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POINTS OF CHANGE – CLOUD

AUDIO TRANSCRIPT

/intro/

There is no doubt that the cloud is one of the most important solutions of the last decade. But its real development is still ahead of us.

What possibilities do cloud solutions offer? How often do we deal with them without even knowing? What should you learn to work with the cloud? And what is the future of the cloud?

Accenture as a workplace is rich in knowledge and experience in the Cloud area, and I will discuss it with my guest.

My name is Krzysztof Kobyłecki and I will be talking to Mariusz Chudy – Cloud First Managing Director at Accenture.

/interview with an expert/

Krzysztof: Hi Mariusz, nice to meet you. Today's topic is the cloud, which is a hot topic right now, so I guess I should start with this simple question. How does the cloud work?

Mariusz: Hi. I am very happy to be here in this episode. How does the cloud work? Maybe we should start by answering what the cloud is. In a nutshell, the cloud is data processing. It is infrastructure gathered in one place, generally centralised with one of the so-called cloud computing suppliers. And now, the cloud provides various types of services that we don't have to configure ourselves to deliver. For example – we don't have to worry about an e-mail backup system; we can buy such a functionality from the cloud. We don't have to buy or configure an accounting management system; we just click it down from the cloud.

Krzysztof: So, at the user level, the cloud offers great ease of use. We don't have to worry about whether our servers work well, or whether everything is ok with them, we can just use the application. Tell me what excites you about the cloud, because you've been doing it for a good couple of years now.

Mariusz: Yes. Cloud computing has been part of my life for several years, although I have been associated with the IT industry for much longer. The cloud is an IT area that is undergoing a revolution. I would call it that. If we look at the evolution of innovation, at where new products and new systems are created, they are created in the cloud and, at the moment, in the cloud only, and this is the first aspect. The second aspect is related to our own backyard, because Poland will be the first country, and so far the only one behind the so-called iron curtain, to have two of the largest public cloud providers. This is extremely important because when you look at the cloud map so far, you can see this old division, say from 50 years ago, into the East and the West. We are breaking through. These investments of USD 3 billion – that is a huge amount of money that will go to Poland.

Krzysztof: And this money will go towards the construction of data centres?

Mariusz: Yes. What's more, these companies have decided to invest, in the scope of that

USD 3 billion, in market education, customer education, public education, training, and certification of cloud specialists. So, this is really a hot topic.

Krzysztof: And tell me, is there any sub-area in this vast area of the cloud that interests you the most?

Mariusz: A very interesting question and a very difficult one. It's really hard to name one area, because the cloud begins with, as it were, infrastructure solutions. It is called Infrastructure Service, so in a way, we are moving the hosting of our IT, our servers and our data centre to the public cloud. Going further, we come to the issues of data analytics, artificial intelligence or the approach to software development called Cloud Native Development. We distinguish three layers: Infrastructure as a Service, Platform as a Service and Software as a Service. Apart from that, there are many accompanying aspects, such as security or cybersecurity, compliance with the law, with regulations, etc. One selected element can be fun, but it is also worth looking at the cloud as a whole. So, I try not to focus on one favourite area, but look at it as a whole.

Krzysztof: The name of your position is Managing Director; can you tell us what your job is and how it is related to the cloud?

Mariusz: Yes. I am a managing director at Accenture. It is the largest technology consulting company in the world. And my role is dealing with cloud computing. What does it mean? It means that my goal is to develop the business and run the team – in our consulting, it is called practice – that is, run this practice in such a way as to develop it, at the same time so that the good that the cloud brings is also reflected on the Polish market.

Krzysztof: Can you list the places where we actually use the cloud?

Mariusz: When we want to think about how our lives have changed thanks to cloud computing, we can think about how we take photos on holiday and where we store them. My data does not follow the device but is consolidated in one place. The security aspect – this is another aspect, but generally it makes life a lot easier. It makes my life easier when I switch from one phone to another, or want to copy those photos somewhere, or share them with someone. Another example is online payments.

Krzysztof: So, the cloud is with us every step of the way. What does the cloud offer the man on the street?

Mariusz: For example, e-mail correspondence and today's communication, whether audio or video. These are examples of cloud solutions. Let's take instant messaging – it's all in the cloud. Our data – before it is, so to speak, sent to another individual – it is somehow processed centrally somewhere, redirected, and so on. The traditional telecommunications infrastructure is no longer needed.

Krzysztof: So it seems that the cloud in our everyday life actually surrounds us and fills our lives because we deal with it more and more often. And what is the cloud market in Poland? What is that cloud in Poland? From the reports I read, it seems that adoption is not as widespread as we thought. And we do not live in a world where all companies use cloud solutions only. How is the cloud doing in Poland?

Mariusz: Well, the cloud in Poland is, I would say, at the beginning of its journey. We are ranked third from bottom in the European Union when it comes to cloud adoption. We are more or less at the same level as Bulgaria or Romania.

Krzysztof: And this is the funniest thing because these are three countries with very good Internet infrastructure. So, the fastest Internet in Europe is in Romania, and in Poland we also have quite wide access to broadband connections. And yet we have very limited levels of adoption.

Mariusz: Yes. But I would like to point out today that the European Commission has introduced

this digitalisation indicator of business and society. This indicator consists of a number of sub-indicators. One of them is access to the Internet and it is not so high if we look at our society as a whole – it is one of the worst results. And this translates directly into the use of cloud solutions by individuals, and then also into how business uses the cloud. Because it is still said in Poland that, on average (according to Eurostat), about 11 or 12% of companies use some kind of cloud-based solution.

Krzysztof: We have to admit that, due to the pandemic, there has been a great acceleration in terms of development. Can you briefly say what the most important events or the most important changes are when it comes to the cloud?

Mariusz: Looking at the coronavirus pandemic, most employees, especially office workers, had to switch to cloud solutions overnight simply to be able to connect to the systems at work, but also to talk to one another. While, I think, in February and March last year, this large majority, I think, 80–90% of employees just met up and arranged certain things in the office and then they sort of went to work and used IT systems in the office. Then the pandemic broke out and there was the first lockdown, and since then, they've been working remotely from home. And now working means connecting through cloud solutions. What are the consequences? It caused a lot of traffic. This showed that the infrastructure is able to scale very quickly and serve so many users because there are tens of millions of people, and you can see that these cloud solutions can simply handle so much traffic. Secondly, it also showed that the cloud is not so scary. You can suddenly switch to this remote mode and work, use these solutions, and carry on with your business. I think it would also be fun to think about what would happen if the coronavirus pandemic had occurred in the 1990s.

Krzysztof: It would have been hard for us to communicate. It would have been hard for us to do lots of different things.

Mariusz: Exactly.

Krzysztof: We talk about the cloud, and we talk about all the possibilities, but I would also like to ask you about the challenges and limitations of the cloud.

Mariusz: I think that if there were no difficulties, all companies today, meaning all business, would be using the cloud. And we are still at a dozen or so per cent. So, there are the difficulties. The cloud itself is a difficult aspect, so an organisation has to change to properly use the cloud. Moreover, the portfolio of cloud services is huge, right? The way it is for a layman, you log in and you don't know what to click next, right? Suddenly servers appear as some AI service, some containers. What's going on there, right? So, knowing how to start is surely a big barrier and then knowing what the future cloud-based organisation should be like. Because from the point of view of cloud management, this is an as-a-service model, i.e. I take, I rent. It is a model a bit along the lines of 'do I lease a car or buy my own'?

Krzysztof: We definitely go with leasing here.

Mariusz: Yes, exactly. Buying is on-premise, and leasing is modern, it's the cloud. And now everything is done in the as-a-service model, and a lot of attention is being paid to business functionalities and benefits for business, so there is talk of a different approach. IT organisations, in fact, must come together in the sense of Development and Maintenance. We are talking of a DevOps approach. It is always difficult to reorganise, especially in a large company. We are also talking here about Change Management. This is one such aspect. Another aspect is the so-called vendor lock. There are services that are specific to a given cloud. And now if, let's say we start using certain services without being fully aware of it, then the transition can be really hard, right? This again is going to be a project related to having to invest a lot of money to rewrite, for example, half of the system.

Krzysztof: Interestingly, I found such data from Flexery reports from 2021, which say that 30% of the money spent on the cloud is lost. So, I guess that's another difficulty that comes up – good management of the cloud and actually using what we need or what we have purchased.

Mariusz: At Accenture, we have also undertaken such a study. We interviewed over 200 companies about the benefits of cloud computing, and two-thirds of those companies said they did not get any benefit from it. Interestingly, the one-third of companies that obtained some benefits spent a lot of energy at the beginning on planning and building a strategy and then measuring its effectiveness. They told themselves that the cloud is not just technology, it is also a change – a change of organisation. So, in general, you have to be smart about cloud computing. I also see a lot of interest from our clients, i.e. large companies across various industries, to consult with them on how to use the cloud and which solution is best for them. Of course, we are talking about business functionalities. We are talking about the CRM. There are ERP-type enterprise management systems, but also more technological things, such as data processing or data storage in databases. This is another very important aspect. The question is, which solution do we use? Do we need high levels of availability where, if one database stops working, its backup will automatically be restored? But it costs a lot. If the company decides to use such a solution, it will have to pay a lot, so the question you have to ask yourself much earlier is which are the critical systems that require e.g. maximum availability, and which systems, for example, can be switched off for the night or for the weekend.

Krzysztof: Yes, for a period of inactivity.

Mariusz: Yes, for a period of inactivity. Only when you put together all these technological and organisational aspects related to cloud computing can you say what cloud model you should be using in the future. Unfortunately, returning to the study and to those two-thirds of companies, many companies do not plan at the beginning, but only test the cloud on the basis of moving with new functionalities and new systems. And then there is the risk of a vendor lock. Then there are also risks related to securing access to the cloud, as the cloud is very safe in general. The question is how we send the data there and then retrieve it. To answer your question, I think that all these aspects at least give rise to the following question: Should we use the cloud and, if so, how? Poles are very pragmatic, so they are asking these questions. In addition, we haven't mentioned it at all, but several industries in Poland have very strict regulations, e.g. finance, telecommunications, or the energy industry, which also define or require an appropriate method or approach to data processing or sending. And you have to follow these regulations.

Krzysztof: We talked about the difficulties, but what benefits do we derive from cloud solutions?

Mariusz: In short, we can divide them into two categories: business benefits and efficiency benefits, such as cost-effectiveness. For the business benefits, they are mostly hidden in, so to say, higher layers related to the cloud and in new functionalities, in a new approach to IT systems development. On the one hand, for example, an advanced Customer Experience system can make our customers more satisfied. Happy customers will buy more and new ones will appear. And it's as if the cloud directly affects the business, revenues and profits that the company achieves. Or it could be that the cloud is accelerating the functionalities that we can offer to our clients. Let's look at mobile banking. Today, it is a deciding factor for many clients – do I use the services of this bank and not the other, and how quickly are the services delivered? If I have additional options, such as – I can take out insurance, or I get a hint of a discount in a store that I used before, it makes me want to stay with that bank and spend money there, so to speak, which also results in better business for that bank.

Krzysztof: We have already gone through many areas when it comes to different ways of using the cloud. However, expanding on this business aspect, can you tell us which of those areas Accenture deals with?

Mariusz: Accenture deals with, looking at the business part only, all those areas. Because, as I said, we are the largest technology consulting company, but we also develop strategies and consult with clients on this aspect of their business. And now for this cloud technology, well, it's a one-to-one relationship. So, when we talk to the client about cloud computing, we also talk about impact on revenues, profits, for example increasing sales, and efficiency of marketing. These aspects cannot be separated. Our strength is that, as Accenture, we have carried out over 30,000 cloud transformations. This is the most in the world and generally applies to every industry. This means that in every industry we have thousands of cases, so we are able to come to, well, a company that produces clothes and say – you know what, looking at five companies that do exactly what you do and who have benefited from technological solutions in the field of cloud computing, we believe that if you pay attention to the supply chain management system and improve it and migrate to the cloud, then you will achieve such-and-such benefits. It is a combination and also our strength – combining very strong technological competences with industry know-how and experience in the area of strategic consulting.

Krzysztof: When you start to work with a client, what is most important in the process of cloud implementation in the client's organisation?

Mariusz: In fact, when we start talking to a client, the cloud is, so to speak, backstage. What do I mean? I mean that first we try to understand why the client is thinking about cloud computing. As I said, it all boils down to these two categories, either increasing the business or optimisation, looking for efficiency.
Krzysztof: So where does this process begin?

Mariusz: This process begins with developing a cloud strategy. The first phase is developing a strategy and this strategy results from business requirements. So, what do I want to achieve, what results do I want to achieve, or tell me which cloud solution or solutions we could use to increase sales? Or we work with clients ourselves. We simply tell them that, for example, a given system, or some solution based on artificial intelligence, would improve the effectiveness of contacts with their customers. And now such a cloud strategy starts with a business case. Then we move on to an analysis of the architecture, what the client's IT architecture is today and how it would have to change to respond to these needs. In the next step, we consider what more can be done, i.e. how to use cloud computing even better in the target model and what further benefits it could bring. Benefits that we had not anticipated before. This strategy then turns into a plan, into a specific road map of activities, which we show the client, and we say how to reach that target state.

Krzysztof: So you start with a strategy and you put an architectural layer on it to get the benefits. And then you come up with a plan that will actually get you to that point. Can you talk about some of the most interesting projects you have worked on? Where did you actually work with the cloud and what did you manage to do?

Mariusz: I think there are some interesting projects like that. Maybe I will start with one project – unfortunately I cannot mention the name of the client here, but it is the largest cloud transformation, cloud migration, at least in Europe. This company had Data Centres scattered all over the world. Mainly in Europe and South America. One such Data Centre, I think, would accommodate some of the largest companies in Poland. They were really scattered in several countries and the company decided, for various business- and cost-related reasons, to migrate everything to the AWS cloud. And it was the first time I had seen such a large company decide to make such a bold move. So, we give up, close, change our entire IT and

move to public cloud computing.

Krzysztof: It doesn't look like a one-person project, it just looks like a very complex one. Can you outline for us who does such things?

Mariusz: This particular project or programme involved several dozen, sometimes even several hundred people. The structure is very complex – there is a Delivery Lead that manages the whole thing. There are teams that deliver. Maybe I will share such an example from the pharmaceutical industry now. We call it the Life Science industry. An industry that has been growing rapidly recently and which had already focused on innovation before the pandemic. And again, innovation is actually impossible today without cloud computing. And the teams provide new software, new solutions directly in the cloud, in the so-called Cloud Native Development model. It is an agile approach with interdisciplinary teams working on those new functionalities. What do I mean? One team of seven to nine people has all the competences to implement new solutions at the level of software development, testing, infrastructure construction and cloud platform management. And then, depending on the size of the programme we are implementing, we start an appropriate number of teams. But these teams are similar in structure, so to speak. There is a team leader – they can be the Scrum Master. Often it is also the chief architect who is responsible for the architecture. There are the DevOps engineers, or engineers who develop and automate the infrastructure. There are, of course, developers who make the software, and then there are testers. What's interesting is that, in this DevOps approach, it is a matter of scaling the teams. So, we just start new teams. Depending on the client, there may be two such teams or maybe 20, or even 80. And what I observe is that – especially global companies, wanting to transform themselves towards cloud computing, approach the creation of new functionalities this way as well as the migration of systems to cloud computing.

Krzysztof: Can you tell us what skills are good to have when you want to work on cloud solutions? Because from what you have outlined so far, the technological and IT aspect is quite important. But maybe other competences are also required?

Mariusz: I would emphasise that technical competences are important. And it's not that the people who come to us have to have them, because they are very new competences. It is more about the willingness to work with technologies and this motivation to develop in a given area. We invest heavily in the development of our experts because there are not too many cloud experts on the market. The Polish market primarily, but not only. Even though we have plenty of IT specialists, it is still not enough. So, we focus primarily on technology. And here we have at least three or four such areas. One is platform or cloud infrastructure. And here we have competences specific to a given cloud, although knowing one cloud makes it easier to learn the other. I would add DevOps competences, both when it comes to DevOps methodology and developing CI/CD pipe lines. They allow for the automation of cloud infrastructure, like an automatic setup of environments. And that's something that is required in virtually any cloud project. The second area is related to software or system development. We are talking here about both Cloud Native Development and software testing, or at the moment it is more a matter of engineers who program test automation tools, as I would call it. The third area is related to data analytics and artificial intelligence. We are talking Data Science here, we are talking data warehouses, but also data processing and appropriate analysis. Somewhere back there we probably also have Machine Learning, which can be used to define certain algorithms. And another extremely important area is Cloud Security. Here too, so to speak, some things have to be clicked in. Network competences are needed, i.e. networking, where you simply need to connect to the cloud, and within the cloud you need to properly define how these systems will talk to one another. And, of course, we have the entire work methodology. There is also the SAFe methodology, or actually the SAFe Framework,

i.e. Scaled Agile Framework, which is based on Scrum, but indicates a higher level of Agile organisation. And here, one such role is the so-called Product Owner, i.e. someone who manages the backlog of tasks, sets out business priorities and distributes the tasks.

Krzysztof: The cloud was created over a dozen years ago, and it has been developing at an amazing pace. You said it yourself at the beginning of our conversation that the two largest cloud players intend to invest a lot of money in Poland, in another Data Centre, but also in people's development. So, internally at Accenture, do you focus on people's development when it comes to new cloud technologies?

Mariusz: Of course. As I mentioned, we invest a lot in the development of our employees. Virtually every individual in my cloud practice has at least one cloud certificate, which translates into specific training and knowledge. We take great care to develop employees through training, both internal and specific technological training. We are a technology company that provides technology services, so we pride ourselves on the fact that we have the best experts, and these experts gain their knowledge thanks to training, among other things. And this is one aspect, but the second and most interesting aspect for any Accenture employee is that we have extremely interesting projects. Because every project is a little different. It requires understanding the client's business problem. And on the one hand, we have a lot of projects that come from, let's say, the West, from more advanced markets; this Cloud Native Development that I mentioned was not a project carried out in Poland. This was a project led by my Polish team, but delivered to a client in the United States. Today, there are no such projects on the Polish market yet, but our employees have a chance to get to know the technology from the most advanced side. I assume that within a year, two or three companies in Poland will start doing it and then it will be interesting to consult them on how to implement such projects. And this is the second area, i.e. working with clients here in Poland. There are also a lot of interesting projects. And there is the so-called Hands-on Experience because we don't keep anyone inside the company. Every employee, regardless of their level of experience, whether they are advanced, an expert, or at the beginning of their career, immediately joins a client project, right? Of course, if it is at the beginning of their journey, they get the right help, and these tasks are carried out with the support of older colleagues. On the other hand, this fun related to working with modern technologies, the excitement of the cloud – it's there from day one.

Krzysztof: Now I would like to talk about the future. How do you see the future of the cloud? Can you talk about trends? When looking at various types of reports, one of the basic things mentioned is cost optimization. But there are certainly also more interesting aspects and trends that lie in the future of the cloud. What kind of trends are there?

Mariusz: The first direction or trend that I am already observing in the West is going to be Serverless. There is no such thing as infrastructure in the Serverless approach. As a developer, I come and I develop. I'm not interested in what's underneath. This code, quote unquote, is of course kept 'somewhere', and the functionality seems to work on other functionalities. Of course, it is extremely important to take care of the architecture and make it cost-effective. But this Serverless approach is gaining popularity. I think this is going to be the trend in cloud computing, so the lower layers will be more and more abstract. Today, for comparison, in such a traditional on-premise approach in IT departments, there are many administrators, be it for databases, or storage, or operating systems, servers, etc. In cloud computing, all this will at one point be abstraction and you will be able to focus on architecture development and management. This is the first trend that we are already seeing, especially in the West. Companies want to create a modern software approach this way. The second trend is Artificial Intelligence and

Data Analytics. These two topics are related, because for artificial intelligence to be effective, it must use or be tested on a sufficiently large amount of data, and this amount of data is available in the computing cloud. So, one is very, very strongly related to the other. And an example of the use of such artificial intelligence is chat bots and voice bots. Voice bots are the most interesting. Many countries, e.g. the Nordic countries, already widely use voice bots to serve their customers. We know it of course; we know that we are talking to a bot. But then, this technology is so developed that we often do not know, firstly, that we are talking to a bot or a computer, and secondly, these voice bots are so, let's call it, intelligent that they can also sense emotions and the temperature of the meeting, e.g. through, well, the tempo of the voice, through certain breaks, but also through the manner of speaking. And when something goes wrong, the client disconnects, they don't like something, they learn so that they do not make this mistake in the next interaction with the same client or a new one. This is the beauty of artificial intelligence. Another such trend, a little more in the future, is Edge Computing, i.e. processing at the ends of the network. It is also related to 5G communication technology and what is happening here is the departure from the typical public cloud in favour of processing at the ends of the network, i.e. in a camera, in a watch, or in a phone to provide answers to clients faster or serve given solutions faster. This is a very important trend, and it is said that in a few years' time, the computing power at the ends of the network, i.e. Edge Computing, will be greater than the computing power stored centrally in the computing cloud. These are, I think, three interesting trends that are happening and that will define how cloud computing will grow in value.

Krzysztof: Thank you very much for talking about the cloud. Today I spoke with Mariusz Chudy. Thank you very much.

Mariusz: Thank you very much.

/outro/

The cloud is an area with huge development potential, but its adoption in Poland is still at an early stage. The cloud is closely related to innovation, it opens up the possibility of implementing new technologies, e.g. AI. So you can say that working in the Cloud is the closest to change and innovation.

The number of customers, partners and cloud projects at Accenture makes it hard to find a better place to grow in this regard.

Thank you for listening to this episode and join us for the next ones. Subscribe to the 'Points of Change' channel in your favourite podcasting app, so you don't miss any. Until then, on the next topic. Bye!

/feature insert 1/

Albert: Hi Marcin.

Marcin: Hey Albercik, have you seen this new social medium yet?

Albert: Are you talking about Facebook? I heard something, but I haven't checked how it works yet.

Marcin: Then create an account!

Albert: You like it that much?

Marcin: You know, you can talk to your friends and it doesn't matter if you're from one school or another.

Albert: Sounds good.

Marcin: I'll send you a friend request when you sign in.

Albert: Oh, I guess it will have to wait.

IT department, can I help you?

And for other data?

I understand.

Ok, let's check it out.

Marcin: What happened?

Albert: In finance, they don't have access to any data in the network.

Marcin: You should have told them to turn the computer off and on again.

Albert: Much as I was tempted to… the entire department?

Marcin: The entire department has no access to LAN?

Albert: That's the weird thing – only some data.

Marcin: Seriously? We have to check it, there's no time to waste!

Albert: I will check if I have access to this data.

Marcin: And?

Albert: I don't see it.

Marcin: I was afraid of this.

Albert: Do you think the drive is dead?

Marcin: I'm just checking it out.

Shit, it's gone.

Albert: When was the last backup?

Marcin: A month ago.

Albert: Damn, this is going to be a mess.

/feature insert 2/

Marcin: Hi, Iwona.

Iwona: Hey Marcin, did you watch the video from the Perseverance landing on Mars?

Marcin: I've seen some of the previous missions.

Iwona: But the previous ones were worse quality.

Marcin: Well, yes, but the surface of Mars is probably not greatly rich in detail?

Iwona: True. Have you ever heard the sound from the surface of Mars though?

Marcin: No.

Iwona: Exactly – because it was recorded for the first time in history!

Marcin: Oh, that's interesting!

Iwona: I have to say, I did not expect this sound to be surprising…

Marcin: …but the fact that it is sound from Mars makes it magic?

Iwona: Exactly! I'll play it for you.

Marcin: Oh, I think it will have to wait.

Szymon from finance wrote that he has a problem accessing data.

Iwona: An Internet problem?

Marcin: No… he says the entire department has the same problem.

Iwona: I'll check if I have access.

I can't open it either.

Marcin: Probably the drive has crashed. Will you check?

Iwona: Sure.

Eh… unfortunately, that's right.

Marcin: No problem. We can recover the data from the backup.

Iwona: Lucky we have the cloud!

Marcin: Well, I remember a dozen or so years ago we had a similar failure and backups from a month ago.

Iwona: It must have been a mess…

Marcin: You can't even imagine!