SAP modernization on Google Cloud

Explore how T-Systems and Google Cloud combine their expertise to achieve secure migrations, stable operations, data sovereignty, and innovation for SAP systems.

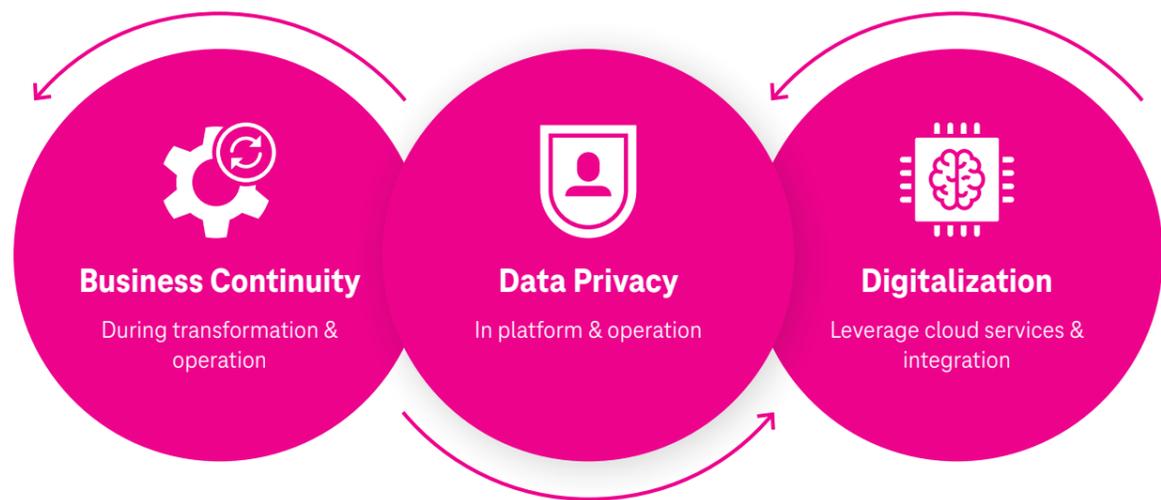*Authors: Rainer Verst und Andreas Schmidt*

Business Continuity
During transformation & operation

Data Privacy
In platform & operation

Digitalization
Leverage cloud services & integration

Abb.1: Three main solution aspects: Combined strength of Google and T-Systems.

One of the most common arguments for cloud usage are "rapid market developments" and that enterprises need to master the challenges of dynamic markets. It was a great selling argument for the cloud, but let's be honest – not everybody was convinced about the power of this "pro-cloud" aspect.

Then a global pandemic arrived. Furthermore, we are seeing huge efforts to shape a new world towards higher sustainability. This is forcing nearly all manufacturing enterprises to set up new strategies and initiatives – not only to reduce their carbon footprint in production, but also in their product line-up.

Electrification becomes a new paradigm, with huge implications for the whole industry. This is what we call disruption – a phenomenon formerly known only from the purely digital world.

And these are only a few examples of how markets need to embrace new rules and adapt to new conditions like supply deficits. With current changes in the political situation, rising prices for energy sources, and even food shortages, nearly every consumer is experiencing disruption. In short: the rapid market developments have arrived – with corresponding effects for all industries.

SAP and Public Cloud – rethought

Against this background, many enterprises are rethinking their position towards the cloud. And a trend visible since the last two or three years is gaining additional traction: the cloudification of SAP. More and more enterprises are thinking about moving their traditional SAP systems to a public cloud. They want to seize the opportunities to adapt to business and market developments with flexible architectures and new contract models that offer them many technical and commercial advantages. They also want to exploit innovation capabilities offered by public cloud platforms.

Often, they pursue a distributed or hybrid strategy, i.e. they utilize several clouds. Thus, cloud providers are placed side by side and the respective advantages are exploited. The result: nine out of ten organizations (92 percent) rely on a multi-cloud strategy, while more than 80 percent have a hybrid cloud strategy.

Even though there are good arguments to migrate to the cloud, some organizations are still hesitant. The security of data in the cloud often ranks first among the reasons for hesitation. Companies also fear that business-support services will temporarily fail when SAP systems are migrated to the cloud.

Many industries, such as the automotive industry or logistics, cannot afford such interruptions. Finding maintenance windows is almost impossible, because services must always be provided around the world, and that means around the clock.

Reduce business disruptions during migration

In fact, service interruptions cannot be avoided entirely. But there are ways to keep these disruptions as minimal as possible. To this end, T-Systems and Google Cloud leverage their joint expertise by achieving the optimum uptime in all phases of an SAP system's lifecycle.

The implementation of SAP landscapes in the cloud requires experience above all – and a professional toolkit. As a migration partner, T-Systems can contribute both. T-Systems has around 20 years of experience as an outsourcing and hosting partner. "In projects for more than 500 major SAP customers with over 10,000 migrated SAP systems, we have continuously optimized our methods," explains Andreas Pfadenhauer, Vice President of Digital Transformation, PU SAP at T-Systems.

T-Systems and Google Cloud leverage their joint expertise by achieving an optimum uptime in all phases of an SAP system's lifecycle.

Even though the IT hardware nowadays is very reliable, failures can still occur; and providers as well as users have to be prepared.

The expertise is pooled in the SAP Data Migration Factory, which focuses exclusively on the migration of SAP systems. The 'Factory' supports downtime-optimized migration in particular. It thereby also relies on tools from its partner SNP. These tools take on two tasks. On the one hand, they facilitate excellent preparation for the migration by using powerful analysis tools, generating a reliable basis. On the other hand, they consolidate many individual processes within the migration.

Andreas Pfadenhauer summarizes the significant benefits: "Compared to classic approaches, on an average we see 73 percent shorter downtimes and cost reductions of over 30 percent in our migration projects".

Think beyond migration: downtime-minimized operations

But migration to the cloud is just one aspect. Keeping systems stable during ongoing operations is the other. In addition to well-organized operational processes, excellent availability of the cloud platform also plays an important role. Even though the IT hardware nowadays is very reliable, failures can still occur. It's a rare phenomenon, but it's real—and providers as well as users have to be prepared.

This is where T-Systems' strategic partnership with Google Cloud comes into play. Several built-in features improve the reliability of the cloud platform, such as live migration and memory poisoning recovery. The latter, for instance, provides more robustness against memory errors, the most common type of hardware failure. Additionally, Google Cloud offers huge capabilities for SAP workloads. The platform enables clients to use up to 16 HANA nodes in a scale-out architecture, which ultimately allows a HANA database size of 192 TB HANA.

New option: Sovereign Cloud

T-Systems and Google Cloud are already offering a superior public cloud solution

in the DACH market in the second quarter of this year. This cloud will not only be secure and sovereign, but will also have almost the same range of functions as the Google public cloud offering. That makes this approach very special. Sovereignty and permanent participation in innovations and high-quality services, which enable new user functionality in conjunction with S/4 HANA, for example, are uniquely combined in this form.

The offer also targets customer reservations regarding data sovereignty in particular. This data sovereignty is established by transferring the key management to the responsibility of T-Systems. This means that nobody else has access to the unencrypted data except the customer. Furthermore, additional sovereignty mechanisms will be introduced to the T-Systems Sovereign Cloud powered by Google Cloud by 2024.

What about SAP S/4HANA® from the cloud?

Talking about stable platforms and sophisticated migration and operation processes, one question remains unresolved: will SAP systems stay the same in the cloud as on-prem? The foreseeable push towards S/4HANA is a very important factor that needs to be taken into account when moving SAP systems to the cloud. The migration of the SAP
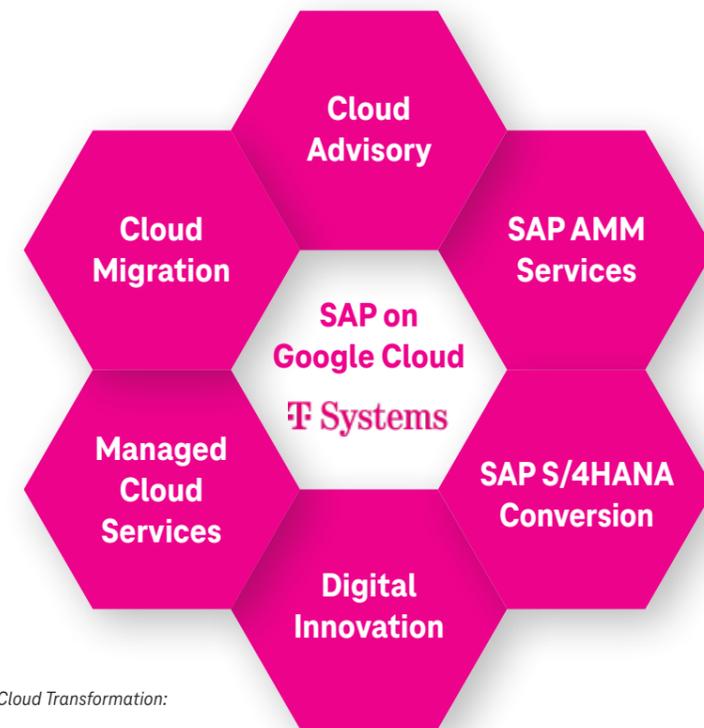

Abb.2: One-stop shop for Business and Cloud Transformation: T-Systems' Multi-Cloud approach.

systems to SAP S/4HANA® opens up a multitude of additional opportunities to improve business processes.

The new application layer offers many standard extensions and interfaces to safely integrate functions such as AI/ML, analytics, IoT, and other new technologies into processes – without endangering the core functionalities of SAP S/4HANA®. Unlike the old world order, when every change in SAP coding could

have devastating effects on the core processes, new, innovative services are now switched on and off via APIs.

Google Cloud offers a variety of helpful functions – particularly in the areas of AI, Machine Learning, and BigQuery. Thus, the combination of included cloud platform services and new S/4HANA capabilities can make a difference for innovative and efficient data analytics to gain further business insights.

T-Systems offers its expertise as a trusted advisor on the topics of cloud and transformation strategy as well as general digitalization strategies. Start-up packages and workshops are specifically designed to get started with digitalization.

For a deeper dive into this topic, download our whitepaper, "SAP on Google Cloud", from our website.