

GIMME FIVE!

By Lucina Paternesi

With the contribution of Giulia Sabella

LUCINA PATERNESI VOICEOVER

Self-driving cars, home appliances that communicate with each other, seismic monitoring of buildings, drones that tell you when it is time to irrigate a field. These are just some examples of the Internet of Things, the 5th generation network set to revolutionise our cities and our lives.

In America it's already active. In Italy, experimental 5G antennas have already been installed in Milan, Turin, Prato, L'Aquila, Matera and Bari.

ZHANG JIANPENG – PRESIDENT, ZTE GLOBAL MARKETING

5G technology will open up new spaces and new possibilities for the world's entire population.

LUCINA PATERNESI VOICEOVER

Here in L'Aquila, at the Innovation and Research centre of ZTE, a Chinese multinational that produces cell phones and telecom infrastructures, an antenna was installed as part of a project submitted by the company to the Ministry of Economic Development, in collaboration with the University of L'Aquila, Wind Tre and ENEL Open Fiber.

LUCIO FEDELE – DIRECTOR OF OPERATIONS, ZTE ITALIA

One of the applications is for supervising the static situation of infrastructures.

LUCINA PATERNESI

In other words, seismic monitoring of buildings using 5G?

LUCIO FEDELE – DIRECTOR OF OPERATIONS, ZTE ITALIA

5G allows us to gather a significant amount of data, which can be used for two main functions: to assess the static situation of the structure, and to activate a whole series of related services. For example, react to a seismic event by shutting off gas or electric power supplies...

LUCINA PATERNESI VOICEOVER

5G propagation uses millimetre waves that travel at frequencies which are still seldom utilised, and which would ensure more bandwidth for every user. These millimetre waves, however, cannot pass through building walls, and tend to be absorbed by plants or rain. In order to ensure consistent service, a much denser infrastructure will be required, with antennas installed onto base stations that will have up to one hundred ports. 5G antennas will work like traffic lights: rather than irradiating at 180 degrees, they will send the exact signal to the user, avoiding interference and dispersion.

By 2022 our cities will become "smart cities", totally connected and, more importantly, densely carpeted with antennas like this one.

SIGFRIDO RANUCCI IN STUDIO

Welcome back. 5G: Through its bidding process, the Italian government pocketed 6.5 billion Euro. Licenses were awarded to TIM, Vodafone, Wind Tre, Iliad and Fastweb. It's a great opportunity, because 5G will make it possible to transfer one thousand times more data at speeds ten times faster than with 4G. The networks will be built by large multinational corporations, including Chinese ones. So, yes, it's an opportunity, but with a few caveats. And we'll talk about those later. Meanwhile, be careful should you receive

an email with a simple attachment that looks like an invoice: if you open it, you might fall victim to a cyber attack.

LUCINA PATERNESI VOICEOVER

A 26-billion dollar market that promises to connect every single thing around you. That's the Internet of Things, the ultra high-speed connection that will transform healthcare, transportation, safety, infrastructures and leisure. Everything will be connected.

Sounds great, but there is a risk of falling hostage to technology. It sounds like a film plot, but that's what really happened in Turracher Hoer, a small lakeside village in the Austrian Alps.

Here, a cyber attack targeted all software in a hotel at 1700 metres above sea level.

CHRISTOPH BRANDSTÄTTER – HOTEL MANAGER

If everything is connected to the network, including bookings, meals, check-ins and check-outs, you have no idea how many guests there are, who's arriving and who's leaving: you're totally in the dark.

We opened an email that seemed like an invoice from one of our many suppliers. As soon as we clicked on the attachment, all our computers froze.

Then, the screen displayed a ransom message with the price to be paid.

LUCINA PATERNESI VOICEOVER

In addition to paralysing the hotel's computers, it also prevented all the rooms doors from opening. Anyone who was outside their room could not get back in.

LUCINA PATERNESI

How much did you have to pay?

CHRISTOPH BRANDSTÄTTER – HOTEL MANAGER

Two Bitcoin, which at the time, thankfully, was around 1,500 Euro.

LUCINA PATERNESI VOICEOVER

At today's rate, it would have cost about 20 thousand Euro. But mostly, the cyber attack prompted the hotel to rethink its modes of operation.

CHRISTOPH BRANDSTÄTTER – HOTEL MANAGER

We replaced magnetic key cards with traditional metal room keys, and in the kitchen, we got rid of the electric oven which was connected to the PC, and put back the old gas oven.

LUCINA PATERNESI VOICEOVER

If a hacker attack can cause so much trouble to a small hotel, what might happen if we underestimate the risk factors of having all industrial activities, healthcare, transportation, energy and political elections connected to the network?

SIGFRIDO RANUCCI IN STUDIO

Democracy itself would be at stake, because that network transmits secret information, the kind of information countries depend on. The new 5G network will be developed in part by Chinese companies. ZTE is a state-owned company, like Huawei. What's worrisome is that they are building the infrastructure on which Italy's 5G will run for the next 30 years. This isn't sitting well with our American ally, Mr. Trump. Why? Because ZTE has violated the embargo on Iran and North Korea, and Huawei has even been accused

of espionage. Is this just standard bickering between two superpowers openly involved in a trade war? Or is there a real risk of undermining our Country's national security? And what are we doing to protect ourselves? So, on one side we have the American superpower, with Trump, and on the other side there's China. In between is our Lucina Paternesi, who managed, since so much is at stake, to gather around one table the Italian secret services, ZTE (the Chinese company) and our prime minister Giuseppe Conte, who even revealed - no minor detail - how he communicates over the phone when he needs to transmit confidential information. But let's start from the future, with the smart city par excellence.

LUCINA PATERNESI VOICEOVER

Shanghai, the pearl of the Orient on the banks of the river Huangpou. With a population of more than 27 million, it's China's economic capital. In 20 years, it has become one of the world's primary financial and business hubs, and is considered an paradigm of the modern smart city.

QIU WEI – OFFICER IN THE SMART CITY DIVISION OF THE SHANGHAI MUNICIPALITY

We have the best IT system in China. It's possible to obtain certificates, pay one's pension, book doctor appointments, request visas, use public transport. And now, with 5G, our lifestyle will be radically transformed.

LUCINA PATERNESI VOICEOVER

Shanghai is the mobile phone capital of the world, and the fair revolves around 5G. Artificial intelligence, robotics, connected objects and the first cell phones that support the new ultra-high-speed standard.

LUCINA PATERNESI

What's the difference between a 4G and a 5G phone?

ZTE HOSTESS

It's like attending a live concert right from your living room.

LUCINA PATERNESI VOICEOVER

Shanghai also houses one of the headquarters of ZTE Corporation, the state-owned company that will develop 5G in Italy. For the first time ever, an Italian TV crew is entering into the heart of one of China's leading mega-corporations. Here, we can see a few of the 5G applications that, in a few years, will be operative in Italy as well.

LUCINA PATERNESI

Now we are basically looking at a 3D view of Van Gogh's "Bedroom in Arles" painting.

ZTE HOSTESS

Using the 5G network, we can operate this drone and its probe, which analyses the water in real time and shows us the results on the screen.

LUCINA PATERNESI

We will also have to get used to the idea of robots like this one delivering our packages or our medications.

LUCINA PATERNESI VOICEOVER

Founded in Shenzhen in 1985, it has long been on Trump's radar for breaking the embargo with North Korea and Iran. In Italy, ZTE has trade agreements with Poste Mobile, Wind and Tre.

LUCINA PATERNESI

Why has the Chinese government decided to invest so heavily in 5G technology?

WANG JIAYI – DIRECTOR OF 5G DEVELOPMENT, ZTE CORPORATION

In recent years, the Chinese government has invested heavily in infrastructures. They are crucial to developing our cities, and now 5G is the new business frontier. It's a stepping stone for China to achieve technological supremacy.

LUCINA PATERNESI FUORI CAMPO

The journey began in 2015 with the "Made in China 2025" plan: ten objectives for ten years. With the ultimate goal of becoming the global leader in innovation, technology and automation. In other words, becoming the world's top industrial power, challenging the supremacy of the United States.

WANG JIAYI – DIRECTOR OF 5G DEVELOPMENT, ZTE CORPORATION

There are always people working on the future of technology.

LUCINA PATERNESI

Does this mean you're working on 6G?

WANG JIAYI – DIRECTOR OF 5G DEVELOPMENT, ZTE CORPORATION

In 10 years our lives will be happier.

LUCINA PATERNESI VOICEOVER

Happiness means having a smartphone in your pocket, and the whole world at your fingertips. The right restaurant on the way home from work, the trendiest shoes or a new watch, while we head to the stadium.

LUCA DI BARTOLOMEI – DATA ANALYST, ATLAS CONSULTING

We followed a few groups of people headed towards Milan's San Siro stadium. From these X thousand people, we selected a small core of individuals who we deemed to have a high level of spending power.

LUCINA PATERNESI VOICEOVER

Tracking our lives has never been so easy; knowing the habits of users allows increasingly precise profiling of consumers.

LUCA DI BARTOLOMEI – DATA ANALYST, ATLAS CONSULTING

By 2025, we estimate there will be approximately 60 billion objects connected to the IoT, from self-driving cars to refrigerators to virtually anything else: all this will enable increasingly thorough profiling.

LUCINA PATERNESI VOICEOVER

Sociologist Shoshana Zuboff has dedicated her entire academic career to this matter, and recently published a book titled "The Age of Surveillance Capitalism".

SHOSHANA ZUBOFF – SOCIOLOGIST, HARVARD BUSINESS SCHOOL

Surveillance capitalism was developed inside Google, even though its founders at first were opposed to advertising. They had what was considered the best search engine on

the market, but this wasn't enough to shield them from the financial crisis that hit Silicon Valley in 2001. So in order to survive, they decided to use the data they collected from the online interactions of us users. It's called data surplus and it contains many predictive and behavioural signals. They utilise these capabilities to predict what ads we will we click.

LUCINA PATERNESI

Is this behavioural surplus also important for governments and intelligence agencies...?

SHOSHANA ZUBOFF – SOCIOLOGIST, HARVARD BUSINESS SCHOOL

After 9/11 the world changed, creating a sort of elective affinity between tech companies and intelligence agencies.

LUCINA PATERNESI

Why is the Chinese government investing so heavily in 5G?

SHOSHANA ZUBOFF – SOCIOLOGIST, HARVARD BUSINESS SCHOOL

China is exploiting technology to increase surveillance and social control. China's communist leaders are looking at these possibilities and saying "Wow, these are superpowers, we need to use them to build a new idea of future."

SIGFRIDO RANUCCI IN STUDIO

Who knows what their ideas are for our future. But we have to realize that Chinese equipment and Chinese companies are so widespread throughout the world that we can no longer do without them. Huawei was founded by a military engineer and over the years has become a leader in the 5G sector. It has staggering fire power, producing a new cell phone every 28 seconds or so. When Trump came to power, he included it in his "Entity List", namely his black list of dangerous companies. It was accused of spying. And there's another problem - actually, the key problem. Article 7 of China's national intelligence law requires every operator and every company to cooperate with Chinese secret services and maintain full confidentiality about such activities. So when Huawei and ZTE operate in Italy, whose law do they abide by?

PAUL M. NAKASONE – DIRECTOR OF THE US NATIONAL SECURITY AGENCY

In recent years, they've spied on us, stolen sensitive information and stolen intellectual property. And the goal of these attacks is to undermine the ideals of western democracies. But who are these enemies?

LUCINA PATERNESI VOICEOVER

This is a serious indictment from someone who knows a thing or two: General Nakasone is the head of the NSA, the American National Security Agency, which was at the heart of the 2013 scandal stemming from whistleblower Edward Snowden's revelations on the mass surveillance programs carried out by US intelligence.

PAUL M. NAKASONE – DIRECTOR OF THE US NATIONAL SECURITY AGENCY

Countries like China and Russia employ IT operations to achieve their strategic goals. They use technology, which was born to connect people, to exert an increasingly authoritarian control over their populations, like we've seen in Hong Kong.

LUCINA PATERNESI VOICEOVER

Washington has always accused China of spying. Among the incidents that have been disclosed is the case of Super Mirco, a California company that assembled its products in China. Allegedly, a spy chip was placed on their motherboards, and these products

are said to have ended up in the servers of Apple and Amazon, although the companies have always denied this. Then there's the case denounced by African Union officials in 2018. The employees of the international organisation reported noticing, from 2012 to 2017, strange flows of information from the African Union servers towards Chinese servers, every night between midnight and 2 am. These servers were provided by Huawei.

JOSHUA P. MELTZER – ECONOMY AND DEVELOPMENT EXPERT, BROOKINGS INSTITUTION

Huawei is one of the entities that worries us the most: their equipment has been found to contain spy chips. Not many cases have been disclosed, because companies are scared of revealing they've been attacked.

LUCINA PATERNESI VOICEOVER

Cyber attacks that sent shock waves all the way to the White House. But there's something else that scares America even more. Article 7 of the 2017 Chinese intelligence law says that "all organizations and citizens shall, according to the law, provide support and assistance to and cooperate with the State intelligence work, and keep secret the State intelligence work that they know."

KELLI VANDERLEE – CYBER SECURITY ANALYST, FIRE EYE

It means companies are required to cooperate with intelligence agencies whenever they are asked to. Huawei has a supply chain for its components, and in turn it connects governments, embassies, public and private entities. Should there be even one weak link in this chain, everyone's security would be at risk.

LUCINA PATERNESI

Are you scared by Article 7 of China's intelligence law?

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

You mean the fact that... Hey, are you testing me? That's not nice! Yes, I remember it... it allows intelligence agencies to obtain information from private companies.

LUCINA PATERNESI

But does that scare you or not?

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

Listen, China can do what it wants within its own jurisdiction. What I need to do is equip our monitoring tools with the most effective weapons to contrast and react to any issues.

KELLI VANDERLEE – CYBER SECURITY ANALYST, FIRE EYE

Between 2016 and 2019 we examined hundreds of incidents. And our work revealed that Chinese espionage activity is funded by the Chinese government itself.

LUCINA PATERNESI

How can we be certain that spying and cyber attacks are being initiated by the government?

KELLI VANDERLEE – CYBER SECURITY ANALYST, FIRE EYE

We've found actual retainer agreements. When you track a hacker group for a long time you can eventually pinpoint their location or even the people themselves, through traces

left in the malware used to infect computers, because in the end they correspond to individuals.

LUCINA PATERNESI VOICEOVER

All these elements prompted US president Donald Trump to include Huawei in the Entity List, a federal list of companies that are deemed a threat to national security, and which American companies are banned from doing business with.

LUCINA PATERNESI VOICEOVER

Even affiliate companies have ended up in this black list, including the Centre for Research and Innovation that the Chinese giant opened in Segrate, near Milan. But why is 5G so scary?

STEFANO ZANERO – ASSOCIATE PROFESSOR IN THE DEPT. OF ELECTRONICS, IT AND BIOENGINEERING, MILAN POLYTECHNIC UNIVERSITY

In a hypothetical scenario where someone intended to cause harm, the possibility of disabling or sabotaging the telecommunications network is something which this attacker would take into consideration. We are entrusting the construction of some very important things to a business partner who doesn't play on the same team as us.

PAUL TRIOLO – GEOPOLITICS AND TECHNOLOGY EXPERT – EURASIA GROUP

The Huawei case has globalised the conflict, extending tensions to Europe, including Italy. American pressure on its main allies aims to snatch away the Huawei bid from certain European countries, but governments are instead more incline to strengthen their cyber security protocols.

SIGFRIDO RANUCCI IN STUDIO

Excluding Huawei and ZTE from the 5G deal could cost up to 4 billion Euro. The research is theirs, but we are only finding out now. If we've reached this point, it's thanks to the astounding commercial surplus that China has accumulated in the past 30 years of explosive growth. A huge amount of money, which they were able to bring to the table of those bilateral agreements with 70 different countries, and through which they weaved their new Silk Road. Its goal is to lock Europe in a commercial stranglehold, based on controlling sea ports, steel, railways, and also digital and mobile telecommunication infrastructures. They call this plan Yi Dai Yi Lu, which means "the belt and the road". It's the visionary metaphor of a strategy, because a belt can fasten but it can also strangle, if you place it around someone's neck. And how are we defending ourselves?

ABRAHAM LIU – HUAWEI CHIEF REPRESENTATIVE TO EU INSTITUTIONS EUROPEAN PARLIAMENT DEBATE of 16 OCTOBER 2019

Huawei is here to stay. We've been partners of Europe for twenty years. And over the next five years, we will inject 90 billion Euro in research and development investments. More than the budget of NASA.

LUCINA PATERNESI VOICEOVER

This is the Chinese strategy. Loads of investments, work contracts, jobs, the establishment of research centres and labs. Not just in Italy. but also in the UK. There, however, the National Cyber Security Centre has been active for a while.

ALEXANDER EVANS – CYBER DIRECTOR, UK FOREIGN OFFICE

This structure provides support and consulting to private companies as well as institutions, local administrations and hospitals.

LUCINA PATERNESI

The United Kingdom hasn't yet decided whether to exclude Huawei from the development of their 5G network.

ALEXANDER EVANS – CYBER DIRECTOR, UK FOREIGN OFFICE

The government is still evaluating the issues and the supply chain... When an agreement will be reached and a political decision will be made, we will announce it.

LUCINA PATERNESI VOICEOVER

The United Kingdom hasn't yet decided. We, on the other hand, have changed our mind a few times. The 5G development plan was under the purview of then-Minister for Economic Development Luigi Di Maio. While experimentations moved along fuelled by ZTE investments in Prato and L'Aquila and Huawei investments in Milan, Matera and Bari, the Yellow-Green government rejected the first draft of the new cyber security regulations relative to 5G.

LUCINA PATERNESI

How is it possible to issue a decree, which implies a need and an urgency, and then not make it into law?

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

Look, this is no secret. The terms for the application of the Golden Power on the part of the government were too short for a very complex investigation, connected to this extremely advanced infrastructure, 5G. We then drafted a much more organic document that embraced all of the issues.

LUCINA PATERNESI VOICEOVER

For the new regulations, we had to wait until the first council of ministers of the second Conte government.

LUCINA PATERNESI

A new government, with you still as prime minister: at the first council session you introduced the Golden Power and a bill to...

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

Look, believe me, it's no secret. We took this measure precisely to provide greater safety and protection for our country, also in terms of cybernetic attacks and hybrid cybernetic threats.

LUCINA PATERNESI

You will have an enormous power, the famous red button to shut down the network.

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

A great responsibility.

LUCINA PATERNESI VOICEOVER

The law was drafted right here, at the headquarters of the Italian Security Services.

ROBERTO BALDONI – DEPUTY DIRECTOR, DEPARTMENT OF INFORMATION SECURITY

There are sectors which of course are highly sensitive - where if something happens, it becomes a national security issue. There won't be Zero Risk conditions.

LUCINA PATERNESI VOICEOVER

In a connected world, there's no such thing as Zero Risk. Which is partly why, last February, Di Maio had announced the creation of a national Centre for the Evaluation and Certification of Networks.

LUCINA PATERNESI

But so far, it's been kind of an empty office, is that fair to say?

ROBERTO BALDONI – DEPUTY DIRECTOR OF THE DEPARTMENT OF INFORMATION SECURITY

There was no entity with that name or acronym, but the know-how within that department has always been there.

LUCINA PATERNESI VOICEOVER

For our trains to travel autonomously on the 5G network, the centre for evaluation and certification of networks will have to give the green light, after having verified and ensured safety conditions.

The regulations also introduce the Golden Power, retroactively effective. Meaning the government will have the ability to exclude Chinese companies from the realization of the 5G network. Even those that have already signed contracts.

LUCINA PATERNESI

Have you made a decision on Huawei and ZTE?

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

We have authorised certain operations but with some very stringent restrictions. We can revoke our concession at any time should we find, as part of our monitoring operations, that security levels do not meet our expectations.

LUCINA PATERNESI

Why must national security play catch up to technology?

ROBERTO BALDONI – DEPUTY DIRECTOR, DEPARTMENT OF INFORMATION SECURITY

Should we be left behind?

LUCINA PATERNESI

No, not left behind, but it should be technology that adapts to...

ROBERTO BALDONI – DEPUTY DIRECTOR OF THE DEPARTMENT OF INFORMATION SECURITY

Do you want to block artificial intelligence systems in Italy? Do you want to block quantum computing? We must safeguard what progress has to offer, while trying to minimise risk.

LUCINA PATERNESI VOICEOVER

Will securing our infrastructures be enough to make Italy a safer nation?

STEFANO MELE - IT LAW EXPERT, CARNELUTTI LAW FIRM

The concern, at least from the American point of view, is that employing technologies that do not meet certain security standards could compromise the security of the information transmitted over these networks.

LUCINA PATERNESI VOICEOVER

In the end, the new law was enacted, perhaps also thanks to US pressures on the fledgling second Conte government.

MIKE POMPEO – US SECRETARY OF STATE

Joint Press Conference 2 October 2019

When Chinese companies show up and are prepared to compete on a fair, reciprocal basis, Italian companies and American companies will compete and will be incredibly successful.

LUCINA PATERNESI

There have been pressures, for instance, from America.

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

The United States invited all their allies to act responsibly and adopt these measures. We defend our national interest.

LUCINA PATERNESI

Chinese companies are investing exorbitant sums here, and they are developing this technology, but on the other side there's America saying that these are sensitive infrastructures.

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

Today, 5G is the cornerstone of technological innovation. However, this obviously doesn't mean that you can come here with the excuse of technological infrastructure and utilise... capture... - how can I put this? - make improper use of these technical capabilities.

SIGFRIDO RANUCCI IN STUDIO

The Golden Power is a special power held by the Government, which retains the right to veto purchases or strategic actions by foreign companies, or else it can authorize them with certain provisions. It has to be said that so far Huawei has been a reliable partner. It's operated in Italy for 15 years, it has collaborations with Leonardo Finmeccanica, Bosch, Isotta Fraschini, and it's invested 17 million Euro for the creation of an innovation centre in Pula. It has collaborated, and in fact continues to collaborate, with 14 Italian universities. It has opened two research centres, in Milan and in Segrate. Then, one of them ended up in Trump's black list. It should also be said that American TV network Bloomberg published some damning documents a few months ago. It purportedly discovered unauthorized backdoors on digital devices, which provided access unbeknownst to the users.

LUCINA PATERNESI VOICEOVER

On April 30 of this year, Bloomberg published documents relative to an email exchange between Vodafone and Huawei. The object of the exchange was the discovery of a backdoor in certain modems sold by Vodafone starting in 2011.

STEFANO ZANERO – ASSOCIATE PROF. OF COMPUTER ENGINEERING - MILAN POLYTECHNIC UNIVERSITY

"Backdoor" is a term that we security experts use to define certain features providing remote access to programs, systems, hardware devices, which have secretly been left there by the programmer or designer, and which are therefore not supposed to be there.

LUCINA PATERNESI VOICEOVER

Vodafone allegedly asked that these backdoors be removed. Huawei assured they would, but subsequent testing showed that the vulnerabilities remained.

GIUSEPPE PIGNARI – CYBER SECURITY OFFICER, HUAWEI ITALIA

In no way, shape or form were these backdoors. It was actually a very well-known protocol, called telnet, that is typically used to perform diagnostics and maintenance on remote devices located inside the customer's home.

LUCINA PATERNESI

If Vodafone didn't want this backdoor, and asked that it be removed, why didn't Huawei remove it?

GIUSEPPE PIGNARI – CYBER SECURITY OFFICER, HUAWEI ITALIA

The telnet port had been forgotten there and left open, so to speak. The only thing the customer could do was go into his or her Vodafone Station and see how it was configured, so there were absolutely no security risk.

STEFANO ZANERO – ASSOCIATE PROF. OF COMPUTER ENGINEERING, MILAN POLYTECHNIC UNIVERSITY

It's not like Huawei is the only one to do something like this: this has happened countless times. Internal documentation written by Vodafone stated: it's not like we found it now because they'd forgotten it, we found it, they removed it, then they put it back, we made them remove it again, and now they hid it and put it back once again.

LUCINA PATERNESI VOICEOVER

Bryan Littlefair, then-head of security at Vodafone, wrote:

"Huawei's behaviour in this case has been disappointing and less than transparent. This will unfortunately make it harder for them to prove they are an honest supplier."

GIUSEPPE PIGNARI – CYBER SECURITY OFFICER, HUAWEI ITALIA

We are in no way funded by the government, we are not influenced by the government, we will never do anything that might undermine our customers' security. It would be a commercial suicide.

LUCINA PATERNESI VOICEOVER

Today, even the independent engineers at Huawei's own evaluation centre, the cyber security lab that the Chinese company was forced to open in England, have had to admit the limited safety of their products.

STEFANO ZANERO – ASSOCIATE PROF. OF COMPUTER ENGINEERING, MILAN POLYTECHNIC UNIVERSITY

It would be one thing to buy the machinery from Huawei and then create the network ourselves, using that equipment. But to give that vendor carte blanche to build the entire network is a whole different story.

LUCINA PATERNESI

Are you talking about technological sovereigntism?

STEFANO ZANERO – ASSOCIATE PROF. OF COMPUTER ENGINEERING - MILAN POLYTECHNIC UNIVERSITY

I'm talking about technological sovereignty: it's a matter of our country retaining the capability to manage certain kinds of infrastructure.

LUCINA PATERNESI

Is it wise to let foreign companies develop such an important network- one that is so crucial for the future?

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

If we keep talking about ZTE and Huawei in the public debate, it's because even American technology, despite being very advanced in certain areas, is not quite as advanced at this time. Chinese technology has obviously made tremendous strides in the realm of 5G infrastructure, and if it is now able to offer a state-of-the-art product at favourable market conditions, a nation state cannot impose [...].

LUCINA PATERNESI

Do you feel at ease when you talk on the phone? And when you text? If you need to transmit confidential or personal information, what do you use?

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

Look, I take no special precautions when I speak on the phone. Of course, if I have to discuss sensitive matters that impinge on national interests, I try to be careful.

LUCINA PATERNESI

You probably don't use the same kind of phone I use.

GIUSEPPE CONTE – PRIME MINISTER OF ITALY

We do have dedicated lines for when we need to communicate on matters of national interest with other heads of state and so on. But other than that, I say: do no harm and you can rest easy.

SIGFRIDO RANUCCI IN STUDIO

Our Prime Minister just gave us a lesson in optimism and serenity. Aside from that, however, we also learned what can happen when a country fails to invest in research and technology for decades, and when it fails to invest in meritocracy, letting its best and brightest emigrate abroad. You fall hostage to others. A concept that was summarized in harsh yet effective terms by the president of AGCOM (Italy's Communications Authority) Marcello Cardani, during a hearing of the Chamber of Deputies' Commission for Transport and Telecommunications. Regarding 5G, he said: "We need to choose who we want spying on us, the Chinese or the Americans." It's no laughing matter. As far as the Huawei backdoor controversy, instead, we got a letter from Vodafone Italia, which uses Chinese parts. They say that "the issues were all resolved between 2011 and 2012", and that no unauthorised accesses were detected. We need to believe them because the official internal documents, all very confidential, have not been provided to us.

