



# **“The impacts of the digital transformation on innovation across sectors”**

## **Introduction to today’s workshop**

*Caroline Paunov*

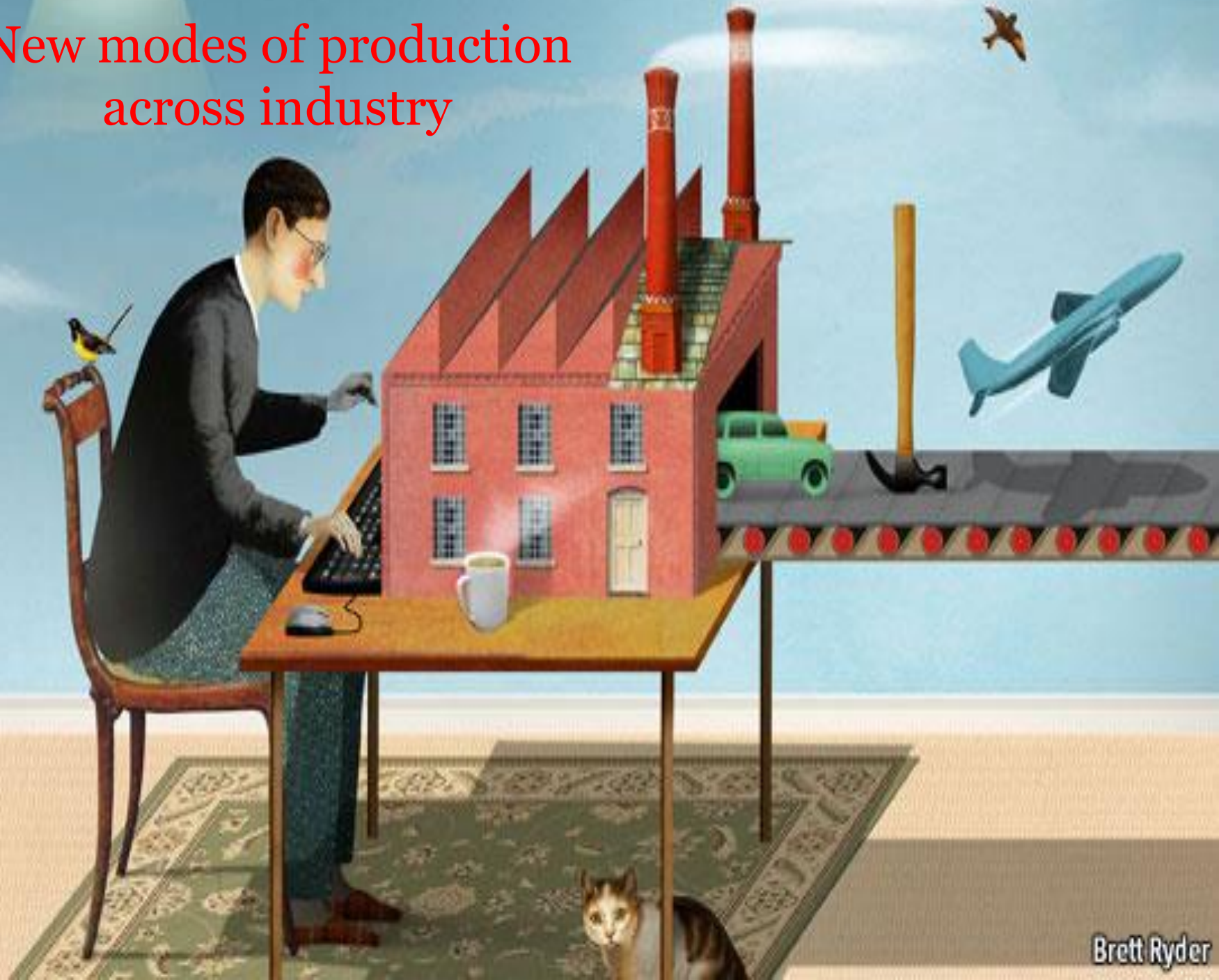
London, 21-22 September 2017

PEDESTRIAN RECOGNIZED  
WARNING!!!

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





## Addressing the innovation policy questions

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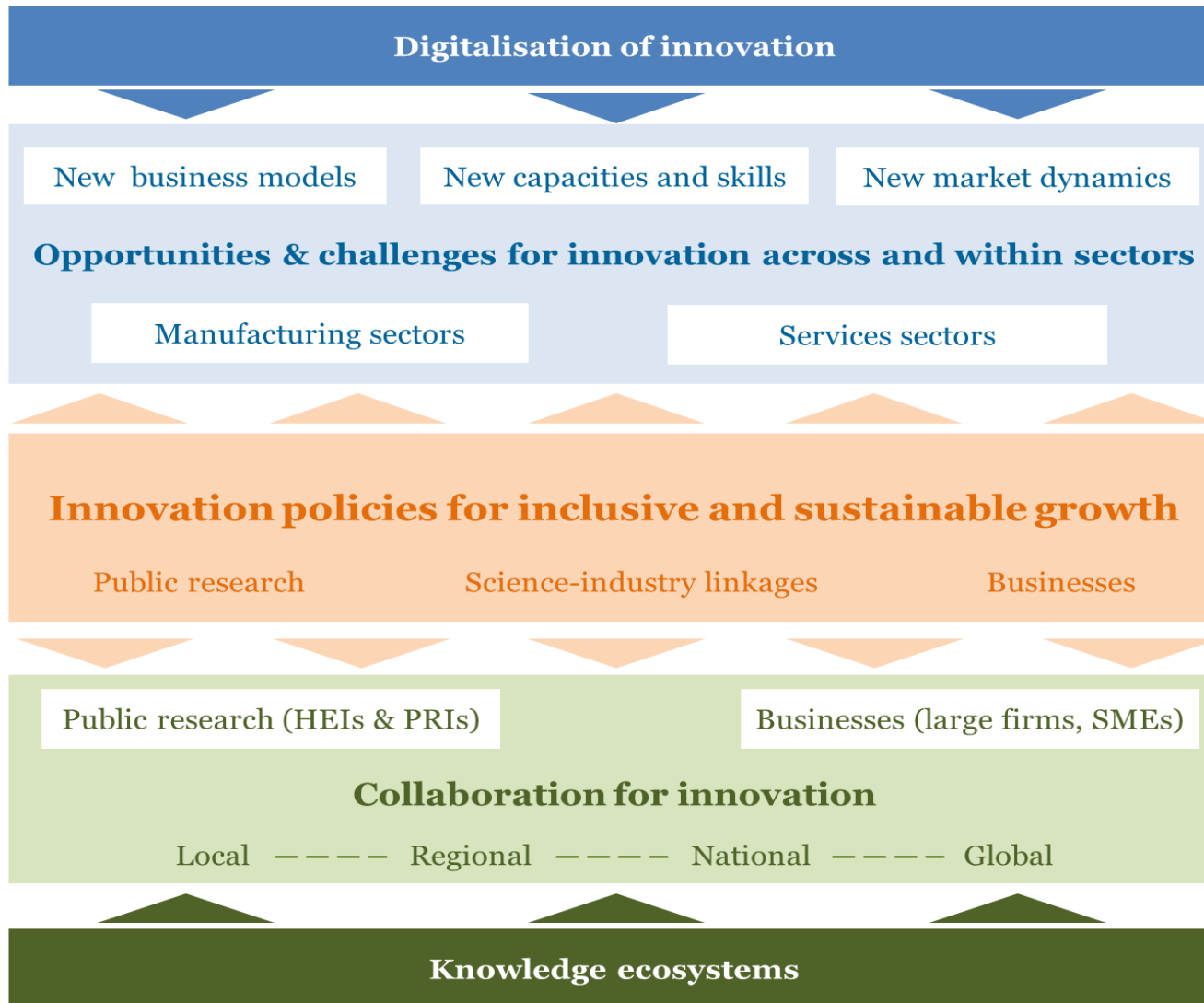
What **innovation policy frames and instruments allow steering the transformation** for inclusive and sustainable growth?

- ⇒ 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)



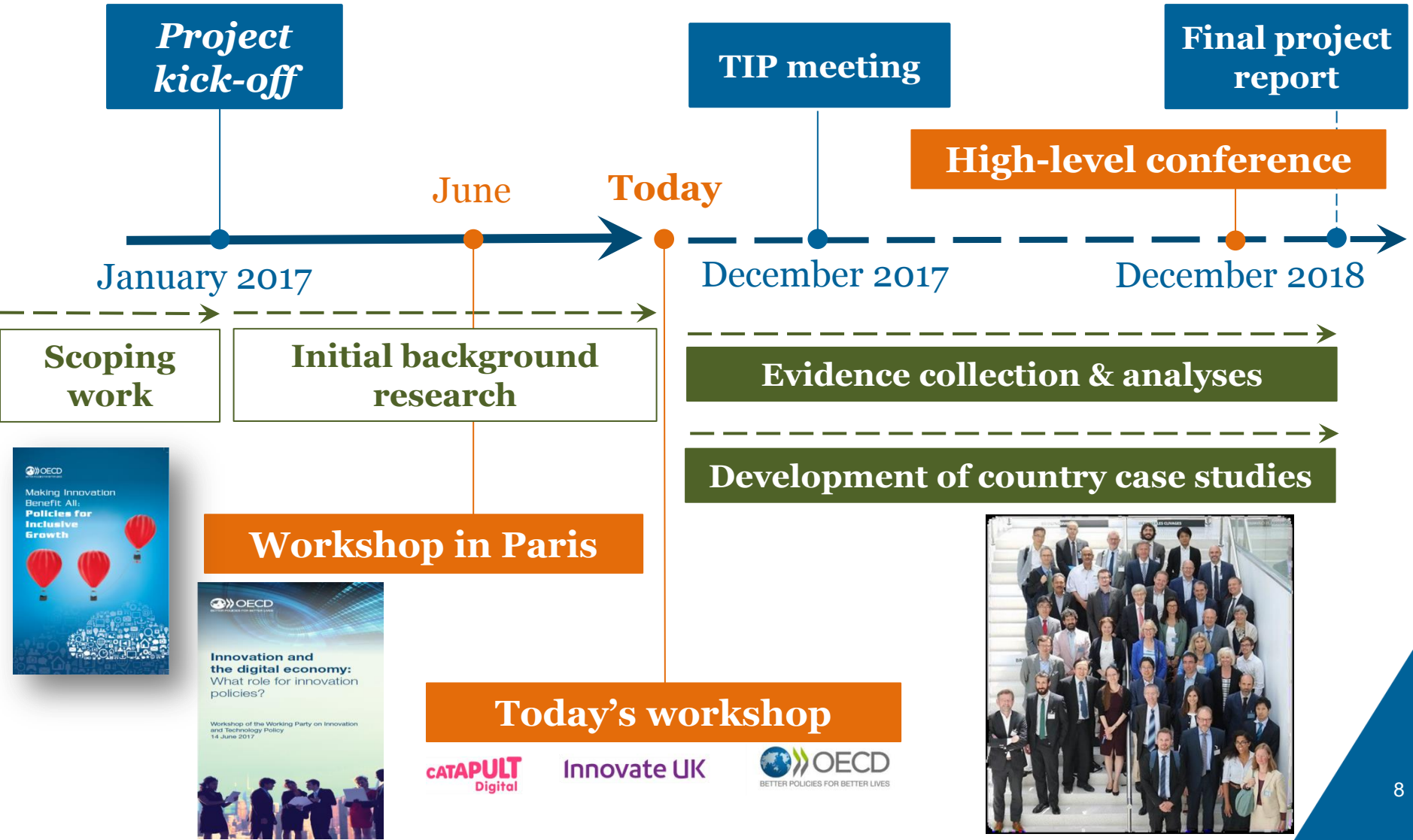


# Project scope





# Project timeline







# Agenda of the workshop

## 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

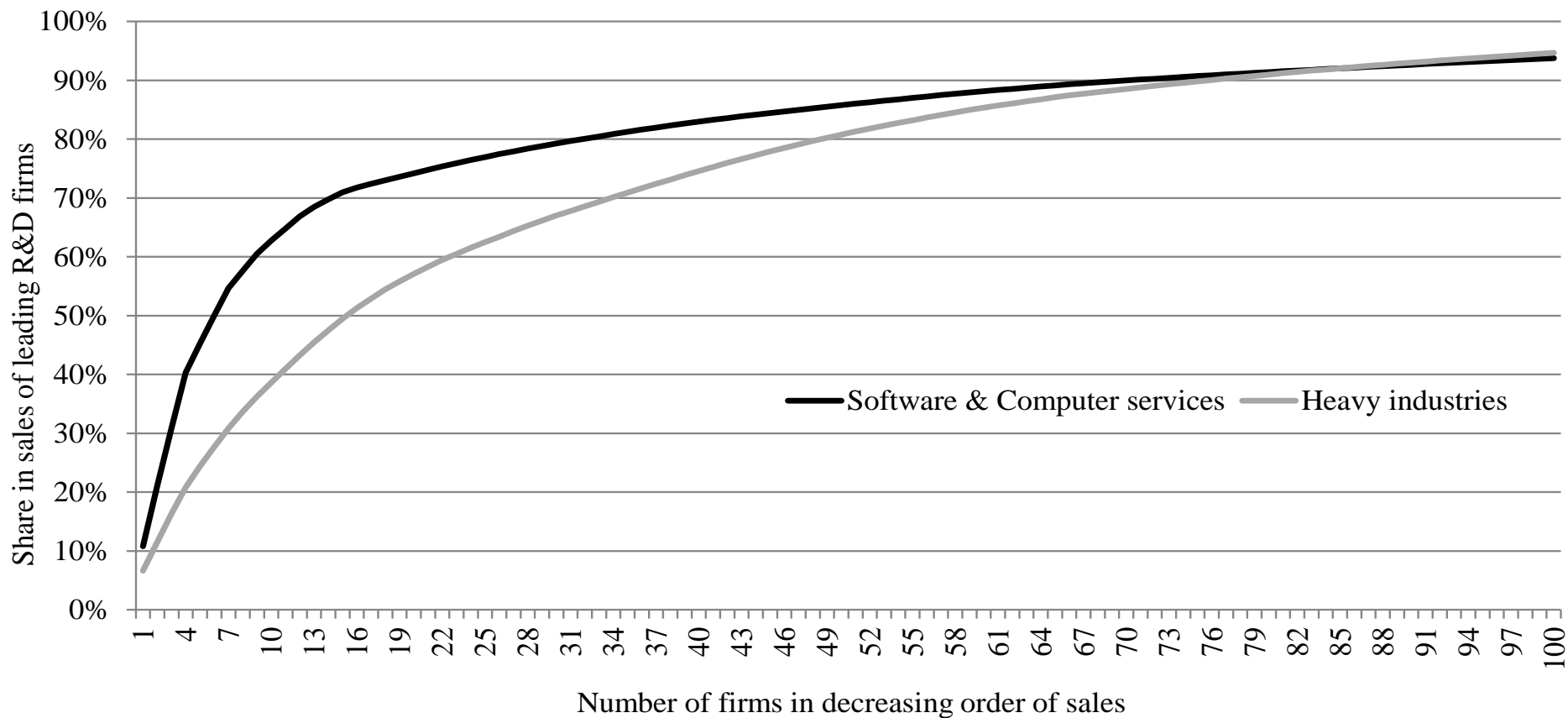
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- ***Servitisation*** (of manufacturing industries) → towards a redefinition of sectors & core business models, different innovation imperatives & competencies needed
- ***Data-driven innovation*** → access and exploitation of data & new collaborations 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



**Source:** Guellec and Paunov (2017) based on EU (2016), EU R&D Scoreboard 2016.





# Panel 1: New business models and innovation dynamics across sectors



## Questions to address

- What are **new business models across sectors** ranging from services to manufacturing?
- What are challenges and opportunities for **different actors** within those sectors, notably SMEs?
- What are impacts **on innovation processes**, including in particular new forms of collaborations?



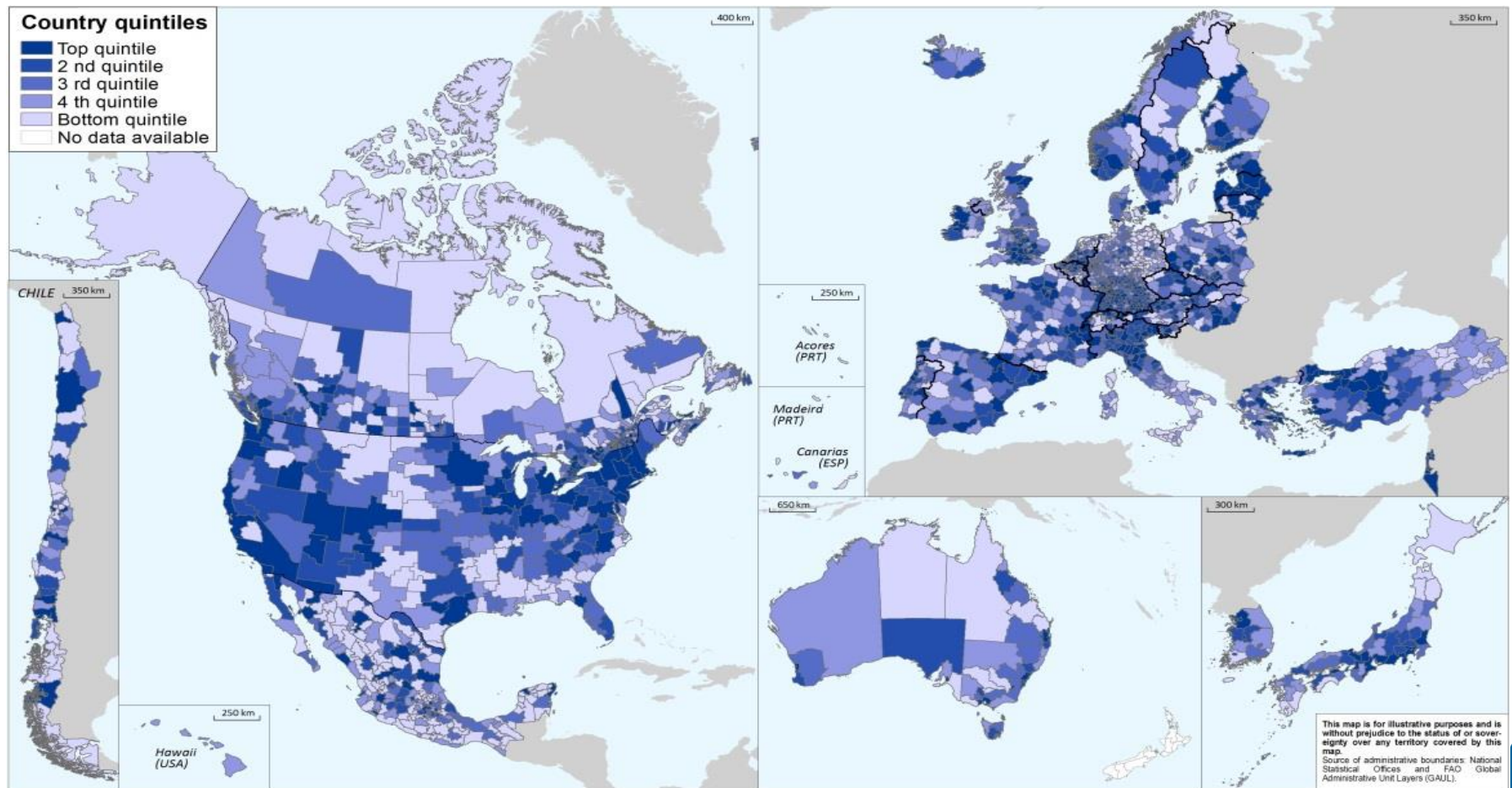
## Participants

- Chair: **Dominique Guellec**, OECD
- Speakers:
  - **Prof. Tim Vorley**, Sheffield University Management School
  - **Alistair Nolan**, OECD
  - **Prof. Margherita Russo**, Università degli Studi di Modena e Reggio Emilia, Italy
  - **Dr. Zsolt Szalay**, Budapest University of Technology and Economics, Hungary
  - **Charles Carter**, Transport Systems Catapult



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

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

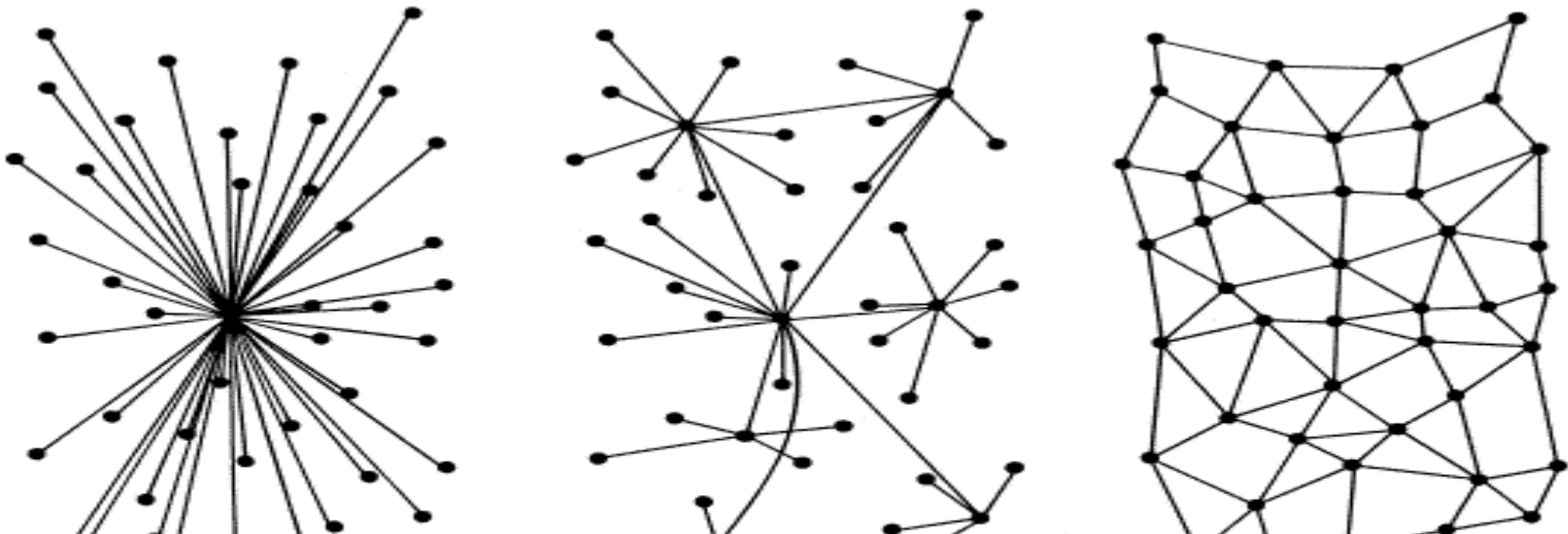


Source: OECD (2017) based on OECD (2016b), *OECD Regional Statistics* (database).



## 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

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- **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?

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- **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:** multidisciplinary, 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 !

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





## Further information

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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!

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# References

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- 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 21<sup>st</sup> Century (with D. Guellec)
- "Has the Internet fostered inclusive innovation in the developing world?." *World Development* 78 (2016): 587-609 (with V. Rollo)
- "Inclusive Innovation Policies: Lessons from international case studies", *OECD Science, Technology and Industry Working Papers*, 2017/02, OECD Publishing, Paris (with S. Planes Satorra)
- "Innovation and Inclusive Development: A Discussion of the Main Policy Issues", *OECD Science, Technology and Industry Working Papers*, No. 2013/01, OECD Publishing, Paris.