



Working Group on System Dynamics for System Innovation

First meeting, 12-13 February 2024, Online (Webex)

WEBEX links:

12/02: [Join the meeting](#)

13/02: [Join the meeting](#)

Meeting purpose and scope

The aim of the first meeting of the Working Group will be to introduce the JRC project on system dynamics, obtain feedback from experts and policy practitioners, and provide a space for collective learning, reflection, and co-creation around systems thinking, measurement and modelling.

About the JRC project “System Dynamics for System Innovation.

There is mounting interest in innovation policy approaches that can lead to transformative societal outcomes which include rapid economic development, environmental sustainability and an inclusive society. These theoretical developments have inspired widespread experimentation by policy practitioners. However, the growing popularity of transformative innovation policy has not yet been matched with suitable developments in measurement and evaluation frameworks and tools. Existing tools for measuring, modelling and evaluating innovation policy inputs and outcomes are unable to capture crucial features of transformative innovation policy, including tipping points, synergies, multi-level interactions and rebound effects.

A new exploratory project by the European Commission's Joint Research Centre (JRC) aims to test the feasibility and demonstrate the potential policy applications of a System Dynamics (SD) model suitable for the *ex ante* impact assessment of transformative innovation policy scenarios. The overall aim is to create the knowledge base necessary for a framework suitable for the *conceptualisation, measurement, modelling* and *evaluation* of transformative innovation policies. Its objectives over the first year are to:

- Develop a **reduced-form working prototype model** with policy applications (energy & mobility; agri-food; security & space) that demonstrate the feasibility and usefulness of the approach
- Contribute to the **definition of design specifications for a fuller and more rigorous model** of the system dynamics of transformative socio-economic change

The Working Group meeting aims to initiate a co-creation process that brings together:

- Pioneer **policy practitioners striving for system-level change**, as the final users of policy evaluations
- JRC **researchers** and **external experts** on the measurement of policy inputs and outcomes, system dynamics models, new industrial policies and transformative innovation policy.

AGENDA, 12-13 February 2024

12 February

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09:00-09:05 Welcome

- Carlos TORRECILLA, Head of Unit B7, Innovation Policies and Economic Impact, Joint Research Centre (JRC), European Commission

09:05-10:00 JRC Project: System Dynamics for System Innovation

- Dimitrios PONTIKAKIS, Joint Research Centre (JRC) B7, European Commission
- Q&A

10:00-10:30 Keynote Address: Industrial policy reloaded: Greening Industrial Ecosystems and the New Competition

- Prof. Antonio ANDREONI, SOAS, University of London (UK)
- Q&A

10:30-10:45 Coffee break

10:45-11:00 DG R&I's on-going work on system dynamics

- Bianca CAVICCHI, European Commission, DG Research and Innovation
- Q&A

11:00-11:30 From project funding to sustainable development: the advantages and challenges of interrogating the dynamics of R&I policy impact

- Igor OLIVEIRA, Technical University of Denmark (DK)
- Q&A

11:30-12:00 Keynote Address: Global Tipping Points Report 2023

- Steven SMITH, Global Systems Institute, University of Exeter (UK)
- Q&A

13 February

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09:00-09:05 Welcome

- Margherita BACIGALUPO, Deputy Head of Unit B7, Innovation Policies and Economic Impact, Joint Research Centre (JRC), European Commission

09:05-10:00 JRC Project: System Dynamics for System Innovation (*repeat/continued discussion*)

- Dimitrios PONTIKAKIS, Joint Research Centre (JRC) B7, European Commission
- Q&A

10:00-10:30 Keynote Address: The diffusion of renewable energy technology: an analytical framework

- Prof. Anna BERGEK, Chalmers University (SE)
- Q&A

10:30-10:45 Coffee break

10:45-11:15 OECD Project Presentation: Quantifying Industrial Strategies

- Luis DIAZ, OECD Directorate for Science, Technology and Innovation
- Q&A

11:15-12:15 Advisory Board meeting (*by invitation only*)