



Collaboration

# Smart Collaboration

A new view on collaboration  
for greater business efficiency



# Executive summary

This white paper looks into how telephony has evolved from a voice ('allo allo') system to a rich multimedia platform allowing people to communicate wherever they are and with whatever device they have. The use of modern communication tools allows us to automate business processes and link these with people. These tools bring about cost reductions and efficiency gains, making employees happy and, ultimately, happy customers.

In a first part we will investigate how these changes manifest themselves whereas, in the second part, we will discuss some of the building blocks that can be combined to form a solution to fit your particular requirements.

Enjoy reading it.

# Work reinvented

When asked why people go to work every day, one of the top 3 answers is **social contact**. Another one is the ability to realize projects. This even comes before self-realization. What people actually want is success and fun while working together. And this is always what the business wants and actually needs. It is success, created by happy employees. Happy employees also create happy customers which, in turn, creates customer satisfaction, loyalty and increased business.

Yet, what is apparently going against this trend is the fact that we are in an **e-world**. Many things and interactions happen via electronic ways. People work from different places instead of all in the same building. We are reinventing the way in which we work and interact with each other.

Working has evolved from manual labor to **intellectual labor**. Our economies have evolved from agricultural to industrial (manufacturing) and, subsequently, to service economies. In Belgium, the distinction between a workman and clerk is disappearing. The distinction was partly based on working with one's hands and lacking the ability to read/write and working with pen and paper. These days, even workmen working at a machine need the ability to read and use computers, since machines are managed by computers.

**Computers** are everywhere and form an integral part of our lives, whatever our activity may be. They have taken various forms: laptops, tablets, smartphones, smart cars, intelligent things, TV sets, etc. They perform many functions that we used to have separate or on separate instruments: writing (pen and paper, typewriter), calculating (calculators), faxing, making phone calls, using index cards (e.g. contact lists), mailing, drawing, designing, producing, TV watching, reading, researching, analyzing, selling, buying, navigating ...

Whereas our grandparents needed to go to where the work was (as it was manual labour), our parents went to the office (because that's where the infrastructure (computers, telephones, faxes, machines) to work was), we now **take our work with**



**us**, because we take our computers with us (laptops, tablets and smartphones). Actually, there are only 2 reasons why we still have offices: a) to have a place to meet each other and customer/suppliers, b) to have an official business address to make the enterprise tangible.

Modern **technologies** allow and implicitly promote the concept of 'anywhere working'. Cloud technologies enable fast access to applications and data from anywhere. End-user computing technologies blur the distinction between a laptop and a tablet, and a tablet and a smartphone. Communication infrastructures have vastly improved and make broadband bandwidths available everywhere at low cost. People can therefore work from anywhere.

# So what?

The most important impact (business-wise) of these trends is on **customer-to-employee interactions**. When, in the past, a customer dialled the number of a company, (s)he reached the switchboard employee who was then able to forward the call to the target person. Nowadays, the receptionist function can be delocated to some callcenter in another location, or can become unnecessary through the inherent intelligence in the telephone switch.

## Customer calls

The customer has actually many **more options** than in the past to interact with an organization: personal contact with a sales representative, landline phone, mobile phone, email, website, social media, physical or online shop, contact center ... Additionally, the customer has contacts with many different people within the organization during his/her journey to purchase and use the product/service.

Attaining **customer delight** means being the best in all interactions and knowing exactly who your customers are (customer intimacy). How? By consolidating the customer data collected from different channels to create one, integrated view. The flawless functioning of your website and e-shop is today one of the obvious elements. The focus of this paper is rather on the smarter collaboration of employees with one another and with customers, than on e-shop optimization.

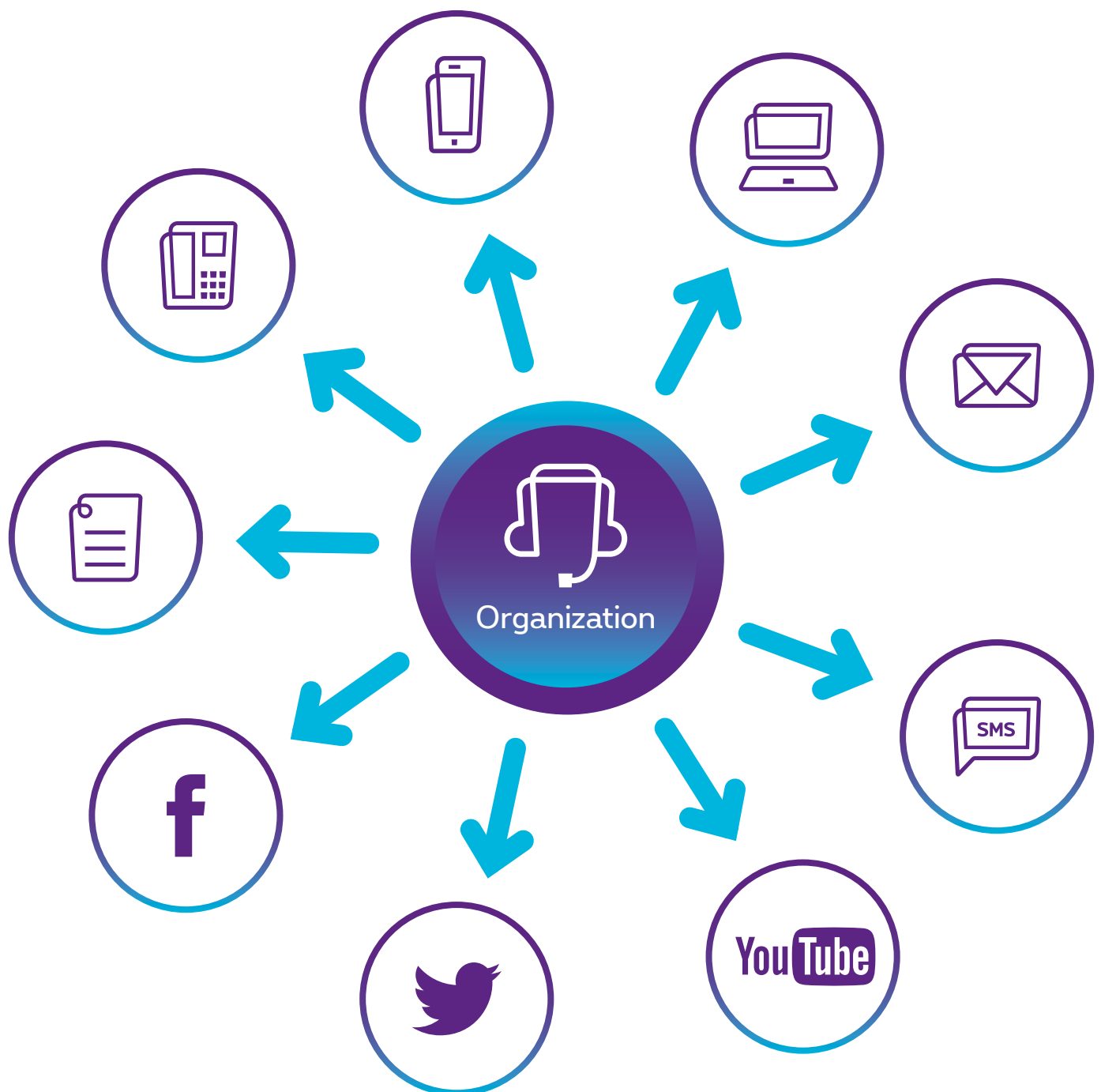
**When a customer calls**, (s)he should ideally get somebody to respond, wherever the respondent maybe: on the road, at the office or at home. The receptionist used to try to forward the call to the office phone and in case of no success to the mobile. Today, users can 'log in' with their mobiles to get the calls directly. Calls to the office phone can then be routed automatically to the mobile in a transparent way. Once logged in, the user can also call the customer, who will see the fixed-line (landline) number instead of the mobile number. The customer then always sees the same business number. Modern systems also allow the routing of the incoming call to the PC of, for instance, the home worker.

And in the other direction, the PC user can call the customer, displaying a fixed-line number. Complete transparency in what the user technology actually is: fix, mobile or PC. That's single number reach across different platforms.

What if the customer hits the **voicemail system**? There are different situations here. Voicemail on the mobile network does not need to be introduced. Essentially, you get an SMS to inform you about the voicemail. PABX functions can now send an email to the recipient with a link to the voicemail, to listen to it via the computer at hand.

How about getting the **right person**? Getting somebody to respond is one thing, but getting the most qualified person for the particular question at that particular moment, is quite another. Interactive voice response (IVR) systems can help here. Everybody hates the "for Sales press 1, for Billing press 2" interaction. At this stage of the technology, speech analysis is too limited to "say what you need and you'll get the right person", so we need to continue with this type of interaction. What has changed, though, is the intelligence one can build behind the system. So suppose the customer wants somebody from Sales. You could have a second menu level to specify the product. Once this is known, we can now route the call to one of the sales specialists who is logged on and available, wherever (s)he may be. This is particularly handy in the case of shops, where the 'fish' specialist may be one of 5 people scattered over 100 shops. This obviously leads to improved customer satisfaction and no missed opportunities.

Call centers become  
multimedia interaction centers





56%  
of customers  
report having to  
re-explain their  
issue during the  
course of a service  
interaction

### Employee calls

Employee-to-employee communications have seen dramatic changes. The advent of the internet brought an explosion in emails. It has become so easy to send an email and to so many people at once, that all our mailboxes are full with messages, all of different levels of importance and urgency. Everybody spends hours sifting through emails, taking appropriate actions and answering or forwarding messages. For the sender it is fast and convenient to send an email, but it is often sent to the wrong or superfluous recipients and many times it was even better to take a different action.

Today's **software** on PC platforms allows you to see if other people are in a meeting or are available. If available you can have a (video)call or use instant messaging to dialog. So instead of sending a mail, you can now, via the same device, have a real-time exchange with the other(s), avoiding an additional mail exchange. These systems also allow users to have online multi-party meetings, sharing screen content, doing presentations or jointly working on 1 document. Suddenly, the PC platform becomes an efficiency platform, as well as the means to have social contacts.

These platforms allow the **integration** with telephony systems for inbound or outbound phone calls. So not only can employees have their necessary internal contacts, but customer contacts too in a transparent way.

The **online meeting** feature reduces the travelling to and from offices. Seeing the availability of the other person and the ability to interact immediately reduces

the time to take decisions. The availability on PC or lookalike platforms allow the 'anywhere working', thus reducing the time wasted in traffic jams. The integration with telephony networks improves the level of customer satisfaction.

### Business processes

Due to the fact that communications are software-based (without diminishing the hardware's role, of course), they can now be **integrated** and tightly linked to business processes. Take, for instance, SMS communications. Signing off for the reception of a parcel can be linked to the purchase cycle, such that the buyer and/or the sender knows that the parcel has arrived safely at the destination. Mass communications, sending the same message to many recipients, is as simple as sending an email. It allows of easy and brisk emergency communications.

Another example of integration of business processes and communications, is the case of the **call- and contact center**. Incoming calls can (and should) be linked to CRM systems, such that the callcenter agent sees adequate customer information on his screen when taking the call. Monitoring the activities of the callcenter agent, as well as the type of customer requests, allows the business processes and services to be fine-tuned. It also pushes other buttons to improve communications. Callcenters can become overloaded, just because one additional line on the monthly bill has been poorly formulated, leading to misinterpretations and yet more questions.



**20 hours**  
Average time  
that knowledge  
workers spend on  
processing emails  
on a weekly basis

### Ensuring business continuity

Organizations are haunted by the idea that one of the servers or computer systems may fail, causing a complete halt of the business. There can be **many causes** for this. Power failures due to storms, snow or insufficient energy availability. Software bugs may also lead to a crash. Inaccessibility of the office due to traffic congestion, strikes, road blocks, natural disasters, weather conditions, etc.

There are **solutions** to most of the above situations. Continuity of the servers can be obtained by making use of cloud infrastructure and cloud services. The server can be placed in your own datacenter and can automatically be restarted in the datacenter of your preferred operator. Your data can be stored in the cloud as well. Your service partner will ensure permanent availability of your business applications.

Once both the applications and the data are in the **cloud**, they can be accessed from anywhere. So, no need anymore for the employees to be at the office for work. They can work from anywhere seamlessly. Since communications can be integrated on their PC platforms, they can actually work as normal.

**Call routing** is the concept of automatically forwarding a call for a particular number to another line, for instance the secretary. This is just a matter of programming in a PABX, which can be installed in your premises or in the cloud. Call routing can also be done in the telephony networks of the operators. This service allows to route an incoming call to

another line (should the first location be out of service). That way, the continuity of your reachability is implemented by the operator and is independent of the state of the equipment on your premises.

Actually, you don't need a PABX on site anymore. It can be placed in the cloud. Since most communications are now software-based, they can run on any platform (in contrast to the old analog phones connected to physical ports on the PABX). The functionalities of a PABX can now be run on servers and can therefore be placed in the cloud. There are different levels of functionalities, giving you an array of choices **from regular telephony managed in the cloud** to full, **rich communications in the cloud**. In these cases, the responsibility to ensure the continuity of your communications is in the hands of your operator, covered by a tightly-worded service level agreement (SLA).

### Improving profitability

The fact that you can give your employees the necessary tools for optimal communications, allows them to be **more efficient**. They can now have meetings without the need to travel, they can share and edit together documents, even when they are working from different locations.

The amount of mails can be reduced as quick questions can be asked via the PC (e.g. via instant messaging). Decisions can be taken faster. For example, visual inspection of prototypes can be done via videoconferencing. There is no need anymore for time-consuming travelling or commuting. And it is more ecological to boot.





21%

It's estimated that mobility issues and traffic jams cost Belgian companies 21% in productivity on a yearly basis

### Keeping the costs down

Facilitating smarter collaboration is a matter of combining different technologies fluidly and seamlessly. Fix and mobile communications, unified collaborations, online meetings, the right software, dedicated hardware and so on. The point here is to keep the total cost down, whilst offering the right tools to the right people. A 'road warrior' has different needs than an accountant or a warehouse operator. Today's collaboration tools are technology-agnostic, meaning that you can build your infrastructure combining DECT telephones with mobile phones, PCs and fixed-line phones.

The costs of communications can now be contained with **various tariff plans**, with shared bundles, all-you-can-eat, company bundles, etc. IP telephony allows you to use the data network interconnecting your different sites, to transport the phone calls, thus avoiding inter-office traffic costs. Moving functionalities to the cloud avoids costly hardware maintenance contracts. Cloud services give a clear cost per user per month. It also saves space in your datacenter. Additionally, using the cloud, allows you to use infrastructure that is secured with levels of protection you cannot manage on your own.

### Increasing collaboration

The advent of tablets and smartphones has brought a profound mentality change, since people have now found other ways of communicating (Skype, Facebook, Instagram, ...). In addition, the performance and stability of personal computers have brought the technical possibility to implement software-based communications.

People now expect the same possibilities at the office as at home. It is therefore a small step to make them use the tools. Granted, it is not sufficient to install it all and then hope that employees will start using it. Certain features may create a hurdle: presence information allows others to see the availability of people, video calls allow you to be seen (in contrast to a regular voice call). So moving to smart tools sometimes requires a positioning of the **tools in a broader context**: the company moving to a smart, modern, e-environment.

### The total approach: new ways of working

Many of our customers want to review the way they work when moving to another building, or refurbishing an existing building. All the solutions we talked about are supportive to the **anytime-anywhere-anyhow working paradigm**. Presence at the office during fixed office hours is not mandatory anymore to get the job done. So having people working from anywhere and anywhen, allows you to drastically reduce the required office space, for example. It requires a modern form of management, based on trust and management by results.

We frequently deliver consulting services to accompany the design of new HR rules, new office designs, reinventing work and integrating the technology to deliver optimal results.

# So how do you implement smart collaboration?

Telephony used to consist of 4 basic elements (starting from the user side): a telephone, a telephone line, a telephone switch and a connection to the operator's telephone network. Analog telephones used to be dumb (dialler and horn), powered by the PABX. Over time, they became more intelligent, with digital displays, directories (missed calls, dialled numbers, incoming calls), telephone lists (names and numbers), hands-free operation, video call features, secretary connections, etc.

## Modern telephony

Together with these functionalities, they can now be connected to your Ethernet infrastructure. The user's PC can be connected to the LAN, in cascade to the phone. The telephone can also be a **'soft phone'**: pure software on the PC. Phones can be connected to the LAN via a cable, to the Wi-Fi infrastructure, mobile network (smartphones) or to a DECT infrastructure.

The PABX has dramatically reduced in size, since the number of physical connections has reduced to an extreme minimum. Whereas in the past, you needed one connection per phone, just one LAN connection is now sufficient for the whole organization. On the operator's side, the connectivity can be greatly reduced as well. In the past, you needed the same amount of lines as the number of simultaneous inbound and outbound calls; you needed, for example, one 'primary rate ISDN' line supporting 30 simultaneous calls. Nowadays, we connect the PABX to a data network, using a 'SIP trunk', based on an Ethernet connection, supporting many simultaneous calls. Of course, there are still combinations of these flavors, depending on your needs. Guarantees of availability and capacity are delivered through tightly-worded SLAs.

The PABX can be a separate box or can be software on a server ('IP-PBX'). In certain cases, it is possible to have the hardware server support several functionalities (e.g. email sharepoint and IP-PBX), depending on sizing, level of utilization, data security and other parameters. Operators now offer PABX in the cloud, since the physical limitations of the old analog telephony have been removed.

Telephony allows you to have voice contact. The quality of a phone call used to be defined by the possibility to hear the other person speak AND instantly recognise the voice and, therefore, the other person. This is still valid today. In the mobile world, you expect the continuity of a call when moving and the possibility to make or receive a call whenever and wherever you are.

## Fix-mobile unification

As already mentioned earlier, employees can work from anywhere. They need the possibility to have their mobile phone be part of the enterprise communication platform (i.e. the telephony system). It should remain transparent, you see, whether somebody is using his fixed-line phone or mobile phone.

Different solutions exist to make this possible. Some vendors allow the integration of the smartphone by the use of a rich communication app, allowing presence, chat and point-to-point videocommunications. One of the inconveniences of this system is the dependence on an app and on mobile data to carry voice traffic. Lastly, Proximus also offers the possibility to link any phone (also known as regular mobiles or feature phones) to your system, just by a principle of logging on or off by dialling a special number. Fix-mobile integration then happens at network level. This means increased reachability as a business, and protection of corporate identity as the fixed 'business' number is displayed, by default, on all outbound calls from logged-in employees.



**67%**  
of CIOs and IT  
professionals  
believe mobility  
will impact their  
businesses as  
much as or more  
than the internet  
did in the 1990s

But why not move everything to mobile? Self-employed people, or small start-ups can do that. But once you get several tens/hundreds/thousands of employees all phoning at once, it is better to have a fixed-line number for the business. Customers, for their part, only need remember one number to reach anyone in the company.

### Rich communications

Modern communications are more than just voice: **text, images, video, sound, music**. Everything that enriches a simple communication is a value add-on, and certainly if the consumer world offers these features. Multimedia interactions contain instant messaging (text messages) and video. Presence information allows to see what the availability is of the contact on the other side. You can see if your contact is free, in a meeting, in a call or out of the office. In function of the presence information, you select the best means to interact. If free, you call, if in a meeting or out of the office, you send an email. For a quick question, you type a short text message.

It is easy to set up a multi-party meeting. Either you start with two people and you invite others to join you 'on the fly', or you send a meeting request with a link to your planned conference call. Everybody joins by clicking on the link in the meeting request. During the conference, you can use audio only, audio plus video or you can show whatever is on currently your screen.

All these features are included in what is now commonly called 'unified communications and collaboration' (UCC) tools.

### Rich, external communications

In the previous paragraph, we mentioned the possibility of setting up a multi-party conference call. This is usually for internal use, since it is based on an internal UCC platform. Setting up a multi-party conference call with external people requires a common platform across companies. It can be obtained with what is called 'federated UC', where the platforms of the two companies are linked together. In that case, you can virtually see the presence of all members in the other company (rules can be defined to limit this).

It is often easier to use cloud services for conferencing. Proximus Meeting Services allow you to set up conference calls with parties from anywhere in the world to do online presentations or have videoconferencing meetings.

If you have frequent internal videoconferences, it may be better to invest in room-based systems. In this case you reserve a room per site with dedicated equipment (cameras, screens, microphones, PC connections for presentations and adequate lights), so that you can have internal meetings on a regular basis.

### Contact centers

Call- and contact centers require a specific approach. Callcenters are designed to do a lot of **outbound** calling, for example to interview people or do cold calling to obtain a meeting for Sales. Contact centers are designed to professionally manage high volumes of **inbound** calls, for example customer helpdesk centers. Interestingly though, with the



# 82%

The percentage of consumers who stopped doing business with a company due to a poor customer experience

range of functionalities available on any modern PABX, you don't necessarily need to invest in massive contact center applications. Call management systems on the PABX often include overflow, automatic call distribution and queue monitoring features.

In both cases, you have a number of **agents**, who often need **headsets** for their personal comfort. And one or several computer **screens** to follow the script (outbound) or to see customer contract information (inbound). In the inbound case, it is possible that the operator doesn't know the answer to the question and that the call needs to be transferred to another person. In that case, the displayed customer information needs to be transferred at the same time to the other agent.

These agents may be physically grouped in one or several rooms at one or several locations. Incoming calls must then be routed to the right person in the right location. This can be done by using **Interactive Voice Response (IVR)** to let the customer select the theme, which is then linked to a group of agents. It is now possible to route calls to scattered agents. Retailers now have the possibility to associate specialists in their different shops with a specific type of product. When there is an incoming call for that product category, the call is routed to the first specialist available at that moment.

Whether these agents are within your company or working from home is now less important than it used to be. The routing can be done within the Proximus network (**Voice Managed Services**) or by linking the agent's home PC to your infrastructure

via UCC. It is now also possible to include remote agents by having them 'log on' to the network with their (simple) mobile phone. Once logged on, they can then receive incoming calls directly on their mobile without the need for any software.

For inbound contact centers you may require an 0800 number (**marketing number**), which is defined within the Proximus voice networks.

## Unified messaging

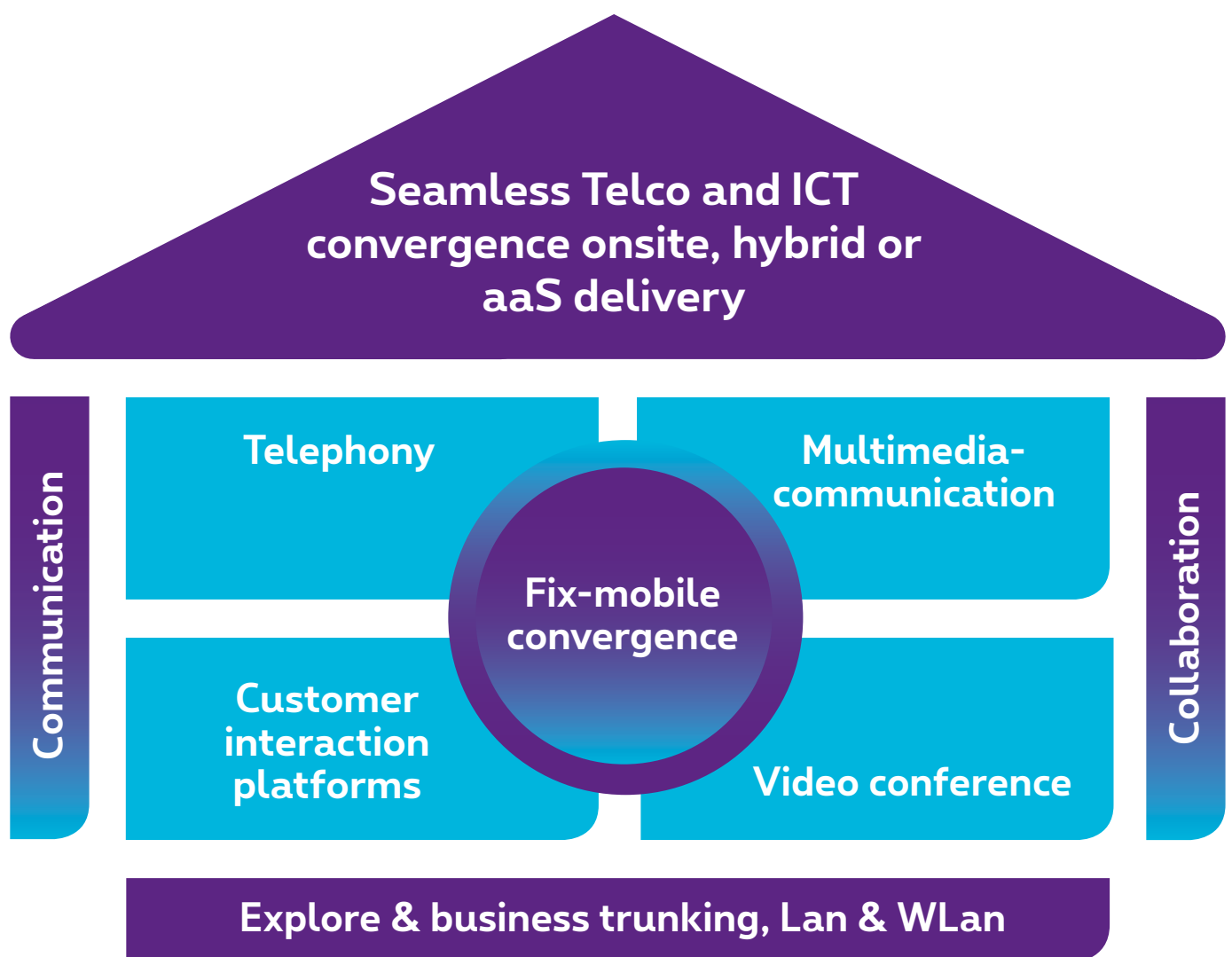
**Voicemail** is a well-known service of mobile telephony. This service can also be part of a PABX or a UCC solution. And it may be linked to e-mail, such that incoming voicemail messages are registered and sent as an email attachment to the intended recipient who can then listen to it via his own email software.

In the opposite direction, it may be possible to send a message to different recipients, using different formats. This is especially handy for emergency communications. You can then send a text message via SMS and/or by email, depending on the definition in a distribution list. The same text message can also be delivered as a 'pre-registered' message to a telephone recipient. (**Crisis communication tool**).

## Coverage

In business operations, it's important that employees can work anywhere on your premises, both in terms of data connectivity on wireless devices (laptops & tablets) and for voice. This may sound obvious, but good voice and data connectivity may become tricky at times if parts of a building are underground (e.g. a railway or a subway station), or when

## The building blocks of Unified Communication





86%  
of CIOs agree with  
the statement  
Cloud acts as  
an enabler for  
reduced operating  
expenses

large structures are causing interference. In which case you will need additional extensions of the mobile network, through femtocell technology, Wi-Fi and/or DECT signals. This improved coverage can be delivered, on request, by Proximus.

### Continuity

Ensuring the continuity of communications can be obtained using several services and design elements. Protection against connectivity loss can be provided by using **backup lines**. Protection against power outages can be provided by installing power backup systems. Protection against a PABX failure can be provided by using call routing in the network (**Voice Managed Service**).

Protection against the inaccessibility of your premises (eg. snow, strikes) can be obtained by allowing your employees to work from different locations, by using **UC, VMS, One Company Number**, etc.

Ensuring business continuity is thus part of the design and choice of adequate services.

### Reducing the cost of ownership

The preceding paragraphs may seem daunting, but no fear, the costs can be contained. It is simply a matter of combining the different parts of the solution according to your current and future needs. Proximus offers, for example, **Engage Packs**. These are tax-deductible packs containing a smartphone with all required security and back up software, insurance, optional communication tariff plans and a helpdesk service. This allows of a predictive cost model for the user side of things.

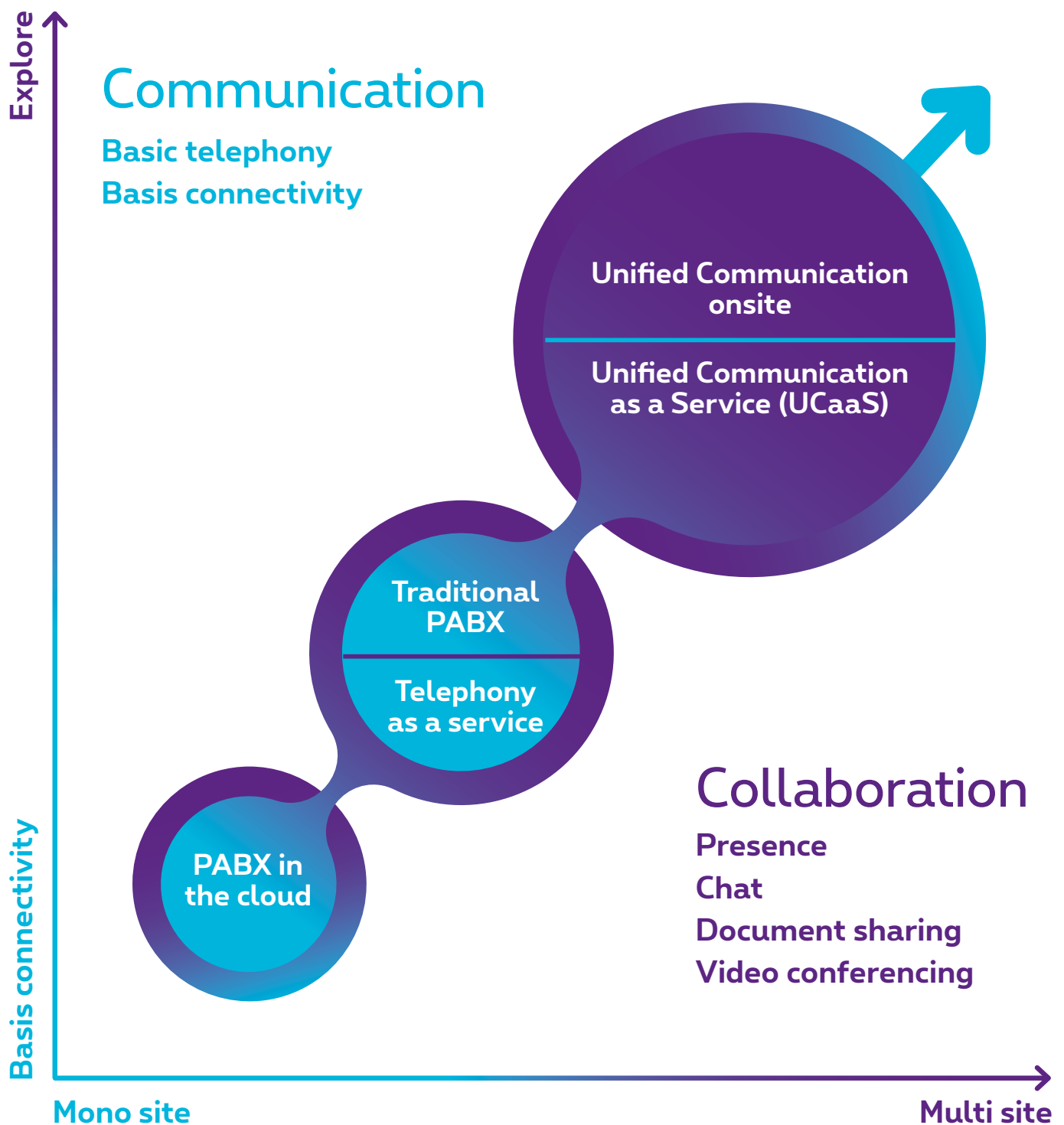
### Cloud

As you may already have understood, many of the required features don't necessarily need to be installed on-premise, but may be served straight from the cloud. PABX as a service, UC as a service, routing (VMS), integration of fix and mobile are just a few examples.

Using **cloud functionalities** places the burden of keeping it all up and running firmly on the service provider. Cloud offers cost predictability, as you can pay per user per month, combined with a flexible growth path. Configuration of the whole (moves, adds, changes) can be done by the service provider or yourself via a Web portal. Security and privacy are guaranteed by the service provider in the total package.

Proximus offers both on-site equipment and cloud services. This combination allows a hybrid on-site/cloud set-up, based on your individual needs. You do not need to have all skills in house, since you can rely on a thorough expertise in voice communications.

From basic communication to collaboration



# Conclusion

In conclusion, we can state that the 100 year-old principle of telephony has morphed into rich communications, for both internal and external use, supporting new strategies about how and where we work. The type of device used by the user doesn't matter anymore. Business processes can be automated. Efficiency improvements and cost reductions can be obtained by using the new possibilities in a clever, well-considered way. And the investments can be limited.

There is no one-size-fits-all approach. There just is your solution, tailored to your needs, but based on standard building blocks and services.

**Just ask us.**

## More info



Proximus is your trusted partner to help you develop and implement your balanced collaboration strategy. Surf to [www.proximus.be/security](http://www.proximus.be/security) or contact your account manager.

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