

TIP Digital and Open Innovation project

ARE IMPACTS OF DIGITAL TRANSFORMATION ON INNOVATIONS SIMILAR ACROSS SECTORS?

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Workshop 'How to leverage the potential of the digital transformation for innovation and research?'

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TIP project on Digital and Open Innovation

Digitalisation of innovation



Innovation policies for inclusive and sustainable growth

Public research

Science-industry linkages

Businesses

Collaborative innovation



The rise of smart and connected products

Sensors, microprocessors, data storage & connectivity increasingly embedded in products → enhance functionalities & capabilities















Data is a key input for innovation

- Explore new areas of product development (e.g. smart farming, on-demand mobility services)
- Improve & customise services

e.g. **Retailers** collect & exploit huge amounts of **consumer and sales data** to:

- Predict consumer preferences
- Personalise services and advertisement



 Optimise development, production & distribution processes (e.g. predictive maintenance; smart stock management systems based on deep learning algorithms)



Digital innovations introduce new & rapid innovation cycles

 Changes in processes of design, prototyping & testing (3D printing, virtual simulations)



 Release of **pilot versions** to the market & regular upgrades (based on consumer's feedback)



 Product marketplaces (e.g. eBay, Amazon) facilitate commercialisation large scale





Drivers differ across sectors

- Opportunities offered by new digital technologies
- Consumer needs & demands
- Degree of market competition
- Opportunities offered by new platforms

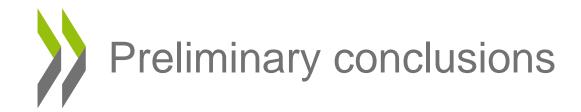




Barriers to the digital transformation also differ

- Access to data for innovation purposes (e.g. restrictions to access sensitive health data)
- Capacities & financial resources to adjust to the transformation
- Awareness of opportunities and resistance to change
- Technology lock ins





- General trends affecting all sectors requiring cross-cutting innovation policy approaches:
 - Proliferation of smart and connected products
 - Data as core inputs
 - Speed of change in innovation practices
- Specificities affecting sectoral adoption rates:
 - 1. Ease of digitalisation
 - 2. Consumer attitudes / demand
 - 3. Market competition
 - 4. Capacities & enabling platforms
 - 5. Data access conditions
- Actors within sectors are differently prepared to adjust to changes



Digital and Open Innovation project:

www.innovationpolicyplatform.org/TIPdigital

OECD Working Party for Innovation and Technology Policy:

http://oe.cd/tip

www.innovationpolicyplatform.org/cstp/tip

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