INNOVATION, DRIVING FORCE BEHIND EUROPEAN COMPETITIVENESS

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It is within the framework of the conferences cycle « Rencontre - Tout se transforme » that the conference « Innovation, driving force behind European Competitiveness » took place. Organised by the Jacques Delors Institute and the Gulbenkian foundation, it featured an intervention by the Commissioner for Research, science and innovation, which is reproduced below.

I am extremely pleased to be in such honourable company in Paris and to see how great an interest you take in the manner in which innovations are going to fashion the future of Europe and of the world.

In the past two weeks I have been to Lisbon, to Madrid and to Rome to share my views on the ways in which the digital transition is currently changing our daily lives in the spheres of innovation and science.

Today I am in Paris and I would like to speak to you about the upheavals that a genuine digital economy is going to trigger and about the reasons why, in my view, we should embrace this development.

I am sure you will agree that digital technologies have already changed our way of conducting research, of moving forward in science and of innovating, not to mention the way in which we produce and sell goods and services.

And yet I would venture that we are still only witnessing the dawn of the digital revolution.

Steve Case, one of the pioneers of the Web, claims that we are barely entering on the third phase of the Internet. The first phase witnessed the construction of the Internet's infrastructure. In the second phase, which is still ongoing, applications have been created at the top of that infrastructure. The third phase, which we can sense is starting to emerge, consists in integrating the Internet and digital reality into our more "traditional" infrastructures such as health, transportation and energy.

After allowing itself to be outpaced in the first two phases of the Internet, Europe today is being offered a fresh opportuntiy to chalk up points and to ratchet up our economy in terms of innovation and of growth.

In order to impart concrete substance to this advantage, we need to understand the ways in which digital technology influences innovation. It does so in three way:

1. first, it puts the user in control;

2. second, it makes minor players stronger, giving them the chance to penetrate and to dominate traditional markets;

3. and third, it permits the creation of totally new markets.

Allow me now to illustrate each one of these three driving forces behind innovation and to conclude by explaining how I intend to proceed, within the European Commission, in order to ensure that Europe can make the most of this opportunity offered by the digital economy.

1. Placing users in control

So, the first way consists in placing the "user" at the heart of innovation.

The digital revolution means that manufacturers and laboratories no longer hold a monopoly on innovation and science. The user has a say in things too!

The Internet puts users in a position where they can co-develop products, conduct tests, and provide manufacturers with feedback. At the same time, it allows shrewd manufacturers to systematically collect their users' feedback and to learn from it.

Let me tell you the story of Tal Golesworthy, a British engineer and an expert in boilers. Tal found out that he was suffering from Marfan syndrome, which meant that his aorta, the artery that comes out of the heart, was not as strong as it should have been. When the syndrome was diagnosed, his doctor informed him that his aorta was in danger of rupturing. Well, Tal used his knowledge as an engineer to come up with a solution that has since saved over one hundred people's lives to date.

So in the digital world, innovations devised by users can have a considerable impact. Imagine what that could bring in the years to come, as people begin to feel more comfortable with innovating. That really is a force for the democratisation of innovation.

2. The openness to new players

Similarly, where the second point is concerned, the digital economy offers small or new players the chance to penetrate existing markets and to rapidly acquire a dominant position in them.

Take the Swedish firm Spotify for instance, which has grown from zero in the space of a few years to a position in which it has entered and totally dominated the music market. Or take Tesla, the US electric automobile manufacturer, which put down roots in a mature market and has seen extremely rapid growth.

There are two factors that explain why Tesla is posing a genuine challenge to the traditional car industry: first of all, it was the first company to realise the importance of building software (the digital factor) into a car's mechanical parts.

[For instance, were you aware that Tesla updated the software on its cars already in circulation two weeks ago. Just imagine: Tesla car owners were able to update their software in their own garages using Wifi, thus suddenly endowing their vehicle with new basic independent driving functions !]

Another reason why Tesla poses a challenge is that electric engines, combined with the rapid development of software, are less complex than traditional combustion engines. So the edge that established manufacturers enjoyed in terms of traditional engineering has lost its importance. A minor software genius who did not even have a driving licence has proven capable of tangibly improving the motor-car.

Thus thanks to a combination of the digital and the concrete, new players can enter markets and they can become the masters of those markets.

The example I have just used is based on a US company, but there is nothing to prevent the Europeans from taking part. With the solid industrial base that we have, if we succeed in making progress with the digitalisation of our industry, we can innovate far more and acquire a competitive edge on the global scene.

Moreover, new European players – I am thinking in particular of small and medium businesses – can compete with existing players, once again proving that digital innovation is a source of economic democratisation. And that brings me to the third way in which digital technology influences innovation.

3. Creating a totally new market

In addition to offering the user a central role and to allowing new players to penetrate traditional markets, the digital economy is also capable of creating totally new markets.

This is what Clayton Christensen calls "innovation that creates markets".

Take Uber or Airbnb. These are platforms that forge a link between free or unused capabilities which already exist in society (spare houses and cars) and users who need those capabilities.

They can forge that link because they are at the leading edge of the Internet, of applications, of geolocalisation and of mobile technology. They are successful because they get rid of the problematical aspects of interaction (for instance, you do not need to have any cash with you to use Uber); and because, quite simply, they work! The design, the service and the procedure are all extremely user-friendly.

These new services undeniably cause concrete problems for our regulatory and fiscal systems, and they raise issues of fairness and competitiveness. We cannot ignore those issues.

But I believe that these businesses generate economic operations which would not otherwise exist.

What I am trying to say when I say that the digital economy creates new markets, is that it permits the kind of innovation that generates new economic prospects.

So again we see that the digital is a force for the democratisation of innovation because it offers a way of opting for the sharing economy, and because it fosters employment and even a more sustainable way of using existing resources, which can have a beneficial impact on the environment.

Conclusion: the democratisation of innovation

So, I have just explained to you what I think are the three ways in which the digital economy can have an impact on innovation: it offers the user the means to innovate; it offers smaller, more recent or more innovative players the opportunity to penetrate existing markets; and it paves the way for the ultimate innovation, namely the creation of totally new markets, accompanied by new jobs and new economic opportunities.

The common denominator does exist: it is the democratisation of innovation.

Each one of us in our capacity as consumers, but also a small business, or a part-time driver, or a budding musician, or a young researcher in an isolated entity can all be innovators and trigger a positive fallout for the world at large.

How can Europe seize this opportunity?

The answer to that question is, of course, somewhat complex, but it starts at the bottom of the ladder. It begins with initiatives such as this one, which place these issues at the heart of the public debate. It continues with projects that shine the spotlight on a whole new generation of CEOs, based on the promotion of the spirit of enterprise. On 27 October this year, President Juncker addressed a conference in Paris at the highest level, in the presence of the French president and of the German chancellor, on the theme "Building a Digitally Industrial Europe". He argued that Europe needs a digital economy because "education, health and the environment depend on it and will benefit from it". And he added: "we will build a digital Europe because Europe's road to greater prosperity and to greater growth is paved with tablets and mobile phones".

That is why the development of a digital market is one of this European Commission's ten priorities, and one to which I personally subscribe.

Europe has the know-how and the creative energy required to make the best use of the digital economy's full potential.

Some of the digital economy's most outstanding achievements in Europe are the product of young businesses in your own country.

For my part, I have the privilege of running "Horizon 2020", the most sweeping programme for research, science and innovation in Europe. We fund the best of the best on a daily basis: the elite among researchers and scientists, and the most innovative businesses.

Furthermore, it is my ambition to set up a European Council for Innovation capable of being for businessmen what the European Council for Research has been for Europe's scientists. This, because I believe that innovators should be free to tell us what they want to do, not the other way around, and because I believe that true innovation is the product of cooperation at the bottom and of interaction among different disciplines.

This project is not going to be put in place tomorrow. It is going to take time and I am relying on institutions such as yours to come up with suggestions as to how the council should function.

Europe must be the continent of openness and of innovation, open to science and open to the world.

In discussing the impact of the digital world in innovation, Walter Isaacson said: "This innovation will come from people who are able to link beauty to engineering, humanity to technology, and poetry to processors. In other words, it will come [...] from the creators who can flourish where the arts intersect with the sciences".

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