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Outsourcing: What to go for in your software development

Content

Outsourcing records

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Outsourcing tasks, projects or services is not new. It is nothing more than a modern form of labour division. Companies concentrate on their core competencies and outsource other activities to appropriate specialists. For example, the entire IT operation, individual tasks such as security and telecommunications, certain business processes or software development. The market research institute ISG currently sees the outsourcing market in Europe "at record heights".

In its nature, outsourcing is challenging due to opposing interests between the customer and vendor. Customers seek better quality, often at lower costs, than when doing the work in-house. The suppliers primarily want to be profitable. These objectives must be handled carefully so that the outcome is successful for both parties. In this light issue of .experience, we highlight some aspects of the outsourcing establishments and the individual benefits they bring to customers and their projects.

We wish you an insightful reading and are looking forward to your feedback.

Various forms for "Outside Resource Using"

Disruptive outsourcing is the new trend

Today, numerous different forms of outsourcing are distinguished. The "Outside Resource Using" could be classified according to very different criteria. For example, a distinction could be made according to the location of the relocation: Onshoring (in one's own country), off-/farshoring with an outsourcing partner in a (distant) foreign country or nearshoring.
With regard to scope, "insourcing" describes the commencement of a new activity within the company that has not yet been taken over by it. With "selective outsourcing", only part of a process or function is outsourced, whereas with "full outsourcing", at least 80 percent or more of a process or function is outsourced to an external supplier.

According to a recent survey by consulting firm Deloitte, traditional outsourcing is dead and will increasingly be replaced by disruptive outsourcing in the future. The focus is shifting from traditional work transfer to upfront transformation and automation. Organisations are recognising that disruptive solutions can revolutionise the way they do business, and that "buying" capabilities in the marketplace is generally faster and more scalable than developing capabilities internally. Emerging solutions incorporating cloud and automation are empowering organisations to work smarter, scale faster, reach new markets, increase productivity and, ultimately, to gain competitive advantage. The primary goal is to accelerate innovation, increase effectiveness or expand business. Fifty-nine percent of respondents in the Deloitte survey want to bring products and services to market faster. The technologies required for this, such as cloud computing, robotic process automation (RPA) and artificial intelligence (AI), give companies the opportunity to use outsourcing to realign their own business models.

Vested Outsourcing: Five Rules That Will Transform Outsourcing

Change is the new status quo in today's business world. New smart, lean and more efficient methods for increasing a company's market share and top line have been created, and the adoption of their methods and practices will be the differentiator between growth or failure in this new business environment. In Vested Outsourcing, supply-chain innovator and lead researcher Kate Vitasek has created a new business model that will transform outsourcing procedures the way business management strategies Six Sigma and Lean improved production processes in the 1980s and 90s. Based on a research study by the University of Tennessee with the United States Air Force, Vitasek has identified the top 10 critical (and often invisible) flaws inherent in almost all outsourced business relationships. She then shows organisations how to reinvent their outsourcing relationships to ignite innovation, improve service, lower costs and increase profit.

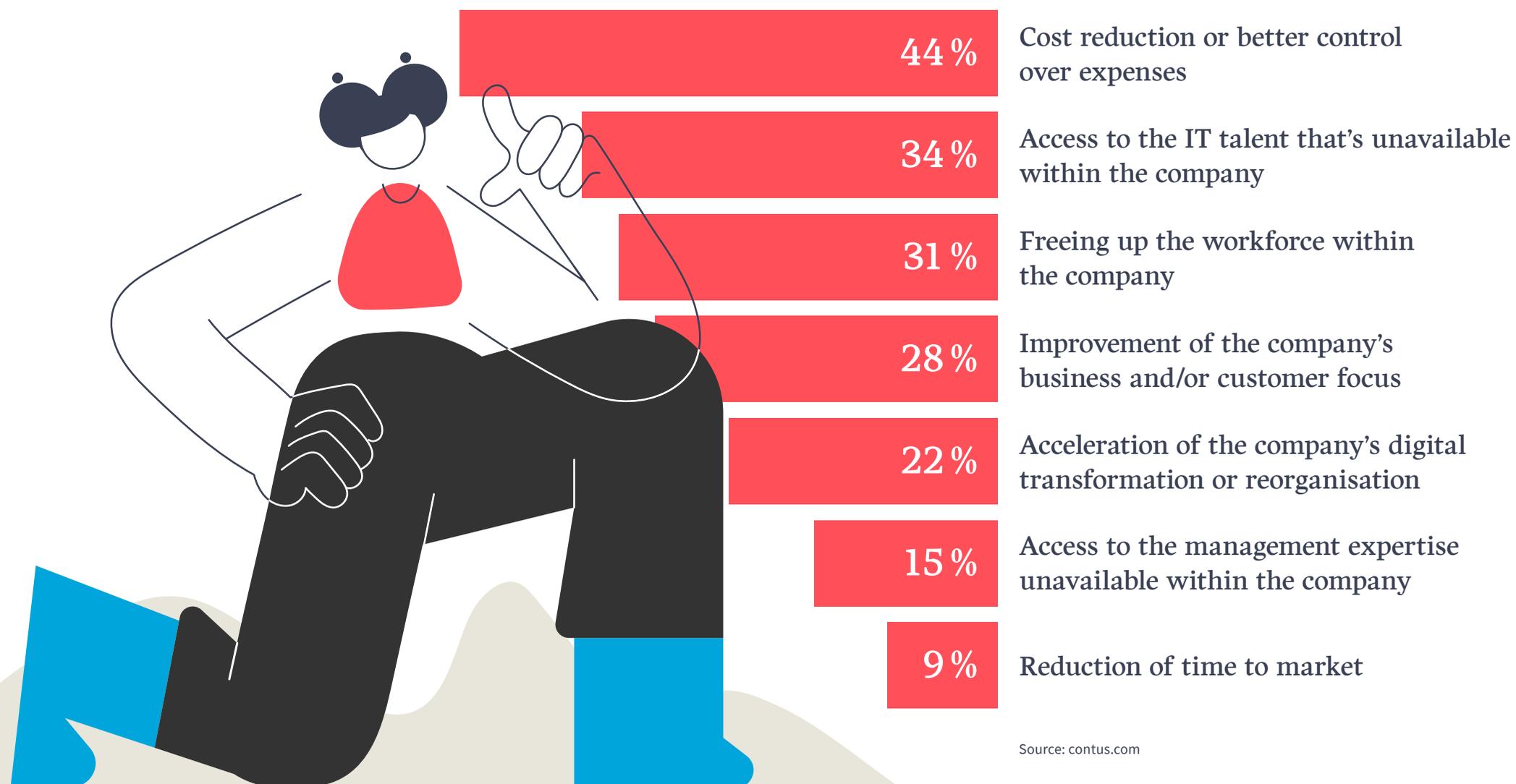**Outsourcing- All You Need To Know**

This book is the definitive guide to leveraging the external services market for business advantage. Based on 30 years of research into over 2,100 organisations and advisory engagements throughout Europe, the Americas, Asia Pacific and Africa, three world authorities detail the frameworks, lessons and practices that inexorably produce high performance. They pinpoint the who, where and how of leadership, establish the strategic agenda and configure the outsourcing arrangement, how to manage across the outsourcing lifecycle, the vital client and supplier capabilities.

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Several factors influencing the decision

Make or buy? Do-it-yourself or outsourcing? Every company today is challenged to put itself, its services, its organisation and its costs to the test bench again and again. At the least, this raises the question of what belongs to one's own core competencies and what does not. And this is followed by the question of whether it is advantageous to outsource certain processes or areas. However, this decision can be quite complex and is not so easy to make.
On the one hand, it depends on the type and scope of the processes to be outsourced. Are you dealing with one-off or recurring tasks? Routine activities or new challenges? What is the relationship between your own efforts and those of outsourcing and does this increase the company's flexibility? Above all: Is there a specialised and trustworthy outsourcing partner who can adapt individually to the needs of the client?
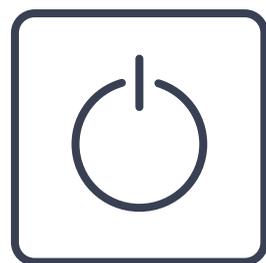
Most important reasons for outsourcing software development

44 %	Cost reduction or better control over expenses
34 %	Access to the IT talent that's unavailable within the company
31 %	Freeing up the workforce within the company
28 %	Improvement of the company's business and/or customer focus
22 %	Acceleration of the company's digital transformation or reorganisation
15 %	Access to the management expertise unavailable within the company
9 %	Reduction of time to market

Source: contus.com

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Case Study

Nearshoring for a textile industry project

Initial situation

Our customer, a global player and market leader in textile quality control, produces systems for ensuring quality and competitive products with a long lifecycle. We'd already had a well-established long-term partnership and, based on past experience with the development teams in Bratislava, they decided to develop two more applications with us. The customer especially values the good communication, technical skills as well as the available UX/UI experts and flexibility. Both of the applications have been successfully launched and the project finalised. The customer developed the hardware, electronics and mechanical design of a measurement appliance and some embedded software written in C. A desktop/touch application needed to be developed as well – here we came into play – already acquainted with the sensors of the hardware and actively coming up with functionalities.
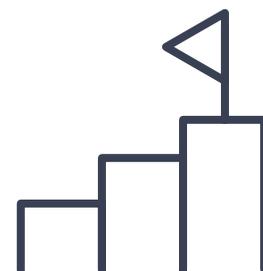
Challenges

At the very beginning of the partnership, the customer did not have any experience with the Agile methodology or Scrum, but they were open to trying it out. Also, this was the first time that both hardware and software had been developed using Agile methodology. The hardware and software had different sprint durations – the hardware was developed in 6-week-long iterations and the software within 3-week-long iterations. Also, there were different teams for taking care of the hardware development and the software development; therefore alignment and coordination between the teams was needed.

The team and the project

Within the project, distributed teams had to work together. The customer's team was located in Switzerland and the software development team in Bratislava, Slovakia. In Switzerland, one developer and the product owner were part of the team. In Slovakia, we had covered the work with five developers, two testers, an owner proxy and a Scrum Master. We not only had online meetings with the customer sharing the Scrum board but also regular video standups, calls and chats. To enable the possibility of end users to connect and send their measured data, the customer also had a management tool for direct production analysis, so our development team had to synchronise regularly with the team who developed the management tool. This was necessary for smooth communication between the management tool and the applications. The Scrum Master had regular meetings with the PO to discuss if everything was running as planned and, of course, also with the team as a retrospective on what was and was not running optimally.

Outsourcing models and finding reliable partners

Once the decision to outsource has been made, the next question is: **Which model** should be chosen? For example, offshoring, nearshoring or onshoring? And how can you find a reliable partner who understands your **corporate culture** and goals so well that friction losses are kept to a minimum?
Also, there are several outsourcing models deployed by CIOs. The types of outsourcing models in daily practice are:
Governance Based-Model
Pricing Based-Model

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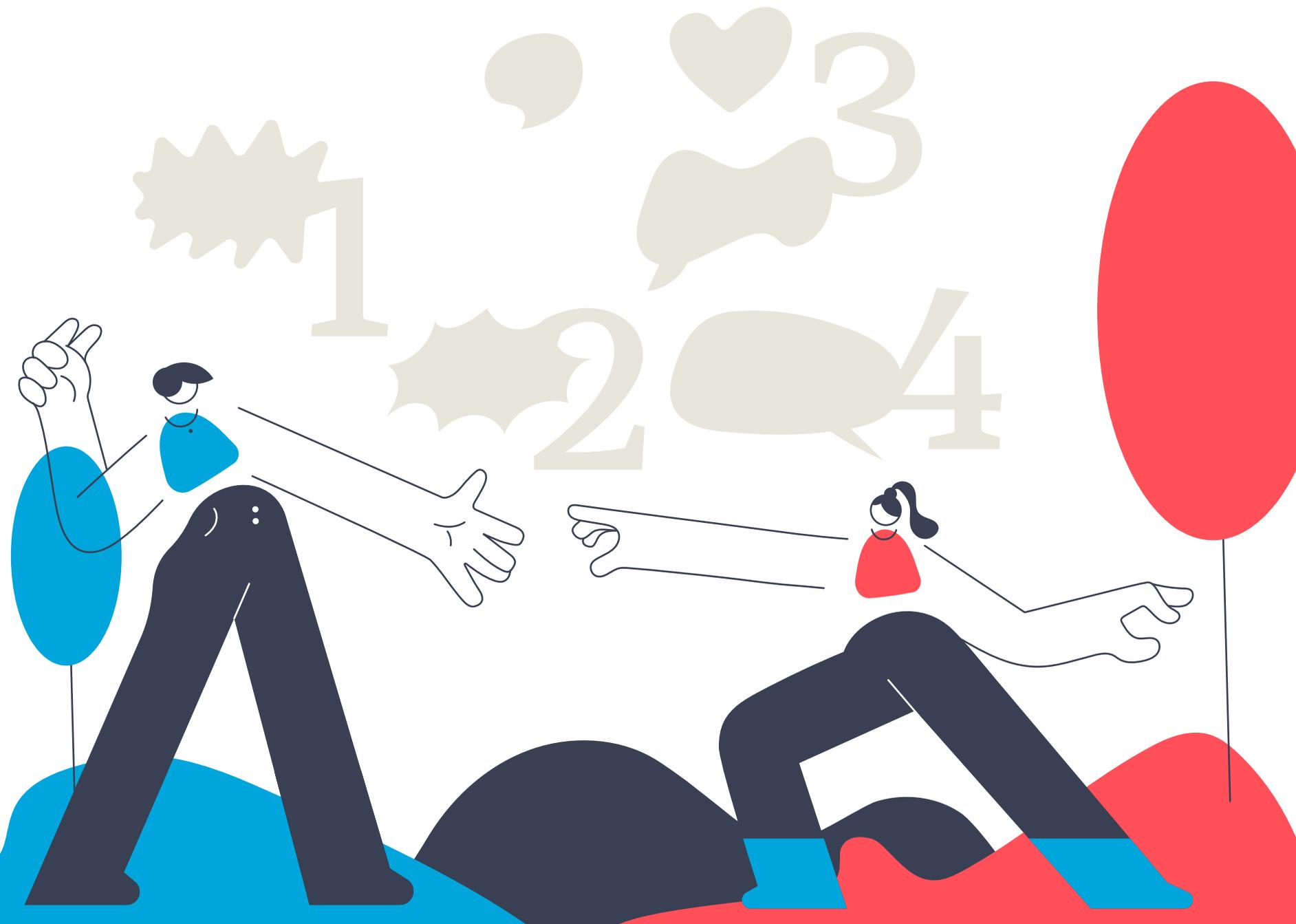
Governance-Based Model

This model is based on an **optimal division of responsibilities** and focuses on cost **provisioning and labour delivery.** An IT governance model allows the customer to maintain optimal alignment of **strategic IT functions** to meet their business needs and **increase competitiveness**. There are three types within this model.

Specialist at customer

In this model, consultants from the outsourcing vendor act as an extension of the customer's project team and they will be supervised by a customer manager responsible for the delivery.

This model is mostly applicable when certain skills are not available in-house.

Another reason for its use is when additional headcount is needed.

Managed Services Model

Managed Services is widely acknowledged as the best model to adopt for technology outsourcing if you have a long-term outlook.

Vendor will be responsible for selection of resources as well as take responsibility of managing stakeholder expectations.

Pricing-Based Model

As the name already indicates, this model is based on the **price**, where the defining guideline are the payments to vendors or the pricing of the work order. A **sound knowledge of pricing models** and the **Pros** and **Cons** can make your **decision process easier**. Every company can greatly benefit from outsourcing software development tasks to another team, ensuring project completion on time and within the budget. There are some basic models you can choose from: **the time & material model and the outcome-based model.**

Time & material based-model

The payments are based on work delivered in regular intervals. The customer has an important role in the software development process.

Good cooperation between the team and the customer is crucial. It is the customer who carries risks related to the scope.

| Changing requirements | No clear project scope | Needs flexibility | The customer wants to be involved in the project | Long-term project |

Outcome-based collaboration

The customer and the developer team set KPIs before the beginning of the software development. Payment is done after achieving the

predefined KPIs only after the customer is justified with the milestone achieved.

| Long partnership | Ongoing budget | Good relationship with a high level of trust | Control of performance according to measurable KPIs |

Offered collaboration models

	Development partnership	Turnkey	Managed Services
Definition	ERNI provides one or more Managed capacity development teams. The structure can either be based on processes and the tools of the customer or of ERNI.	ERNI is responsible for the result.	ERNI provides the customer with the service. The customer measures and steers through SLAs and KPIs. Examples are: maintenance, support, testing services, development services.
How ERNI is measured	Can we provide the expected development capacity? Fluctuation and scaling according to agreement.	Customer acceptance: Does the product comply with the agreed requirements?	Can we meet the agreed KPIs (response time, availability, scalability, delivery-to-order, time-to-fix, time-to-restore, …)?
Contract type	Service	Work	Work or Order
Offset	According to personnel expenditure with or without cost ceiling	Fixed price with payment plan, story-point price, rarely according to expense	Service-based (example per test case), KPI-based (time-to-fix), Story point, per development work order, Annual basic fees

Who?
• A major telecommunications provider

What they got
• A new contract framework giving them the opportunity to scale the required work capacity up or down without huge rework on the contract itself.
• A clear measurable KPI on what we as a service provider should deliver.
• The quality delivered raises in time with an established team and the responsibility that we carry for the results.

What they needed
• The customer wanted a switch to a model that sustainably delivers small efficiency gains with a stable team, and at the same time a reliable answer on what they can expect on work to be delivered at a higher quality, better velocity, and efficiency of delivery.
• For the work that we deliver, we give a guarantee for the upcoming year. If the customer finds a bug in our software during the year, they get a fix in that time for no costs raised.

How?
• We discussed the objectives of the customer.
• In the measurement phase, we measured the team velocity as well as all related parameters and defined KPIs for the outcome-based model.
• Together with the customer, we agreed on the parameters for accepting and closing the contract.
• We switched to the outcome-based collaboration.

Case Study

Outcome-based collaboration

One of our customers in the telecommunications area requested more efficiency in service delivery alongside raising quality. Is it possible to achieve these seemingly contradictory conditions? Yes. We proposed to switch from the time and material model to an outcome-based collaboration.
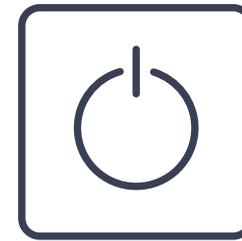
Initial situation

Our customer had a request to raise velocity, efficiency and the quality of our long-term delivery even more. This was meant to deal with the question of how this could be reached and what it would mean for the working model of our teams. How do higher velocity and quality reflect in measurable KPIs? The task for us as service deliverer was to find parameters that we could work on and where we could change and improve. An even more important aspect was how to do this on a long-term basis sustainably.

Process

Our ideations brought us to the thought of changing the model from time and material-based to an outcome-based model. Generally, if you have an established team, it grows more and more unified and gets better with time in terms of know-how, communication and knowing the aspects of the project and the customer. These are the efficiency gains for the customer. With the same team working for the customer and the same type of work, they can work steadily faster. On the other hand, for us as a partner delivering the service, it was important to take over more responsibility and gain ownership. In this sense, we are not only delivering the code but we are also responsible for entire stories and take over responsibility for the seamless functioning. To show the customer how such a model could work, one of my colleagues arranged a reference visit at a customer who was already making use of this collaboration model. It took us approximately two months from the first talks until the agreement was finalised for the new model of delivery. We worked closely with the customer. Initially, as part of a measurement phase, the team worked on a time and material basis and the velocity in sprints was measured. In this phase, we also settled all aspects like the definition of the process, how everything would be measured, how we would measure the velocity, and the definition of a reference story and a story done, etc. After this, we had the average team velocity on hand, indicating also the capacity at which this team was able to deliver. Parameters for accepting the contracts and for closing the agreements were defined. After that, we transferred the work to the outcome-based model. We have closed the agreement, and further projects are going to switch to this model based on this case with the same customer.

Outsourcing in software development

What is suitable for it?

The reasons for outsourcing are actually always the same: Lack of in-house expertise – i.e. too few or not the right employees on the one hand – and concentration on the core business on the other. Often there is also a lack of internal resources for the implantation of new technologies such as cloud computing, artificial intelligence or virtual reality. And for the in-house IT department, it is often not so easy to keep up with constantly changing requirements in addition to daily operations. After all, this would also mean continuous further training for the company's own staff. In a study, the ZHAW School of Management and Law writes "the decision on outsourcing and offshoring is becoming increasingly important for the success of companies", and also sees in particular a trend towards nearshoring.

Combining agile development methods and shoring

"In the service and IT sector in particular, Swiss companies are facing major challenges due to cost pressure and the availability of skilled personnel", the scientists state. In addition, more and more software development projects have to be carried out faster and more cost-effectively, whereby requirements are constantly changing.

Many companies now use agile methods such as Scrum which can help to increase flexibility and speed. At the same time, offshoring and nearshoring are intended to achieve the greatest possible cost advantages. A contradiction? Not necessarily, because both approaches can be combined quite well with each other.

However, some organisational, psychological and technical changes are usually necessary to make the transition from traditional to agile offshoring. In agile development, for example, direct cooperation with the users of a product or application is expressly requested in order to receive unfiltered feedback and quickly improve the solution. But how is this supposed to work if the software is written on the other side of the globe?

*DevOps
the efficient cooperation of
the areas software development
(=DEVelopment) and system
administration **(=IT OPerations)**
as well as quality assurance
in the entire lifecycle of applications –
also requires a fundamental
change in corporateculture and
philosophy.

Restructuring in the organisation is usually necessary

If working with distributed teams is already a challenge in traditional projects, whether due to different time zones, language barriers or general cultural differences, the required self-organisation of the teams with agile methods is an additional hurdle for successful projects. Gone are the days when offshore teams mainly accepted simple assignments and completed them as cheaply as possible. If you want to combine agile development with offshoring, you will hardly be able to avoid restructuring your organisation.
This is the only way to implement projects for customers at high speed and to quickly implement suggestions for improvement. Since the development of mobile apps is usually a relatively small project compared to other software projects, it is ideally suited to be carried out in another country by local programmers with the help of agile methods. The current trend towards Progressive Web Apps (PWA) also benefits offshoring.
With the help of DevOps*, the entire process can be further optimised. The increasing digitalisation of business models requires a continuous management of software, web and mobile applications with flexible adaptability.

## Outsourcing of quality assurance is popular

In addition to the creation of mobile apps and PWA, the development of web applications, solutions for the Internet of Things (IoT), communication and data interfaces, database applications as well as system software and device drivers are also outsourced. There are also many good reasons for outsourcing quality assurance: This allows developers to concentrate on the essentials - the development of useful functions – and specialised partners usually offer test services at a lower price. However, there is often a lack of in-house personnel to handle the upcoming tests before a new release within a reasonable period of time. In this case, outsourcing helps to bring software with assured quality to the market faster.

From the daily life of an Agile Coach

Interview with Christine Salzeller,
Agile Coach and Scrum Master, ERNI Switzerland

Christine Salzeller has been with ERNI since 2017. In 2013, at her previous job, she first came in contact with Agile and Scrum, which she got to know as an alternative to the classical waterfall model. She took over the role of a **Scrum Master** at ERNI in April 2019 and currently **coaches three teams**. In this interview, Christine tells us what a typical day of an Agile coach looks like.
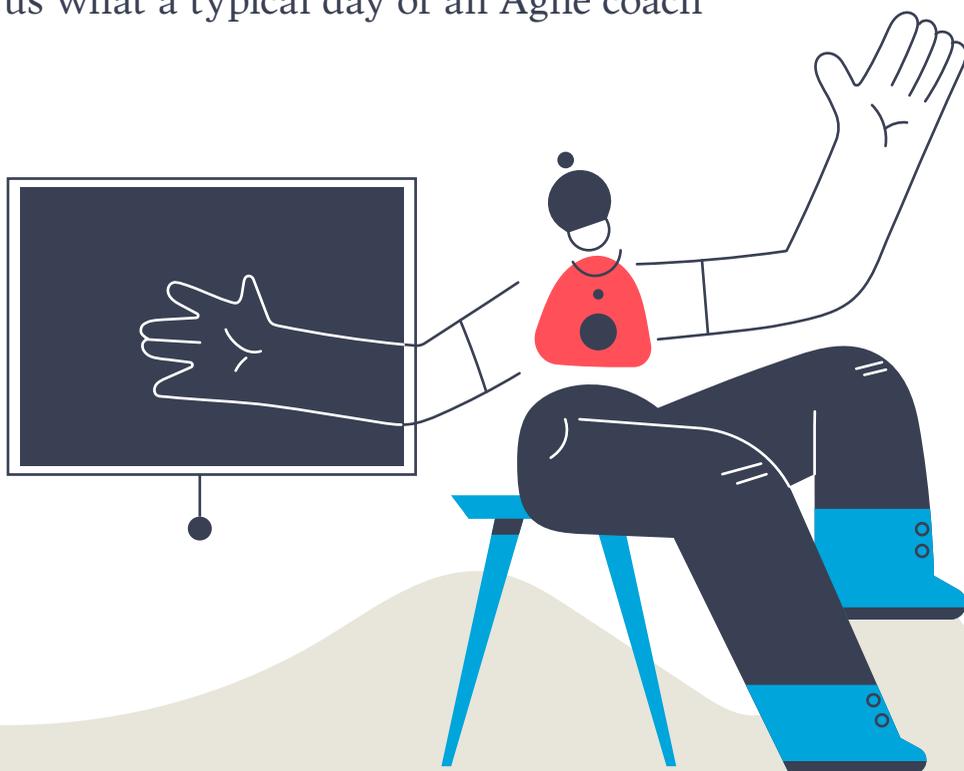
Christine, have you always been active in the field of IT and Consulting?

I started my IT career with my apprenticeship as a Software Engineer and acquired a Bachelor's and later a Master's in Business Informatics. I have always worked in IT, and have been doing some form of programming, continuous integration and process improvements for the development process for approximately nine years. In recent years, I have also done IT consulting in a big manufacturing company and now for ERNI. I have always been interested in the field of agility and took a deep dive for my master's thesis in this topic and also in my last mandate. Most recently, I wanted to invest more time into this topic and took over the role as full-time Scrum Master.

What does a typical day of a Scrum Master look like?

Such a day does not exist. We have two-week sprints with fixed Sprint Meetings – so every two weeks, the appointments are time-fixed here. Daily stand-ups start at 8:45 in the morning (a very important meeting to get an inkling if something is going wrong or is on track in the team!), three of them one after another with the three teams I work with. We have Refinements every Tuesday, Plannings every second Thursday and Retrospectives on every second Wednesday. This is the regular part of my job. Added to that, I am always aware that new or unexpected things can happen and I have to react to them. I take a look at my inbox even the evening before, to get a feeling of how the situation in the teams is and try to understand what has changed, what has led to certain situations or how the mood might be. I also might have face-to-face meetings with individual team members, plan some additional meetings to clarify uncertainties and remove impediments in the teams, or prepare for and follow up on different meetings.

What happens during a daily, a retro and a planning?

During a daily, we take a look at what happened since the last daily. Each of the team members reports what was done since yesterday, what the next steps are and if there are any problems or if assistance from others is needed. If someone needs support, we deal with it. Sometimes I am the moderator, but most of the times the teams do it in a self-organised way.

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For me it is a very important meeting to get a hint about the mood in the team and find out about possible tensions and clarify them. We also involve additional general information if there is any. In a retrospective, we focus on the things that are working well or missing, possible improvements in the scrum process and how we as a team will deal with the challenges, and try to define action points. It is important to strive to-wards good communications. During the planning, we take a look at the prioritised backlog, plan the coming sprint and discuss what the team can commit to finish. We take a closer look at the capacity of the team and distribute the workload accordingly concerning what is doable within the next sprint and discuss which tasks are needed to fulfil the commitment. The refinement can be viewed as a type of preparation for the planning; it involves clarifying dependencies, open questions, the complexity (in story points) and whatever is needed for the tasks to be understood by the team, so we do not need to go into deep detail in the planning as it is already known by the team what has to be done.

What influences the success of your day in the end?

There are many things. There may be good feedback from the team members that a process is finally working smoothly; we may complete a feature or have a good team event. I am always happy to cele-brate a partial, small or big success with the team. Also, solving a conflict is among the pleasant aspects if it has been handled well and successfully.

What are the main character features that a Scrum Master should have?

Especially in the time of remote work, empathy is needed and a feeling for people, e.g. being attentive to the tone of voice when speaking, as well as reading between the lines, in order to identify conflicts or dissat-isfactions. When I register having perceived something like this, I speak up and we deal with

"If there are organisational difficulties, the coach is the one who has commit to challenges regarding moving and changing."

it. Being a bit persistent also belongs among the traits, I would say. If there are organisational difficulties, the coach is the one who has to commit to challenges regarding moving and changing.

What do you consider as the biggest challenges in your work as Scrum Master?

Working with people – not only the team but also the organisation. You are dealing with various personalities who are also influenced by their private lives, cultures, different environ-ments, etc. Having all members find a goal and walk together towards it is also not easy some-times. The remote situation has made this more difficult, but with time I have learned more and more how to deal with it also under these circumstances.

What helped you in the role at the beginning?

I see the certification as Scrum Master I did at the beginning as the foundation. On the practical side, it is the communication with and learning from others, e.g. in a Scrum Master Community circle.

What would you recommend to the Scrum Masters or Agile Coaches who are only starting out in their role?

I would say to be open to all sources of information, yet also keep up the exchange and communication with other coaches and team members, which can broaden your view.

Would you like to add something important about the role you play as Scrum Master in a team?

Being a Scrum Master in one organisa-tion can be a different role from what you will find in a different organisation or team. Be open to the changes, the differences/diversity and exchange with others – you will grow from it.

About ERNI

ERNI stands for Swiss Software Engineering. What are we really interested in? How we can support you and your employees better than any other company in developing and marketing software-based products and services. Our global platform for software development in combination with a sound understanding of the market forms the framework for our customers' success. Our team also implements complex projects, empowers people and delivers outstanding customer solutions in the shortest time. We apply the Swiss mentality with behaviours such as consensus building, pragmatism, integration, reliability and transparency on a global scale – and have done so since our foundation in 1994. Together with our great team, which is the basis for successful software projects. Today, the ERNI Group employs more than 800 people worldwide.

About .experience
In this magazine, which is published three times a year by ERNI, we provide information about important experiences that we have learned in our daily work in the areas of collaboration, processes and technology.

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