

# The PBX Is Dead. Long Live the Integrated Communications System (ICS)

## Computing Environment Today

The computing industry is currently facing many changing trends. Predicting the future of computers over the next ten years will not render accurate results. The world today depends on open networks and the most successful services are delivered over the Internet. Latest innovations are network centric and it is obvious that the most interesting applications are yet to come.

Phone communications did not change fundamentally in the past 100 years, maybe because there was no demand from the public to change anything. But living in the information age requires important changes to our communication techniques.

## Migrate to Integrated Communications System (ICS)

### Note:

The generic term PBX (Private Branch Exchange) is obsolete, an exponent of the old circuit switched networks. Therefore, we use the term **Integrated Communications System (ICS)** to define the solution able to handle business communications in 21<sup>st</sup> century.

### Abstract

This whitepaper analyzes the demand for smarter communication services integrated with business infrastructures. Small and medium businesses should understand the differences between an old PBX system and modern Integrated Communications Systems (ICS).

The paper focuses on business growth and value added rather than on the direct cost savings introduced by network communications.

For many businesses, it is not very obvious that a switch to VoIP also involves a much more important migration, the one from the old PBX to the modern ICS.

Decision makers that are not so technical easily spot the economical advantages of VoIP. People usually know that VoIP is just a transport method that uses the Internet, but few understand that the old PBX is dead and software developed on the communication stack makes the interesting applications possible.

Businesses should avoid deceptive advertising. Many vendors advertise VoIP as the miracle invention that allows people to sell, support and find partners, but do not try to educate market about the implications of this technology.

## Important Facts about VoIP

Like any new technology, VoIP passed through different maturity levels. For many years advertising was targeted to residential users and focused on cost reductions. The struggle to minimize costs led to bad experiences that made people associate VoIP with poor quality.

On the second level of VoIP maturity, vendors targeted advertising to businesses and promised incredible productivity levels. Often, businesses discovered the hard way the problems that occur in the implementation of any new technology. The third level of maturity has been reached. Vendors still struggle to find the best advertising message.

**Fact 1:** VoIP is just a generic term for network voice and video communications.

There is nothing spectacular about it. There are not many differences between SIP, a protocol used to build VoIP networks and HTTP, the protocol used by websites.

**Fact 2:** Do not get a **PBX software** to replace your **old PBX**.

You need an Integrated Communications System (ICS) to get your office into the new computing world. You do not need a system that behaves like your old PBX with a nice computer interface and some extra gadgets. Remember that you used the old PBX for more than 15 years. Do you know what will happen in the next years?

**Fact 3:** VoIP is not more insecure than your old PBX.

You are getting constant alerts about VoIP insecurity. Although encryption is still not used at large in VoIP networks, this will happen pretty soon. Even without it, a VoIP network is still more secure than a regular phone line. People tend to overreact on risks they do not fully understand. Do you know how easily it is to trap on a circuit switched line?

**Fact 4:** Many software based PBX resemble the features and ideas behind old PBX systems.

Not all vendors realize that the old PBX is dead. In the happy case, the company just wanted to make the product easier to understand for the customer and replicated old PBX features. In the worst case, it is a design fault. But is this system ready for tomorrow? The software must be adapted to the networked world paradigm and scalable to face tomorrow's challenges.

**Fact 5:** Vendors often focus on hyped opportunities.

Many vendors focus on integrations with high profile applications. However, such integrations are not a signal that the vendor is spending resources on the right direction. It is nice to have a system integrated with the CRM media loves, but you will need much more.

## Should You Choose a Hosted Offer?

Providers started to offer hosted Integrated Communications Systems (ICS). From the hosted infrastructure's point of view, service providers have a huge opportunity to deliver cost efficient, highly available ICS. From the customer's point of view, hosted platforms come with smaller risks, for example, they do require upfront investment. Customers should also notice that hosted platforms introduce additional risks, most of them common to outsourced services. Therefore, providers must be carefully selected.

**Trivia:** During our consulting work, we discovered that many businesses are afraid to use hosted services because they think their calls might be abusively recorded. Actually, people should know that it is much easier to read an email than to record a call. Almost everyone is using a hosted email service. Some providers even index the content of your emails and few people believe these companies are evil.

Because it is so fast and efficient to go with a hosted solution, we recommend small companies to try a hosted service. Larger companies should consider in the next two years a hosted solution also.

Even if you choose an on-premises or a hosted solution, there are some things you should ask your potential vendor.

## Ask Your Vendor

Analyze and balance answers before taking the purchase decision. There is no perfect software, but the vendor must know how perfect software looks like.

**Question:** How is your ICS able to fit into my company's processes?

Question background: The ICS must be able to morph seamlessly when company processes change; the company should not adjust processes after the system as some vendors ask. Solutions that try to impose a workflow should be regarded with skepticism. Remember, you are not looking for an ERP.

**Question:** I have a small business. Do you have a scaled down version of your system?

Question background: This is a tricky question. Most vendors will say Yes, but this is not the right answer. Small companies gain their competitive advantage from efficient processes and they require outstanding tools to organize their communications. You need the best industry can provide, not scaled down versions.

**Question:** How many communication methods does your solution offer?

Question background: A unified communication system should be able to offer voice, video, chat, messaging, fax, and email. Even if you do not need all these now, you might want to have them in the future. It is impossible to have an excellent system that delivers all these functionalities; in most cases, third party integrations are desired.

**Question:** How can I deploy the system?

Question background: Right now, it might make sense to install it on a server on your premises, but industry is changing. What will happen when you want to deploy it with your preferred IT infrastructure provider?

**Question:** How standards compliant is your solution?

Question background: Traditional PBX systems were locked into proprietary standards, increasing costs and decreasing interoperability. Don't ink the same deal again. There is nothing wrong for the product to have a closed source, but it is wrong to use proprietary standards.

**Question:** What is your update policy?

Question background: One of the greatest assets of a software system is the capacity to continuously improve. Check for the vendor's claims and past records.

**Question:** What operating systems are supported by your software?

Question background: The underlying operating system can be almost as important as the ICS. The software must support server operating systems maintained for at least five years.

**Question:** How do you answer to security threats?

Question background: People in computing industry know that even old, popular and “reliable” technologies are prone to security threats. The Integrated Communications System (ICS) is server software, having different requirements compared to desktop software. What is the vendor’s experience in this area?

**Question:** What is your vision for the next three years?

Question background: Do not expect to get detailed information, but the vendor must be able to communicate a coherent vision for the next period. It is important to be able to understand the vendor’s perception about the industry.

**Question:** What are your plans for mobile agents?

Question background: Over the next years, smart phones will get many of the features notebooks have today. The revolution has just begun. Is the vendor prepared to deliver functionality and interoperability with these devices?

**Question:** Why should our business use your solution?

Question background: Software companies usually assume that it is enough to offer more features than competition to make everyone want their product. The last two years taught industry an important lesson. Innovation can lead to simplicity and this can gain the customer.

**Question:** What availability can you guarantee for the system?

Question background: The availability of the system depends on underlying technology. The system should deliver at least 99.9% availability on standard hardware. The vendor must support a setup able to deliver these figures.

**Question:** What are the support costs for the first three years?

Question background: Trapping the customer with a low initial investment and high maintenance costs is a common practice. If the software is so efficient, reliable and easy to use, why are the support costs so high?

## 4PSA VoipNow Approach

These questions can provide a fair overview over different products. We compiled them using the 4PSA VoipNow vision sheet, a list that contains over 120 recommendations covering our product development strategy.

In the early steps of the 4PSA VoipNow design, we gathered intelligence about all communication systems on the market. At that time, it was interesting to discover that solutions were usually developed by people trying to replicate in software the old PBX features and functionalities. Although efficient on a short term, this strategy affects customers on a long term because their investment cannot scale to meet industry demands.

Server software delivering services must provide reliability, security, flexibility, scalability, and low maintenance costs. Additionally, software must be prepared to face the new challenge – Software as a Service (SaaS), the future of on demand platforms. It is one of our top priorities to add Integrated Communications Systems (ICS) to the cloud.

## Conclusion

If you are a business with less than 50 employees, choose a hosted service instead an in-house solution due CAPEX versus OPEX analysis. Even if you go with an on-premises or a hosted solution, perform a network readiness assessment first.

Rather than a feature to feature comparison, the decision maker should try to answer to the fundamental questions surrounding the solution, most of these previously covered in the present paper.

Your new communication system should be a major step forward, not a replacement of the old PBX. Check the vendor's vision and make sure they are not using as a reference twenty years old PBX systems. Remember that there is much to gain, but also much to lose on a wrong decision.

## About Rack-Soft

Rack-Soft is a specialized developer and integrator of server and Data Center software. The company created 4PSA VoipNow, the innovative Integrated Communications System software. The product foundation lays on a strong vision over the future of computing that includes clouds and platforms on-demand. The product is available for download and can be used for **free** with up to ten phone extensions.

The company's explosive success is based on excellence, innovation, and customer oriented processes. Rack-Soft's quality management system is ISO 9001 certified by TÜV Cert. For more information, please visit <http://www.4psa.com>.

## More Information

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