

White Paper

Keep Your SAP Processes Relevant with Solution Manager

WP0129 | January 2014



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Ben Parris and Gavin Richardson are SAP-certified ALM experts who specialize in SAP Solution Manager and associated 3rd party ALM tools. They are two of the founding members of Rapid ERP (www.rapid-erp.com); providing high quality, innovative SAP consulting services to clients who want to maximize the value that ALM can bring to their SAP operation. With over 35 years of combined experience, Rapid ERP provides the marketplace with the industry's most experienced and knowledgeable SAP ALM consultants.

Understanding and documenting your SAP business processes can seem like a daunting task, yet once completed, organizations find tremendous value in having accomplished this exercise. Ensuring that all that hard work is not de-valued over time, by inadvertently allowing it to become outdated, is often interpreted as another significant commitment and can even lead to a reluctance in undertaking the initial documentation exercise.

In this paper we will demonstrate how SAP Solution Manager can assist in maintaining the accuracy of your SAP centric business process documentation and break down some of the conceptual barriers that can deter SAP customers from utilizing the tool from the outset. We begin by revisiting the benefits of business process documentation within SAP Solution Manager and discuss the maintenance challenge that this presents, before going on to present approaches for avoiding documentation degradation. Additionally, we will show how you can use SAP Solution Manager tools to validate that the documented business processes blueprint actually represents the real usage of the SAP system.

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These tools, available free of charge in SAP Solution Manager, are as follows:

- Reverse Business Process Documentation, via the Solution Documentation Assistant. Used, in this scenario, as a means to validate your business process documentation.
- Test Management. We will show how the use of automated testing solutions can help ensure the technical alignment to your blueprint design.
- Business Process Change Analyser. Innovative functionality to identify where technical change impacts operational business processes and, therefore, where your documentation is potentially out of date.

Adopting these approaches and tools will safeguard the relevance and accuracy of the documented solution whilst also helping to ensure that business processes are executed in accordance with the current approved design.

The Value of Business Process Documentation in SAP Solution Manager

Before we discuss how to utilize the differing tools to keep your documented SAP processes relevant, we'll first remind ourselves of 'how' and 'why' SAP business process are documented in Solution Manager.

As discussed in our previous paper: 'SAP Solution Manager – Much more than a Systems Administration tool' (Richardson, G & Start, N 2013) SAP business process information is represented in SAP Solution Manager as a three level hierarchical display, accessible via the Business Blueprint transaction. This allows a company to represent the business scenarios, processes and process steps that are either already used or are going to be implemented as part of an implementation project (*Figure 1*).

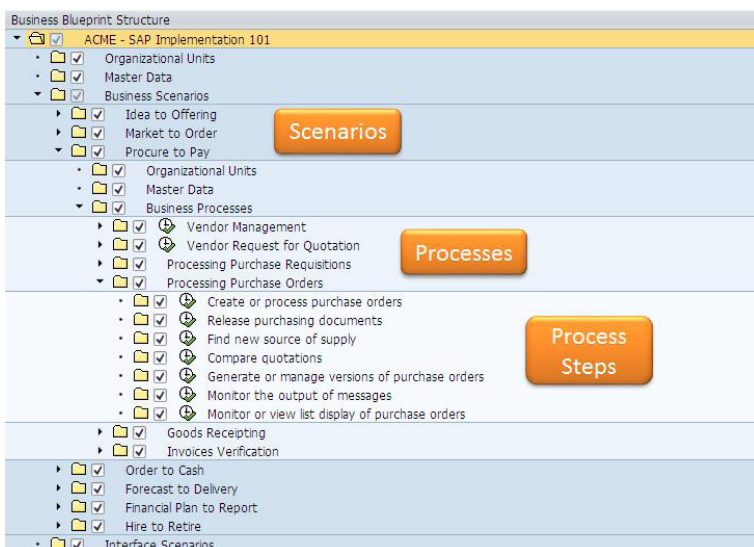


Figure 1: Business Blueprint Structure
(Richardson, G & Start, N 2013)

Against each node in this hierarchy the business process structure can be supplemented with associated documentation (e.g. business process designs, functional and detailed design specifications, test scripts, SAP transactions and other technical objects, Configuration entries, etc.) to build a rich and complete business process library.

The main advantage of this approach is that the technical information is given immediate business context by being stored against the relevant business process. In addition, the

documentation is centralized and available for the lifetime of the SAP solution, not just for the duration of any implementation project.

This 'single source of the truth' becomes an invaluable asset to SAP support teams, who often have not been involved in the initial rollout of functionality. Likewise, future implementation projects will also benefit by having a documented baseline, from which they can then extend.

However, unless this documentation is then kept up-to-date, its value will significantly decrease over time.

The Challenge of Change

In the large implementation projects that we have observed, there is often a period of relatively intensive change following the initial go-live, generally as the organization adopts the newly deployed functionality. This can occur for several reasons, such as an advance in the business during the project implementation phase where these changes are not reflected back into the project requirements and, ultimately, the business process design. This can lead to process documentation diverging from process execution almost immediately and the bad news is that it doesn't get any better over time.

As the deployment moves into the operational phase, further efficiencies and requirements for business process change are identified. The changes are implemented and the respective documentation updated but, due to that underlying discrepancy between documentation and execution, the gap between the two can quickly widen.

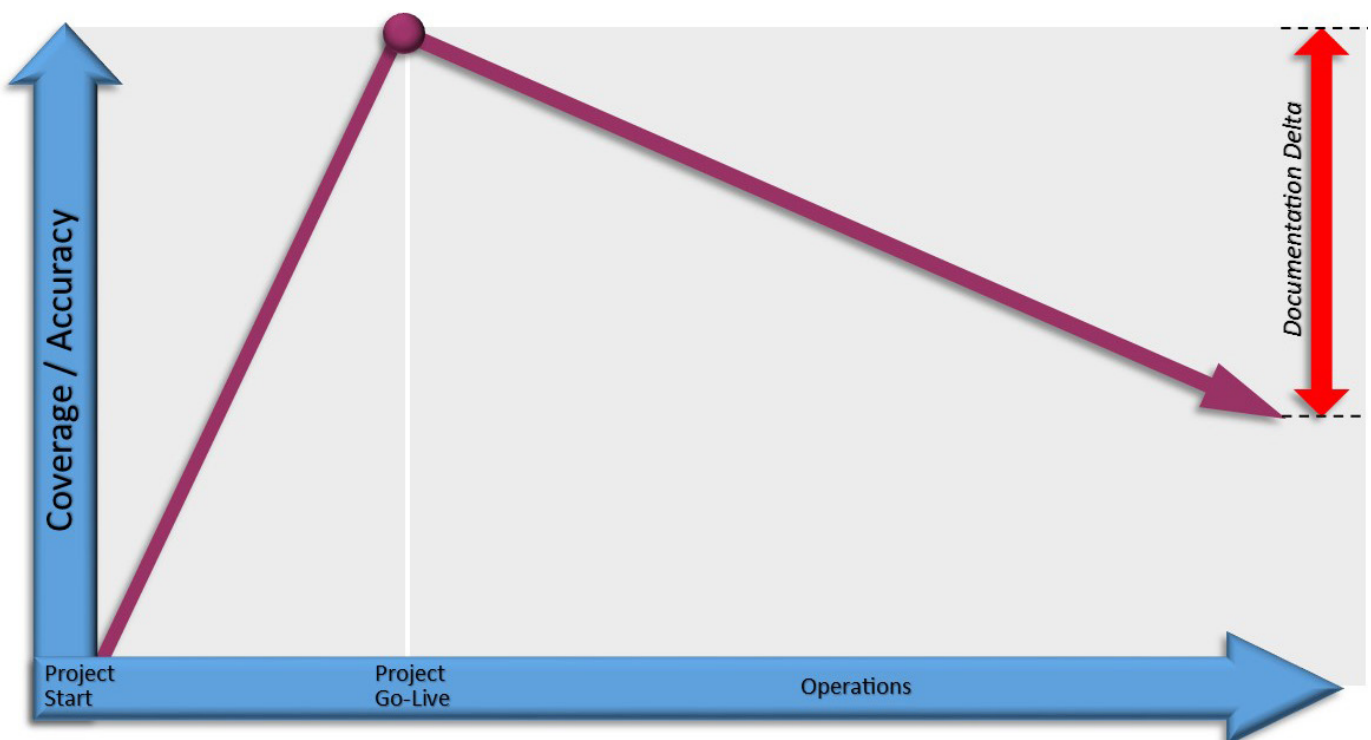


Figure 2: The Degradation Of Documentation Over Time

End users are also exploratory beings; whilst they will often adhere to project training and user documentation initially, if they can discover a different transaction or report that makes their life easier, you can bet that they will adopt this as the standard and deviate from the documented process.

Both issues lead to a reduction in the quality and coverage of your original business process documentation, as illustrated in *Figure 2*.

Unfortunately, this is simply one of life's inevitabilities. Even organizations that impose the most rigorous of documentation change control will fall foul of this phenomenon, although the delta is often reduced by doing so. The key to maintaining a relevant documentation base is to understand the challenges and implement measures to counteract this.

Prevention Is Better Than Cure - Avoiding Documentation Degradation

Ensuring that your business processes remain aligned with your design blueprint from a technical perspective is often a challenge. How does one know when technical BAU changes have impacted the original process design and whether those changes now make it impossible to operate the existing documented process?

There are three areas of SAP Solution Manager functionality that can be used to answer these questions:

- (i) Business Process Change Analyser (BPCA)
- (ii) Automated Testing using re-usable test cases
- (iii) Linking Technical Changes to Solution Documentation elements via Change Request Management (ChaRM)

Business Process Change Analyser

The goal of the Business Process Change Analyser (BPCA) is simple; it aims to identify which business processes will be impacted by a pending technical change.

The tool achieves this by comparing the inventory of technical objects changed with a 'Technical Bill of Materials' (TBOM) recorded against each of the processes defined within the blueprint structure. These TBOMs are, in essence, a complete listing of all the technical objects that the business process utilizes; covering transaction codes, programs, functions and tables (to name a few).

In order to enable this functionality, TBOMs need to be created and aligned to the processes within the blueprint structure. TBOMs can be recorded from real system usage, either via recording specific executions

of the technical object, or in the background via the recently introduced usage and procedure logging statistics. It does require some effort to complete these activities, but once available they are worth their weight in gold; providing the data required to facilitate true change impact analysis functionality. This has many use cases; for example, it can be used to enable a true risk based approach to testing for large projects, e.g. Enhancement Package / Support Package implementations or a full release upgrade – allowing you to test only those processes that have been truly impacted by the technical changes introduced.

Another significant benefit of this functionality is that it can be used to understand the impact of discrete technical changes on the documented business processes.

Performing an analysis of all transports within a maintenance release, or even a single transport in isolation, will identify which business processes are impacted by the change. This will highlight where associated documentation needs to be reviewed and updated to include the changes introduced by the maintenance release. The documentation can then be updated and the potential divergence between documentation and real system usage has been avoided.

With recent enhancements delivered to assist in creating and maintaining TBOMs, including the identification of damaged TBOMs (where a technical object change necessitates the recreation of a TBOM in order to remain accurate), it really is best practice to utilize the BPCA to ensure that your Solution Documentation remains accurate and prevent the need to undertake large scale re-documentation exercises.

Making the Most of Your Automated Testing Investment

If you have invested in automated testing solutions, you will no doubt be looking to make the most of the, often fairly significant, investment. If you have gone to the lengths of creating automated test assets then increasing the reuse potential as a means of validating business process integrity could be an interesting proposition. If you're looking to put together a business justification to embark on a test automation program, then an additional use case for the outputs of such a program could help.

This approach can be used to identify where a business process has been changed, and as such has diverged, from the processing that was in use when the automated test case was created.

The concept with this approach is to execute your automated tests in your test environments on a periodic basis. The results are then collected and analyzed within the test automation framework of SAP Solution Manager. Any reported test failures, caused by the composition of the

executed test recording, can highlight where business processes have been changed during the day-to-day maintenance of the landscape. Accordingly, the associated business process documentation, in addition to the associated test assets, should then be assessed to ensure that any shortfalls created as a result of the technical change are addressed.

Upfront Identification of Impacted Processes per Technical Change

If you are using SAP's Change Request Management (ChaRM) solution within SAP Solution Manager, there is a third mechanism for preventing process documentation from becoming inaccurate. Solution Manager 7.1 introduced some additional ChaRM features improving, amongst other things, integration with other Solution Manager functionality. The latest ChaRM solution has now made it even simpler for any user involved in the change lifecycle, from requesting the change through to deployment, to link individual change requests to an element or elements of the Business Process structure. Doing so can impose a proactive mentality to ensuring that the relevant documentation is updated to reflect the effect of the change, by identifying the affected processes and process steps upfront and enforcing documentation updates procedurally. Any changes made can then be further validated by the other techniques described in this paper.

The same concept should be applied regardless of the Change Management tool in operation within the SAP environment, although the integration is likely to be less comprehensive when using a third party tool (less so if using an off system process). Ensuring there is a mechanism to identify impacted process documentation for individual changes should be a fundamental element of any change management process, and the respective documentation update activities should be traceable and enforceable.

Validating Documentation

So how can you make sure that your SAP Solution Manager Business Process Documentation continues to reflect the way that your end users are actually using the system? A traditional approach is to instigate a significant project to audit system change, interview business Subject Matter Experts (SMEs) and ultimately re-document the solution. This is time consuming, effort intensive and costly, but with SAP Solution Manager we now have the toolsets to remove the pain associated with this process!

The release of Solution Manager 7.1 introduced a significant update to the Solution Documentation Tool (SAP's Reverse Business Process

Documentation solution (RBPD)). This functionality allows for an automated business process documentation structure to be created by reading the actual technical usage of the productive SAP environments and comparing this against SAP's Business Process Repository – a library of standard SAP processes. Used in combination with SAP's comprehensive rule database, which significantly increases the accuracy of the tool, the results can really be relied upon to build an accurate picture of the real usage of the SAP systems.

Many SAP customers are aware of this tool, but few have understood the relevance to the challenge of maintaining accurate business process documentation.

By scheduling regular periodic analyses of usage statistics from productive environments against the baseline of existing Solution Documentation, the RBPD tool can be used to identify where system usage has moved away from documented processes and even suggest how any gaps can be filled by proposing where new Business Process Repository (BPR) processes or process steps have become relevant. The concept is described in *Figure 3*.

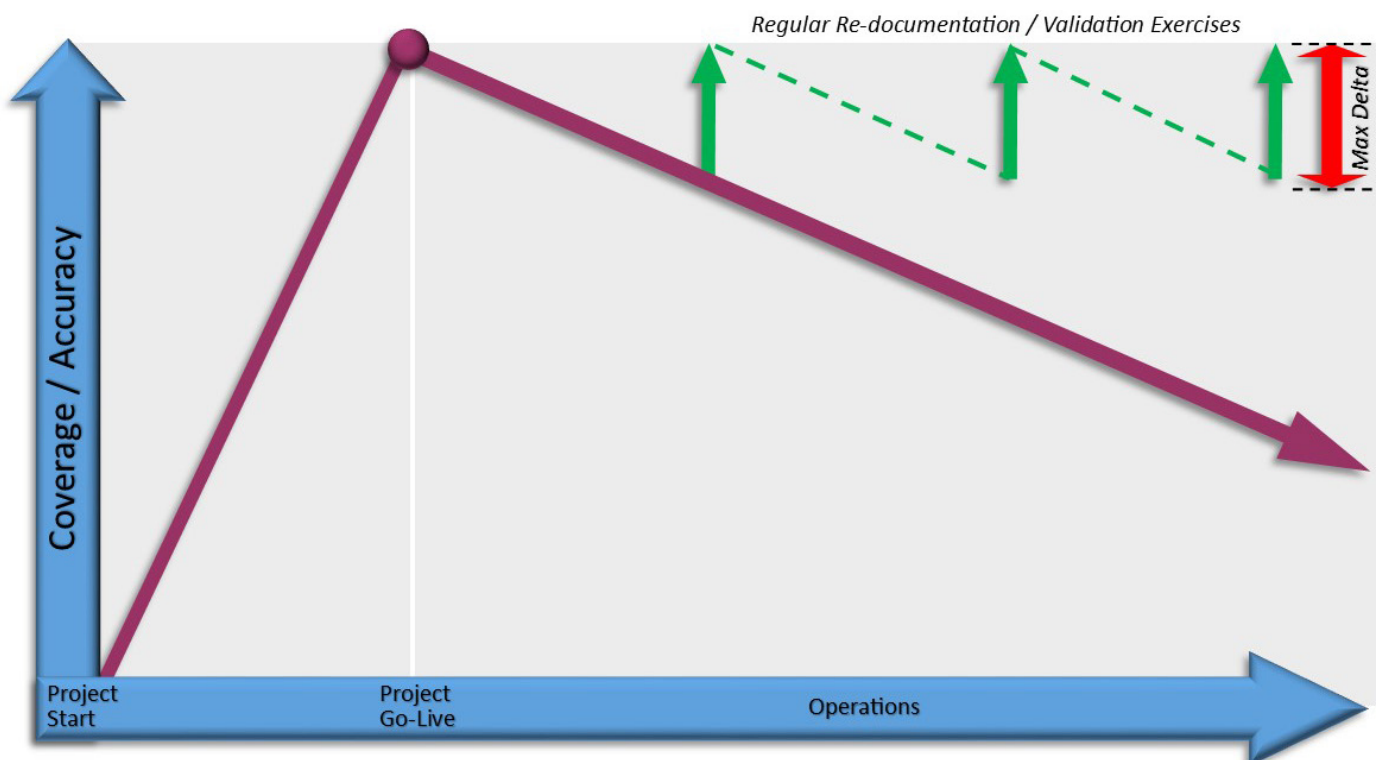


Figure 3: How regular RBPD validation exercises minimize the degradation of Process Documentation

A design decision then needs to be made, in consultation with the business users, as to whether to adopt the new usage profile or to enforce the original design. There may well be good reason to adopt the new usage profile due to changing requirements within the business, or due to operational efficiency savings realized as a result of the revised processing. The key is to have a formal discussion on design, document any changes to the design and then undertake a formal test cycle to understand the implications of adopting the change on other related processes.

Conclusion

In conclusion, there are two core approaches to ensuring that process information documented within SAP Solution Manager remains relevant and aligned to the actual usage of the SAP environments at a technical level:

1. Prevent, or at least minimize, divergence between process documentation and actual operation of the system by using impact assessment techniques, either:
 - a. Before the change has been implemented (by linking ChaRM records to the documentation structure)
 - b. During integration / user acceptance testing of the change by using automated testing solutions
 - c. Before deployment of the change using the Business Process Change Analyser tool
2. Recover from a diverged position periodically by utilizing the Reverse Business Process Documentation tool.

Ensuring that your business process structure is accurate is the key to understanding the impact and therefore planning the next significant enhancement to your SAP environments.

Through Solution Manager and the above techniques, it is now possible to ease the burden of maintaining the accuracy of your Business Process (Solution) Documentation. This ensures that the required attention can be applied to the process areas that have actually been changed, whilst also providing a mechanism to validate the full business process structure on a periodic basis.

Additional Information

1. SAP Reverse Business Process Documentation Homepage:
<http://service.sap.com/~form/sapnet?SHORTKEY=00200797470000094563&SCENARIO=01100035870000000202&>
Last Accessed: 25th November 2013
2. SAP SDN Blog Post suggesting an implementation concept for using RBPD to continually verify SAP centric Business Process documentation:
<http://scn.sap.com/community/it-management/alm/blog/2012/11/21/rbpd-and-continuous-verification-of-solution-documentation>
Last Accessed: 25th November 2013

References

Richardson, G & Start, N (2013). SAP Solution Manager – Much more than a Systems Administration tool [online]. Available:
<http://www.orbussoftware.com/downloads/white-papers/sap-solution-manager-much-more-than-a-system-administration-tool/>
Last accessed 26th Nov 2013.

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