DEEPSHORE

Are your ERP projects too slow and too expensive?

Has your ERP system turned into an inflexible monolithic application?

Are costs for new ERP features and upgrades spiraling out of control?

Or are individual ERP modules expensive to maintain and operate?

MICROSERVICES—
NEW STRATEGIES FOR ERP PROJECTS

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ERP systems and environments are the crucial backbone that critical business processes rely on at enterprises and larger mid-sized companies. It is becoming increasingly clear that conventional ERP strategies from the late 90s and early 2000s are simply too inflexible, too slow to deploy, and generally not economically feasible in today's IT world. And in many cases, they don't generate any significant added value to compensate for the enormous investment in capital, development resources, maintenance, and daily operations they involve. To achieve rapid and agile projects in the ERP space, new strategic options are necessary.

Especially companies that have relied heavily on SAP over the last 15 to 20 years are now falling behind the pace of modern technologies. Tech firms such as Amazon, Google, and Facebook have demonstrated how efficient and agile IT can be when, instead of conventional monolithic ERP applications, systems comprising intelligent, modular microservices are deployed. In these types of architectures, small, independent processes and services handle specific tasks independently. They integrate with the core ERP system through standardized interfaces. Even 'old economy' companies are adopting new IT philosophies now. Instead of suffering the competitive disadvantages of costly and inflexible conventional IT structures, they have turned towards supplementing their core ERP systems with flexible microservices.

The innovation-driven businesses that Deepshore GmbH focuses on are characterized by these modern agile development methods. This also includes the evolutionary step of making information solutions faster, more flexible, and more financially predictable with the help of efficient and proven open source technologies. The synergies our partner nextevolution brings to the table for archiving plays a special role in our IT projects—particularly with respect to big data technologies and compliance requirements.

THE LIMITS OF CONVENTIONAL ERP STRATEGIES

The late 90s and early 2000s were also characterized by the rise of powerful ERP systems and manufacturers. During this era, many enterprises implemented IT strategies built exclusively on replicating business processes in standard enterprise software such as SAP. Especially in large organizations, this made it possible to break up what had become a free-for-all of heterogeneous IT solutions. That had become necessary because the majority of these data silos that were developed as point solutions—in-house by individual departments and specialized business units or through external IT partners—were generally too specialized, problematic to operate, and difficult to integrate. What's more, these systems soon reached their performance limits as data volumes and the complexity of business processes increased.

Mid-sized and large companies reacted to this dilemma by implementing ERP platforms such as SAP as their main systems. In this way, they were able to avoid more chaos and consolidate somewhat. But as time wore on, this focus on system consolidation led to new problems. Too many processes were imported into a single system. Furthermore, additional features were implemented that normally would not have conformed to the standards intended for the base ERP system.

This resulted in the following two major categories of problems.

1. Adaptability and extensibility

As a result of the high complexity of monolithic software applications, updating or modifying the system is neither flexible enough nor fast enough. For each modification, the effect on the entire system must be analyzed. This involves a complex procedure to eliminate the potential for undesired side effects. Although many business processes can be handled with tools and extensions based on the standard of the main ERP system, small changes can also involve minor modifications to these standards. This makes a project complex, increases project costs, and lengthens deployment time exponentially. Agile change management as we understand it today is simply impossible under these conditions.

Extremely cost-intensive maintenance services from the ERP vendor for these custom software components make matters worse. And technical requirements that don't match the system standard have to be developed at your own risk and integrated into the ERP system including consideration of all potential side effects on existing processes and workflows.

2. Operations and upgrades

The challenges mentioned above automatically result in problems maintaining the system. Each deviation from the standard increases the complexity of the overall system, which causes headaches each time it's patched or upgraded. Even simple upgrades can turn into full-scale projects costing millions and taking years to complete. And these projects don't even generate any added value—all they do is secure manufacturer support for an additional but far-too-limited period. Even if minor consolidations are successfully achieved within such projects, their benefits stand in no relation to the costs.

Even operating such a system purely as a monolithic ERP solution can result in runaway costs as complexity increases. This is especially true for cases in which the standards supplied by the vendor are not used exclusively. Modifications normally need to be given special consideration and planned for accordingly during system sizing.

RE-THINKING ERP

Information technology should never be implemented for its own sake. Especially not when you're talking about critical business processes, considerable competitive advantages, and ensuring a promising future. Our customers see how important it is to be quick and agile as consumer tastes and market conditions shift on a daily basis. With this constant change, being flexible and able to react quickly while keeping costs in check is the crucial challenge.

Conservative ERP strategies are no longer able to make that a reality. Monolithic systems fail to bridge the gap between standard functionality and real-life process requirements. And anyone who thinks they can save themselves by falling back on solutions and applications in their standard system configuration will miss out on process-based advantages over the competition. The solution is not to limit oneself, but rather to take a new strategic direction for ERP projects and infrastructures.

THE AGILE MICRO-SERVICES APPROACH

The fact that the elimination of conventional ERP strategies is even possible today is to a large extent due to developments in the open source community. The anti-licensing renegades of 20 years ago have turned into the technology and opinion leaders of today. And players like the Apache foundation have made their mark in the enterprise market at a number of large corporations—because they are exceptional at translating initial technological developments into pioneering solutions.

The label open source today stands for software that has been continually refined by numerous experts. Specialized vendors such as Apache can reliably and sustainably coordinate the hive mind. Pioneers such as Google, Facebook, Twitter, and Amazon have proven the value of open source solutions by using them in their infrastructures. Renowned German corporations such as the Otto Group and the Metro Group have long since begun to implement the corresponding platforms and models. The added flexibility and speed are compelling arguments.

In the ERP segment, the agile microservices strategies of the future are paving the way for integration with open source tools. This new way of thinking is as groundbreaking as it is simple. It starts with a farewell to the fully loaded container ship—the "old" ERP system—and a switch to a new armada of speedboats—the microservices. Of course, a conventional ERP freighter is—once it's been built—able to carry a massive load. But in an age when maneuverability, high speed, quick braking, high availability, reasonable acquisition costs, and minimal maintenance are the order of the day, it's simply no longer competitive. The small, swift microservices follow a completely different principle. Each one of these speedboats may only be able to handle one specific task. But as a fleet, it's possible to rapidly clone 1000 vessels, set them in the water, and launch them all in the same direction. As necessary, individual boats can change their course or speed. And if a particular model is discontinued, it doesn't impact the effectiveness of the rest of the fleet.

The foundation for microservices-based ERP solutions is the use of agile development models that help to achieve considerably more efficient project workflows than in traditional ERP contexts. With this, a technical platform

is established that serves as a structured foundation for building individual microservices. The existing ERP system is not completely eliminated, however. The new platform is created alongside the proven stack and implemented using clearly defined interfaces from and to the ERP system. This coexistence of old and new worlds is intended. Partly because it doesn't make sense to port processes that have functioned flawlessly for years into an agile solution platform. Instead, existing ERP capabilities become part of the microservices world through dedicated interfaces. An objective analysis helps to uncover which process will run faster, better, or more cost efficiently on which platform.

Companies benefit in numerous ways. Not only by receiving a cutting edge IT growth strategy, but also from a significant increase in the efficiency of their IT project workflows and a sustainably improved cost structure across the entire IT organization. That also applies to the self-correcting effect among these parallel IT structures, since the smartest investment and implementation decisions will win out in the end as the available platforms compete for resources.

OUR APPROACH

The advantages of shifting to agile IT strategies are readily apparent. The integration of microservices in the ERP space is just one example of how we create added value while securing future opportunities for our customers. The expertise of Deepshore as a specialist for innovative enterprise information management solutions is just as important as the compliance knowledge contributed by our partner nextevolution. With this combination, our agile methods lead to exemplary solutions—using leading edge technologies, financial foresight, and a trained eye for pragmatic solutions.

It's not about eliminating your ERP infrastructure, but rather achieving additional efficiencies and opportunities. Selective integration in a new, agile microservices platform achieves that step forward, while also ensuring significantly faster and less expensive execution of all the accompanying projects. The secondary benefit of forcing the simplification of their IT infrastructures is an added benefit our customers also appreciate.

ERP and business processes are and will remain highly unique challenges. Watch our experts work, and you'll notice they don't see their agile methodologies as universal blueprints, choosing instead to intensely study your specific requirements and gain a deep understanding of your circumstances. This way, we are able to obtain an accurate picture of how we need to proceed as well as the planning, costs, and deployment times involved. Because that's how we establish the foundation for our mutual success.

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