



EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR EMPLOYMENT, SOCIAL AFFAIRS AND INCLUSION  
DIRECTORATE-GENERAL FOR COMMUNICATIONS NETWORKS, CONTENT AND  
TECHNOLOGY

# **High-Level Expert Group on the Impact of the Digital Transformation on EU Labour Markets**

## **Report of the 2nd meeting of 10 October 2018**

The second meeting was opened by Mr Maarten Goos, chair of the HLG, and it focused on innovation in digital technologies and inclusive innovation policies. He welcomed the first time attendants and set out the agenda for the day (see annex).

Then a Wiki-page was introduced for the HLG where all members can post and view documents related to the topics discussed. The agenda's, minutes and slides of every meeting will be posted here. As there are more expert groups working on digitalisation within the Commission, it was agreed to provide factsheets on the activities of those groups.

### Session 1

Mr Karl McFaul hosted the first session and held an extensive presentation on how value chains have changed and how this has been shaped by technology. As the scope of operations grow, a system evolves from being simple to more complex, and that we develop technologies in order to handle this complexity. This is happening according to an ontological design, which means that what we design will 'design us back'.

In the old world economy, value chains function as a 'pipeline' business model, which is linear and has a clear beginning and end. In the new world economy, however, those can be thought of as value constellations rather than value chains, as they are platform business models which are more circular and consist of co-creation. This is accompanied by a transformation from a win-win to a triple-win situation, where not just the company and the customer gain but often also the ecosystem where the platform is operating.

Technological companies are increasingly dominating the economy: the top five global companies are all technology companies which is a huge change even from five years ago. Europe is lagging behind. An explanation might be that the success of a platform business is related to scale, and scalability might be limited in Europe as it still does not function as a single market (different regulations, preferences, languages).

Platform economy can be explained by the existence of supply (a developer's ecosystem) and demand (a consumer's ecosystem) in between which a feedback loop exists which creates a network effect. This loop is important, as with platform economies sometimes you are a user and sometimes a provider (Uber, Airbnb). Value exchange is created when consumers interact in the loop. Entry is almost frictionless but the system needs scale in order to be successful. When the platform is being used and provided, it becomes a self-operating system. Therefore digital platforms can be seen as the new factories, with more income opportunities because they can operate 24/7 and are more easily accessible. Also, operations are often cheaper as no assets or employees are 'owned' by the company, they only use external capital.

The presentation was followed by a discussion on the developments within AI and the impacts on the labour market. The main worry is that declining wages in operation costs due to technological advances make income taxes less and less appropriate to redistribute wealth. There is a need for new solutions related to social security. Furthermore, it appears that we are only at the beginning of a new AI boom. For this boom to happen, the applications of AI have to become more widely accepted among consumers. In order for consumers to use them, they will have to see that these applications are safer, better and save time, as then their use will allow for more investment and research into AI. General purpose artificial intelligence is not in grasp for the next 10 years.

It was argued that the use of AI is held back by cultural and legislative issues and wondered whether it is an issue of too little investments. Case in point is an example from the insurance sector, where claim decisions can already be handled by a robot but where clients initially preferred to talk to a human instead of to a robot even though using a robot is faster and more accurate (due to its self-learning capacity).

It was suggested that Generation Z is using technology in a more interactive way and develop a new way of learning, in particular through gaming. This shows that innovation also has a cultural perspective.

Another issue is the inequality in bargaining power between platform owners and users, and the role of regulation. As platforms are often transnational, this can often not be solved for national regulation, and that is where the EU should step in. DG CNECT is working on the Collective Awareness Platforms System (CAPS), to address that platform businesses tend to form huge monopolies based on data gathering. Legislation is still under proposal.

It was mentioned that governments have outdated ways on acquiring information on labour market demands, namely through information from statistical bureaus, universities and employment services, and that these are far behind compared to the fast moving business environment we compete in nowadays.

Lastly, a couple of examples were introduced on the latest trends regarding innovation systems where the frontline of philanthropic investors and social entrepreneurs are now building "impact innovation ecosystems" together with cities and regions: Katapult Accelerator in Oslo, Norway; SOCAP and Impact Hub in San Francisco, USA; and Sankalp in Mumbai, India, to mention a few.

## Session 2

The second session was managed by Ms Maria Savona and centred on the topics of R&D, employment and wage distribution (inequality), and inclusive innovation policies.

It was explained that the fear of losing jobs is not new. First workers were afraid of machinery, then of ICT and now of AI and robots (neo-luddism). The heart of the matter is not losing jobs but how workers will be supported in finding new jobs after the technological transformation.

After that, Ms Savona presented her own research on the impact of R&D investment on employment and wage distribution in local labour markets in the UK. The results of the research show that R&D growth changes the employment composition in local areas (Travel to Work Areas) that have a higher than average density in routinized jobs. It leads to employment growth effect in services, low-skilled jobs, self-employment, and the cohort between 25-34 years old.

A different study, which has yet to be finalised, also looks at the effect of R&D investments on wage inequality within the examined firms. Initial findings suggest that there is a wage premium for workers in firms that invest in R&D, and that this premium is larger for top-earners than for those in lower quartiles controlling for everything else. There is also a systematic gender pay gap resulting from R&D investments for those firms, where men are enjoying an advantage.

Focussing on policy, it is important to find novel compensation mechanisms within the fields of robots and AI, focusing also on the quality of jobs. The R&D productivity link should be recovered, so that investments in R&D do actually lead to more employment.

The foundation Nesta mapped inclusive innovation policies which were focused on the fact that the benefits of innovation are more equally shared. Policy making should involve a broad participation of the public (through decision making and governance). Nesta examined inclusive innovation policies in ten countries. It appears that many countries are able to identify societal challenges but do not consider the needs of different social groups within this, and that often policies promote job-rich growth but ignore the negative impacts on the labour market (displaced workers).

There were two examples of inclusive innovation policies:

- BioNetwork: which retrains (displaced) workers to become employed in the biotechnology or life science sector, available for all skill-levels.
- vTaiwan: an online and offline consultation platform where the public is involved in policy making, which was used to develop regulations on Uber in Taiwan.

## Closing

It was agreed that for the next HLG meetings, the discussions should focus more on policy recommendations. Participants should keep in mind the European perspective and the role of social partners, as this is specifically important.

For the next meeting, the participants will send questions to the Commission, and the Commission will reply ahead of the meeting. Presenters should address the policy implications after each discussed topic.

As the next meeting will take place on 16 November 2018, in Brussels, it was agreed that the Commission will receive questions by 26 October, and provides answers by the 12 November.

## **ANNEX: LIST OF PARTICIPANTS**

### **HLG Members<sup>1</sup>**

- Mr Maarten Goos, Professor of Economics, Utrecht University (Chair)
- Mr Morten Binder, CEO of HK, Danish Unemployment Insurance Fund
- Ms Katarina Ćurković, Head of career guidance and counselling division, Croatian Employment Service
- Mr Vassil Kirov, Associate Professor, Institute for the Study of Societies and Knowledge, Bulgarian Academy of Science
- Mr Karl McFaul, Strategist, City of Lund, Sweden
- Ms Maria Savona, Professor of Innovation and Evolutionary Economics, SPRU Science and Technology, Policy Research University of Sussex UK
- Ms Lucia Velasco, Director of Research and Social Innovation, Fundacion Tomillo (until July 2018); temporarily seconded as an advisor to the Office of the Prime Minister of Spain
- Mr Vili Lehdonvirta, Associate Professor and Senior Research Fellow at the Oxford Internet Institute, Oxford University
- Mr Gary Shaughnessy, CEO EMEA (Europe, Middle East & Africa) of Zurich Insurance

### **European Commission**

- Ms Fabrizia Benini, Head of Unit, DG CNECT
- Mr Max Uebe, Head of Unit, DG EMPL
- Ms Anita Vella, Deputy Head of Unit, DG EMPL
- Mr Andrea Glorioso, Policy Officer, DG CNECT
- Mr Istvan Vanyolos, Policy Officer, DG EMPL
- Ms Carola Bouton, Policy Officer, DG EMPL
- Mr Tommaso Alberini, Trainee, DG CNECT
- Ms Roos de Bruijn, Trainee, DG EMPL

### **External experts**

- Mr Sebastian Stache, expert in computer sciences, Lund University, Sweden
- Mr Claes Magnusson, director of the Malmö Politeknik, Sweden
- Mr Bert-Ola Bergstrand, founder of a number of international platforms in the field of “crowd-impact economy”, Trondheim, Norway
- Ms. Madeleine Gabriel, Head of Inclusive Innovation, Nesta, United Kingdom

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<sup>1</sup> Ms Solveigh Hieronimus was not able to attend.

## ANNEX: AGENDA OF THE MEETING

### 2<sup>ND</sup> MEETING OF THE HIGH-LEVEL EXPERT GROUP ON THE IMPACT OF THE DIGITAL TRANSFORMATION ON EU LABOUR MARKETS

#### INCLUSIVE INNOVATION

10 October 2018

*Brussels, Belgium*

*Thon Hotel, EU, Rue de la Loi/Wetstraat 75, France room*

9:00 – 9:30 Registration/coffee

#### **SESSION 1: Digital technologies and the innovation value chain (Karl McFaul)**

9:30 – 10:30 **Digital technologies** (big data, artificial intelligence, machine learning, robotics, web-based platforms)

10:45 – 11:15 Coffee break

11:15 – 12:30 **The innovation value chain** (implementation and barriers; incubators, entrepreneurship; venture capital)

12:30 – 13:45 Lunch

#### **SESSION 2: Inclusive innovation policies (Maria Savona)**

13:45 – 15:00 **Innovation across sectors, firms and regions** (manufacturing vs. services; private vs. public; small vs. large firms; smart cities; intra EU differences; China-EU-US; globalisation and innovation)

15:00 – 15:30 Coffee break

15:30 – 16:15 **Inclusive innovation policies** (R&D policies, industrial policies)

16:15 – 17:00 Concluding discussion (with feedback from the EC)