



*Living in a future Big Data world: can prosperity, freedom and fundamental rights be reconciled?*

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Ladies and gentlemen

First of all, my sincere thanks to the Delphi Economic Forum for the invitation to be with you today.

Data is everywhere. Everyone at this conference venue with a smart phone or tablet is generating information.

Soon, each one of us will create 1.7 megabytes of new information every second - that's the equivalent of about 7 books.

This is big data.

The biggest growth area is video and images, driven by social media enabled by handheld devices. These devices are in the vanguard of the Internet of Things.

Soon, there could be over 50 billion smart connected devices in the world, each designed to gather, analyse and transmit data - and store it in the cloud.

If you believe the hype, big data will increase profits for businesses, slash prices for consumers and stop epidemics.

It is fashionable now to talk about data as a currency, as the new oil, as digital breadcrumbs...

I have even heard data described as 'silk' - the string which we deposit wherever we go, both physically and virtually.

All of these metaphors help us visualise, in different ways, the new reality of the Big Data Revolution.

But they are imperfect images.

They imperfectly capture the present extraordinary moment of confluence in the technology.

I mean confluence of connection speeds, processing power and storage capacity.

But perhaps the most striking statistic is also the truest one: less than 0.5% of all data is ever used.

So at a conference where we are looking for opportunities to boost growth, big data may look like an open goal.

I represent an independent EU institution which supervises and advises the other institutions on personal data processing.

And I want the EU to harness the power of data, but I want us to do it in a sustainable way.

I will try, in this short address, to explain what I mean by sustainable.

After four years of negotiations, the EU has just - in December 2015 - concluded a huge and complex package of reforms which will affect every government, every business that targets its services at people in the EU.

Is big data also personal data?

More often than not, yes. It is personal data.

Businesses and governments want to know what people are doing so that they can understand their behaviour. Even better, they want to anticipate their behaviour. Ideally, they would like to change their behaviour.

The key question is: What are the benefits of big data and who is meant to benefit?

Europe is a world leader in data protection.

The EU's objective has always been two-fold:

- to allow the free flow of information to facilitate the internal market; and
- to protect the rights and interests of the individual.

The US also has a rich tradition of privacy protection.

They have a good claim to being the birthplace of the modern right to privacy at the end of the 19th century, with the concept of right to be left alone.

But the US at Federal level does not have a comprehensive and coherent framework on personal data processing which applies to all sectors.

Europe, meanwhile, has set a gold standard: first in the 1970s with national laws, then with the Council of Europe's Convention 108, and later with the EU's Directive 95/46.

By 2004, the Asia-Pacific Economic Cooperation forum had adopted privacy principles, similar to those in the EU.

Last year, 2015, it was reported that 109 countries had data protection laws in place, or almost in place. European countries are therefore now in the minority.

Why are lawmakers so active in this area?

Because along with the explosion and ubiquity of data, there is a global debate on whether these trends are sustainable.

More connected devices means more personal information than ever stored on remote servers - in the cloud.

Technology allows now almost all this information to be used to identify - to single out - a person.

These data are not necessarily provided by the users. They may be gathered while the user of the device is completely unaware.

The Internet consumes much more energy than the whole of Greece. "If the worldwide Internet were a country, it would be the 12th-largest consumer of electricity in the world, somewhere between Spain and Italy". This represents roughly 1.1 to 1.5% of global electricity use.

Sustainable?

I spent a week in Silicon Valley last year, and I know that there is enormous pressure from shareholders and venture capitalists to monetise this data.

Technical sustainability means connectivity speeds - which are not evenly distributed among regions and income groups.

Sustainable?

For the global economy, this has been a rocky start to the year.

Fears are growing that we may have witnessed a tech bubble.

Will Silicon Valley eat itself? - as someone said to me, rhetorically, last year in California.

There are already signs of major consolidation in digital markets.

When the winner takes all, in the offline world, that can create imbalances between producer and consumer.

In the same way, in the online world, whoever controls the data is increasingly more powerful than the individual to whom the data relates.

Especially when customers are expected, or encouraged, to reveal everything about themselves, while the data controllers hide their own practices on the grounds of business confidentiality.

The first industrial revolution prompted the human rights framework which is now at the core of democratic freedom in Europe.

The 'fourth industrial revolution' needs to stimulate a similar awakening.

We need a new deal. New principles.

The basis for this new deal is already in place.

Data protection has always been about balancing interests:

- The legitimate interests of companies in using data to create value from the sale of products and services by attracting and retaining customers;
- The public interest which requires the availability of information about citizens; and
- The rights of the individual, or data subject, to be treated fairly, and to have a degree of control over how information about him or her is handled, decisions taken which could have an impact on their lives.

This is the balancing act which the EU and the US are intensively attempting, through negotiations on the Privacy Shield agreement for transatlantic data transfers.

No longer is data protection an optional extra.

It is not an empty slogan.

Courts at European and national level are interpreting data protection laws in a very rigorous way.

The new General Data Protection Regulation creates new norms, like the right to be forgotten and the right to portability of data about oneself.

These provisions have been controversial, and the subject of unprecedented lobbying. But they are soon going to be the reality.

It's a complex area of law - the current text contains over 90 articles and over 130 recitals.

Data protection authorities, like mine, want to help. By informing citizens, and providing guidance to companies and public bodies.

But this is about more than compliance.

A box-ticking exercise will be waste of resources and a waste of time.

Like in the area of antitrust, the goal is to treat companies like responsible adults.

Data protection authorities will assume that they are complying with the letter and the spirit of the law.

And authorities will leave companies alone, unless there is a signal that the law has been breached. In that case, there are now big sanctions available - up to 4% of total worldwide revenue or 20 million EUR.

In other words, the objective of the new regulation is to inculcate a genuine culture of accountability.

That is why my institution has just launched a new Ethical Advisory Group, to look at the long term implications of artificial intelligence, wearable technology, autonomous vehicles and other technologies which rely on personal data.

So, Ladies and Gentlemen,

My message to you is to seize this exciting opportunity for the economy.

But let's do it sustainably.

Putting the individual back at the heart of the algorithm, in the driving seat of data-driven technology, and placing trust in data regulators to find the right balance.

Thank you for listening.