

SAP Upgrade

How to ensure smooth sailing for your organization



EXECUTIVE SUMMARY

This ancient wisdom is completely applicable to today's hyper-dynamic business environment. In order to beat competition, meet shareholder expectations and chart a rapid growth path, today's enterprises require a comprehensive, ready-made IT solution. ERP packages offer convenient, easily customizable solutions and informed organizations are increasingly adopting such packages. At the same time, enterprises that already run an ERP package such as SAP find the need to leverage advanced features of newer versions of the software to meet their changing business requirements. While upgrading sounds like a simple solution, many upgrade initiatives confront unique challenges.

This white paper offers a questionnaire to assess an organization's readiness to upgrade and offers recommendations that will make the entire SAP upgrade experience a smooth one. The topics are covered independent of SAP versions so that they are applicable irrespective of the SAP version that is being used.

Keane Facts

Top Reasons for Upgrading

- Standard maintenance is ending – 23%
- Business users are requesting new functionality – 23%
- Technical infrastructure is outdated – 19%
- Increasing maintenance costs – 14%

Upgrade Evaluations Best Practices Survey, conducted by America's SAP Users' Group, May 2006

"Nothing endures but change."

Heraclitus, Greek Philosopher (535 BC – 475 BC)



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Target Audience

CIOs, IT Managers, and existing customers of SAP.



Introduction

Enterprise planning software is critical for the success of most businesses. ERP software such as SAP is the IT backbone of an enterprise. It is typically feature-rich and serves a diverse user base. It necessitates significant investment to install, implement, and maintain and also demands regular investments to remain current and operational. However, with changes in business environments and industry standards, CIOs face enormous pressure to cater to the demands of business in the most cost-effective way. Many CIOs believe that an ERP upgrade is a direct and efficient solution to address several of the catalysts that influence change in enterprise computing environments, including:

- Changing statutory and legal regulations that must be embraced by the business
- Change in scope of the business functionality
- Need for optimization of existing functionality
- Need to consolidate multiple instances of the ERP solution
- Release of newer versions of the product

However, ERP upgrades present unique challenges, which can potentially derail the upgrade initiative and produce sub-optimal results. The following sections feature a questionnaire to help organizations assess their readiness and provide recommendations to ensure a smooth upgrade.

Assess Your Readiness

Most enterprises struggle to make the right decision about when to upgrade and what level of upgrade is necessary. The biggest challenges identified in an upgrade project are timing, balancing the execution of the upgrade project with other concurrent projects, and lack of knowledge regarding release-specific functional enhancements. Keane’s ERP experts have developed a readiness questionnaire that we use

with our clients, who find it a helpful and effective guide for evaluating their present situations.

Questionnaire Methodology:

Please answer each question using the response key provided. Once all

questions are answered, tally your score and then refer to the inference table on page 2 for insight on your score and its implications for your ERP upgrade needs.

Questions	Score
1. How stable is your business? 1 – Very unstable; 5 – Not very stable; 10 – Very stable	_____
2. Do you have resources that can be readily deployed for upgrade? 1 – No resources are available; 5 – Very few resources are available and they are not sufficient; 10 – Handful of resources	_____
3. How frequently do you face problems (such as compatibility issues with specific hardware/ database platforms, performance issues, etc.) in the current ERP product? 1 – No such problems encountered; 5 – Encounter problems once in a while; 10 – Encounter problems very frequently	_____
4. What percentage of existing customizations is available as a ready-made solution in the to-be upgraded version? 1 – More than 50 percent; 5 – 10 to 50 percent; 10 – 0 to 10 percent	_____
5. Is the product vendor announcing the withdrawal of support for the current version? 1 – No such announcement; 5 – Withdrawal is announced, but not immediate; 10 – Yes, withdrawal deadlines are nearing	_____
6. Is the current version of the product able to support the regulatory requirements needed for the business? 1 – Almost all regulatory requirements are supported; 5 – Yes, but a few regulatory requirements are not supported; 10 – No regulatory requirements are supported	_____
7. How many productive business instances do you have that are to be consolidated? 1 – 0 to 2 instances; 5 – 2 to 5 instances; 10 – More than 5 instances	_____
8. How many disparate systems must be integrated with the ERP system? 1 – None; 5 – Very few; 10 – Many	_____
9. What is the tentative ROI on the upgrade methodology? 1 – Marginal/ Have not done that exercise yet; 5 – Not great, but acceptable; 10 – High	_____
10. Is adoption of evolving technology trends such as SOA a primary focus for you? 1 – Yes, very much; 5 – We are still debating these issues; 10 – No, we are not focused on this now	_____
11. Is your SAP system volatile and subject to frequent patches/releases/versions? 1 – Very stable; 5 – Stable but not very predictable; 10 – Quite volatile	_____
TOTAL SCORE: _____	



Inference Table	
Score Range	Insights
10 – 40	Upgrade may not be required in the immediate future. The current business needs could be handled in a much more cost-effective way without an upgrade. However, we recommend evaluating the need for upgrade on a periodic basis to ensure that upgrade needs are captured well in advance.
40 – 75	Upgrade does not seem to be a compelling need at this point of time. However, there may be certain business needs that are very unique to your business that may drive an upgrade requirement. It is advisable to conduct an evaluation in the light of your future business direction. The objective of your evaluation is to: <ul style="list-style-type: none"> • Evaluate all possible solutions for the current business problem and arrive at the final decision on whether or not to upgrade immediately • Define the symptoms to be monitored should an upgrade be deferred
Above 75	Upgrade may be required in the immediate future. It is advisable to conduct an extensive evaluation of the IT landscape to identify how well it is aligned with the long-term goals of your organization. The evaluation should also help to identify: <ul style="list-style-type: none"> • The best upgrade strategy • The right vendor (if outsourcing is considered) • Break-even period for return on your upgrade investment

Recommendations for a Smooth Upgrades

The key aspects to be considered while planning and executing an SAP upgrade are specified below:

1. Purpose of the upgrade

Before considering an SAP upgrade, the purpose and goals should well defined. The decision to move forward should take into consideration the expectations of internal business leaders and other key stakeholders.

Keane’s Recommendations

- A direct upgrade path to SAP R/3 Enterprise is not provided. We suggest customers running releases below SAP R/3 3.11 to upgrade to R/3 4.6C first.
- If you are using SAP R/3 3.11 through 4.6x, we suggest carrying out a functional upgrade. SAP has added a significant number of features to its product to justify the extra overhead in time and effort.
- If you are currently using SAP 4.7 Enterprise and the requirement is

either a SAP ERP upgrade or an ECC upgrade, a technical upgrade could suffice unless there is a specific need for a functional upgrade.

2. Pre-preparation

There should be a significant amount of effort and care expended for pre-preparation activities. It has often been observed that the amount of work planned in the initial stages of the project often falls short of actual. Lack of pre-preparation can lead to unnecessary overruns of time and money.

Keane’s Recommendations

In order to ensure a smooth upgrade process and resulting “clean” upgraded system, we recommend the following:

- Data that is not required to be online should be archived. Archiving will keep the data conversion effort to a minimum. Ensure statutory compliance for data retention when doing archival. Involve business early to identify data that can be archived.
- Data can alternately be moved to

an external data warehouse created exclusively for selective historical reporting.

- Audit trail needs to be enabled on program execution in order to capture metrics on usage of custom programs. Over a period of time, most instances of SAP tend to accumulate custom objects that are not adequately used or are developed for one-time use. With the aid of such metrics, a decision can be made regarding which programs need to be retained in the upgraded system and which objects can be discarded.
- If the as-is version of the SAP instance is not well documented, an exercise to document business processes and program logic should be undertaken. This makes the job of the project team much simpler and reduces upgrade project risks.
- Understand the SAP security features of the new version (especially when a migration is being made from



transaction-based to role-based security) well in advance so that there is adequate time to define, test, correct, and freeze the definition of the roles. This opportunity also can be used to identify defunct user IDs.

- If there are other SAP products installed and integrated with the current SAP version, determine the impact on those when upgrading SAP. Also, attention should be given to the sequence in which the systems are upgraded. R/3 should be the last one to be upgraded.
- Interfaces are a common failure point especially due to potential changes in attributes of data elements. Allocate the budget for changes to be made to sub-systems.
- Revisit pre-printed forms. Space allocated for content should be revisited to ensure that the changes due to upgrade do not impact field widths in the pre-printed form.
- Check for the compatibility of SAP GUI version with the upgraded SAP version. If users are scattered over a wide geographical area, ensure that careful planning is done for the distribution of the right version.
- Optimize the automations achieved through scheduled background jobs in the system. An SAP upgrade is the ideal occasion to clean up and centralize job management activities.
- Building automated testing tools for key and critical business processes is a recommended preparatory step for an SAP upgrade. Not only will they be used during the upgrade project itself, but an array of Computer Aided Testing Tools (CATT) and similar objects

Fast Fact

"53% of Global 2000 enterprises name SOA adoption a priority for 2007"

Forrester Research

also provides a very useful toolset for subsequent strategic IT initiatives. The ideal time to embark on this initiative is during the planned development time for the upgrade.

3. Planning and Organizing

A clear project management strategy should be laid out before venturing into an upgrade project. One of the typical challenges is managing regular support during the upgrade project. Routine work can be affected because the upgrade involves changes to the objects in the production system, as well as the introduction of new objects.

Keane's Recommendations

- In order to keep things simple, we recommend that no new development projects (at least those that could have a significant impact on business) be undertaken within three months of the upgrade start date.
- Devise a strategy between the support and upgrade teams to ensure that objects that are being modified are kept in sync in both versions. This ensures that no changes are lost when upgraded code overwrites the earlier version.

4. Timing

The timing of an upgrade is critical. The volume of data and of business transactions varies over a period of time. Business cycles often pose constraints on IT to execute projects when it best suits the business. As a consequence, upgrade projects are best planned at a time when there is least impact to business.

Keane's Recommendations

- Execute an upgrade project at the beginning of a financial year. An upgrade towards the later part of the year will involve more effort in data conversion. Also, business pressures and volumes are least likely to peak at the start of the year.

5. Sponsorship

Any project – not just an upgrade project – requires the full commitment, support, and sponsorship of the executive

Top Trends

"Optimization of ERP investments for lower operating costs and long-term flexibility forms the theme for 2007 for most organizations."

Forrester Research

management team. Experience has shown that there is a direct correlation between management support and the success of an upgrade project. While the project may not get complete support from all senior managers, it is mandatory for the project team leadership to ensure that disagreement does not degenerate into skepticism and cynicism.

Keane's Recommendations

- Obtain support from the executive management team (at a minimum from the CIO/CTO and the CFO).
- Ensure transparency in reporting the project status to the management team.
- Hold regular meetings with the management team to review the project status.
- Give management a snapshot of features they can expect post upgrade in order to sustain interest in the project.

6. Project Team

The end output of any project is directly proportional to the quality of the project team and its ability to work together. Careful planning needs to go into choosing the right resources for the team.

Keane's Recommendations

- Secure staff who have prior experience in the relevant versions.
- If in-house resources are not available, seek external consulting help. Define a good vendor management strategy prior to doing so.
- A significant portion of an upgrade project can be outsourced. Some of



the areas that may be considered for outsourcing are sizing and analysis, as well as the actual code modifications.

- Make sure that the upgrade team has the right mix of the following skilled resources:
 - o Basis administrators
 - o Security specialists
 - o Developers and architects – SAP and sub-systems
 - o Configuration specialists
 - o Business analysts/experts
 - o Testers

7. Communication

Considering that most upgrades impact the end users of the current instance and therefore has an impact on the business, it is critical that the rationale for the upgrade be understood by all. Setting realistic expectations about the end result of the project is important.

Keane's Recommendations

- Devise an internal communication plan for all stake holders and impacted parties to effectively manage expectations. The communication plan should cover:
 - o Frequent reminders about the objectives of the upgrade
 - o Periodic updates on the progress
 - o Early notification of potential impediments
 - o Regular team meetings
- Communication planning is a necessary process when the users and/or project teams are geographically distributed and when there are significant cultural and language differences among them.

8. Testing

Testing is the corner-stone of an upgrade project. Adequate testing is essential for executing the project on time and avoiding last minute surprises.

Keane's Recommendations

- Properly scope the testing effort. If there is a constraint of time or

resources in testing the new features of the upgraded SAP version, prioritize the areas/transactions to be tested and thoroughly test the features of highest priority.

- The unit and integration test scripts should be created prior to the completion of the actual upgrade. The Business Process Procedures (BPPs) can be used to prepare various testing scenarios.
- Utilize the support team to carry out the testing of business processes.
- Ensure that security settings are also tested.

9. Training

Users are the essential component of the system. A system that is not user friendly is certainly not worth the hardware on which it is hosted.

Keane's Recommendations

Depending on the type of upgrade, anticipate the changes due to user experience. We recommend planning early for:

- Preparation of training material (multiple languages if required)
- Identification of trainees – internal and external
- Determination of the training methodology – train the trainer via online training
- Evaluation of the need for SAP Tutor as a training tool

10. Post Upgrade

In the best interests of business continuity, careful planning should be done to ensure that there is minimal or no impact on the business environment after upgrade.

Keane's Recommendations

- Make sure that the support team best suited to maintain the upgraded instance is well versed in the new version of SAP.
- Involve the support team in the upgrade process to ensure familiarity with the new system.

- Segregate post-upgrade issues from regular support issues in order to facilitate appropriate work allocation to the upgrade project team.

What does the future hold?

A question that frequently lingers in the minds of SAP customers is "Are SAP upgrades a necessary expenditure of time, effort, and money?"

Insight on SAP's evolution path was provided by SAP during the 4th Annual SAP Summit in 2006. Shai Agassi, President of SAP's Product and Technology Group, indicated that the latest version of SAP will not see any major updates for the next five years.

SAP intends to release optional enhancement packages on SAP ERP 2005. The first such enhancement package addresses SAP ERP Human Capital Management, SAP ERP Financials, Retail, and Manufacturing.

SAP intends to create an environment in which enhancement packages are released – with themes – into the market every six months and the customers can adopt them optionally at their pace. Each enhancement package is a grouping of enterprises, all of which are included in the standard SAP license and maintenance fees. By having each package address three or four main themes, SAP aims to give customers the ability to look at the product roadmap and make the right choices for their organizations.

SAP's roadmap suggests that they will release roughly two enhancement packages every year until 2008. Future enhancement package themes include the Service and Trading industries in 2007 and the Discrete and Process industries in 2008.

Conclusion

An America's SAP Users' Group (ASUG) survey conducted in May 2006 found that successful SAP upgrades are within the reach of most organizations.



- 92% of upgrade projects are completed on time, early, or only slightly delayed.
- 94% of upgrade projects are on-budget, under budget, or only slightly over budget.
- 86% of upgrade projects meet or exceed expectations in delivering functional enhancements and supporting business process improvements
- 88% of upgrade projects meet or exceed expectations in delivering desired results from a financial or ROI perspective.

Careful planning and tracking of SAP upgrades will mitigate the risks associated with these projects. While there are robust and proven methodologies for carrying out SAP upgrades, the devil is often in the execution details – something that

methodologies don't teach. This knowledge is best acquired through the experience of people and organizations that have successfully executed SAP upgrades – ideally multiple times – in the past.

Given the wealth of information and experience the industry has gained, there is little reason to defer your SAP Upgrade. With the right approach and resources, organizations like yours can be confident in their ability to implement an SAP upgrade that can be executed with minimal business disruption and maximum business gain.

About the Authors

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Arvind heads Keane's Enterprise Business Solutions Group, the rapidly growing practice that provides packaged applications services. Prior to this, Arvind held various leadership positions within

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Chandramouli (Mouli) heads the SAP Technical Center of Excellence (COE) at Keane. Mouli has extensive experience in managing and executing complex, large-scale SAP projects on a global basis. He has nearly ten years of technology industry experience, including software development, SAP product development, and program/account management.

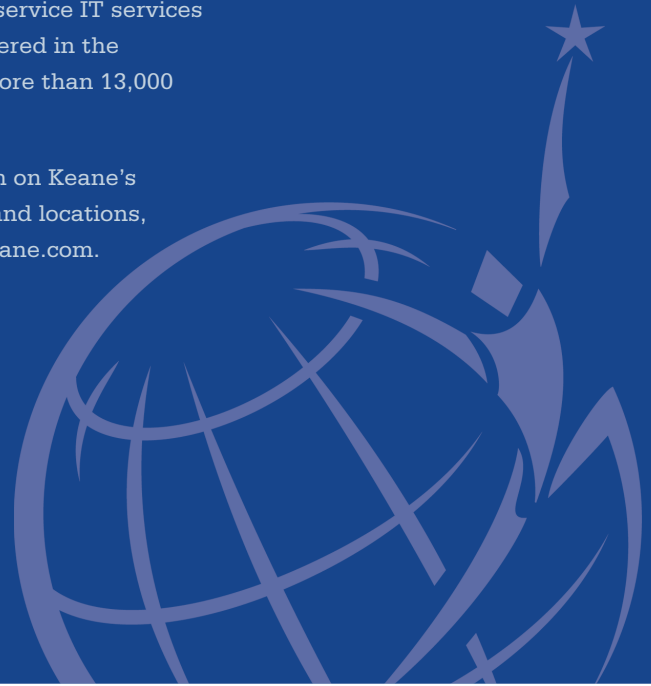


About Keane

Keane partners with businesses and government agencies to *optimize* IT investments by delivering exceptional operation, maintenance, and evolution of mission-critical systems and business processes. Keane helps clients realize the greatest value from their IT investments by leveraging an insider's hands-on understanding of the nuances and subtleties of their applications, processes and infrastructure making the recommendations we give more actionable, the work we do more pragmatic, and the results realized more measurable.

In business since 1965, Keane is an agile, mid-sized, full service IT services firm with headquarters in the United States and more than 13,000 employees globally.

For more information on Keane's services, solutions, and locations, please visit www.keane.com.



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