



Whitepaper

A new generation of ERP solutions –

**How new technologies help you reduce costs and create
new possibilities**

Introduction

The development of ERP solutions for small and medium-sized businesses is one of Comarch's core business activities all over the world. Cooperating very closely with our partners, analysts and most importantly our clients, we steadily invest in research and development of cutting-edge technologies that help our customers boost the performance of their business.

The principle we stand behind is that smaller businesses need the same solutions as big corporations, since high functionality is a crucial factor for success in this segment. We also know that solutions for SMEs have to be delivered quicker and for a lower price. These principles are taken under consideration during the development of all our ERP solutions.

Because engaging software analysts is very time- and cost intensive for an individual company, we have decided to have this whitepaper written for you by an independent market analyst in order to provide you with an overview of the newest ERP software technologies and how they can help you improve your business. Based on our Comarch ALTUM ERP solution, which has been developed using many of these new technologies, we would like to show you how an ERP solution of the newest generation helps you reduce costs and at the same time improve the performance of your business.

I trust that you will find this a great source of useful information and will enjoy reading this whitepaper.

Mr. Zbigniew Rymarczyk

Director of the SME Business Unit,

Member of the Board

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1. INTRODUCTION

In the German ERP market there are numerous and various providers, offering such a large amount of different solutions that for many companies, especially SMEs, it is difficult to get an overview in order to find the solution that suits them best. In addition, they must make sure that they invest in a solution that uses new technologies and can find a solution provider that will prove to be a stable partner over many years.

The intention of this whitepaper is to support companies in the selection of an ERP solution. It has been written by the independent consulting and market research institute, Pierre Audin Consultants (PAC) on behalf of Comarch AG, Dresden.

On the one hand PAC identifies in this whitepaper the general ERP requirements of SMEs, which must be met by up-to-date ERP solutions. On the other hand it shows how the Comarch ALTUM ERP solution fulfills users' requirements by offering solutions based on the newest technologies. A description of Comarch ALTUM can be found in the paragraphs in contrasting colors.

The first few pages of the report focus on current trends in the German ERP Market as well as a focus on companies. It details what users and providers are concentrating on and what they are investing in and to what extent. In the next part, user requirements and the change of these requirements will be highlighted. Selection criteria concerning ERP software and the ERP provider should support potential ERP customers during the evaluation process.

2. EXECUTIVE SUMMARY

Finding the perfect ERP solution is a very complex task, especially for small and medium-sized businesses, as it means choosing the backbone of your IT solution for the entire company for years to come. This whitepaper helps decision-makers in IT and business get an overview of current market trends, user requirements and the criteria that must be addressed by ERP solution providers.

At the moment, due to slow economic development, companies are investing modestly in IT-products and business-software. However, this is about to change within the next few months as PAC expects the German business software market to grow by 3 percent already in 2011.

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The main focus of investments is on solutions that help increase efficiency without increasing or decreasing the complexity of the IT environment. Companies are looking for flexible solutions that are fully capable of being integrated and are easy to use. An ERP solution must be adaptable to current changes of business processes and support those processes within the entire company as well as the entire supply chain.

Monolithic applications are no longer able to fulfill the requirements of SMEs in the fields of flexibility, business-process-orientation, usability, personalization, serviceability and costs. Additionally there are significantly new requirements concerning the integration of e-commerce solutions, the use of mobile solutions and the availability of business intelligence functionality within the ERP system. The newest generation of ERP systems comes with solutions that offer all this functionality and remain flexible, easy to use and, compared to earlier solutions, require lower investment costs and lower TCO.

In short, the main aim is to quickly and straightforwardly provide more employees with relevant information in order to improve decision quality throughout the company. Additionally, an ERP solution has to be flexible enough to be adapted to current changes in the business environment quickly and without huge costs. That's why users should consider the following criteria when selecting an ERP solution:

Usability: Only easy-in-use systems are accepted by end-users

Business Performance Management: support of the entire decision-making process from planning to controlling; by means of an integrated data-warehouse.

Business Process Management: Predefined processes containing industry best-practices as well as the possibility to easily define company-specific processes.

Integration of mobile solutions: Mobile clients that use data from within the ERP system should be available.

E-Commerce integration: easy integration of webshops into the ERP solution with automated data exchange between the applications

Comarch offers a solution for all these requirements – Comarch ALTUM specifically covers the above mentioned functionalities.

3. ERP-TRENDS IN GERMANY

Companies are facing great challenges that require enormous changes. A good way to face these challenges is to begin taking advantage of IT-innovations. However, companies are investing little in new software and IT-projects at the moment. This is a mistake, as challenging tasks such as internationalization, process automation, focusing on customer requirements and the further development of e-commerce activities can be handled much easier by using intelligent software-solutions.

In the German ERP market there are about 250 ERP-solution providers of every size, and all are struggling with decreasing demand. Estimations by the market analyst, Pierre Audoin Consulting show that in average, ERP-expenses in all sectors were reduced by 3 percent in 2009. According to PAC, 2010 should bring a 1 percent improvement compared to the previous year and in 2011, market growth should be somewhere around 3 percent.

In spite of the bad investment-climate many companies are focusing on increasing efficiency and reducing the complexity of their IT solutions and processes. Based on this development, PAC foresees the end of monolithic ERP systems. Today the most important requirements are the ability for integration, openness and flexibility; especially with business processes changing much faster than only a few years ago. The required flexibility of business processes must therefore be supported by the implemented ERP solution.

At the moment there is increasing demand for end-to-end solutions that not only integrate front and back-office solutions but also allow for the improvement of business processes outside the company as well. The possibility to integrate ERP functionality with other business applications such as BI, CRM or MES also becomes increasingly crucial.

ERP producers are switching from offering solutions that combine all relevant processes to developing platforms that cover basic functionality and offers the possibility to integrate further functionalities and industry-specific solutions. As different industries are using different practices, industry specific solutions become more and more important. Additionally, ERP systems should support web-

A survey performed by PAC, asking 600 IT-decision-makers about their investment behavior shows, that in spite of reduced investments software modernization is one of the current key challenges.

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services and be able to integrate content from Office solutions as well as external web content.

Today, users expect ERP solutions to be easy to use. The principle is to keep it simple; this concerns usability as well as the deployment and servicing of the system. End-users must be able to make the ERP solution an integrated part of their daily work routine – the more it boosts efficiency, the more probable the user will accept a new solution. In short, ERP systems should be flexible, scalable, process-oriented, easy to use and secure.

3.1. ERP trends in SMEs

The small (10-99 employees) and medium-sized (100-2500 employees) businesses market is not just expecting software, but value-adding solutions. Due to a lack of past investments, businesses in this segment have considerable catching up to do, as many of them still use individual legacy-solutions. Many companies also use integrated ERP solutions.

As soon as the economic downturn comes to an end, this segment will face a considerable increase in investments in the replacement of old ERP solutions, best-of-breed and individual-software. As this market segment is characterized by a high percentage of production companies as well as retailers and wholesalers that are under great pressure to go international, there is a high demand for process-oriented, vertical solutions. These solutions must be easy to use and easily customizable, in order to keep implementation costs and times as low as possible.

Slowly but surely ERP providers are coming up with alternative delivery models for the SME sector. The major trends are the hosting and Software-as-a-Service (SaaS) models. Hosting has already been adopted by many companies in the upper mid-market and has become more or less a standard model, whereas SaaS is still in an early stage. Users still have to be convinced of its advantages, such as security, flexibility and availability. Nonetheless, SaaS in the medium term will become an important option, especially for smaller businesses, as they gain access to software-solutions that in the traditional licensing-model would be unattainable due to high costs and complexity.

As this market segment is characterized by a high percentage of production companies as well as retailers and wholesalers that are under a lot of pressure to go international, there is a high demand for process-oriented, vertical solutions.

In most cases the ERP system is the backbone of a company's software environment: most applications used within the company are adapted to the requirements of the ERP solution

4. ERP REQUIREMENTS OF SMALL AND MEDIUM-SIZED BUSINESSES

ERP is a set of activities and business processes that are defined by the means of business rules and software. Cutting-edge ERP solutions include many different functional modules, starting from manufacturing and warehouse management over to accounting and risk management and including Business Intelligence tools that allow for the creation of reports and the performance of in-depth analyses. Usually these functionalities are offered in standardized software packages that are based on a common architecture and technical backbone.

In many cases the ERP solution is the backbone, meaning that with the exception of technical-scientific systems and controllers, many other solutions in the software environment are adapted to the ERP solution. Do they offer the right interfaces? Can data be transferred in both directions and processed by both systems? Are the programming languages compatible? If necessary, are there conversion tools, filters and other tools available that support the integration of ERP and customized solutions? All these questions must be asked, as investments in ERP are usually long-term investments. A badly chosen ERP solution can not be replaced as easily as other software as it is technically too complex and too deeply integrated into the company's processes, the daily activities of employees and the functionality of other IT solutions. That's why companies must evaluate possible solutions completely before making a final choice.

4.1. Development of ERP requirements in the SME sector

Many medium-sized companies modernized their ERP solution more than 10 years ago, in order to avoid problems with the Y2K bug. Since then many things have changed in the fields of business requirements and business organization – monolithic applications can no longer deliver the required flexibility, process orientation, personalization, serviceability and cost reduction. Additionally, new requirements have arisen in connection with the integration of e-commerce solutions, mobile devices and business intelligence functionalities. According to research done by PAC, the ability to design company-wide processes and to use ERP functionality in Office solutions is becoming more and more important for users.

Earlier ERP solutions can only be adapted by specialists through extreme effort. Each altered workflow results in a change request in

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More and more employees must be supplied with important information which they can base their daily decisions on.

those systems and many reports cannot be created by users but must first be defined by IT-specialists.

The market trend points towards graphical tools that allow for the easy definition and edition of processes. Thanks to these tools, expensive software adaptation projects become redundant. New ERP software also allows for the definition of different roles that can be assigned to certain system users in order to grant access to information and system functionalities. These roles can be changed at any time, even with the system running.

Some ERP solutions of the latest generation also include fully integrated Business Intelligence (BI) features. Thanks to these features, users can create reports directly in the ERP interface, without having to start an external reporting tool or a separate BI application. Some ERP-vendors integrated fully functional BI-engines with OLAP-functionality and data warehouses into their systems that not only allow for the analysis of historical data but also for the creation of forecasts. These functionalities are of special interest for companies that until now could not afford to invest in additional BI and Business Performance Management solutions in order to improve their management.

Today, as compared to 10 years ago, many more processes within a company are automated, requiring more and more employees to work with an ERP solution. In order to keep training expenses within a reasonable range, ERP solutions have to become easier to use for today's generation of users. Therefore ERP has to adapt to the look and feel of popular office and web applications that many people are used to. Some vendors even integrate their ERP solutions with Office applications such as Outlook, where they can receive tasks and messages created by the ERP system, or Excel, and can analyze company data without having access to the actual BI application.

Today, with IT available in almost every household, there are increasingly fewer computer-illiterate users while the number of advanced users is rising. These experts don't require a lot of training and are interested getting deeper into a program. Modern ERP solutions are very attractive to these users, as they offer many possibilities for setup configuration and personalization of the software. Authorized users are not only able to change processes using e.g. graphical editors, but also change underlying business rules.

The internet is becoming a more and more important sales-channel for small and medium-sized businesses as well. Therefore they expect

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integration of e-commerce solutions in the ERP solution in order to avoid redundant input of information and to reduce the risk of errors. As PAC's research has shown, users prefer to have a common database for ERP and e-commerce functionality together with the possibility of common data-analysis.

Slowly but surely, aside from mobile phones, other mobile devices are becoming increasingly present in everyday business including smartphones for knowledge-based workers, handhelds and special mobile devices for the warehouse, service or manufacturing. Users expect these mobile devices to be an integrated part of their ERP solution.

The current trends in the ERP market can be summarized as follows: On one hand, more and more employees need to be supplied with important information that they can base their daily decisions on. On the other hand, ERP solutions are becoming more and more flexible in order to make them adaptable to changes in business faster and with lower costs.

5. CRITERIA FOR ERP SELECTION

Current market researches done by PAC shows that the following criteria are crucial for future ERP-investment decisions:

- **Usability:** End-users within a company like working with software that is easy to use and follows a transparent logic. Usability is one of the most important criteria for the acceptance of ERP-software. That's why companies should invest in their system's ergonomics. End-users have to be included in the evaluation of solutions that are on the shortlist, testing their usability. Another important factor is cooperation with office applications, e.g. the use of Office applications as a frontend for ERP functionality.

The acceptance of an ERP solution not only depends on ergonomics but also the functionality the system offers and the increase in efficiency that can be gained. So called usability does not just include the graphical interface but all aspects of the system design that have a direct or indirect influence on communication between the user and the system. Two of these aspects are e.g. the navigation and control of the system. It is clear that usability plays an important role in ERP solutions that cover a great deal of functionality within one user interface. End-users that are used to the usability of current web applications are mainly looking at usability criteria such as simplicity, efficiency and performance. In 2006, Professor Hans Hinterhuber from the Leopold-Franzens University in Innsbruck did research on the usability of ERP solutions. His paper entitled "Usability testing of ERP solutions"* shows that the usability of software increases the productivity of employees and reduces the number of errors as well as consulting and training expenses. Users learn to work with software within a much shorter period of time, if the software is user-friendly. Usability also affects servicing costs. Hinterhuber shows, that 80 percent of software TCO is attributable to servicing costs. The high amount of these servicing costs is directly dependent on ignored user requirements and other usability errors. Usability also positively affects the user satisfaction. Whereas only 15 percent of software problems are connected with a system's functionality, 60 percent of software problems are caused by a lack of usability. Usability also includes the possibility to personalize the ERP solution. Personalization not only means the creation of different user roles, but the possibility to adapt the user interface to the individual working environment of each system user.

End-users that are used to the usability of up-to-date web applications are mainly looking at usability criteria such as simplicity, efficiency and performance.

Usability is one of the main criteria adhered to during the development of Comarch ALTUM. Thanks to the ribbon menu that is used in all new Microsoft Office applications, users can work in an interface that is well-known to them. The full adaptability of the interface to the requirements of each user guarantees that there will be no distraction caused by unnecessary information and that the user interface suits the typical working process of each employee. In addition, features such as the contextual availability of BI-reports and the contextual initiation of business processes let the user perform all tasks within one interface, without the necessity to switch from one application to another. An integrated search engine that is reminiscent of Google search helps users find required information in a fast and easy way.

- **Business Performance Management:**

Small and medium-sized businesses require ERP solutions to come with reporting tools. With these tools, data can be displayed in reports showing the current situation of the company. For users without any technical knowledge, it must be possible to create such reports, not merely access reports that have been defined earlier. Ideally, the reporting tools use an extensive data-warehouse that comes standard with the system. Comarch ALTUM comes with a fully integrated Business Performance Management Suite that allows for quick reaction to internal and external changes, starting from the planning process, which is supported by a budgeting-tool. The results of the planning process can be converted into key performance indicators that can be communicated by means of Business Scorecards (BSCs). The BSC allows communicating the company's target, grouped by different dimensions, and monitoring target achievement using a single report that uses status and trend indicators to provide a quick overview of the company's situation. Additionally, alerts warn users of any deviation. If a company's performance deviates from the given target, detailed reports can be used to analyze all the information pertaining to the company's activities and identify the source of the problem. Once the source for the deviation has been identified, it can easily be eliminated by changing the business processes in the company in order to guarantee the achievement of the company's goals. Thanks to continual updating of all data, the business performance management process evolves and allows for quick reaction to upcoming changes – through planning, monitoring, analysis and adaptation.

- **Business Process Management:**

Earlier ERP solutions use horizontal standard-processes that organize input data and create information. Those processes could only be adapted by the company's own specialists or its deployment partner. Later solutions appeared on the market that contained processes that were adapted to the requirements of a certain industry. Additionally, users could choose predefined practices out of best-practice libraries. This development decreased the costs of customization, but still did not eliminate the necessity of customization projects, a problem especially for SMEs that often were not willing to pay huge sums to have their system customized by specialists. As a result they often chose the standard-processes being offered, giving up their own, often better and more specific processes, as they were unable to integrate them. As a result, the main effect of the automation of business processes was lost. This is why it usually is done using process-modeling tools that follow different concepts of use. In order to avoid complexity, SMEs should choose an easy to use tool, ideally with a graphic editor, as it easily enables following a process definition, step by step.

In order to guarantee business process automation also outside the ERP solution, the BPM tool should have an open architecture. Only if the integration of external applications is possible, processes that require the functionality of those applications can be automated and improved.

The business process management tool in Comarch ALTUM delivers best practices from different industries through predefined processes. Furthermore, you can make your own company's know-how, which you have developed over the years, part of your ERP solution. In order to make the creation of new processes and the customization of existing ones as easy as possible, the system has been equipped with a graphic process editor. The business process engine that is running in the background enables the partial or full automation of business processes within your company and beyond. During the process flow, employees all over the company can be assigned tasks, as defined in the process. Those tasks will be sent to their personal task-inbox, which is also available as an Outlook plug-in, where the user can immediately perform the task, guided by the system. Thanks to the open architecture of Comarch ALTUM, external applications that are used within your company or even by your business partners can be integrated in the process flow. This allows for considerable improvement of process quality and a high level of automation within the entire supply chain.

In order to guarantee business process automation outside the ERP solution as well, the BPM tool should have an open architecture. Only if the integration of external applications is possible, can processes that require the functionality of those applications be

automated and improved. Thanks to an open architecture it is also possible to automate processes across the entire supply chain, through the integration of supplier and customer applications.

- **Integration of mobile devices:** Employees as well as managers need to have access to ERP functionality at every moment, in order to input data or receive information. Mobile devices are being employed for this purpose more and more often. Managers open and work on reports on their notebooks or mobile phones. Meanwhile, when picking and releasing an article from the warehouse, warehouse personnel use mobile devices, on the basis of current ERP data, to check what amount of a given article is still in stock and update the main database. Therefore, the system is able to react immediately to an eventual reorder. There are many scenarios of how mobile devices can increase the efficiency of a workforce. A sales force in particular uses many different mobile solutions that could be considerably more efficient if they had access to key ERP system functionality to exchange data with the company's main system.

Comarch ALTUM has been integrated with three specific solutions that enable users that spend most of their work time not by their desks to use key ERP functionality on their mobile devices :

- The sales force has access to all necessary information as well as functionalities to receive orders, reserve articles or print out invoices from their smart phone at the client's premises.
- Managers can access current reports and track and react to current developments from any place in the world.
- The mobile warehouse solution allows for the automated receipt and picking of items by using mobile devices. Creating warehouse documents and counting inventory can be sped up significantly, as articles only have to be individually scanned.

What makes these solutions even more efficient is their full integration in the ERP solution, allowing for a steady flow of information throughout the entire company. That way an order registered on the customer's premises can immediately be filled and articles that have been delivered to the warehouse are instantly ready for sale.

- **E-commerce functionality:** As online trade, thanks to its revolutionary cost-structure, has made it possible for many companies to enter new markets, the online offer as well as the prices of all the players on this market have become increasingly similar. In order to gain a competitive advantage, merely trading online is no longer enough. Companies must improve their service and/or further improve their cost structure in order to enter new market niches. As integration of web-shop applications into an ERP solution was quite complicated, many companies made only modest investments in online B2B and B2C solutions. Modern ERP systems should offer the possibility to easily integrate such solutions and therefore avoid redundant data administration. This would help companies reduce their costs connected with the online sales channel. B2B cooperation can be made significantly easier and more efficient by the granting of access to online functionality such as order posting, checking the availability of articles or the tracking of orders. There are various ways of integrating these online solutions in an ERP solution. One way is to steadily synchronize data between the online applications and the ERP system. Therefore data such as article availability or price must be continuously updated as well as product descriptions. Moreover the update of one solution often requires changes in the interface between those solutions. In order to deliver a better integration, some ERP vendors are also offering integrated e-commerce solutions that avoid the above mentioned problems. These solutions enable the simultaneous operation of multiple webshops and better integration of business intelligence, manufacturing or logistic solutions that are either part of or integrated in the ERP solution.
- **Internationality:** Is the software restricted to the domestic market only? Is it adapted to the legal regulations of other countries? Is the user interface available in different language versions? These questions are becoming more and more important for SMEs that have either already entered or plan to enter foreign markets. Using one ERP solution within all subsidiaries not only makes expensive integration projects unnecessary, but also helps lower TCO.
- **Functionality:** Which processes can be supported by the software and to what extent? Are functionalities available as a standard or do they have to be added to the system? The required functionality of the solution depends on the business model of the company. During the evaluation process a company must verify if a system fulfills these functional requirements.

Due to the increasing interconnectedness of companies, ERP solutions have to enable data exchange between different systems or even the execution of transactions that require the cooperation of those systems.

Comarch ALTUM helps you improve the performance of your online sales channel with three solutions: an online-store, a B2B portal and a tool for the handling of online auctions on portals such as eBay or Allegro from within your ERP system's interface. As all three solutions are fully integrated parts of Comarch ALTUM, there is no need for redundant data administration. This allows you to improve customer service quality through a lower error rate and shorter realization times and also has a positive effect on the cost structure of your entire online sales channel. Data such as information on products that are offered on eBay as well as the online store and the related price lists can be administered using the ERP system. Every order that is registered within an Internet front-end is immediately available for immediate execution in the order management tool in Comarch ALTUM. The B2B solution allows you to give your business partners insight into stock availability, price lists and other data that is required for effective cooperation. This simple and cost effective way of cooperation makes you an attractive business partner and member of a supply chain. The availability of different language versions, allowing you to expand your sales channel into new countries, increases the value of the e-commerce solutions integrated with Comarch ALTUM.

- **Level of integration:** How deep is the integration of single system functionalities? Are additional tools required that enable communication and data synchronization between different modules? This question is especially crucial when choosing the solution of a vendor that has recently purchased software-packages from other vendors and is now selling them as one product.
- **Integration of external solutions:** ERP software becomes increasingly important not only for activities within a company but also for cooperation with partners, suppliers and customers that usually use other solutions. Due to the increasing interconnectedness of companies, ERP solutions must enable data exchange between different systems or even the execution of transactions that require cooperation of those systems. Software that supports common industry standards such as EDI, Web Services or XML, can be integrated much easier with other solutions.
- **Adaptability:** The big ERP vendors are developing their own infrastructure platforms that should enable users to adapt their software to changing requirements where possible without programming. Examples of such platforms are SAP's Netweaver, Fusion Middleware, developed by Oracle and Microsoft's .Net platform. IBM, although not offering an ERP solution is also offering such an infrastructure platform, called Websphere. Small vendors

don't have such platforms, but usually use those of the big players. The interconnection of different applications using integration-platforms is crucial for users, as they enable the use of different systems and the smooth flow of processes beyond the borders of the ERP system.

- **Fulfillment of compliance-regulations:** Different regulations for accounting, the archiving of documents, the traceability of products in the food or pharmaceutical industry, Basel II, Sarbanes Oxley, and many other rules and standards a company must follow have to be reflected in the company's ERP solution. Whenever these regulations change, a product update must be published and installed within a defined period; otherwise the software becomes useless to the company.
- **Security:** the ERP solution has to have integrated mechanisms, that block unauthorized users as well as accidental or incorrect input of information and defines what user can perform what action in the system. Next to the protection of accounts by secure passwords, the traceability of changes, who has changed what, is an absolute must-have. The producer should also implement security measures that protect the system against attacks from outside.

The Comarch ALTUM ERP solution contains full ERP functionality, supporting a company's processes in purchasing, logistics, sales and accounting. The system allows the use of multiple currencies and fulfills the legal requirements of three countries. Additionally, the user-interface of Comarch ALTUM is available in four languages. All features are built based on a highly flexible platform that contains a workflow engine and a fully integrated Business Intelligence solution. Thanks to its open architecture the system can be adapted at any time to the changing requirements of a company through functional extensions or the integration of external solutions, with the help of the Comarch ALTUM TrueAPI programming interface. Thanks to the platform architecture of Comarch ALTUM, all system extensions can be fully integrated with Business Intelligence and Workflow. Therefore your ERP solution becomes the backbone of your entire software infrastructure. In order to improve cooperation with customers and suppliers within your entire supply chain, Comarch ALTUM has been equipped with an EDI interface, allowing for easy data exchange with all your business partners.

The use of up-to-date technology (.net 3.5 and SQL Server 2008) guarantees not only high efficiency, but also highest data security.

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Users are focusing more and more not only on TCO (total cost of ownership) but also on TCI (total cost of implementation).

5.1. Requirements concerning the vendor

Next to criteria concerning the software, the software vendor itself must also meet certain requirements:

- **Industry know-how:** In particular for small and medium businesses, which usually have rather limited budgets for ERP projects, the industry focus of a vendor is important. As a result it is possible to lower the costs and time of implementation as well as the effort required for process design. Also the possibility to personalize the software without expensive customization projects plays an important role. Users are focusing more and more not only on TCO (total cost of ownership) but also on TCI (total cost of implementation).
- **Internationality:** Is the vendor present on international markets? Is the software available in different languages? In particular, SMEs on international markets need effective on-site support and software that allows for the use of different languages and currencies.
- **Possibility of data migration:** Particularly for those companies that are switching from an old ERP solution to a new one, the possibility of data migration is of special interest. Is it possible to transfer master and transactional data from the old system to the new one?
- **Service and support costs:** Next to the license costs the annual costs of service and support also have to be considered, as they have an enormous influence on the TCO of an ERP system. Companies have to clarify, what services are included; how many updates, how much support, etc.
- **Sustainability:** As an ERP system is a long term investment, the sustainability of the software and its vendor are of utmost importance. What does the vendor's financial situation look like? Is the technology being used sustainable? Is the software based on new technological trends or old technological platforms?

Comarch is an international software house, employing about 3500 specialists worldwide, offering end-to-end solutions. Along with first class ERP systems, the company's portfolio also includes CRM and EDI management solutions. Complementary services such as infrastructure hosting and outsourcing as well as software implementation and adaptation services complete Comarch's perfect offer.

6. SUMMARY AND RECOMMENDATION

As this whitepaper demonstrates, the selection of an ERP solution is an important decision that has a great influence on a company's future. This is why this decision must be made with care and considering all the criteria that have been identified in this paper.

Small and medium businesses in particular are facing major challenges connected with internationalization, customer loyalty, online sales, manufacturing and logistics flexibility as well as cooperation with partners and suppliers. In addition, there are more and more legal requirements and rules, international as well as domestic, that SMEs must follow. In order to continue their success, businesses have to be able to analyze their activities in detail and based on this information, create reliable forecasts of future developments.

Up-to-date ERP solutions support companies with the fulfillment of those criteria, without forcing them into a predefined concept. The criteria named in this whitepaper should be sufficient for deciding on the right ERP solution for a company.

The Comarch ALTUM ERP solution, offered by Comarch AG in Dresden, is part of this report. This product presents very interesting possibilities for small and medium sized companies. As it pertains to usability, the product impresses with an easy to use and fully customizable user-interface. The integrated business performance management suite opens up new possibilities for a company's performance management. The same is true for business process management; it allows users to make the company know-how a part of the ERP system. Additionally, integrated mobile solutions are available for a sales force, management and warehouse personnel.

In general, users that are looking for the right ERP solution should consider three major questions:

What solution best fits the individual requirements of my company?

What solution can be adapted to changing requirements and processes in the most flexible and inexpensive way?

What system offers more than just administration, but the possibility to improve the company's processes and performance, in short – what ERP solution offers real added value?

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ABOUT PIERRE AUDOIN CONSULTANTS

PAC is a global market research and strategic consulting firm for the Software and IT Services Industry (SITSI). PAC helps IT vendors, CIOs, consultancies and investment firms by delivering analysis and advice to address a range of growth, technology, financial and operational issues.

Our 30+ year heritage in Europe combined with our US presence and worldwide resources forms the foundation of our ability to deliver in-depth knowledge of local IT markets, anywhere. We employ structured methodologies undertaking thousands of annual face-to-face interviews on both the buy and sell side of the market, as well as a bottom-up, top-down approach to leverage our research effectively.

PAC publishes a wide range of off-the-shelf and customized market reports including our best-selling SITSI® program in addition to our suite of strategic consulting and market planning services. Over 160 professionals in 16 offices across all continents are delivering the insight that can make a difference to your business.

More information can be found on our website www.pac-online.de.

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