University-Business Cooperation webinar

New mobilities of learning, research, and innovation:
How can UBC 2021-2027 support sustainable social innovation?

Meeting Report

(part of the ongoing HEInnovate Webinar Series)

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1.0 Introduction

On Thursday 5 November 2020, the European Commission – supported by Ecorys and Technopolis – organised an **online webinar on "Social and sustainable entrepreneurship and innovation."**[1] The webinar kicked off the next generation of the University-Business Cooperation (UBC) network,[2] which the Commission has been running for more than ten years. The webinar was organised almost exactly one year after the last European University-Business Forum (UBF), which took place in Brussels on 24-25 October 2020 and brought together representatives from academia and the business world all over Europe to discuss key challenges and opportunities for UBC.[3] This webinar was organised as part of the ongoing HEInnovate Webinar Series.[4]

The webinar attracted **over 50 participants, including policymakers, representatives from higher education institutions (HEIs), companies, business associations and civil society**. The webinar sought to explore social and sustainable development and innovation, as well as the consequences of technological innovations for the European labour market. More specifically, the webinar focused on the following three questions:

(1) What are the implications for skills investments in different scenarios for job and skill needs till 2030 in the automation industries? What are the potential threats for labour market participation caused by new technological innovations and changes such as artificial intelligence?

(2) Which sustainability issues are most important? Do environmental concerns vary in different parts of the world? How are sustainability issues related to each other?

(3) The "Green Transition" represent one of the largest challenges faced by society now and for the coming generations. What are the opportunities of addressing such challenge in terms of breakthrough innovations, new venture creation, as well as demanding and fostering new collaborations and partnerships internationally and often in a cross-sectoral environment?

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[1] See https://www.technopolis-group.com/new/heinnovate-webinar-series-social-and-sustainable-entrepreneurship-and-innovation/
[2] See https://ec.europa.eu/education/policies/innovation-in-education/university-business-cooperation_en
[3] See https://ec.europa.eu/education/events/8th-university-business-forum_en
[4] See https://heinnovate.eu/en

2.0 Supporting social and sustainable development and entrepreneurship

Fiona Godsman, Chief Executive of the Scottish Institute for Enterprise (SIE),[5] moderated the webinar. She opened the meeting by welcoming the participants, giving an overview of the agenda, and noting the format of the webinar. She encouraged participants to contribute to the discussion by participating in the poll questions and asking questions through the webinar's chat function. She then went on to introducing the three speakers:

- The first presentation was given by **Raymond Montizaan**, Research Leader and Associate Professor at Maastricht University, and **Cornelia Suta**, Project Manager at Cambridge Econometrics, are both involved in the Horizon 2020 funded *Technequality* project,[6] which focuses on understanding how technological innovations affect work, education and inequality.

- The second presentation was given by **Dr Frans Stel,** Managing Consultant at CreateNewBusiness,[7] Senior Research Associate at the University of Twente (NL) and Visiting Professor at Yamaguchi University (Japan), is one of the academic leaders of the Erasmus+ funded *Scale-up for Sustainability (S4S)* project.[8] S4S aims to develop innovative business models and new teaching modules in green venturing.

- **Mikkel Trym** co-founder of joint university-business innovations centres in Copenhagen, gave the third and final presentation. Mikkel is the entrepreneurial lead for the *EIT Climate-KIC Accelerator Programme* in the Nordic countries. The EIT's Climate KIC is a European knowledge and innovation community working to accelerate the transition to a carbon-zero economy.[9]

An overview of the key messages from the three presentations is provided below. Annex 4.2 includes more details and background on the speakers and moderator.

2.1 Labour Market Forecasting: impact, risk and scenarios for automation and artificial intelligence

Cornelia Suta and **Raymond Montizaan** presented some of their work being conducted as part of the *Technequality* **Horizon 2020 project**,[10] funded by the European Commission. The project explores technological innovations, such as robotics, big data, increased computing power and machine learning. Within this context, the project aims to improve understanding of the relation between current technological innovations and social inequalities (income, skills, well-being, and health).

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[5] The SIE is the national organisation promoting and supporting enterprise skills and entrepreneurship in Scotland's universities and colleges www.sie.ac.uk.
[6] See https://technequality-project.eu/
[7] See http://www.createnewbusiness.com/Welcome.html
[8] See https://www.scaleup4sustainability.eu/
[9] See https://www.climate-kic.org/
[10] See https://technequality-project.eu/

1. The impact of automation on labour market forecasting

Cornelia Suta presented the research on labour forecasting scenarios for automation risks. One purpose of the *Technequality* project is to further develop our understanding of the potential consequences of automation on the European labour market. The Cedefop Skills Forecast 2018[11] data constitutes the starting point of the research, as it offers the future trends in employment by country, sector and occupation, using harmonised data and methodologies for all EU Member States. This database was used to create the scenarios (by country, sector, and occupation) to understand the potential **impact of automation on jobs in Europe until 2030**. The main assumption of the research was that automation would reduce the amount of time spent by workers on certain tasks (which will be taken over by automation) and that, as a result, there would lead to less job opportunities.

The results of all scenarios are available for public use in **an online tool**.[12] Cornelia invited participants to visit the webpage and use the tool to analyse the data for different scenarios. The extent of penetration of automation in industries and occupations and the speed at which automation will be adopted are the key determinants of the 18 scenarios considered. Depending on the scenario considered, the **estimated number of jobs lost across the EU ranges from 12.5 million to 106.6 million**.

Figure 1: %Difference from Cedefop Skills forecast 2018 by 2030 in EU28

	No employment protection			Employment protection		
	2035	2055	2075	2035	2055	2075
High	44%	20%	13%	37%	19%	12%
Middle	31%	14%	9%	28%	13%	9%
Low	18%	8%	5%	17%	8%	5%

Source: Speaker's presentation

Key recommendations for effective policies on automation and labour market forecasting (based on Cornelia's presentation and the ensuing Q&A session with participants):

- **Flexible policy responses are needed** to able to adapt to different outcomes of automation. These should also help moderate the pace of adoption so that the labour market will be able to adapt to unexpected consequences.

- Policy needs to continue to **focus on preparing the workforce and employers of the future for the effects of automation**, in line with policies such as the EU Skills Agenda[13] or Digital Education Action Plan[14].

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[11] See https://www.cedefop.europa.eu/en/publications-and-resources/publications/3077
[12] See https://technequality-project.eu/results/web-tool-automation-impact-employment
[13] See https://ec.europa.eu/social/main.jsp?catId=1223&langId=en
[14] See https://ec.europa.eu/education/education-in-the-eu/digital-education-action-plan_en

- **Targeted and evidence-based solutions for specific groups** are needed so that everyone is equally prepared for the digital transition. Such solutions should help the workforce transition to higher skills level that will ensure their competitiveness in the labour market.

2. Effectiveness and impact of artificial intelligence (AI) on the labour market

Raymond Montizaan presented the results of a field experiment performed during the COVID-19 pandemic to help shed more light on the effectiveness of artificial intelligence (AI) and the potential threats this might cause for participation in the labour market. While automation and AI are perceived as a threat to the workforce, these will need to be supported by employees in the near future. The field experiment was conducted in a multi-national company's service centre unit for private costumers in 2019-2020. It consisted of randomly introducing an AI personal interactive assistant to support customer advisors with their tasks.

The findings showed **a drop in productivity of employees as the number of AI applications available increased**. The findings also showed that the perception of customers on the personal effort of employees decreased.. In conclusion, Raymond reminded the audience of the unexpected results that AI can cause. As highlighted by the results of the experiment, while AI is expected to increase productivity, it can also have the opposite effect.

Figure 2: Productivity change introduced by AI applications
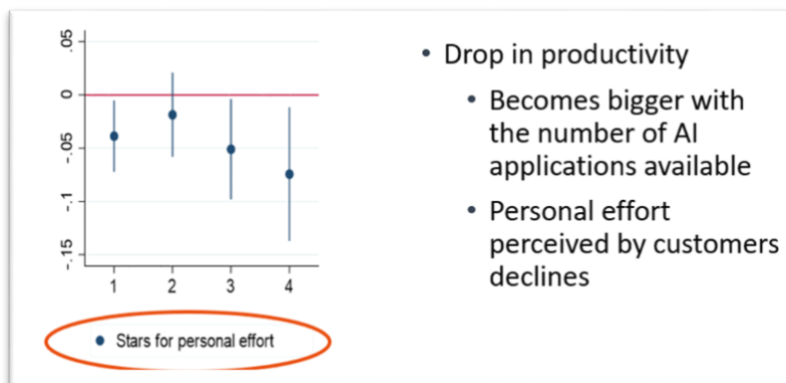
Source: Speaker's presentation

Key recommendations for effective policy responses to AI (based on Raymond's presentation and the ensuing Q&A session with participants):

- **Recognise the positive effects of automation**: the speakers underlined that perhaps the most positive effect of AI is that it allows workers to spend less time on routine or manual tasks, and more on non-automatable tasks.

- **Adaptability**: the introduction of AI applications should consider differences between sectors as well as be able to adapt to unexpected consequences that may occur as a result of the introduction of AI.

- **Leaning period**: AI policy needs to take into consideration the adaptation and learning period of different workforces=, in particular the up- and reskilling needs to perform different cognitive and non-cognitive skills. In so doing, policy should remain alert of the unintended consequences of AI.

- **More research is needed**: while there are many expectations with new technologies, there is not yet sufficient research to fully understand the effects of AI.

2.2 Agenda for the Future: Does awareness of SDGs differ across the world?

Dr Frans Stel presented the **"Agenda for the Future" programme**, which is part of the Erasmus+ funded ***Scale-up for Sustainability (S4S) project***,[15] which aims to develop innovative business models and new teaching modules in green venturing. The "Agenda for the Future" programme aims to increase awareness of the SDGs amongst young adults. The programme is built from the belief that SDG awareness is not enough to stir individual action and aims to provide students with the skills and competences needed to take ownership and take action towards collaboration.

Figure 3: SDGs Implementation levels

Source: Speaker's presentation

Following the project, data was examined to see whether priorities of sustainability differ across values and how these priorities relate to personality traits, social attitudes and environmental concerns. The project explored questions such as: Which sustainability issues are most important? Do environmental concerns vary in different parts of the world? How are sustainability issues related to each other? Does awareness of SDGs differ across the world? Results from a large student sample (N=1,981; 39 nationalities) made it clear that only **climate change is highly prioritised among *all* students all over the world** **while the availability of raw materials and waste issues are considered much less important**. Other sustainable development priorities differ per country, or according to the background of the individuals. Whereas the SDGs have a global scope, the motivation to achieve these goals may depend on local priorities. The programme developed an integrative understanding of critical success factors needed to implement sustainable development. As part of the programme, students across the globe have invented new innovative ideas and gave a start to implementation.

> **Key recommendations for implementing the SDGs** (based on Frans' presentation and the ensuing Q&A session with participants):
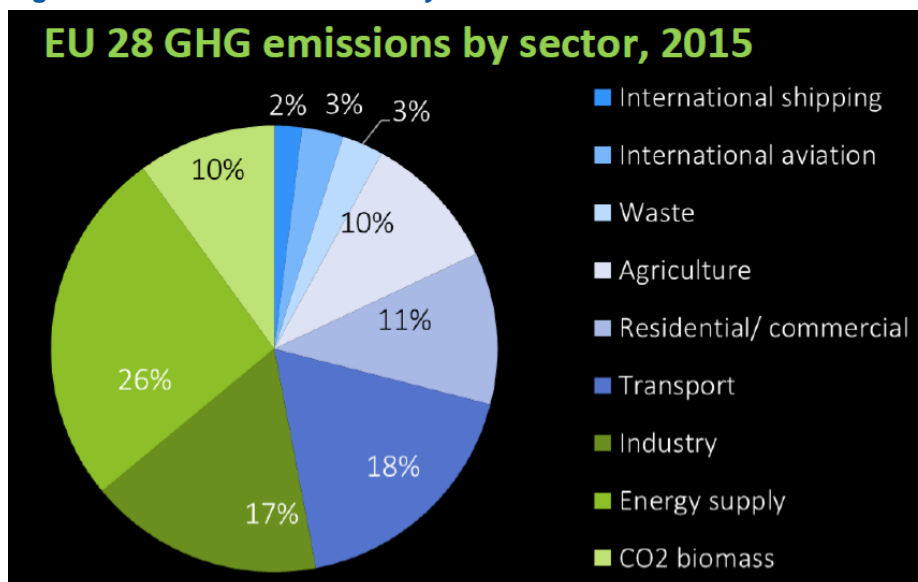>
> • **Awareness of SDGs is not enough**: SDG awareness needs to be accompanied by a sense of ownership leading individual action in order for the SDGs to be tackled.
>
> • **SDGs are interlinked and have a global impact**: although some SDGs have a greater global impact than others, they are in fact all closely interlinked, have a global impact and should therefore be considered together.
>
> • **Capitalise on young people's enthusiasm around implementing the SDGs**: climate change and implementing the SDGs are extremely high on young people's agenda. We should be building on this enthusiasm to help ignite more action in businesses and universities this area. More attention is needed towards items of availability of raw materials and waste issues.

2.3   The Green Transition: Igniting engines of innovation

Mikkel Trym presented insights regarding the path towards "green transitions", based on his role as entrepreneurial lead for the **EIT Climate-KIC Accelerator Programme**[16]. In his presentation, Mikkel explored the green transition as an opportunity to ignite engines of innovation, and the role of HEIs in.

The "Green Transition" currently represents one of the largest challenges faced by society and for the coming generations. At the same time, it also provides some of the biggest opportunities in terms of breakthrough innovation and new venture creation. The green transition addresses a societal challenge demanding new collaborations and partnerships at all levels. Mikkel emphasized **the speed towards this transition needs to be speed up and be accompanied by strong political commitment over the next 10 years**. The next phase in the transition is to unlock the potential that lays in the most.

Figure 4: EU28 GHG emissions by sector

Source: Speaker's presentation

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[16] See https://www.climate-kic.org/programmes/entrepreneurship/accelerator

As a whole the Knowledge and Innovation Community (KIC), works to accelerate the transition to a zero-carbon, climate-resilient society. The community is composed of different organisations taking part in novel collaborations and partnerships including students, researchers, start-ups, corporates, civil society, public institutions, etc. These collaborations take place in an international and often cross-sectoral environment and are creating the new engines of innovation that will also become a large part of the HEI (the entrepreneurial university and research institutions) of the 21st century. Within the programme, Mikkel presented an **impact framework created to forecast entrepreneurs' climate impact**. The systems innovation helps making estimations and it is then use as a decision-making tool for start-ups, allowing them to understand their impact and values that drive them.

Lastly, Mikkel discussed the role of Higher Education Institutions (HEIs) and the mutual benefits for collaboration between business and HEIs towards the green transition. **UBC can promote a flow and exchange of business skills and access to investors on the one hand, and access to resources such as data, equipment and networks on the other**. As an example, he highlighted the potential of HEInnovate[17], an "ecosystem" tool where HEIs, social enterprises, policy makers, businesses, and others, can use it as a 'neutral' platform on which to develop a dialogue about how best to develop their regional/local innovation ecosystem.

Key recommendations/conclusions for the "green transition" (based on Mikkel's presentation and the ensuing Q&A session with participants):

- **There is high commitment from the business community to address climate change**: the high commitment from business and entrepreneur community with a motivation to achieve a big impact is waiting to be unlocked.

- **The Green Transition needs strong political commitment**: ctions need to be taken at a much faster pace in order to address the urgent challenges of climate change.

- **The Green Transition requires efforts from** : both business and Higher Education Institutions have a strong role to play, in sharing resources and bringing actors together towards common goals.

- **A common language is needed**: the language used by enterprises, universities and policy makers around the sustainability agenda is different, which is why it is important to make sure a common language is developed to align all actors and foster joint action around implementing the SDGs.

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[17] See https://heinnovate.eu/en/about

3.0 Conclusion

Sustainability is a common priority to businesses and students alike. Quality and sustainability are part of the business models and costumers and citizens expect it from companies. However, as Mikkel mentioned in his presentation, there is potential to achieve more linkage between students and their contribution to businesses. It is therefore necessary to continue to educate and promote collaboration in businesses and university communities. One of the criticisms of the SDGs is that they are not sufficiently operationalised and exist separate from each other. At the same time, as Frans' presentation showed, there are many links between the SDG, and these could be more emphasised in university programmes. Within the green transition, it is also important to take into account the impact of automation and the role of AI for the workforce. As Cornelia and Raymond's research showed, there are unintended consequences in the speed of automation that need to be further explored. In so doing, we need to consider how to maintain competitiveness in the labour force.

4.0 Annexes

4.1   Input Paper for UBC webinar (November 2020) and Reflection Paper on UBC 2021-2027 (July 2020)

- Input Paper: Calabuig, P., F. Staring and M. Blakemore (2020). *New mobilities of learning, research, and innovation: How can UBC 2021-2027 support sustainable social innovation?* Discussion paper for UBC webinar on 5 November 2020.

- Reflection Paper: Staring, F., M. Blakemore., T. Andersen, K. Nedergaard Larsen, N. Burquel and S. Mannsberger-Nidl (2020). *University-Business Cooperation (UBC) 2021-2027 Contributing to a Sustainable and Social Europe (beyond COVID-19).* UBC reflection paper.

The Input Paper and Reflection Paper can both be consulted here:
https://heinnovate.eu/en/webinars/heinnovate-webinar-7-social-and-sustainable-entrepreneurship-and-innovation-discussion

4.2   Speaker bios and project descriptions

Fiona Godsman is Chief Executive of the Scottish Institute of Enterprise (SIE), the national organisation for promoting and supporting enterprise skills and entrepreneurship in Scotland's universities and colleges. SIE's vision is for Scotland to be the best place in the world for students to develop the innovative and entrepreneurial mindsets they need to become the change-makers, innovators and global leaders of the future. She has served on a number of advisory groups related to enterprise and entrepreneurship education in UK and EU, and she sits on the board of trustees of Glasgow Clyde College. Prior to leading SIE, Fiona worked for over 20 years in senior global sales, marketing and business development roles in a number of pharmaceutical biotechnology organisations, including Q-One Biotech and Invitrogen and subsequently set up her own biotech marketing consultancy. Fiona's wealth of experience ensures that SIE plays a vital connecting role between academia and business within Scotland's entrepreneurial ecosystem, ensuring that activities remain relevant, effective and supportive to both student entrepreneurs and academic staff.

Raymond Montizaan Raymond Montizaan is researcher at the Research Centre for Education and the Labour Market (ROA). **Cornelia Suta** is Project Manager at Cambridge Econometrics. Both are members of the Techniquality project, a Horizon2020 project funded by the European Commission. Other collaborating institutions in this project are Maastricht University (ROA), University of Oxford (Oxford Martin School, Skope), Cambridge Econometrics (CE), WZB Berlin Social Science Centre, Tallinn University (Sociology dept), Tilburg University (Tranzo), Stockholm University (SOFI) and the European University Institute (SPS).

Technological innovations, such as robotics, big data, increased computing power and machine learning, promise great potential for increasing productivity and boosting general welfare. Furthermore, these innovations play a crucial role in securing the competitiveness and growth of EU economies. However, technological innovations may also have an impact on social inequalities (income, skills, wellbeing and health). Given this complex environment, the Technequality project has as goal to improve our understanding of the relation between current technological innovations and social inequalities, by:

1. Providing better predictions of the consequences of technological innovations for the European labour markets.

2. Understanding which skills are crucial for productive growth and how skill differences can lead to (technology-driven) inequalities in income, education, wellbeing and health.

3. Researching how education (lower, higher and vocational) can prepare today's children and workers for tomorrow's labour market.

4. Assessing how governments can avoid large-scale poverty caused by technological unemployment.

5. Investigating what the consequences of automation (and unemployment) are for income tax and public finances.

6. Comparing the current technological boom with earlier technological revolutions to draw lessons learned.

Dr Frans Stel is one of the academic leaders of the Erasmus+ program: Scale-up for Sustainability (S4S). In this project, companies and universities from Germany, Sweden and the Netherlands collaborate to develop innovative business models and new teaching modules in green venturing. Frans is managing consultant at CreateNewBusiness, senior research associate at the University of Twente, in the Netherlands and visiting professor at Yamaguchi University, Japan. Frans has held positions as professor international business, director, corporate consultant and sales manager. Frans obtained a PhD-degree at the University of Tilburg on alliance management. His main research areas are developing 21st century skills using serious games. His research projects include team creativity, cross-cultural collaboration, negotiation skills, sustainable entrepreneurship and alliances.

Mikkel Trym has played a role in the "green transition" and the creation of "new engines of innovation" for the past decade, as the co-founder of joint university-business innovations centres in the Copenhagen metropole and as the entre preneurial lead for EIT Climate-KIC, Europe's largest climate-innovation initiative with more than 400 committed partners from both the public and private sector. It will be an example of a trans-national collaboration trying to illustrate how innovation impact can be scaled up and have success beyond the "local" level.