

Frederik Ahlemann

# **Project Management Software Systems**

**Requirements,  
Selection Process  
and Products**

5<sup>th</sup> Edition

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# Preface

## Projekt Magazin

### *A Fool Who Counts Stars*

Imagine you are sailing far away from any landmark without modern tools like GPS. It is night and the clear sky boasts billions of brilliant stars. How do you get your bearings? By counting the stars? Or would you rather search for the polar star or for known constellations?

It is the right stars that count, not the amount! The same goes for choosing the right software for project management. If you are coordinating real estate projects for an insurance company, you will need a package that offers comprehensive portfolio management but only basic scheduling functions. Conversely, engineering and construction projects need elaborate network analysis features, but no portfolio analysis.

A closer look at the actual use of project management software reveals that only a handful of functions are really used, while 80 to 90 per cent of the licensed code lies idle in the computer's memory banks. Some companies with large installations of powerful project management software systems only use these, for example, for time sheet applications, others only for scheduling, although they insisted that the software systems that they were considering during the decision process should provide comprehensive functionality.

If those companies had not counted stars but had looked for the right stars, they would not only have saved a great deal of money, but would most probably have chosen another, more appropriate and easier to handle product.

In our opinion, the European Business School's market study of "Project Management Software Systems - Requirements, Selection Process and Products" presents a groundbreaking approach that users as well as vendors may not yet entirely appreciate. The authors of the study allocate stars to each discussed software system, after first describing the process model for the software selection process. The main question is not: "What can I use the installed software for?", but: "What support do I need for my project management?"

Consequently there is no "ranking list" of project management software. In contrast to the well-known magic quadrants which are probably "magic" because "magically" each software package seems to have a quadrant in which it outshines all other products this study really provides a guideline for decision-makers. We strongly recommend that our readers use this study as a navigation tool when trying to make up their minds on the project management software that best fulfills their requirements.

Don't count the stars, search for the stars that you need!

Munich, December 2007

Petra Berleb (CEO) and Dr. Georg Angermeier (Chief Editor)  
Projekt Magazin

## Foreword to the Fifth Edition

This fifth edition of this book on project management software systems adheres to the well-established concept of the fourth edition. Conceptually, only minor modifications and corrections have been introduced. However, the product evaluations have been updated to reflect the current state of the market. Moreover, the number of products assessed has been slightly reduced to follow a general trend in the market. The number of leading products has decreased since a wave of acquisitions has led to a market consolidation. Whereas several years ago project management software was a domain for small and medium-sized vendors, it has now become a field for large software manufacturers like HP, CA, SAP, Microsoft, Oracle, and others. Rather than developing project and project portfolio management solutions on their own, these companies have acquired smaller specialists and are now integrating the systems into their product portfolios. Thus, it is apparent that project management software is no longer a niche market. Instead, its attraction, in terms of revenue, has awakened large software companies. As a result, it is expected that small vendors will encounter serious problems in keeping their market share as long as they do not have clear value propositions that differentiate them from the products of the leading manufacturers. These are exciting times for all market participants!

Oestrich-Winkel, December 2007

Frederik Ahlemann

## Foreword to the Fourth Edition

Over the last decade more emphasis has been placed on the general significance of project management for modern enterprises than ever. Globalization, the emergence of new technologies and increasingly strong competition in almost all industries force companies to constantly adapt their processes and products in order to meet the requirements of the market. As a result, permanent organizational change, inter-organizational collaboration and knowledge work have become typical behavior patterns in today's economy. Projects to implement organizational change, redesign business processes and develop new products have therefore gained significantly in importance in everyday business. An ever-increasing number of people work in project-oriented assignments.

Project management software systems are widely regarded as an important building block in today's project management. The nature of such systems has changed considerably in the last decade. Even today they are still developing from single-user/single-project management systems to complex, distributed, multi-functional systems that no longer cover project planning alone. This development reflects a general change in the way projects are carried out today; inter-organizational, distributed projects that are part of enterprise-wide project management have become the norm in many businesses and companies. Software systems are one of the strongest enablers for such projects helping minimize frictions caused by geographically dispersed teams, time zones and organizational boundaries.

Unfortunately, the market for project management software systems is not transparent. Hundreds of vendors compete for millions of users of such systems, and the variety of underlying technologies and concepts is wide. The reason why some systems are licensed is often because the vendor is the only one known offering a specific kind of technology or functionality, not because it is the most suitable one. A more suitable competitor may not be taken into consideration simply because he is not "visible".

The objective of this book is twofold: On the one hand, we aim to offer a solid guideline for decision-makers intending to buy or rent a project management software system. On the other hand, we wish to provide researchers with empirical data on today's commercial project management software. For this reason, this book is divided into two parts:

The first part of our book is a guideline for decision-makers, based on our experience gained in research and consulting projects. We start with a brief definition of the term "project management software" (chapter 1) and then go into the success factors of the application of project management software. These success factors are used to derive a process model for the software selection process (chapter 2). Afterwards, a maturity model for project management software is presented. This model not only helps to classify systems, it is also used to describe the focus of the systems analyzed in the second part of the book (chapter 3). Subsequently, we discuss typical technical architectures of such systems and show how they can be integrated into an organization's IT environment (chapter 4). Furthermore, the spectrum of

today's functionality is analyzed and described (chapter 5). This chapter can be used to create a requirements list for a concrete software selection.

The second part contains detailed information about 34 leading commercial project management software systems. First the research design is presented (chapter 6). Then the products are discussed (chapter 7). Further chapters enable the comparison of the systems analyzed (chapter 8) and discuss new innovative software that has not yet gained a significant market share.

The product assessments contained in this book are intended to help decision-makers to pre-select a set of systems and to give researchers valid empirical data about project management software. Each system is presented in detail based on approx. 70 functional and 30 non-functional criteria. Obvious weaknesses of a software system that can be stated independently of specific user needs will also be mentioned. However, we will neither offer a "rankinglist" of software systems nor state any direct superiority of a specific system. Instead, we will make the software systems easily comparable with regard to their functionality and technical architecture. The book can therefore be used to identify suitable software systems, offering the possibility of a rough pre-selection before vendors are contacted.

In contrast to other project management market analyses (e.g. [8], [21]), we have concentrated on a medium-level comparison of the systems. For example, you will not find any information about the time-scale of Gantt charts in this book. We believe that such information is of limited use to companies that are in the early phase of a software selection process. In this book, project management systems are compared by their functionality to support the overall lifecycle of projects and their ability to provide all levels of management with the information relevant to manage not only one but dozens or hundreds of projects. Here, this is called enterprise-wide project management, which covers a lot more processes than single-project management.

As a consequence, the target group for this book is not project managers or project controllers who have to prepare a project plan for a single project. Rather, the book offers information that could be useful for project offices or for management who intend to streamline project management processes and improve the coordination of project initiation, planning, execution and termination.

This book was developed from the *Comparative Market Analysis on Project Management Systems*, a study published by the University of Osnabrück from 2003 to 2005. Although the product assessment framework applied here is quite similar to that of this study, we have implemented some major changes to give our readers more benefits. The most important changes are:

- The number of products assessed has been reduced to 34. We have concentrated on those products with the highest market relevance, measured by the number of users working with the product.

- We have enlarged the textual description of the products to obtain a more complete and consistent picture of each individual system.
- The number of criteria has been reduced. We have especially dropped those criteria we found to be of lower relevance for product selection in organizations.
- On the other side, criteria for time and resource management have been added since we felt that we could thus improve the precision of the assessment.
- The number of assessment points has been increased from three to five. This allows a more detailed analysis of the products. E.g. in the past, advanced products almost always obtained the full number of points in the area of resource management. This is no longer the case; it is now possible to determine specific strengths and weaknesses.
- We have added two additional aggregations to the assessment results. In addition to the M-Model the product descriptions now also contain an aggregation that is derived from the nine knowledge areas of the *Project Management Body of Knowledge* [17]. These knowledge areas are completed by three additional areas, two of which are knowledge management and portfolio management. The third aggregation shows the software's maturity.

This book would not have been possible without the support of a number of colleagues and project partners: Our thanks go out to Teresa Gehrs, Kathrin Meyer zu Loesebeck, Elisabeth Wieland, Stefanie Brandenburg, David Wittstruck and Felix Klostermeier. We would also like to thank all the companies and their representatives who participated in the product assessment and the many advisors among them who made the book what it is today.

Osnabrück, January 2006

Frederik Ahlemann

Kristin Backhaus



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