

Ace your architecture



EXPERT ARTICLE

_MICHAEL BOLLIGER
Lead Architect & Consultant
Ergon Informatik AG
_FLORIAN BOSSHART
Senior Consultant
Ergon Informatik AG

Published in SMART insights 2021 magazine

ergon

smart
people –
smart
software®

Digitalisation is advancing area by area across the corporate world. Yet without IT architecture management, businesses can't keep up with the pace of innovation long term. Architecture touches everything. Get it right and you can respond very quickly to emerging demand without putting the flexibility and security of your applications at risk. This demands a joint effort from a company's management, IT and business departments.

Speed, ease, flexibility and constant availability are what customers expect of their interactions with you. That's impossible without the latest IT. Soon, that will be true no matter what your sector. Banking is a prime example here as it faces what is likely one of the biggest revolutions in its long history. Fintechs are developing new products and services. Banks that have grown the conventional way are now adding third-party packages to their offerings. Some of these are almost as regulated as the banks themselves, some much less. "Open banking" fuses these developments together.

Retailing is also front and centre when it comes to digitalisation. As technology grows in importance, multi-channel capability is no longer a vision but the new standard. Customers want to decide for themselves how and where they look into new products; how and where they buy those products; and how they get answers to questions that arise only once they've got them home. With smartphones, browsers, branches and call centres all in the mix, retail companies need an IT landscape that can cope with the diversity

and complexity of shopping in the digital age.

The crux

Most sectors are in much the same boat when it comes to the challenges of digitalisation. They differ only in the progress they have made to date. Companies nowadays can use all manner of means to pass the digitalisation test. Examples include cloud computing, the latest collaboration tools, new paradigms and approaches to software such as a close mesh of development, security and operations. No matter what the choice, the IT architecture provides the foundation.

IT architecture delineates how a company creates and builds something. Static frameworks are not up to the job here. IT architecture, meanwhile, represents scope. It evolves – has to evolve – along with the changing demands on the business. The world is becoming more complex and IT is no exception. The number of point-to-point connections between systems is on the rise, for instance, while we observe a decline in the quality of business process documentation and the number of services being reused. This sort of complexity

isn't just the short-term hangover from implementing a digitalisation project, however. It's here to stay, as companies extend pilot projects and applications to cover more tasks and more areas of their business.

Contemporary – but a step ahead

Where a company manages its IT architecture appropriately, it keeps system complexity under control and can respond swiftly and flexibly to the changing needs of the market. Well thought through IT architecture makes it easy to use an AI-based service from a cloud to resolve a specific issue, for example. To do this, the company itself does not need any great depth of knowledge about artificial intelligence, much less the algorithm itself. With today's architecture management, integrating a robo advisor is also a relatively simple matter. There are decisions to be made of course: What interfaces do I need? What data from what applications does a device need? How can I get hold of up-to-date data? What transmission technology is used? And how can I prevent unauthorised access? Yet with functioning IT architecture management, answering those questions is easy.

"It's not about big successes but about continuity and knowing what your users need."



_MICHAEL BOLLIGER, LEAD ARCHITECT & CONSULTANT;
MICHAEL.BOLLIGER@ERGON.CH

"The most important, and hardest, thing is to establish open, trust-based working relationships between departmental representatives and IT."



_FLORIAN BOSSHART, SENIOR CONSULTANT;
FLORIAN.BOSSHART@ERGON.CH

Blurring departmental boundaries

For an IT architecture to really fit a company, it has to cover and coordinate a variety of functions and processes. Old technologies and old ways of thinking, reflected in internal structures and IT set-ups, often get in the way of fast, cost-efficient action and reaction. Silos are another factor here – structures, systems and processes perfectly tailored to a given department but closed off from the rest of the company. If your company has several of these optimised standalone departments, customer demand for a smooth company-wide service is going to be a major challenge. There are opposing needs here. The IT architecture must provide suitable solutions to support real-world operations in each area. At the same time, it must satisfy criteria such as onward development flexibility and security. Of course, while departmental needs overlap in certain respects, they differ significantly in others. Recognising and sharing the commonalities saves costs and enables companies to establish customer-centric processes across departmental boundaries. IT architecture managers can help to balance interests here because they need the different parts of the architecture to work together but do not represent any specific department themselves.

Business and IT hand in hand

Open, trust-based working relationships lay the groundwork for an IT architecture that successfully encompasses all elements of a company's business. That's why you'll often find interdisciplinary architecture teams that are not drawn purely from IT. This allows all concerned to pool not only their knowledge but also their interests

directly. An IT department that understands the business side well can prove a useful advisor on general IT requirements and new technological trends. Another important task for IT is to point out cost implications. Changes such as greater flexibility or faster release cycles have their price, after all but the resulting costs must always be seen in relation to the practical benefit.

Without going into technical details, shared working tools and visualisations make life easier for the architecture team. It can be helpful, for example, to have a clear visualisation of the operating landscape that shows applications and their dependencies. Business processes should be recognisable from those applications.

That's not always easy to do. Quite apart from the time involved, it helps to encourage key individuals and management to think from a different angle. Work on any given IT architecture can only deliver if there is transparency. And creating that transparency may be new territory for some.

Keep moving

IT architecture is a broad field but you still have to show that work is beginning to pay off if you are to secure the long-term support of management. It's common when setting up an architecture team to be overwhelmed by the number of issues at hand. That's the time to set clear priorities that are based on the company's strategy and aimed at responding swiftly to what the customer wants. Both the most urgent and the most readily implementable needs should be tackled first. Enjoy those first successes, then build on their momentum. Nothing stands still today, including IT architecture, and that's just one of the reasons to keep moving forward, and to monitor progress and opportunities continuously. If you do that, architecture work will eventually become routine. It's not about big successes here but about continuity and knowing what your users need. Whether they're in finance, retailing or another sector, your customers will thank you. />

And what about us?

Interested in more?

Digitisation projects
Change makers
Tech trends

Order now
ergon.ch/smart-2021



Your architecture check-up

Business focus

WHO IN THE COMPANY KNOWS HOW APPLICATIONS SUPPORT BUSINESS OPERATIONS?			POINTS
A: WE WOULD HAVE TO LOOK INTO WHO MIGHT KNOW	B: EACH AREA IS FAMILIAR WITH ITS OWN APPLICATIONS AND MANAGES THEM INDEPENDENTLY	C: WE HAVE A CURRENT OVERVIEW OF PRODUCTS, BUSINESS PROCESSES AND APPLICATIONS	A ☐ 0 B ☐ 5 C ☐ 20
HOW DO YOUR APPLICATIONS SUPPORT BUSINESS OPERATIONS?			
A: MANY PROCESSES OR PROCESS STEPS ARE NOT COVERED BY APPLICATIONS	B: APPLICATIONS SUPPORT MOST OF THE CORE BUSINESS PROCESSES BUT THERE ARE A FEW GAPS	C: APPLICATION SUPPORT FOR BUSINESS PROCESSES IS VERY GOOD TO IDEAL, INCLUDING USABILITY	A ☐ 0 B ☐ 5 C ☐ 20
WHO IS FAMILIAR WITH OVERARCHING BUSINESS REQUIREMENTS AND THEIR UNDERLYING STRATEGIES?			
A: A SMALL NUMBER OF EMPLOYEES HAVE THAT KNOWLEDGE IN THEIR HEADS	B: EACH AREA COLLECTS THAT KNOWLEDGE AND MAKES IT AVAILABLE WITHIN ITS TEAMS	C: BUSINESS INFORMATION IS UP TO DATE AND AVAILABLE EVERYWHERE	A ☐ 0 B ☐ 5 C ☐ 20
WHERE AND HOW ARE THESE OVERARCHING BUSINESS REQUIREMENTS MANAGED?			
A: NOWHERE. THEY AREN'T DOCUMENTED	B: EACH AREA RECORDS THEM INDIVIDUALLY, MOSTLY IN ELECTRONIC FORM	C: THEY CAN BE FOUND IN A GENERALLY-ACCESSIBLE TOOL OR DOCUMENT	A ☐ 0 B ☐ 5 C ☐ 20
HOW IS RESPONSIBILITY FOR THE APPLICATIONS ALLOCATED FROM THE BUSINESS STANDPOINT?			
A: NO BUSINESS RESPONSIBILITIES ARE ALLOCATED	B: EACH APPLICATION HAS A PRIMARY USER GROUP THAT GENERALLY DECIDES WHAT HAPPENS WITH/IN THE APPLICATION	C: EACH APPLICATION HAS A BUSINESS "OWNER" WHO IS ALSO RESPONSIBLE FOR FINANCING	A ☐ 0 B ☐ 5 C ☐ 20
0–10 points There doesn't appear to be a plan to ensure that applications continue to meet needs in the long term and to prevent departments getting in each other's way. You can prepare yourself by visualising your most important applications, determining who is responsible and who has the necessary knowledge. It won't take long.			TOTAL
11–59 points Basic needs seem to be covered. To respond more efficiently and cost-effectively where change is required, you could help related departments to work together and discuss their needs.			
60+ points The applications appear to cover needs very well. The necessary processes are in place to ensure this remains the case in future but there are places in which they could be even more efficient.			

IT architecture

HOW ARE DECISIONS ON ARCHITECTURE MADE?

POINTS

A: EACH PROJECT DECIDES INDEPENDENTLY ON ISSUES CONCERNING ARCHITECTURE

B: PROJECTS AGREE ARCHITECTURE-RELATED ISSUES BETWEEN THEMSELVES

C: THERE ARE GUIDELINES SUCH AS ARCHITECTURE PRINCIPLES AND A CENTRAL BODY TAKES THE RELEVANT DECISIONS FOR THE COMPANY AS A WHOLE

A ☐ 0
B ☐ 5
C ☐ 20

WHAT SCOPE DO THE INDIVIDUAL APPLICATIONS COVER?

A: THE SAME FUNCTIONALITY IS PROVIDED BY SEVERAL APPLICATIONS

B: CERTAIN APPLICATIONS ARE CLEARLY DISTINCT, OTHERS NOT

C: EACH APPLICATION IS RESPONSIBLE FOR A CLEARLY DEFINED BUSINESS AREA

A ☐ 0
B ☐ 5
C ☐ 20

HOW DO APPLICATIONS AND TECHNICAL COMPONENTS COMMUNICATE WITH EACH OTHER?

A: THE INTEGRATION PROJECT IS RESPONSIBLE FOR THAT

B: THERE ARE TECHNICAL AND CONCEPTUAL STANDARDS

C: THERE ARE CLEAR BUSINESS AND TECHNICAL INTERFACES BETWEEN THE APPLICATIONS

A ☐ 0
B ☐ 5
C ☐ 20

HOW ARE INDIVIDUAL APPLICATIONS UPGRADED?

A: THEY AREN'T. TECHNICAL OBSTACLES MEAN THAT APPLICATIONS CANNOT BE UPDATED OR REPLACED

B: ON AN AD-HOC BASIS WHEN IT IS NECESSARY AND POSSIBLE

C: THERE IS A LONG-TERM ROADMAP AND THE TECHNICAL FRAMEWORK IS IN PLACE

A ☐ 0
B ☐ 5
C ☐ 20

HOW DO YOU HANDLE MEDIUM TO LONG-TERM DEVELOPMENT IN YOUR APPLICATIONS?

A: WE ARE OFTEN TAKEN BY SURPRISE BY TECHNICAL UPDATES TO IT TOOLS THAT AFFECT OPERATIONS OR INTERFACES, ETC.

B: IT IS NOT PLANNED, BUT PURELY-TECHNICAL UPGRADES ARE IDENTIFIED AND DEALT WITH IN GOOD TIME

C: THERE IS A MEDIUM TO LONG-TERM PLAN FOR TECHNICAL ENHANCEMENTS TO OUR IT ENVIRONMENT

A ☐ 0
B ☐ 5
C ☐ 20

0–10 points

You risk losing the ability of your IT environment to continue fulfilling business requirements. The current systems may become technically obsolete or unnecessarily complex. It would be worth looking at technical architecture issues specifically and planning accordingly. The first steps here would be to draw up a road map and to agree on basic principles for your IT architecture.

11–59 points

You seem to be addressing the necessary technical work and your IT environment does not appear to be causing problems just yet. However, your IT work is generally reactive and spread around the company. To minimise the risk of future changes impacting negatively on your systems, it would be worth drawing up a medium-term plan with more detailed processes and tools.

60+ points

Your IT environment is meeting most of your needs and will continue to do so in future as far as it can. You might still fine-tune it in certain areas, however, to make IT an enabler for future digital products.

TOTAL

Cooperation

HOW DO YOU IDENTIFY NEEDS THAT ARE SHARED ACROSS DEPARTMENTS?			POINTS
A: ONLY BY CHANCE BECAUSE THE INDIVIDUAL SPECIALISTS KNOW EACH OTHER, FOR EXAMPLE	B: WE ENCOURAGE DEPARTMENTS TO COMMUNICATE AND COMPARE NEEDS OCCASIONALLY	C: NEEDS ARE COMPARED REGULARLY; BOTH IMPLICITLY AND EXPLICITLY	A ☐ 0 B ☐ 5 C ☐ 20
HOW DO BUSINESS AND IT WORK TOGETHER?			
A: ON AN AD-HOC BASIS; THERE IS CONTACT IF REALLY NECESSARY	B: RESPONSIBILITY FOR INDIVIDUAL ISSUES IS DEFINED	C: PROJECTS AND PLANS ARE COORDINATED REGULARLY	A ☐ 0 B ☐ 5 C ☐ 20
IN WHAT FORMAT DO BUSINESS AND IT COMMUNICATE WITH EACH OTHER?			
A: BUSINESS AND IT HAVE THEIR OWN WAYS OF WORKING THAT MIGHT NOT ALWAYS BE CLEAR	B: THERE ARE CLEARLY-DEFINED DOCUMENTS ON THIS SORT OF EXCHANGE THAT BOTH SIDES UNDERSTAND	C: OPERATIONS AND IT WORK WITH THE SAME TOOLS	A ☐ 0 B ☐ 5 C ☐ 20
HOW ARE NEW APPLICATIONS SELECTED?			
A: ACCORDING TO BUSINESS CRITERIA ONLY, WITHOUT CONSIDERING IT OR OTHER APPLICATIONS	B: ACCORDING TO OBJECTIVE CRITERIA BUT TAKING THE IT FRAMEWORK INTO ACCOUNT	C: IT IS PART OF THE EVALUATION TEAM AND HELPS TO FIND THE BEST OVERALL SOLUTION	A ☐ 0 B ☐ 5 C ☐ 20
WHAT TYPICALLY HAPPENS WITH MAJOR NEW DEVELOPMENT/DEPLOYMENT PROJECTS?			
A: SERIOUS PROBLEMS EMERGE WELL INTO IMPLEMENTATION THAT MASSIVELY DELAY THE PROJECT OR EVEN MAKE IT IMPOSSIBLE	B: WE CHANGE BUSINESS DIRECTION FREQUENTLY BUT RECOGNISE THAT IN GOOD TIME TO AVOID HUGE DELAYS OR EXTRA EXPENSE	C: PROJECTS CAN BE IMPLEMENTED ON TIME AND ON BUDGET	A ☐ 0 B ☐ 5 C ☐ 20
WHAT DOES BUSINESS THINK OF IT?			
A: BLOCKERS AND NAY-SAYERS	B: WE GET ALONG	C: SUPPORTERS AND ENABLERS	A ☐ 0 B ☐ 5 C ☐ 20
WHAT DOES IT THINK OF BUSINESS?			
A: THEY DEMAND THE IMPOSSIBLE BUT CAN'T EXPRESS WHAT THEY REALLY NEED	B: WE GET ALONG	C: THEY UNDERSTAND BACKGROUND AND STRATEGIES, AND CAN ALSO EXPRESS THEM	A ☐ 0 B ☐ 5 C ☐ 20

0–15 points

Business and IT rely on each other but still seem worlds apart. An intermediary might bring departments closer together by identifying the main weak points and illustrating them in visualisations that both sides understand. Business and IT should focus on their core competencies.

16–94 points

Business and IT are probably still communicating at a very project-based level and there is a shared understanding of each other's work. Understanding of the general architecture can be improved by highlighting the dependencies to those involved. This helps to get the company even better aligned overall.

95+ points

Business and IT seem to be collaborating well. Future projects can expand on this good working relationship, by steadily strengthening it or developing new products together. Interdisciplinary project teams consisting of business and IT, are very efficient and highly recommended.

TOTAL

These questions are not exhaustive. Interested?

