

Chapter 2.11

Developing and Customizing Federated ERP Systems

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ABSTRACT

Small and Medium Enterprises (SMEs) are the most important drivers in many economies. Due to their flexibility and willingness to innovate they can stand up to larger industry players. However, SMEs – as every other company – need to further reduce costs and optimize their business in order to stay competitive. Larger enterprises utilize ERP systems and other IT support for reducing costs and time in their business processes. SMEs lack behind because the introduction and maintenance of ERP systems are too expensive, the return on investment is achieved too late and the associated financial risks are too high. However, SMEs would like to have IT support for their business. The research behind the Federated ERP System (FERP) addresses the problems SMEs face with conventional ERP systems and offers reasonable and scalable IT support. This is done by decomposing the whole business logic of the ERP system into Web services, which are linked at run-time.

The service composition is realized by a workflow system that is also responsible for creating and managing the user interfaces and the data-flow. By integrating only the Web services that are needed (possibly from third parties) the cost is reduced and the functionality can be scaled to the actual needs. However, not only a technical solution is needed but also the development process must be tailored towards SMEs. Small companies cannot afford highly-skilled staff and often do not have defined business processes.

INTRODUCTION

The business world is rapidly moving and Small-to-Medium Size Enterprises (SMEs) are competing within this vibrant marketplace with their flexibility and ability to innovate. They are an important part of the economy. For example, according to the IfM Bonn (2008) SMEs in Germany account for 38.3% of the overall turnover

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