WHY AZURE SHOULD NOT BE CONSIDERED A CLOUD STRATEGY

The mindset and skillset pitfalls to avoid

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— Interview with Éric Chailler, CTO at FX Innovation

Throughout the years, our team has not only experienced the Cloud adoption adventure internally but also externally, with its clients. No matter the industry and the size of the IT team, the human and technical challenges remain the same. Éric Chailler, our CTO, helps us to unveil misconceptions, how to optimize the Azure Cloud platform and reap its benefits.

ÉRIC CHAILLER
CTO at FX Innovation

Éric has more than 20 years experience in strategic roles both in start-ups as well as in Fortune 500 companies. He is an expert capable of transforming business needs into new products and of defining technological solutions that bring undeniable value to his clients. At FX Innovation, he is the leader of emerging technologies and oversees, with his team, deliverables to ensure consistency and quality. His specific areas of expertise are managed services in process automation, global architecture, research and development, data centers and system optimization. Since 2018, Éric has been chosen to be a member of Forbe's IT Technology Council.

How do you see the positioning of the Azure Cloud offering?

That's an interesting question! First, I would say that Microsoft has strong ties with enterprises and they understand that many companies still run data centers and, as a result, Azure has a strong hybrid Cloud strategy offering IaaS, PaaS and CaaS (Kubernetes) solutions. Second, Microsoft has an extensive ecosystem of partners (marketplace) and is well-connected with developers, providing them with a rich development experience (Visual Studio, Azure DevOps).

Another point is that Azure is also the Cloud provider with the broadest geographic presence, 140 countries, bringing applications closer to users around the world and preserving data residency. Microsoft is also seen more as a partner than a competitor in certain sectors such as retail, finance and banking. Azure has a vast set of services that can be used to migrate, refactor and build new Cloud native applications and ensure the quick deployment of workloads.

Lastly, Microsoft is changing the way for developers, as it is becoming a platform for experimentation. If you have an idea, if you can program and if you have access to a credit card, you can quickly create a company with a global reach!

AZURE IS ALSO THE CLOUD PROVIDER WITH THE BROADEST GEOGRAPHIC PRESENCE, 140 COUNTRIES

Many talk about Azure as a new technology to adopt, why is it a mistake to think this way?

It's a fact that we, IT people, only look at the technology aspect. Let's face it, geeks like technology, but technology for the sake of technology is the wrong way to look at the Cloud! If you really want to get the full benefits of consuming Azure, you must think in terms of consuming services not just technologies and this requires a different mindset.

The Cloud and Azure require a transformation, and part of this transformation entails a different set of competencies. Automation in the Cloud is a must, and that's a competency that a lot of companies don't have. For 25 years, many of us have been trained to work with wizards and click next, next, next and now we're moving towards everything as code: infrastructure as code, security as code, compliance as code, etc. As a result, job descriptions are changing; software engineers know how to code, but a lot of operational teams do not. Also, coders need to work more in synch with other teams as everything happens more quickly (iterations, testing, deployment).

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Rethinking the way security is handled is also part of this new transformation mindset. Nowadays, security needs to be thought out at the inception of a project, in the solution design phase. The reality is that Azure's data centers are very secure. Microsoft's security team, in order of magnitude, is larger than any of our clients' security teams. The Cloud Model is based on trust, and this trust is something that Microsoft takes very seriously.

Another important aspect is that Azure, or the Cloud should not just be considered a strategy. Yes, you can have an IT strategy and Azure is one tool in that strategy to address time-to-market, business objectives, business drivers to enable companies to undergo a digital transformation. Thinking of Azure as simply a new set of VMs and storage technology is the wrong way to look at it. If done right, using Azure can be very transformative in the way you can deliver business value.

AZURE, OR THE CLOUD SHOULD NOT JUST BE CONSIDERED A STRATEGY.

Lastly, it is important to rethink how applications are built when moving to the Cloud. Here, we are talking about designing applications from the ground up that are asynchronous, that can scale on demand and that are resilient: meaning that the applications are error aware / failure aware if something goes wrong, applications know how to react i.e. caching user data and waiting for the database to become active again. Also, we are increasingly moving towards microservices. The Cloud is enabling the use of microservices and accelerating the adoption of serverless computing, profoundly impacting how applications are built while delivering business value faster.

In summary, when you only see the Cloud as a technology, you're missing the full benefits that the Cloud can offer.

What are the barriers to adopting Azure?

There are a few barriers that our clients are experiencing. The first one that comes to mind is security/compliance and, to me, that's a misconception. In fact, the Azure platform meets the most certifications and compliance regulatory frameworks. Banks, hospitals, pharmaceutical companies, retail companies and even governments (Azure.gov – with different data centers) are using Azure. Companies have a visibility on whether Azure is compliant, and they have all the means to control and protect their data (encryption, keys, etc.).

Another real blocker to me would be the lack of competence and old ways of doing things that prevent Azure adoption. As mentioned, Azure

AZURE IS VERY SECURE, BUT THE WAY YOU DO SECURITY IN AZURE IS DIFFERENT THAN THE WAY YOU DO IT ON-PREMISE.

is very secure, but the way you do security in Azure is different than the way you do it on-premise. So, new ways of doing things are required. This is how I like to explain it: the WHAT doesn't change (you still need to do change management, incident management, problem management, security management, etc.), but the HOW you do it is very different. The one thing that the Cloud provides is automation... everything in the Cloud can be done through APIs, software development, programming services; so, we can script and then ensure consistency, which is a great value for clients.

Since Azure is a set of services that are consumed, there also needs to be a change in mind set from just looking at it as a return on investment to seeing it as a real value benefit. The time-to-market, scaling, flexibility, etc. far outweigh the fact that Azure can sometimes be more expensive. It's a fact that the one-time expense for a physical infrastructure has now been replaced by a monthly expense, which can also be challenging for some clients. So, educating clients on the value vs. cost is a must.

Another important showstopper is the lack of operation and optimization skills. Today, clients adopt the Cloud and deploy without having the governance and controls in place to benefit from the advantages of the platform. They tend to migrate lots of workloads, but they don't know how to manage them properly and then stopping the project seems a better option since they don't know how to operate the platform. Azure offers a lot of benefits (backups, monitoring, traceability, security, etc.), but if you don't know how to use them then they become blockers.

ANOTHER BARRIER THAT CLIENTS HAVE IS SEEING AZURE ONLY AS AN EXTENSION OF THEIR DATA CENTERS.

Another barrier that clients have is seeing Azure only as an extension of their data centers. So, they bring the same controls and same way of doing things and end up not getting the full benefits provided by the Azure platform. If you only use VMs in Azure, then you're only getting 10% of what Azure can provide as a platform.

Many do not fully understand the shared responsibility model on which the Cloud is based. The problem with this misunderstanding is that clients want to control everything and when you adopt Azure, you are in a shared responsibility model with Microsoft and it's not always clear to the consumer where the responsibility starts and stops. So, again if you set the proper governance and controls in place, you'll succeed and see the value that Azure can provide.

How can FX Innovation help its customers in adopting Azure Cloud?

First off, FX Innovation has been there before, we've been using Azure for a very long time and learned from our mistakes, so now we're helping our clients not make the same mistakes. We can share our experience in managing Azure workloads, we know how to do security, backups, monitoring, audit, etc. We've been managing and will manage Azure Cloud for a very long time, it's part of our DNA.

Secondly, we can bring value to our clients by helping them define their Azure foundations to make them easy to grow, from a security-compliance standpoint. We can help design an organization that can grow and can talk back to on-premise and ensure they have a foundation on which they can build and benefit from for a very long time.

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We are also familiar with new approaches (Infrastructure as Code, Security as Code and Compliance as Code) and we can share this knowledge with our clients. Anyone can learn, they just need the proper environment, coaching, etc. Over the years, FX Innovation has built blueprints, reference architecture, and we also developed the FX well-architected framework with architecture guidelines that touch 6 pillars: security, operational excellence, reliability, compliance, performance and cost optimization. So, basically, we have a set of guidelines, practices and tools that all our architects and system engineers can use to build a well-architected solution for our clients.

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Lastly, FX Innovation is well positioned to help clients with the various phases: plan, design, migrate, operate and optimize. We can also help clients build and operate those services and all the Microsoft building blocks since we know them and can operate them 24/7, 365 days a year.

What are the reasons that cause user dissatisfaction with the Azure platform, and the Cloud in general?

There are a few reasons why people are not fully satisfied with their Azure adoption. Lack of automation is the first one that comes to mind because if clients don't automate, they won't be able to keep up with the speed of innovation.

A second cause for dissatisfaction, which I also mentioned previously, is that clients see Azure as a simple extension of their current data centers. They bring all the legacies and all the inefficient ways of working with them and then try to take something that is very agile and flexible and make it into something with tools and approaches that are not adapted to the Cloud.

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Another reason why users are dissatisfied is they don't understand the security model of the Cloud and, as a result, they implement controls and ways of working that limit what services they can use.

The cost focus seems to create frustration too. With Cloud adoption, clients are getting access to a lot more than on-premise and if they don't manage it properly or keep the same overprovisioning habits and only do lift and shift, the bill will incessantly increase. The timeframes for measuring the gains are often too short. If you need to show value in 3 months, you will obviously not see the full benefits of Azure because you need to change the way you work and learn new skills, which takes more time.

Another reason for dissatisfaction is jumping too quickly to the Cloud without setting guidelines, defining a proper governance and control mechanisms. There is also a lack of experience when it comes to using Azure; clients just don't grasp the vastness of the services. They don't know where to start, which service to use, when and why. It seems too big for them and they prefer to keep on doing things as before.

A final challenge is that clients see the Cloud as a competitor since as you start using Azure services, Microsoft is doing some of the operations work for you. So, many VPs of Infrastructure/Operations prefer to experiment before asking for help. In reality, the need for Cloud adoption usually comes from the business, not IT, because the business needs to gain velocity and time-to-market as mentioned before. We need to keep in mind that Azure is a lot more than a strategy, Azure is part of the strategy, and the strategy should be aligned with the business goals and drivers. It should be a means to and end and not an end in itself. It is a subtle nuance, but an important one.

WE NEED TO KEEP IN MIND THAT AZURE IS A LOT MORE THAN A STRATEGY, AZURE IS PART OF THE STRATEGY, AND THE STRATEGY SHOULD BE ALIGNED WITH THE BUSINESS GOALS AND DRIVERS.

Many see Azure as a platform to run Windows in the Cloud. What's your point of view?

Another interesting question! Everyone assumes that Azure is Microsoft so therefore Microsoft is Windows, but this is false. Microsoft Azure is a Cloud platform that will do Windows, Linux and Containers very well, but it's also more than that. Azure is a full-blown service platform that allows you to run things like Containers, Kubernetes with AKS or Microsoft Azure Red Hat OpenShift. Azure is also a complete end-to-end development platform, you can do Java, Python, Golang, etc. so it's a lot more than just running Windows workloads.

EVERYONE ASSUMES THAT AZURE IS MICROSOFT SO THEREFORE MICROSOFT IS WINDOWS, BUT THIS IS FALSE.

Azure also provides a full integration suite offering services such as Event Grid, API Management, Logic Apps, Service Bus; these are all services that allow you to integrate on-premise data. It also has a complete data platform where relational workloads are run (SQL server, Postgresql, MySQL, Oracle) as well as Hadoop/Spark, CosmoDB, NoSQL. These are all services that can be consumed; Microsoft is now offering these as a service, they are doing the bulk of the work for us.

A LOT OF PEOPLE DON'T REALIZE THIS, BUT MICROSOFT IS BECOMING ONE OF THE BIGGEST CONTRIBUTORS TO OPEN SOURCE

Azure is also about AI and Machine Learning. Microsoft's Cortana is a quickly maturing ecosystem that is increasingly being embedded in their application run times. Microsoft uses AI itself (with their VMs) and is making it available to us as clients. So, this goes way beyond just running Windows.

Another area where we see a lot of growth is IoT. Microsoft has built a very strong ecosystem around IoT working with their partners around the globe.

Lastly, a lot of people don't realize this, but Microsoft is becoming one of the biggest contributors to open source, they acquired GitHub, making it available to everyone. Microsoft's network backbone runs on Linux, not Windows. Microsoft loves Linux but also loves open source, and not only are they using open source, but they are also contributing to it. Microsoft is sharing a lot more and helping the community to grow. It's a new era for Microsoft!

A LITTLE ABOUT US

FX INNOVATION

For 17 years, we have guided our clients in Canada, US and Europe in the adoption of new technologies to surpass their business objectives and to stand out from the competition. We are recognized for our caring corporate culture and values, but we have the expertise of the big guys without the red tape.

As an end-to-end IT thought leader, FX Innovation meets its clients where they are to optimize, transform and support their digital transformation journey. We tailor our technological solutions to clients' business reality and processes through our human-centric approach.

OUR MICROSOFT AZURE EXPERTISE

FX Innovation, a pioneer in the use of Azure Cloud Services, has supported Azure managed service environments since 2008.

We are proud of the following accomplishments that demonstrate our Azure expertise:

- Microsoft Gold Cloud Platform certification in 2015
- Migration of more than a 100 workloads
- Deployment of over 5000 Cloud services (including VMS, Containers, database services, VPN services as well as other PaaS services)
- A seasoned team of over 65 Cloud experts including twenty Microsoft certified specialists

WANT TO LEARN MORE
ABOUT OUR
AZURE SERVICES?

1-855-525-5777

info@fxinnovation.com

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