

WHITEPAPER

Corporate Communications – Cloud Computing and its Alternatives

■ English

innovaphone

communicate. connect. collaborate.



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Why do Businesses Switch to the Cloud?

The development and the rapid advance of cloud computing are closely connected to general trends of business communications: mobility, cross-location collaboration, speed and flexibility are all features of our new working routine. Simultaneously, these changes also affect the demands placed on IT teams. Smartphones, laptops and tablets are the new players in enterprise communications next to the desktop computer and the traditional desk phone. With cloud computing, programs and applications can be accessed anywhere and anytime. This is especially beneficial if the workforce also consists of a remote workforce. So today, it is more a question of "what IT resources are currently required" rather than "what IT resources are generally available within the company"?

When asked about the reasons for moving the enterprise communication to the cloud, following aspects are the most common ones stated in favor of the cloud:

Money Savings - Acquisition, operation and maintenance of an on-premises IT infrastructure would be far more expensive than obtaining the same services via the cloud and via a cloud provider. Pay only what you need and flexibly adapt your expenditure to the current requirements. Expensive one-off payments (CAPEX – capital expenditure) are replaced with flexible and customized services (OPEX – operational expenditure) while the company cash flow remains preserved.

Flexibility – Opting for a purchased on-premises solution is a long-term decision while cloud services offer short-term payments and general flexibility. Hardware resources such as memory space or computing power ("IaaS" – Infrastructure as a Service) plus individual software applications ("SaaS" – Software as a Service) can be booked flexibly and at short notice with most cloud providers.

Do these two arguments cover the truth or do these and other supposed advantages have a catch? Let us find out.



Five Myths about the Cloud

The Costs:

Calculating and comparing the total costs of an on-premises solution with the total costs of a cloud solution can become quite a challenge. After all, how many companies can put an absolutely accurate price tag on overall IT expenditure? Who would be responsible for determining the costs (controlling / IT department / management)? A distinction is necessary to calculate the proportionate costs concerning the infrastructure and the use. In addition to expenditure on hardware and software, labor, energy and facility costs need to be taken into account when calculating general IT expenses. What is often neglected is the fact that businesses do not only have the two options of either buying an on-premises solution or of renting via cloud. Instead, there is also a third option: renting on-premises. This allows for companies to shift costs towards the OPEX model by renting hardware and software from one single supplier - partially even without the commitment of a fixed minimum term. .

Flexibility and Scalability:

One major benefit of cloud solutions is the seemingly endless flexibility that comes along with opting for the cloud. Businesses and enterprises with high dynamics and fluctuation can quickly adapt to changing situations. New workplaces can be set up at short notice while workplaces that are no longer required can be removed again in no time. Should additional memory space be required at short notice, it will be made available in a timely manner. It is undisputed that a physical business communications system permanently installed on the premises of the company cannot offer the same degree of scalability and thus flexibility. However, this flexibility is also provided with an on-premises rental model and not exclusive to the cloud. What remains important in both cases is that the respective services are offered with a pricing model that is transparent to the customer.



Five Myths about the Cloud

Greater Performance:

The assumption is that cloud components perform better due to the “best of breed” approach where leading state-of-the art solutions ensure maximum performance. The reality, however, shows that many companies migrate to the cloud via “lift and shift” – existing applications are transferred to the cloud without any changes. (Source: Studie Cloud Migration 2018, p.35). Merely 35 % of the companies use the migration to the cloud as a starting point to modernize applications and to introduce innovations. The hopes of automatically achieving better performance when migrating to the cloud can only become reality when companies actively grasp the opportunity of modernization. If the existing applications are only shifted to the cloud, no change and no improvement can be assumed.

More Reliability:

Another often stated reason for the switch to the cloud is the demand for “stability and reliability concerning the IT.” (Source: Studie Cloud Migration 2018, p.23). Here, we are confronted with a paradox: on the one hand, moving to the cloud is supposed to guarantee more security, yet on the other hand, security concerns are one of the most common obstacles to switching to the cloud in the first place. Therefore, private cloud solutions are currently rather popular among businesses.

Passing on IT Responsibilities:

One further argument in favor of outsourcing the services into the cloud is the aim to hand over responsibility of the hardware. Once again, differences between the various cloud models need to be taken into consideration. If the cloud is a private one located on corporate servers and on-premises, the in-house IT department will nonetheless be responsible for the system. The situation is a different one if the applications are outsourced to

servers of external service providers or if a full shift to the cloud takes place. Here, businesses generally assume that data security, data backup, regulatory compliance or application availability rest in the hands of the cloud provider. Erroneously – liability issues concerning cloud services are a highly complex matter, and the location of the cloud provider plays a big role.

Conclusion:

Whether businesses opt for a cloud solution, an on-premises solution (either rented or purchased) or a hybrid model thereof, there are always numerous aspects that need to be considered. Calculating the costs, for example, is not as easy as just setting up a cost-benefit calculation. Evaluating flexibility and the scope of services is by far easier: cloud and rental models clearly have a flexibility advantage over the one-off purchased business infrastructure. Yet, it is understandable if companies want to keep the infrastructure and its full control entirely in-house. Additionally, “Security in the Cloud” is a topic often driven by desires, expectations and fears and therefore only offers limited potential and capacity to make a rational decision whether or not to move the own IT infrastructure to the cloud. The following checklist shall help with the decision what model to choose.

Helping You Decide – Would Your Company Profit from Moving Your Corporate Communications to the Cloud?

How is Your Company Positioned in Terms of IT Resources?

If your business has an in-house IT department, you are basically free to choose from all three models: the communications system on-premises, as a rental or from the cloud. What is often underestimated is the fact that transferring the communications infrastructure to the cloud will not release the company's IT department from being responsible for management and operations. There again, it is not always necessary to have a large IT department when a business opts for an on-premises installation. It is possible to transfer the responsibility of operating the communications solution over to a systems house with round the clock services (managed services). Start-up companies without dedicated IT may profit from a cloud installation or an on-premises rental model where maintenance and management is outsourced to an external provider.

What do the Premises & Spatial Prerequisites of the Company Look Like?

If a business has enough space and capacity plus an in-house server structure, an on-premises installation may be a sensible solution. Depending on the manufacturer, the dimensions of offered communications solutions might differ quite a bit. One option may be a little all-in-one box that does not require additional servers while others may provide a full server farm with extra firewalls. If the spatial requirements are lacking and if the company has no separate, air-conditioned room for servers, the alternative is to transfer the entire infrastructure to an external data center in form of a virtualized ITC and UC solution from the cloud.



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How Flexible and Agile shall Your Communications Solution be?

A high fluctuation of employees and often-changing requirements concerning the business software are an indicator that the communications infrastructure hosted in the cloud or a rental model (on-premises) are more feasible given their higher degree of agility. However, some cloud and rental offers may also pose the risk of long-term commitment. If flexibility and agility are deciding factors, companies should make sure to avoid long-term contracts since these cancel out the desired flexibility. What should be noted: flexibility has a special price tag. Packages with shorter commitment periods tend to be more expensive than packages with longer runtimes.

Should you consider your upgrade strategy to be a relatively conservative one, this does not automatically imply that your business communications and UC solution necessarily needs to be located in-house, on your premises. Here, hardware and software can either be rented or obtained from the cloud. Yet, you should make sure that continuous updates are not started automatically. Businesses should be free to decide when and whether at all an update is to be carried out. Being forced to update to the very latest software version is not always beneficial to businesses. In order to have this freedom of choice, you should opt for a single-tenant solution for your business communications. Opposed to multi-tenant solutions, single-tenant solutions will let you select updates individually.

Emphasizing Digital Security & the Cloud Paradox:

Concerning their security mechanisms, there is not necessarily a great difference between the various communications models (on-premises, rental or cloud). All three models can offer a high degree of security. One prerequisite is the implementation of security mechanisms within the applications directly so that the entire communication process is encrypted from start to finish. Then, businesses need to decide if they want to keep all data within the very own walls where the IT department will be responsible or whether an external service provider is to be chosen to take care of the digital security – with general access to ALL business data.

It remains personal preference whether you feel more secure when everything is directly on site and whether the feeling of being able to “push the red button” in case of an emergency security threat would make you feel safer. For others, it might be exactly the other way round: knowing that true experts are in charge of the company’s IT security is what feels right. So, there is no right or wrong – however, when outsourcing the telecommunications infrastructure, you may want to make sure that you opt for hosted services within European data centers since these are in compliance with strict European regulations and standards.



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Reliability of the Communication System – Businesses Need to Remain Operational

For corporate communications to stay up and running, a well-functioning redundancy concept for the infrastructure is of crucial importance. A redundant PBX is installed for the Master PBX. If the Master PBX breaks down, the redundant system will immediately take over the functions of the main system to avoid any kind of downtime. This scenario can be implemented for installations on premises as well as for rental or cloud solutions. With a Master PBX operated in the cloud, a back-up PBX can be

installed on site with the customer. These hybrid models combine all the advantages of the various solutions. If an extremely high level of reliability is required, there are instances of infrastructures such as the ultra-secure business communications system in the highly redundant nuclear bunker in the Swiss mountains. Yet, even with this option, some form of risk remains if the connection between the business and the outsourced communications system is not stable.



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More Complex than it Seems: CAPEX or OPEX

If it is time for a new business communications solution, customers have all three options to choose from: operation from the cloud, purchasing hardware and software for an on-premises solution and renting hardware and software licenses on premises. Hybrid combinations of the different models (e.g. renting the server, buying end devices such as phones) are also possible. If the company has more than enough financial means, it may make sense to buy a telecommunications & UC solution for their own premises. In the long term, this option is generally cheaper than renting or operating from the cloud. Prerequisite is that the products are sturdy, long-lasting products with continuing development where new security features or applications are offered during the entire life cycle.

Depending on the country and the respective legal provisions, these systems can bring tax deductions for several years. Ideally, the system will be in service more than ten years so that the overall costs are significantly lower opposed to recurring monthly fees that would occur with a virtual operation. After depreciation, the system will further become part of the company assets.

Large companies with a focus on the shareholder value are prone to opt for an OPEX model since this option will not tie up corporate capital for a prolonged period of time. Yet, choosing this option does not automatically mean that the cloud is the only way to go. An on-premises rental solution is just as possible.



How can I Make Sure to Select the Right Cloud Solution for my Business?

Today, there are so many different cloud providers with a long list of offers available on the market. So, how can businesses be sure to select the one cloud solution that best fits their personal needs?

No False Economy – Getting Advice from a True Expert

With the overabundance of cloud providers, you may want to seek advice from a true cloud expert who will offer support for the decision-making process. In collaboration with your in-house IT department and management, the expert will generally create a specification profile. The suitable cloud model – private cloud, public cloud or hybrid cloud – will be determined in the course of this decision-making process.

A Sensible Solution: Cloud Providers Based in Europe

Doubts concerning the security and confidentiality of data and documents stored on American servers have been an ongoing issue for years now (think NSA). According to a court ruling by the European Court of Justice, the Safe Harbor Privacy Principles were overturned in 2015. These principles were initially developed between the US and Europe to protect from the disclosure of personal information and then declared invalid since data of European users were not adequately protected from unauthorized access by authorities. Therefore, it is a sensible decision to select a cloud provider based in Europe.

The Factors Redundancy & Reliability

If high availability is one key factor, the infrastructure of the cloud provider's data center should also be taken into consideration before making a final decision. Are the systems set up in a redundant structure so that other components take over in case of a disturbance to avoid system failure? Especially when businesses outsource their IT infrastructure entirely to the public cloud, they become highly dependent on the cloud provider. If the infrastructure of the cloud provider were to break down, all IT-based business processes of the customer would come to a standstill. Power blackouts, hardware and software malfunctions, virus attacks and human error as well as fire protection with adequate fire extinguishing systems should all be included in the considerations.

Compliance with GDPR

Ever since the European GDPR has come into effect in May 2018, cloud compliance according to the respective laws and regulations needs to be met by the cloud providers. The first cloud providers have already become active and responded to the new data protection regulations by getting certification according to the GDPR. Depending on the respective country, federal Offices for Information Security may provide further information on issued [cloud certifications](#) (e.g. the BSI – Bundesamt für Sicherheit in der Informationstechnik – in Germany).

The innovaphone Concept: Rent, Buy or Move to the Cloud?

Are you looking for a new communications solution but you have not yet decided whether you would like to opt for the cloud or whether you would like to rent or buy a solution instead?

With innovaphone, it is entirely your decision. The complete innovaphone product portfolio is always available with the full set of features. You can opt for any model and will always receive a solution that perfectly matches your individual requirements. You further have the option to combine the different models with each other.

Cloud

- Operation in European data centers
- No investment and no capital commitment
- No fixed contract period
- Updates are included
- Flexibility when adding or reducing the number of users and features

Rent

- Installation on premises
- No investment and no capital commitment
- No fixed contract period
- Updates are included
- Flexibility when adding or reducing the number of users and features

Buy

- Installation on premises
- One-time investment, no monthly fees
- —
- Updates with optional software service agreement
- Users and features can be added flexibly

Advantages of the innova- phone Cloud Solution

Providing a Secure Single-Tenant Solution

Each individual cloud PBX is listed as a reliable single-tenant in a logically isolated virtual machine. This procedure ensures that updates do not necessarily need to be carried out all at once with every customer. Instead, the updates can be selected individually because every customer has an own virtual PBX and every domain acts absolutely independently.

Initial Installation by Your Authorized innovaphone Partner

An innovaphone partner will carry out the initial installation of every single cloud PBX before the new system is booted. After this phase, the cloud PBX can no longer be accessed by third parties. The system must be started up at the latest ten days after it has been made available; the whole installation process is mostly an automated one. Thereafter, the specific cloud PBX is manually configured as desired by the customer.

Flexible Billing with Software Credits

The billing process is carried out via so-called iSC (innovaphone Service Credits). This system allows for software and hardware components to be added or removed in an extremely flexible manner. iSC can be ordered and acquired via the distribution network. The Devices app of the client innovaphone myApps is then used to manage these iSC which are based on a prepaid "pay as you go" system.

Secure in the innovaphone Cloud

Once the cloud PBX and the Application Platform have been started up, they will no longer be accessible for third parties. System administration lies fully in the hands of the partner. The partner can adjust the cloud PBX according to the requirements of the individual customer. In order to enhance login security, two-factor authentication can be set up for administrators and users. End devices are standardly integrated via full H.323/TLS encryption. All innovaphone components further support the protocols SDES-DTLS for end-to-end encryption of call data as well as ICE, STUN and TURN for media transmission. Within the scope of maintenance procedures, innovaphone is merely granted maintenance access. The innovaphone cloud solution is operated in highly secure European data centers and ensures utmost data security according to European data protection standards. innovaphone further meets the strict requirements of the "Cloud Services made in Germany" initiative and is now listed as a participating company.

Reliable Support

Partners can send support requests concerning functionality or issues with the cloud PBX to the innovaphone support team.



INNOVAPHONE

innovaphone has been playing a decisive role in driving the development of IP telephony ever since the company was founded in 1997. To this day, the owner-managed company is financed entirely with private funds and stands for continuity and sustainable value as well as for strong development performance. All innovaphone hardware and software solutions are developed in-house by engineers and software specialists and produced in Europe. innovaphone currently employs more than 100 people at its headquarters in Sindelfingen, at other locations in Germany and at three foreign subsidiaries in France, Austria and Italy.

The guiding principle of the innovaphone development department is the evolutionary expansion into new technologies: starting with the first VoIP gateway that was followed by the innovaphone PBX, a sophisticated, mature IP telephony system, the subsequent myPBX, a Unified Communications solution, to the current innovaphone myApps, a universal work environment - innovaphone ensures technological innovation and high investment protection are compatible. This reliability is also reflected in the company's sales strategy: from the outset, the innovaphone product portfolio has always been available via authorised resellers and distributors who undergo training at the innovaphone training centre. The innovaphone myApps Cloud solution is also distributed via the innovaphone partners and opens up new business models.



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