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Accelerated SAP

4 Case Studies

Executive Summary



Accelerated SAP 4 Case Studies

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1 Introduction of R/3 in Small and Medium-Sized Businesses

1

The most important questions for project management

For the use of R/3, SAP has developed some 1000 reference processes which companies can use to map their administrative processes. These processes form the *R/3 Reference Model*.

In particular, small and medium-sized companies which have decided to introduce the integrated standard software R/3 gear their business processes to the R/3 reference model. This means shorter introduction phases and lower project costs and thus a higher ROI (Return On Investment) from the project outlay. Faced with a forthcoming introduction project, managements continually ask themselves largely the same questions:

- How flexible is R/3 when it comes to developing business processes?
- What is the relationship between implementation time and project scope?
- What points have to be taken into account in order to ensure that R/3 is introduced rapidly and successfully?

SAP has developed its introduction method known as «AcceleratedSAP» – ASAP for short – in order to help companies implement the R/3 system on the basis of predefined reference processes. In analyzing the ASAP projects at Crosfield, Mitek, Nokia and DMC Prints, our aim was to answer these and associated questions.

Four companies with different points of departure

We analyzed four companies selected by SAP, all of whom implemented SAP R/3 within a maximum of 6 months. The points of departure within the individual organizations varied widely. The decision in favor of R/3 was made for different reasons:

- *Crosfield*, a company in the chemical industry with a workforce of some 200 employees located in Eijsden, near Maastricht, found itself forced to take action in view of the millenium problem and the fact that their maintenance contract for the old information system was about to run out. The company operates in a price-sensitive market which does now allow large profit margins. This means that Crosfield must have an information system which allows them to calculate cost-effective prices. Their parent company ICI supported the choice of R/3.

- *Mitek* is a small but rapidly expanding company which manufactures medical equipment. In view of its growing size, Mitek has started to think about its administrative business processes. Keeping the area of administration small is part of corporate strategy for this sales-driven business. Mitek is a subsidiary of Johnson & Johnson.

- Business Unit Switching Platforms (SWP) has a payroll of 1500 employees and belongs to the Finnish *Nokia* corporation. This company operates in a highly technology-driven market and is faced with rapidly changing demands. The need to be able to react quickly to market changes and the close logistics partnership with suppliers call for an integrated information processing system. The information system previously in use at Nokia SWP was neither integrated nor equipped to deal with the year 2000. Migration to R/3 was in line with Nokia's group-wide IS strategy.

- The Prints Division of the international textile concern *DMC* decided in favor of R/3 for its New York, Los Angeles and Orangeburg sites. The Division, which employs 150 people, has to compete in an international market characterized by stiff competition on both price and quality. The attainable profit margins are low, with sales volumes showing a downward trend. Against this background, a high degree of information availability throughout its US sites and in the consolidation of financial data with DMC Europe becomes a critical success factor for the Division. DMC Prints decided on R/3 following an in-depth evaluation of various software packages despite the fact that the R/3 functionality does not as yet fully cover the special requirements of the textile industry.



1 Introduction of R/3 in Small and Medium-Sized Businesses

Fig. 1: Overview of introduction projects studied

The companies ...				
Company	Crosfield	Mitek	Nokia NTC SWP	DMC Prints
Group	ICI	Johnson & Johnson	Nokia	DMC Group
... and their introduction projects				
Project completion date	15.5.1998	29.9.1997	Phase 1: 2.6.1997 Phase 2: 1.12.1997	1.8.1997
Introduction phase	approx. 6 months	> 5 months	4.5 months and 10 months resp.	approx. 6 months
External consultants	SAP Netherlands	SAP USA	SAP Sweden + others	HJM
Consultant ratio	approx. 1/2 external/internal approx. 270 consultant days	approx. 1/2 external/internal approx. 620 consultant days	approx. 1/3 and 1/6 external/internal 745 and 720 consultant days	approx. 1/3 external/internal approx. 600 consultant days
R/3 modules	SD, MM, FI/CO, partly PP	SD, MM, PP, FI/CO	SD, MM, PP, QM, FI/CO	SD, MM, FI/CO
No. of users	approx. 40 users	approx. 40 users	500 named, 120 permanent users	approx. 55 users
Project budget	approx. 1.200.000 NLG (approx. 600.000 USD)	approx. 1.500.000 USD 13% below budget	– no info – 12% below budget	approx. 1.250.000 USD 46% below budget



2 Strategies for the Introduction of SAP R/3

The first question a company wishing to introduce R/3 will ask itself is what would be the best way of going about it: first introduce the software or first re-engineer the business processes? Here we distinguish between two basic *Extreme Strategies* (cf. Figures 2 and 3):

- *Process-oriented approach*: A company first re-engineers its business processes and then introduces R/3 on this basis. The aim of this strategy is to introduce processes which are as effective and efficient as possible with the implementation of R/3.

nies investigated (cf. Figure 4). For this reason they consciously decided *against a preceding BPR*. When implementing R/3, all four companies preferred to take advantage of the business management know-how depicted in the R/3 reference model in order to depict their own processes. Therefore we talk about a *reference-based approach*.

Fig. 2: Focus, advantages and disadvantages of extreme strategies

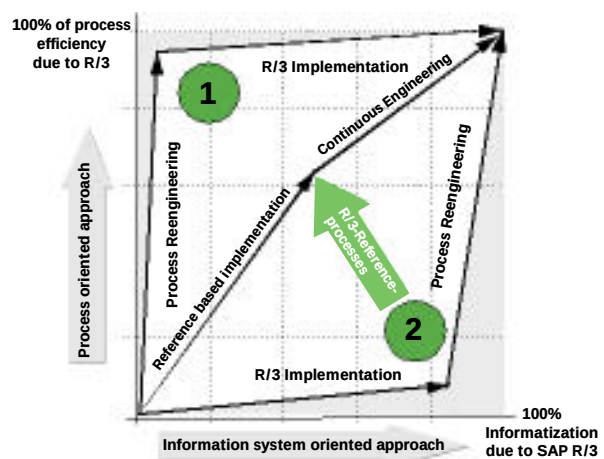
	Focus	Advantages	Disadvantages
Process-oriented approach	Individual re-engineering of business processes	Very efficient processes	Tendency towards longer and more complex projects
Information system-oriented approach	Use of R/3 reference processes	Short projects which are easier to calculate	Processes which are not optimized may make recustomizing necessary later on

- *IS-oriented approach*: A company places the emphasis on the swift introduction of e.g. SAP R/3, on the basis of existing processes without systematically analyzing and possibly re-engineering them beforehand. The aim of this strategy is the rapid availability of R/3, by means of a pragmatic introduction using a R/3 standard with minimum process modifications. These processes are then systematically developed in the course of on-going process improvement on the basis of an already productive SAP R/3 system.

In order to avoid the disadvantages of the two extreme strategies, consultants can draw on their experience and knowledge of the system when it comes to introducing it. But what should a company do in order to combine the advantages of both strategies?

The question of «how long will it take to introduce the system» was very important for the compa-

Fig. 3: Reference-based implementation with subsequent continuous engineering



2 Strategies for the Introduction of SAP R/3

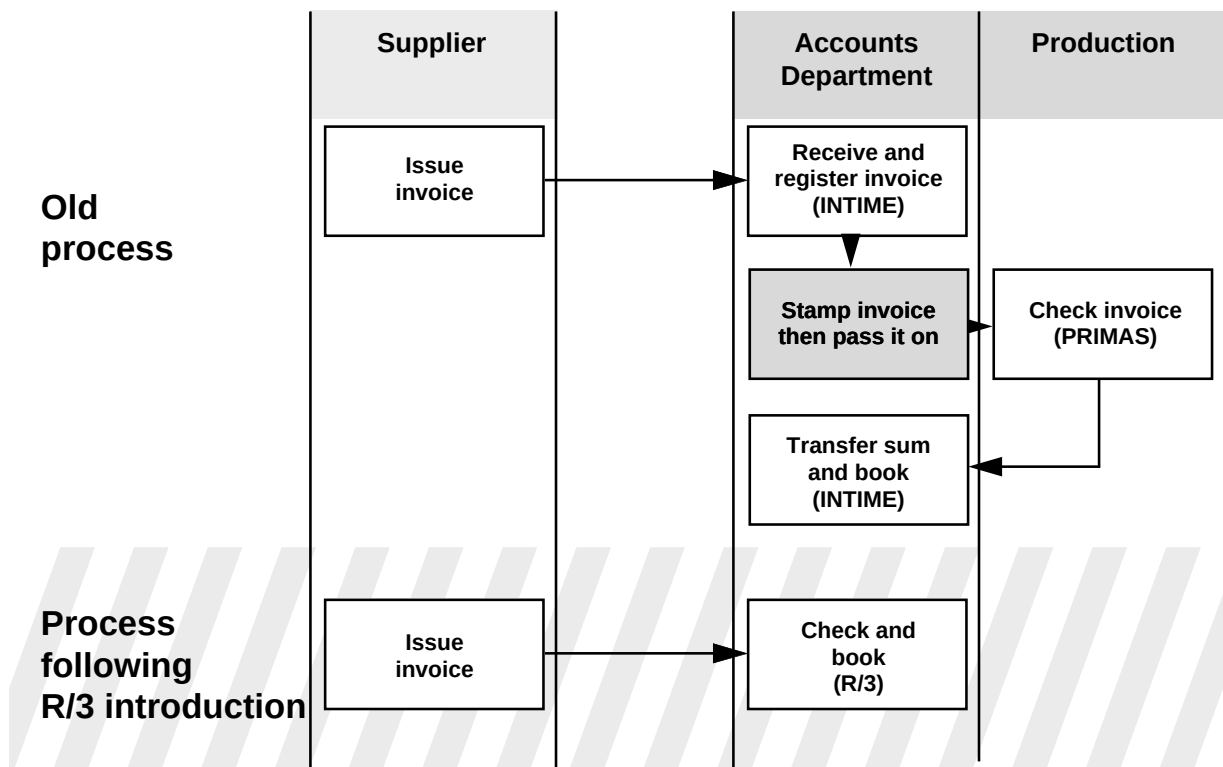
Fig. 4: Selected opinions on the reference-based implementation of R/3

- *Jack Vrancken, project manager at Crosfield:* «We would have needed about 18 months instead of 6 for a combination of BPR and R/3 introduction, and we would have had to prepare our staff for a new system and new processes. In view of the consultancy costs involved in an introduction project, a rapid R/3 introduction without a preceding BPR is the best strategy for a company of our size.»
- *Claus von Bonsdorff and Kimmo Paavola, project managers at Nokia SWP:* «We had to go for fast introduction! If we had first spent a long time analyzing and re-engineering processes, the general framework would have changed dramatically yet again by the time of the R/3 introduction and all our work would have been for nothing.»

Ex post analysis shows that by bringing their own processes in line with the R/3 reference processes, the four companies studied benefited from the business management know-how inherent in the R/3 system. During the course of the 6-month introduction phase they were able to realize important improvements rapidly. Figure 5 shows an example of the type of improvements based on the simple process of «invoice checking» at Nokia.

The companies realize further improvements through subsequent *Continuous Engineering*.

Fig. 5: Invoice checking at Nokia before and after the R/3 system was introduced



3 Key Lessons to be Learned from the Introduction Projects Studied

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The project managers at the companies investigated draw the following conclusions from the way in which their introduction projects ran and their experience with the R/3 system, and thus provide answers to the questions raised at the beginning of this report:

How flexible is R/3 when it comes to developing business processes?

The variety of business management scenarios and the reference processes assigned to them proved adequate to depict the processes of three of the four companies studied. DMC Prints had to adapt part of the R/3 standard to suit the special requirements of the textile industry, which led to delays and extra work. All four companies were convinced that R/3 basically provides them with sufficient functionality to meet the business management challenges of the next few years (cf. Figure 6).

Fig. 6: Opinions on the flexibility of R/3

- *Dexter Strong, project manager at Mitek:* «Everywhere in the R/3 system we find ideas which would simplify our processes. We are collecting these ideas and will implement them in a follow-up project.»
- *Jack Vrancken, project manager at Crosfield:* «The R/3 system is sufficiently flexible to allow any process changes to be readily assimilated through recustomizing.»

What is the relationship between implementation time and project scope?

The four companies studied all introduced R/3 with the aid of ASAP within a period of six months.

ASAP reckons on 6 to 9 months for an introduction phase. The project scope determines the project focus, i.e. which processes, regions, etc. are to be depicted. 9-month projects allow a wider project focus than 6-month projects. Fundamental considerations regarding the re-engineering of processes and the introduction of new management concepts call for longer introduction projects.

The big bang approach proposed in the ASAP method also prevents extensive temporary interface programming.

Fig. 7: Opinions on a realistic project scope

- *Dexter Strong, project manager at Mitek:* «We had to reduce the scope of the project in order to keep within the time frame.»
- *Henri Schirmer, CFO at Crosfield:* «After a project lasting 6 months a company is in a position to support part of the operative processes with R/3. However, it is not possible to consider any fundamental changes in controlling structures and management concepts, which should also be depicted within the framework of the project, within such a short space of time.»
- *Beatrice Leon, project manager at DMC Prints:* «Unfortunately there was no time left in the project to make it possible to depict management reporting extensively.»

What points have to be taken into account in order to ensure that R/3 is introduced rapidly and successfully?

«The first priority is keeping to the project timetable» must be the guiding principle for the project. This makes it necessary to adopt a pragmatic approach oriented towards the R/3 standard using the rules of 80/20.

The company managements of the various organizations identify critical success factors for each phase of the project. Figure 8 provides a summary of the most frequently named points.

Time bottlenecks in the project

ASAP addresses the classic risk areas which companies tend to underestimate in the project, e.g. the transfer of old data, at an early stage.

Calculability of a reference-based R/3 introduction

Figure 9 shows how the external consultants' time was split between the various ASAP project phases, based on an average of the companies studied. (This does not include consultancy time for the continuous engineering after going live, which in some cases was considerable.)



3 Key Lessons to be Learned from the Introduction Projects Studied

Fig. 8: Critical success factors during each phase of the project

Project Preparation	Secure management commitment.
Blueprint	View R/3 processes as «best practices», i.e. avoid software modifications.
Realization	Ensure that ample capacity is available amongst internal staff and make important decisions quickly.
Final Preparation	Consider the range of variants during the integration test and concentrate on the most important business processes.
Go Live & Support	Do not underestimate the time and effort involved in the transfer of old data.

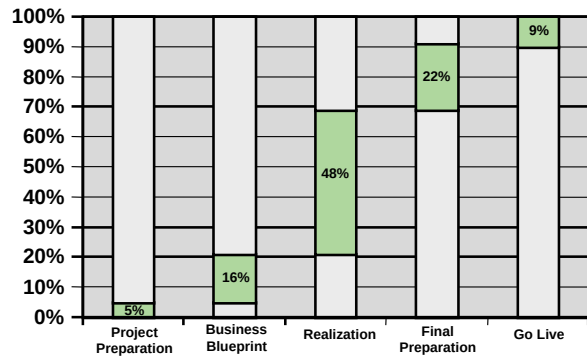
For company management, being able to determine the exact project budget and the project duration was more important than a complete process optimization.

If a project is to be successful, a company should have a rough knowledge of its processes prior to the commencement of the project and know which processes it wishes R/3 to support in the future. With the project focus thus fixed and the selected reference-based R/3 implementation, the time and costs involved for the companies could be realistically estimated on the basis of the SAP tool «Project Estimator».

Requirements of the method

What characterizes a successful implementation project? Based on the experience of the projects investigated, we have compiled a list of some of the items which characterize a successful R/3 implementation. In each case we have given an assessment of the extent to which ASAP supports a company during the introduction.

Fig. 9: Distribution of external consultants' time over the various ASAP phases



3 Key Lessons to be Learned from the Introduction Projects Studied

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Fig. 10: Success factors and the extent to which they are supported by ASAP

Requirements + Description	sufficiently covered by ASAP
➡ Orientation towards R/3 standard	✓
The company uses the processes from the R/3 reference model which are stored on the ASAP CD-ROM.	
➡ Suitable project scope	✓
The short duration of an ASAP project forces companies to concentrate on essentials. The project time frame is easily defined with the aid of the R/3 reference processes.	
➡ Clear budget and time constraints	✓
If the function scope of R/3 is sufficient for a company, then the budget and the timetable for the ASAP project can be precisely defined beforehand with the aid of the «project estimator» and the reference project plans.	
➡ Early benefits from the software without preceding process engineering	✓
The selection of suitable reference processes replaces process engineering. The R/3 references represent «best practices» which allow the company to implement business processes which reap direct benefits from integration.	
➡ «Big bang» migration strategy	✓
The ASAP project plans are designed for «big bang» migration. This reduces the time and effort required for interfaces.	
➡ Efficient use of external consultants	✓
The roadmap and the accelerators in particular help the R/3 consultant to advise efficiently during the project.	
➡ R/3 know-how in the Company can be utilized for continuous engineering	✓
The project organization recommended by ASAP is based on close cooperation between R/3 consultants and company staff. This way of working promotes a high degree of know-how transfer.	
➡ Adherence to the project scope ensures maintenance of the project timetable	✓
ASAP gives priority to a short introduction phase. The project scope must be chosen to suit the introduction phase. All four companies investigated introduced R/3 within 6 months.	
➡ Harmonization of business management terminology	✓
The R/3-specific vocabulary is readily available to all project collaborators on the ASAP CD-ROM.	
➡ Enhanced employee motivation and reduced risk when going live thanks to early prototyping	✓
ASAP provides for a «base line» design of the system several weeks prior to the start of the project. The project team refines the «base line» configuration in a series of cycles by a process of iteration.	
➡ Benefits of detailed documentation in the case of roll-out projects	✓
With the business blueprint, ASAP forces the consultants to provide detailed documentation which can then be used again in subsequent projects.	
➡ Adequate end user training	
During the course of the projects investigated the companies received only rudimentary support in the planning of training courses. Templates for planning training arrangements are now included on the ASAP CD-ROM.	
➡ Change management	
ASAP provides little support for change management.	



4 The study «Accelerated SAP – 4 Case Studies»

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The comprehensive study «Accelerated SAP – 4 Case Studies» describes the introduction projects at Crossfield, Mitek, Nokia and DMC Prints in great detail. With their analysis of real introduction scenarios, the authors Ralph Dolmetsch, Thomas Huber, Elgar Fleisch and Hubert Österle identify the problems and the most important decisions which had to be made throughout these concrete implementation projects.

The study provides companies who are about to confront or already find themselves in similar situations with a concrete insight into the consequences of various approaches. In addition, the reader learns the essence of the ASAP method, its strengths and weaknesses and how the ASAP method guided these companies through their projects from a neutral source.

The study is available from SAP in Walldorf or through the Institute for Information Management at the University of St.Gallen.

