ERNI Experience reports on management, processes and technology

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SEEKING THE RIGHT SOLUTION

ERNI
enables & delivers

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The motivation for seeking external help is usually driven by a lack of resources or know-how and comes in various forms. The support can range from purchasing the complete solution, engaging an external service provider at the customer's site, to the training of employees. Choosing the right type of service will impact on success and failure, therefore it is just as important as choosing the strategic partner. A good solution provider has experience in various service types and can give advice on the type of support that is most sustainable in any given situation.

In this issue of Experience, the first article discusses important considerations when choosing a service partner. It points out how client and partner can leverage effective forms of cooperation in order to achieve an optimal solution.

The second article illustrates how an experienced partner takes additional measures during or after the software development process, to ensure the cooperation is successful and generates benefits over the long term.

How guidance and enablement delivered by an external partner can empower internal employees and structures, is the topic of the third article. It examines a situation where external expertise is required, alongside the reinforcement of internal expertise.

The fourth article goes even further: based on training sessions that follow a practical and methodical approach, external consultants can systematically build up internal expertise with a strong focus on identified knowledge gaps.

This issue will show you how projects enjoy greater success if the right types of cooperation are applied. Examples of solutions, consulting, training and engineering will be used to demonstrate their impact on project success and sustainability.

We hope you will be inspired!

Best regards,
Reto Lütolf

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TRUST, AS THE CORNERSTONE OF SUCCESSFUL SOURCING PROJECTS

Outsourcing software development can help companies to gain incremental capacity focusing on their core business.

Outsourcing software development can be the ideal solution for companies that need to reconcile the competing needs of IT quality, cost pressures and time-to-market. Of course, trust is a key issue when it comes to any strategic partnership of this type.

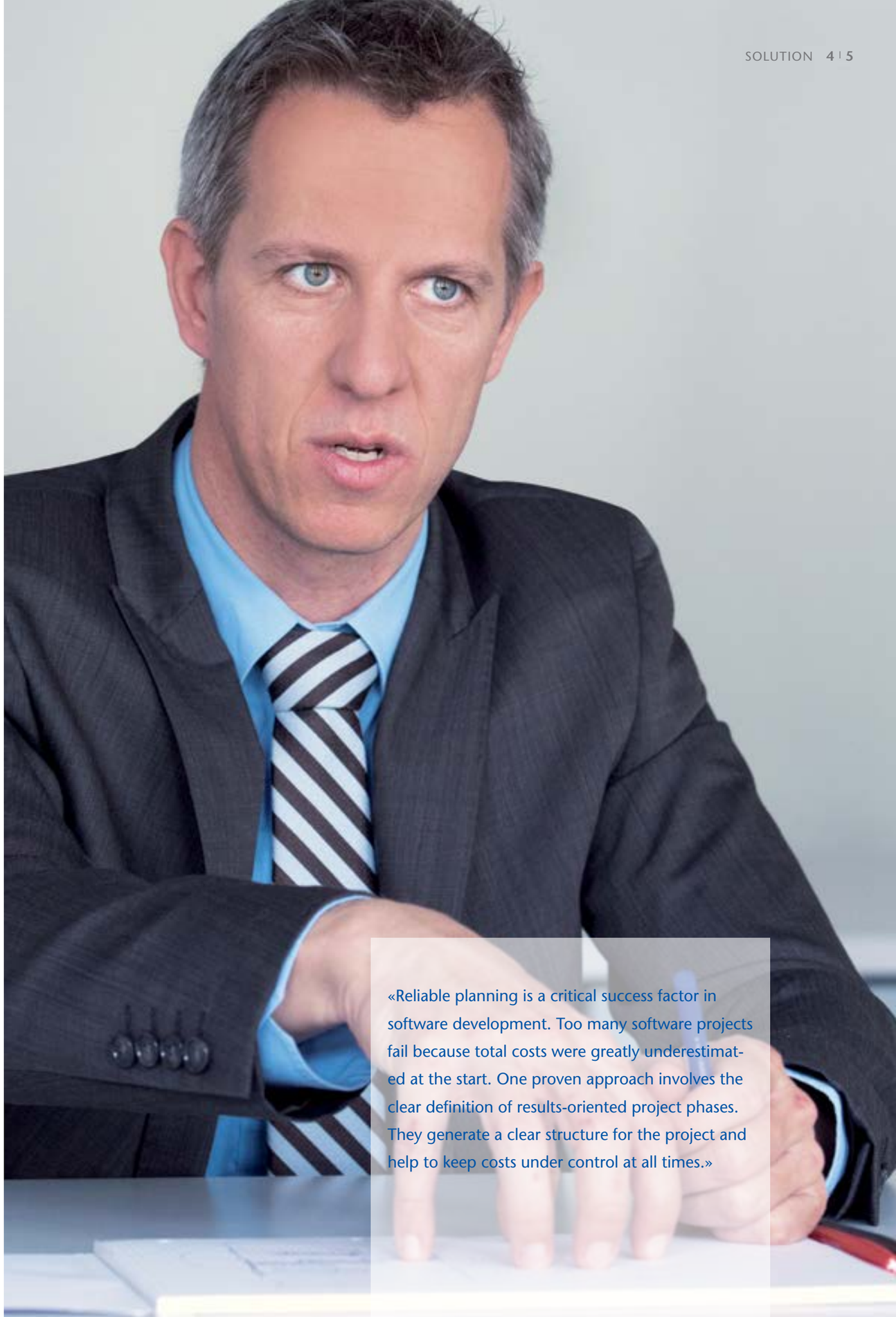
BY DOMINIK BISCHOF

Cost pressures, resource deficits, scalability and flexibility are among the many legitimate reasons for companies putting their trust in a specialised partner to handle their software development. As a rule, a company that outsources software development has more financial control over the budget, creating a positive impact on costs. Even if a company's IT staff are extremely well trained, the internal IT department of an ordinary business can rarely compete with the level of experience and expertise of a service provider specialising in software development and IT consulting. Within many companies, the development of platforms and software is not part of their core competencies. Instead, it is often an activity tied to specific tasks: an online platform is needed to sell a product, or software is needed to operate a new device. By outsourcing software development, companies are able to free up resources that can then be redirected towards their core business.

Of course, with regards to the structure and practical organisation, finding the right sourcing partner requires careful consideration. Reliability is the top priority since outsourcing software development requires a close relationship between the client and the partner. The client must be able to have complete confidence in the partner at all times if a strategic partnership is to develop to the full extent. Besides «hard» factors such as technical competence, experience and a professional organisation, «soft» *(interpersonal)* considerations are also critical to the overall success. Here, the service provider above all, is expected to demonstrate to the client that they are interested in a long-term strategic partnership *(as opposed to short-term order flow)*.

An ideal starting point for any strategic long-term partnership is often a preliminary phase ahead of larger initiatives. It represents a great opportunity to analyze the project in detail and reduce its complexity. This gives both parties the opportunity to get acquainted and see if they can work together productively. Moreover, the service provider can demonstrate tangible expertise to the client within a small-scale engagement. This approach is often recommended, simply because at this stage, the goal of the sourcing strategy is often still very vague. At this point, the client has already made the decision to rely on external expertise and resources for software development. However, frequently it is still unclear what exactly this means in detail and with regards to the cooperation. A preliminary phase of this nature offers the perfect environment for the client and the service provider to jointly clarify all requirements, define the scope of the project and determine who is responsible for what. Most importantly, this phase helps to boost the level of mutual trust.

In many cases, the right solution cannot be determined until issues have been analysed within such a preliminary project phase.



«Reliable planning is a critical success factor in software development. Too many software projects fail because total costs were greatly underestimated at the start. One proven approach involves the clear definition of results-oriented project phases. They generate a clear structure for the project and help to keep costs under control at all times.»

FIG. 1: PROJECT PLAN/ROADMAP

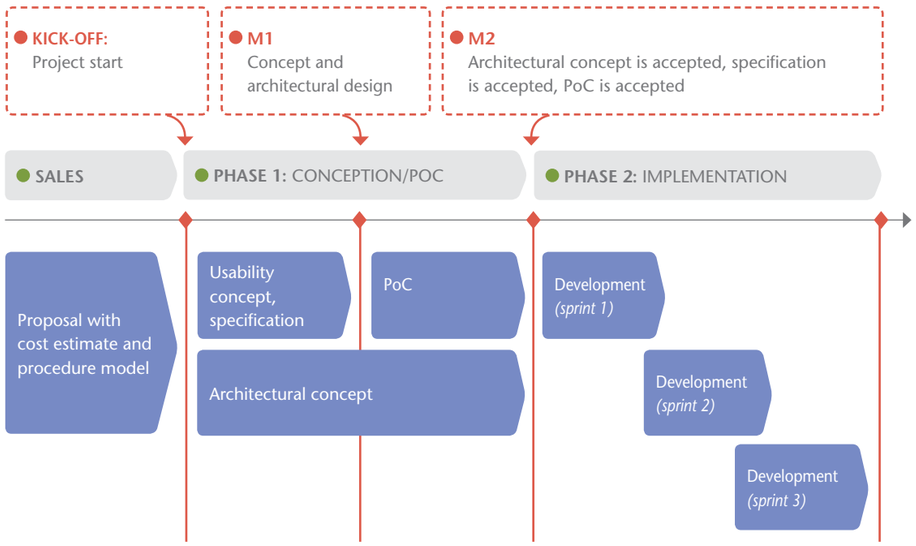
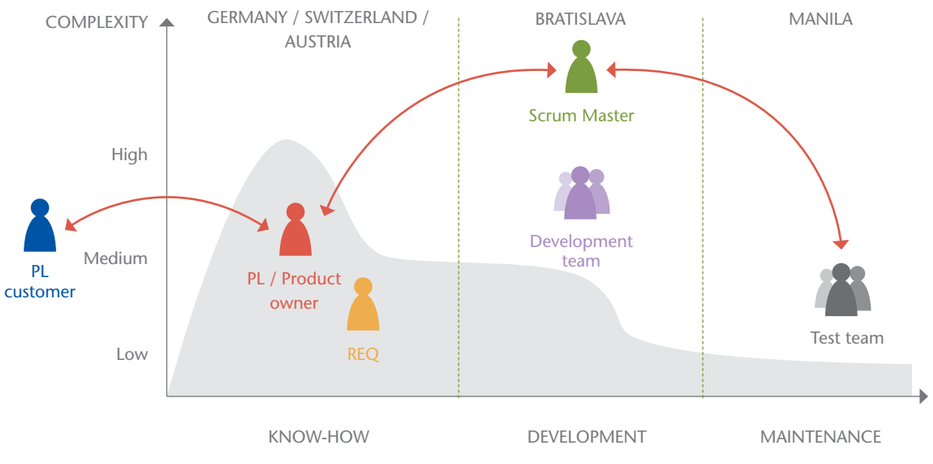


FIG. 2: TEAM SETUP / INTERFACES



Although the level of expertise of a professional IT service provider should not be underrated, every sourcing project definitely has its own unique characteristics. As a result, in most cases, off-the-shelf solutions cannot be expected to help the client. Instead, approaches that are tailored to the specific situation are required. However, preparation of individual solutions of this sort requires the service provider to have an intimate understanding of the client. How is the client's organisation set up? What are the client's strengths and weaknesses? Most importantly: What exactly is needed and what is not? The service provider's outside perspective is a strong benefit in this situation. Thus, in many cases the client will experience difficulties in accurately summarising internal requirements. To address this challenge, the service provider can work on-site with the client to establish a comprehensive picture of the clients requirements, which will then lead to suitable and accurate recommendations. This will help clients to reduce any unnecessary costs.

Example:

RELIABLE PLANNING OF SOFTWARE DEVELOPMENT USING A PHASE-BASED PROJECT APPROACH

A trading company decides to migrate its application to a new platform, because of its existing heterogeneous system, which has evolved over a number of years, and can no longer be extended to meet new requirements. Until now, the company has developed its software in-house. Due to more demanding and complex requirements, the company decided to work with a professional external partner to develop its new software. For this purpose, the company requests information and proposals from several IT service providers.

«Cost pressures, inadequate resources and a desire for flexible scalability are among the many reasons for companies turning to external partners to handle their software development. Trust lies at the very core of every successful partnership. A preliminary phase offers the ideal framework for both client and prospective partner to get to know one another.»

At this stage, the main difficulty regarding the project is the fact that the information available does not allow any accurate cost estimates.

Two IT service providers propose to structure the project into two phases: analysis and implementation. In this scenario, the client would have to approve the first phase *(already accounting for a large share of the budget)* without having an estimate of overall costs or an outline of the challenges associated with this project.

The third IT service provider, on the other hand, proposes to divide the project into three phases: in the initial phase, consultants from the service provider will establish an overview of the project and its requirements, based on document analysis, interviews and workshops. They will then prepare a proposal on how to proceed, including an initial cost estimate. In the second phase, a detailed specification will be drawn up along with an architectural concept. This information will then form the basis for a binding price proposal. The third and final phase concerns the actual implementation. Thanks to this multistage project structure, the client can plan their budget accurately at all times. Moreover, the clear structuring of the project gives the client the option to change service providers upon conclusion of each phase, without any associated hidden risks or costs.

The client opts for the multistage approach. Following intensive preparatory work, it turns out at the end of the second phase, that the original budget estimate from phase 1 was relatively precise. As a result, the actual project – development of new software – can now begin. In phase 2, the service provider also creates initial prototypes of the software desired. These serve as a proof of concept for the new software architecture. This is an opportunity for the service provider to build the necessary level of confidence with the client. Such a mutually trusted relationship and confidence in the new solution will establish the ideal conditions for the subsequent phase 3, involving the development of software meeting the company's needs optimally and delivering high quality.

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ENSURING LONG-TERM SUCCESS FOR STRATEGIC PROJECTS

The success of major projects is highly dependent on smaller preliminary project efforts supporting the initiative.

In very large strategic projects, organisations frequently focus on a single objective. However, sustainable results require a broader perspective with strong focus to long-term success.

BY CÉDRIC ESCHER
AND JEAN CHRISTOPHE DUMÉRIL

Globalisation, competitive and cost pressures, lean management – there are many factors that may trigger strategy changes such as out-sourcing plans and restructuring programmes. Projects of this type can have far-reaching consequences for the internal organisation. This is also true for the processes it uses, since the technological implementation will ultimately impact internal processes. Quite often the expertise and resources required for successful planning and implementation of a strategically important project are not available in-house. Nowadays, there is an increasing trend to purchase what is needed from an experienced external solution provider.

The greater the emphasis placed on the project, the higher the risk of focusing exclusively on this single effort: By focusing so much attention on the desired objective, the company underestimates the preparations and supporting measures that such extensive projects typically require. Soft factors play a major role in the success or failure of any corporate transformation and are frequently ignored. This is mostlty due to a a certain internal euphoria surrounding the project's perceived positive impact on the business. However, change competence and knowledge transfer represent qualities that are not necessarily present and fully embraced within every company.

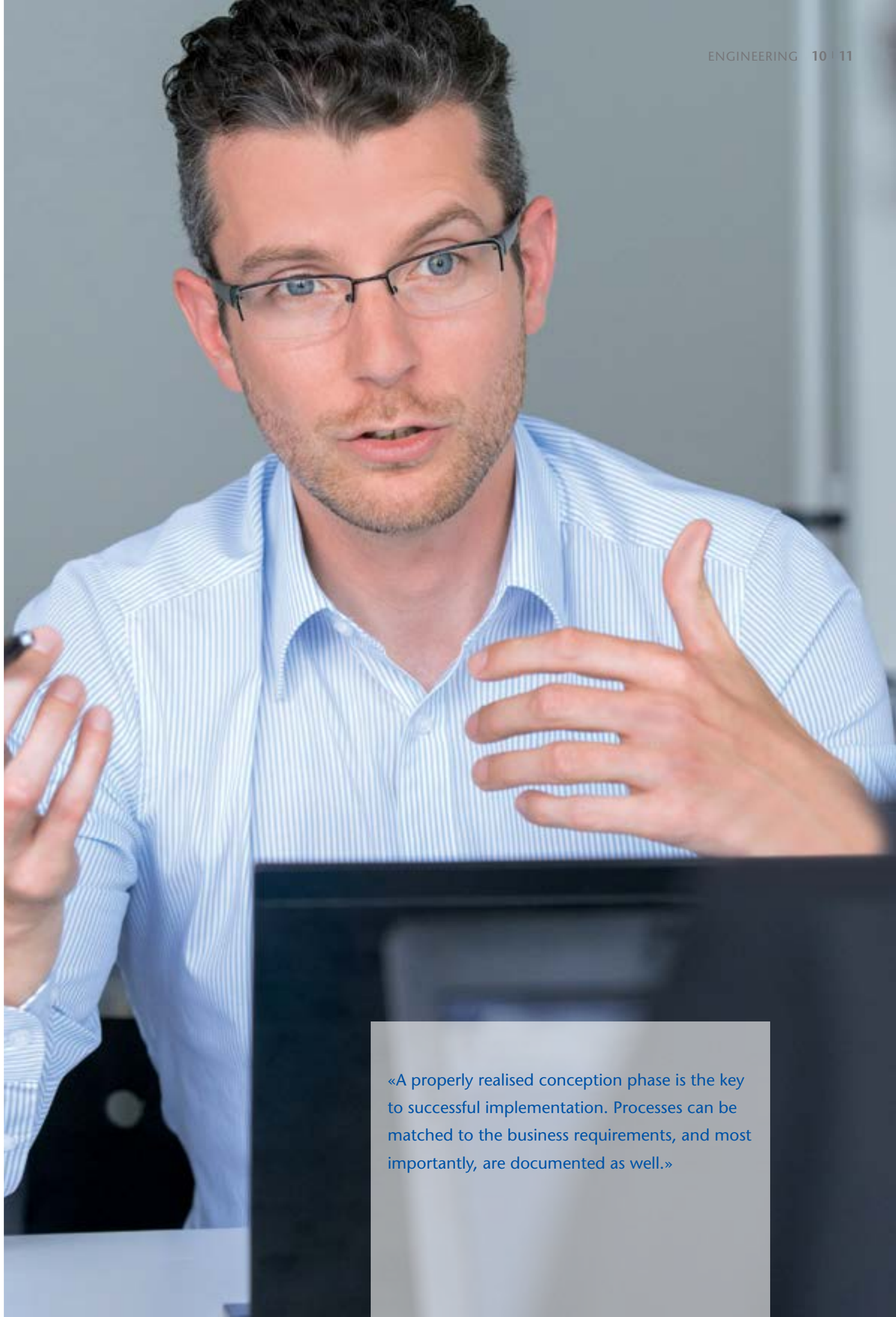
In order to avoid any unplanned additional costs, delays or inefficiencies in implementation and ensure the project's success, an integral approach to planning is essential. Here, companies need to consider two key questions:

Are there any factors, for example the infrastructure, software, processes or employees, that could distract from the success of the project? Which factors should be tackled in advance? Would it pave the way for the strategic project?

What additional requirements should the company expect during or following the project? How can they plan and control this from the outset?

In order to successfully implement strategic change it is important to apply an approach, that is tailored to the individual situation. The conception phase must be carefully planned and structured and the setup documented in detail. This results in a faster and more cost-effective implementation. Most importantly, the conception phase must include an analysis of the actual and desired situations with regards to infrastructure, tools, processes, organisation, roles and responsibilities. As a result, this analysis will show open gaps and which specifications will help to close them. Above all, these new tasks will get prioritised and a «minimal scenario» developed. This will ensure that requirements are not overstated or diverting attention from the actual goal.

In this situation, an experienced external perspective can help in creating the right balance. Ideally, the partner brings in-depth expertise and experience required in such a conception



«A properly realised conception phase is the key to successful implementation. Processes can be matched to the business requirements, and most importantly, are documented as well.»

If a service provider is required for a sourcing or software development project, the client's management team should verify whether partners can provide integral consulting, specify, and deliver all relevant business and software requirements – if possible from a single source.

«Integral planning of a project can generate valuable byproducts for companies. In this case, the idea of involving the client's customer in this process was enormously successful and is now paying off in financial terms for the client too.»

phase. They can therefore interact with the organisation on an equal footing from the outset. For example, if a service provider is required for a sourcing or software development project, the client's management team should verify whether potential partners can provide integral consulting, specify, and deliver all relevant business and software requirements – if possible this should be done from a single source. With software projects, success or failure often remains undetected until the latter stages of the project – either during testing or, in the worst case, during acceptance testing by the client. Unfortunately, tests are only capable of assessing the quality retrospectively. However, quality must be established at the start of the development process. This is why minimising the number of interfaces during the implementation phase will also naturally help to minimise friction.

A properly realised conception phase is the key to a successful implementation. Processes can be matched to the business requirements and, most importantly are documented as well. This not only forms the basis for future management decisions, it also increases the organisation's internal transparency and efficiency, and raises its overall level of maturity.

Example 1:

OVERALL PLANNING OF SOFTWARE SOURCING

A Swiss technology company is globally active in a very complex market that features tough competition, including pressure from low-price Asian suppliers. The software development process thus needs to be dynamic, scalable and cost-effective. Although software development is not the company's core business, it lies at the heart of important business processes: the company's internal service team and its end customers both use the web-based portal on a daily basis to access important data. Accordingly, the system must be available at all times and it must be possible to rapidly implement new requirements and functions. However, the company does not have sufficient resources or capabilities to achieve this – a problem that is clearly impacting the business end: product launches are delayed and an extremely heterogeneous software land-scape *(and thus also prone to error)* has evolved within the company. Moreover, further development of this landscape is limited by the difficulty of assessing the overall situation.

The company has recognised this weakness and quickly chose a trustworthy external solution provider to assign its software development. The goal is to

As a basic rule, better planning in the conception phase, along with greater detailing of the setup, results in a faster and more cost-effective implementation.

move previously high investments from this area, into operating costs that are as low as possible and which allow for proper scheduling.

The sourcing partner analyses the requirements and potential consequences of the sourcing project. They also design a setup for the operative process and project organisation. The partner applies a model approach to the overall planning, in order to successfully complete the conception phase in just three months. Due to the detailed setup phase, the company quickly obtains an overview of possible follow-up or side projects. In this case, four obvious «construction areas» become apparent: the software requirements must be more detailed in terms of scope and quality, the testing processes must be specified more comprehensively, and the documentation and organisation must be structured to be more transparent and efficient.

The sourcing partner assigns a professional requirements engineer to assist the client. The requirements engineer works with the company to rapidly determine the business and software requirements defined in the setup phase. These requirements are then implemented directly by the development team. The solution provider is able to close the gaps in testing, thereby significantly boosting the quality level. At the same time, the internal processes and workflows are structured more efficiently or newly defined where necessary. The knowledge transfer between the client's main internal user, the service team and the provider's development team begins as early as in the middle of the setup phase, thus ensuring a smooth transition to the new arrangement. During special workshops, the solution provider trains the client's employees to use the new processes and tools and enables them to perform their future tasks.

Example 2:

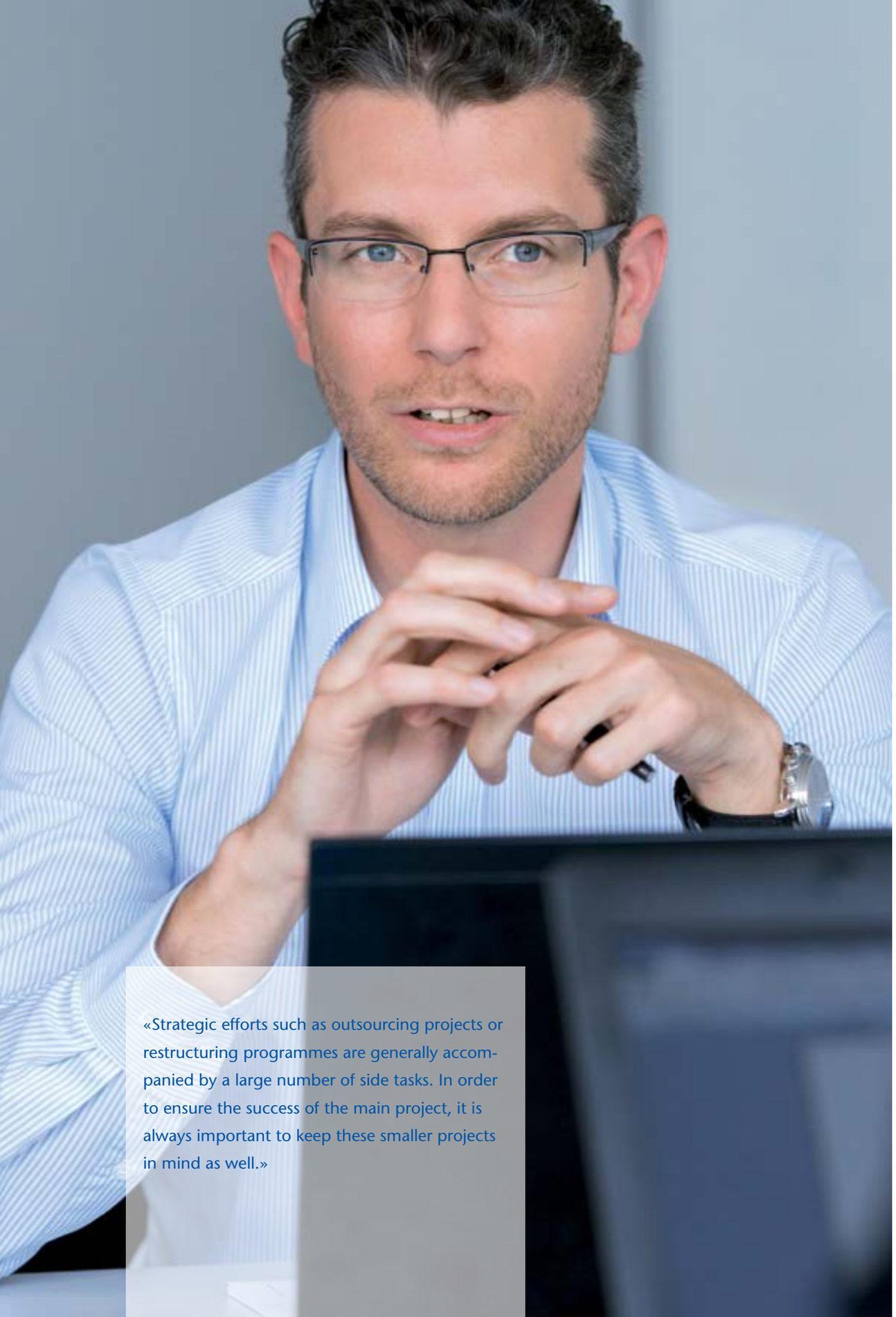
SIDE PROJECT BECOMES A BIG HIT FOR THE CLIENT

A large manufacturer of industrial machines with a diverse range of products would like to completely outsource its software development to a specialist. The objective of this project is to organise its software development and make it more efficient. This will enable the company to launch new products quicker, while opening up room for innovation in its core business.

For this complex project, the company is seeking a trustworthy partner who is capable of responding swiftly to individual needs. Other important criteria include verifiable experience, as well as references demonstrating the partner had successfully taken full responsibility for software development in prior projects.

In its European development centre, the solution provider quickly assem-

Success factors for strategic changes include an approach that is tailored to the individual situation, along with a structured conception phase prior to project kick-off.



«Strategic efforts such as outsourcing projects or restructuring programmes are generally accompanied by a large number of side tasks. In order to ensure the success of the main project, it is always important to keep these smaller projects in mind as well.»

bles an individual development team for the client. The nearshore team can get to work immediately without friction, thanks to the close and often personal contact between the local Swiss team and the client.

During the conception phase, it becomes apparent that the areas of requirements for engineering and testing represent a risk to the success of this project. While analysing the client's customers, the partner also identifies potential for improvement in the user interface of the industrial machines. Two teams are immediately assigned to handle these projects to prevent a delay in the overall schedule.

The «by-products» of these side projects are a clearly structured concept for the software user interface of the industrial machines, as well as intuitive user navigation for the client's various product families. They are developed within the scope of formulating the software requirements – and prove to be very popular among the client's customers. The systematic user navigation and consistent, attractive user interface in all of the products simplifies operation of the machines for the end users. This reduces the required training period and leaves less room for error. The new and clear concept thus results in higher customer satisfaction with the products and becomes a unique selling point for the client.

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LEVERAGING EXTERNAL EXPERTISE TO RESOLVE LEGACY ISSUES

A conscious approach can help to avoid unpleasant surprises.

Most companies have legacy issues of some sort. There is much debate about how to deal with such problems. External consulting can help to determine which issues are truly important with a view to fully exploiting the company's existing potential.

BY RETO LÜTOLF, RETO ZUMBÜHL, AND MICHAEL HOFER

Whether it happens as a result of growth, following acquisitions or simply due to dynamic development, companies that have been operating in the market for a long period of time will tend to have a number of legacy issues - this in itself is not really a problem. Legacy issues are to some extent normal in successful companies and in many cases they are not a direct consequence of any sort of mistake. During an acquisition, for example, the acquiring company will often not become aware of problems such as inadequate documentation, until after the transaction has been completed. Changing regulations can also make legacy issues current, such as outdated systems or processes that cannot keep pace with new market requirements, resulting in previously unforeseeable difficulties.

Basically, companies have three options when dealing with such legacy issues:

- The obvious choice is to just roll up one's sleeves and take care of the issue. Once the problem has been eliminated, the organisation can again focus on its core business. However, in many cases this approach requires time and resources that are not necessarily available. In other instances, there may be a shortage of the required technical expertise.
- A popular alternative is to evaluate the legacy issues and consciously ignore those that are anticipated to have little influence on the business results. In this case the company is accepting the risk that a given issue could become more critical and thus could have a negative impact on the business. Having calculated the risk as part of the assessment, the company simply chooses to tolerate it due to its perceived irrelevance.
- A third possibility is to delay tackling the problem until a later date. In this case, the company is also aware of the problem, but chooses to postpone dealing with it in the vague hope that this won't be necessary in the foreseeable future.

The final strategy is the least favourable alternative, as the legacy issue may turn into a tangible problem and the company will in all likelihood be unprepared. Accordingly, a conscious approach – even the decision to consciously ignore the problem – is always better than postponing dealing with it.

Whichever strategy a company chooses, a course of action is required when the potential problem that was postponed becomes critical. However, what should be done if the necessary resources or expertise are not available? Here, an external consulting firm can provide the relevant assistance. Such firms generally have the resources needed to execute such projects even within tight deadlines. Two different approaches can be adopted: the company can hire an external partner to eliminate the legacy issue, or it can acquire the necessary expertise from the consultant in order to learn how to professionally tackle the problem on its own. In actual practice, a combined

«Legacy issues are not a serious problem. However, conscious handling can help a company to avoid unpleasant surprises. If the required resources or expertise are not available, the company can hire an external partner to help. This also allows the company to learn a lot about dealing with legacy issues.»

«On completion of the project, the company has revised its existing document base and also gained methodological competence in this area with the aid of the experienced external partner.»

approach of involving acquisition of the necessary expertise, while eliminating the legacy issue is frequently the best solution. In this manner, the existing problem is solved while the company simultaneously gains the ability to manage similar future challenges on its own.

When choosing the right partner, there are a few points to keep in mind. The consulting firm must have experience in dealing with legacy issues, having addressed similar situations in the past. Of course, relevant sector-specific know-how is a big plus in this context, since every industry has its own characteristics. Solutions that work well in one sector can turn out to be entirely impractical in another. Finally, trust is another key component of any successful partnership with an external consultant, as the company must disclose internal details to the provider. When working with an external partner for the first time, the necessary trust can be acquired beforehand. This needs to be based on the methodological competence and know-how of the provider, combined with extensive transparency.

Example 1:

USING EXTERNAL EXPERTISE TO ACQUIRE IMPORTANT KNOW-HOW FOR HANDLING LEGACY ISSUES

In order to enter a new market, an equipment manufacturer is planning to obtain regulatory approval for one of the devices it sells in a region of the world where it has not operated previously. The device has been a commercial success for a very long time, but a new approval is now required for new applications. The associated requirements are generally more demanding and complex than previous ones.

The key issue that is causing a problem for the company: the original device was developed many years ago, has since been modified, and continually improved over the course of time. Each time the existing approval was renewed, only the current changes needed to be verified. However, since the device now requires approval for new applications in a new market, comprehensive verification of the entire device is necessary. Unfortunately, certain parts of the documentation are missing, along with the technical expertise to create them.

After assessing the potential of the new market, the equipment manufacturer decides to hire an external consulting firm to assist with a comprehensive review of the existing documentation. This will help them to understand how it diverges from the current product. At the same time, the solution provider is tasked with enabling the client to assess and maintain the documentation in accordance with the regulatory requirements in the future.

Based on interviews and workshops, the client identifies the gaps in their documentation, with the partner providing guidance and assistance. Determining of the relevant documents involves reverse engineering of the system decomposition. Using this system decomposition, the scope of the documents relating to requirements, specifications, product risks and tests can be derived and the document structure defined. On this basis, the client succeeds in creating all of the documents

needed for the device. The company is now well prepared for the product approval process in the new target market. It is also equipped to maintain the device and software documentation on its own from here on in.

Example 2:

SYSTEMATIC ELIMINATION OF LEGACY ISSUES TO MINIMISE RISKS

A medical technology company would like to revise the documentation that was created in parallel to the development of a now established and successful equipment line. The company has all of the required approvals for the product, but the documentation is old and incomplete.

Since the company lacks the appropriate resources and is also interested in a highly structured approach, it hires an external partner who specialises in consulting for medical technology companies. As part of a special project, the company works with the partner to review the specification and test documentation for the equipment line in a step-by-step process, looking for any shortcomings.

«Tracing information» is used as the methodological foundation for the overall procedure. This information links the requirement and specification elements to their implementation within the product as well as inspections during the verification and validation process – at all levels of detail and abstraction. As a result, any missing tracing information is immediately visible. Using this tracing system, any possible gaps in the requirements, as well as in the area of verification and validation documentation are also revealed. The gaps that are detected can then be prioritised and closed in a controlled manner. The decision-making process, which may be based on systematic risk considerations, as well as future maintenance can be simplified and greatly accelerated by using the right tools.

On completion of the project, the company has revised its existing document base and also gained methodological competence in this area with the aid of the experienced external partner. Going forward, the company can handle the maintenance and evaluation of its documentation internally. In doing so it is continuously aware of the overall state of its documentation and can manage it accordingly in the context of risk considerations.

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«Acquisitions, regulations and approval procedures are just some of the contexts in which seemingly harmless situations in a company can suddenly become problematic. When this happens, it is important to react promptly since legacy issues often entail negative consequences for the company's business and general competitiveness.»

APPLYING METHODOLOGY TO CASE-SPECIFIC TRAINING

Professional training provided by an external partner is a good way to build up expertise in a short period of time.

Many companies deliberately accept certain methodological deficiencies – without really knowing what risks they involve. In most cases, however, it is possible to fill in the missing know-how quickly and easily with the support of of a systematic training programme.

BY REMO MATHIS AND PETER ZUBER

Methodological weaknesses in internal processes are something that many companies have learned to live with. In many cases, time constraints of daily business prevents companies finding a solution to such problems without a compelling reason, such as new compliance rules or upcoming certifications.

Even without any external catalysts, it is important for companies to know where they might have gaps in their methodology or processes and to consider what risks they pose. Of course, not every weakness that is discovered has to be fixed immediately. However, it is important to be aware of the scope and evaluate the possible consequences. The goal is to recognise potentially disruptive scenarios early on and avoid them by initiating related measures in good time.

There are various tools and methods that can be used to examine internal processes by way of a «fitness checkup». This approach helps to diagnose methodological gaps and evaluate their risks for the organisation and its business activities.

Some methodological gaps can be closed in parallel to everyday business, for example, with systematic training focusing on a current problem from everyday business. A specific example is used to illustrate the missing know-how in a practical manner. This is followed by training in possible application cases and hands-on of the new capability.

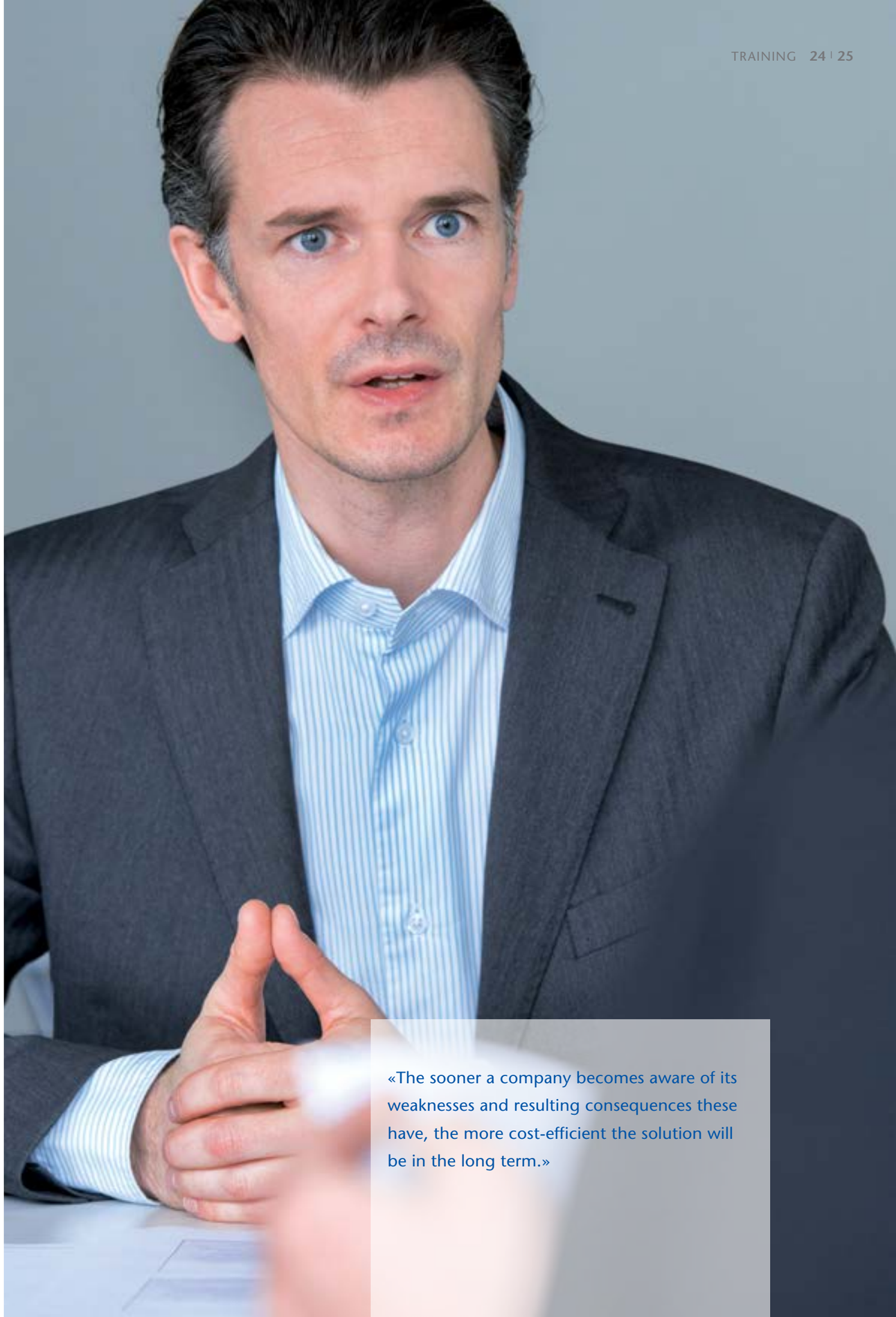
If the methodological expertise or resources to perform «fitness check-ups» or training courses are not available in-house, an external partner with the appropriate experience can provide consultation and support. This is even more important in cases where many employees are affected and need training. No company can easily train several hundred employees. Of course, it should be checked beforehand whether the external trainer has the relevant domain expertise, for example specific certification requirements.

One clear advantage of external trainers is their ability to move about freely in the company without constraints resulting from hierarchies and internal structures. This helps to accelerate decision-making and related processes; external trainers are present only for a limited time, they can also act and communicate without worrying about «legacy issues». This is a success factor that should not be underestimated.

Example 1:

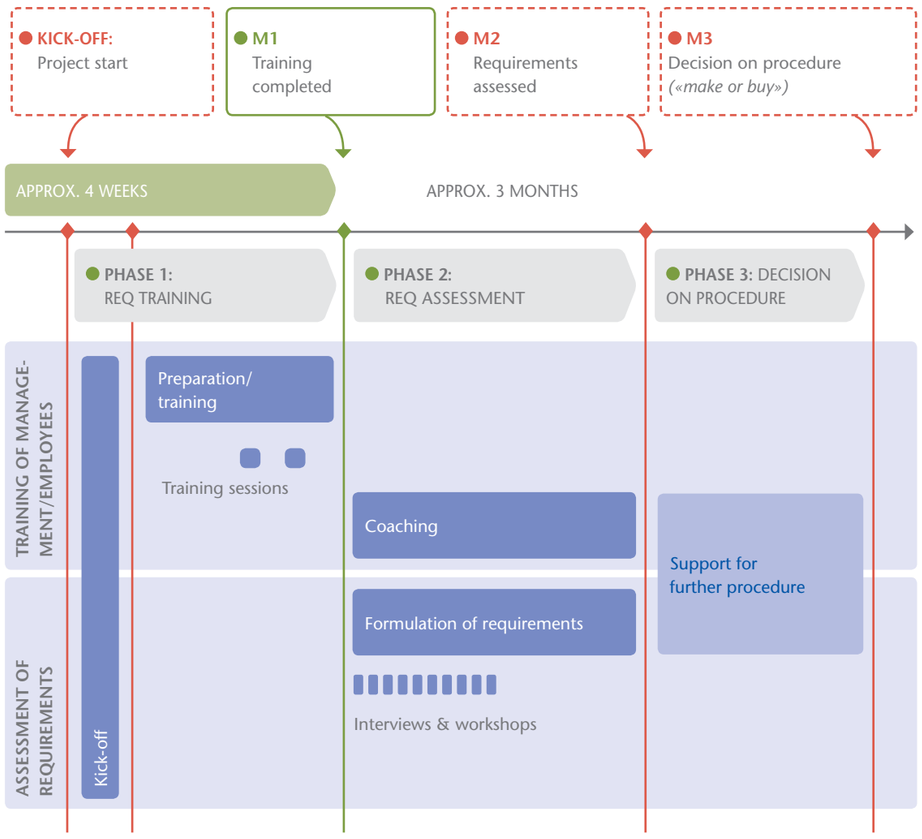
ACTIVE RISK MANAGEMENT THROUGH COMPREHENSIVE EMPLOYEE TRAINING

A business unit of an international industrial corporation manufactures highly specialised products. Starting with a few basic types, the products undergo extensive customisation to meet the customer requirements. The business issue: In product development, the parameters for the individual product versions are not documented in a reproducible man-



«The sooner a company becomes aware of its weaknesses and resulting consequences these have, the more cost-efficient the solution will be in the long term.»

FIG. 3: PROCEDURE IN TWO PHASES / OVERVIEW OF TIME SCHEDULE AFTER PROJECT START



These individual training sessions involving employees resulted in a substantial increase in efficiency. New products are introduced more quickly and overall the project is a lasting success for the company. This is largely due to the enthusiasm shown by the employees.

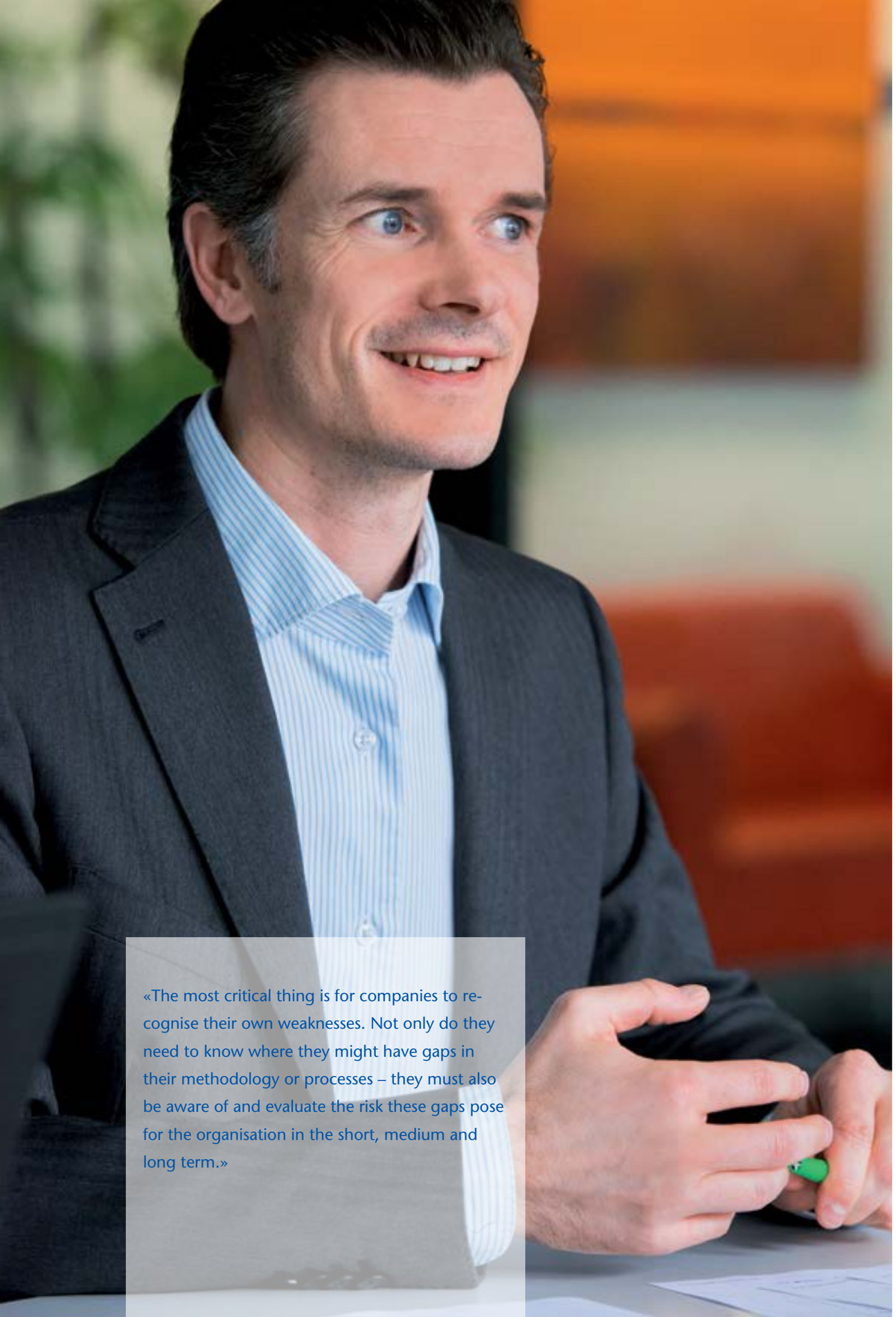
ner. This means the wheel is constantly being reinvented - a time-consuming and inefficient approach that sometimes leads to the development of products that are not commercially successful. At the same time, knowledge of the products is closely tied to individual employees.

The challenge: to help the company and its employees specify the requirements for product development, and to close a knowledge gap in the area of requirements engineering in a first step.

Prior to developing a solution, it was necessary to build up internal methodological expertise within the client company. Accordingly, the external partner who had been brought on board, trained the employees in requirements engineering during a three-day intensive training session. Based on this newly acquired knowledge, it is possible to clearly define the scope of the project.

In a second step, the specific requirements for the new methodology, which are to be applied in project development, are elaborated in workshops involving all of the affected stakeholders and departments. The external service provider aims to provide relevant expertise to the client's employees through workshops and ongoing coaching. This will enable them to master sustainable and structured requirements management for product development. Selected employees receive special training for this purpose and are also engaged directly in the running of workshops – the consultant remains in the background and assists these employees. Upon conclusion of this phase, lasting about six months, the external consultant continues to be available to the client's core team in the role of a coach.

These individual training sessions involving employees resulted in a substantial increase in efficiency. New products are introduced more quickly and overall



«The most critical thing is for companies to recognise their own weaknesses. Not only do they need to know where they might have gaps in their methodology or processes – they must also be aware of and evaluate the risk these gaps pose for the organisation in the short, medium and long term.»

the project is a lasting success for the company. This is largely due to the enthusiasm shown by the employees.

Example 2:

EFFICIENTLY TRAINING SEVERAL HUNDRED PEOPLE

This is not the sort of challenge that an internationally active service organisation encounters every day: as part of an effort to train over 1000 employees, the company is seeking an expert external partner. The selection criteria includes comprehensive methodological expertise, specialized knowledge on corporate certification and related requirements, as well as experience working with such large training groups.

Some of the specific challenges faced include a general state of «training fatigue» in the entire client organisation, as well as a very diverse set of training participants, in terms of background knowledge and area of activity. The solution provider thus develops a three-stage approach that delivers the content in a targeted manner, while simultaneously permitting the participants to be selected based on the level of their knowledge. To implement this particular approach and to take account of the large number of employees to be trained, custom practice software is developed.

During the first two training phases, an e-learning module is used to teach the basic principles and relevant theory of the complex subject matter, including practical exercises. In an online test, the employees' level of knowledge can be determined. If the required know-how is already in place, the module may be skipped. This strategy saves time and keeps the motivation level of training participants high. At the same time, the test results prove that the training sessions were successfully completed. This in turn needed to be documented properly as this was an important requirement as part of the certification process.

In the third and final phase, the core subjects for certification are prepared by the solution provider, based on specific practical examples and communicated in small training groups. The training is very well received because practical examples focus on specific projects from participants. In this manner, the trainers are able to tie together the theoretical and practical aspects. As an outcome, they direct value to the participants by making it more relevant to their own work.

This structured approach, does not waste resources and both client and participants are extremely satisfied. The training phase lasts about six months and is then followed by a successful certification of the client.

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