  - Ability to set measurement methods for individual task types as defaults
  - Ability to calculate percentage of completion values using various measurement methods in parallel
  - Storage of calculated data per day supporting progress analysis for short-running projects
This portfolio and project management (PPM) consulting solution is based on official standards for earned value analysis (EVA) and completely integrated with the project system (PS) in SAP ERP.

- Multiple measurement techniques available to calculate (non)aggregated POCs
- Aggregation of POC for project hierarchy and work breakdown structure (WBS) elements in the project system
- Tabular and graphical reporting of POCs for projects, phases, and tasks
- Comparison to project baselines
- Predefined KPIs:
  - SPI: Schedule performance index
  - CPI: Cost performance index
  - BCWS: Budgeted costs work scheduled
  - BCWP: Budgeted costs work performed (= earned value)
  - BAC: Budget at completion
  - ETC: Estimate to complete
### Earned value management and progress measurement

#### Requirements and integration scenarios

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<thead>
<tr>
<th>Project system in SAP ERP</th>
<th>SAP Portfolio and Project Management</th>
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<td>3. Calculation of KPIs, based on cost data</td>
<td>1. Calculation of POC values</td>
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<td>4. Reporting</td>
<td>2. Transfer POC data to WBS elements</td>
</tr>
<tr>
<td>1. Cost data on WBS elements</td>
<td>3. Calculation of POC values and KPIs</td>
</tr>
<tr>
<td>2. Transfer cost data to objects in SAP Portfolio and Project Management</td>
<td>4. Reporting</td>
</tr>
<tr>
<td>Optional</td>
<td>Standard accounting integration or object links</td>
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</tbody>
</table>

#### Requirements

- For POC calculation and reporting
  - None
- For KPI calculation and reporting
  - Accounting integration in order to retrieve cost data assignment of SAP Portfolio and Project Management objects to WBS elements or internal orders → see integration scenarios
  - Manually entered costs
  - Calculated costs (resource-based)
  - “Integrated cost planning” PPM consulting service
Earned value management and progress measurement
Configuration I

Definition of progress versions (= calculation scenario)
- Set of dates (earliest versus latest dates)
- Weighting type for aggregation on phase and project level
  - No weighting
  - Based on duration
  - Based on effort
  - Manually entered

Definition of measurement methods
- Start-finish rule (for example, 0-100; 20-80; 50-50; …)
- Degree of processing (manually entered, based on change documents in SAP Portfolio and Project Management)
- Subproject (POC values from assigned subproject)
- Time proportional (based on duration of the task)
- Status-based (customizing table)
- Based on recorded work (recorded cross-application time sheet (CATS) hours divided by planned effort of task)

→ Different measurement methods for planned and actual POC possible
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Configuration II

Definition of KPIs

- Based on calculated POC values
- Predefined KPIs (if cost data is available)
  - SPI Schedule performance index (cost independent)
  - CPI Cost performance index
  - BCWS Budgeted costs work scheduled
  - BCWP Budgeted costs work performed (= earned value)
  - BAC Budget at completion
  - ETC Estimate to complete

Transfer of POC and KPI values to SAP customer fields (CI* structures)

- Visible for each object in SAP Portfolio and Project Management
- Access to values in dashboards and additional reporting tools

* Configuration item
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Functionality

Calculation of POC and KPI values
- Ad hoc for specific project
- As batch report/job for all projects (select options possible)
  → Create a saved version in order to create a snapshot of your project’s progress

Reporting of POC and KPI values
- Comparison of different calculation scenarios (using different progress versions)
- Comparison of project with a saved version
- Comparison of planned against actual progress
- Time basis (daily, weekly, monthly, yearly)
- Time frame (from … to …)
  → Quick selections provided
- Tabular and graphical reporting for each object
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Advanced POC reporting for project hierarchy

- POC reporting for project
- Hierarchy-based object selection with POC aggregation on phase and project level
- Dynamic accumulation depending on the selected time basis (day/week/month/year)

Weekly reporting

Monthly reporting
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Data selection
## Earned value management and progress measurement

Tabular and graphical reporting

### Table Area

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![Line graph showing planned and actual progress over time](image)
## Earned value management and progress measurement

### Progress details

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### Additional Data

- **Object:** POC Example II
- **Period:** 11/2009
- **From:** 01.11.2009
- **To:** 30.11.2009

### Planned vs. Actual

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Earned value management and progress measurement
Integrated earned value chart

- Planned Value
- Actual Costs
- Earned Value
- Planned Value (Forecast)
- POC Plan
- POC Actual
# Earned value management and progress measurement

Aggregation to accounting object level of the project system

Aggregation of the POC per accounting object and fiscal period:

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**Agreement Project**

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**n : 1 cardinality**
Earned value management and progress measurement
Integration with SAP ERP

- A starting page makes it easy to select the right project.
- The accounting objects such as WBS elements can carry planned costs and budgets.
- A new transaction has been created that reads the project hierarchy, the associated costs/budget, and the precalculated POCs from SAP Portfolio and Project Management and derives planned and actual earned values.
- Standard tables from the controlling (CO) module in SAP ERP are used to store earned value data, so that all standard CO reports can be used.
Earned value management and progress measurement
Enhanced project controlling and reporting

The “earned value management and progress measurement” enhancement service supports the analysis of project-related progress in SAP Portfolio and Project Management based on official SAP standards, following the implementation of the project system (PS) in SAP ERP.

Business challenges
You are seeking to:
▪ Measure your project’s progression toward its target performance
▪ Apply an earned value methodology for project controlling
▪ Create your own KPIs

Key features
▪ Evaluation and representation of your project’s progression toward its target performance, cumulated and per period
▪ Interpretation on a daily basis
▪ Application of various measuring techniques and methods
▪ Contrasted versions
▪ Tabular and graphical presentation
▪ Integration with the project system of SAP ERP
▪ Implementation in ~4 weeks

Business benefits
▪ Detailed overview of your project’s progress and resulting KPIs
▪ IT-supported realization of the earned value methodology
▪ Seamless integration with the user interface (UI) of SAP Portfolio and Project Management 5.0
▪ Rapid and detailed evaluation of each project element
▪ Levels of progress and KPIs available in standard dashboards

Availability, technical details
▪ Availability for SAP Portfolio and Project Management for SAP S/4HANA 1.0 and SAP Portfolio and Project Management 5.0, 6.0, and 6.1
▪ Delivery through transport
▪ Support for distributed ERP systems
▪ Complete documentation of all development objects and functionalities

Related services
▪ Integrated cost planning

Links
▪ SAP Note 157390
▪ Contact: PLMServices@sap.com
▪ More information: PPM Services
Thank you.

Contact information:

**PPM Services**
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