



# **SAP Regression Test Service for SAP Integrated Business Planning**

**(Version 3)**

PUBLIC

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# Agenda

## Service overview

## Scope

## Appendix

- Responsibilities: What do customers have to do?
- Screenshot: SAP Test Automator
- Q&A

# SAP Regression Test Service for SAP Integrated Business Planning

- ▶ The SAP Regression Test Service for SAP Integrated Business Planning enables you to test your customer specific configuration efficiently. By using the test service you can reduce the test effort associated with the quarterly SAP IBP upgrades.

## Business needs

- Identification of critical changes that arise due to SAP IBP upgrades
- Avoidance of quarterly upcoming time-consuming and challenging manual tests
- Verification of the steadiness of used data integrations jobs
- Guarantee a stable productive planning environment within SAP IBP

## Delivery approach and scope

- Identification and support during the creation of a best-fit test scope
- Support during creation of a stable test environment with including test data
- Run of the defined test flows in an automated environment
- Provisioning of the test results and all identified deviations

## Value and benefits

- Coverage of multiple test scenarios within one test run
- Efficient and fast determination of test results and deviations
- Avoidance of recurring costs that would originate from manual test efforts
- Reuse of defined test scenarios for future test runs

## Related Services

- Best-practices Implementation for SAP Integration Business Planning (50129762)

# Agenda

Service overview

Scope

Appendix

- Responsibilities: What do customers have to do?
- Screenshot: SAP Test Automator
- Q&A

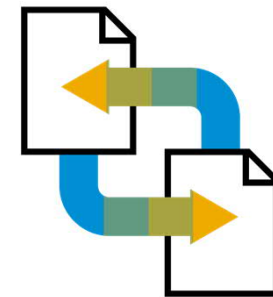
# Service scope



## SAP Test Automator

- UI-driven test tool that performs an adjustable test script
- Is designed to compare multiple SAP IBP planning views at once and identifies deviations in planning levels (attributes) and key figures values (respectively master data workbooks)
- Creates a new planning view during the test run and compares all cells with the reference sheet
- Can also be used to check the outcome of data integration jobs (e.g. via SAP Cloud Platform Integration) by comparing the according master data or key figure values

Reference planning view  
(before upgrade)



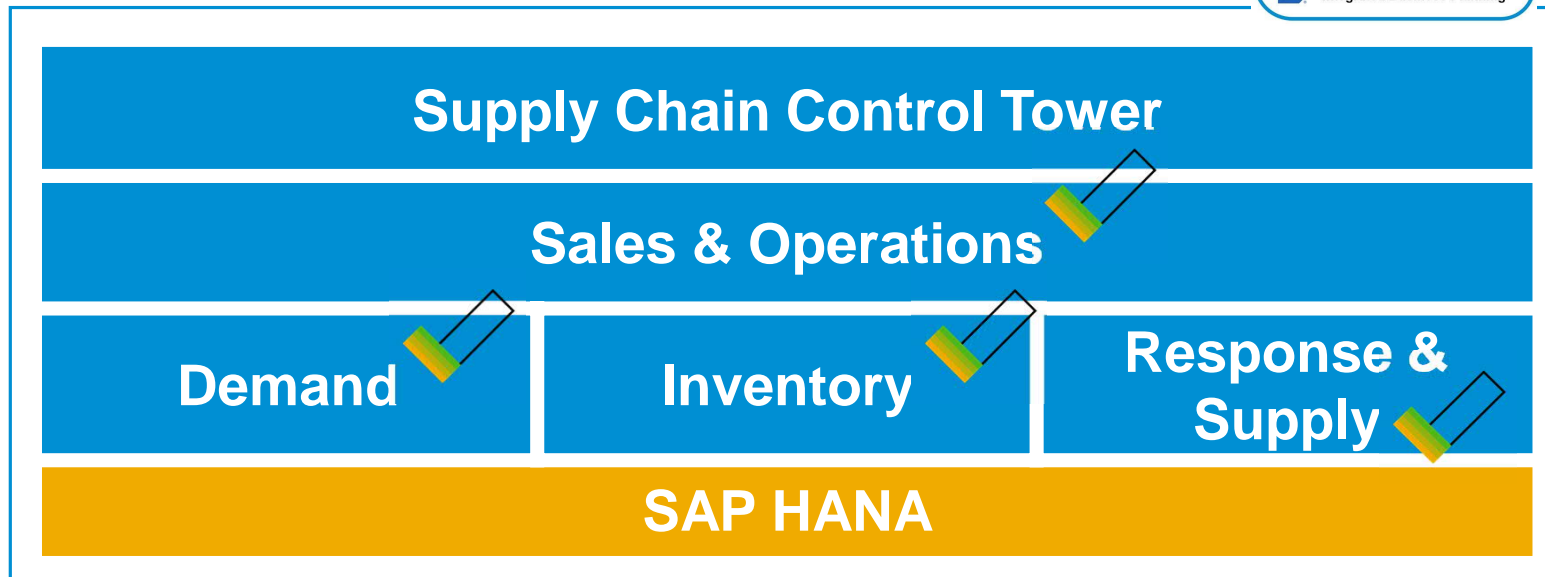
Test planning view  
(after upgrade)



The SAP Test Automator is designed to test customer specific configurations (planning levels and key figure values). The test results might contain errors in case the outcome of the key figure calculations or planning operators (e.g. Time-Series-Based Supply Planning Optimizer) is ambiguous. Hence an unambiguous test data set should be in place. New SAP IBP functionalities, UI-tests and all other tests are out of scope. The Service is designed for live customers with concluded project phase. The SAP Test Automator itself won't be shipped to the Customer.

# SAP Integrated Business Planning

## Modules covered by the SAP Regression Test Service



Response is not yet supported.

# Supported operators

\* Optional

	Demand	S&OP (Sales and operations)	Supply	Demand and S&OP or supply	Inventory
Test flow ↓	Application Job Template *	Application Job Template *	Application Job Template *	Application Job Template *	Application Job Template *
	Copy Operator *	Copy Operator *	Copy Operator *	Copy Operator *	Copy Operator *
	Statistical Forecasting	Time-Series-Based Supply Planning Heuristic	Time-Series-Based Supply Planning Optimizer	Statistical Forecasting  Time-Series-Based Supply Planning Heuristic or Time-Series-Based Supply Planning Optimizer	Inventory operators (Application Job Template)



Application Job Templates can be used to trigger SAP Cloud Platform Integration (SAP CPI-DS) data flows. If the data flow targets the appropriate test object (planning area or version) the integration can be verified as well. You can either verify integration of master data or key figure integration (or both).



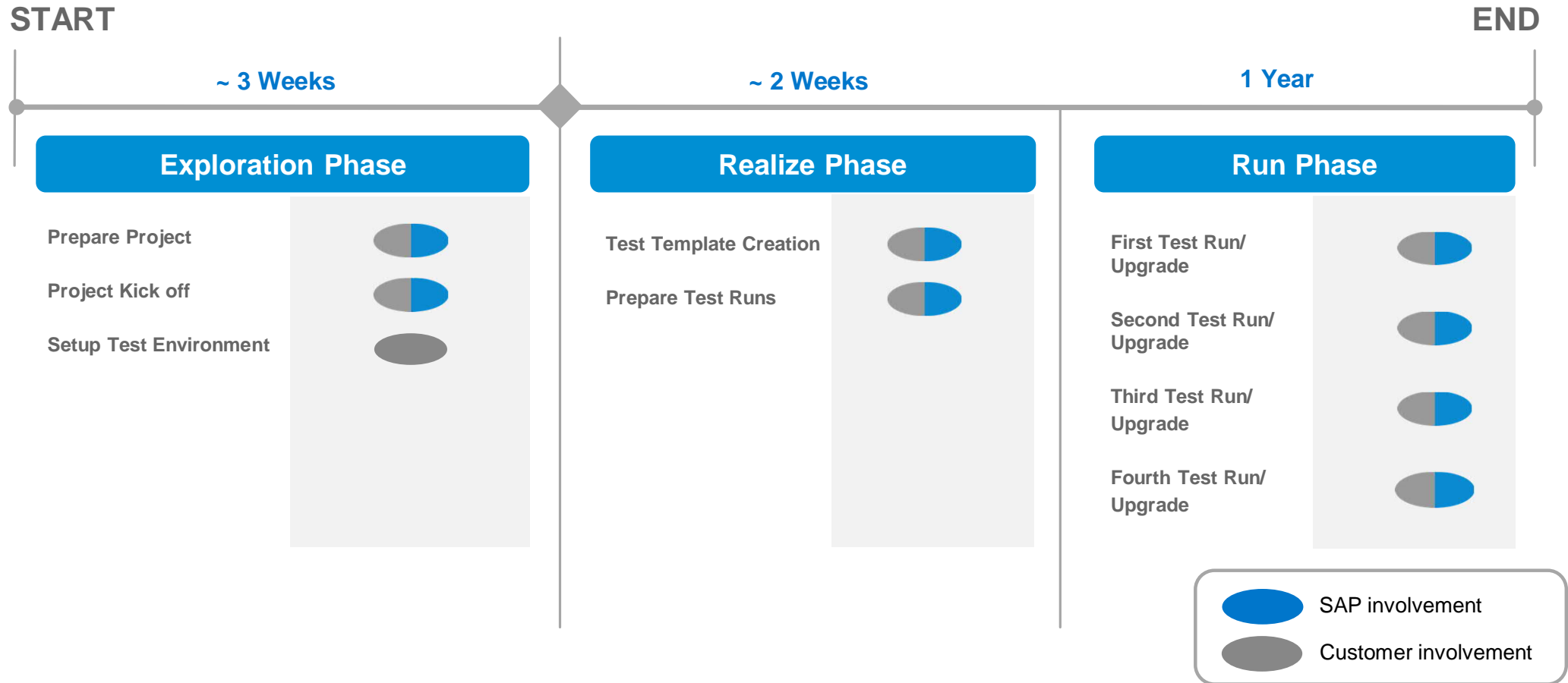
# Service scope options

A service scope option is a combination of scope that can be removed to reduce the service price.

Scope options	Required	Scope items / Functionality delivered
<b>Foundation: first year</b>	Mandatory	<ul style="list-style-type: none"><li>▪ Relevant for new customers</li><li>▪ Covers the setup of the customer specific test automation</li><li>▪ Comprises four test runs to cover four upgrades of your SAP IBP system</li></ul>
<b>Extension: subsequent year</b>	Optional	<ul style="list-style-type: none"><li>▪ Relevant for existing regression test customers who want to test further upgrades</li><li>▪ Setup of the customer specific test automation must be already existing and must be up to date</li><li>▪ Includes additional four test runs to cover four upgrades of your SAP IBP system</li></ul>

# Typical project plan - Foundation: first year

Shows main project activities



# Service overview - Foundation: first year

## Exploration Phase

### Prepare Project

- Onboard the project team

### Project Kick off

- Workshop to elaborate on customers testing requirements and to get a common understanding about the aim of the test service
- Clarification of responsibilities and features of the test service

### Setup Test Environment

- **Creation of test environment** and import of test data in customer's SAP IBP system

## Realize Phase

### Test Template Creation

- Workshop to transfer knowledge regarding test template creation
- Definition of SAP IBP planning views (test templates)

### Prepare Test Runs

- Configuration of the SAP Test Automator
- Verification of created test templates
- Readiness check for productive test run

## Run Phase

### Test Runs

- **Update of test environment** for inclusion of new functionalities
- Test runs are triggered in the SAP Test Automator
- Test results or findings are presented to the customer

All **yellow** items need to be done by the Customer, otherwise the Service can't be delivered.

# Service overview - Extension: subsequent year

## Exploration Phase

### Prepare Project

- Onboard the project team

### Project Kick off

- Workshop to elaborate on customers testing requirements and to get a common understanding about the aim of the test service
- Clarification of responsibilities and features of the test service

### Setup Test Environment

- **Creation of test environment** and import of test data in customer's SAP IBP system

## Realize Phase

### Test Template Creation

- Workshop to transfer knowledge regarding test template creation
- Definition of SAP IBP planning views (test templates)

### Prepare Test Runs

- Configuration of the SAP Test Automator
- Verification of created test templates
- Readiness check for productive test run

## Run Phase

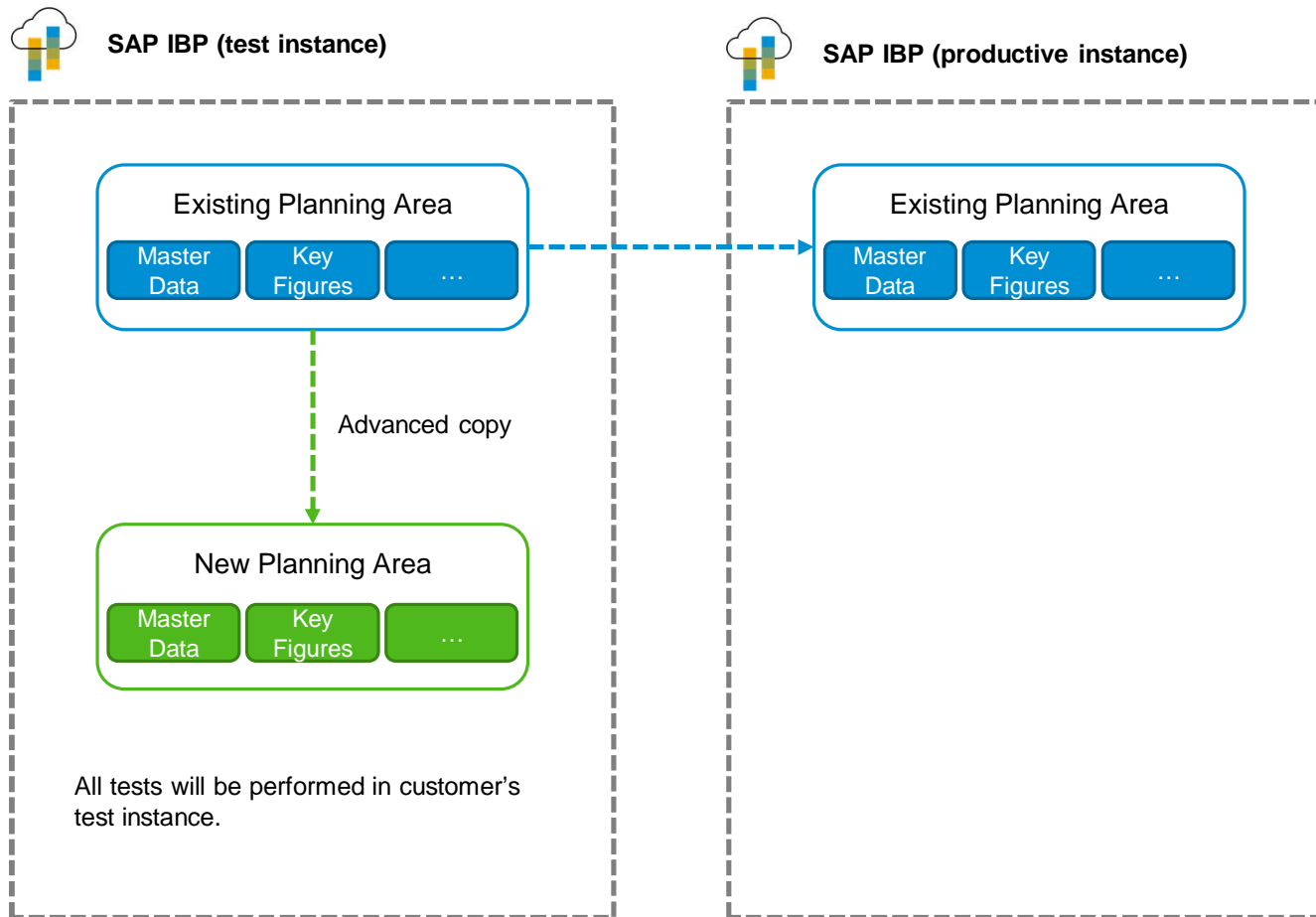
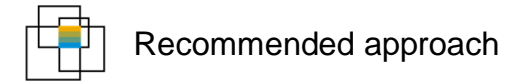
### Test Runs

- **Update of test environment** for inclusion of new functionalities
- Test runs are triggered in the SAP Test Automator
- Test results or findings are presented to the customer

All **yellow** items need to be done by the Customer, otherwise the Service can't be delivered.

# Creation of test environment

## Option 1: Own planning area for testing



### Benefits:

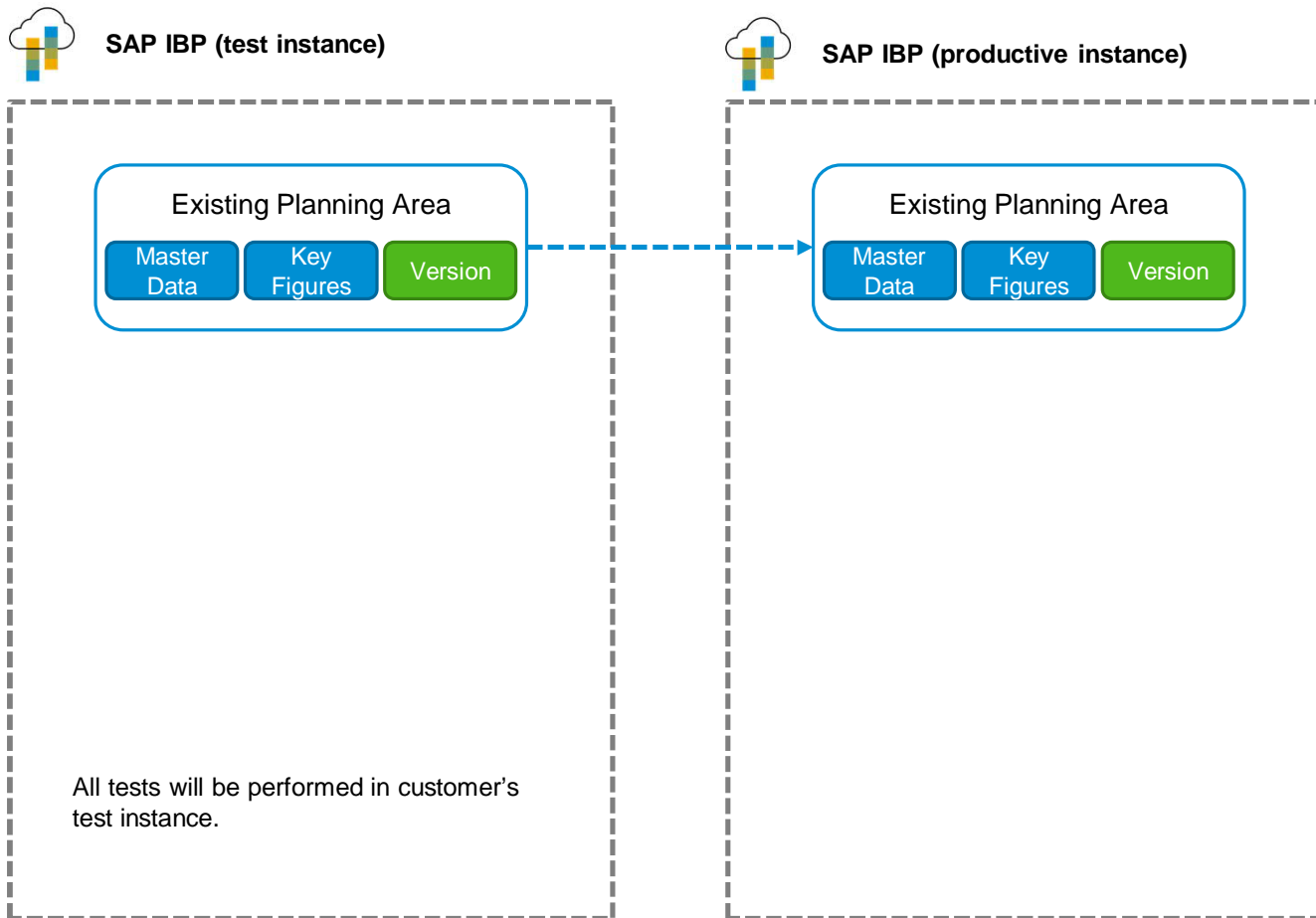
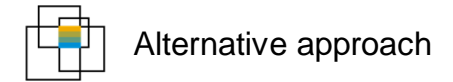
- Planning area is secure from any changes
- An own planning area is rather aligned with a regression test
- Test data set can be re-used by changing the planning area offset

### To be considered:

- Test data set needs to be integrated manually
- Planning area must be updated in case of major changes

# Creation of test environment

## Option 2: Own version for testing



### Benefits:

- Test data set can be copied from existing versions
- Test data set can be re-used by changing the planning area offset

### To be considered:

- Every change in configuration might impact the test result
- Complicates the root cause analysis in case of errors
- Version is being shipped to the productive environment as well

# Responsibilities

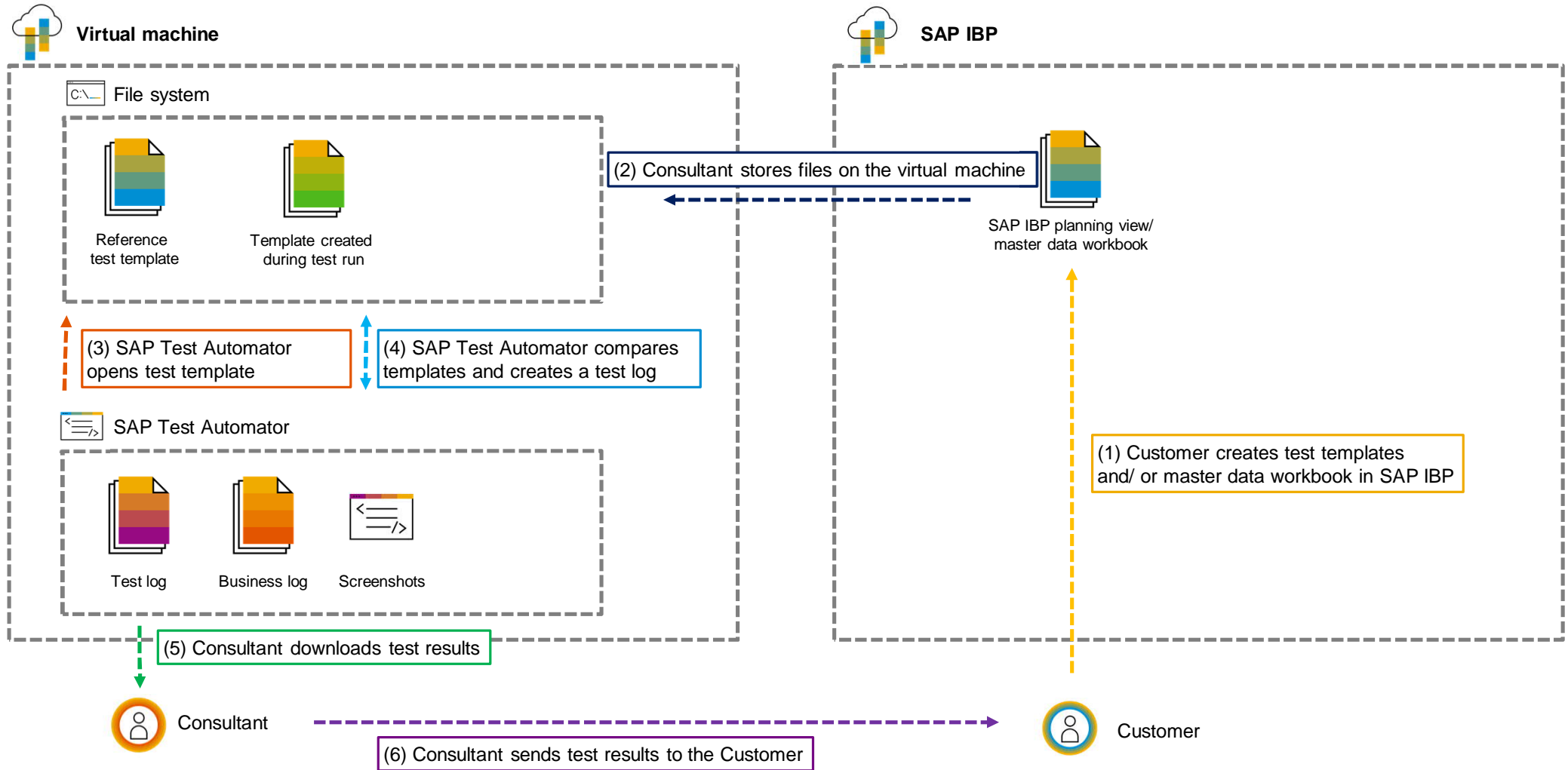
## What does SAP do?

- Support the identification of suitable test scenarios based on defined test scope
- Support customer during test template creation
- Preparation and configuration of the SAP Test Automator to establish a connection with customer's SAP IBP system
- Trigger and monitor the test runs
- Verification of test results and provisioning to the customer

## What do customers have to do?

- Definition of critical functions that should be included in the test scope
- Definition and creation of test environment in SAP IBP including import of meaningful test data
- Definition of test templates
- Creation of test user with limited permissions (business role can be defined by SAP)
- Update of test environment in case new or changed functions should be included in the tests


# Process steps during Service delivery






# Process steps during Service delivery

- During the test run each cells of the test templates are being compared
- All test templates are being duplicated to allow an individual comparison of test data before and after the test run (respectively the upgrade)
- Deviations in planning levels and key figure values will be visible in the test log and the test templates
- Additionally screenshots of the affected test templates are being created

 Reference test template

Product ID	Customer ID	Key Figure	Jan 2019	Feb 2019
Phone 1000	Retailer A	CONSENSUSDEMAND - Total Demand	100 !	106
Phone 1100	Retailer A	CONSENSUSDEMAND - Total Demand	200	210

 Template created during test run

Product ID	Customer ID	Key Figure	Jan 2019	Feb 2019
Phone 1000	Retailer A	CONSENSUSDEMAND - Total Demand	150 !	106
Phone 1100	Retailer A	CONSENSUSDEMAND - Total Demand	200	210



 Test log

```

---
Differ! Template Value: '100' / Test Value: '150'
----
```

# Deliverables and activities

Task	Activities	Deliverables
<b>Kick off workshop</b>	Agenda, overview, expectations, test scope definition	
<b>Test environment workshop</b>	Discussion of possible creation approaches	
<b>Knowledge transfer workshop</b>	Knowledge transfer and test template creation (one example)	
<b>Four test runs</b>	SAP triggers test runs in the SAP Test Automator once each upgrade	
<b>Duplication of all test templates</b>		Test templates with test data before and after the test run (respectively the upgrade) for an individual comparison
<b>Test log including screenshots</b>		Test log that lists all identified deviations and screenshots of the appropriate test templates
<b>Result analysis slide deck</b>		Rough analysis of test results and highlights (*)

(\*) A detailed analysis of the test result is not in scope of the service but can be requested if needed.

# Service pricing

Scope options	Required	Description
Foundation: first year	Mandatory	▪ 40.000€
Extension: subsequent year	Optional	▪ 25.000€

# Optional scope

If done by SAP, this optional additional scope needs to be covered by additional time and material contracts.

Optional Scope	Required	Scope items / Functionality delivered
<b>SAP IBP upgrade support (offered as fixed price)</b>	Optional	<ul style="list-style-type: none"> <li>▪ Support in the area of SAP IBP upgrades</li> <li>▪ Details see following slide</li> </ul>
<b>Creation of test environment</b>	Optional; outcome mandatory for delivery of service	<ul style="list-style-type: none"> <li>▪ Creation of test planning area or version in customer's SAP IBP system</li> <li>▪ Import of customer's test data</li> <li>▪ Adaption of test data to receive meaningful test results</li> </ul>
<b>Update of test environment</b>	Optional; outcome relevant for delivery of service	<ul style="list-style-type: none"> <li>▪ Workshop to elaborate changes or distinctions compared to the productive planning area</li> <li>▪ Implementation of changes</li> <li>▪ Optional: Re-import and adaption of test data</li> </ul>
<b>Comprehensive analysis of service results</b>	Optional	<ul style="list-style-type: none"> <li>▪ Identification of root causes</li> <li>▪ Recommendations for action</li> </ul>

## Optional scope: SAP IBP upgrade support



Discussion of what's new content considering selected SAP IBP modules



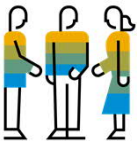
Discussion of mandatory tasks before/ after the SAP IBP upgrade



Running check mode and analysis of appropriate log



Test of the latest SAP IBP Excel Add-on with customer's SAP IBP system



Consultation in case of SAP IBP errors or necessary configurations changes

# Agenda

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Scope

## Appendix

- Responsibilities: What do customers have to do?
- Screenshot: SAP Test Automator
- Q&A

# Responsibilities: What do customers have to do?

## Creation of a planning area with test data

- To get meaningful test results a stable dataset has to be defined; otherwise the test result can't be compared
- If there are business critical data the customer has to decide if they want to use this data or if they replace the data with dummy data

## Definition of SAP IBP templates for test runs

- The templates should include all attributes and key figures which are relevant for the test
- The templates shouldn't include any formatting or graphics since this will harm the performance
- The templates store the original key figure values (before the upgrade) and will be used for comparison after upgrade (as per design of the SAP Test Automator these templates are being stored during test runs on a file system to which the SAP Test Automator has access to)
- Data filters or aggregations could be used since a comparison of all data at their base planning level might lead to long run times

## Creation of test user and its permissions

- To avoid any risks the permissions of the test user should be restricted

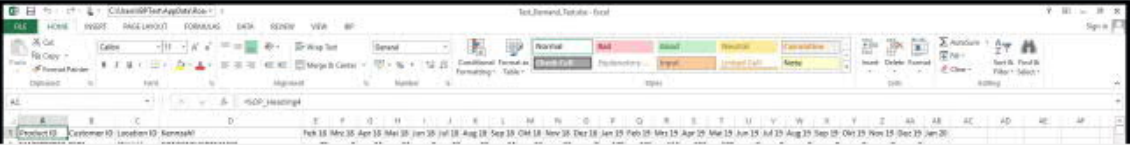
# SAP Test Automator

Test all Excel Templates - Test Automator

Open Variables Clear Log Save Log  Show all Dialogs

Test Flow: C:\Program Files (x86)\SAP\SAPPCD IBP TestAutomator\TestFlows\IBP\ExcelTest.testflow

Date/Time	Severity	LogMessage
15.02.2018 09:20:18	Info	Checking Master Data:
15.02.2018 09:20:18	Info	Checking Range: 'Demand!A2:D9' start...
15.02.2018 09:20:18	Info	Checking Range: 'Demand!A2:D9' finished!
15.02.2018 09:20:18	Info	Checking Range: 'Aggregated Demand!A2:B10' start...
15.02.2018 09:20:18	Info	Checking Range: 'Aggregated Demand!A2:B10' finished!
15.02.2018 09:20:24	Info	Optimizer run started...
15.02.2018 09:22:21	Info	Optimizer run finished successfully!
15.02.2018 09:22:42	Info	Checking Optimizer Data:
15.02.2018 09:22:42	Info	Checking Range: 'Demand!E2:AB9' start...
15.02.2018 09:22:42	<b>Error</b>	<b>SAPCDMobileTestAutomator.Model.Actions.IBPTest.ExcelFileCompareAction - checkExcelRange: The value of cells Demand!\$G\$9 differ! Template Value: &gt;Empty&lt; / Test Value: '80'</b>
15.02.2018 09:22:42	Info	Checking Range: 'Demand!E2:AB9' finished!
15.02.2018 09:22:52	Info	Captured Windows Desktop Screenshot named 'Error_Test_Demand_Test.xlsx - Excel_Sheet Demand_20180215_092251.png' C:\Users\IBPTest\AppData\Local\Temp\Error_Test_Demand_Test.xlsx - Excel_Sheet Demand_20180215_092251.png



TestFlow ended.

Extras



## Q&A

### **Q: What permissions should the test user have?**

A: The test user must have access to the planning area or version in which tests should run. The test user shouldn't have any write permission and shouldn't have rights to change something in the administration section or the configuration itself. The customer is responsible to setup the test user. SAP can support the creation of the appropriate business role.

### **Q: How does SAP receive the test templates?**

A: The planning views are being stored as usual templates in the customer's SAP IBP system. The responsible consultant will copy the test templates to the virtual machine.

### **Q: Does SAP setup a virtual machine for each customer?**

A: For the time being there will be only one virtual machine. Using this system SAP can access all customer systems and tests can run individually (tests can't be run simultaneously). The customer data is separated into different areas.

## Q&A

### **Q: What about the user credentials of the test user and how does SAP receive them?**

A: The test user should be created using the mail address of the assigned SAP consultant. This way no credentials have to be exchanged. The SAP Test Automator can store the credentials and can use the SAP Cloud Platform Identity Authentication log-on automatically. Other authentication methods are not supported.

### **Q: Can customer run the test on their own?**

A: No, the customer has no access to the virtual machine or the SAP Test Automator. The customer interacts with the consultant and not with the test tool itself.

# Thank you.

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