Challenges Faced in ECC 6.0 Upgrade Project

Applies to:

ECC 6.0 For more information, visit the Enterprise Resource Planning homepage.

Summary

SAP technical upgrade is a periodic project that is implemented across companies to upgrade their SAP system to the latest released version. The article describes the challenges faced in such upgrade projects and also suggests the best ways to overcome them to ensure successful and smooth upgrade. It covers some features specific to the upgrade to current SAP release ECC 6.0

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Author Bio

Palanisami Nachimuthu is a Lead Consultant with Infosys Technologies Limited and has over 10 years of work experience in varied domains such as Sales, Marketing, SAP consulting and Project Management. His experience in leading the SAP ECC 6.0 Technical Upgrade project for a large chemical industry MNC has given him the insights on the challenges faced in a complex upgrade project. Based on his experience he presents this article that describes the critical challenges and the ways to overcome them to ensure smooth and successful upgrade with minimum disruptions to the business.

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Introduction

This article describes about the challenges faced in SAP ECC 6.0 technical upgrade projects. Even if it is a technical upgrade, the challenges faced are not technical alone. There are many other challenges that need to be carefully managed failing which the project will be under risk. Some of the most important challenges are covered in detail in this article based on lessons learned from a technical upgrade from SAP 4.7 to ECC 6.0.

Challenges faced in ECC 6.0 upgrade project

Each upgrade project is unique and will have its own challenges. However the challenges given below are common to any upgrade project.

1. Critical Technical challenges
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6. Timing of the upgrade
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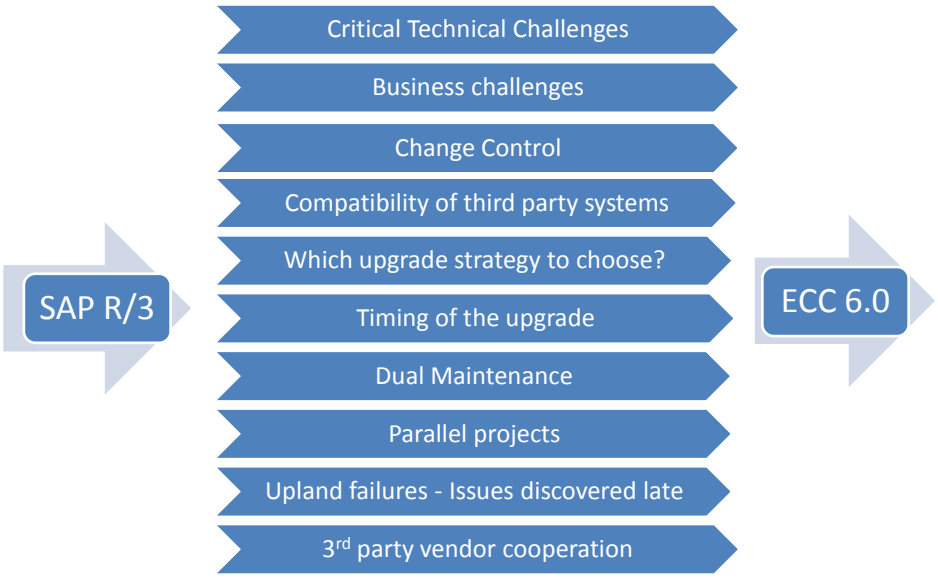

1. Critical Technical challenges

In a technical upgrade there will be many technical challenges and they are expected. While most of them can be identified and fixed during the course of the project, one should watch out for the critical showstoppers which will lead to failure of the project if not taken care well in advance. Couple of examples are given below.

- SAP add-ons and the applicable notes

If any add-on is implemented in the system, then one should ensure all the applicable notes are implemented before commencing the upgrade process. While some notes can be implemented even after the upgrade, there are some notes that MUST be implemented before starting the upgrade. If these notes are missed, it jeopardises the entire upgrade project. If it is not realised till production system upgrade, then there is no way except to revert back the system to pre upgrade environment and apply the note and restart the upgrade process.

One such example is that if the customer has C-CEE add-on (Central European Extension), then SAP note 947554 has to be implemented BEFORE starting the upgrade.

- ITS migration

With ECC 6.0, SAP moves from standalone ITS to integrated ITS (Internet Transaction Server). If the client is using ITS, then the migration needs to be planned in advance since it requires specialist ITS and BSP consultants in addition to ABAP consultant.

2. Business challenges – Business involvement and support

Technical upgrade projects are driven by IT department but it cannot succeed without the business involvement and support throughout the project. Care must be taken to communicate to the business on the need for upgrade and the various advantages it brings to the business like enhanced functionalities, improved user interface, etc. Since the objective of the pure technical upgrade project is not to change the way the users work with the system and its functionalities, business testing forms the core of the project activities. Business needs to test all its critical business processes and certify at every stage of the upgrade that all the functionalities work as expected.

Unit testing in Development system is usually done by the technical team where individual objects are tested. But IST (Integrated System Testing) in Test system and UAT (User Acceptance System) in Quality system are performed by the business users to ensure that all critical business functionalities work as expected and that the upgrade has not caused any disruptions. Business users should be encouraged to test as many functionalities as possible to ensure a smooth go-live.

Another important phase where business support is critical is the downtime phase. The downtime requirements for the project should be conveyed in advance and the business acceptance should be secured so that the business can plan their activities accordingly.

3. Change Control

One of the toughest challenges an upgrade project faces is change control. Normally a change freeze is brought in place at the start of the project whereby only critical changes are allowed in the system till the upgrade go-live. This is required to secure the system because if any parallel changes go on in the system then those changes will have to be constantly remediated for upgrade and thus increase the complexity of the project.

An effective way is to implement a phase by phase freeze periods as below. To start with, all ongoing changes should be completed and signed off as much as possible before the start of the upgrade project.

- Soft Freeze

This phase extends from start of the project till development system upgrade. Changes allowed during this phase are

- Pre-approved corrections (to solve production problems)
- Complete the final few critical ongoing changes

- Hard Freeze

This phase covers the period from development system upgrade till UAT signoff. Allowed changes are

  - Only critical production issue resolution (LTO/P1)

- Deep Freeze

This phase covers the period from UAT signoff till Go-Live. Absolutely NO changes are allowed during this period.

A Change Control Board should be set up comprising the key stakeholders like project manager and the business coordinator. It should strictly monitor the changes and approve the change requests after careful evaluation so that upgrade project is secured.

4. Compatibility of third party systems

Interfaces form a crucial part of the upgrade project. A thorough impact assessment should have been done before the start of the project that has clearly identified all the interfaces that have compatibility issues with SAP ECC 6.0 and necessary actions listed for them. Some interfaces may have to be upgraded in parallel to SAP upgrade while for some others applying some patches may be enough. Since the time taken for each approach is different, a clearly defined strategy is essential so that the upgrade project timelines are not impacted.

Testing of interfaces also is an integral part of the upgrade project. If the number of interfaces is very high, then it may not be practically possible to test each and every interface. Challenges will be to get the required resources from the client as well as interfaces, availability of test environment in the third party system, time required for end to end testing, etc. In such cases, the first priority should be to classify all the interfaces based on business criticality. Based on the criticality, the number of interfaces to be tested should be finalised – say top 200. Then a resource should be identified for each such critical interface who will coordinate and ensure that his interface is fully tested and certified for its compatibility with ECC 6.0.

After the top critical interfaces are tested, based on the remaining available time, rest of the interfaces can also be tested as much as possible that will ensure minimum business disruptions post go-live.

5. Which upgrade strategy to choose?

SAP offers different upgrade strategies to choose from. Upgrade project team should carefully evaluate the client specific technical considerations and business needs before finalising on the strategy.

- Downtime-minimized strategy
- Shorter production downtime
- Higher demand on system resources

This is the preferred strategy if the business cannot afford longer downtimes and sufficient hardware resources are available.

- Resource-minimized strategy:
- Lower demand on system resources
- Increased production downtime

This is the preferred strategy if the business has hardware resource constraints but can afford longer downtime.

In certain cases there may be some technical limitations that will mandate either of the upgrade strategy. For example, if the client has C-CEE add-on implemented in their landscape, then the only possible strategy is resource-minimized.

After deciding the strategy the results should be observed during sandbox upgrade and further system upgrades and improvement options should be tested during dry runs.

6. Timing of the upgrade

Timing of the upgrade is a critical decision for most of the clients. Major considerations are the ongoing projects, upcoming projects, peak/lean business period and SAP support validity for the current version.

All ongoing projects must be completed before starting the upgrade since no changes should be allowed in the system till go-live.

Similiarly, if any strategic project is scheduled for a later date, then upgrade should be completed before the start of that project.

Go-live should be planned during the lean business period. Back-up Go-Live date should also be finalised to fall within the lean period just in case upgrade fails in the first attempt.

Lastly the timing of the upgrade project should consider the maintenance support validity provided by SAP for the existing SAP version used by the client.

7. Dual Maintenance

During upgrade process, as described above, production support fixes and LTO's should go through the landscape to the production system. But the upgraded development and test systems should not be disturbed since that would affect the upgrade fixes and testing carried out during the project. Hence the solution is to create a dual landscape to cater to this need.

When the development system is taken out for upgrade, it should be copied to a new client and handed over to production support team so that Priority 1 and LTO fixes can be done here and transported through to the production system. Transport path also needs to be changed accordingly.

Once the dual landscape is setup, maximum care should be taken to maintain both landscapes in the same state till go live. Changes done in the old version landscape should be manually redone in the upgraded landscape also to ensure consistency between the systems. This will be one of the biggest challenges in the upgrade project and any slippages here will adversely impact the post go live operations.

8. Parallel Projects

As much as possible all efforts should be made to hold all new projects till the upgrade is complete. But due to various business constraints it may not be always possible. If any project needs to be taken up in parallel to upgrade, then that poses a serious challenge to the upgrade. Since there will be many remediations carried out by upgrade team during the project, any parallel project changes will mean additional remediations and duplication of efforts in addition to the risk of remediated objects being altered by the parallel project.

One solution to mitigate this is to develop a triple maintenance landscape.That is, a third landscape in the upgraded version should be created and the parallel project developments should be carried out here. After the upgrade is completed, then these changes can be copied to the original upgraded landscape and moved till production. This way we can secure the upgrade project and avoid the risk of parallel projects.

9. Upland failures - Issues discovered late

As we emphasised earlier, testing forms the core of the upgrade project. But comprehensive testing that covers 100% of the business scenarios is never achievable and this will be a big challenge that any project faces.

If any critical business scenario is not tested and if issues are found at a later stage in the project, then sufficient time might not be available to fix the issues before go-live. Hence the go-live has to be postponed and the project timelines need to be revised. In order to avoid this scenario, sufficient care must be taken so that all critical scenarios and interfaces are covered in the test plan and must be thoroughly tested at the integrated system testing and user acceptance testing phases. Earlier the issues are found the better for the project. Test plan is thus a crucial success factor for the upgrade.

10. Third party vendor cooperation

Last but not the least, sufficient support and cooperation from third party vendors is a challenge that can make or the break the project if not well managed. Third parties include those who manage the third party systems like banks, customs, customers, etc., and also the different vendors who support the hardware and other non SAP applications for the client. Availability of the resources during critical times like testing and go-live and support for the testing of the upgraded version of SAP with existing third party application is a formidable challenge the project has to sail through.

Clear planning of the project activities and communication of the same to all involved parties will help to mitigate this. All the deliverables and their required timing should be clearly planned and communicated well in advance so that each participant is aware of his role and requirement. Third parties must be made available during the post go-live phase as well in order to resolve any issues that surface after the go-live.

Thus the success of the upgrade project depends on how well we manage the top challenges that the project faces as listed above.

Related Content

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Best Practices for Conversion of System Landscapes to Unicode

http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/309e6163-018f-2c10-e2b3-a8634e0f5f0d

SAP Upgrade Delta Document SD Module

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