SAP Solution Manager 7.2 – Test Suite

How obstacles in functional testing can be solved

Solution Management, DBS, SAP SE
April 2018
Agenda

Scope of this presentation: Obstacles for functional tests and how they can be resolved with SAP Solution Manager Test Suite and integrated partner solutions

- SAP Solution Manager 7.2: Adoption Framework
- Hurdle 1: What are the important BP and PS of your Solution that needs full test attention?
- Hurdle 2: Setup of manual testing / creation of manual tests
- Hurdle 3: Setup / creation of automated tests
- Hurdle 4: Data refresh of QAS / TST systems
- Hurdle 5: Test Data identification and provisioning for manual and automated tests
- Hurdle 6: Change Impact Analysis and optimized Test Plans
- Hurdle 7: Identification of Software Changes not covered by Regression Tests
- Hurdle 8: Agile development and testing for Transformation and Innovation projects
SAP Solution Manager 7.2
Adoption Framework
SAP Solution Manager 7.2 - Adoption Framework
Implementation effort

- Many
  - Value achievable in **weeks**
- Few
  - Value achievable in **days**
- High
  - Value achievable in **hours**

**Alignment**
- Low
- High

**Basic Configuration**

**Rollout**
- Portfolio-to-project
- Requirement-to-deploy
- Request-to-fulfil
- Detect-to-correct
### Adoption Framework - Test Suite

**Value and Effort**

<table>
<thead>
<tr>
<th>Value</th>
<th>Adoption Steps</th>
<th>Capability</th>
<th>Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher RT coverage</td>
<td>Test Automation</td>
<td>Test automation of RT for fix, enhance, maintenance and innovation projects</td>
<td>1 day + 1-2 days per RT test case + onboarding of test engineers</td>
</tr>
<tr>
<td>Less incidents in PRD</td>
<td></td>
<td>Prognosis of change impact and adjustment / test efforts (Scope &amp; Effort Analyzer) for maintenance and upgrade projects</td>
<td>0,5 day for custom code setup (incl. UPL or SCMon activation) + 2 hours for job execution for semi-dynamic TBOMs</td>
</tr>
<tr>
<td>Less manual test effort</td>
<td></td>
<td>Change impact analysis for RT for fix, enhance, maintenance and innovation projects</td>
<td>+ 1/3 day per prio-1 process step + onboarding of change manager</td>
</tr>
<tr>
<td>Faster SP/EHP deployment</td>
<td></td>
<td>Manual testing for innovation and transformation projects (SFT, UAT, FIT, RT)</td>
<td>2 hours per test (SFT, UAT) 1 day per test (FIT) + onboarding of testers and test manager</td>
</tr>
<tr>
<td>Faster identification and optimization of test scope</td>
<td></td>
<td>Manual testing for RT for fix, enhance, and maintenance projects</td>
<td>1 day + 2 hours per RT test case + onboarding of testers and test manager</td>
</tr>
<tr>
<td>Change impact analysis for maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transparency over test execution progress</td>
<td>Manual Testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better guidance for testers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replace ad-hoc test planning with structured approach</td>
<td>Test Suite</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- **SFT:** Single Functional Tests, **UAT:** User Acceptance Tests, **FIT:** Functional Integration Tests, **RT:** Regression Tests
Hurdle 1:
What are the important BP and PS of your Solution that need full test attention?
Executable Library, Process Step Library, Business Processes and Test Cases

**Business Processes**
- ERP Scenarios
  - Sales Scenarios
    - Order to Cash V1
      - Quotation
      - Sales Order STD
      - Delivery
      - Goods Issue
      - Billing
    - Order to Cash V2
      - Quotation
      - Sales Order Special
      - Delivery
      - Goods Issue
      - Billing

**Library**
- Executables
  - LE
    - LE-SHP
    - Delivery (VL01N)
    - Goods Issue (VL02N)
  - SD
    - SD-BIL
    - Billing (VF01)
    - SD-SLS
    - Quotation (VA21)
    - Sales Order (VA01)
  - Customer Exe
  - Dev Class 1
    - ZVA01

**Process Steps**
- Sales Order STD
  - VA01
  - ZVA01

**Alt 1: E2E manual test**

**Alt 2: multiple single tests at Process Step level**

**Generic Sales Order test at executable level**

**Process Step specific Sales Order tests**
Alternatives to identify Business Processes, Process Steps and Executables with high business criticality*

**System-based Usage Analytics**
Goal: business transactions with high usage or variations

- ST03N
- Usage and Procedure Logging (UPL)
- ABAP Call Monitor (SCMON)
- SAP SolMan partner products (Celonis, DeceSoft DBP,…)

**Expert knowledge**
Goal: mission critical business transactions

- Input from experts: Business Process Experts, Solution Architects

* SAP Best Practices and SAP Model Companies should be considered as first choice to speed up the solution documentation before custom specific process identification
Generation of Process Step Variants via partner product DeceSoft DBP

DBP Usage Analysis and generation of most used Process Step Variants

Result in Solution Documentation - Process Step Library

Here: variation of posted business documents by Order Type and Distribution Channel
The **ABAP Call Monitor** allows you to monitor the execution of ABAP procedures (function modules, method calls, forms) and their leading requests (business processes) in the live ABAP system in parallel to productive use. Using this tool, you can focus on usages of a business process that is initiated by a request entry point - such as a specific transaction, RFC call, URL request, or ABAP report.

As a result of this monitoring, you get a list of executed request entry points along with all ABAP procedures that have been executed under the umbrella of these entry points. The ABAP Call Monitor not only indicates that the procedure was called in the first place, but also provides an execution counter for each procedure.

1. **Display Data**
Requestor, like transaction VA01 and called objects, like Methods

2. **Display Call Graph**
Shows additional requests of the calling transaction
   - Update Task (German: Verbucher)
   - Remote Function Calls (RFC) within the same system
   - Batch jobs
Custom Attribute “Process Priority” and BPCA / SEA

BPCA and SEA Preparation
• Custom attribute to flag mission critical business processes / process steps

Feature details
• SAP Best Practice highly recommend to flag mission critical BP / PS
• BPCA Test Scope Optimization allows to define an optimization approach to force impacted critical nodes into the test scope, especially when Test Scope < 100%
• SP05 delta: Definition of Custom Attribute can be accelerated by using SAP delivered DOMAIN and Data Element AGS_BPCA_PROCESS_PRIORITY

Benefits
• SAP customers can follow SAP Best Practice to flag mission critical processes in a much faster way
# Custom Attribute

Define Custom Attribute via SAP Solman Configuration – Scenario: Process Management

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## SAP Solution Manager Configuration: Process Management

### Technical System: FQ7_SM-ABAP-200

**1. Check Prerequisites**

**2. Generate Library**

**3. Configure Digital Signature**

**4. Configure Document Management**

**5. Configure Solution Documentation**

**6. Configure Embedded Search**

**7. Configure SAP Best Practices Calculation**

### Create Incident

---

### Manual Activities

<table>
<thead>
<tr>
<th>Status</th>
<th>Updates Needed</th>
<th>Activity Description</th>
<th>Type</th>
<th>Comment</th>
<th>URL to T-Code SMUD_MODEL_WIZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Define Custom Attributes</td>
<td>Optional</td>
<td></td>
<td>Not Performed</td>
</tr>
</tbody>
</table>

---

### Custom Code Management

### Test Suite

- **Test Suite Preparation**
- **Test Automation Preparation**
- **Scope and Effort Analyzer**
- **Business Process Change Analysis**
- **SAP Test Acceleration and Optimization**

### Change Control Management

### Application Operations

### Business Process Operations

### IT Service Management

### Emancipation and Service Delivery

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**Log with 3 messages for Step: Configure Solution Documentation Model**

<table>
<thead>
<tr>
<th>Message</th>
<th>Type</th>
<th>Date</th>
<th>Time</th>
<th>Object in Scope</th>
<th>User</th>
<th>Lo... D... URL At... N...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define Related Documents Visible at Attribute Pane</td>
<td></td>
<td>16.05.2017</td>
<td>12.18.32</td>
<td>FQ7_SM-ABAP-200</td>
<td>SIKBAH</td>
<td>Show</td>
</tr>
<tr>
<td>Define Custom Attributes</td>
<td></td>
<td>26.01.2017</td>
<td>10.00.22</td>
<td>FQ7_SM-ABAP-200</td>
<td>WEFERSM</td>
<td>Show</td>
</tr>
<tr>
<td>Define Custom Attributes</td>
<td></td>
<td>09.24.59</td>
<td>09.24.59</td>
<td>FQ7_SM-ABAP-200</td>
<td>WEFERSM</td>
<td>Show</td>
</tr>
</tbody>
</table>
**Custom Attribute**

Define Custom Attribute via SAP Solman Configuration – Scenario: Process Management

### Add customer attribute type to element types

<table>
<thead>
<tr>
<th>Settings</th>
<th>It is recommended to use one extension for all customer attributes.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use &quot;CUSTOMER_EXTENSION&quot; (will be created if necessary)</td>
</tr>
<tr>
<td></td>
<td>Create or use another extension (*)</td>
</tr>
<tr>
<td></td>
<td>Activate the extension if it is inactive</td>
</tr>
<tr>
<td></td>
<td>Regenerate search model</td>
</tr>
<tr>
<td>Package for Search Model</td>
<td><em>TIME</em></td>
</tr>
</tbody>
</table>

### SAP delivered Data Element and Domain including values: AGS_BPCA_PROCESS_PRIORITY
Custom Attribute

Use of Custom Attributes “Process Priority” within Solution Documentation

Example:
Executable Library
Custom Attribute
Use of Custom Attributes “Process Priority” within BPCA Test Scope Optimization

Test Scope Optimization

- **Purpose**: optimization of identified test scope especially for large change events
- **Benefit**: significant reduction of test efforts
- **Risk-based approach**:
  - Test each software change only once to reduce number of required test cases
  - Identification of test cases with highest efficiency regarding changed objects
  - User defined test coverage below 100%, e.g. 99% to filter out less efficient test cases

TSO with 99% test coverage → risk mitigation: force Executables of BP and PS into the test scope which are mission critical and impacted by the change event using custom attribute “Process Priority”
Hurdle 2: Setup of manual tests
Hurdle 2: Setup of manual tests

**Test Case Template**

- Define test case templates for SFT and FIT

- Assign TC template to Solution in Solution Administration

**Test Case**

- Describe the test activities and test exit criteria

- Alt: leverage functional specs and user stories

**Test Classification**

- Assign attribute Test Classification (SFT, UAT, FIT, RT) during TC assignment to SolDoc

- Smart filtering during Test Plan generation

**Test Data**

- No test data inside the test case - too much maintenance effort!

- Link Test data Container (or .xlsx) to Test Plan or Test Package

**Solution Documentation**

- BP or PS or Exe

**Test Document (manual test script)**

- Link to Test Data Container
Alternative manual test solution – provided by Focused Build

New approach for manual testing

- New manual test solution using grid approach
- Fully embedded in Test Suite of SAP Solution Manager

Test Steps

- Designer application for Test Engineer to create manual tests using grid to describe test activities

My Test Executions

- Access for manual testers with high usability for casual users
- Suitable for single testers as well as teams

Availability

- Focused Build SP01 for SAP Solution Manager 7.2 SP05

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Licensing and pricing for Focused Build Requirement-to-Deploy solution

Customers with a SAP Premium Engagement, e.g. Max Attention or Value Assurance Package already have a license!

All other customers buy licenses in SAP Store for only € 250 per user per year.

How to get it?

– Customer can subscribe user licenses directly in SAP Store
  ▫ [http://sapstore.com/focused-build](http://sapstore.com/focused-build)
  ▫ Services available in Focused Solution Circle
– Customers in SAP PE would enable the usage rights with SAP service engagements
  ▫ Requirements to Deploy Process with a minimum of 12 days with “Agile Methodology and Tool Coach” service
  ▫ Standalone Features included in Focused Build with several rapid deployment services (2-10 days)
  ▫ Optional - Project support to be scoped individually, going in position for mid-sized project

Who is a user?

• Licensing is based on named users per year
• Only users who actually work with the solution need to be licensed.
  – Users in Focused Build are all active project members. Business and end user such as role Tester or Requestor are not counted as active users*
  – Users in Focused Insights are all viewers of the dashboards
• Named users who execute functions of focused solutions are counted with the standard license auditing processes of SAP

*) e.g. test execution via app My Test Executions with manual test cases of type Test Document and Test Steps
Hurdle 3:
Setup and creation of automated tests
Test Suite
Best Practice approach for functional test automation

1. Select test automation tools from SAP and/or certified partners
2. Create automated tests for single business transactions (SAP, non-SAP)
3. Create automated composite tests for business processes (SAP, non-SAP)
4. Identify and validate test data and assign to automated tests

Test Automation Framework

5. Derive test plan with automated regression tests via BPCA change impact analysis
6. Schedule and run automated tests online or in “lights-out” mode
7. Analyze test execution results and assess status
8. Create Defects for application errors and “Damage” for damaged test cases
Functional Test Automation tools from SAP and / or certified Partners

SAP Customer Situation

- A typical SAP customer uses SAP, custom-developed and non-SAP solutions to execute business processes
- A particular business process can include hybrid scenarios with SAP and non-SAP process steps

Scope of available functional test automation stools

- The Test Suite of SAP Solution Manager provides a Test Automation Framework allowing SAP customers to choose the test automation tool of their choice
- SAP test automation tools can automate SAP business transaction – SAP standard and custom developed, using SAP user-interfaces including SAPGUI, CRM web-client, WebDynpro, SAPUI5, Fiori, …
- Partner test tools can be used to automate SAP and non-SAP business transactions, but require additional licenses
- Test Suite of SAP Solution Manager enables composition of automated tests using SAP and Partner tools.
## Alternatives to select Functional Test Automation Tools for Test Suite

<table>
<thead>
<tr>
<th></th>
<th>Alternative 1</th>
<th>Alternative 2a</th>
<th>Alternative 2b</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Scope</strong></td>
<td>SAP business transactions</td>
<td>SAP and non-SAP business transactions</td>
<td>SAP and non-SAP business transactions</td>
</tr>
<tr>
<td><strong>Test Tools</strong></td>
<td>CBTA / SAP Solution Manager</td>
<td>CBTA / SAP Solution Manager plus 1 partner tool</td>
<td>1 partner tool</td>
</tr>
<tr>
<td><strong>License</strong></td>
<td>No additional license for customers under SAP Enterprise Support (SAP ES)</td>
<td>CBTA – no add.licenses (SAP ES) Partner tool – add.licenses required</td>
<td>Partner tool – add.licenses required</td>
</tr>
<tr>
<td><strong>Details</strong></td>
<td>Customers looking for functional test automation of business transactions</td>
<td>CBTA used for test automation for all business transactions using SAP user-</td>
<td>Partner tool used for test automation of SAP and non-SAP business transactions</td>
</tr>
<tr>
<td></td>
<td>limited to SAP user-interfaces</td>
<td>interfaces</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• SAP GUI</td>
<td></td>
<td>• Advantage: Test Team needs to learn only test automation tool</td>
</tr>
<tr>
<td></td>
<td>• CRM web-client</td>
<td></td>
<td>• Disadvantage: higher license costs, since test cases have to be built for</td>
</tr>
<tr>
<td></td>
<td>• Web-Dynpro</td>
<td></td>
<td>all business transactions with partner tool</td>
</tr>
<tr>
<td></td>
<td>• SAPUI5</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Fiori</td>
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<td></td>
<td>• ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partner tool used for test automation of non-SAP business transactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Advantage</strong>: cost savings since add.licences only needed for non-SAP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>test automation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Disadvantage</strong>: Test Team needs to learn 2 test automation tools</td>
<td></td>
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</tr>
</tbody>
</table>

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### Test Automation Tools integrated with Test Suite

SAP and certified Partners

<table>
<thead>
<tr>
<th>Product</th>
<th>Scope</th>
<th>License</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component Based Test Automation (CBTA)</td>
<td>SAP applications</td>
<td>No add. license required for SAP customers with SAP Enterprise Support contract</td>
</tr>
<tr>
<td>Unified Functional Testing (UFT) *</td>
<td>SAP and non-SAP applications</td>
<td>additional license required</td>
</tr>
<tr>
<td>Certify **</td>
<td>SAP and non-SAP applications</td>
<td>additional license required</td>
</tr>
<tr>
<td>Test Automation ***</td>
<td>SAP and non-SAP applications</td>
<td>additional license required</td>
</tr>
</tbody>
</table>

* Former software division of Hewlett Packard Enterprise is now part of Micro Focus

** Focused solutions circle partner: [https://support.sap.com/solution-manager/focused/focused-solutions-circle.html](https://support.sap.com/solution-manager/focused/focused-solutions-circle.html)

*** no specific product name available for Tricentis Tosca functional test automation product
**Automated Tests**

Test Configuration and its building blocks

### Business Processes

- **Order to Cash (Variant 1)**
  - Create Quotation
  - Sales Order Creation from Quotation Ref
  - Create Outbound Doc. with Order Ref.
  - Create TO for Delivery
  - Change Outbound Delivery
  - Create Billing Document

- **Order to Cash (Variant 2)**

**Starting point to create / maintain automated tests**

### Test Configuration

- **Test Script**
  - CBTA, eCATT
  - UFT
  - Certify

- **Test Data**
  - \[\begin{array}{|c|c|c|}
    | Order Type | Customer | Product |
    |------------|----------|---------|
    | OR         | C1000    | P-100   |
    | OR         | C2000    | P-200   |
  \end{array}\]

- **Test Data Container**

### System under Test

<table>
<thead>
<tr>
<th></th>
<th>DEV, QAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP ERP</td>
<td></td>
</tr>
<tr>
<td>SAP CRM</td>
<td></td>
</tr>
<tr>
<td>SAP SCM</td>
<td></td>
</tr>
<tr>
<td>SAP S/4HANA</td>
<td></td>
</tr>
<tr>
<td>Non SAP</td>
<td></td>
</tr>
</tbody>
</table>

### Composite Tests

**Composite Tests** for E2E business processes covering SAP and non-SAP process steps

- CBTA 1 → CBTA 2 → MF UFT 3 → CBTA 4

**SAP customers have a choice of test automation tools integrated with SAP Solution Manager through the Test Automation Framework**
Test Suite of SAP Solution Manager

Activities to create automated tests using SAP or Partner test automation tool

- Business Process or Process Step
  - Select BP or PS
  - Create new Test Case
  - Refine new Test Case

- Test Composition Environment (TCE)
  - Assign test data
  - Execution of business transaction

- Test Automation Tool
  - CBTA / SAP
  - UFT / Micro Focus
  - Certify / WorkSoft
  - Test Automation / Tricentis

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Automated Tests for Business Processes
Test Suite - Test Composition Environment (TCE)

Typical Business Process

Steps to build an automated process test

1. Create Test Scripts for each Process Step with export / import parameters

<table>
<thead>
<tr>
<th>Test Script 1</th>
<th>Test Script 2</th>
<th>Test Script 3</th>
<th>Test Script …</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output parameter: Quotation Number</td>
<td>Import parameter: Quotation Number</td>
<td>Import parameter: …</td>
<td>[……]</td>
</tr>
<tr>
<td>Test Script 1</td>
<td>Test Script 2</td>
<td>Test Script 3</td>
<td>Test Script …</td>
</tr>
<tr>
<td>Test Data Assignment Wizard</td>
<td>Test Data Assignment Wizard</td>
<td>Test Data Assignment Wizard</td>
<td>Test Data Assignment Wizard</td>
</tr>
</tbody>
</table>

2. Build Composite Test using TCE

   Composite Test

3. Assign Test Data using Test Data Assignment Wizard

   Test Data Container
Test Suite of SAP Solution Manager
Execution of automated tests using SAP or Partner test automation tool

1. User starts test execution in „lights-out“ or adhoc mode

Test Configuration
- Test Script
- Test Data
- System under Test

2. Test data selected from TDC

TDC
Test Data Container (TDC)

3. Test execution: handover of Test Script + Test Data + SUT info

4. Logon and automated business process execution

Test Case
CBTA or Partner tool

5. Test results and test tool logs

SAP or non-SAP application
Hurdle 3: Setup / creation of automated tests

Key Take Aways

1. **What**: automate business processes that are mission critical / high priority

2. **Tools**: select CBTA plus 1 integrated partner tool, or just 1 partner tool when your team shall learn only 1 tool

3. **Team**: establish a Test Center of Expertise (TCoE) or outsource to service provider (assess their operational excellence) for test case maintenance, development of new automated tests and test execution
Test Suite - Test Automation Framework

How-To Guide

Comprehensive description on how-to

- Setup test automation with SAP Solution Manager 7.2
- Create test scripts
- Build composite tests
- Assign test data
- Available for customers in partners in our Test Suite Wiki

Hurdle 4: Data Refresh of DEV / QAS Systems
Data refresh of test systems

**Test System Preparation**
- Setup of lean test systems (QAS) from PRD or Pre-PRD systems
- Copy of master data and selective transactional data
- Data refresh on a regular basis

**SAP Products**
- SAP TDMS (Test Data Migration Server)
- SAP LaMa (SAP Landscape Management)
1. Data Selection (cluster)
2. Data Deletion
3. Data Transfer
4. Scrambled Data
SAP TDMS
Reduction of test data

**Assumption:**
80-90% of the production data is stored in 10 – 20% of client-dependent tables

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**Time-based Reduction**

**Object Oriented Reduction**

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Typical Use Case Example: Refresh of Data in Q, T, D Systems

Before SAP TDMS
- PR1: 1.5 TB
- TRN1: 1.5 TB
- QA1: 1.5 TB
- DEV1: 200 GB

No easy way to bring current data to DEV

With SAP TDMS
- PR1: 1.5 TB
- TRN1: 300 GB
- QA1: 300 GB
- DEV1: 500 GB

Reduced copies
Selective data copies possible into DEV

Current data

Outdated data
Hurdle 5: Identification, planning, validation and provisioning of test data
How do you identify and provide test data that shall be used by manual testers and test automation tools?
Test Data
DeceSoft DTD for test data identification, planning, validation and provisioning for manual / auto tests

DeceSoft DTD identifies and validates data from your SAP systems - suitable to test your business transactions
Test Data
DeceSoft DTD: 4 approaches for test data identification, planning and validation

- Online Planning with access to SAP system
- Offline Planning (MS Excel) plus DTD online validation
- Derive data from posted business documents
- High volume usage analytics of posted business documents

DTD planning grid to identify / plan Test Data Records
Test Data
DeceSoft DTD: Approach 1

Approach 1: Online planning

- User gets a table (like MS Excel) which allows data entry
- Value help from DTD integrated with managed system like SAP ERP test system allows seamless take over of valid data into planning grid
- DTD immediately shows whether field combinations are not valid
- Example VA01: Division, Sales Org, Distribution Channel
- Correct values via value help
- Online test data validation

Get correct data via value help (F4) with access to connected SAP ERP test system

- Value help to get valid data from connected SAP system
- Online data validation

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Test Data
DeceSoft DTD: Approach 2

Approach 2: Offline planning with MS Excel and DTD online validation

1. Download DTD test data DNA to generate MS Excel file
MS Excel file includes column header with field texts

2. Offline planning of test data

3. File upload to DTD

4. Validation of test data against SAP system
Test Data
DeceSoft DTD: Approach 3

Approach 3 derive data from available business documents of executed business transactions

0. SAP system contains many documents of posted business transactions

1. DTD supports User to find posted documents with suitable data, e.g. launch of display transaction in SAP system

2. DTD fetches selected documents and extracts relevant data

3. DTD saves as new Test Data Records in DTD planning grid

Document 11828: Order Type OR, ...
Document 4969: Order Type RO, ...

<table>
<thead>
<tr>
<th>#</th>
<th>Plan Status</th>
<th>Origin</th>
<th>System</th>
<th>Sales Document</th>
<th>Sales Doc. Type</th>
<th>Sold-to party</th>
<th>Division</th>
<th>Sales Org.</th>
<th>Distri Channel</th>
<th>Order quantity</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reference</td>
<td>ER1/809</td>
<td></td>
<td>11828</td>
<td>OR</td>
<td>1000</td>
<td>02</td>
<td>0005</td>
<td></td>
<td>1590000</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Refer. &amp; Adj</td>
<td>ER1/809</td>
<td></td>
<td>4869</td>
<td>RO</td>
<td>1300</td>
<td>03</td>
<td>0005</td>
<td></td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Reference</td>
<td>ER1/809</td>
<td></td>
<td>4879</td>
<td>RO</td>
<td>1175</td>
<td>02</td>
<td>1000</td>
<td></td>
<td>5300</td>
<td></td>
</tr>
</tbody>
</table>
Test Data
DeceSoft DTD: Approach 4

Approach 4: Usage Analytics

Thousands / millions of posted documents

Usage Analysis for selected business transaction

<table>
<thead>
<tr>
<th>ABC</th>
<th>Order Type</th>
<th>Sales Org</th>
<th>Document Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>OR</td>
<td>5-01</td>
<td>1,500,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5-02</td>
<td>800,000</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td>75,000</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td>50,000</td>
</tr>
</tbody>
</table>

Flexible selection of important fields per business transaction (Test Data DNA) – generic approach – no specific coding

Automatic derivation of fields with interdependencies – generic approach

Very fast retrieval of valid combinations from PRD systems with subsequent ABC usage analysis

Drilldown to analyze used field values of other entities of the business transaction

Automatic generation of test data from ABC analysis

Generic

Automatic

Fast

Drilldown

Test Data

Drilldown customer, material group, ...

Test Data generation
Test Data
DeceSoft DTD: Test Data Validation

Test Data Validation: check data validity against SAP systems such as DEV, QAS, Pre-PRD

- Online validation of each Test Data Record against selected SAP system
- Check of each field as well as field combinations
- Error messages explain reasons for failed validation
- SAP table entries can be checked via drill-down
- Validation reports allow fast correction of incorrect test data
- Custom-specific validation checks available via BADI
Test Data
DeceSoft DTD: Test Data Validation

Advanced Validations with custom specific check rules via DTD Enhancement Spot

DTD enhancement spot (BADI)
Method: check data
- ...
- Call Function ‘BAPI_MATERIAL_AVAILABILITY’
- ...
- <customer specific validation logic>

SAP standard BAPIs

DTD Validation
- Mouse-over shows DTD standard and custom-defined validation errors
- Example: material in stock shortage
- DTD validation report lists all problems
- DTD test data generation via Usage Analytics with validations
Test Data
DeceSoft DTD: test data provisioning for SAP Solution Manager – automated tests

Use Case 1: Automated Tests - Test Suite - SAP Solution Manager

DTD Test Data Repository
Select validated test data and push into Test Data Container

Test Data Container
Assign TDC to automated tests
Create Test Plan and assign automated tests

Execution of automated tests
Automated tests fail less often due to incorrect test data and identify application errors

Test Automation Tools
• SAP CBTA
• Micro Focus UFT (ex HP QTP)
• WorkSoft Certify
• Tricentis Tosca

ok Test Case 1
ok Test Case 2
failed Test Case 3
ok Test Case 4
### Test Data

DeceSoft DTD: test data provisioning for SAP Solution Manager – manual tests

**Use Case 2: Manual Tests - Test Suite - SAP Solution Manager**

1. **DTD Test Data Repository**
   - Select validated test data
   - Download to MS Excel or push into Test Data Container

2. **Test Data Container**
   - Create Test Plan and select manual test cases
   - Assign MS Excel or Test Data Container to Test Plan

3. **Test Document (docx, xlsx, ...)**
   - Improved efficiency of manual testers due to availability of correct test data

4. **Test Steps**
   - **ok** Test Case 1
   - **ok** Test Case 2
   - **failed** Test Case 3
   - **ok** Test Case 4
Test Data
DeceSoft* DTD for test data identification, planning, validation and provisioning for manual / auto tests

Fast and efficient way to identify test data for functional tests of SAP business transactions

Sophisticated validation of test data to ensure correct test data before start of test cycles

Efficient way to understand how org.units post business transactions plus test data generation

Convenient Test Data provisioning via MS Excel or SAP Solution Manager (TDC)

* Focused solutions circle partner: https://support.sap.com/solution-manager/focused/focused-solutions-circle.html
Hurdle 6:
Change Impact Analysis
Hurdle: Change Impact Analysis

Problem statement

- Distributed test teams – often partially outsourced to service providers in foreign countries
- Missing transparency about impact of software changes on business processes
- Shrinking time window to perform functional tests before go-live
  - Enterprise DevOps
Change Impact Analysis with SAP Solution Manager 7.2

Business Process Change Analyzer (BPCA)

- Change impact analysis for business processes resulting from software change events
- Use cases
  - Impact analysis for Customizing and Custom Code changes, planned SP and EHP deployments
  - Impact analysis for SAP S/4HANA OP release upgrade
  - Test Scope Optimization and automated Test Plan generation
- Benefits:
  - Precise impact analysis and significant test scope reduction

Identify your test scope and significantly reduce your test effort for regression tests with BPCA of SAP Solution Manager 7.2
## Change Impact Analysis using BPCA by Change Pace

<table>
<thead>
<tr>
<th>Change Type</th>
<th>Change Event</th>
<th>Magnitude of Change</th>
<th>Typical Change Pace</th>
<th>Change Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fix</strong></td>
<td>Break-fix / Standard Change</td>
<td>Rather small</td>
<td>Daily - months</td>
<td>Monthly maintenance activities including changes of custom code and customizing objects</td>
</tr>
<tr>
<td><strong>Enhance</strong></td>
<td>Enhancements using minor release</td>
<td>Moderate</td>
<td>Weeks - months</td>
<td>Small functional enhancements requested by Business Users</td>
</tr>
<tr>
<td><strong>Innovate</strong></td>
<td>Innovation and transformation projects using major release</td>
<td>Large</td>
<td>Months</td>
<td>Significantly changed or new business processes, EHP deployment</td>
</tr>
</tbody>
</table>

**BPCA identifies impacted business processes and significantly reduces your test effort for regression tests**
BPCA and SEA: Prerequisites

Solution Documentation

- Test Suite Attribute: BP Test
- Custom Attribute: BP Prio

SAP Solutions – usage data

- Usage and Procedure Logging (UPL)
- ABAP Call Monitor (SCMON)

Usage data transfer

- SAP Solution Manager - Configuration
- Section: Custom Code Management

BPCA Self Check

- Checks BPCA prerequisites in SAP Solution Manager and managed systems
- Availability of statistical data and data flows

Semi-dynamic TBOM

- Where: Exe Library
- How: Background Job to generate semi-dyn.TBOMs using UPL or SCMON data

Dynamic TBOM

- Where: high-priority process steps

Test Automation

Completeness Reports

- Check: Process Steps without (dynamic) TBOMs
BPCA and SEA: TBOM Types and Best Practice

<table>
<thead>
<tr>
<th>TBOM type</th>
<th>Precision</th>
<th>New with SAP Solution Manager 7.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic TBOM</td>
<td>Very precise</td>
<td></td>
</tr>
<tr>
<td>Semi-dynamic TBOM</td>
<td>Moderate to good</td>
<td>TBOM generation based on usage data provided by ABAP Call Monitor (SCMON)</td>
</tr>
<tr>
<td>Static TBOM</td>
<td>Not recommended to use</td>
<td></td>
</tr>
</tbody>
</table>

**Best Practice**

- **Mission critical business processes, process steps and assigned executables**
  - Make use of *dynamic* TBOMs
  - Flag processes with custom attribute „Business Process Priority“ with value „Prio 1“

- **All other non-mission critical business processes and process steps**
  - Whenever possible make use of dynamic TBOMs
  - Generate *semi-dynamic* TBOMS using SCMON data
BPCA and SEA: Generation of semi-dynamic TBOM

Usage Procedure Logging (UPL) versus ABAP Call Monitor (SCMON) usage data

### Usage and Procedure Logging (UPL)
- Objects in usage statistics w/o relationship

### Semi-dynamic TBOM generation
- Programmatic code analysis of each executable
- Exclude code branches for TBOM not verified via UPL usage data

![Executable 1](X)

**X** = Exclude code branches containing objects not included in UPL (grey boxes)

### ABAP Call Monitor (SCMON)
- Objects in usage statistics with entry point

![Executable 1](X)

### Semi-dynamic TBOM generation
- Compilation of 1) used objects for each executable identified by SCMON usage data plus 2) Data Dictionary objects (tables, …)
- SCMON includes dynamic calls to other execution objects (not included in UPL approach)
BPCA and SEA – TBOM Types

**Technical Bill of Material (TBOM):** is a list of technical objects, which are used when business processes are executed.

**Static TBOM Generation Approach**
- **Advantage:** background job to generate all TBOMs without manual effort
- **Disadvantage:** less precision compared to dynamic or semi-dynamic TBOMs \(\rightarrow\) not recommended by SAP

**Dynamic TBOM Generation Approach**
- **Advantage:** exact list of objects that are used when executing a transaction in the context of a specific business process
- **Disadvantage:** high manual effort, if not combined with test execution (manual or automated)

**Semi-dynamic TBOM generation approach**
- UPL (Usage Procedure Logging) Data in PRD system
- ABAP Call Monitor (SCMON) usage statistics from Call Graph and Data Browser
- Where-used Index to identify DDIC objects like tables, etc.

**Semi-dynamic TBOM**
- **Advantage:** Background job to generate all TBOMs without manual effort
- **Disadvantage:** Table keys and variants of the same executable are not supported
### BPCA – Data Flow for semi-dynamic TBOM Generation

#### SAP Solutions
- SAP ERP, SAP CRM, …
- SAP S/4HANA

---

**Identify DDIC objects like tables via where-used index in QAS system**

**Transfer of usage data (UPL or SCMON) to SAP Solution Manager**

**Usage data analysis**

**BPCA semi-dynamic TBOM generation job**

**List of all Executables of Executable Library**

**Assign semi-dyn.TBOM to Executable of Exe-Lib**

**Solution Documentation (Executable Library)**

---

**SAP SolMan BW CCLM Cubes**

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BPCA Self Check
BPCA Self Check – Selection Screen

BPCA Self Check

Solution Documentation
- Solution: Business Solution

Managed System for TBOM Generation
- System: xuq
- Client: 800
- Branch: Maintenance

System with UPL/SCMON Data
- System: xuq
- Client: 800
- Branch: Production
BPCA Self Check

Check Options

- Check for branch Maintenance: OK
- Check for the TDSM system XUQ / 800 included in system landscape of branch: Maintenance: OK
- Logical components found for XUQ and 800: 3
- SAP ERP Development System
- SAP ERP Quality Assurance System
- SAP ERP Production System
- Number of Systems per Logical Component:
  - SAP ERP: 3
  - SAP ERP: 3
  - SAP ERP: 3
- Best matching logical component for XUQ and 800 is SAP ERP
- Authorization to read Process Documentation in branch: OK
- Authorization for TDSM Generation: OK
- Authorization to create BPCA Analysis: OK
- Authorization for BPCA Test Scope Optimization: OK

Checks for SAP Solution Manager System

- Existence check for branch Maintenance: OK
- Check for the TDSM system XUQ / 800 included in system landscape of branch: Maintenance: OK
- Logical components found for XUQ and 800: 3
- SAP ERP Development System
- SAP ERP Quality Assurance System
- SAP ERP Production System
- Number of Systems per Logical Component:
  - SAP ERP: 3
  - SAP ERP: 3
  - SAP ERP: 3
- Best matching logical component for XUQ and 800 is SAP ERP
- Authorization to read Process Documentation in branch: OK
- Authorization for TDSM Generation: OK
- Authorization to create BPCA Analysis: OK
- Authorization for BPCA Test Scope Optimization: OK

Check availability of data from Usage Procedure Log and ABAP Call Monitor (SCMON)

1. SCMON System: XUQ / 800
   - Check Read RFC against SCMON system: Destination: SM_XUQCMON_7000_READ: OK
   - Check SCMON Status:
     - SCMON active
     - SCMON Info No. 1: Status = X
     - SCMON Info No. 2: Fetching root information = X
     - SCMON Info No. 3: Job SCMON Control = X
   - Status check: SCMON data extraction from SCMON system to SAP SolMan InfoCube
     - SCMON extractor is active
     - Last Status: OK
     - Status of last 20 extractions: OK: 20; Failed: 0
   - Check MDX parser configured on SolMan System (required to read SCMON data):
     - MDX Parser OK
   - Check Reading of SCMON data for SCMON System in SAP SolMan BW InfoCube
     - SCMON data available in SAP SolMan InfoCube
     - First month with SCMON data: March 2016
     - Last month with SCMON data: June 2016
     - Total available months of SCMON data: 4
   - Check available memory on BW system for reading of SCMON data
     - Reading profile parameter zittaroll_extension data via RFC destination: NONE
     - Value of profile parameter: 2,809,000,000
     - Reading profile parameter abapheap_area data via RFC destination: NONE
     - Value of profile parameter: 8,809,000,000
     - See SAP Note 205268 for recommendations on memory settings for BW system
   - Check SCMON System XUQ / 800 included in system landscape of branch: Production: OK
     - SAP ERP Development System
     - SAP ERP Quality Assurance System
     - SAP ERP Production System
### Checks for TBOM System

1. **TBOM system**: XUQ / 800

2. **RFC destinations**:
   - Read RFC: SM_XUQCLNT800_READ
   - Trusted RFC: SM_XUQCLNT800_TRUSTED

3. **Check of ST-PI Release/SP**: Failed
   - Version: 740 0000000003
   - ST-PI Version not sufficient for future SMON TBOMs: Minimum required Version: '2005_1.700 with SP14' or '740 with SP04'

4. **Authorization checks for function modules to create TBOM**:
   - Authorization check for function module E2E_TESTING_AGENT_PFA: Destination: SM_XUQCLNT800_TRUSTED: OK
   - Authorization check for function module E2E_TESTING_AGENT_EXECHCK: Destination: SM_XUQCLNT800_READ: OK
   - Authorization check for function module E2E_TESTING_AGENT_UPL_CONVSAVE: Destination: SM_XUQCLNT800_TRUSTED: OK

5. **Function Modules to read Transport Requests**:
   - Authorization check for function module E2E_TESTING_AGENT_TRCOUNT_STR: Destination: SM_XUQCLNT800_READ: OK

6. **Function module to get information about Web applications**:
   - Authorization check for function module E2E_TEST_GET_BSP_APP_CRMFRAME: Destination: SM_XUQCLNT800_READ: OK

### Available User Parameters

- No BPCA parameter found for user: WEFERSM
Hurdle 7: Identification of Software Changes not covered by Regression Tests
Identification of Software Changes not covered by Regression Tests

Software Transports (fixes, enhancements, new features) from DEV to QAS to PRD

1. Are all transported SW changes covered by our available Regression Tests?
2. Which Test Cases need to be extended / created?
Identification of Software Changes not covered by Regression Tests

DeceSoft Transport Analysis (DTA)*

1. Identification of software changes included in Transports, but not covered by Regression Tests
2. Advanced changed code analysis in managed system (ERP, CRM, S/4...) for Includes and their FORM routines
3. Identification of Executables (SAP, custom code) impacted by changed SAP objects, but not covered by Regression Tests

* Focused solutions circle partner: [https://support.sap.com/solution-manager/focused/focused-solutions-circle.html](https://support.sap.com/solution-manager/focused/focused-solutions-circle.html)
Identification of Software Changes not covered by Regression Tests

DeceSoft Transport Analysis (DTA)*

Prepare activities before Software Change
- Solution Documentation with Processes / Steps and Executables covered with BPCA TBOMs
- Regression Tests (RT) up-to-date and available for all mission critical Processes
- BPCA TBOMs generated via automated Regression Tests

Software Change Event
- Software changes (fixes, enhancements, new features) implemented in DEV system
- Transports (TR) or Transport of Copies (ToC) to Quality Assurance System (QAS)

DTA Transport Analysis
- Gap identification of changed objects included in TR / ToC, but not BPCA TBOMs
- Advanced gap identification in managed system for includes and new/changed/deleted FOM Routines
- Identification of Executables using of identified gap objects to provide guidance for Test Engineers

Take Action and close Gaps
- Test Engineers close gaps by extending test cases.
- Example: additional steps with navigation that use changed objects. Result: up-to-date Regression Tests
- Execute Regression Test Case and re-generate TBOMs

* Focused solutions circle partner: https://support.sap.com/solution-manager/focused/focused-solutions-circle.html
Identification of Software Changes not covered by Regression Tests
DeceSoft Transport Analysis (DTA)*

- Reduced Risk
  - Reduced risk of PRD system issues due to incomplete Regression Tests

- Efficient
  - Fast and efficient way to identify changed objects not included in available regression tests

- Automated
  - Automated identification of transactions, reports, ... using changed objects not covered by RT

- SAP and Custom
  - Supports SAP and custom executables

* Focused solutions circle partner: https://support.sap.com/solution-manager/focused/focused-solutions-circle.html
Hurdle 8: Agile development and testing for Transformation and Innovation projects
Manage Customer Innovation and Transformation Projects
with SAP Solution Manager 7.2 and Focused Build

Possible project types
- Digital Transformation projects including Custom Code adjustments
- Implementation of new business processes
- Extension of existing business processes
- Integration of additional applications

Standard SAP Solutions as starting point for customer driven innovations

SAP Solution Manager 7.2 includes all capabilities to manage innovation and transformation projects. Focused Build is a turn-key solution to manage agile development projects.
Focused Build for SAP Solution Manager 7.2

Requirements to Deploy

- Prepare
- Explore
- Realize
- Deploy
- Run

Requirements Management within process models
Agile development projects: from Sprint to Release
Modern applications with high usability for all involved roles
Project governance with automated status reporting

Focused Build is a turn-key solution to manage agile development projects
Focused Build: The Big Picture

Software Solutions for Innovative Business Models

Understand customers’ new business models
Accelerate innovation based on preconfigured building blocks

Model Companies on the SAP platform powered by SAP HANA

Out-task development
Deliver as one team

One Methodology and Integrated Tool Chain

Document target operating models end-to-end (transactional and analytical landscape) to derive roles’ and personas’ workspaces.
Identify gaps requiring major investment and prototype individual parts in early sprints.
Go from the big picture down to the details, and use the standard tools for ONE Service.
Automate project reporting based on percentage of completion by developers and consultants.
Value for Business and Discovery Teams

Collaborate with the Business
Capture new business models, target operating models and requirements.

Manage show & tell, testing and training with the business
- Constant feedback loops with business
- Prototyping instead of lengthy blueprinting on paper
- Discovery jumpstarted with model company per industry

Scope what needs to be built
- Prepare work packages for solution build
- Validate functional gaps with MCC industry architects
- SAP R&D to sign off application landscape

Model office shares the vision with the business
Effective collaboration via publication in multiple languages, and a common notation supporting business sign-offs
Value for Build Teams and Solution Delivery

Prototypes replace traditional blueprinting
- Business reviews every few weeks using agile methods
- Scope changes tightly monitored to safeguard project budget

Collaborate for solution delivery
Manage specifications and designs for requirements (WRICEF & gaps) in virtual project rooms and development factories.

Manage agile development in waves and sprints
- Share resources across customers and scale with partners
- Share software building blocks globally
- Track project progress from solution readiness perspective: One single source of truth for the Virtual Project Room

Automation of project work
- Configuration automation via RDS
- Transport automation Dev to QAS to PRD
- Test planning automation for UAT and regression testing
Value for Project Management Office (PMO)

SAP Solution Manager orchestrates and tracks solution readiness
- Consistent methodology and integrated “requirements to deploy” content and toolset
- Quality Gates per wave and phase with defined deliverables, synchronized with the SAP back-end to allow global project governance as well as demand and capacity management across customers

- **Solution Readiness Dashboard**
  - Visible risk and issue management
  - Ready-to-use work break-down structure enriched with customer-specific work packages for the solution.
  - Automated delivery progress dashboards
  - Big-picture reporting on program and project level

Run SAP and transition to operations and support is integral part of the implementation
Structure Elements of Focused Build Projects

- Focused Build project is structured in **five phases**

  - **Phases** are distinct periods of time during a project that structure work streams so that at the end of an individual phase outcomes are available.

  - In a **release**, you capture and aggregate all information relevant for building and deploying the customer solution. A release is the entity that is shipped at the go-live.

  - A release is subdivided into **waves**. A wave comprises a well-defined functional scope of work packages that is formally signed-off by customer key-users.

  - The lowest level is the **sprint**. In agile development, a sprint is a defined period of time during which software development has to provide deliverables for review. The backlog of a sprint is based on the prioritization of backlog items, i.e. work items.
Incremental deployment with constant feedback loops with the business

**Releases** synchronize project go lives and ensure continuous delivery and integration.

**Project** to bundle deliverables. Multiple and parallel projects are possible.

**Phases** ending with **Quality Gates**
Short prepare and scope, incremental build

**Waves** ending with **Touch and Feel** by the business (~ 8 – 12 weeks)

**Sprints** with **Show and Tell** sessions to the business (~ 2 weeks)

**Program Level**
- Release automation
- Automated reporting
- Pragmatic documentation handling
- Automated completion tracking
  - Test planning & execution automation
  - Jira Integration, unit test automation, transport automation

**Team Level**
- Continuous delivery and automation
- Scaled agile orchestration
- Pragmatic documentation handling
- Automated reporting
- Automated completion tracking
- Test planning & execution automation
- Jira Integration, unit test automation, transport automation
Requirement to Deploy with Change Pace: Innovate
Test execution during and across Waves and Sprints

Deploy phase
- Final Functional Integration Tests to validate E2E processes with new functionality
- Final Regression Tests
  Change Impact Analysis + Test Scope
  Optimization + RT execution for all impacted business processes
- Final UAT: get sign-off from business key users
- Integration Validation: Performance tests, interface tests, etc to prepare go-live
Test Plan Management for R2D
Activities to prepare Functional Tests

Test Preparation
- Create / update tests
  - Single Functional Tests
  - User Acceptance Tests
  - Functional Integration Tests
  - Regression Tests

Solution Documentation
- Process Steps
- Business Processes
  - SFT Test Plan
  - UAT Test Plan
  - FIT Test Plan
  - RT Test Plan
  - Change Impact Analysis (BPCA) to identify test scope
Test Execution
Test execution during multiple Sprints

Sprint 1
- Sprint Planning
- Dev/Config
- Unit Test
- Single Functional Tests
- Sprint Review

Sprint 2
- Sprint Planning
- Dev/Config
- Unit Test
- Single Functional Tests
- Sprint Review

in case of incomplete feature / incorrect implementation

e etc.

Sprint 3
- Sprint Planning
- Dev/Config
- Unit Test
- Single Functional Tests
- Sprint Review

Sprint 4

Functional Integration Tests

Sprint 5

Functional Integration Tests
**Assignment Analysis and Test Plan Generation**

**Features**

- View assignment of Requirements and Work Package to Solution Documentation
- Identify Process Steps with Work Packages, but missing Test Cases
- Identify Work Packages with missing Test Case assignments
- Create and assign missing Test Cases via DropDocs

*Capability provided by Focused Build for SAP Solution Manager*
Test Suite Analytics
Dashboard for Test Manager and Test Coordinators

Test Suite Dashboard*

- Ready to use dashboard for Test Manager and Test Coordinator with aggregated and detail information

Selected Feature

- **Traceability Matrix**: full traceability for dependencies between project, requirements, WP, process step, test cases, test status, defects, defect status, defect priority
- Filters for:
  - Test Classification
  - Test Case status
  - Defect status
  - WP status

* Capability provided by Focused Build for SAP Solution Manager 7.2
Test Suite Analytics
Dashboard for Test Manager and Test Coordinators

* Capability provided by Focused Build for SAP Solution Manager 7.2
SAP Solution Manager – Test Suite

More Information for Customers and Partners
Test Suite – more information for customers and partners

SAP Solution Manager WIKI – Test Suite

- Audience: customers and partners
- Positioning presentations
- How to configure and administration
- Tips and tricks
- Offline demos

## SAP Solution Manager Learning Resources Overview

Build up your knowledge and skills

### Available Learning Resources

**From Interest to Expert Knowledge**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP Books</td>
<td>Overview Videos and Virtual Roadshow for SAP S/4HANA</td>
</tr>
<tr>
<td>SAP.com</td>
<td>Overview Publication for SAP Solution Manager for SAP S/4HANA</td>
</tr>
<tr>
<td>SAP Support Portal</td>
<td>Overview Information for SAP Solution Manager</td>
</tr>
<tr>
<td>Media Center</td>
<td>SAP Solution Manager Homepage (support.sap.com/solutionmanager)</td>
</tr>
<tr>
<td>SAP Community</td>
<td>SAP Solution Manager Media Center</td>
</tr>
<tr>
<td>SAP Demo Systems</td>
<td>Product Videos, System Demos, Tutorials</td>
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<tr>
<td>SAP ES Academy</td>
<td>SAP Solution Manager Community Blogs &amp; Questions</td>
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<td>SAP Education</td>
<td>System Landscapes: Private Cloud System (CAL), Public Demo System, Internet Demo System</td>
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<tr>
<td>SAP Help Portal</td>
<td>Live Expert Sessions &amp; e-Learnings</td>
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<tr>
<td>SAP Solution Manager 7.2</td>
<td>SAP Solution Manager Media Center</td>
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<tr>
<td>SAP Solution Manager Videos</td>
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<tr>
<td>SAP Solution Manager Virtual Roadshow</td>
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<td>SAP Solution Manager Technical Documentation</td>
<td>Supported languages, browsers, and databases</td>
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<td>SAP Solution Manager Expert WIKIs</td>
<td>Functional Areas Expert Content</td>
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<td>SAP Solution Manager System Landscapes</td>
<td>Blogs &amp; Questions for Cloud System (CAL), Public Demo System, Internet Demo System</td>
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<tr>
<td>SAP Solution Manager Live Expert Sessions &amp; e-Learnings</td>
<td>Get empowered by the SAP Enterprise Support Academy</td>
</tr>
<tr>
<td>SAP Solution Manager Classroom Trainings</td>
<td>Setup, configuration, and functional overview</td>
</tr>
<tr>
<td>SAP Solution Manager Product Documentation</td>
<td>Application Help, Release Notes, Installation, Upgrade, and Security Guides</td>
</tr>
</tbody>
</table>

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Focused Build – more information for customers and partners

SAP Support Portal – Focused Build

- Audience: customers and partners
- Positioning presentations
- How to configure and administration
- FAQ
- Training material

Focused Build – more information for customers and partners

**Media Center for Focused Build**

- Audience: customers and partners
- Positioning presentations
- How to configure and administration
- Application Demos

Navigation: SAP Support Portal → SAP Solution Manager → Overview → Product Information → Media Center