“The impacts of the digital transformation on innovation across sectors”
Introduction to today’s workshop

Caroline Paunov

London, 21-22 September 2017
New transformative products for society and industry
New modes of production across industry
Distributional challenges across people, places and firms
New ways to conduct policy
What innovation policy frames and instruments allow steering the transformation for inclusive and sustainable growth?

⇒ Question of the project on open and digital innovation of OECD Working Party on Innovation and Technology Policy

⇒ Joint activity with participating countries (analysis, statistics and case studies)
Project scope

Digitalisation of innovation

- New business models
- New capacities and skills
- New market dynamics

Opportunities & challenges for innovation across and within sectors

- Manufacturing sectors
- Services sectors

Innovation policies for inclusive and sustainable growth

- Public research
- Science-industry linkages
- Businesses

Collaboration for innovation

- Public research (HEIs & PRIs)
- Businesses (large firms, SMEs)

- Local
- Regional
- National
- Global

Knowledge ecosystems
Project timeline

Project kick-off

January 2017

Scoping work

Initial background research

June

TIP meeting

Today

Evidence collection & analyses

Workshop in Paris

Development of country case studies

Today's workshop

Final project report

December 2017

High-level conference

December 2018
Day 1

10h00 – 10h30: Initiatives in the UK
10h30 - 12h00: Panel 1
   New business models and innovation dynamics across sectors
13h00 – 14h30: Panel 2
   Smart cities and regions in the digital transformation: how to ensure inclusive developments?
15h00 – 16h30: Panel 3
   Policies for technology development, diffusion & collaboration: What facilitates digital transformation?
16h30 – 18h00: Immersive Lab

Day 2

9h00 –11h00 : Panel 4
   What policy instruments are needed to develop vibrant innovative eco-systems?
11h30 – 12h15: Wrap up and final discussions
13h00 – 15h00: Discussions of the TIP Steering Group
Panel 1: New business models and innovation dynamics across sectors

- **Servitisation** (of manufacturing industries) → towards a redefinition of sectors & core business models, different innovation imperatives & competencies needed

- **Data-driven innovation** → access and exploitation of data & new collaborations beyond the boundaries of the firm

- **Increasing speed of innovation** → need for fast and experimental policy responses, impacts on diffusion of technologies and market dynamics

- **Competition & concentration** → opportunities and obstacles for start-ups and SMEs, platforms as facilitator or obstacle?, new dynamics of innovation
Panel 1: New business models and innovation dynamics across sectors

Distribution of the 100 largest firms in terms of sales among the top R&D firms within the software and computer services and heavy industries sectors in 2015

Panel 1: New business models and innovation dynamics across sectors

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<th>Questions to address</th>
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<td>• What are <strong>new business models across sectors</strong> ranging from services to manufacturing?</td>
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<td>• What are challenges and opportunities for <strong>different actors</strong> within those sectors, notably SMEs?</td>
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<td>• What are impacts <strong>on innovation processes</strong>, including in particular new forms of collaborations?</td>
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<table>
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<th>Participants</th>
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<tr>
<td>• Chair: <strong>Dominique Guellec</strong>, OECD</td>
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<td>• Speakers:</td>
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<td>– <strong>Prof. Tim Vorley</strong>, Sheffield University Management School</td>
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<td>– <strong>Alistair Nolan</strong>, OECD</td>
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<td>– <strong>Prof. Margherita Russo</strong>, Università degli Studi di Modena e Reggio Emilia, Italy</td>
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<td>– <strong>Dr. Zsolt Szalay</strong>, Budapest University of Technology and Economics, Hungary</td>
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<td>– <strong>Charles Carter</strong>, Transport Systems Catapult</td>
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Panel 2: Smart cities & regions in the digital transformation: how to ensure inclusive developments?

Regional patenting intensity in OECD countries (average 2011-13)

Panel 2: Smart cities & regions in the digital transformation: how to ensure inclusive developments?

- **The digital transformation facilitates connections** but proximity still matters.
- Is the geographic distribution of innovation activities getting more skewed as *the best can now collaborate with the best*?
- **Smart regions as role** models of what the digital can do to sustainable and inclusive growth (transportation, living, etc.)
### Panel 2: Smart cities & regions in the digital transformation: how to ensure inclusive developments?

#### Questions to address

- How can **regional clusters** best contribute to the digital transformation?
- **Territorial inclusiveness:** What role do dynamic urban and rural environments play in addressing wider SDGs?
- How can cities become **smart cities**? What role can policy play?
- Smart cities and **living labs** have been used to implement new technologies. Can they support a new way of designing policies?

#### Participants

- **Chair:** Brian MacAuley, Digital Catapult
- **Speakers:**
  - Ben Hawes, Department for Digital, Culture, Media & Sport
  - Nicola Yates, Future Cities Catapult
  - Dr. Ed Manley, University College London
  - Lee Omar, Red Ninja Studios
Panel 3: Policies for technology development, diffusion & collaboration

- **Diffusion challenges** with rapid speed of change, complexity and uncertainty
- Public research institutions as **platforms, technology development, trusted source**
- **New forms of collaboration** and models for open innovation
- **Data and research support** as an infrastructure for next developments
Panel 3: Policies for technology development, diffusion & collaboration

### Questions to address

- **How can public research institutions** best support the digital transformation?

- **What are examples of public-sector-led technology development** for the digital transformation? Why were those developments not done by the private sector? How did they take on board multi-disciplinarity?

- **What programmes best facilitate technology diffusion**? What are the challenges and obstacles to successfully implement those policies?

### Participants

- **Chair**: Caroline Paunov, OECD

- **Lead intervention**: Tera Allas, McKinsey

- **Speakers**:
  - Peter Leihn, Data 61, Australia
  - Joe Scarboro, Touchpaper, 3beards & Unicorn Hunt
  - Jerry Sheehan, National Library of Medicine, NIH, United States [by WebEx]
  - Christopher Haley, Nesta
Panel 4: What policy instruments are needed to develop vibrant innovative eco-systems?

- **Adopting a start-up mentality** (“fail fast, learn fast”) to deal with higher risk/uncertainty? Is it compatible with evaluation standards?
- **Provide the right research environment**: multidisciplinarity, responsiveness to demand, cluster-wide transformations
- **Steer digital transformation towards sustainable and inclusive objectives**
- **Design programmes that have impact, are robust to rapid change and technological complexity**: additionality (what would get done anyway?, taking the best approach (who is best placed to take decisions on core technologies?), ...
Panel 4: What policy instruments are needed to develop vibrant innovative eco-systems?

**Questions to address**

- What **specific challenges** should public policy address to enable the context of digital transformation?
- What are implications of different impacts across sectors, firms and geographic spaces on **most suitable instruments** at regional and national levels?
- What are **business perspectives** on the policy instruments needed in the context of digital transformation?

**Participants**

- Chair: **David Legg**, Innovate UK
- Lead intervention: **Prof. Jonathan Haskel**, Imperial College London
- Speakers:
  - **Wolfgang Crasemann**, Federal Ministry for Economic Affairs and Energy, Germany
  - **Felicity Burch**, Confederation of British Industry
  - **Roland Sommer**, Platform Industry 4.0, Austria
  - **Marnix Surgeon**, European Commission
  - **Tim Page**, Economic and Social Affairs Department Trade Union Congress (TUC), UK
Rules of the workshop: Time to discuss!

- Panel speakers have 7 minutes for their interventions
- Signs will go up at 2 minutes, 1 minute and when it is over
- To all: questions and discussion points are what we need for the workshop
Further information

The **summary of the workshop discussions** and all presentations will be available at:
https://www.innovationpolicyplatform.org/LondonWorkshop2017

**OECD Digital and Open Innovation project** website:
https://www.innovationpolicyplatform.org/TIPdigital

**OECD Working Party on Innovation and Technology Policy (TIP)** website:
https://www.innovationpolicyplatform.org/CSTP/TIP

**OECD Going Digital project**: http://www.oecd.org going-digital/

**OECD Innovation for Inclusive Growth project**: http://oe.cd/inclusive

THANK YOU!

Contact: **Caroline Paunov**, Caroline.Paunov@oecd.org
References

• OECD (2017), Making Innovation Benefit All: Policies for Inclusive Growth
• Digital Innovation and the Distribution of Income (2017), Contribution to the NBER CRIW Conference on Measuring and Accounting for Innovation in the 21st Century (with D. Guellec)
• "Has the Internet fostered inclusive innovation in the developing world?." World Development 78 (2016): 587-609 (with V. Rollo)