



TREND STUDY

SAP Application Management in Europe and the USA

The status quo and new requirements in the context of SAP S/4HANA as well as new developments in relation to the cloud, artificial intelligence (AI) and SAP Business Technology Platform (BTP) topics



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In professional cooperation with



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INTRODUCTION

SAP is one of the leading providers of business application software and market leader in enterprise resource planning (ERP). These systems are critically important as they form the backbone of key business processes.

Effective SAP Application Management (SAP AM) ensures the smooth functioning and performance of the systems and thus contributes to business continuity. Application management initially focused on ensuring an application's availability and stability, while at the same time freeing up internal resources for tasks with a greater degree of innovation. However, with increasing maturity, the value proposition has been changing, so that applications now do not only have to be "in operation" but also require continuous optimisation.

Innovative technologies such as cloud computing, automation and artificial intelligence (AI) are changing SAP AM by creating new ways to improve efficiency and optimise performance. However, at the same time, these changes also lead to new requirements for SAP users and their service partners.

SAP's particular focus currently rests on the topic of cloud ERP. RISE with SAP is a complete offering of cloud solutions and services. At the press conference in July 2023, SAP announced that it would mostly offer important innovations in combination

with a RISE contract, which led to some dissatisfaction in the SAP community. SAP responded in January 2024 by further incentivising SAP users to switch to either the Private Cloud or Public Cloud edition.

At the same time, the SAP Group has been heavily investing in innovation topics like AI. It is clear that this technology will soon become a firmly established part of SAP's product lineup and the company's entire portfolio. As a result, it is becoming increasingly important for IT decision-makers and SAP managers to engage with the possibilities, areas of application and risks technologies like generative AI present.

In order to gain an up-to-date view of both the status quo and future developments in the SAP Application Management field, between January and February 2024, PAC conducted a survey on behalf of NTT DATA Business Solutions among 200 SAP and IT managers located in a variety of European countries and the USA, asking them about the challenges and strategies surrounding this topic.

The study's aim is to discover how companies currently operate and develop their existing software applications and what challenges they encounter in this regard, including in the context of SAP S/4HANA and developments relating to the cloud, AI and other innovative topics.

THE KEY TAKEAWAYS

- **Increasing complexity represents one of the biggest challenges in SAP Application Management (AM).** As many companies are or will be using a number of different cloud applications and deployment models simultaneously, they are learning how complex it can be to integrate and manage these solutions.
- **The integration between SAP and non-SAP applications is becoming ever more important.** Companies use a wide range of business applications alongside the SAP system at their core. Accordingly, it is important to ensure a seamless integration and communication between SAP and non-SAP applications and to be able to operate them in parallel over the long term.
- **Service automation is a lever for increasing AM efficiency as well as service quality.** The study's results show that the respondents had an average degree of automation in the AM area. The highest scores are achieved in the service desk, security and testing areas. The majority of respondents think that the use of AI (including generative AI) can create cost-saving potentials of up to 30% across all AM areas. This is particularly true for monitoring, documentation and system administration processes.
- **The SAP Business Technology Platform (BTP) will play an important role in future.** Although alternatives to the various SAP BTP components exist, none of the third-party providers offer the full range of functions for SAP-centric application environments in-house. For a seamless integration of customised ERP extensions, it is even more important that SAP BTP provides essential basic services such as a unified interface, unified data and domain models as well as a unified security architecture.
- **External support, especially when it comes to the cloud.** Overall, it is striking that the respondents prefer to seek external help whenever the cloud topic comes into play – from the implementation of a cloud-based application up to its hosting and the operation of SaaS solutions.
- **New expectations with regard to SAP partners:** Overall, it can be said that besides knowledge, innovation and competencies in the security field, an SAP partner should ideally also offer a broad service portfolio, from consulting to operations. SAP partners who go beyond traditional AM (maintenance and operations) and integrate additional services (transformation and innovation) are best positioned for the future.

THE APPLICATION LANDSCAPE

SAP S/4HANA

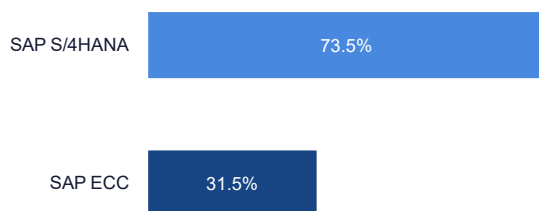
In our sample, over 70% of respondents say that they have chosen the latest version of SAP ERP, SAP S/4HANA. In doing so, most choose the ERP solution's cloud version (63%); only 37% opt for the SAP S/4HANA On-Premise edition or a traditional software license.

Among those planning to migrate to SAP S/4HANA, the majority (68%) are also favouring a cloud version, with almost one in two planning to use a public cloud option. In most cases, opting for the public cloud also means opting for SAP's RISE with SAP program.

In view of the approaching end-of-maintenance date for SAP's predecessor ERP systems at the end of 2027, users will not be able to avoid the migration. Over 70% of participants have made a clear decision in favour of SAP S/4HANA. The rest are currently still sticking to SAP ECC.

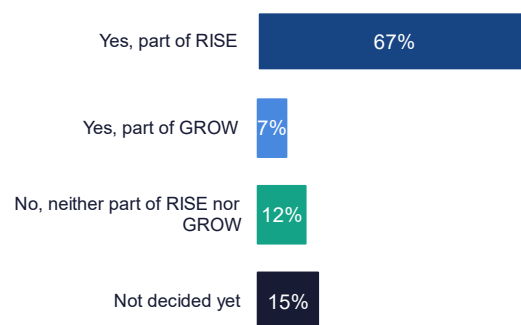
Despite the fact that SAP is incentivising SAP users to choose the cloud license for the latest ERP version. The public cloud options include the SaaS-native version as well as the private editions, which are operated in a public cloud environment.

Composition of sample by SAP ERP use



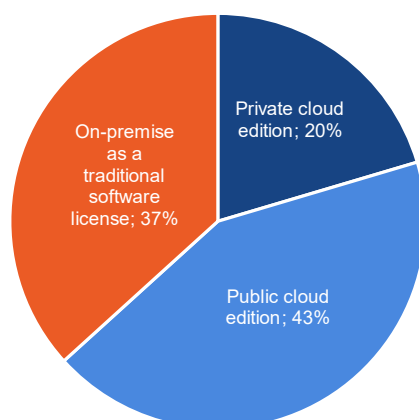
Breakdown of responses from the organizations surveyed, in % (n = 200)
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Is your SAP S/4HANA implementation part of SAP's RISE or GROW contractual models, or will it be?



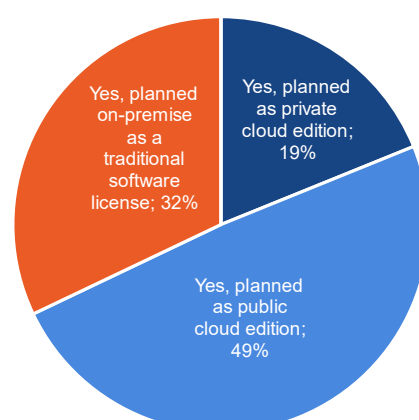
Breakdown of responses from those organizations surveyed that use or plan to use S/4HANA as private or public cloud edition, in % (n = 129)
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Composition of sample by S/4HANA edition – in use



Breakdown of responses from those organizations surveyed that already use S/4HANA, in % (n = 147)
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Composition of sample by S/4HANA edition – plans



Breakdown of responses from those organizations surveyed that do not have S/4HANA in use, in % (n = 53)
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SAP AND NON-SAP APPLICATIONS

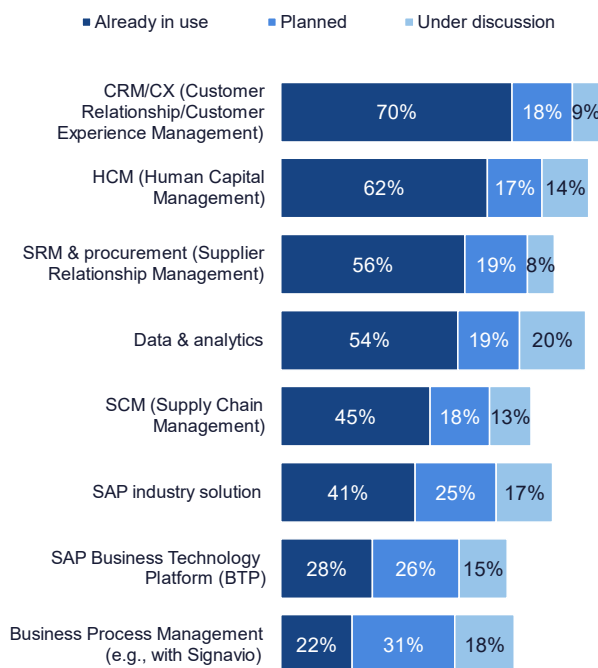
The use of SAP software outside the ERP area is particularly common in the CRM/CX, HCM and SRM areas as well as in procurement and for data & analytics. Other areas where SAP applications are currently used or planned are, among others, asset management, travel and expense management and project management. The use of SaaS is widespread, especially to support individual business processes.

This applies to frequently acquired, native SaaS solutions, like SAP SuccessFactors in the HCM area, Ariba for the purchasing area and Concur for travel expense accounting. SaaS usage is less widespread in industry-specific SAP applications which primarily support value-adding processes within

organisations (and which are used to process production data, R&D data, health data, etc.). There is still some reticence here.

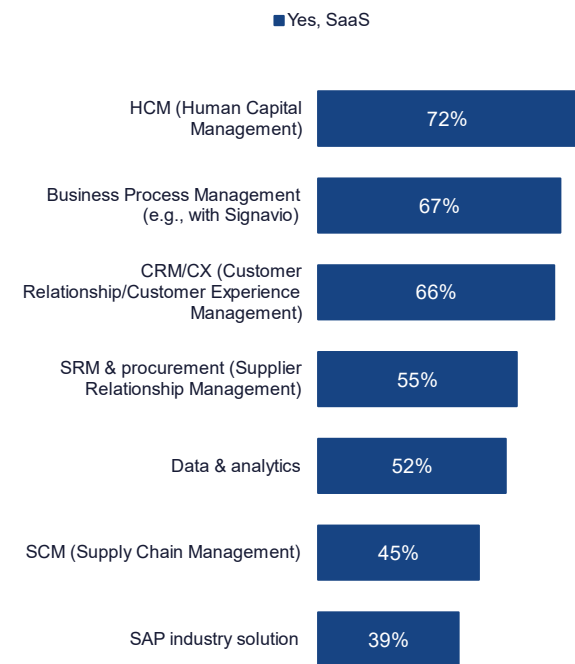
Many organisations use software products from other leading platform providers alongside their SAP systems. These include suites or individual solutions in the sales, service & marketing, HCM and collaboration areas or even niche solutions. Most notable are the providers Microsoft, Salesforce and Adobe. Rarely, the parallel use of alternative solutions for the finance area has been mentioned. The range of business applications companies use alongside their core SAP system is wide. Accordingly, it is important to ensure a seamless integration and communication between SAP and non-SAP applications and to be able to operate them in parallel over the long term.

In which of the following areas does your organization use, plan to use, or discuss using SAP solutions?



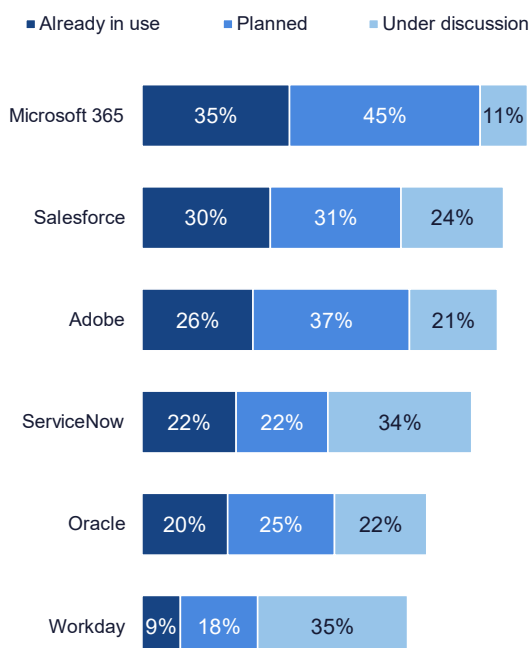
("Neither in use nor planned or discussed" not shown)
Breakdown of responses from the organizations surveyed, in % (n = 200)
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Is it a software-as-a-service (SaaS) model?



("No, no SaaS" not shown)
Breakdown of responses from those organizations surveyed that use or plan to use or discuss using the respective SAP solution, in % (n = 185, 141, 192, 165, 184, 151, 164)
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Which of the following software-as-a-service solutions are already in use, planned, or being discussed in your organization?



("Neither in use nor planned or discussed" not shown)
Breakdown of responses from the organizations surveyed, in % (n = 200)
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CHALLENGES IN SAP OPERATION

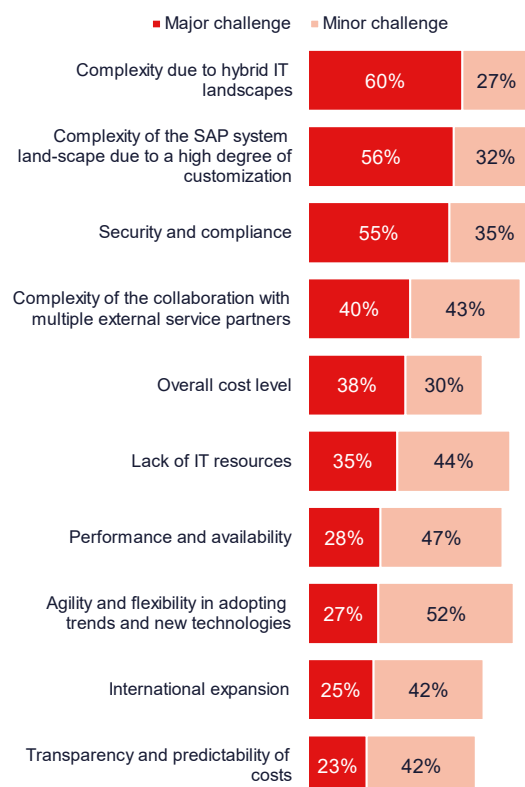
One of the biggest challenges in SAP operation is the increased complexity that results from hybrid IT environments, customisations/adaptations as well as the security and compliance topics.

Hybrid IT environments combine on-premises infrastructure with cloud services. On the one hand, this offers advantages in terms of data control and flexibility in the use of resources. On the other hand, this increases the IT landscape's complexity. Interfaces as well as the corresponding data integration strategies and tools are often required in order for different technologies to interact seamlessly. Furthermore, there is a need for specialised solutions to manage user identities and access rights (Identity and Access Management). The monitoring of hybrid environments is more complex still and requires appropriate orchestration solutions to monitor and control the performance, availability and security of on-premises and cloud-based resources.

The operation of highly adapted SAP systems equally leads to additional complexities. Whenever new upgrades or updates are installed, for example,

these systems require additional testing and, where necessary, adaptations to ensure they are compatible and secure. Where no corresponding documentation for the adaptations or in-house developments is available, this leads to additional work for the support team.

With regard to the operation of your SAP systems, including license, infrastructure, and application management: Which of the following aspects are a major, minor, or no challenge for your organization?



("No challenge" not shown)
Breakdown of responses from the organizations surveyed, in % (n = 200)
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The increased complexity extends beyond the IT systems themselves. Although cooperation with a number of operating partners gives customers negotiating power and potentially better contractual conditions as well as access to specialised competencies, it also has its downsides. More than 80% of respondents find working with several external service partners challenging. In the case of multiple external partners, the responsibility for the various system operation aspects is shared. Here, additional factors also come into play, such as multiple contracts and different contractual conditions, e.g., several SLAs, a variety of measurement methods, performance targets, etc., which all drive up the coordination costs. What's more, extra monitoring work is required if the partners are controlled separately.

COOPERATION WITH THE SAP PARTNER

EXTERNAL SAP SERVICES – STATUS QUO

In the area of SAP consulting and system integration, most respondents work with external partners to at least some extent. Particularly for the implementation of SAP SaaS solutions, SAP partners are predominantly used.

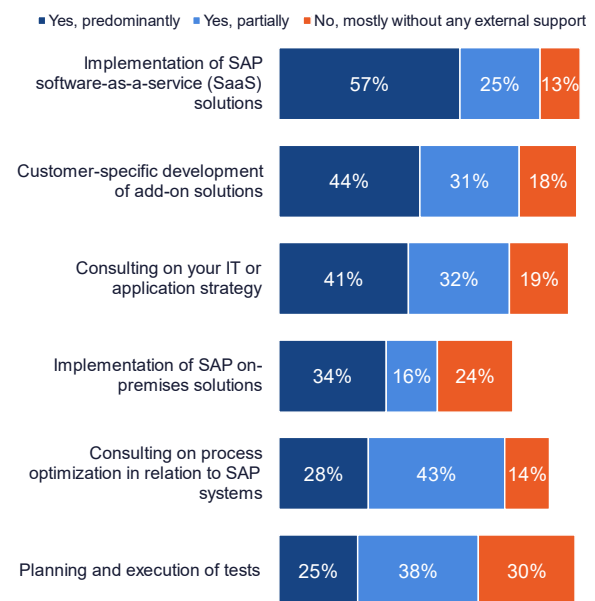
In each case, more than 40% of respondents also state that they mainly opt for external help to host SAP applications in the public cloud and to operate SAP SaaS solutions. More than half of the respondents outsource SAP Basis support to an external partner. Almost half of them also outsource most of the user help desk to a partner. In addition to the more traditional SAP AM services, 68% of respondents state that they outsource at least parts of their application optimisation to an external partner.

Overall, it is striking that the respondents prefer to seek external help whenever the cloud topic comes into play – from the implementation of a cloud-based application up to its hosting and including the operational services for SaaS solutions. External cloud specialists have experience in the planning, implementation and management of cloud solutions. They know the best practices, tools and migration methods to support, automate and accelerate the migration of SAP systems to the cloud.

More and more external partners are also offering their own services based on the RISE with SAP program. Such expanded offers are aimed at specific customer groups, e.g. designed for particularly complex structures, as is the case with company groups, for example.

When using external SAP hosting and AM services, there are advantages for SAP users. In many cases, external partners offer their own frameworks and use agile methods that promise “smart” or “intelligent” AM, whereby tasks such as system monitoring, troubleshooting or patch management are carried out partially or completely automatically.

Does your organization predominantly or partially work with external service partners for the following SAP-related projects, or do you mostly do without any external support?

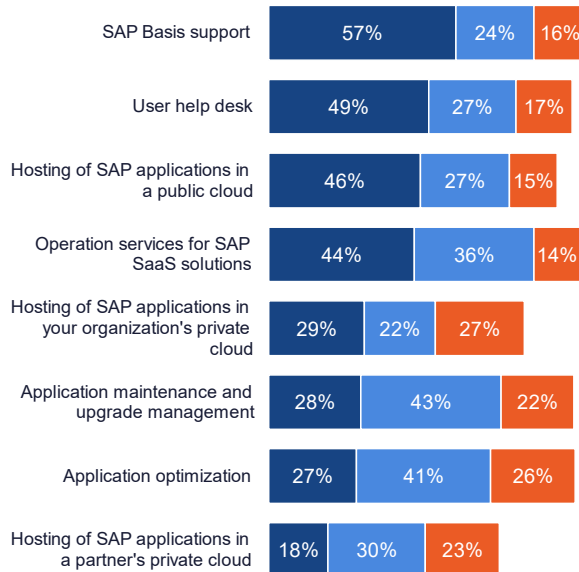


("Not relevant" not shown)
Breakdown of responses from the organizations surveyed, in % (n = 200)
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Furthermore, many external partners offer more than traditional AM (maintenance and operations) and integrate additional services into their SAP AM (transformation and innovation) offerings.

Does your organization predominantly or partially work with external service partners for the following SAP operating services, or do you mostly do without any external support?

■ Yes, predominantly ■ Yes, partially ■ No, mostly without any external support



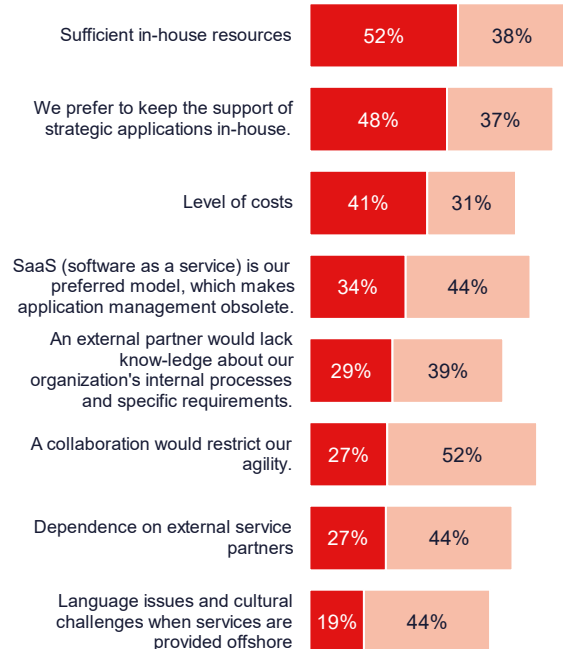
("Not relevant" not shown)
Breakdown of responses from the organizations surveyed, in % (n = 200)
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There are a number of reasons why SAP AM is not outsourced to an external partner. Especially where sufficient internal IT resources are available to them, most respondents are against external SAP AM. For almost half of them, one important reason is that they prefer to provide in-house support for strategic

applications. In addition, cost considerations also play an important role in their decision-making.

What are the reasons why you WOULD NOT work with an external service partner for the management of your SAP applications?

■ Major reason ■ Minor reason



("No reason" not shown)
Breakdown of responses from the organizations surveyed, in % (n = 200)
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REQUIREMENTS IN RELATION TO SAP SERVICE PARTNERS

As far as their SAP service partner is concerned, respondents consider the most important characteristics to lie in the areas of knowledge (of the SAP portfolio and SAP licensing models), competencies in the security area as well as innovative abilities in terms of the technologies and pricing. Overall, the respondents have high requirements in relation to their SAP partner. Here, too, it becomes clear that there is much more to it than "mere" expertise in relation to the SAP product landscape. Innovation cycles in the IT market are getting ever shorter, as has been highlighted by the developments around AI in particular.

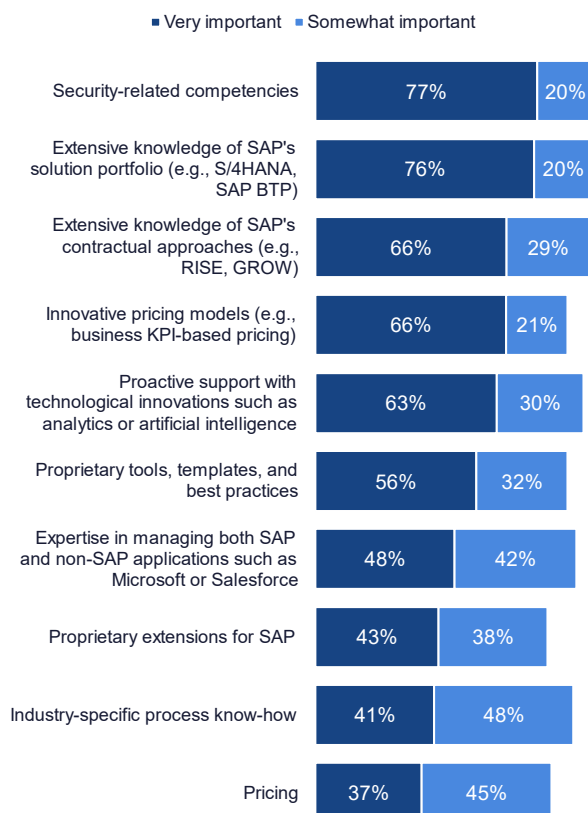
SAP too announced in January 2024 that it would invest around two billion euros in innovative growth areas, primarily in AI. In 2023 alone, the group invested in the AI specialists Aleph Alpha, Anthropic and Cohere. AI will soon become a firmly established part of SAP's product lineup and its entire portfolio. All the more reason why SAP users expect

their SAP partners to take a proactive approach and educate them about the benefits, opportunities and risks of the new technologies, all of which goes far beyond merely ensuring smooth, secure operations. Competencies that relate to the SAP systems' security and their smooth operation are among the must-have criteria that any SAP partner must fulfil.

As far as the SAP partner's service is concerned, the following requirements in particular should be emphasised: end-to-end services, software development support, migration and operation support in the public cloud and the ability to leverage automation in service delivery.

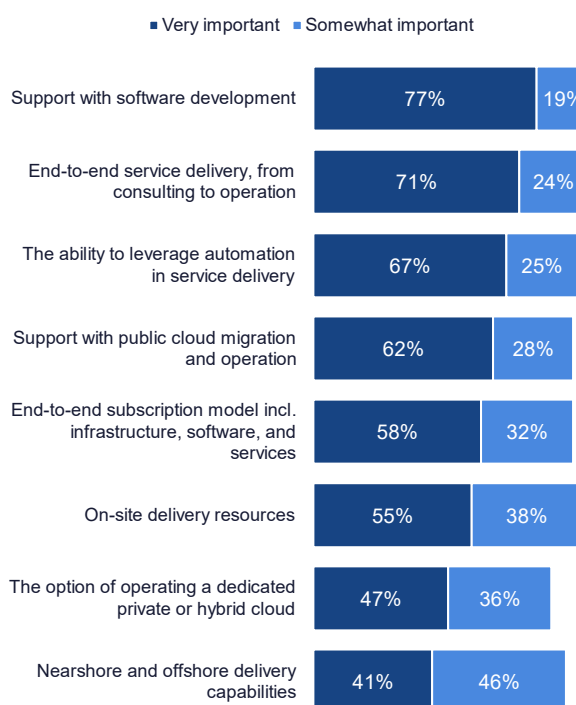
The previous statements have shown that respondents prefer to seek external help when the cloud topic comes into play. Accordingly, the requirements in relation to an SAP partner in the area of public cloud migration and operation are perceived as particularly important. By automating the service provision through the use of tools and frameworks, it is hoped that an acceleration and optimisation of the aforementioned processes, e.g. during cloud migration, operational efficiency, etc., is achieved.

Which of the following aspects do you or would you consider as very important, somewhat important, or not important at all with regard to a SAP service partner?



("Not important at all" not shown)
Breakdown of responses from the organizations surveyed, in % (n = 200)
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And what about the following delivery capabilities (regarding a SAP service partner)?

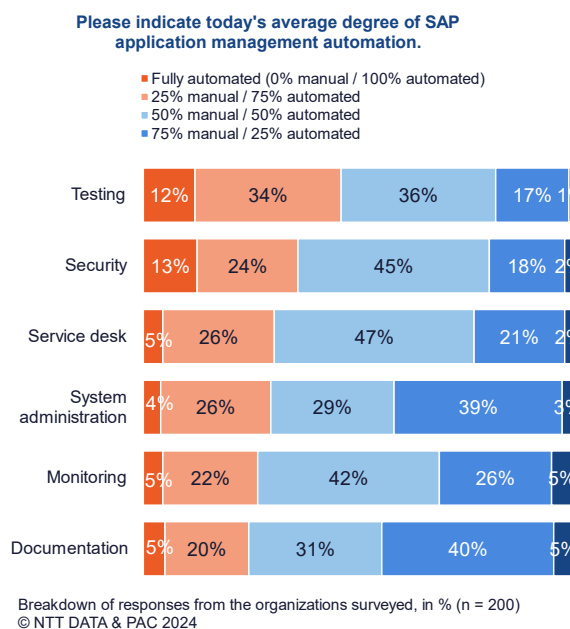


("Not important at all" not shown)
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THE TECHNOLOGIES

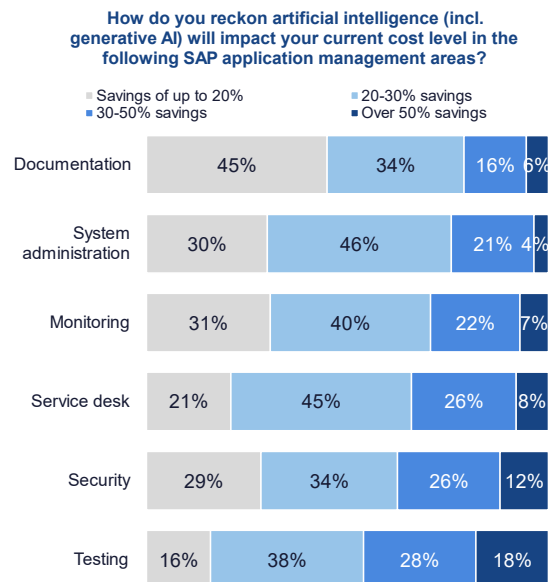
AUTOMATION AND ARTIFICIAL INTELLIGENCE

The highest degree of automation is seen in the service desk, security and testing areas. Automated processes in SAP AM mainly generate efficiency gains and ensure error prevention. Many tasks are repetitive and are therefore particularly suited to automation. This applies, for example, to the automatic processing of service desk tickets and the automated execution of tests. Thanks to automated security analyses, it is furthermore possible to detect and respond to potential threats more rapidly.



The majority of respondents believe that the use of AI (including generative AI) can create cost-saving potentials of up to 30% across all AM areas. This is particularly true for monitoring, documentation and system administration processes. The integration of AI (including generative AI) into documentation processes can help to create and update documents automatically. Furthermore, it is possible to automatically index and categorise documents, whereby they become easier to search, which results in more accurate and up-to-date documentation overall. Other areas include the automated monitoring of the system performance, installation of patches and updates as well as the optimised use of SAP system resources, for example via dynamically adapted workloads. Incidentally, in November 2023, SAP announced the SAP Build Code, a PaaS that enables

SAP developments using the generative AI assistant Joule. Java and JavaScript developers are thereby able to speed up the programming, testing, integration and AM tasks.

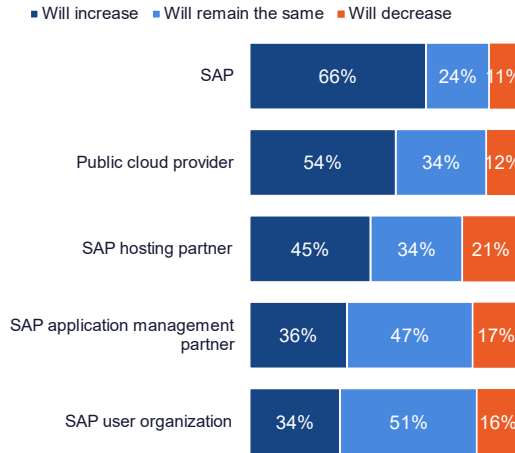


RESPONSIBILITIES IN CLOUD OPERATION

The shift towards public ERP systems affects SAP users' IT and application architectures while also influencing the relationship between customers and partners. The increasing shift from SAP S/4HANA to cloud-based platforms means that both the hosting services and the provider environment are changing.

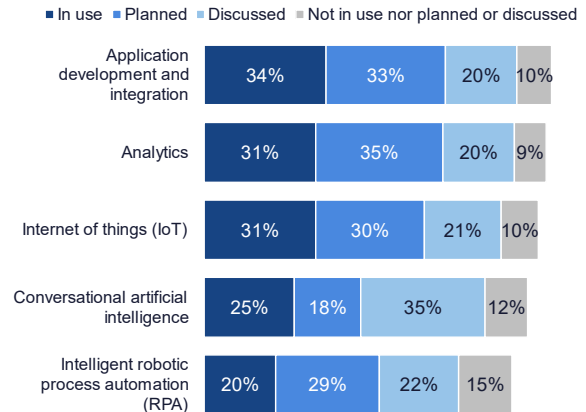
Generally speaking, SAP hosting partners are increasingly relying on public cloud infrastructure resources from AWS, Microsoft Azure and Google Cloud. For SAP AM partners, this means that expertise in the areas of consulting, migration and operation in relation to hyperscaler platforms is becoming increasingly important. The increased focus on cloud-based delivery models with a "Keep the Core Clean" approach leads to a realignment of AM. Within the framework of SAP RISE contracts, the responsibility for technological AM lies with SAP and follows a certain standard. In SAP S/4HANA environments, the AM's functional focus is increasingly on customer-specific extensions, which are developed and maintained outside the core system.

Against the backdrop of the new RISE and GROW models, do you think the degree of responsibility for the end-to-end availability of SAP systems will increase, remain the same, or decrease for the following roles?



Breakdown of responses from the organizations surveyed, in % (n = 200)
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In which of the following areas is BTP (Business Technology Platform) already in use, planned, or under discussion? Please state if an area is not relevant to your organization.



("Not relevant" not shown)
Breakdown of responses from those organizations surveyed that use or plan to use or discuss using BTP, in % (n = 136)
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PLATFORMS AS A SERVICE – THE SAP BUSINESS TECHNOLOGY PLATFORM

With its SAP Business Technology Platform (SAP BTP), SAP offers a cloud platform – an integrated solution that consists of four core areas:

1. Application development and automation (via SAP Build)
2. Data and analyses (via SAP Data Intelligence Cloud, SAP Datasphere, SAP Analytics Cloud, etc.)
3. Integration solutions such as APIs and connectors, for example for cloud integration or the integration of third-party solutions (via the SAP Integration Suite)
4. Solutions for the use of AI; these include pre-trained, ready-to-use models, solutions for AI workload management (via SAP AI Core) and the management of generative AI (via SAP AI Launchpad) created through machine learning

The BTP provides an opportunity to complement, extend and integrate solutions from SAP or SAP partners while using the same data model. The solutions are designed to help develop innovations more quickly through the use of traditional tools, no-code/low-code solutions, pre-configured analysis models and self-service analyses. RISE users benefit from access to selected BTP areas. These include SAP Build solutions, i.e., low-code solutions for the creation of web and mobile apps or company websites as well as process automation via RPA (Robotic Process Automation). This could explain the comparatively high usage rates in the areas of application development and intelligent RPA. In the foreseeable future, SAP BTP will form the basis for all SAP cloud products as well as for all functional SAP S/4HANA enhancements and innovations. The more companies move to a cloud-based S/4HANA edition, the greater the demand for SAP BTP will be as custom extensions will need to be developed and integrated.

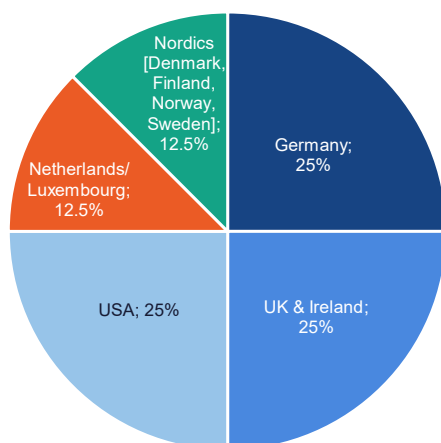
METHODOLOGY

Between January and February 2024, PAC surveyed 200 executives who are in charge of SAP/IT in large companies across Europe and the USA. The CATI (Computer-Assisted Telephone Interview) survey was conducted by experts from Germany, the United States, the United Kingdom, Ireland, the Nordic countries (Denmark, Finland, Norway, Sweden), the Netherlands and Luxembourg. In doing so, care was taken to ensure that only companies who use SAP ERP (SAP ECC or SAP S/4HANA)

as a core application participated. A further prerequisite for participation was a turnover of 500 million to 5 billion (EUR/USD/GPB) or a number of at least 2,000 employees for public sector participants.

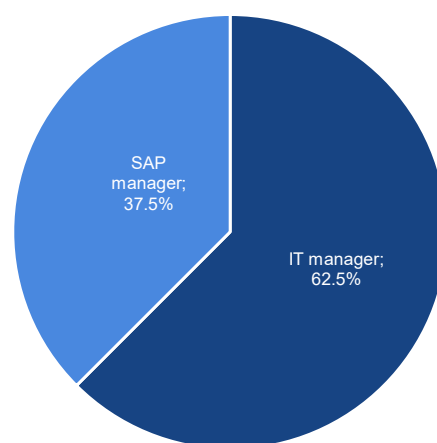
The study's aim was to obtain an up-to-date picture of both the status quo and future developments in the SAP Application Management (AM) field.

Composition of sample by region



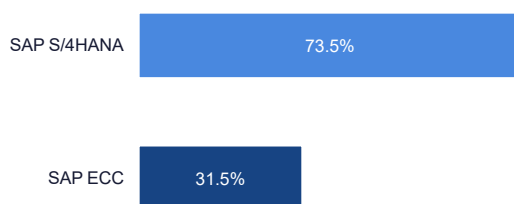
Breakdown of responses from the organizations surveyed, in % (n = 200)
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Composition of sample by position of respondent



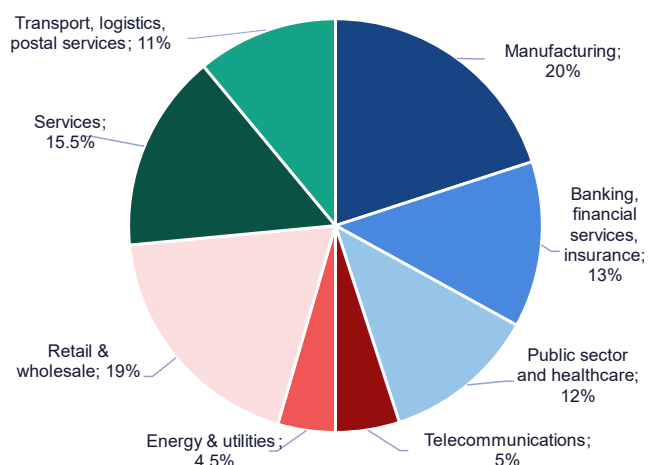
Breakdown of responses from the organizations surveyed, in % (n = 200)
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Composition of sample by SAP ERP use



Breakdown of responses from the organizations surveyed, in % (n = 200)
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Composition of sample by industry



Breakdown of responses from the organizations surveyed, in % (n = 200)
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ANNEX

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This study was commissioned by NTT DATA Business Solutions.

For more information, please visit www.pacanalyst.com.

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The participants in the study were assured that the information they provided would be treated confidentially. No statement enables conclusions to be drawn about individual companies, and no individual survey data was passed to the ordering party or other third parties. All participants in the study were selected at random. There is no connection between the production of the study and any commercial relationship between the respondents and the ordering party of this study.

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