SAPinsider

BENCHMARK REPORT
EXECUTIVE SUMMARY

by Robert Holland February 2024

SAP INFRASTRUCTURE AND LANDSCAPE TRENDS

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Insider Perspective

"The infrastructure plans for our SAP systems center on the ability to maintain, support, and keep up with licensing for new versions we are required to implement. The benefits that cloud environments offer in this scenario are reduced hardware investments and that our infrastructure provider maintains our underlying architecture is while meeting our service level requirements."

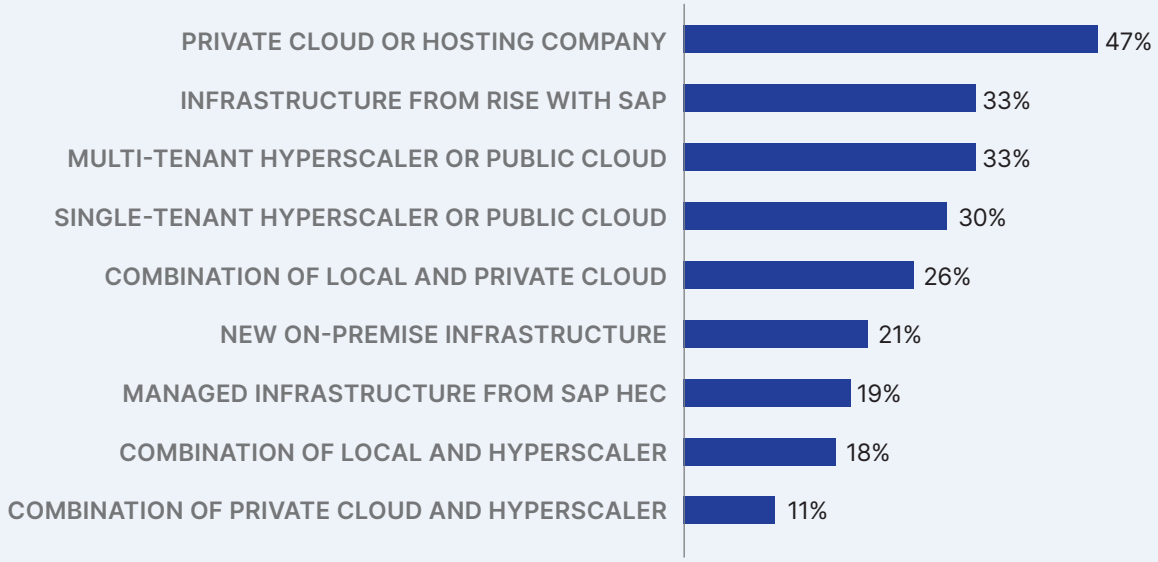
– TECHNICAL DIRECTOR, REGIONAL UTILITY

INFRASTRUCTURE IS THE FOUNDATION of any SAP landscape. Although SAP has a goal of becoming a cloud company, many organizations have yet to make the move to cloud-based infrastructure. This is because a significant number of existing systems reside on legacy infrastructure. However, this infrastructure is changing. When SAPinsider first researched infrastructure and landscape trends in 2022, the top two infrastructure choices were a private-cloud environment and multi-tenant hyperscaler or public cloud. The third most likely infrastructure choice was new on-premise infrastructure, selected by more than a quarter of survey respondents.

SAPinsider research on how SAP workloads are moving to the cloud shows it is more likely that new solutions will be deployed on cloud infrastructure. To understand more about how these infrastructure choices are changing, SAPinsider surveyed 176 members of its community between November 2023 and January 2024 to generate insights on SAP workloads in use and the infrastructure used for those workloads. The survey also sought to understand the impact of RISE with SAP on infrastructure plans, and how much sustainability measures played into infrastructure planning.

As was the case two years ago, the biggest factor impacting infrastructure plans was the requirement for cloud deployments to support digital transformation objectives (29%). However, the cloud environments used to support those digital transformation objectives vary significantly. While the proportion of respondents planning to use new on-premise infrastructure continued to drop, and was exceeded by those planning to use either multi-tenant or single-tenant hyperscaler environments, what was unexpected was how many respondents planned to use infrastructure from RISE with SAP **(Figure 1).**

Figure 1: Planned Infrastructure



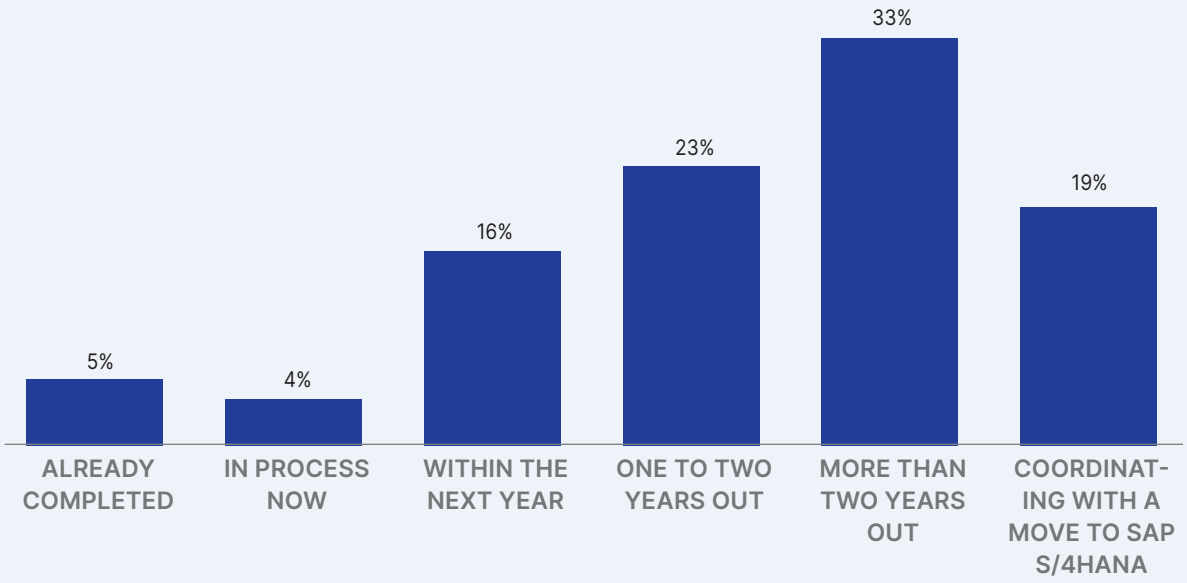
The most likely new infrastructure investments continue to be focused on the private cloud, with nearly half the respondents indicating this is the infrastructure they plan to use to update their landscape. However, while multi-tenant hyperscaler environments is the second most likely new infrastructure, an equal number of respondents are planning on using infrastructure from RISE with SAP. While RISE with SAP is essentially synonymous with SAP S/4HANA Cloud, which makes up the ERP core of the offering, SAP provides infrastructure services for organizations that sign on for RISE with SAP.

Not unlike the platform-as-a-service offering SAP HEC, organizations moving to RISE with SAP can leverage the infrastructure as an interim measure before transitioning to SAP S/4HANA and can continue to use them for non-ERP solutions after their transition is complete. SAP focuses on the SAP S/4HANA Cloud component in RISE with SAP, but in the first two years of release as many as three quarters of RISE with SAP deals initially used only the infrastructure portion of the offering.

Organizations continue to make decisions about future infrastructure investments and the timeline for updating and replacing infrastructure for the end-of-mainstream maintenance of core SAP Business Suite applications will play out over the next few years **(Figure 2).** About a quarter of respondents say that they plan on completing their infrastructure changes during 2024, while another quarter say they expect their timeline for replacement is one to two years away. One in five respondents (19%) report they plan on coordinating infrastructure changes with the move to SAP S/4HANA, but the timeline has not been finalized for many organizations. The fact that a third of respondents report that any plans to replace infrastructure are more than two years out does align with the end of maintenance timeline.

The gradual timeline for infrastructure replacement may align with the fact that the most likely strategy organizations are taking to support their infrastructure and landscape needs is to replace older infrastructure with updated technology in the cloud (50%). While replacing older infrastructure is an important step for both cost savings and providing more flexibility and scalability, organizations are not rushing into this task. Replacing older infrastructure as it reaches the end of life allows a company to fully realize the value of the previous investment before it is replaced. This also means that systems are aged out rather than replaced wholesale, explaining the extended timeline for updating infrastructure.

Figure 2: Timeline for Updating or Replacing Infrastructure



Measuring the success of infrastructure and landscape initiatives starts with savings, both in terms of minimized operational efficiencies and reduced operational cost **(Figure 3).** Reduced cost allows organizations to either redirect expenditures to more important needs or provides for expanded capabilities without increasing overall cost. Improved efficiencies also contribute to cost savings as organizations are better able to scale up or down to provide resources as needed but it also allows for automation of routine tasks such as backups, updates, patching, and resource provisioning. This also has a cost savings because it frees up teams to focus on more critical tasks.

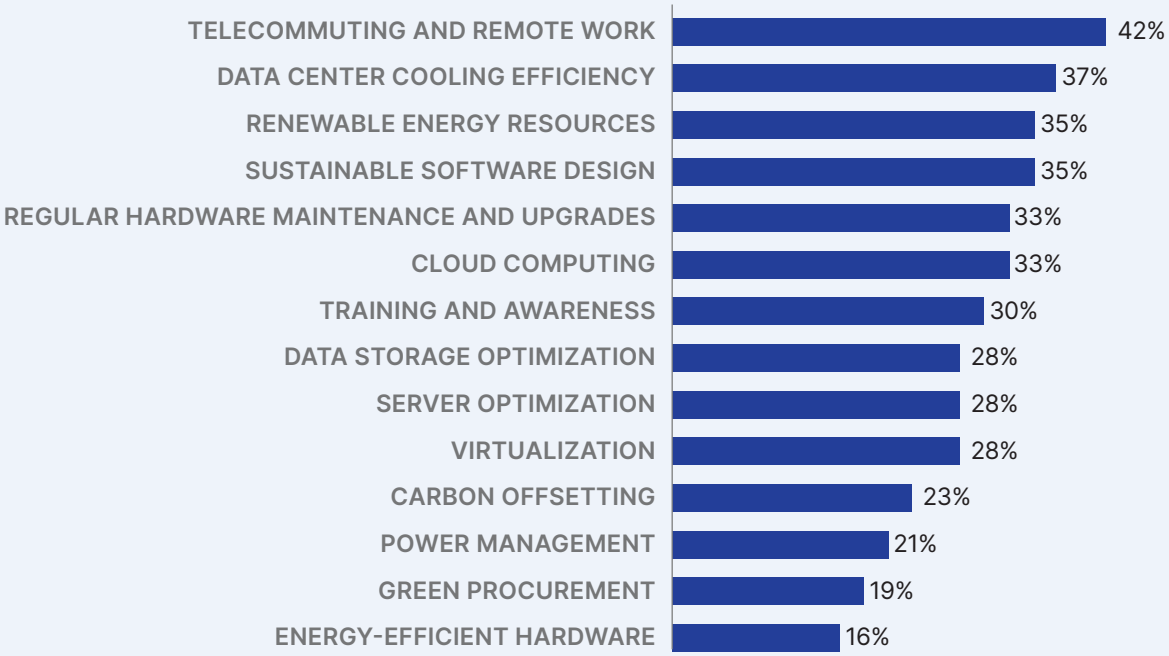
Organizations expect other benefits, which include increased scalability and flexibility, preserving capital expenditure, and increased uptime. Increased scalability and flexibility are some of the core benefits the cloud offers as compute resources can be used as needed. If a system is not actively required, it can be shut down to save costs. Additional computing power can be added when more capacity is needed, such as when more users are actively accessing the system. Uptime also is crucial as organizations look to maximize resilience in their operations. Having to take down systems, even in a planned manner, can be very expensive for a global organization. Avoiding unplanned downtime is even more important.

While the standard measurements of successful infrastructure updates focus on cost savings and flexibility, creating a more sustainable infrastructure also is important for many respondent organizations. For example, 39% of respondents reported that creating a more sustainable infrastructure and landscape with reduced environmental impact was important or very important to their organization. Another 38% reported that it was moderately important. Only 23% indicated it was no more than somewhat important.

To create this more sustainable infrastructure, key actions include reducing the need for employees to be on-site, improving data center cooling systems and efficiency, sourcing renewable energy resources, and focusing on sustainable software design **(Figure 4).** Leveraging telecommuting and remote work reduces the need for potentially long commutes for employees, which has an energy cost that is not always tracked. It also allows organizations to reduce the need to maintain and manage office space. Given that most IT workers are remotely connecting to systems being administered, rather than physically interacting

Figure 3: Measurements of Success for Infrastructure and Landscape Initiatives

Figure 4: Actions Taken to Create a More Sustainable Infrastructure



with them, it can be a significant savings to have these employees work remotely at least some of the time.

Data center cooling efficiency, along with renewable energy resources, also help organizations minimize the impact of running large data centers. For example, organizations may move towards liquid cooling systems rather than traditional airflow-based systems, but the goal is limiting the impact on the environment through carbon emissions and water consumption. Renewable energy resources ensure that the large volumes of electricity required to power data reduce the impact on the environment. But also significant is sustainable software design, which can have a large impact through technologies like low-power devices, cloud-based services, and utilizing algorithms that minimize memory usage, network traffic, and modular and reusable code.

This year's survey also revealed the following trends:

- Respondents remain split over how important SAP's Intelligent Enterprise, or Intelligent Sustainable Enterprise, is to their infrastructure planning. 27% report that it is of low importance, 48% report it is moderately important, and 26% report that it is important.
- Despite a significant number of respondents indicating that they intend to use infrastructure services from RISE with SAP as they update and replace existing systems, 44% of respondents report the offering has little to no impact on their infrastructure plans. Two in five (40%) report it is having a moderate impact, while just 16% report it has had a significant or major impact on their infrastructure plans.
- Nearly half (48%) of the research respondents report they are implementing sustainability KPIs for all systems in their IT landscape. One in five (21%) report they are implementing these KPIs for SAP systems only, while 7% say they will only have sustainability KPIs for non-SAP systems. Nearly a quarter (23%) report they have no plans to implement sustainability KPIs.

Insider Perspective

"The biggest factors impacting our current infrastructure plans are the age and expense of maintaining our existing systems. By moving to the cloud, we hope to be able to transition away from ageing systems more quickly than would be possible if we had to source new on-premise infrastructure. We are also looking to benefit from the cost savings of outsourcing the management and administration of new systems."

– IT MANAGER, SERVICES COMPANY

Insider Perspective

"Our organization still has most solutions running on-premise and we have not actively considered moving to the cloud given the significant investments made in existing infrastructure and security requirements. However, as we replace older infrastructure, we are starting to consider hyperscalers as we need an environment that will support using SAP S/4HANA in the cloud. It has not been an easy process has we have had to convince some more conservative executives that believe the cloud isn't secure, but we are starting to see the cloud as the environment we should move towards."

– DIRECTOR, TECHNOLOGY SERVICES COMPANY

REQUIRED ACTIONS

Based on the survey responses, organizations should make the following plans around their infrastructure and landscape strategies:

- **Understand the impact that RISE with SAP will have on any landscape plans.** Although only 16% of respondents report that RISE with SAP had a significant impact on their infrastructure plans, 33% reported they planned to use infrastructure from RISE with SAP as they update their landscape. This suggests that, even for organizations that may not immediately be moving to SAP S/4HANA Cloud, infrastructure in RISE with SAP may serve an interim role in the transition process. This makes it vital for organizations to understand what is in RISE with SAP from an infrastructure perspective and whether it makes sense to leverage the offering in broader landscape plans.
- **Include sustainability factors when creating infrastructure and landscape plans.** More than three quarters (77%) of respondents reported that they are implementing sustainability KPIs for their IT landscape, and 61% report that creating a more sustainable landscape with reduced environmental impact is at least moderately important to their organization. Given this growing focus on sustainability, it is important for organizations to include in their landscape plans an understanding of the steps that they will use to create more sustainable infrastructure and the metrics they will use to measure the success of IT sustainability initiatives.
- **Explore how SAP's changing cloud and ERP strategy will impact the need to update and replace infrastructure.** Over the last year, SAP has placed a much greater emphasis on moving to RISE with SAP and has experienced double-digit growth in cloud revenue as they continue to become a fully cloud-based enterprise software organization. While only a small number of organizations are running all their core systems in the cloud, every organization running SAP systems needs to understand the impact that SAP's strategy will have on their future infrastructure plans. This is particularly important given SAP's strong emphasis on moving to RISE with SAP, and SAP S/4HANA Cloud, as the only ERP path for the future.

DART
MODEL FRAMEWORK

STRATEGY AND NEEDS FOR INFRASTRUCTURE AND SAP LANDSCAPES

DRIVERS

- Requirement for cloud deployments to support digital transformation objectives (29%)
- Need more flexibility and scalability in enterprise infrastructure (29%)
- Need to implement new infrastructure that improves resilience and availability (27%)
- Pressure to modernize infrastructure to reduce costs and simplify IT (27%)

ACTIONS

- Replacing older infrastructure with updated technology in the cloud (50%)
- Redesigning IT platforms to allow for faster deployment of systems and software (47%)
- Architecting new systems to provide improved customer experience and insight on usage (33%)
- Improving infrastructure usage and efficiency by using virtualization or hyper-converged infrastructure (31%)

REQUIREMENTS

- Maximized infrastructure for minimized cost (61%)
- Flexibility to scale systems to meet increased needs (58%)
- Operating system configurations that reduce downtime (56%)
- High performing and secure infrastructure and operating systems (56%)
- Hybrid environments leveraging local and hyperscaler infrastructure (51%)

TECHNOLOGIES

- Cloud-based infrastructure (28%)
- Infrastructure-as-a-Service (25%)
- Virtualization and hyper-converged infrastructure (23%)
- High availability solutions (21%)
- Open-source platforms/operating systems (21%)
- Hardware and operating systems optimized for SAP HANA (19%)
- Containerization (19%)
- Data lakes (16%)
- Platform-as-a-Service (16%)
- Managed infrastructure solutions (14%)
- Sustainably monitoring tools (12%)
- Automated system deployment and configuration tools (7%)
- Edge systems (7%)

Appendix: The Dart™ Methodology

SAPinsider has rewritten the rules of research to provide actionable deliverables from its fact-based approach. The DART methodology serves as the very foundation on which SAPinsider educates end users to act, creates market awareness, drives demand, empowers sales forces, and validates return on investments. It is no wonder that organizations worldwide turn to SAPinsider for research with results.

THE DART METHODOLOGY PROVIDES PRACTICAL INSIGHTS, INCLUDING:

DRIVERS	These are macro-level events that are affecting an organization. They can be both external and internal, and they require the implementation of strategic plans, people, processes, and systems.
ACTIONS	These are strategies that companies can implement to address the effects of drivers on the business. These are the integration of people, processes, and technology. These should be business-based actions first, but they should fully leverage technology-enabled solutions to be relevant for our focus.
REQUIREMENTS	These are business and process-level requirements that support the strategies. These tend to be end-to-end for a business process.
TECHNOLOGY	These are technology and systems-related requirements that enable the business requirements and support the company's overall strategies. The requirements must consider the current technology architecture and provide for the adoption of new and innovative technology-enabled capabilities.

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T Systems

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