New Approaches to Economic Challenges

NAEC Innovation LAB

OECD
BETTER POLICIES FOR BETTER LIVES

NEW APPROACHES TO ECONOMIC CHALLENGES (NAEC)

NAEC Innovation LAB

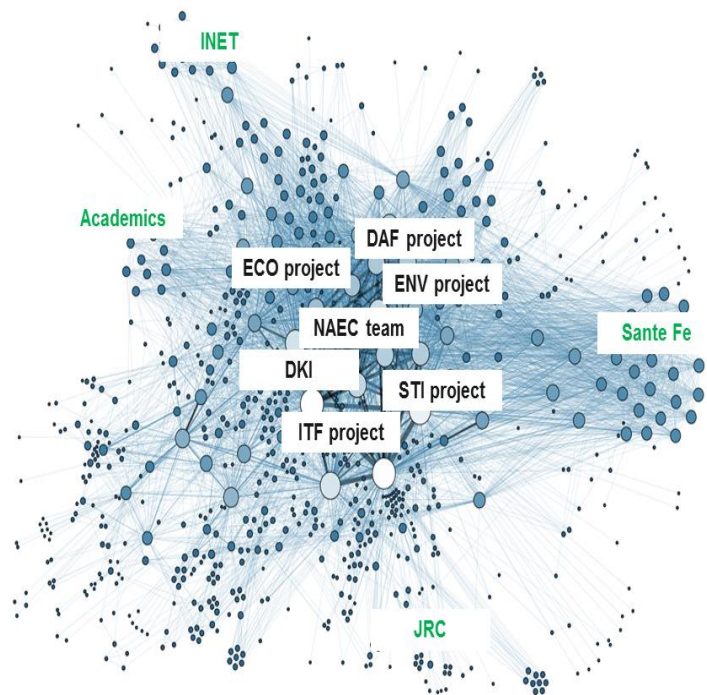**Approaches to Policy in a Complex World**

Implementing new approaches to economic challenges requires new tools and techniques to make sense of a wide range of economic and social phenomena in a complex world.

Digital innovation is opening up new possibilities for data generation and policy analysis that need to be explored and mastered.

The aim of the NAEC Innovation LAB, is to encourage the adoption of new and innovative analytical methods across the OECD to address new policy questions and bring new policy insights.

It will help to continuously review and upgrade the OECD's analytical capabilities, promote co-operation across the organisation as well as provide a platform to engage with broader research communities.

The LAB is joint Initiative of the NAEC Unit in the Office of the Secretary General and the Office of the Chief Economist.

LAB OBJECTIVES

The aim of the LAB is to provide a space for researchers across the OECD to work together on specific projects that apply and experiment with new analytical tools and techniques so as to diversify and strengthen the OECD's analytical tools. Ideas and approaches emerging from the NAEC initiative can be tested and assessed further to demonstrate their value and policy relevance. Some OECD Directorates are already undertaking small-scale "sand box" projects, but these efforts require more support. The LAB can facilitate this by providing cross-fertilisation, scale and incubation.
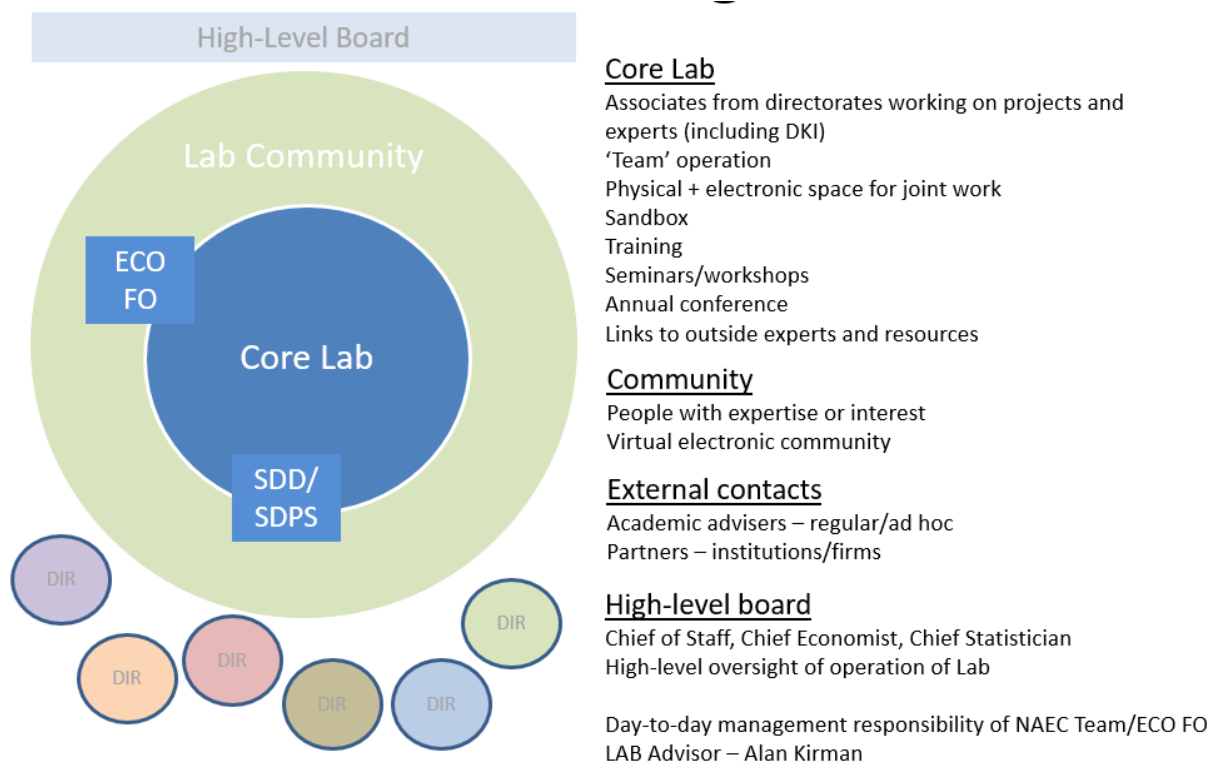
The background to the LAB, its objectives and aims, its design and what it will do is outlined in the NAEC Innovation LAB blueprint

LAB DESIGN

The LAB operates in a dynamic, open and flexible way within the OECD framework. It is supported jointly by: the Chief of Staff through the NAEC team in the Office of the Secretart-General; the Economics Department through the Chief Economist's Office; and the Statistics and Data Division (SDD) through the Chief Statistician. Individual LAB projects contribute to the work of the OECD Committees, while the Economic

Policy Committee (EPC), Committee on Statistics and Statistics Policy (CSSP) and the NAEC Group play a role in ensuring the robustness and policy-relevance of the work of the LAB overall.

LAB work is primarily driven by projects principally funded by OECD Directorates in support of their agreed Progammes of Work. The LAB aims to encourage OECD researchers to undertake innovative projects, whether through large-scale projects or small-scale work, and to provide the necessary support. A limited amount of start-up co-funding for projects will be available through the LAB.

Core Lab
Associates from directorates working on projects and experts (including DKI)
'Team' operation
Physical + electronic space for joint work
Sandbox
Training
Seminars/workshops
Annual conference
Links to outside experts and resources

Community
People with expertise or interest
Virtual electronic community

External contacts
Academic advisers – regular/ad hoc
Partners – institutions/firms

High-level board
Chief of Staff, Chief Economist, Chief Statistician
High-level oversight of operation of Lab

Day-to-day management responsibility of NAEC Team/ECO FO
LAB Advisor – Alan Kirman

The LAB plays a facilitating role to incubate and connect projects in Directorates, drawing on new tools to take new approaches to policy challenges. The LAB involves a core team of researchers working together on projects. As associates of the LAB, these researchers share approaches and build common understanding. The projects and the researchers are primarily supported by Directorates, ensuring that they are part of the mainstream of Directorates and Committee work.

The LAB provides a platform for collaboration between the OECD and wider research and policy networks. This includes researchers in national governments, think-tanks, universities, research institutions and the private sector. Leveraging expertise, tools and data across these networks is key to developing the application of new tools and methods. The OECD can play an important role in connecting the development of cutting-edge techniques to policy. The LAB is a point of contact for researchers in governments looking to apply new methods in a policy context.

The LAB works closely with the OECD Statistics and Data Directorate in the context of the OECD Smartdata Framework to develop innovation policy research drawing on new sources of data and big data, including developing the necessary skills, infrastructure and partnerships.

LAB WORKSHOPS AND SEMINARS

Developing skills within the OECD and facilating exchanges with those applying or developing new techniques and methods is an important part of the LAB's role.
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27 June 2018
Seminar on modelling housing using ABM with
Marc Hinterschweiger and Arzu Uluc (Bank of England) and Adrián Carro of the Institute for New Economic Thinking (INET)

The Bank of England/Oxford team led an in-depth discussion of their work using ABM to model the housing market at the Bank of England which went into depth on the design, calibration and simulation of their model.

31 May 2018
Presentation by DataIKU of the pilot OECD Smart Data Science Platform

The Collaborative Data Science platform from DataIku complements the existing 'smart data sandbox' with data science features made easy to access and use by analysts (machine learning, text mining, policy simulation or exploration of large data). It was selected by a panel of OECD experts as part of 2017 call for tender 'data services and solutions'. DataIKU presented the platform and illustrated its value with several examples relevant in the OECD context. Analysts were also invited to present their potential uses of the project and 10 projects were selected for pilot.

7 June 2018
Seminar on semantics
by Neil Thompson (MIT)

Neil Thompson presented his paper on "Science Is Shaped by Wikipedia: Evidence From a Randomized Control Trial" with a focus on the technical aspects of his work on semantic analysis and discussed the use of AI-based techniques in economics. Caroline Paunov, of the OECD Science, Technology and Innovation Directorate, introduced the seminar by providing a short discussion of the relevance of semantics for work conducted in the OECD context and giving concrete examples of applications in the field of science, technology and innovation policy analysis.

20 October 2017
Workshop on financial markets, network analysis and agent-based models

A technical meeting on methodologies and tools for understanding financial markets with Rick Bookstaber, one of the world's leading risk managers, and Jean-Philippe Bouchaud, Capital Fund Management and École Polytechnique ABM background paper

29 September 2017
Workshop on new perspectives on the labour market:
Policy applications using agent-based modelling (ABM)

In a session on macro-economic insights on labour markets using ABM Jean-Philippe Bouchaud (Capital Fund Management and École Polytechnique) discussed a methodology, inspired by statistical physics, that helps in understanding large macro-economic fluctuations. A session on Micro insights on the Labour Markets Using ABM, with Gérard Ballot, Université Paris 2 Panthéon-Assas, and Jean-Daniel Kant, Université Pierre et Marie Curie (UMPC), reviewed French Labour Laws using a model of the recent French labour market. An agent-based approach to evaluate the impact of economic dismissals facilitation on the French labor market

LAB ACTIVITIES

Current LAB projects include:

- Using agent-based modelling (ABM) to analyse financial interactions and network effects in the global economy based on a stylised representation of the financial system and the behaviour of key agents. This would highlight policy spillovers and show how policies and institutions affect resilience.

- Using machine-learning techniques to improve short-term macroeconomic nowcasting/forecasting, and to understand the non-linear interactions between growth-enhancing policies and inclusive growth outcomes, allowing for rich interactions between policies and with country circumstances. This opens the way to give model-based policy advice that is more country specific.

- Using big data approaches to understand how prices are being affected by technological change and exposure through trade and global value chains with implications for well-being and policy.

LAB CONTACTS

For further information on the NAEC Innovation LAB, contact:

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