COMARCH ICT

COMMUNICATE WITH GENERATION Y
A FEW WORDS ABOUT THE CLOUD

AGENDA

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INTRODUCTION

Probably everyone is familiar with the terms 'Millenials', 'Generation Y' and 'Generation Z'. The new buzzword is Generation C: those born between 1980 and 2000, accounting for 9 to 11 million Poles. Well-educated, working in international corporations or running their own businesses, they are hungry for success and want to climb the career ladder fast. As they get into managerial positions, changes in our work environment will follow.

I am not a sociologist but I would like to share my insights on the technological preparations we should make for the Generation Y to come.

1.
WHAT DIFFERENTIATES MILLENIALS FROM THE REST OF SOCIETY?

What distinguishes Millenials from the rest of society? It is **net-centricity** and **multi-tasking**. Net-centricity?

THE FIRST THING MILLENIALS DO IN THE MORNING IS GRAB THEIR SMARTPHONES.

A Deloitte survey shows that 49% of respondents living in developing countries check their mobile devices within 5 minutes of waking up, as do 62% of Poles aged 18-24. Smartphones, rather than phones, have been part of their lives forever. One may venture to say they are unfamiliar with classical phones fitted with keyboards, displays and hand-held receivers, and some of them might even find them shocking.

AS SOON AS I WAKE UP, I REACH FOR THE PHONE / SMARTPHONE:[1]

Younger Millenials

24%

Older Millenials

24%

Generation X

13.5%

By the same token, Generation X, i.e. people born in the second half of the 20th century, would be bewildered by a phone with a crank and call requests made with a telecommunications service provider. What Millenials could not imagine their lives without is evident. 64% of those participating in a survey carried out by the British Science Museum[2] stated that they cared more about Internet access than about amenities such as toilet, fridge and clean running water. In a nutshell, the Internet is a top priority for them.

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1. Odyseja Public Relations' report entitled "OMG, czyli jak mówić do polskich milenialsów"
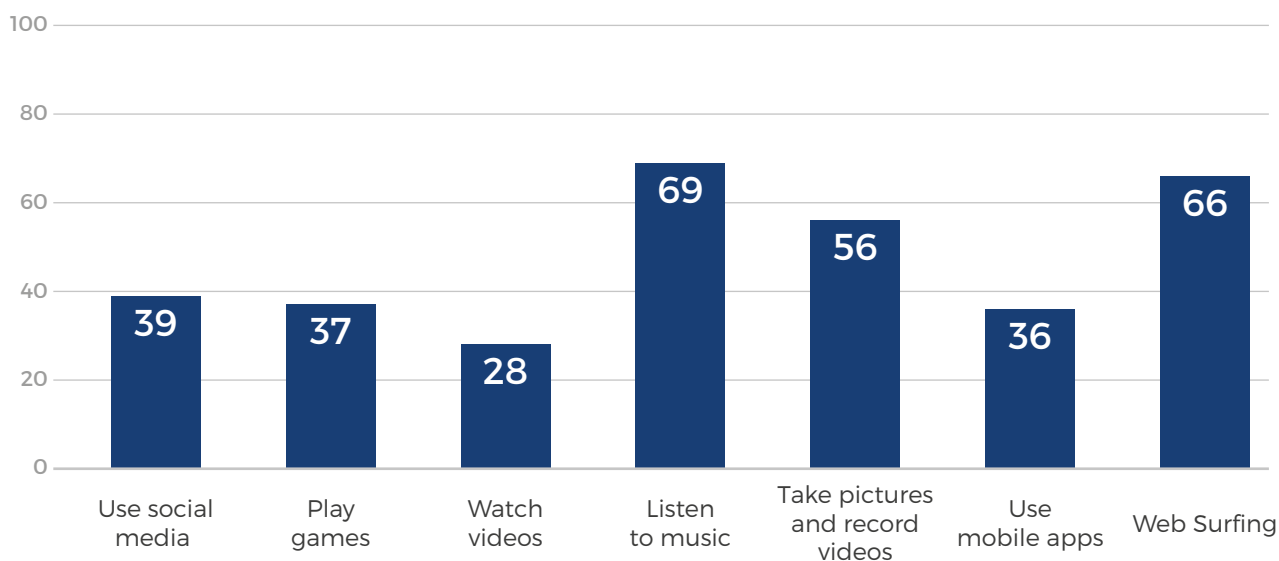2. http://www.sciencemuseum.org.uk/

How about multi-tasking? It is an ability to do many things at the same time. If you have teenage children, just look at them doing their homework. As my daughter switched between a PC, a tablet and a smartphone the other day, I made a diffident remark that one was capable of using just one device at any one time. I was given a scorn-and-pity glance since it was simply the style she finds more comfortable and fitting. Millenials are capable of simultaneously writing articles, viewing Instagram pics, commenting on Facebook posts and messaging their friends.

As I did my research for this article, a stark difference between Generations X and Y occurred to me, one regarding management and collaboration. Information on any attempts at changing IT architecture were, however, nowhere to find. How should we prepare for the Millenials to come? We will definitely need to change our approach to communication, and this process should be supported by technology.

WHAT DO YOU NORMALLY USE YOUR SMARTPHONE FOR? YOUNGER MILLENIALS:[3]

Use social media	Play games	Watch videos	Listen to music	Take pictures and record videos	Use mobile apps	Web Surfing
39	37	28	69	56	36	66

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3.   Odyseja Public Relations' report entitled "OMG, czyli jak mówic do polskich milenialsów"

Let's try to define features that distinguish Generation Y from the still prevalent Generation X.

1. **LONELINESS ONLINE.** Millenials are individualists. However, it is not that they do not keep in touch with their workmates. Things are more intricate than that. Keep in mind that Millenials value friends most highly (92%)[4] and, as problems occur, are likely to ask their friends for help or look up solutions online. Consequently, they might seem arrogant or bumptious.

2. **MY SMARTPHONE IS MY WORLD.** According to GlobalWebIndex[5], 91% of Internet users have smartphones and use laptops less and less often. They use smartphones mostly to keep in touch, not necessarily for phone conversations, though. Yes, there are laptops and tablets, yet smartphones are the absolute winners.

3. **VIDEO IS NOT THE KEY.** Contrary to what IT manufacturers claim, video is not the most important communication channel among Millenials. According to Kelly Services' report[6] entitled "THE COLLABORATIVE WORK ENVIRONMENT," just 6% of respondents prefer video as a means of communication. Much more prevalent (34%) is online communication, with the biggest share in all age groups. Here comes an important caveat: **e-mail does not count as online communication.** Online communication is a classically asynchronous way of communicating, without the possibility to confirm the receipt of a message or the date of likely response. Being online means using messengers and (less frequently) text messages.

4. **WHAT ABOUT PHONE CALLS.** As Deloitte's report "TMT Predictions 2016" report reveals, 26% of smartphone users in developed markets are not going to use traditional calls in the coming 7 days. Furthermore, only 24% of respondents reckon that landline phones will keepremain popular until 2019.[7]

5. **„THE WORLD IS NOT ENOUGH".** Over 47% of Millenials state that they want to travel and visit as many places as possible[8]. What are the facts? A survey conducted by Allianz Worldwide Partners demonstrates that 96% of Poles aged 18-30 travel for pleasure.

6. **SOCIAL MEDIA.** 74% of Millenials have Facebook accounts[9]. This generation does not draw a clear line between the private and the professional. The report entitled "Young professionals at work" published by a department of Ericsson ConsumerLab additionally implies that personal communication is an employee's right rather than a privilege. Here comes multi-tasking, again: if someone is checking their Facebook status and listening to music while working, they do not need to be less productive – it is just the way they like to work.

7. **FLEXIBILITY RULES.** 54% of respondents taking part in a survey conducted by Kelly Services values flexibility at work very highly. Flexibility implies flexitime and off-site work.[10]

8. **OWNERSHIP OUGHT TO BE FLEXIBLE, TOO.** Why should you buy a car if you can use Uber? Why should you buy a house if you can keep living at your parents' place? Why should you buy albums if you can stream music with Deezer or Spotify? The research by Nielsen[11] also shows that one may share tools (23%), camping equipment (18%), furniture (17%), clothes (22%) and animals (7%).

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4. Odyseja Public Relations' report entitled "OMG, czyli jak mówic do polskich milenialsów"
5. https://www.globalwebindex.net/blog/9-in-10-online-adults-now-own-a-smartphone
6. http://www.kellyservices.com/uploadedFiles/16-0019_2015_KGWI_Topic5_ebook.pdf
7. Report "POKOLENIE Y A ŚWIAT PRACY" – HAYS
8. Odyseja Public Relations' report entitled "OMG, czyli jak mówic do polskich milenialsów"
9. Report "POKOLENIE Y A ŚWIAT PRACY" – HAYS
10. http://www.kellyservices.com/uploadedFiles/16-0621_KGWI_Topic5_infographic.pdf
11. http://www.nielsen.com/apac/en/press-room/2014/global-consumers-embrace-the-share-economy.html

2.
FUTURE OFFICE
- WHERE AND HOW
WILL WE WORK?

What should an office for your young employees be like? It should not be a classical open space with grey boxes adorned with employees' holiday pics. In fact, there should be no office at all. Bear in mind that Generation Y enjoys flexibility of work and ownership. One day, they want to work at home (on a laptop), the other – at a trendy coffee shop. At times, they will spend some time at the office, too; the office is not the most important thing, though.

Millenials do not need to have their own computers, their pigeon-holes, files and what not. A laptop might suffice, or even a smartphone. Importantly, we should depart from hierarchical work systems with fixed times for the benefit of task-oriented schedules. Now, how should you communicate with the generation in question? Definitely avoid phone calls. You may occasionally call them, but it is better to use online messengers. It is best to have a tool that will bring Facebook habits into the work environment: a platform that will enable group work, will be fitted with a messenger, allow file sharing and be accessible from anywhere. One should be able to manage such a platform with any tool (especially a smartphone) and anywhere they like, not necessarily from their corporate network.

A Millennial-friendly organization should be more of a hive or shoal rather than a flock with clearly defined roles and a hierarchical structure. How tocan provide Millenials be provided with suitable work conditions? Shared infrastructure is the way to go. Shared infrastructure is part of the 'sharing economy', a term lately as trendy as decaf soy latte. Obviously, the very trend is nothing new as Forrest Gump would say: "Own nothing. Borrow even shoes." Besides cars, bikes and animals, one can share bags and children's toys. In other words, there should be no office as employees will meet at cafes or trendy co-working places, which might come as a bit more formal. However, the key to effectively managing a cluster of employees occupying a dozen cafes is to facilitate secure and efficient communication. In other words, IT infrastructure will be shared, too. You do not need your own servers, firewalls and switches. In fact, you do not even need to know what your infrastructure consists of and where it is located. ItThis is obviously an oversimplification, since all of our data is kept with one provider of shared infrastructure, and a major failure is likely to cause us major trouble. It all sounds good, but are such solutions available in the market today?
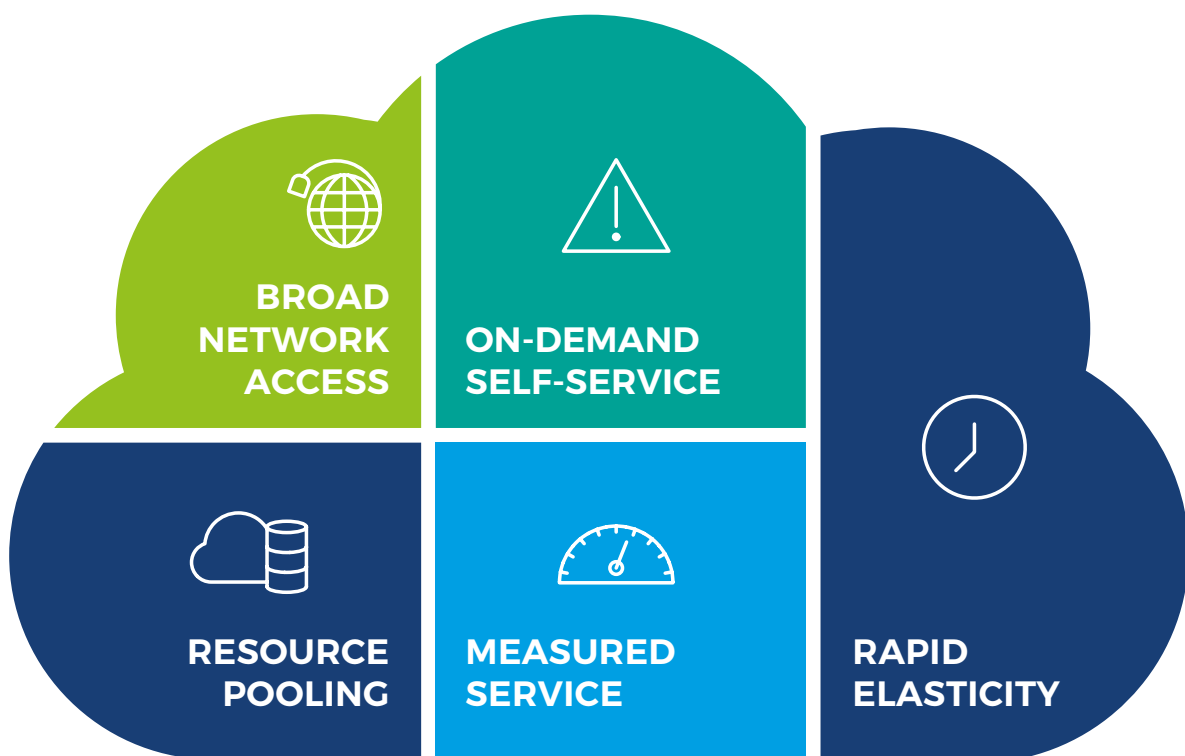
3.
A FEW WORDS ABOUT CLOUD

The keyword is 'cloud'. Let me just explain what cloud is and what it is not. Following the definition put forth by the National Institute of Standards and Technology (NIST), cloud computing is:.." cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction."

The most popular definition is presented by Gartner analysts who define cloud computing as: a style of computing in which scalable and elastic IT-enabled capabilities are delivered as a service using Internet technologies."[12] The user doesn't have to know how this service is realized, and does not need to deal with technical aspects necessary for its operation either.

A true cloud environment, as defined by the National Institute of Standards and Technology (NIST), is characterized by:[13]

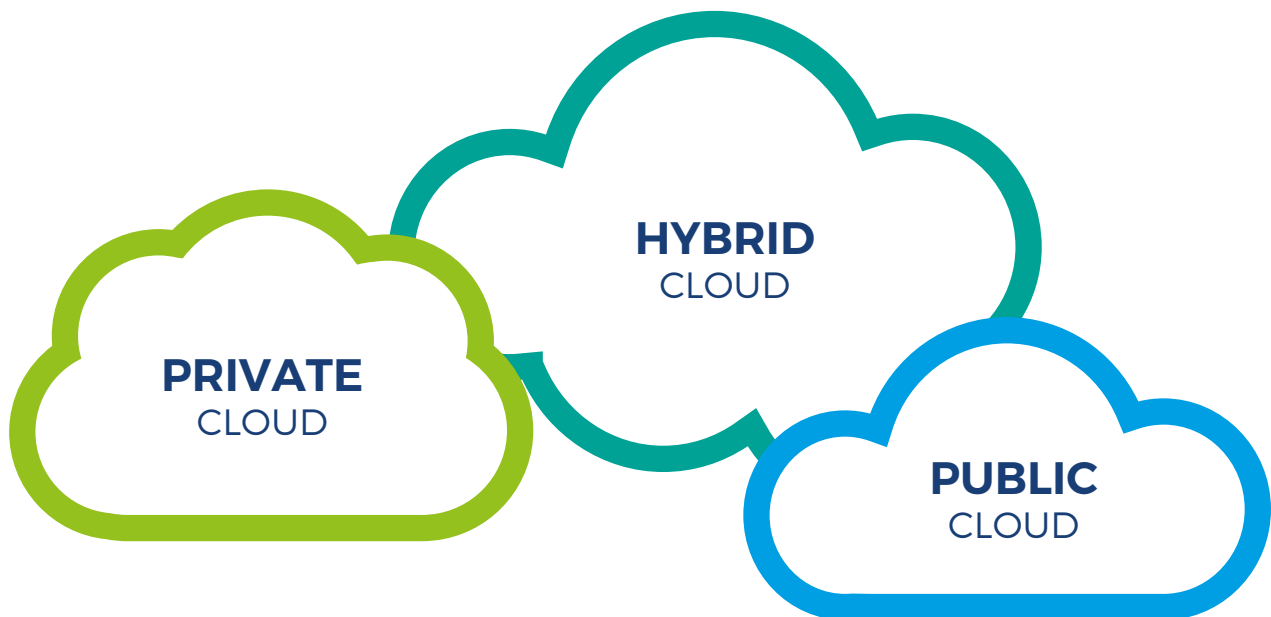## ELEMENTS OF THE CLOUD

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12. http://pclab.pl/art44389-4.html
13. https://www.nist.gov/news-events/news/2011/10/final-version-nist-cloud-computing-definition-published

Of course, it is worth mentioning here that on the market we have two, or rather three types of clouds in the market: the public, private and hybrid.

TYPES OF CLOUD

HYBRID CLOUD

PRIVATE CLOUD

PUBLIC CLOUD

3.1.1 PUBLIC CLOUD

One of them is public cloud, whereby private users, businesses and institutions use services offered entirely by an independent provider. Cloud is, by rule, simple and flexible. You do not need to know what your employee's e-mail box consists of, and adding new users with a simple wizard is a pleasure. However, you don't know where your data is, and if something does not work, you are left clueless on who to call and lodge a complaint with. You have access to solutions offering just computing power (e.g. Amazon Cloud and Microsoft Azure) or disk space (Dropbox) or much more advanced tools, such as the packages from Microsoft and Google. ItThis means that a single application can cover file sharing, text editing, spread sheets, video conferencing and even online messengers that Millenials love so much.

3.1.2 PRIVATE CLOUD

Shared solutions are often viewed as less secure, and private cloud solutions seek to address that. These are cloud products dedicated to the needs of one group of users. The simplest solution of this kind is a NAS server, NAS being short for Network Attached Storage. With NAS servers, the user may connect hard discs to a network and make their data available online. Think of Dropbox with full control. File storage is not the only private cloud functionality. Depending on your IT department's imagination, you can also share business software (such as ERP and CRM) and phone and videoconference apps.

Is private cloud more secure? It is hard to say, but it facilitates better control of what is happening. We can respond more quickly as long as requisite resources are available. It requires substantial investment within the IT department, especially the onepart responsible for security. Private cloud also requires some commitment on the infrastructural front – proper power supply, connections, software patches, compatibility between software versions (it might happen that adding a new functionality willmay entail the need to upgrade the entire application, and the new app will not work with the operating system in place) and a relevant SLA level.

Is private cloud more costly? It is hard to say. It greatly depends on the amount of hardware and services at hand. For a start-up, private cloud is going to be more expensive. However, if you have your own Data Centre, servers and connections (and cannot abandon them for a couple of years to come), then the cost might be lower.

THE ADVANTAGE OF PUBLIC CLOUD SOLUTIONS IS THAT THEY ARE QUICKER TO DEPLOY THAN PRIVATE CLOUD SOLUTIONS

As long as there is no need to integrate individual environments previously delivered on-premise. A good example is the integration of CRM with a telecom server, something that is relatively easy within a private environment, yet often impossible to deliver in cloud solutions, as providers of telecommunications infrastructure may support just one type of CRM (specifically the one they provide themselves).

3.1.3 HYBRID CLOUD

The third solution is hybrid cloud, also known as dedicated cloud, whereby an individual user is provided with access to specific network and software resources (e.g. specific physical disks). To put it otherwiseIn other words, the user is provided with access to specific machines within a work environment, and so hybrid cloud enables data access control that is superior to the one offered by public cloud at a cost lower than with private cloud. Resources can be accessed from anywhere in the world providing a good Internet connection is available – otherwise it will be impossible to work.

Which is the most popular solution? A lot depends on the telecommunications infrastructure. The EMC Forum Survey 2013 shows that private cloud services are the most popular cloud solution in countries such as the Netherlands, United Kingdom, Italy and Spain, where cloud has gained the biggest traction. Interestingly enough, private cloud is nowhere to

findbe found in Finland and Singapore (just 2% of users, hybrid cloud users accounting for 82% of the total). For a change, public cloud is the most popular model in France and Turkey. In Poland, the most popular model is private cloud.

3.1.4 CLOUD MODEL AND THE EXPECTATIONS OF GENERATION Y

What is the market's response to Generation Y's expectations? I have recently attended a training course dedicated to web products. Producers used to focus on showcasing new phones, terminals and new switches as being faster than the previous ones so that we should discard the old ones. It was different this time. Producers presented mainly cloud solutions. What specifically? Cloud telephony. The very idea itself is not quite new as telecommunications service providers have offered the 'virtual phone exchanges' for over 20 years now. However, it seems that hardware, or rather software, producers now want to get their piece of the pie. The path has already been paved by Microsoft, with such services as Azure, Office 365 and now Skype for Business. The latest financial report from Microsoft[14] shows that 'Intelligent Cloud' services have grown by 7%, not quite a shocking figure in itself. What is shocking though is the rise in revenue from Azure platform services: 102% of annual growth.

STANLEY ANALYSTS ARGUE THAT IN 2018 CLOUD SERVICES WILL ACCOUNT FOR 30% OF MICROSOFT'S REVENUE[15]

Unfortunately, the problem with cloud solutions is that each provider defines 'cloud' as a slightly different set of services. The term is used to mean mostly online backup, which is far inadequate from the Millenial's viewpoint. CurrPresently, Microsoft's offer is probably the broadest range of cloud services, including online storage space, a messenger, telephony, group work and a few other interesting features, including said the above-mentioned Azure. Similar products are available from Google, offering

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14. https://www.microsoft.com/en-us/Investor/earnings/FY-2016-Q4/press-release-webcast
15. http://www.forbes.com/sites/louiscolumbus/2016/03/13/roundup-of-cloud-computing-forecasts-and-market-estimates-2016/#4a590e2b74b0

an office package, a messenger and online storage space. How about other players? One of the industry's leaders, according to Gartner,[16] is Amazon and its Amazon Web Services. The biggest disadvantage to of this solution is no the lack of software support: the user can access only the computational cloud, without extra apps, such as a word processor, spread sheets or a messenger. Slightly different is the path followed by Cisco is slightly different, as it which offers Cisco Spark solution (not to be confused with processors). Spark is mainly intended for communication, hence the stress on chats and video calls. Additionally, the user can store files on a shared disk. In future, Spark will cover such functionalities as phone calls and integration with business apps;

however, it will still lack an office package, something that makes this app incomplete.

Slightly different is The approach followed by solutions oriented towards communication inside the organization is slightly different. Examples are Slack, Microsoft Teams and Workplace, formerly known as Facebook for Work. These solutions are likely to replace Intranet by offering Facebook-like groups, walls and chat functionalities. Their interfaces are modelled after the famous Facebook GUI of Facebook. It is also worth mentioning that Slack and Workplace support videoconferencing and provide storage space.

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16. https://www.gartner.com/doc/reprints?id=1-2G2O5FC&ct=150519&st=sb

4.
COMARCH CLOUD

The Polish market is quite fragmented. Research institutes each year publish promising forecasts (e.g. Aas preliminary estimates by IDC show, Poland's public cloud market has grown by 25% compared to 2015. The value of the Polish public cloud market in 2016 was USD 160 million (PLN 630 million) , yet a closer look reveals that this accounts for a fraction of the whole market. This year's edition of the Computerworld TOP200 report shows that it is a mere 0.6% of the entire IT market (PLN 105.3 billion). These stats are driven mostly by medium and large enterprises, 24.7% of which use cloud services[17], which are ideal for start-ups due to their low initial cost. However, only a few cloud packages are available in the Some other providers claim they are going to add a word processor functionality to their storage services or that their tools are compatible with independent word processors. Polish market, especially ones that would be well localized, or adapted for the local market. Some other providers claim they are going to add a word processor functionality to their storage services or that their tools are compatible with independent word processors.

One such product is **Comarch Cloud**[18], a solution that offers ERP functionalities and an online cloud backup. It is a pity that this solution lacks a group work functionality, yet it offers full integration with business apps, something absent from other solutions. But, among others, it consists of the modules:

- **COMARCH MOBILE SALES** An app for sales representatives and field staff who spend most of their time on business trips and at their customers' offices. The app facilitates the effective planning and delivery of sales trips. It provides a full history of transactions, payments and contacts with customers and facilitates pre-sales deals (accepting orders and offers at customers' offices), including in foreign currencies, and vanselling transactions (processed at customers' offices) as each field employee can print invoices, receipts and goods-dispatched notes and enter them into the fiscal controls and auditing system. These functionalities are complemented by efficient solutions for the planning and executing of sales trips.

- **COMARCH MOBILE MPOS** An app for salespeople and sales assistants working at bricks-and-mortar and pop-up stores (stores of a temporary nature). With smartphones or tablets with the

16. http://itwiz.pl/wielkosc-rynku-cloud-computing-polsce-roku-2016/
17. http://www.computerworld.pl/news/Dlaczego-chmura-sie-w-Polsce-nie-udaje,405741.html
18. https://www.comarch-cloud.com/

mPOS app tethered to a payment terminal, a fiscal printer and an external bar code reader via Bluetooth, the whole vending system fits into a pocket.

- **COMARCH MOBILE SERVICES** An app for service staff who inspect and repair the devices owned and sold to customers, alike. Comarch Mobile Service provides users with access to all the parameters of the devices, a history of repairs and a list of under-warranty check-ups, and comes with a check-up planning feature. Additionally, the app facilitates the planning and execution of service visits, report-based evaluation of past activities, and allows the user to track itineraries and use a messenger to keep in touch with other service staff members.

- **COMARCH ERP STOCKTAKING** is an app that permits employees to make inventories within Comarch ERP systems and turns phones with a built-in camera into mobile bar code scanners and data collectors. Staff members can work without computers or Internet access by just scanning product bar codes and entering their quantities.

- **COMARCH ERP E-EMPLOYEE** is an app that facilitates the management of rosters, work time and leaves and is compatible with the Comarch ERP payroll module. It also works with the Comarch RCP app, which automatically keeps track of the employee's clock-in and clock-out times.

Comarch focuses mainly on business aspects here. Why? Cisco's insights show that the most popular cloud apps are business CRM and ERP solutions (67%), office apps (47%) and tools for mobile collaboration, file exchange and communication (35%). Our solutions, justifiably, address mostly the former. Nevertheless, it is a pity that this solution lacks collaboration functionalities. However, the comprehensive integration with business apps available here is absent from other offerings in the market. We wonder what Millennials might think of this solution. It is hard to say.

The Comarch product is nothing like Instagram or Facebook and its mobile version resembles a desktop app. This naturally stems from the specific functionalities customers expect from us as well as ergonomic requirements. The outcome is a solution that is more 'cloud' than 'social'.

SUMMARY

Generation Y is pushing its way into the labour market and is going to bring huge organizational and technological challenges to small and large employers alike. We have all the tools at hand to provide young employees with an efficient work environment or, at least, we know what conditions need to be met to tap into Millenials' assets.

Bear in mind that Millenials are going to be the largest force in the labour market soon.
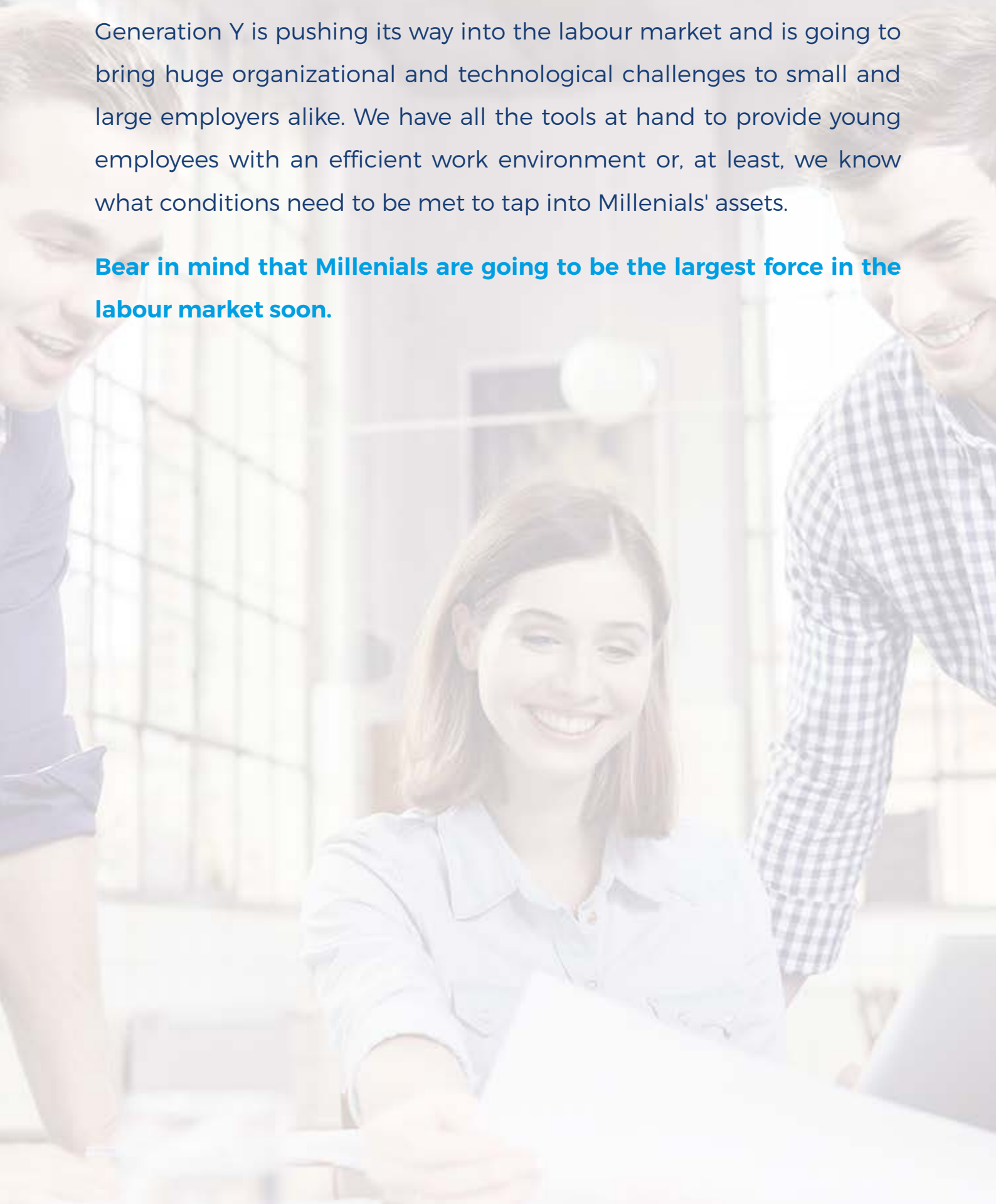
COMARCH

ABOUT COMARCH

Comarch, a global software provider, also offers reliable services related to IT infrastructure. Comarch outsourcing gives customers access to thirteen Data Centres located all around the world. Extensive international experience and the number of international offices allows the company to offer nearshoring services. The flexibility of our solutions convinced global brands, including Thomas Cook, Heathrow and BP, to establish a long-term cooperation with Comarch. For 23 years, the company has helped them to optimise business costs by using the latest technologies and ensuring the highest data security standards.

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