

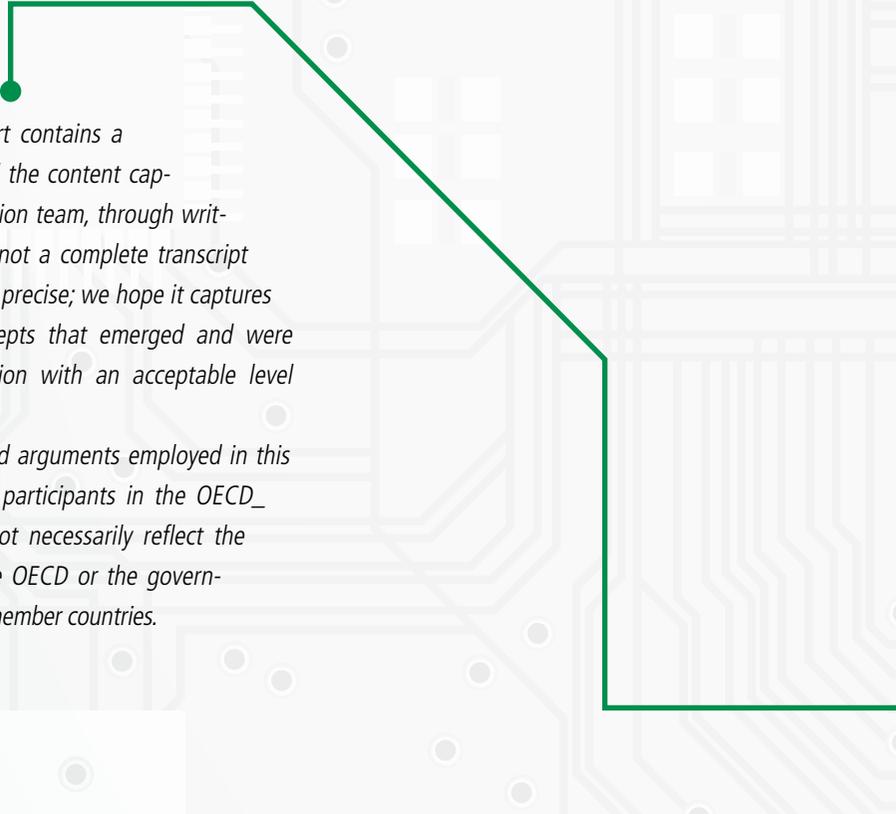


IdeaFactory_2014

THE FUTURE OF THE INTERNET

6 May 2014





This report contains a summary of all the content captured by the facilitation team, through writing and scribing. It is not a complete transcript and does not claim to be precise; we hope it captures the main ideas and concepts that emerged and were discussed during the session with an acceptable level of approximation.

The opinions expressed and arguments employed in this report are those of the participants in the OECD_IdeaFactory and do not necessarily reflect the official views of the OECD or the governments of its member countries.

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The OECD_IdeaFactory invites global experts and OECD Forum participants to work together to explore significant social phenomena, combine their perspectives and discuss the potential of new approaches and solutions. A selected number of participants take part in a three-hour immersive session where new kinds of conversations are provoked through active engagement, collaboration and interaction. Inside the IdeaFactory everyone is part of the process, everyone's experience counts and ideas can be combined, tested, prototyped and built into potential new solutions. The aim of this IdeaFactory is to understand the most interesting boundaries and possibilities of the Future of the Internet. How do we leverage this new infrastructure - and all its related experiences and information - to learn better, do better things, solve bigger problems, create more jobs, reduce inequality and accelerate development? The following pages capture some of the key ideas discussed during the session.

INTRODUCTION

Jens-Henrick Jeppesen ●
**Representative and Director for European Affairs,
Center for Democracy and Technology**

Democracy and Technology—what does this expression mean? We work on technology policies in relation to **civil liberties and human rights**. Our mission is to **keep the Internet open, innovative and free**. This means preserving the core attributes of the Internet—an infrastructure that has evolved in small part by design and in large part by chance—so that it will continue to be the incredibly useful tool that we have today.

It is a huge challenge, and we are mainly working on three buckets of issues:

The first issue has to do with **personal data and data protection**. How are personal data handled by corporations in commercial transactions? How are data collected and processed by governments? These are burning questions right now and there is a lot of work that needs to be done in order to get to the necessary reforms.

The second issue is about Internet governance. **What is the optimal way to run this global infrastructure?**



The third issue is **net neutrality**. There are some fundamental questions that need to be addressed. One view is that the guiding principle should be non-discrimination; others affirm that there should be more openness to steering traffic in certain directions based on commercial or other considerations.

Jean-Jacques Sahel

Vice President of Stakeholders Engagement for Europe, ICANN

The **resilience of the Internet** is a broad topic. In terms of the architecture of the directory of domain names (which is mainly what ICANN does), it means keeping alive the infrastructure that allows one to get to the website one wants to go. **It is a well-organised system governed by the technical community.**

There are many questions about the future of the physical infrastructure of this “Network of Networks”: how **secure** is it against viruses, how **robust and capacious** is it, how **fast** can it be, how can it cope with more and more people and things connecting to the network?

The technology works pretty well, even if it has grown to 2.2 billion users. As it continues to grow, **we need to make sure it remains stable.**

Yet, the sort of **institutional framework around the Internet is still very new and still pioneering.** There are many unanswered questions covering a wide array of areas. An example is the current debate about the Internet governance eco-system and processes. **The Internet is a wonderful cross-border tool that brings us all together:** how can we regulate it internationally?



Pastora Valero

Head of Government Affairs, EMEAR, Cisco

The new opportunities emerging in the Euro-Middle East, Africa, and Russia are tremendous. Many unconnected people will be connecting in the coming years.

But, since fixed networks sometimes do not exist in these countries, we need ubiquitous broadband and mobile connections.

Education is also needed to develop information and communication technology (ICT) skills, and build awareness of what ICTs can do to create better economies and societies.



When you can leapfrog and start building networks from the beginning, there are huge opportunities: this is the Internet of everything - everything is connected. The challenge is immense and inspiring.

Seong Ju Kang

**Director General, Ministry of Science and Technology,
ICT and Future Planning, Korea**

One of our biggest concerns is **cyber-security**. It is an area where we are investing about 3% of our IT budget, I have witnessed a case where more than 100 billion personal data were leaked by a sub-contractor.

While it was not intentional, this example demonstrates how **an error in the system can have very serious consequences**.

Another concern is how to promote the creation of jobs and start-ups using the Internet, big data and the data cloud. We call it the **"creative economy"**.

By leveraging the power of the Internet, we can create more jobs for young people and achieve a more sustainable development.



Maurizio Travaglini

**Co-Founder Architects of Group Genius,
IdeaFactory Designer and Facilitator**

The idea behind the IdeaFactory is simple: by combining people with different perspectives, we can all gain a better understanding of the complexity surrounding an important issue.

Today we will discuss the future of the Internet from different vantage points and then focus our conversation on the "adjacent possible" of the Internet. In the words of Steven Johnson and Stuart Kauffman, the adjacent possible is "a kind of shadow future, hovering on the edges of the present state of things, a map of all the ways in which the present can reinvent itself".

Together, we will take a look at what is happening at the boundaries of this world we call "the Internet", and explore what might be possible next.



The Value Map of the Internet



- **WHAT NEW VALUE WILL BE CREATED, IN TERMS OF THE ECONOMY, SOCIETY, LEARNING, ENGAGEMENT AND DISTRIBUTION?**
- **WHO IS MOST INFLUENTIAL IN CREATING THAT VALUE?**
- **WHO IS EXTRACTING MOST VALUE FROM THE SOCIAL EXPERIMENT WE CALL "THE INTERNET"?**

The Power Map of the Internet

- **WHO IS MOST INFLUENTIAL?**
- **WHO OWNS THE INFRASTRUCTURE, CONTROL SYSTEMS, ALGORITHMS, DATA?**
- **WHO IS CLAIMING MORE POWER?**
- **WHEN THE INTERNET STARTED 25 YEARS AGO, IT WAS AN EMPTY WILD WILD WEST. WHO HAS STAKED THIS TERRITORY SINCE?**

ADJACENT POSSIBLE

**THE ADJACENT POSSIBLE
IS A KIND OF SHADOW FUTURE,
HOVERING ON THE EDGES
OF THE PRESENT STATE OF THINGS,
A MAP OF ALL THE WAYS
THE PRESENT CAN REINVENT ITSELF.
THE STRANGE AND BEAUTIFUL TRUTH
ABOUT THE ADJACENT POSSIBLE IS THAT
ITS BOUNDARIES GROW AS YOU EXPLORE THEM.
EACH NEW COMBINATION OPENS UP
THE POSSIBILITY
OF OTHER NEW COMBINATIONS.**

STEVEN JOHNSON

How will the rights of "netizens" evolve? What process might emerge at the edge of the "rights issue"?

As all sorts of pressures are increasing, what are the parts of the system that will bend but not break? What are the parts of the system that are most likely to break down first?

What new value - in all its possible meanings - will be created? What will be destroyed through this creative process?





RIGHTS

“We all have the right to privacy, and we can give—or not—our consent. But it is not enough: business owners and business people can overuse personal information even beyond our consent. There are many breaches, personal information is being leaked, and some are also trying to hack that information.”



“Governments believe that **the online world is becoming too important not to get involved.** The question is: will more regulation make our rights better? Or would more user control, transparency and choice protect us better than top-down regulation?”

“We must separate data on the Internet from data that should not be on the Internet, for example data surrounding business transactions. We should not be afraid to regulate while maintaining the freedom of the Internet. **Regulation and restriction are not the same thing.**”

“The question is not how much the Internet will be regulated, but how much the regulation of the offline world can be implemented online.”

“What is *netizenship*? When we talk about citizenship, we are talking about the individual in relationship to the government. **When we talk about *netizenship* we do not have to deal with just one government, but with all governments globally.** If I am a user somewhere in Africa and I see my privacy rights being violated, where should I go? My government does not have the power to influence regulation and, moreover, the company that is dealing with my data may not even be in my country.”

“**The power is shifting from governments to gatekeepers of platforms**—like Amazon, Apple, Google, Facebook and Twitter. People are giving away their rights individually, while a process is emerging to try to reclaim their rights collectively. For citizens, or netizens, living in countries with large governments and who see the government as their ally or arbiter in reclaiming rights, this process might play out through the government itself. However, in countries where the government is smaller or less strong, this could take place through self-organising communities, collective action or intergovernmental organisations.”

RIGHTS

"The Internet is a global platform, and there are a series of paradoxes emerging and bringing a wide array of people and parties together. There are tensions, but also opportunities. Large companies benefit from economies of scale, but at the same time start-ups can have an influence on a global level. There are users who have more opportunities to share their knowledge and opinions, but at the same time they might divulge their personal data which could be misused. The future shape of this eco-system will depend on whether we achieve an optimal balance at different levels."

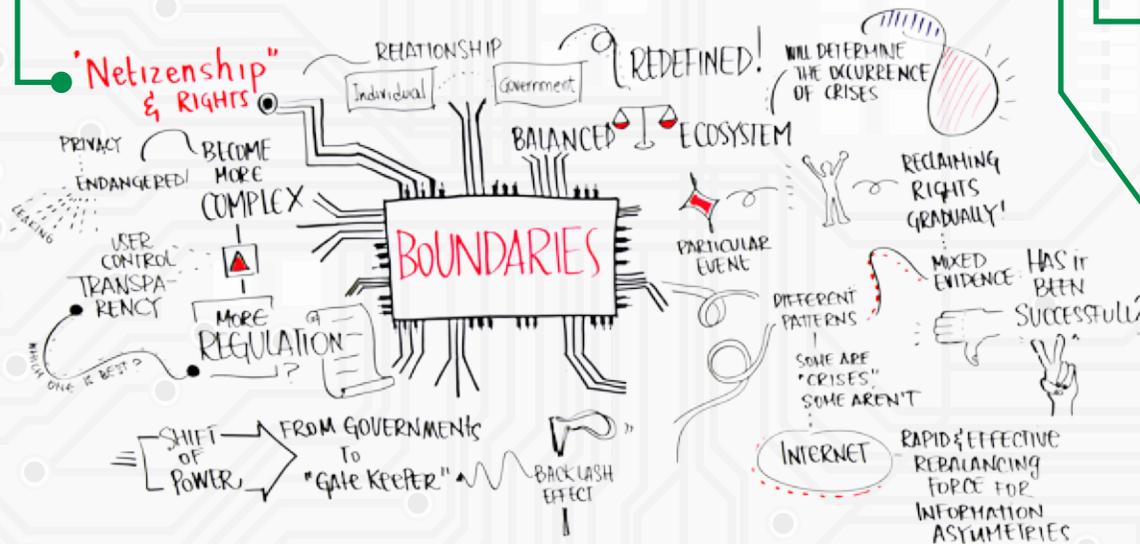
"The Internet has caused changes in the balance of power between consumers and companies, and between governments and citizens. At the same time, it has facilitated the emergence of information, provoking changes in the balance of power. This cannot be reduced to a single pattern: there are extremely complex patterns, and often contradictory."

"Is now the time for us to create a Manifesto, a Bill of Rights, or a Magna Carta for the netizens?"

"The broad eco-system of Internet governance is going to evolve and look quite different in the next few years. I hope there will be more collaboration between the various stakeholders, precisely because we need to strike a balance between different perspectives, roles, and responsibilities."

"In a market with significant asymmetry between the amounts of information different groups have, the Internet is a powerful and rapid force to correct that asymmetry. The group knowledge that the Internet facilitates is a strong mobilising force for those who would otherwise be disenfranchised."

"The process of shifting or reclaiming rights that are not "Net rights", such as basic human rights or political rights or civil liberties, has not yet had a great impact online. In the future, the Internet might be the mechanism by which citizens reclaim rights from their government, their political rights or civil liberties."



RESILIENCE

“Technological infrastructure will not break in the near future. Developments are fast enough to handle ever-increasing data traffic. In some countries technology cannot keep up, but it is for business reasons: you can make more money by keeping it as it is than by investing in new infrastructure. That might change in the future.”

“The problem is who is going to invest. And if it is not a question of companies, then it is a question of governments, that will have to intervene. Otherwise we will have two levels of netizens: the ones who get fibre and good-quality networks, and the others that do not.”

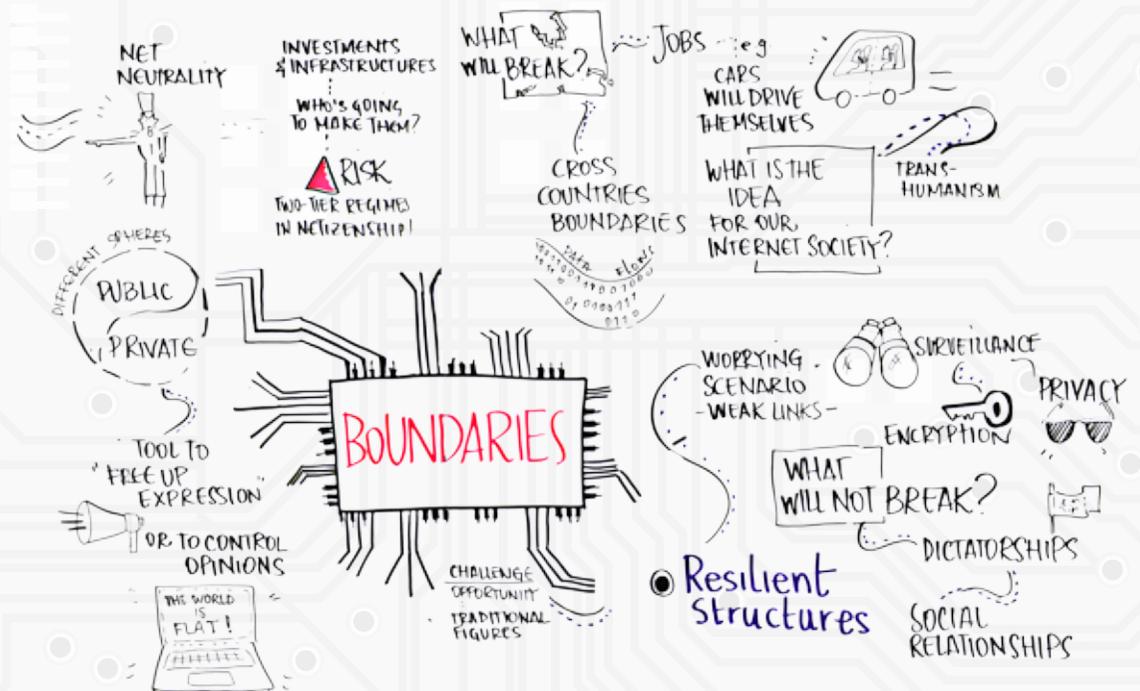
“Free and open technologies will prove to be very resilient: free to use, free to change, free to modify.”

“Net neutrality is likely to break down in the not-too-far future.”

“Many of the traditional sources of power are fading away: the job market will evolve, traditional business models and education systems will be reshaped, and the traditional sources of knowledge will change.”

“Wide access to information, greater levels of transparency, crowd-sourcing and open innovation mechanisms are creating new business models. Education will be challenged because of the skills needed to access the new labour market. Politicians and governments are also being challenged. All these changes can be seen as threats, but are also opportunities to explore this new society the Internet is creating.”

“The risk is that **human rights may break first**. With a few changes in policy it would be very easy to make the Internet the most incredible surveillance machine.”



“Privacy has already broken down: everybody knows everything about everyone in one way or another. You are already considered to be dangerous if there is no information about you online.”

“**How will privacy rights evolve?** In society, values and ideas evolve in parallel. At present, we have to find an emerging idea for our Internet society.”

“The social value system is evolving through the use of the Internet. In previous generations **we had a strong distinction between the private and the public spheres. Now we see not only a generation gap, but a changing social system.** How do we deal with this reality and what does our generation need to accept?”

“Contrary to common belief, the Internet will not cause dictatorships and authoritarian governments to break down. In principle, if you are a smart dictator, the Internet is your friend. You can easily identify the opposition fuse and go after it.”

“The keyword is duality. **The Internet is a wonderful tool for a more democratic way to operate and manage a country.** There is no distinction between those who have the knowledge and those who do not, and you can express your opinion freely and openly. But at the same time you can use the Internet in the opposite way: to control. **Who has the right to control the opinion of citizens?**”

“In terms of internal resilience, we need to create a balance between three players: individuals, companies and the government. At the level of individuals, netizens’ rights, digital identity and privacy need to be protected, while for companies cross-boundary flows of data enhance economic interests; and governments need to ensure security.”

RESILIENCE



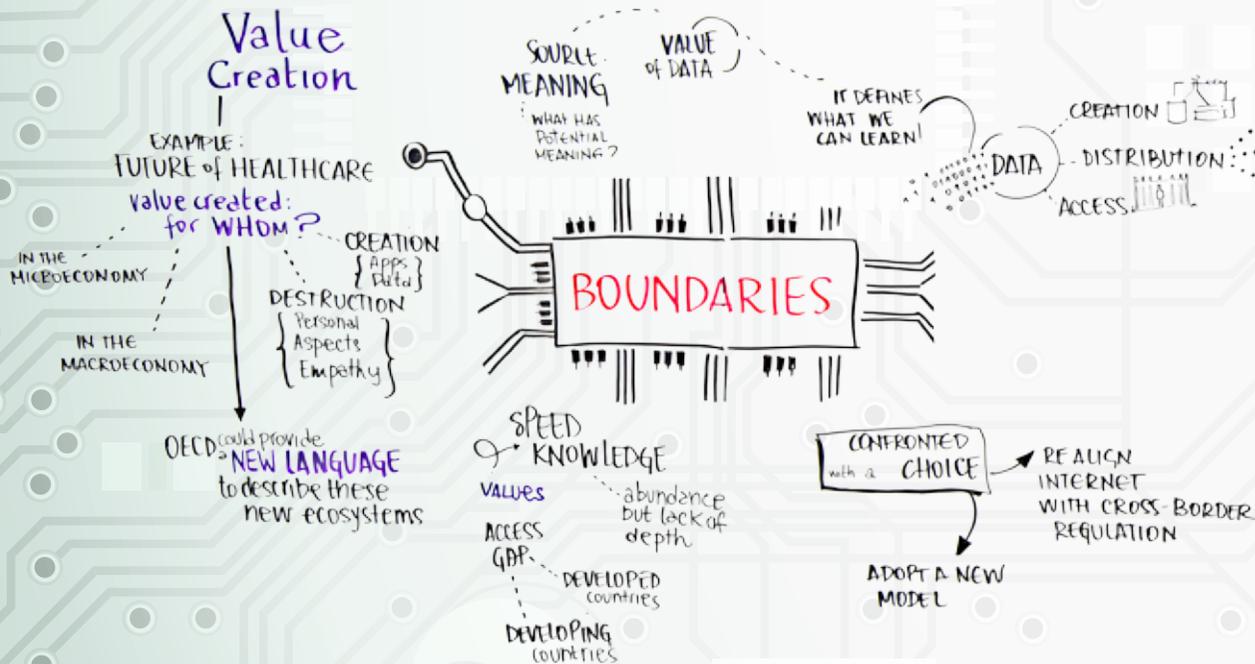
“Value creation, value destruction, and the power game around it: take the example of healthcare. In terms of value created, we will be able to stop epidemics immediately because we can see them as they emerge. We can enjoy real-time healthcare. We can have apps that create commercial value and personalised healthcare. On the other side, in terms of value destroyed, we will lose personal contact with a care team, and of course healthcare pretty much depends on empathy and sympathy. **What happens when we lose face-to-face contact?** We can see a divide coming: as commercial value around healthcare increases, inequality will emerge.”

VALUES

“There is a new sector opening up that we cannot describe with old models. **We need to provide the language to analyse these new eco-systems.** What do they look like, what words can we use to discuss what they look like? It must be a language that ordinary people can understand, because now we are stakeholders, too.”

“There are many values of the Internet, but at the same time, while learning and knowledge sharing are much faster, there is a lack of depth in education. **We see the information, but we do not see beyond the information.**”

“Looking at inclusiveness, technology can be a powerful tool to even out some inequalities, but can also enlarge the existing gap between developed and developing countries. Many countries do not have access to the Internet, and some people do not even know how to use a computer. It is our job to reduce this gap between the least developed countries, and provide information that is available and easy to use.”



“The Internet is enabling different forms of participation among different actors, and new forms of collaboration which allow people to crowd-source solutions to problems. This creates social value both for the users, who would normally not be engaged in finding solutions, and for the government and the private sector who are able to better spot the needs of the users and design better solutions.”

“Sharing information becomes easier with the Internet, but does it really change something in terms of power? Universities and research institutions will always generate, collect and distribute data. They have the infrastructure to do it, which not everyone does. **There is a power imbalance between those who can access the raw data and those who cannot.** Who decides on the cut between raw and distributed data? This is a tremendous power because, in the end, the data define what we can learn.”

3 VALUES

“International governance systems have not evolved in parallel with the cross-border nature and infrastructure of the Internet. This raises important questions about how law and regulation apply to the Internet. We are confronted with a choice: either we progressively realign the Internet to national boundaries because this is how our legal systems work and how regulation used to work, or we find other mechanisms to preserve the cross-border nature of online spaces. In this regard, understanding the political, economic and social value of cross-border interactions is incredibly important.”



Andrew Wyckoff

Director, Science, Technology and Industry, OECD

Messing up the greatest invention of our generation—this is what I worry about. The Internet is a huge platform. There are tremendous benefits we have already reaped, and others that are still coming. What I worry about is good intentions that go awry.

The Internet is a network that, to the amazement of many, has scaled from a few thousand people in the late 1960s and early 1970s to 2.5 billion people now. No one would have guessed this. We need to look at the structure and what has worked well and what we need to preserve.

The Internet is also an important and fundamental infrastructure for social and economic outcomes. Governments play a large role in basic infrastructures, whether roads or bridges or the banking system. This has not been the case for the Internet up to this point. There has been a light regulatory approach, waiting for this innovation to evolve. Now, we see governments coming in and exerting more influence.

This is an incredible period of structural change. A lot of people will be winning, but others are going to get crushed. We have seen it with other big technological change; such as when the automobile came around, I think structural change will reduce and alter asymmetries of information, modifying the power equation.

However, we need to be very very careful and proceed with caution: this is a Network of Networks, which makes it all very complex.





**THE BEST WAY
TO PREDICT
THE FUTURE
IS TO INVENT IT.**

ALAN KAY

COMPUTER SCIENTIST AND INVENTOR OF THE LAPTOP COMPUTER



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