WEEK 19 PUBLICATION

When is an enterprise architecture useful or necessary for ERP consulting?

In larger medium-sized companies with several locations and a complex IT structure, the question often arises before choosing an ERP: Do we need an enterprise architecture (EA)?

The answer is usually yes.

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Especially in the course of digitization for SMEs, the following applies: Without a clear architecture plan, there is a risk of only putting a new ERP system on top of it as an isolated solution and missing out on opportunities for IT system harmonization, data integration and efficiency gains.

A well-thought-out enterprise architecture creates common structures and guardrails right from the start – and significantly increases the chances of success of ERP consulting and implementation.

Background and relevance

Enterprise architecture refers to the holistic planning and documentation of a company's business processes and IT landscape. The aim is to optimally coordinate business and IT and make complex IT landscapes manageable. Especially in larger medium-sized companies, EA is not an end in itself, but a strategic tool to deal with the challenges of modern IT environments. But *when* is the right time for EA in the ERP context – and what happens if you don't do it?

When EA is particularly necessary

EA is particularly useful or necessary when certain triggers or framework conditions are present. Typical situations in which Enterprise Architecture should be high on the agenda before or during an ERP selection include:

- **Heterogeneous, grown IT landscape:** If your company has accumulated different systems over the years (keyword "grown uncontrolled growth"), there is often a lack of overview. EA creates transparency and an overall view here in order to bring all applications to a common denominator before a central ERP is introduced.
- **Multiple locations and isolated solutions:** If business units are spread over different locations with different software islands, EA is practically mandatory. This is the only way to bundle requirements across locations and map them in a common ERP solution.
- **Upcoming ERP introduction or migration:** If you are about to switch to a new ERP system, this is the *ideal* time for an EA definition. Experts say: *"A new ERP is already half an EAM"* – in other words, the introduction of an ERP system almost inevitably requires accompanying enterprise architecture planning in order to be successful. From our experience in advising medium and larger clients, this is always a point of discussion that needs to be discussed. It is not uncommon for infrastructure problems to only arise when companies have first decided on ERP software. But then you realize that the entire IT architecture needs to be questioned and redesigned. We can solve this with a timely discussion of the topic, without there being expensive "surprises".
- **Digitization and growth initiatives:** If your company starts a digitization offensive or grows strongly, the demands on IT increase. EA helps to embed new digital solutions into an overall strategy instead of just creating selective individual solutions. In this way, you can keep the common thread in your IT strategy despite expansion.

In summary: The greater the organizational and technical complexity, the more necessary an enterprise architecture becomes to put the ERP project on a stable foundation.

Typical problems without EA in the ERP context

What happens if you *don't* define an enterprise architecture and start ERP selection and implementation directly? Without a holistic architectural view, a number of problems threaten:

- **Technological chaos:** Without EA, the big picture is missing. As a result, easily parallel structures, media breaks and a jumble of unconnected applications emerge – a *"technological chaos"* with poor information exchange between the systems. In such an environment, the new ERP would be just another island instead of harmonizing processes.
- **Redundancies and data islands:** If an ERP system is introduced without an architectural concept, existing legacy systems and data islands often remain untouched. Redundant applications (e.g. duplicate customer master data in different systems) and inconsistencies continue and undermine efficiency: instead of IT system harmonization, there is a risk of silos continuing under a new name.
- **Lack of strategic orientation:** Without a clear target image, there is a risk that an ERP project will get bogged down. You implement functions and workarounds without an overall plan – what remains are "fruitless individual measures" without sustainable benefits. ERP selection can then take place according to the loudest need instead of a long-term strategy that supports and implements the corporate strategy. The consequence can be expensive adjustments, project delays or an ERP that does not fit the company. In ongoing projects in which we are involved, we often find this constellation. Thanks to our experience in various industries and our knowledge of different ERP programs, we can usually save our customers from expensive implementation projects with expertise in these tasks.

In short: Without an upstream enterprise architecture, the ERP project lacks a compass. The result is inefficiencies, higher project risks and missed opportunities for optimization. Without EA, medium-sized companies with complex requirements in particular run the risk that the new ERP system will not have the desired effect.

Solutions and modern methods

The good news is that with a clearly defined enterprise architecture, these problems can be averted. Modern EA methods and best practices help medium-sized companies to make their IT landscape fit for the future before an ERP implementation. This closes system discontinuities, improves data availability and enables an increase in efficiency in everyday work. In the following, we highlight current approaches to EA consulting as well as a practical example.

Current Best Practices of EA Consulting

Modern enterprise architecture consulting has moved away from cumbersome theories and focused on pragmatic, practice-proven approaches. Important best practices include:

- **Holistic overview and orientation:** A central principle is the *big picture*. EAM enables a holistic view of the entire enterprise architecture – all processes, functions and IT systems. This overall picture is the basis for understanding the *impact* of a new ERP solution on all areas of the company and planning ahead. In addition, the overview ensures that IT strategy and business goals are constantly aligned and that the ERP fits into this strategy.
- **Standardization and IT system harmonization:** Enterprise architects establish company-wide standards, guidelines and architectural principles, for example which core functionalities will be covered in the ERP in the future and which will remain in separate systems. This clear division ("building blocks") makes it much easier to integrate the ERP system into the existing IT landscape. At Dreher Consulting, we use this process model to efficiently achieve a result for our customers. At the same time, redundant applications are identified and consistently consolidated, which simplifies and harmonizes the IT landscape and thus demonstrably reduces costs.
- **Transparency in data and processes:** Another best practice is to ensure transparency at an early stage. All relevant business processes, data flows and system dependencies are documented and visualized. This allows *critical business questions to be answered in a targeted manner* and all parties involved to understand where which data will be stored in the future. Improved data transparency is the basis for creating a true *single source of truth* with the new ERP . In practice, this means that employees find information faster and decisions are made more well-founded.

- **Agile approach with quick wins:** Instead of drawing theoretical models for months, modern EA approaches rely on *an iterative approach*. For example, we create a rough target architecture model at a very early stage to give everyone involved a clear picture of the future. At Dreher Consulting, we have developed a model for this purpose, which is based on the supply chain and is used as documentation in the entire consulting process up to the acceptance of ERP software implementations.

  We thus achieve a cost reduction in the processing of requirements of up to 25%.

  This model does not have to be perfect, but it provides orientation. After that, it is refined step by step – always with a focus on quick wins. Small, quick improvements (e.g. an initial data integration or the shutdown of an obsolete legacy system) demonstrate tangible successes and motivate the team. This agile approach prevents the "big bang" shock and can continuously demonstrate benefits. From our experience, however, it may be that the agile, quick win procedure does not work because the IT architecture does not allow it, then we use other successful methods such as waterfall approaches.

- **Continuous architecture management:** Modern EA consulting doesn't end with a one-time architecture paper. Successful companies establish Enterprise Architecture Management as an ongoing process. This means that the enterprise architecture is regularly reviewed and adapted, for example in response to new business requirements or technology trends. It is important to integrate EA into everyday work – this is the only way to keep the architectural concept alive and not become a theoretical flash in the pan. This also means that *the EA team and departments work closely together* (EAM is *not* only the task of IT, but also cooperation with business and the specialist departments). This permanent anchoring ensures that the ERP system and all other building blocks of IT remain in line with the corporate strategy in the long term.

Modern frameworks such as TOGAF can serve as a guide, but the emphasis is on pragmatic adaptation to corporate reality – no company has to stubbornly recite a complete framework. Rather, the focus is on communication, flexible planning and a step-by-step approach. In many successful projects, we have not imposed a fixed theoretical structure on our customers, but our strength clearly lies in the fact that we adapt the use of standards and process models individually to the customer. The success proves us right.

In summary, these best practices help to master complexity and establish a business-IT alignment. The enterprise architecture thus becomes the enabler of a successful ERP implementation: tomorrow's **problems are anticipated today and opportunities - for example through new digital processes - are actively used.**

Practical example wholesale

How effective EA-supported ERP consulting can be is shown by a practical example from wholesale. A multi-site wholesale company was faced with the task of modernizing its fragmented IT landscape. Over the years, each location had developed its own isolated solutions for ERP, warehouse and sales tasks (it was the famous Excel lists that are used when the actual ERP system no longer meets the requirements).

The result: multiple data storage, time-consuming coordination processes and hardly any transparency about inventories and customer data as a whole. Efficient digitization in SMEs seemed hardly possible – the company felt that its IT was slowing down rather than supporting it.

Approach: Before selecting a new ERP system, the decision was made to create an enterprise architecture roadmap. First, all existing applications and processes were recorded and checked for redundant functions. It quickly became apparent that many solutions fulfilled similar tasks. In the course of our EA consulting, the company defined a target image: In the future, a central ERP system should cover core processes such as order processing, warehouse management and financial accounting in a standardized manner.

Special solutions were only provided where really necessary (e.g. a special route planning tool in the logistics sector, connected via interface). This target architecture was communicated to all locations so that everyoneknew at an early stage what changes were coming and what future IT system harmonization would look like.

Result: This EA-powered approach has enabled the company to reduce its IT system diversity by 30%. Several legacy systems became obsolete and shut down, which not only saved on licensing and maintenance costs, but also improved data availability– there were now significantly fewer data sources drifting apart and analysis results for management. Employees feel the change in their everyday lives: The search for up-to-date information (e.g. stock levelsor customer orders) is much faster today, as much can be viewed via the central ERP.

Overall, work per workstation became around 10% more efficient because there was less need to switch between systems or manually consolidate data from Excel lists. In addition to these quantitative effects, the company also reports qualitative improvements: The IT department now acts more as a partner of the business departments, and futureextensions can be integrated much more easily on the basis of the clear architecture.

Recommendations for action step-by-step

So how can you go about integrating Enterprise Architecture into your ERP project? Below is a step-by-step guide that has been tried and tested. From the analysis of your current IT landscape to the final ERP selection, you think about architecture and system implementation together.

1. Assessment of the as-is landscape

It starts with an honest inventory of the existing IT and process landscape. Gain transparency: Which applications are in use? Where do redundant functionalities or data silos exist? Which business processes run and how, and where are there media discontinuities or inefficient workarounds? This *as-is analysis* forms the foundation for all further steps.

In practice, this means collecting and documenting all relevant information – ideally centrally, e.g. in the form of a simple architecture model or in an EA tool. Enterprise Architecture Management aims to document the current state and derive meaningful measures from it.

That's exactly what you do in this step: You record where you stand in black and white and identify the first construction sites (for example, duplicate systems for the same task). It is important to involve all stakeholders – i.e. both IT managers and specialist departments such as supply chain or sales. This will ensure that the inventory is complete and pain points are captured from all angles.

The result of this step is a common understanding of the initial situation, which you will build on in the next step.

2. Development of the target image

Based on the current analysis, you now define the target image of your future enterprise architecture. Ask yourself: What do you want our IT landscape to look like in 3-5 years? What role will the new ERP system play in this, and what other systems will still be needed? The strategic corporate goals are included here.

Orient yourself to the business strategy and consider which processes can be covered in a standardized way in the new ERP and where specialized solutions may make sense. The target image – often referred to as the target architecture – typically includes a rough representation of all core systems and their tasks. Responsibilities are clearly delineated, e.g. which system will hold "the truth" for product data in the future or which application will be responsible for logistics planning.

Also plan for future requirements: If, for example, a web shop (e-commerce) or new BI tools are being considered,take them into account in the architecture (keyword scalable architecture). This step requires creativity and coordination: design several variants, discuss them with stakeholders and pay attention to feasibility.

In the end, there should be a clear architectural goal that is in line with the corporate strategy and is supported by the management. Achieving a defined target image from your current state – forward-looking enterprise architecture planning helps with this.

Once you have defined your target image, it is best to also create a rough roadmap: What gaps need to be closed between the actual and the target (GAP analysis), and in what order do you approach this? In this way, the target image becomes a concrete implementation roadmap.

3. Thinking about ERP and architecture together

Now it's time to select and introduce the ERP system itself – and here it is crucial to think about the architectural considerations in an integrated way. Actively involve your EA team or enterprise architect in the ERP selection process. When evaluating ERP solutions, not only functional requirements of the departments should play a role, but also architecture criteria: Does the software fit into our desired architectural goal? Can it be easily integrated into the existing system landscape? Does it support the defined standards (e.g. open interfaces, cloud strategy, data models)? No matter how many features an ERP system has , if it doesn't fit into the big picture, the joy of it will be short-lived.

That's why our enterprise architects pay attention right from the start to how the new ERP fits into the existing IT ecosystem and that applications work together seamlessly.

In practice, this means that during ERP consulting and selection, architectural principles such as "one central data source" or "modular systems" are used as evaluation criteria.

Parallel to the software selection, integration is already being planned: Which legacy applications will be replaced? How do we migrate the data to the new system? All of this is taken into account in the decision. Always think about ERP selection and enterprise architecture together – this ensures that the selected ERP system is not considered in isolation, but is part of your holistic future architecture.

As soon as the decision has been made, it goes into implementation. This is where the preparatory work pays off: Thanks to the clear target image, all those involved know *why* this ERP is coming and what the future system landscape should look like. This facilitates change management and reduces expensive course corrections. In short, the ERP implementation takes place within the framework of the defined enterprise architecture – and not alongside it.

Result

A well-thought-out enterprise architecture is not a luxury in ERP consulting and implementation in medium-sized companies, but increasingly a necessity.

Anyone who invests time in EA planning before selecting an ERP lays the foundation for a harmonized, efficient and future-proof IT system. This pays off: *system harmonization* creates clarity instead of chaos, *data availability* enables better decisions, and *efficiency increases* relieve your employees in their day-to-day business. Companies that consistently integrate EA achieve their digitization goals faster and turn their IT from a cost factor to a real value creation factor. In the course of the digital transformation, enterprise architecture is no longer a nice-to-have, but a must – also and especially for larger medium-sized companies.

Take the next step now:
use this URL for your checklist to check and use whether an Enterprise Architecture initiative will benefit you.

Get concrete tips on how to make *your* ERP project a success through EA. Get started now – for future-proof IT and sustainable competitive advantages through an optimal combination of business and IT