Success Factors for the Implementation of Enterprise Portals

Ulrich Remus
University of Erlangen-Nuremberg, Germany

INTRODUCTION

The implementation of enterprise portals is still ranked top on the wish list of many CEOs, expecting that the portal becomes the core system for offering a flexible infrastructure that integrates and extends business applications "beyond the enterprise" (Hazra, 2002). By 2009, the market for application integration, middleware, and portals is expected to grow to $7.1 billion, with a 5-year compound annual growth rate of 2.7% (Correia, Biscotti, Dharmasthira, & Wurster, 2005).

The success of enterprise portals is not astonishing, since the portal concepts promise to provide secure, customizable, personalizable, integrated access to dynamic content from a variety of sources, in a variety of source formats, wherever it is needed (Amberg, Holzner, & Remus, 2003; Collins, 2001; Davydov, 2001; Hazra, 2002; Kastel, 2003; Smith, 2004; Sullivan, 2004), enabling core e-business strategies by running supportive portals like knowledge portals, employee portals, ERP portals, collaborative portals, process portals, and partner portals.

However, after the first wave of euphoria, the high expectations of companies became more and more realistic, taking into account that portal projects are complex, time- and cost-consuming, with a high risk of failure. In complex portal projects, costs and benefits to build up and operate an enterprise portal are weighed up in a systematic manner, including make-or-buy decisions with regard to packaged portal platforms vs. open source developments, individually developed vs. purchased portal components (so called portlets), and benefits vs. costs to run, maintain, and improve the portal (Hazra, 2002).

Altogether, the growing demand for portal solutions is leading to an increasing attention in regard to the management of critical success factors (CSF). In contrast to many studies and surveys covering aspects about the portal market and technological features of packaged portal platforms, there is still little known about CSF and best practices when implementing enterprise portals. Considering these critical factors, portal implementation projects can be directed and managed more effectively.

The goal of this article is to present the most important factors that are critical for the success of the implementation of an enterprise portal. In order to better understand these factors, we first provide background knowledge on basic tasks, actors, and relationships in typical portal implementation projects. We then present a comprehensive list of CSF, together with a categorisation framework, classifying these factors into tactical vs. strategic, technical vs. organizational, static vs. dynamic, and stage- vs. nonstage-specific CSF.

BACKGROUND: THE PORTAL VALUE CHAIN

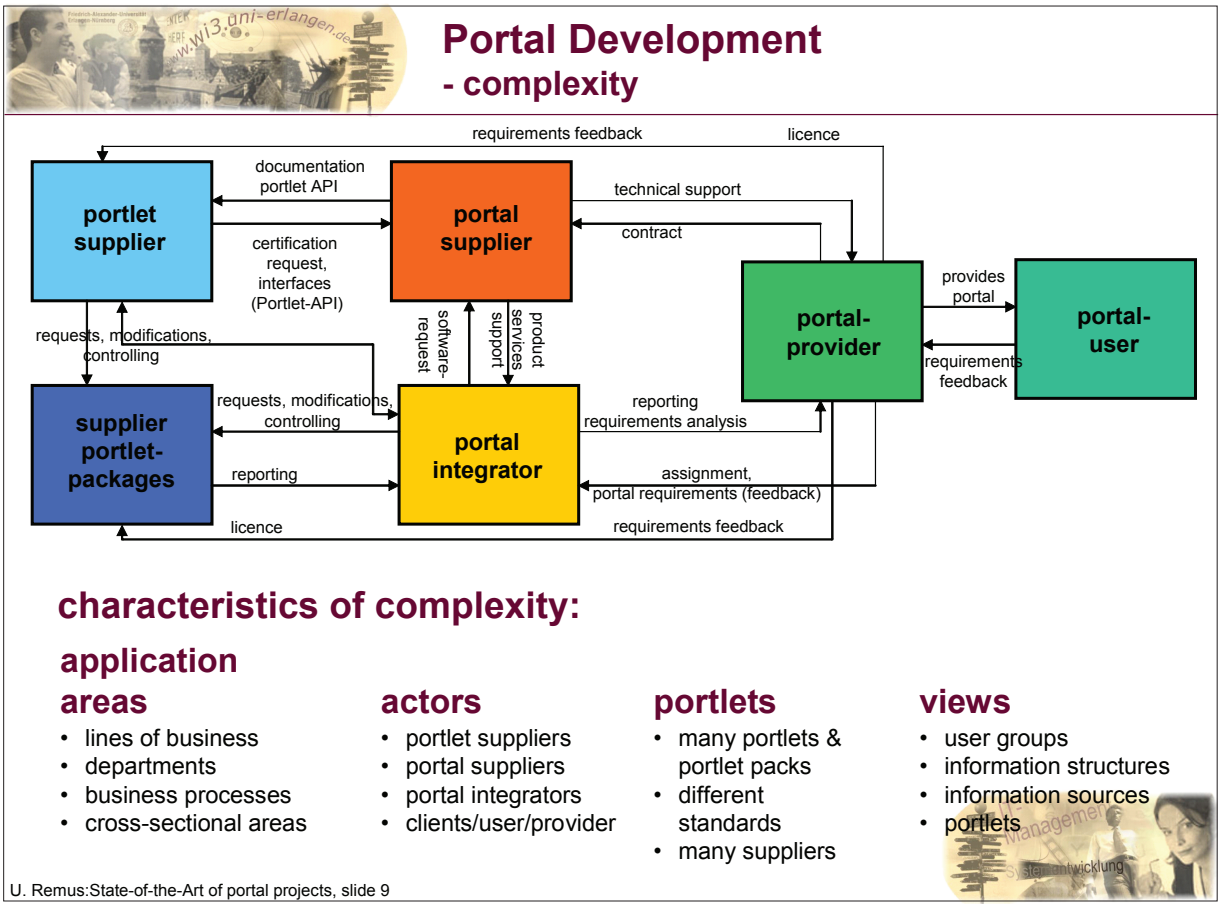
At present, the market seems to be in a strong consolidation phase, in which many small vendors are put out of the market or bought up by the big vendors of portal products, that is, IBM, SAP, Plumtree, or Oracle. We assume that, in the long-run, the market might split up into vendors that provide portal frameworks, vendors that are specialized in building portal components (portlet suppliers), and service providers who will integrate the components to a complete portal solution for the customer (portal integrator). The whole portal industry might shift continually towards a multilayered supply chain—comparable to the automotive or the mechanical engineering industry (see Figure 1).

During the configuration of portals, portlets of different portlet suppliers can be combined and integrated into the portal solution. Portlet package suppliers integrate portlets to larger, Web-based, industry-specific components (so called portlet packages) that can be delivered either to portal integrators or directly to end customers. This can be portlet packages especially developed for electronic commerce, knowledge management, or for collaboration. Portal integrators are responsible for the integration of complex portlets and portlet packages at the customer's side; therefore, designing and installing portal frameworks, customizing and integrating suitable portlets and portlet packages, and supporting the corresponding project management with coordinating different tasks between portlet suppliers, portal vendors, as well as portal providers and users.

CRITICAL SUCCESS FACTORS

In order to analyse the CSF, we followed a multimethod design of a two-stage approach, with the first stage analysing the

Figure 1. The portal value chain



state of the art of portal engineering by reviewing relevant literature and interviewing portal integrators in Germany (Remus, 2005), and a follow-up stage with a focus on "critical success factors." In order to identify and analyse CSF, we chose portal integrators as the target group (in contrast to client companies implementing portals), because portal integrators have the necessary expertise to give in-depth answers to our mostly explorative questions, as they have already been involved in several portal projects implementing packaged portal software. In addition, we reviewed literature on scientific papers and case examples, and finally compiled a list of 21 relevant CSF (applying the coding procedures proposed by Glaser & Strauss, 1967). We also refined the CSF of portal engineering by comparing these with CSF of other IS implementation projects, (i.e., ERP projects). The following list briefly describes each CSF, together with its relationship to portal engineering, in alphabetical order:

- **Business Process Reengineering (BPR):** In order to achieve the greatest benefits provided by an enterprise portal, processes and activities have to be aligned with the new system. In many cases, the underlying business processes have to be redesigned before the portal solution is deployed and customized. The question here is if activities in business processes have to be changed before, during, or after the portal implementation. This CSF has strong relationships to the CSF process and application integration.
- **Change Management:** Introducing enterprise portals can cause resistance, confusion, redundancies, and errors. Often, portals provide a completely new work environment based on new user interfaces structuring content, services, and application in a very different manner. In addition, they often provide new functions and features that, at first, can overload the user. As with other large-scale IT projects (e.g., ERP), companies often underestimate the efforts in change management (Somers & Nelson, 2001).
- **Clear Goals and Objectives:** Similar to other large IT projects, clear goals and objectives are seen as critical