Determining an SAP Upgrade Strategy and Using Technology at Each Stage to Reduce Risk, Cost and Effort
Introduction

Industry analysts Gartner estimate in their latest report\(^1\) that 8000 or more SAP customers still run older releases of the software. If customers want to stay on SAP support, they will need to upgrade before March 2013.

Version upgrades can be challenging, especially given the complexity of the SAP landscape. Introducing a large amount of change poses risk, stretches resources and requires retraining of staff. However, upgrading enables us to get up-to-date on SAP support. It opens up new functionality, designed to meet demands from the business and enable innovation. Keeping systems up-to-date provides the foundations for improving compliance with legal and security requirements.

The success of an upgrade is dependent on the strategy we take. The SAP *upgrade roadmap* recommends the activities we undergo at each stage of the upgrade. Each stage brings unique challenges and the way in which we tackle these challenges will impact the duration of the upgrade and effort required—all factors which affect the bottom line and ROI of the upgrade.

This paper focuses on how we can better approach our SAP upgrade and looks at ways to improve our strategy based on each phase of the upgrade journey.

Key Upgrade Challenges

- Defining an upgrade strategy.
- Estimating the cost of the project and effort involved.
- Justifying the required budget.
- Understanding the impact on existing systems. SAP infrastructure is typically complex.
- Deploying on time and avoiding delays and unexpected risk.
- Ensuring business processes work as expected after the upgrade goes live.
- Meeting security and compliance requirements.

\(^1\) Planning Checklists for Minimizing the Cost of an ERP 6 Upgrade. 24 May 2012, Derek Prior.

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Factors that Influence Complexity

**The SAP landscape:** It is not uncommon for global organizations to run multiple SAP instances, due to mergers, subsidiaries, global locations and regional variations.

Organizations often run landscapes consisting of more than just the typical DEV—QAS—PRD environment, supporting testing, projects, and business-as-usual (BAU) requirements.

**Parallel Projects:** Although SAP recommend keeping developments to a minimum during the upgrade, this is often unrealistic for the business. Keeping project and business-as-usual streams synchronized leads to dual maintenance challenges.

**Level of customization:** Over time, a considerable amount of custom code may be developed. It can prove difficult to keep track of this. Custom code is often expensive to manage and adds complexity to the upgrade process.

**Unicode conversion:** If required, this adds an added level of complexity, requiring additional time and resources.

**Business requirements:** What new functionality does the business need to realize? What downtime restrictions need to be considered and planned for?

**Current business situation:** Global recession and business mergers can all influence time frames and budgets.

“Our biggest issues were determining which changed objects were being used in the different user groups/countries in order to assess the full impact of changes by operating unit” - Q8
“In view of the large amount of testing required on an SAP ERP 6.0 project, consider using a proven impact analysis tool to remove unused customizations and focus the testing effort “

Planning Checklists for Minimizing the Cost of an ERP 6 Upgrade. May 2012, Derek Prior.

Key Upgrade Activities

- Conduct a complete as-is versus to-be system analysis.
- Analyze SAP system usage.
- Analyze custom code, programs and objects.
- Identify SAP standard code that could replace custom code.
- Identify unused custom code.
- Identify all impacted objects and modules.
- Identify impacted roles and authorizations.
- Identify impacted business processes.
- Generate test plans and cross-reference with HP Quality Center or IBM Rational Quality Manager.
- Compare systems to ensure consistency and synchronization.
- Conduct an object comparison to identify inconsistencies in the ABAP dictionary.
- Identify new transaction codes.
- Identify any transaction codes that are now obsolete.

This analysis and system insight can be obtained manually but it would require a lot of resources and take considerable time. It doesn't make sense to answer these questions manually.

The answer = LiveCompare and LiveModel.
Project Preparation

LiveCompare allows us to conduct a full system analysis, providing an up front risk and impact assessment. Templates are configured to answer the following questions automatically:

- Impact on Custom Code.
- Impact on Used Custom Code.
- Unused Custom Code.
- Custom Code Complexity.
- Impact on Standard Code.
- Used Obsolete Transactions.
- New SAP Transactions.
- Impact on Users.
- Impact on Security.
“There are some SAP tools that provide aspects of what IntelliCorp could do, but in comparison they’re fairly inefficient.” - Q8

Project Preparation (continued)

Analyze the current situation: Get an accurate and complete picture of how your current SAP system is used by running LiveCompare to perform the analysis automatically.

Define the upgrade objectives: Why do we need to upgrade? What do we want to achieve to support the business? Fact-based analysis from LiveCompare is used to develop a business case to justify the upgrade and budget.

Create the project plan: Detailed analysis and reports generated from LiveCompare provide a basis for your project plan. Answer questions and define the scope of the upgrade using LiveCompare.

Organizational preparation: LiveCompare’s analysis helps define the project team, identifying who the main users are and who will play a key part during the upgrade. Automatically identify who will need retraining because a transaction is obsolete. Use LiveCompare results to plan the downtime required.

Cost and effort estimates: Fact-based analysis helps drive effort and cost estimates.

Align the upgrade with other IT projects: Consider business-as-usual and project streams. Use LiveCompare to keep multiple systems synchronized and tackle the challenges of dual maintenance.

License provisioning: Run LiveCompare’s templates to identify which SAP licenses are in use. Perhaps users can be moved down the license tier, out to ESS and MSS, freeing up licenses for other users and saving you money further down the line.
Blueprint

**Identifying business processes:** Feed the information gathered in LiveCompare directly into LiveModel to quickly define business processes.

**Business process visibility:** By cross-referencing LiveCompare output with LiveModel, we can identify what impact the upgrade will have on business processes. By making existing business processes transparent, we can enable better testing.

Together, LiveModel and LiveCompare provide the complete view of flowcharts to source code, helping business and IT professionals understand change and, more importantly, the impact of change.

**Populating SAP Solution Manager:** Automated business process discovery provides accurate, fact-based, business process documentation. The business process hierarchy can then be published into SAP Solution Manager.

**Defining a test strategy:** The output generated from LiveCompare provides detailed information to support a test strategy. This information can be integrated with automated testing tools such as HP Quality Center and IBM Rational Quality Manager.
Realization

Typically, realization is the longest phase, encompassing building and testing. How can we ensure this phase runs smoothly?

**Keeping systems synchronized:** Run LiveCompare’s synchronization templates to guarantee that changes are not overwritten. Use LiveCompare to automatically compare table data, IMG data and objects as well as tackle the challenges of dual maintenance.

**Custom object remediation:** Use LiveCompare to understand what custom code is actually used by the business and identify code that can be considered for retirement.

**ABAP code quality analysis:** LiveCompare examines custom code from multiple points of view including complexity, performance, use of obsolete features and security. Check that code is up to date, secure and does not violate any segregation of duty rules.

**Security and profile analysis:** This analysis often gets left to the last minute. Use LiveCompare during the realization phase to analyze security provisioning and reduce risk to business.
Realization (continued)

**License optimization**: Use LiveCompare data to optimize SAP license use and audit what licenses the organization has in place.

- Identify unused licenses.
- Identify and list professional license accounts including number of transactions executed.
- Identify "time entry only" users, who could move to a portal application and free up professional licenses.
- Identify duplicate licenses that may be attributed to the same user, but under different names.

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**Business process test planning and integration with automated testing tools**: Used with automated testing tools such as HP Quality Center or IBM Rational Quality Manager, LiveModel output provides a clear picture of the testing process, highlighting end-to-end, integrated business processes.

Cross-reference LiveCompare output with these tools to identify which test scripts to run. Easily validate SAP change and identify any gaps—impacted transactions where there are no recorded test assets.
Go-Live Preparation

Minimizing the freeze period: By using IntelliCorp’s software, IT can reduce the freeze period required for Go-Live. LiveCompare and LiveModel allow organizations to keep agile and meet business requirements.

Reducing risk: System stability and ensuring systems are kept in synchronization is an ongoing challenge. Use LiveCompare continually to manage dual maintenance and reduce potential Go-Live delays.

Focused testing: Reduce testing effort by integrating technology and identifying what needs to be tested. Use LiveModel and LiveCompare together to focus testing on core business processes including interfaces, forms, authorizations and developments.

Verify testing: Be certain that transports going into production contain the correct changes and that these changes have been tested. Use LiveCompare to verify that testing has gone ahead as planned. Automatically identify any incorrect or missing transports before they move to production.

Training: Use LiveCompare and LiveModel output to identify who across the business will be impacted by the upgrade and require retraining.

Final analysis: It may have been several months since you first ran LiveCompare. By running the upgrade workflows again, you can keep track of critical transactions before Go-Live.
Go-Live and Support

Operational stage: Once the upgrade has gone live, use LiveCompare to continually monitor the system and identify any conflicts.

Ongoing system support: SAP change is never-ending. Once the upgrade has taken place, consider using LiveCompare and LiveModel for a number of ongoing system maintenance activities:

- Support packs.
- Enhancement packs.
- Testing.
- Keeping business processes up-to-date.
- Daily change and custom change.
- System synchronization and data comparisons.
- Audit and security analysis.

Business validation before Go-Live: Test business-critical applications and processes before they go live

Critical data comparisons: Ensure critical data such as financial and stock level is consistent between systems before Go-Live.
Benefits of Using LiveCompare and LiveModel

- Automatically define your project scope and eliminate unnecessary work by focusing on real-time system use.
- Enable business-as-usual by reducing the freeze period.
- Significant time and effort reduction.
- Reduce the technical debt of SAP by eliminating custom code and getting back to standard where possible.
- Improve system performance by minimizing redundant usage.
- Support for all SAP application upgrades - BW, HCM, SRM, CRM, ERP.
- Third Party integrations with HP Quality Center and IBM Rational Quality Manager.
- Population of SAP Solution Manager Blueprint.
- Improve quality and validation efforts, based on factual evidence. Identify the most at risk areas.
- Improve security, highlighting key issues before they become a problem.
- Enable better SAP license management and optimization.

“LiveCompare and the Upgrade Templates have allowed us to cut our Upgrade cost by ~65% and the time spent on testing, even more!”—CSC
Perform rapid and repeatable assessments on the DNA of your SAP systems.

Summary

By making LiveCompare and LiveModel a part of our SAP upgrade strategy, we can:

- Develop and adopt an efficient upgrade strategy.
- Reduce the Total Cost of Ownership of SAP by reducing application maintenance costs after the upgrade.
- Replace time consuming, manual testing processes.
- Validate SAP change and better control risk to the business.
- Realize new business requirements faster.

Relevant Gartner Reports

Application Maintenance Challenges of Complex Landscapes. 1 May 2012, Derek Prior.

Planning Checklists for Minimizing the Cost of an ERP 6 Upgrade. 24 May 2012, Derek Prior.

Datasheets and Case Studies

LiveCompare Datasheet, LiveModel Datasheet

Coca-Cola Case Study, Bentley Motors Case Study

Webcasts

Understand your SAP Upgrade,

Enhancement Packs Made Easy
About IntelliCorp

IntelliCorp provides SAP application lifecycle management, business process management and data management software for SAP customers and partners. IntelliCorp’s suite of intelligent lifecycle optimization products is used by more than 35% of the Fortune 500 companies that run SAP to cut Total Cost of Ownership.

IntelliCorp’s LiveCompare, LiveModel and LiveInterface products automate the analysis of SAP systems and are SAP Certified.

For more information, email: sales-info@intellicorp.com

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www.intellicorp.com

“IntelliCorp software is flexible, well designed, and reduces the costs and risks associated with many SAP lifecycle events” - Hershey’s