

Value Increasing Documentation Excellence in Process & Application Documentation

A step-by-step approach to restructure your process and application documentation and establish an integrated testing, training and documentation repository

Discovered pain points

Why a solution on an integrated approach is urgently required?

Pain points – preventing from having the lowest T(otal)C(ost) of O(wnership):

- Companies and organizations are struggling in setting-up a clear and redundancy-free maintainable and always latest digital process and application documentation due to a missing approach and method
- This is causing the consequence that the more user generations are running an ERP-system the more the knowledge moves to the surface (fast handover instead of repeatable sustainable trainings)



Why is this?

- Identical business processes/ functions are documented several times for different purposes
- Application documentation is up-to-date after the initial implementation project and usually become outdated after the first changes have been applied to the system.
- Thus there is no reliable basic training for new employees (or a possibility for self-studying) in the proper business processes and application handling and errors/problems of understanding are multiplied one-to-one in handover sessions



© 2022 sapXPerience GmbH, Switzerland



How could this happen?

- Today the companies BPM usually is documented within a tool or Suite (MS-VISIO or any BPM-Suite)
- Created application documentation is not properly integrated into the BPM documentation and for this reason do exist redundant in both systems → Significant increase in workload and complexity in case of required updates
- This results in inconsistent, outdated documentation that is no longer accepted as a reliable source by the users. → Those may start to create their own documentation separately

What does it take to start eliminating these problems? Not very much!

- A Business Process Management documentation tool (most likely this already exists in your organization (VISIO or any BPM suite such as ARIS Express, Adonis CE, SIGNAVIO or the Symbio Suite) that is capable of working in an integrated manner with an authoring tool
- A modern authoring tool like SAP's "[SAP Enable Now](#)" or simpler and cheaper "[Ovio](#)" to [record application operation](#) and automatically generate demos, trainings and tests and an integrated learning management - if you don't have this in a separate system
- The approach and tools necessary to achieve consistent and efficient integration of these two components



How the future could look like

Achievements and Benefits

Achievements – Deliverables related

- A consistent set of integrated, aligned and redundance-free documentation deliverables:
- A completely developed Business Process Master List (BPML) showing the dependencies between external (market or customer driven) influences/events on your e2e processes
- The Business Process Management (BPM) documentation giving a complete overview on all tasks/ responsibilities to be performed to run your business (i.e. for certification purposes) independent from the application you are using to run those
- A set of computer based trainings (CBTs), which can be run in demo, train, test and navigation mode describing the application specific execution of the tasks within your BPM within the (different?) applications you are using to run those – the digital end-user-documentation (EUD)
- A complete set of evolutionary growing test scripts to run and manage efficient e2e oriented testing of all e2e process variants relevant to your business



Maintenance-related achievements

- A fully developed view of your business from the perspective of the end-to-end process or a selected part of it based on your choice.
- A transparent and consistent change management process for your documentation that enables actual and consistent updates according to changes in your processes or applications, facilitated by the absence of redundancies, clearly defined responsibilities, and integration of documentation updates into the change testing and release process.
- Last but not least, a defined approach to how to create context and design the overall system so that your key users can create and keep everything up to date with minimal effort, and your users can efficiently navigate the documentation they create and self-train as changes are made - while you are able to monitor progress.



- Your BPM will be broken down to a defined and application independent level only and thus be easily kept actually up-to-date as changes in underlying applications will not be reflected in your BPM → The use of different applications (i.e. Oracle, Microsoft or SAP R/3 or S/4 HANA) does NOT need to be reflected within your BPM
- Your application specific end-user documentation and training material (CBTs) will be generated as a spin-off when test-running your end-to-end processes (and their to be tested variants) within the different applications and thus will be automatically updated by any integration test for new functions or regression testing of existing ones → The End-User-Documentation (EUD) will be kept always on an actual level based upon the build-in update and release approach
- This both will also lead to a clearly defined and split responsibility and defined way of collaboration between the responsables for maintaining the BPM (your QM department?) and the EUD (your key-users or application experts?) and also lead to
 - a massive decrease on effort to be spent by your auditors to create and maintain the documentation (up to 80% savings) and thus allow them to keep it always on the newest level
 - a complete elimination of all efforts (and confusion) raised today by the fact, that parts of your process and/or application documentation are maintained redundantly
 - ...and you should also consider how the motivation of your auditors will increase facing these facts

And imagine, what it will mean to your support organization, if your users will be provided with such an self-learning and supportive environment; The Key-Users can focus on continuous improvement again



- Your users will be provided with an environment where they can easily navigate through the processes and process parts relevant to them and on task level jump into the application specific CBTs relevant to their specific part of the organization, which will lead to:
 - A massive decrease in training efforts for new users when joining the company or changing the job
 - A massive decrease in the need for delta-trainings into new applications for your existing user community (i.e. when changing from any legacy to SAP or from SAP R/3 to S/4HANA) as they are able to review and self-study the task specific before (legacy) / after (new system) situation repetitively and always again when required
- There will be no loss of (background) knowledge anymore with each new user generation as all (new) end-users are trained and provided with the documentation to the same efficient level of depth and (self-) training and studying

And imagine, what it will mean to your users community, if they are realizing, that ALL training and documentation for ALL different applications and releases they are using in different parts of the organization are following THE SAME SIMILAR approach and logic and do have THE SAME look and feel with your Business Process Management as the overlaying navigator



What else can come? A vision for the future of onboarding

- Building on this type of integrated process and user documentation, a vision - still visionary for many companies today - could then be realized.
- A new employee is created in the HCM (Human Capital Management) system and can then learn their new job completely independently and this is how it could work:
 1. In the HCM system, the new employee is assigned his/her new job(s)/role(s)
 2. This HCM information is replicated to the AD. The accesses to applications and data are defined by the jobs and roles
 3. The employee logs on with SSO (Single Sign On) in the BPM into which his user has been replicated with the corresponding roles. Now the employee can see in the BPM which processes he is involved in and which tasks he has to perform and with which other functions he works and how.
 4. In any task to be executed in an application (e.g. SAP, MS-Office or any other), he can click to go to the corresponding documentation in the authoring tool and run the task in demo, training and test mode (HR and his supervisor can monitor the progress)
 5. During the first steps in the productive use of the application, the employee can be supported by the interactive assistant in a context-sensitive manner - of course, this can also be done again at any time later, if he needs support in his productive work.
 6. If there are changes in the applications or processes, the employee is automatically notified if these are relevant for him based on his roles. It is then possible to specify whether the employee must confirm that he or she is aware of these changes - and, of course, he or she also has the option of interactively familiarizing himself or herself with the changed processes and functions.

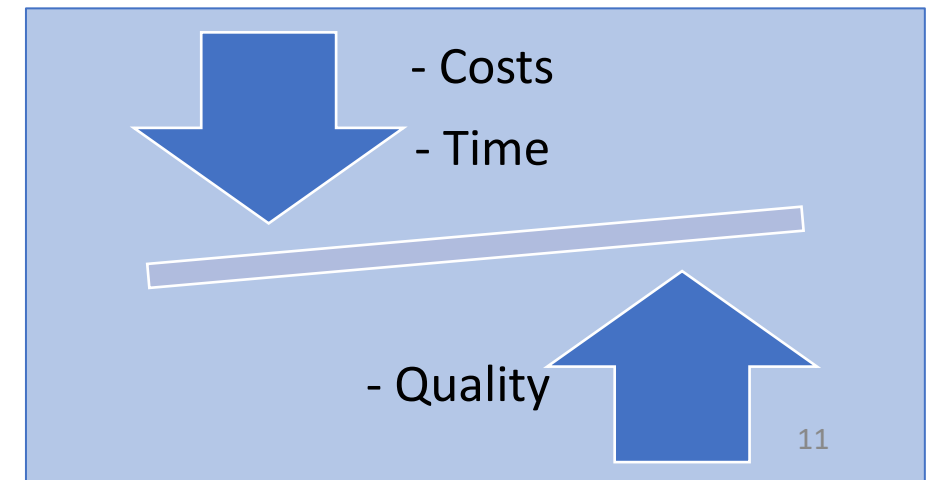
Imagine how much easier, cheaper and at the same high quality level new employees could be on board - and the whole thing would also be possible completely remotely.

What does is need to get it done

Method and recommended tools to create a Value
Increasing Documentation

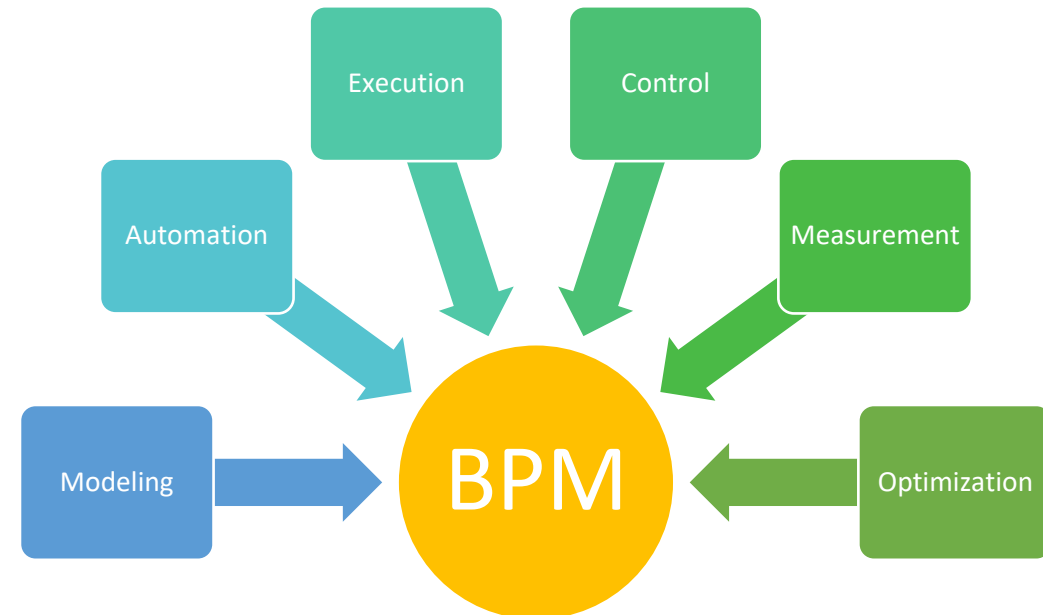
Why is structured state-of-the-art documentation approach integrating Process-, Application and Testing documentation the key?

- It provides a central, standardized knowledge base, that is always up to date. Everyone is on the same level **due to the lack of redundant documentation.**
- **A lot of time** during the business day is spend with searching (e.g. forms or information) that **could be used for more important tasks.**
- The **knowledge** within the company is **kept on a constantly increasing level.** The risk of losing process- or application-knowledge if a trained employee leaves the company is minimized and **newly joining colleges are trained on a similar or higher level like their predecessors.**
- It allows a continuous improvement of the business processes **integrating test- and documentation updates with the ones of system functions and processes**



What is BPM?

- BPM stands for **B**usiness **P**rocess **M**anagement
- It is a management concept to control, adjust and optimize business processes.
- It includes the integration of the processes into the company structure.
 - It allows the company to become more agile and adapt to changes more easily.
 - BPM is typically maintained in a flow tool such as VISIO or a BPM suite such as SIGNAVIO, ADONIS CE or the Symbio Suite - SIGNAVIO was recently acquired by SAP so should be a safe investment and SIGNAVIO is able to import process flows in BPMN2 notation into its suite)
 - SAP AG provides the [best practice process flows of the current S/4 HANA release](https://sapxp.ch/tools-overview-digistore24/?lang=en) in BPMN2 format and we offer them as download packages with vertical or converted with horizontal swimlanes in DE and EN for download in our digistore: <https://sapxp.ch/tools-overview-digistore24/?lang=en>

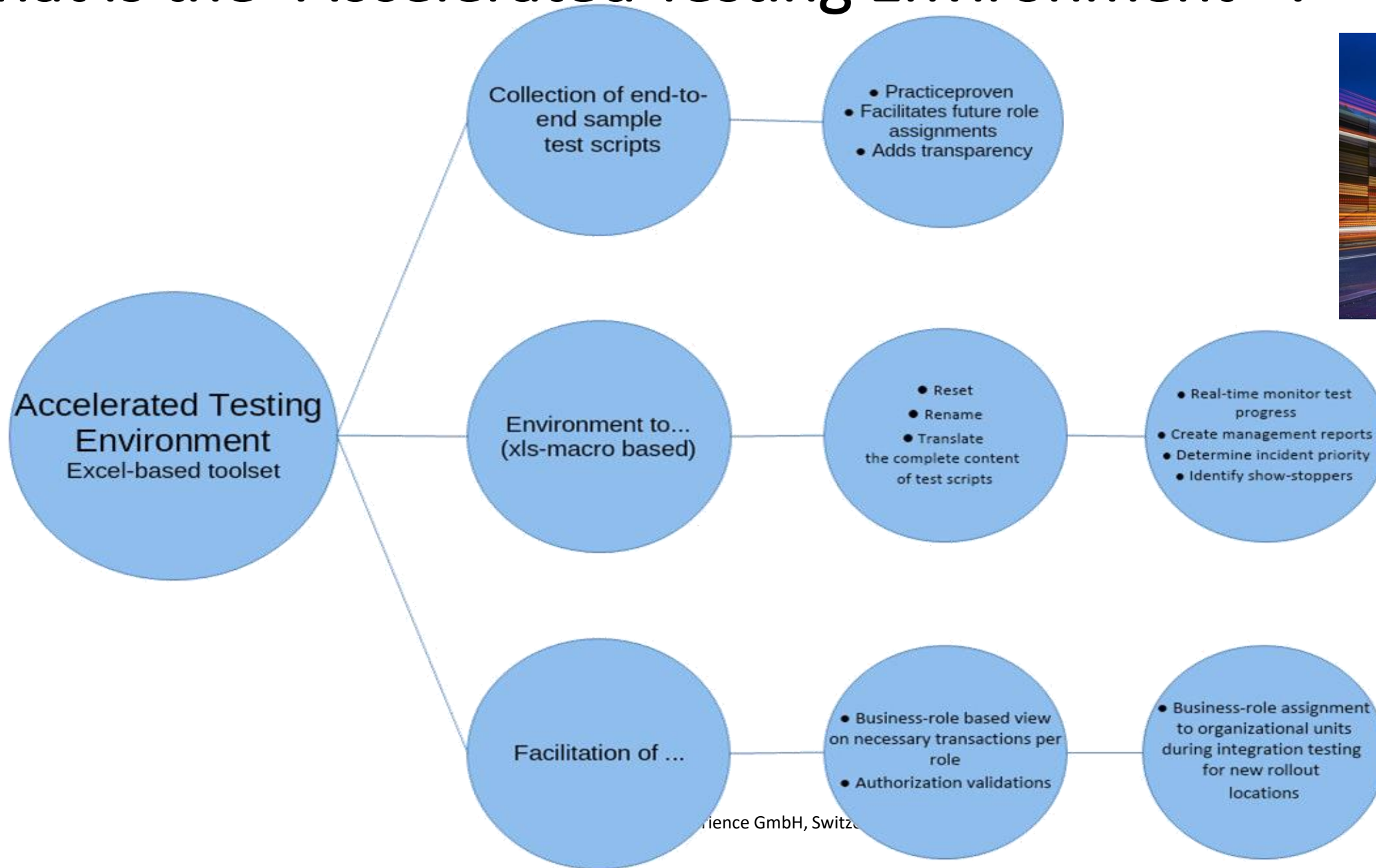


What is CBT / what is an authoring tool?

- Computer Based Training allows existing and new employees to acquire the same knowledge, easily and all in one place.
- It can be done in self-study, which means that the training time is shortened, there is no need for an instructor and the training can be repeated independently at any time.
- Training costs can be significantly reduced. Once the knowledge is digitized, everyone can benefit from it AND it is preserved and remains in the company even if the author who created the training leaves the company.
- Modern authoring tools such as OVIO now provide AI-based annotation of recordings, both visually and audiotively.
- Simple CBT's can be created based on the recordings with an authoring tool like [SAP Enable Now](#) or the relatively new, very innovative and meanwhile highly highly recommended [OVIO](#) created.



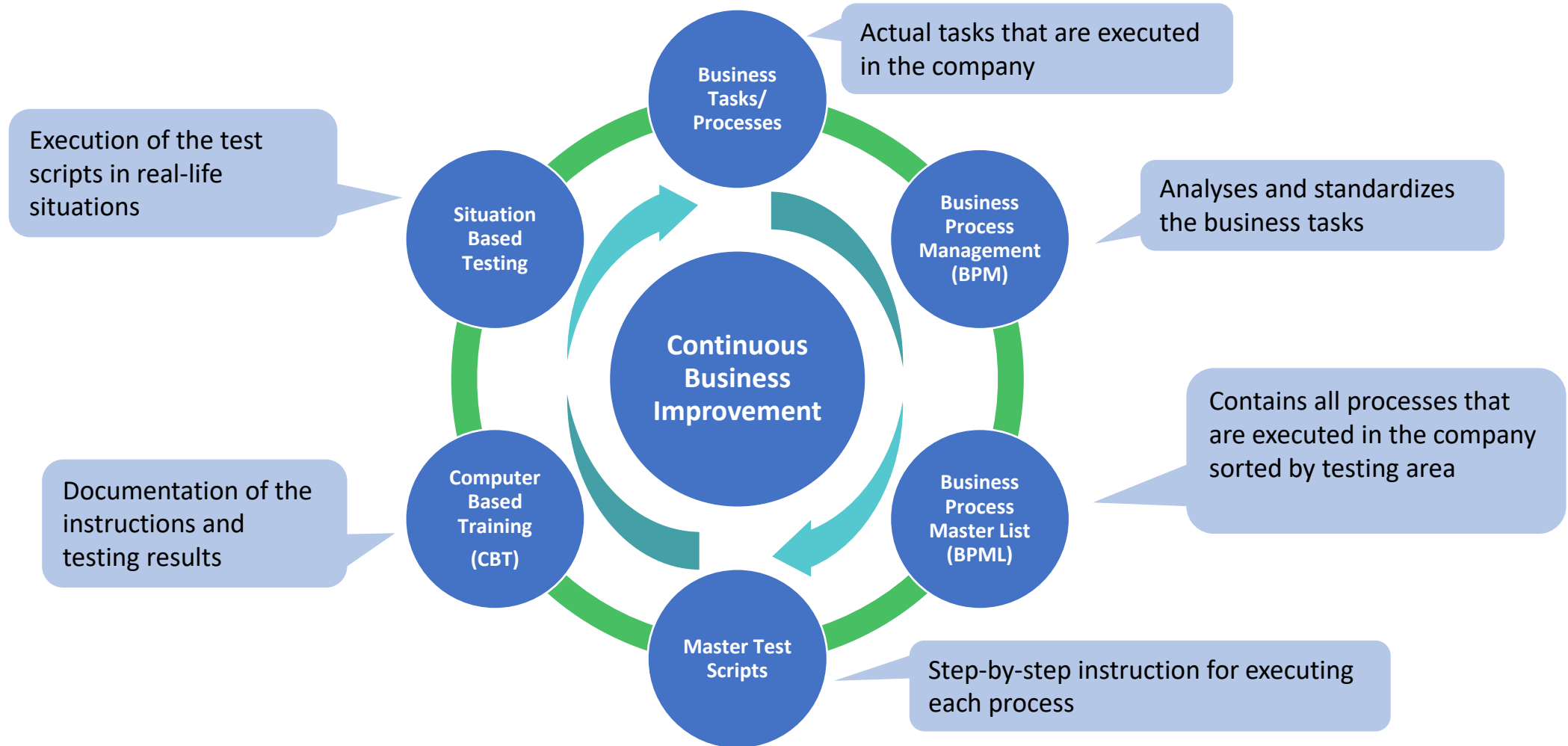
What is the “Accelerated Testing Environment” ?



A FULL EXPLANATION CAN BE FOUND ON OUR RELATED WEB SITE (and the links contained therein):

<https://sapxp.ch/tools-overview-digistore24/?lang=en>

Interrelations between the tools mentioned



If an error or an abnormal situation occurs in any of these steps, it can be corrected and the change influences the other steps. Therefore the business processes are always up-to-date.

When is the right time to start?



Recommended	Optional
<p>Start with documenting your current processes and application handling and profit from having a complete set of test scripts and up to 90% savings in delta trainings and when onboarding new employees</p>	<p>Use the HANA momentum. Use your S/4HANA implementation project to build up your documentation following the described approach in order to assure the best lifecycle Return-on-Investment and lowest Total-Cost-Of Ownership</p>

APPROACH – The 10 steps necessary to get there Explained step-by-step

Overview

Step 1

- Build the company specific process house with the BPM and define the process naming and numbering conventions

Step 2

- Assign/map the e2e testing areas within the BPM process house

Step 3

- Build the Business Process Master List (BPML)

Step 4

- Create the Master-Test-Scripts for all e2e processes to be tested

Step 5

- Combine Process-Steps to be executed in the applications into business tasks (sequence of steps to be executed by the same business-role at the same time)

Step 6

- Create the repository of documentation containers for the CBTs

Step 7

- Integrate the business tasks into the BPM process description

Step 8

- Link from the business tasks in the BPM to the related CBTs

Step 9

- Execute the master-test-scripts and record the CBTs per business task

Step 10

- Create all to be tested process variants by replicating and adjusting the master-test-scripts and execute those (while recording additional CBTs, if specifically required)

• Build the company specific process house with the BPM and define the process naming and numbering conventions

What:

- Describe the specific Business Process Model including organizational functions, business roles and organizational units as required for certifications
- Define important roles within the release procedure of processes (i.e. process owners) and naming conventions for the items that are created

How:

- Divide the business areas into process areas and within those break down the processes into the different business tasks to be executed
- Mark Business Tasks to be executed in any application with a specific shape (shapes may differ by application type like ERP, CAD, Office, but should not be application specific)

Tool to be used:

- Any BPM tool or better BPM suite - your existing solution or a new one ([feel free to consult this overview on the WWW](#) and get a first orientation based on the BPMN tool overview (see right)).
We recommend using a BPM suite like SIGNAVIO, ADONIS CE or the Symbio Suite - SIGNAVIO was recently acquired by SAP and should therefore be a safe investment and SIGNAVIO is able to import process flows in BPMN2 notation into its suite.

Important principles:

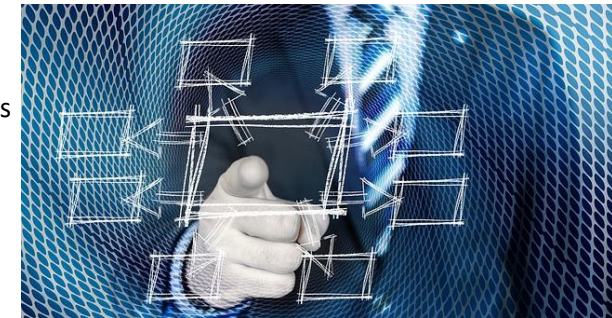
- Follow the common building principles and distinguish on the highest level between Management-, Value-Creating- and Supporting processes
- Make sure the lowest level of sub-processes (or business tasks) will remain application independent

Starting with:

- Either rework your existing process model according to these principles or build a new one starting with a common model

Accelerators provided by sapXP:

- Example proposals for definitions, naming conventions, business role models and basic process models
- SAP AG provides the [best practice process flows of the current S/4 HANA release](#) in BPMN2 format and we offer them as download packages with vertical or converted with horizontal swim lanes in DE and EN for download in our digistore: <https://sapxp.ch/tools-overview-digistore24/?lang=en>



Final result

The company business process model is completely defined within the BPM Suite individually for each company.
→ It can serve as a process guidebook for certifications and trainings.

Sample: Process-House within the in BPM System

Management Processes



Supporting Processes



• Assign/map the e2e testing areas within the BPM process house

What:

- In order to have a clearly defined start and end for each of the processes relevant for application, testing it is necessary to map or assign the application specific e2e process testing areas against the processes defined within the defined BPM process house

How:

- Assign the different e2e testing areas to the building blocks within the business model

Tool to be used:

- Can be documented within or even also outside the BPM-Suite

Important principles:

- Document the assignment in the field within the BPM-Tool that can be used for reporting
- Ensure that the assignment happens for all processes containing application supported business tasks

Starting with:

- The defined business model (reworked to the principles according to step 1)

Accelerators provided by sapXP:

- Defined end-to-end testing areas with start/ end and definition/ description of the covered business functions
- Remote training and coaching sessions for those employees that are in duty to execute this step, i.e. BPM Auditor and Application Managers jointly



Final result

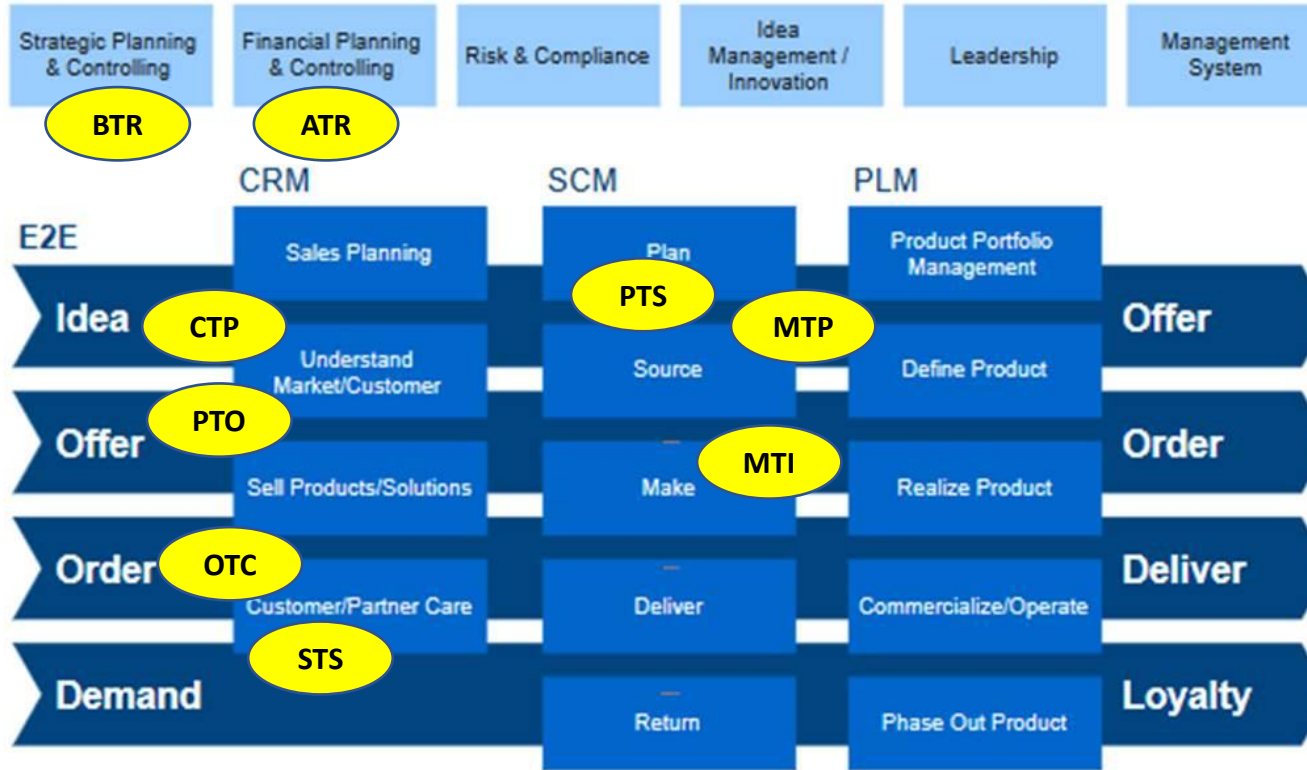
Transparency on the assignment of the different processes within the specific business model to the e2e testing areas
→ This will provide consistency when creating the e2e master test scripts

End-to-End testing areas (ERP-System)

End-to-End testing					
area	START	END	DEFINITION	Support by SAP@Borger	
BUDGET TO REPORT	BTR	Budget preparation	As-Is versus Budget analysis	Budget to Report encompasses all business functions necessary to identify, collect, measure, accumulate, analyse, interpret, and communicate cost information to accomplish the many objectives associated with control, decision making, planning, and reporting.	CO (-OM; -PA; PCA) PC SAP-BI
HIRE TO RETIRE	HTR	HR Budget	employee retired	Hire to Retire encompasses all Business functions necessary to plan for, hire, develop, assign, sustain, and separate personnel resources.	HR
ORDER TO CASH	OTC	Customer Inquiry	cleared customer item (FI)	Order to Cash encompasses all business functions necessary to accept and process customer orders for parts or machines. This includes such functions as managing customers, accepting orders, prioritization of orders, fulfilling orders, performing distributions, managing receivables, and managing cash	SD (-MD; -SLS; -SHP; -TR; -BIL; -EDI) LE
MAKE TO INVENTORY	MIT	Mat. Requirement to be produced	produced finished good on stock	Make to Inventory encompasses all business functions to produce machines and parts. This includes process like make to order, make to stock, production supply or production order controlling.	PP (-SFC; -KAB; -REM) QM
PROCURE TO PAY	PTP	Mat. Requirements To be procured (from MRP or other)	cleared vendor item (FI)	Procure to Pay encompasses all business functions necessary to obtain goods and services. This includes such functions as requirements identification, sourcing, contract management, purchasing, payment management, and receipt/debt management.	MM (-PUR; -EDI) QM
PLAN TO STOCK	PTS	Sales Forecast	Material Requirements (from MRP)	Plan to Stock encompasses all functions around strategies, tactical and operational planning with all business scenarios. This area should ensure that all material is available at the right time with the right quantity.	PP (-MRP) MM (-IM; -CBP) WM
SERVICE TO SATISFACTION	STS	to be serviced item @ customer	Analysis on customer satisfaction	Service to Satisfaction encompasses all business functions necessary to determine service requirements from customers and execute measures to customer satisfaction.	CS
REQUEST TO RESOLUTION	RTR	to be serviced item @ ownAssets	maintained tools and assets	Request to Resolution ist the process of performing maintenance on materiel/assets requiring repair or complete rebuild of parts, assemblies, subassemblies, and end-items, including the manufacture of parts, modifications, testing, and reclamation as required.	PM
PROSPECT TO ORDER	PTO	qualified lead	customer inquiry	Prospect to Order encompasses all business functions necessary to generate and sustain sales by pursuing qualified leads, employing effective sales techniques, efficient order processing, maintaining customer relationships, and providing support functions to include service, personnel, and financial	SD-CAS (SAP-CRM)
MARKET TO PROSPECT	MTP	Marketing measures	identified potential customer requirement (qualified lead)	Market to Prospect encompasses all business functions necessary to establish marketing plans, identify target markets, plan and define marketing campaigns, execute marketing campaigns, and evaluate the performance of marketing campaigns.	
CONCEPT TO PRODUCT	CTP	Idea	created master data required for production	Concept to Product encompasses all business functions necessary to effectively identify product needs, and plan and execute all necessary activities to bring a product from initial concept to full production.	PS SAP-PLM?
ACCOUNTING TO REPORT	ATR	Booking on financial Account	External Reporting	Accounting to Report encompasses all business functions necessary to plan, formulate, create, execute against and report on the budget and business activities of the entity. This includes updates to the general ledger.	FI

Mapping of typical ERP e2e testing areas to the process house

Management Processes



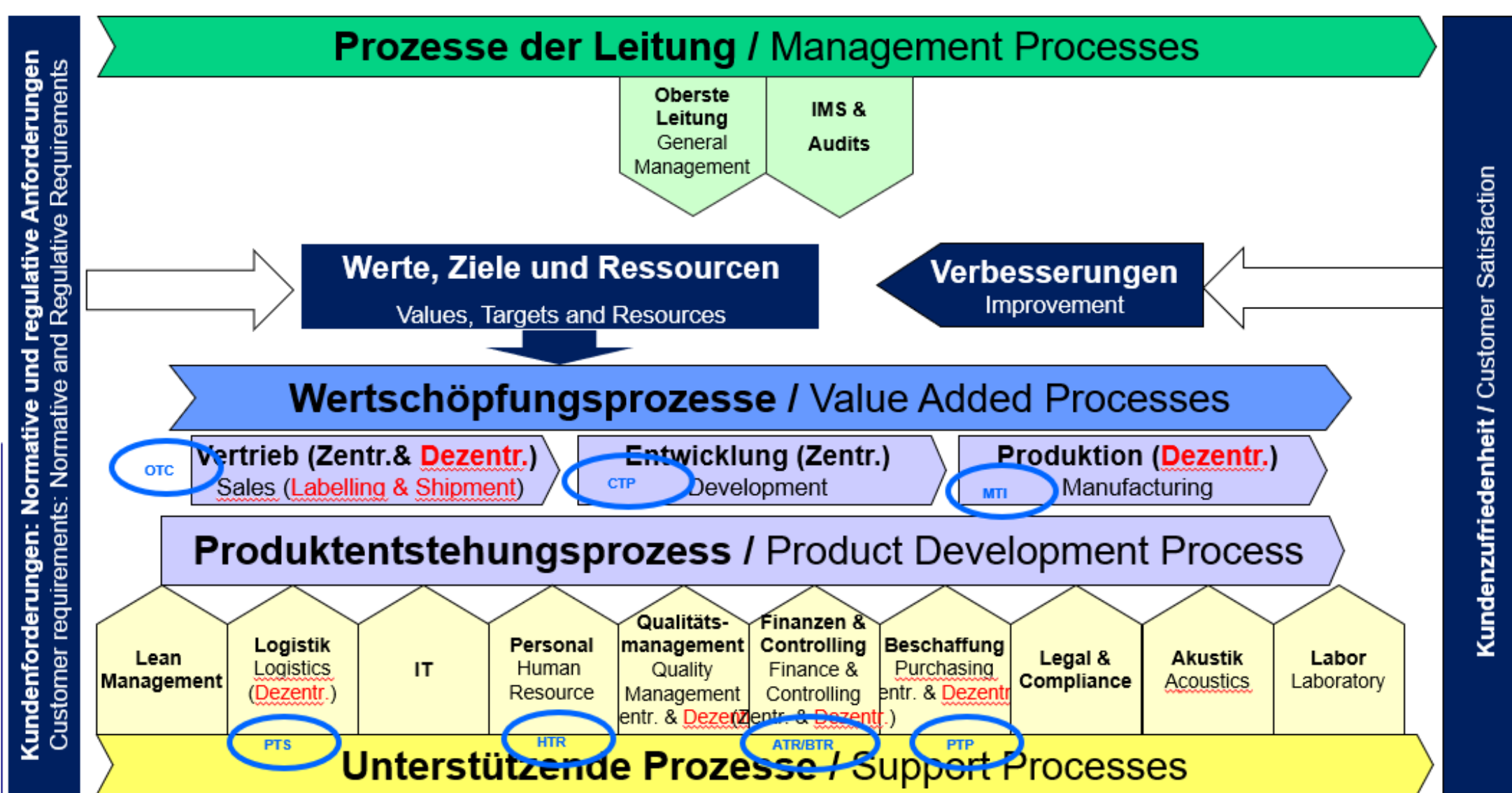
Supporting Processes



ERP e2e testing areas

BUDGET TO REPORT	BTR
HIRE TO RETIRE	HTR
ORDER TO CASH	OTC
MAKE TO INVENTORY	MIT
PROCURE TO PAY	PTP
PLAN TO STOCK	PTS
SERVICE TO SATISFACTION	STS
REQUEST TO RESOLUTION	RTR
PROSPECT TO ORDER	PTO
MARKET TO PROSPECT	MTP
CONCEPT TO PRODUCT	CTP
ACCOUNTING TO REPORT	ATR

Another mapping sample



• Build the Business Process Master List (BPML)

What:

- Mapping of the required application specific e2e application processes & variants (application specific terms) per e2e testing area against the different (market or customer driven) business processes/ occurrences within the company (business specific terms)

How:

- List all different real-life business processes/ occurrences required by the customers in the columns and provide one concrete typical real-life example (i.e. Customer/ material combination)
- List the different e2e testing areas as sub-header-lines in the rows; list the different application processes in use in the application system thereunder
- Within the matrix mark the valid combinations of business processes and application processes with a „x“

Tool to be used:

- BPML in MS-Excel

Important principles:

- No different processes should appear in the columns other than driven by the market or customers as they may create the need for additional application processes; the usage of different application processes disconnected from the customer interface is (i.e. discrete or repetitive manufacturing) up to the individual decision within the company and thus not directly derived from any external influence

Starting with:

- Sample BPML
- Identified e2e testing areas to be addressed within the application

Accelerators provided by sapXP:

- Sample BPML
- Remote training and coaching sessions for those employees that are in duty to execute this step, i.e. Business Process Experts & Application Managers jointly

Final result

Complete list of to be used/ valid e2e handling variants within each occurring business process (customer perspective)



Sample Business Process Master List (BPML) – Structure

Basic Business Process		Glokale Festlegungen		Customer Projects		Sample	
		Customer Projects	Sample	Customer Projects	Sample	Customer Projects	Sample
				Einzelverkauf zu Einzelbestellur Träger na Dagro (0046845, 43			
				Regulärer LAB/FAB Prozess Oc "Side shield" nach Volvo (006;			
				Regulärer LAB Prozess mit GTL HTB hinten nach BOS (00699;			
				Regulärer PUS Prozess			
				Regulärer JIS Prozess mit PUS KoMa & Ladeboden nach PSA			
				Regulärer Mengenabruf JIS			
				JIS Abwicklung mit Perlenkette			
				Lohnbearbeitung mit Beistellung Macan SW nach Porsche (008			
				Lieferabruf EDL			
				Regulärer LAB/FAB Prozess Fo Koffermatte nach Ford (00808			
				Regulärer LAB/FAB Prozess Fo Koffermatte nach Ford FCSD			
				Regulärer LAB Prozess mit Zoll F25 Klappe nach Borgers USA			
				Regulärer LAB Prozess mit BEL F31 Halter nach BMW (00794.			
				Auslieferungsauftrag mit GM PUS			
				Auslieferungsauftrag mit ET19 (inkl. C Touran na Valeo (0074465, 45			
				Auslieferungsauftrag mit RAN			
				Streckengeschäftsauftrag mit Li PES nach Feltex (0009596-03			
				Werkzeugverkauf			
				Dienstleistungsvverkauf			
				Muster + Erstmusterverkauf			
				Kundenretouren mit physischer Kundenretouren mit physische			
				Kundenretouren ohne physische Kundenretouren ohne physisc			
				Gut-/Lastschriften für Wertdiffer Gut-/Lastschriften für Wertdiff			
				Gut-/Lastschriften für Mengendil Gut-/Lastschriften für Mengen			
				Gut-/Lastschriften für Mengen- u Gut-/Lastschriften für Mengen			
OTC	Order-to-Cash						
SA-OTC-010	Sales Order Processing Materials			X			
SA-OTC-013	Sales Order Processing Tools						
SA-OTC-016	Sales Order Processing Services						
SA-OTC-020	Third-party-orders / Drop shipments						
SA-OTC-030	scheduling agreement release (LAB only)				X		
SA-OTC-030	scheduling agreement release (only LAB / FAB)			X			

Sample Business Process Master List (BPML) – Application Processes

OTC	Order-to-Cash
SA-OTC-010	Sales Order Processing Materials
SA-OTC-013	Sales Order Processing Tools
SA-OTC-016	Sales Order Processing Services
SA-OTC-020	Third-party-orders / Drop shipments
SA-OTC-030	scheduling agreement release (LAB only)
SA-OTC-030	scheduling agreement release (only LAB / FAB)
SA-OTC-040	scheduling agreement release with delivery order (PUS)
SA-OTC-040	scheduling agreement release with delivery order (PUS-JIS)
SA-OTC-040	scheduling agreement release with JIT call (MAB-JIS)
SA-OTC-050	Scheduling Agreements with consignment EDL
SA-OTC-060	Scheduling Agreements with pearl necklace
SA-OTC-070	Scheduling Agreements with subcontracting EDL
SA-OTC-080	Scheduling Agreements with NLK time slice
SA-OTC-090	Scheduling Agreements with inventory control VMI
SA-OTC-100	Credit and debit-note processing
SA-OTC-100_01	Credit and debit-note processing for value differences
SA-OTC-100_02	Credit and debit-note processing for quantity differences
SA-OTC-100_03	Credit and debit-note processing for quantity and value differences
SA-OTC-110	Customer returns

BTR	Budget-to-Report
CO-BTR-010	Product Costing
CO-BTR-020	Investment Management
CO-BTR-030	Overhaed Management
CO-BTR-040	Period end Closing

ATR	Accounting-to-Report
AC-ATR-010	Asset Management
AC-ATR-020	Accounts Payables
AC-ATR-030	Accounts Receivable
AC-ATR-040	Banks
AC-ATR-050	General Ledger
AC-ATR-060	Cash register
LO-ATR-070	Physical inventory

MTI	Make-to-Inventory
ME-MTI-010	Discrete manufacturing
ME-MTI-020	Repetitive Manufacturing
ME-MTI-030	Pre-Producton in another plant
ME-MTI-040	Joint production
ME-MTI-050	KANBAN processing
ME-MTI-060	Rework processing
ME-MIT-080	Sample production
LO-MTI-005	master data maintenance - warehouse management
LO-MTI-010	Storage process goods receipt
LO-MTI-020	internal replenishment
LO-MTI-030	cross plant replenishment
LO-MTI-040	cross plant replenishment (from central raw material storage)
LO-MTI-050	corss plant returns
QM-MTI-020	Management of blocked stock
QM-MTI-030	inspection during production
QM-MTI-040	process the Firewall
PTP	Procure-to-Pay
PR-PTP-010	Purchase Request processing
PR-PTP-020	Procurement into stock (Single purchase)
PR-PTP-040	Procurement into consumption
PR-PTP-050	Procurement of Services
PR-PTP-060	Subcontract order processing
QM-PTP-010	Returns processing
QM-PTP-020	quality inspection for the receiving department
SC-PTP-010	Procurement based on scheduling agreements and quotation (for production)
SC-PTP-010	Procurement based on scheduling agreements (for production)

RTR	plant maintenance
PM-RTR-010	preventative maintenance
PM-RTR-020	repairs

Step 4

• Create the Master-Test-Scripts for all e2e application processes → Master test cases

What:

- Test-scripts are showing the sequence of the steps to be performed within the application including the assigned business role and the to be used master data during test execution

How:

- For each row in the BPML at least one test script is created starting with the templates and sample scripts provided by us

Tool to be used:

- The most pragmatic way to document and manage testing is to use the MS-Excel based test-scripts and testing environment provided by sapXP. Please refer to the respective amendment in this presentation for further details.

Important principles:

- Test-scripts can be finally completed and adjusted during the test-runs, thus it is not necessary to try to create a 100% solution initially; a good, almost complete, even rough first draft is fine for the beginning

Starting with:

- Test-script samples

Accelerators provided by sapXP:

- sapXP accelerated testing environment – an Excel based toolset consisting of:
 - A collection of end-to-end sample-test-scripts proven in practice and which is facilitating the future role assignment within the organization and thus also brings transparency into the required organizational change
 - An environment to reset, rename and translate the complete content of the test scripts (xls-macro based; facilitating central repositories and different translation methods)
 - An environment to real-time monitor test-progress, create management reports and identify show-stopping incidents (xls-macro based)
- Remote training and coaching sessions for those employees that are in duty to execute this step, i.e. Business Process Experts & Application Managers jointly



Final result:


With the finalization of the master test scripts a starting point for a first integration test run is created
 → It is recommended to completely run through this test in order to verify the correctness and completeness of the scripts created or adjust them accordingly before replicating errors into the test-variant scripts (see step 10)


Sample Testscript


S/4HANA best practice process version - including FIORI App per step and required SAP Business Role to display FIORI App.


Test Script													
Order-to-Cash Sale of Services Service Sale to EU Customer OTC Team 07.05.2019													
											Analysis steps Overall 4 E - Successful 2 50% U - Unclear 0 0% F - Fault 1 25% O - Open 1 25%		
SAP BP	Business Role	Task	Process Step	Test Data	TCO	S/4HANA App	3rd party syst exchange	Document created	Status	Tested	Date tested	Remarks, vEPK	Positi Org.
2EQ	Internal Sales Representative	Sales Order Entry	Sales Order Entry	Customer 23 Material 43567	VA01	Manage Sales Orders (F1873) - manage		100000003	E	M. Meier	10.05.22		SAP_BR_INTERNAL_SALES
2EQ	Billing Clerk	Billing	Create Billing Document	created Sales order		Create Billing Documents (F0798) - create		200000006	E	K. Müller	10.05.22		SAP_BR_BILLING_CLERK
2EQ	Billing Clerk	Billing	Scheduling Job for Billing Release (Optional)	ApplicationJob		Schedule Billing Release (F1518) - show	auditor tax system		F	K. Müller	10.05.22	3000034 account determination wrong	SAP_BR_BILLING_CLERK
2EQ	Billing Clerk	Billing	Scheduling Job for Billing Output (Optional)	ApplicationJob		Schedule Billing Output (F1510) - show			0				SAP_BR_BILLING_CLERK


Sample Repository of master test scripts


 Txxx-ME-MTI-010_01_EN_Discrete Manufacturing_HU.xlsx


 Txxx-ME-MTI-020_01_EN_Repetitive Manufacturing.xlsx


 Txxx-ME-MTI-040_01_EN_Processing Set Tools.xlsx


 Txxx-ME-MTI-050_01_EN_KANBAN-Processing.xlsx


 Txxx-ME-MTI-060_01_EN_Rework processing_HU.xlsx


 Txxx-ME-MTI-080_01_EN_Samples_Production.xlsx


 Txxx-ME-MTI-090_01_EN_MIN_MAX_PVB.xlsx


 Txxx-PM-RTR-010-001_EN_preventive maintenance.xlsx


 Txxx-PM-RTR-010-003_EN_other measures.xlsx


 Txxx-PM-RTR-010-004_EN_Investments.xlsx


 Txxx-PM-RTR-020-002_EN_Repairs.xlsx


 Txxx-PM-RTR-050-001_EN_-_Reporting.xlsx


 Txxx-PM-RTR-060-001_EN_Master_Data.xlsx


 Txxx-PR-PTP-020_01_EN_Procurement to Stock (Single Purchase)_Vendor outside EU.xlsx


 Txxx-PR-PTP-020_02_EN_Procurement to Stock (Single Purchase) of EU-Vendors.xlsx


 Txxx-PR-PTP-040_01_EN_Procurement into Consumption.xlsx


 Txxx-PR-PTP-050_01_EN_Procurement of Services.xlsx


 Txxx-QM-MD-001_01_EN_Master Data.xlsx


 Txxx-QM-MD-002_01_EN_Inspection Plan_GR.xlsx


 Txxx-QM-MD-003_01_EN_Inspection Plan_Production.xlsx


 Txxx-QM-MD-004_01_EN_Master Data for Test Equipment.xlsx


 Txxx-QM-MTI-020_01_EN_Management of the Blocked Stock.xlsx


 Txxx-SA-OTC-016_01_EN_Service Sale.xlsx


 Txxx-SA-OTC-020_01_EN_Third-Party Order Processing.xlsx


 Txxx-SA-OTC-030_03_EN_Scheduling Agreement Releases (only LAB) - Odette.xlsx


 Txxx-SA-OTC-030_05_EN_Sales of ROH (Return Transfers).xlsx


 Txxx-SA-OTC-035_01_EN_Scheduling Agreement Releases (LABFAB) - Odette.xlsx


 Txxx-SA-OTC-040_01_EN_Scheduling Agreement Releases with Delivery Order (PUS) - GM GTL.xlsx


 Txxx-SA-OTC-050_01_EN_Delivery Schedule with Consignment EDL.xlsx


 Txxx-SA-OTC-070_01_EN_Delivery Schedule with Subcontracting EDL.xlsx


 Txxx-SA-OTC-100_03_EN_Credit and Debit Memos for Quantity and Value Variances.xlsx


 Txxx-SA-OTC-110_01_EN_Customer Returns with physical goods return.xlsx


 Txxx-SA-OTC-110_02_EN_Preference Determination.xlsx


 Txxx-SC-PTP-010_01_EN_Procurement Using Scheduling Agreements (for production).xlsx


 Txxx-SC-PTP-010_01_EN_Procurement Using Scheduling Agreements and Quota Arrangement (for production).xlsx


 Txxx-AC-ATR-020-01_EN_Accounts Payable.xlsx


 Txxx-AC-ATR-030-01_EN_Accounts Receivable.xlsx


 Txxx-AC-ATR-040-01_EN_Bank Accounting.xlsx


 Txxx-AC-ATR-050-01_EN_General Ledger Accounting_DE.xlsx


 Txxx-AC-ATR-060-01_EN_Cash Journal.xlsx


 Txxx-CO-BTR-010_01_EN_Product Costing.xlsx


 Txxx-CO-BTR-020_01_EN_Invest Management.xlsx

 Txxx-CO-BTR-030_01_EN_Overhead Cost Controlling.xlsx

 Txxx-CO-BTR-040_01_EN_Period-End Closing Controlling.xlsx

 Txxx-LO-ATR-070_01_EN_Physical Inventory_IM.xlsx

 Txxx-LO-ATR-070_02_EN_Inventory_WM.xlsx

 Txxx-LO-MTI-010_01_EN_Putaway Process Goods Receipt_BORGR_1.xlsx

Step 5

• Combine Process-Steps to be executed in the applications into business tasks

What:

- Within this step the logical connection between the application and the BPM documentation is defined by combining the steps executed within the application into business tasks which are represented within the BPM documentation

How:

- The created test scripts are simplified (and verified within a first test-run) and can use a very simple approach at a first attempt:
ALL APPLICATION STEPS WHICH ARE EXECUTED BY THE SAME PERSON (BUSINESS ROLE) IN A SEQUENCE AT THE SAME TIME CAN BE COMBINED INTO A BUSINESS TASK THAT IS REPRESENTED IN THE BPM

Tool to be used:

- MS-Excel based test scripts. If sapXP's accelerated testing environment is in use, a view can be created and used across all test scripts created so far

Important principles:

- Do not name a business tasks within the BPM with an application specific term in order to remain on an application independent level within the BPM documentation

Starting with:

- Test scripts created (and verified within a first test-run)

Accelerators provided by sapXP:

- Accelerated testing environment
- Remote training and coaching sessions for those employees that are in duty to execute this step, i.e. Business Process Experts & Application Managers jointly



Final result

Upon finalization of this step a complete inventory/mapping of the steps to be executed within the application against the related business tasks within the BPM system is created. As in our system the business tasks are also defining the names of the related documentation containers, wherein the related CBT's for handling the tasks in the different applications can be found, the involved employees can work simultaneously from now on:

The QM-Department to complete the BPM documentation (Step 6) (including links to the related documentation containers from each business task (Step 7 & 9) and the key-users to run tests, create the CBTs for all involved transactions and systems and fill the documentation containers (step 8)

Sample Combine Process-Steps

Team	Step Number	Business Role	Process Step	Test Data	TCODE
MTI	ME-MTI-010-16-01	104 - Operation planner	Check work center	Tested: Plant XX01; Workplace: 7500A25; 7500A45;	CR03
MTI	ME-MTI-010-16-02	104 - Operation planner	Check routing	Tested: Plant XX01; Material 10003967	CA03
MTI	ME-MTI-010-16-03	104 - Operation planner	Check material BOM	Tested: Plant XX01; Material 10003967	CS03
MTI	ME-MTI-010-16-04	104 - Operation planner	Check production versions	Tested: Plant XX01; Material 10003967	MM03
MTI	ME-MTI-010-16-05	104 - Operation planner	Material master work scheduling - view	Tested: Plant XX01; Material 10003967	MM02
MTI	ME-MTI-010-16-06	104 - Operation planner	Check palletization data material master, these data are used in the transport order	Tested: Plant XX01; Material 10003967	MM02
MTI	ME-MTI-010-16-07	104 - Operation planner	Check packing instruction	Tested: Plant XX01; Material 10003967	POP3
MTI	ME-MTI-010-16-08	104 - Operation planner	Packing instruction - check determination record	Tested: Plant XX01; Material 10003967	POF3
MTI	ME-MTI-010-16-09	105 - Production planner	MRP Single-Item, Multi-Level	Tested: Plant XX01; Material 10003967	MD02
MTI	ME-MTI-010-16-10	105 - Production planner	Convert planned order in production order	Tested: Plant XX01; Material 10003967	MD04
MTI	ME-MTI-010-16-11	106 - Shift-Leader	Print order PrOrd-paper	Tested: Plant XX01; Material 10003967	CO02
MTI	ME-MTI-010-16-12	107 - Production worker	Confirm operation with the new transaction on the scanner	Movement: XX01; Material 10003967; RM No: 258123	YRFPP01
MTI	ME-MTI-010-16-13	107 - Production worker	Print HU - Label		YRFPP01
MTI	ME-MTI-010-16-14	107 - Production worker	Confirmation scrap	Movement: XX01; Material 10003967; RM No: 258123	YRFPP01
MTI	ME-MTI-010-16-15	105 - Production planner	Complete order	Movement: XX01; Material 10003967;	COOIS
MTI	ME-MTI-010-16-16	105 - Production planner	Check goods movements	Movement: XX01; Material 10003967;	COGI

Packing the steps into 5 to be distinguished business tasks (also our CBT documentation containers):

1. Check production master data
2. Execute production planning
3. Prepare production execution
4. Confirm production
5. Finalize production order

• Create the repository of documentation containers for the CBTs

What:

- In order to allow to link from each business task to the relevant CBTs of the respective application create a separate folder for each business task within the repository system used to store the CBTs

How:

- Create folders on the lowest level using the defined names of the business-tasks as folder names; the overlaying higher structure could be created i.e. in accordance with the key-user areas responsible for the CBT creation and maintenance

Tool to be used:

- Any repository-system (Recommendation: Use a system which allows the folder links by using URL-adresses)

Important principles:

- Make sure the system created is extendable for future changes
- If it looks reasonable, allow to combine succeeding business tasks with few transactions only into one folder

Starting with:

- The identified business tasks and the defined overlaying structure

Accelerators provided by sapXP:

- Remote training and coaching sessions for those employees that are in duty to execute this step, i.e. Business Process Experts & Application Managers jointly



Final result

Documentation containers (folders) are created and prepared to be filled with the CBTs for all identified business tasks

Sample Repository structure of CBTs

Variant - with R/3 only	Variant - on change-over-to S/4 HANA
Documentation folders (BPM only one language; EUD many languages)	Documentation folders (BPM only one language; EUD many languages)
Sales	Sales
Purchasing	Purchasing
Production	Production
Check Production master data	Check Production master data
1_DE_CR03_Arbeitsplatz prüfen_SAPR3.cbt	1_DE_CR03_Arbeitsplatz prüfen_S4HANA.cbt
1_EN_CR03_Check work center_SAPR3.cbt	1_DE_CR03_Arbeitsplatz prüfen_SAPR3.cbt
2_DE_CA03_Prüfen Arbeitsplan_SAPR3.cbt	1_EN_CR03_Check work center_S4HANA.cbt
2_EN_CA03_Check routing_SAPR3.cbt	1_EN_CR03_Check work center_SAPR3.cbt
3_DE_CS03_Stückliste prüfen_SAPR3.cbt	2_DE_CA03_Prüfen Arbeitsplan_S4HANA.cbt
3_EN_CS03_Check material BOM_SAPR3.cbt	2_DE_CA03_Prüfen Arbeitsplan_SAPR3.cbt
4_DE_MM03_Fertigungsversion prüfen_SAPR3.cbt	2_EN_CA03_Check routing_S4HANA.cbt
4_EN_MM03_Check production versions_SAPR3.cbt	2_EN_CA03_Check routing_SAPR3.cbt
5_DE_MM02_Materialstamm AV-Sicht_SAPR3.cbt	3_DE_CS03_Stückliste prüfen_S4HANA.cbt
5_EN_MM02_Material master work scheduling - view_SAPR3.cbt	3_DE_CS03_Stückliste prüfen_SAPR3.cbt
6_DE_MM02_Prüfen Palettierungsdaten Materialstamm_SAPR3.cbt	3_EN_CS03_Check material BOM_S4HANA.cbt
6_EN_MM02_Check palletization data material master_SAPR3.cbt	3_EN_CS03_Check material BOM_SAPR3.cbt
7_DE_POP3_Packvorschrift prüfen_SAPR3.cbt	4_DE_MM03_Fertigungsversion prüfen_S4HANA.cbt
7_EN_POP3_Check packing instruction_SAPR3.cbt	4_DE_MM03_Fertigungsversion prüfen_SAPR3.cbt
8_DE_POF3_Packvorschrift Findungssatz prüfen_SAPR3.cbt	4_EN_MM03_Check production versions_S4HANA.cbt
8_EN_POF3_Packing instruction - check determination record_SAPR3.cbt	4_EN_MM03_Check production versions_SAPR3.cbt
Execute Production Planning	Execute Production Planning
1_DE_MD02_MRP Einzelplanung mehrstufig_SAPR3.cbt	5_DE_MM02_Materialstamm AV-Sicht_S4HANA.cbt
1_EN_MD02_MRP Single-Item, Multi-Level_SAPR3.cbt	5_DE_MM02_Materialstamm AV-Sicht_SAPR3.cbt
2_DE_MD04_Planauftrag in Fertigungsauftrag umsetzen_SAPR3.cbt	5_EN_MM02_Material master work scheduling - view_S4HANA.cbt
2_EN_MD04_Convert planned order in production order_SAPR3.cbt	5_EN_MM02_Material master work scheduling - view_SAPR3.cbt
Production Execution (Prepare & Confirm)	Production Execution (Prepare & Confirm)
1_EN_CO02_Print order PrOrd-paper_SAPR3.cbt	6_DE_MM02_Prüfen Palettierungsdaten Materialstamm_S4HANA.cbt
1_DE_CO02_Auftrag drucken FA-Papier_SAPR3.cbt	6_DE_MM02_Prüfen Palettierungsdaten Materialstamm_SAPR3.cbt
2_DE_RFPP01_Vorgang Rückmelden auf dem Scanner_SAPR3.cbt	6_EN_MM02_Check palletization data material master_S4HANA.cbt
2_EN_RFPP01_Confirm operation on the scanner_SAPR3.cbt	6_EN_MM02_Check palletization data material master_SAPR3.cbt
3_DE_RFPP01_Drucken HU - Label_SAPR3.cbt	7_DE_POP3_Packvorschrift prüfen_S4HANA.cbt
3_EN_RFPP01_Print HU - Label_SAPR3.cbt	7_DE_POP3_Packvorschrift prüfen_SAPR3.cbt
4_DE_RFPP01_Rückmeldung Ausschuss_SAPR3.cbt	7_EN_POP3_Check packing instruction_S4HANA.cbt
4_EN_RFPP01_Confirmation scrap_SAPR3.cbt	7_EN_POP3_Check packing instruction_SAPR3.cbt
Finalize Production Orders	Execute Production Planning
1_EN_COOIS_Complete order_SAPR3.cbt	1_DE_MD02_MRP Einzelplanung mehrstufig_S4HANA.cbt
2_EN_COGI_Check goods movements_SAPR3.cbt	1_DE_MD02_MRP Einzelplanung mehrstufig_SAPR3.cbt
1_DE_COOIS_Auftrag abschliessen_SAPR3.cbt	1_EN_MD02_MRP Single-Item, Multi-Level_S4HANA.cbt
2_DE_COGI_Warenbewegungen prüfen_SAPR3.cbt	1_EN_MD02_MRP Single-Item, Multi-Level_SAPR3.cbt
Plant Maintenance	2_DE_MD04_Planauftrag in Fertigungsauftrag umsetzen_S4HANA.cbt
Controlling	2_DE_MD04_Planauftrag in Fertigungsauftrag umsetzen_SAPR3.cbt
Finance	2_EN_MD04_Convert planned order in production order_S4HANA.cbt
	2_EN_MD04_Convert planned order in production order_SAPR3.cbt
	Production Execution (Prepare & Confirm)
	...
	Finalize Production Orders
	...
	Plant Maintenance
	Controlling
	Finance

• Integrate the business tasks into the BPM process description

What:

- Make sure all identified application related business tasks are represented within the BPM System

How:

- Compare, if the business tasks, identified within the test scripts, are represented with the correct role assignment and in the correct sequence within the BPM
- Create an application documentation link to the respective folder in the CBT repository system where the folder name equals the business task name

Tool to be used:

- The BPM tool or better BPM suite in use

Important principles:

- Standardize the naming
- Use the same set of roles which has been used within the test scripts; align upfront with the role-master-file in the Accelerated testing environment
- Prevent redundancy caused by having the same sequence of business tasks in different test scripts
- Recommended: use different shape colors within your BPM for the different application-types (i.e. ERP, CAD) to have a more clear visualization

Starting with:

- The process house within the BPM system

Accelerators provided by sapXP:

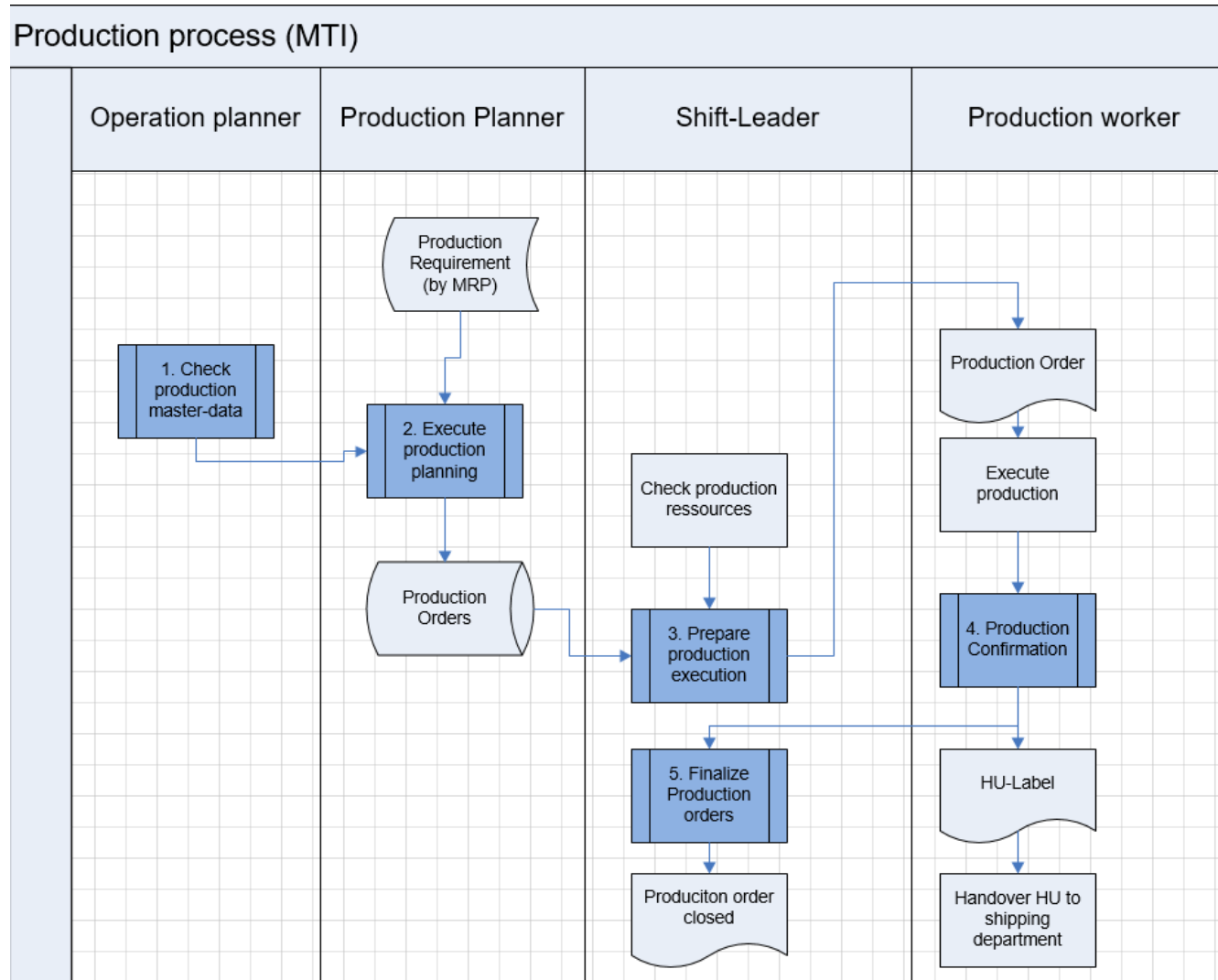
- Remote training and coaching sessions for those employees that are in duty to execute this step, i.e. Quality Manager responsible to maintain the BPM jointly
- SAP AG provides the [best practice process flows of the current S/4 HANA release](#) in BPMN2 format and we offer them as download packages with vertical or converted with horizontal swimlanes in DE and EN for download in our digistore: <https://sapxp.ch/tools-overview-digistore24/?lang=en>



Final result

Complete and consistent representation of all identified business tasks within the BPM system

Sample Business tasks in Process Flow



Step 8

• Link from the business tasks in the BPM to the related CBTs

What:

- Link all business tasks in the BPM to the related documentation container (folder) in the repository system of the CBTs

How:

- If not already completed in step 6, insert the link to the respective folder in your BPM

Tool to be used:

- The BPM tool or better BPM suite in use

Important principles:

- Make sure ALL application specific business tasks within the BPM are linked to the respective folders holding the application documentation

Starting with:

- Verification of links in the BPM

Accelerators provided by sapXP:

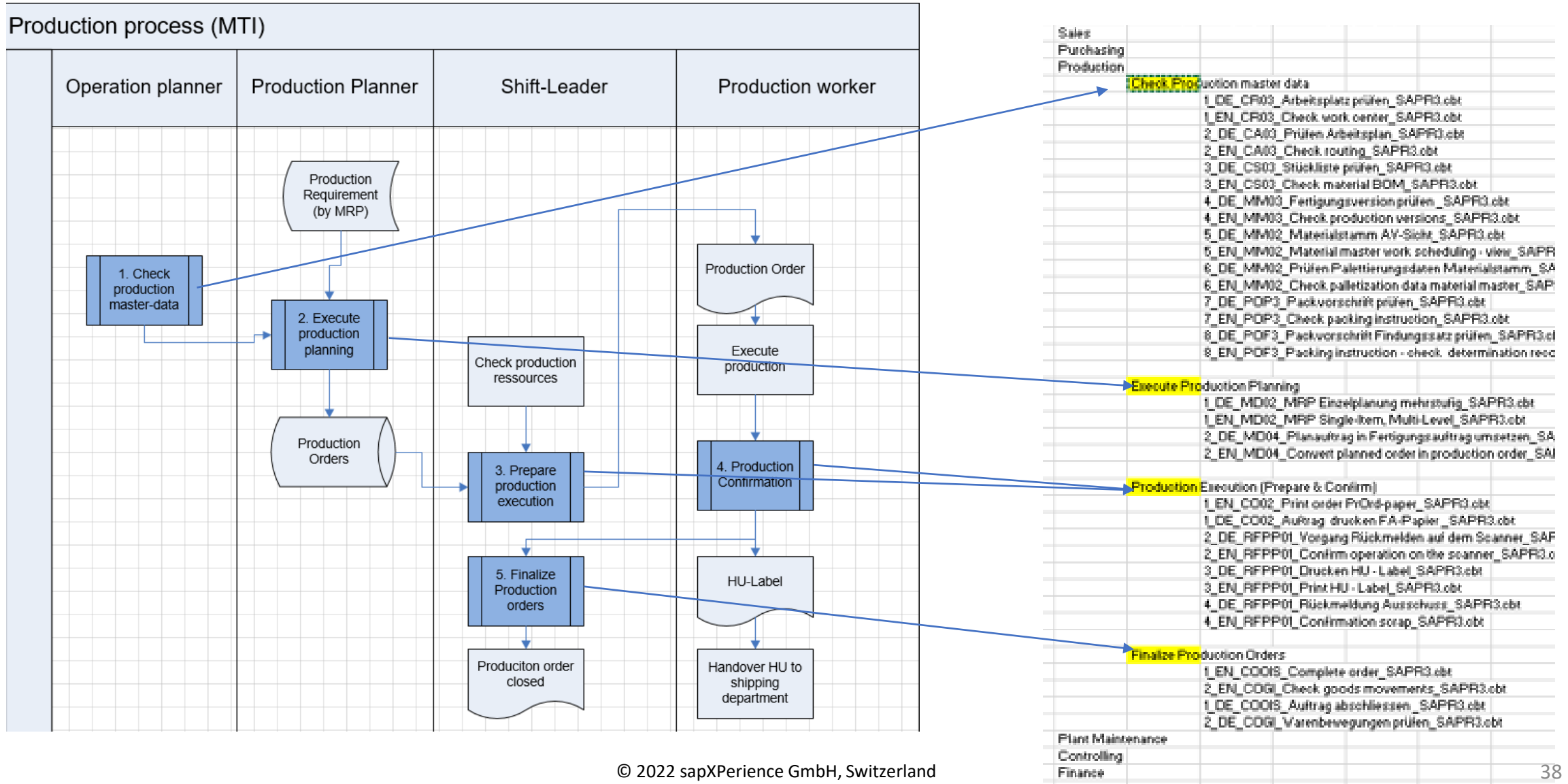
- None



Final result

All application specific business tasks in the BPM are linked to the related documentation containers (folders) in the repository system of the CBTs

Sample Business tasks in Process Flow



Step 9

• Execute the master-test-scripts and record the CBTs per business task

What:

- Create the application documentation for all transactions mentioned in the test scripts

How:

- Run the test for the master data test scripts and record the screen flow and entries with a CBT auditing software
- Alternatively it is possible to use a fixed quoted service to get the company specific CBTs created by a team of experts in order to minimize the effort in the initial creation for your Key-Users or application managers ([contact us for details & quotation](#))
- Store the created CBT in the folder of the related business task
- Usually it is necessary to execute a finishing step for each CBT in order to add specific explanations, standards to be considered and tips and tricks

Tool to be used:

- A state-of-the-art CBT auditing software like SAP's enable now or or meanwhile the more recommendable [OVIO authoring tool](#)

Important principles:

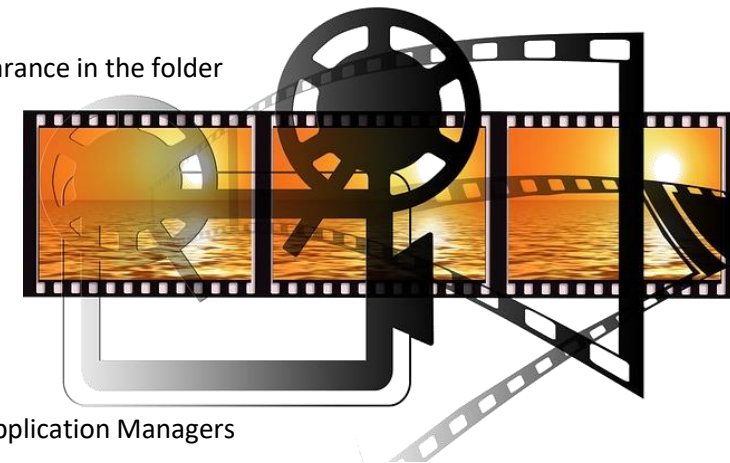
- Have a naming convention for the CBTs in place that allows to represent the sequence of the transactions according to their appearance in the folder as well as the application system the CBT is recorded in (i.e. SAP R/3 or S4Hana)
- Make sure the transaction is running successful and without errors in your application system before starting recording

Starting with:

- Any already successfully executed test script

Accelerators provided by sapXP:

- Recording services and support
- Remote training and coaching sessions for those employees that are in duty to execute this step, i.e. Business Process Experts & Application Managers jointly



Final result

All application documentation is created and stored in the respective business task folders

Step 10

• Create all to be tested process variants by replicating and adjusting the master-test-scripts and execute those

What:

- Create and test-run test scripts for all variants to be tested additionally besides the master-test-scripts

How:

- For each to be tested variant copy the related master-test script, adjust the sequence of transactions to be executed and specify the respective real-life master-data to be used in the test-script, typically representing the test variant

Tool to be used:

- Tool that has been used to create the master test scripts, i.e. sapXP accelerated testing environment

Important principles:

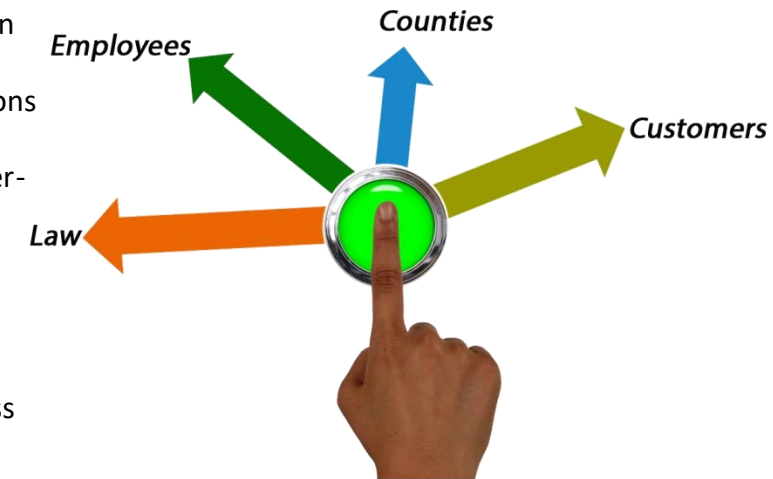
- Only create variants for test-scenarios based upon real-life occurrences, avoid to create test-scripts for situations, which theoretically can happen, but do not have any real life example out of the ongoing business
- Also avoid to create variants for occurrences, like breaks, that are occurring in real-life, but need to be handled within the execution of the already existing test-scripts
- Decide, if additional CBTs need to be created for actually missing transactions or for a special handling of a transactions within the specific defined test variant
- Have a clear naming and numbering concept for those test scripts identifying/assigning the variants under the master-test-script, they are derived of

Starting with:

- The BPML

Accelerators provided by sapXP:

- sapXP accelerated testing environment
- Remote training and coaching sessions for those employees that are in duty to execute this step, i.e. Business Process Experts & Application Managers jointly



Final result
 Complete set of test-scripts for all processes and relevant variants to be tested
 → Complete workload for integration testing