

Le Mémo – épisode 18

5G: Why is deployment causing so much controversy?

Imagine. It's 2031. 5G networks have been around for years and everything has changed. Smartphones have been completely reinvented. They have become so large that their screens are now pliable and can slip into our pockets. And that's not all. Instead of doing our grocery shopping in person, we just fill up our virtual trolleys and it's all swiftly delivered by drone.

5G connections are so fast that cars can travel without a driver. We no longer have to go to the doctor anymore; medical devices capturing our vital signs in real time alert us to any anomalies. And that's without mentioning virtual reality, which would now be integral to our daily lives. We can work "side by side" with colleagues from anywhere in the world. On lunch breaks, we take a virtual stroll through the shopping districts of Tokyo. In the evening, why not go and support your favourite football team in the stands ... from the comfort of your sofa. I read about all these advances in an article published by Radius, an online magazine launched by VMware, the American company specialised in virtualisation software. By 2031, 5G could have revolutionised our lives, changing our relationship to technology use and innovation.

Let's return to 2020. In Europe, the launch of this technology has been hobbled by the events of the past few months. In Asia and in the United States the race for 5G coverage is already on. In delaying the arrival of 5G- are we (in Europe) at risk of missing the revolution?

[Identité sonore]

- Joe :

Hello Chloe.

- Chloe :

Hi Joe.

- Joe :

Welcome everyone to the latest of the Memo, the podcast that helps you decode the digital news. Today we are discussing 5G again, focusing on the variety of uses that it promises and on its future economic impact. But Chloe, first we should talk about innovation. Is a new world of technology opening up in front of us?

- Chloe :

Yes, some people claim that 5G could be to the 21st century what electricity was to the end of the 19th century. In other words, the engine of an industrial revolution which has the potential to fuel new possibilities for growth. At least, that's what the Vice-President of the French National Digital Council said on Radio France Info.



- Joe :

And... How do we know?

- Chloe :

An article from the New York Times gives us an idea. To start with, you have to understand that 5G is not only about speed. You've already experienced high-speed wifi, but as soon as 5 or 6 people connect at the same time, capacity falls. 5G can avoid this by increasing bandwidth and cutting latency time. But above all, and this is where 5G gets interesting, it allows what we call "slicing". That means we will be able to guarantee available network for more sensitive uses.

- Joe :

Could you give us an example?

- Chloe :

Yes of course. Imagine a surgical operation with two doctors working at a distance. A stable bandwidth ensures the stability of the connection, and the possibility to exchange huge volumes of data permits them to have high quality video. And finally, an almost non-existent latency allows one surgeon monitoring at a distance to be entirely synchronised with the operation.

- Joe :

Alright... but in the end the real uses are going to emerge from innovations which depend on the existence of the network.

- Chloe :

Not only that; you have to remember that the drive to 5G is being driven by current usage and the need to decongest 4G networks. It's what Emmanuel Paquette, a journalist specialised in new technology, has been talking about in the programme "C dans l'air", dedicated to the subject of 5G. He takes the example of a football stadium. He says we might believe that people watching the match live have no need for their phones, but it's not true. People might rewatch in slow-motion, share social media stories and so on. That's what is pushing the existing network to its limits. And that's only one example among many others. The journalist finishes by saying that whether we agree or not, these needs do exist and demand 5G networks.

- Joe :

So for the moment, 5G is not really going to serve new uses but rather act as a support, augmenting existing networks?

- Chloe :

Yes, but other uses are going to arrive soon afterwards. Frank Gillett, a technological analyst for Forrester Research, gives the example of self-driving cars. We've talked about it a lot in the past few years but the reality is that without 5G, it's impossible to make them work. So thanks to this new network they can exchange in close to real-time with their environment. They can safely signal their presence to other vehicles or analyse the road in front for any obstacles, all thanks to the low latency of 5G.

- Joe :



So we're actually just at the start of this... revolution.

- Chloe :

I read in a Quartz article that the network could even launch a new wave of innovation leading to new possibilities for growth.

The United States and Asia seem particularly advanced in this. For example, I read in an article from CIO that big Indonesian plantations are already using 5G-connected drones. They take high-resolution photos of the farming area and send them back in real time. The goal is to analyse the data as finely as possible in order to increase their yields.

For other usage examples, we talk about them more in our previous episode on 5G which I invite you to return to.

- Joe :

I also read that thorny issues have been raised surrounding infrastructure.

- Chloe :

It's a central issue: Deploying the technological tools that allow the construction of a 5G network requires huge investment. The GSMA, an association bringing together operators and telecoms builders, recently published a report on the Asia Pacific area. In this region alone, mobile telephone operators plan to invest more than 400 billion dollars on their networks between 2020 and 2025, with 331 billion euros dedicated to 5G deployment.

- Joe :

Alright, but are these predictions still on track? The health crisis hasn't upset this schedule?

- Chloe :

Well yes, the Covid 19 crisis will have an impact due to its financial repercussions and the different measures being used to fight the illness. That includes global lockdowns, which have impacted supply and demand in these economies. But the study that I cited earlier claims that while investment around 5G will see a slowdown in the short term, it'll pick up again once the health crisis has passed.

- Joe :

I also saw that the race to build this infrastructure has ramped up competition between the US and China?

- Chloe :

I'll give you a comment made by US Attorney General William Barr that I read in the New York Times. "The risk of losing the 5G struggle with China should vastly outweigh other considerations."

For him, the economic future of the US is at stake. He also said that for the first time in its history America is not leading in a technological sector that could be central to future innovation.

The context is particularly tense, and it's centred around one key player: Huawei.



- Joe :

Huawei, as in the biggest telecommunications manufacturer in the world?

- Chloe:

Yes, but also a Chinese manufacturer which Washington- and now others- say is compromised by its proximity to the central Chinese government, and that its data confidentiality practices are questionable. According to an article I read in the new York Times, Huawei is on the frontline of a new cold war between the West (Europe, the UK and the US) and China.

- Joe:

I've seen the tensions between Asia and the United States, but what's happening in Europe and in France in particular?

- Chloe :

5G is already being deployed across European countries. That's the case in Spain, Austria, Switzerland, Germany, Belgium, the Netherlands, Romania and Poland. For more details you can visit the European 5G Observatory website. In France, the Covid-19 health crisis has frozen frequency allocations and deployment until September 2020. But above all, this pause of a few months have seen an intense debate emerge around the worth and the environmental cost of 5G. Debates that have been tainted by the mass of disinformation circulating on social media.

- Joe :

Yes, that infamous rumour linking 5G antennae to coronavirus... Rumours that led to people setting fire to antenna sites in the UK and France.

- Chloe :

Exactly, Sébastien Soriano from Arcep, the authority which oversees communication in France, analysed that these acts go beyond a simple refusal to take up new technology. He wrote a column in Reporterre, a newspaper focused on environmental issues, where he explained that "if communication networks are being targeted, it's without doubt because they are seen as the veins and arteries of a system considered to be disrespectful of humans and their natural environment."

He goes on to explain the strategy of Arcep, which is to roll out 5G with regular evaluation of frequencies and their impact. That's while opening a working platform for "designing a chosen technology together, not suffering from it."

- Joe :

If I understand correctly, it's about moving forward while staying conscious of the positive and negative sides to the uses of 5G.

- Chloe :

I would even say that the point raised by Sebastien Soriano is pretty important. He reminds us that 5G is above all a network; a neutral tool. And like other tools, it's the way in which they are used which determine whether their impact is positive or negative.



- Joe :

Thank you Chloe and thank you everybody for listening. We hope you enjoyed this episode, and if you did, feel free to share it or discuss it with those around you. That was the final episode before our summer break. (But don't panic, we've prepared something for you to listen to over the pause.)

Chloe, thank you for a great season and looking forward to decoding new topics with you in September!

Chloe :

Me too Joe, have a good summer everyone.

Joe :

See you soon!

Sources :

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