



STIxNET

Welcome to STIxNET

STIxNET is a network of Science, Technology and Innovation (STI) policy and practice experts. Its aim is to assist policymakers worldwide through enhanced peer-to-peer collaboration. STIxNET will aim to provide an increasing diversity of expertise, thus improving the inter- and multi-disciplinary quality of policymaking in the STI domain.

STIxNET brings together years of experience and insight and practical experiences of what works and what does not in STI policy development and implementation and innovation practice. This is doubly important given the challenges of the attainment of the SDGs, and the important role that technology needs to play in Agenda 2030.

STIxNET is hosted by the United Nations Conference on Trade and Development.





STIXNET

Experts



Dr. Jean-Eric Aubert
 With career expertise in science, technology and innovation policy and with experience in countries of all development levels, gained as an international civil servant at OECD and the World Bank. Dr. Aubert consults for many international organizations and institutions.

Challenge: working in a country with innovation potential and subsequent possibilities for economic and social development, but being blocked by government inertia and rent seeking.

Solution: discovering and stimulating an organisation and group of people able to act sustainably as change-makers with a systemic perspective.



Dr. José Luise Solleiro
 Industrial Engineer and PhD in technology management. Currently, he is senior researcher at the Institute of Applied Science and Technology of the National University of Mexico.

Challenge: most firms and managers in developing countries do not have enough knowledge on innovation management and technology transfer.

Solution: educate managers and to support their decision-making process with sound technical and strategic information.



Catherine Adeya (PhD)
 Results-driven Information Scientist with over 20 years experience in multidisciplinary environments, in the public and private sector. Expert in multilateral agency operations, excellent skills in research and policy development.

Challenge: the tension between the need for innovation and the pressure to maintain continuity, social order and stability, distrust in public and private institutions.

Solution: access to newer technologies to improve inclusion; policymakers need to be more engaged with academics, industry and civil society to support this.



STIXNET

Experts



Prof. Paul Trott
Professor of Innovation Management, University of Portsmouth, UK.

Challenge: innovation in high-tech industries is very different to innovation in low-tech industries.

Solution: low-tech industries innovation occurs within the manufacturing process.



Juana Rosa Kuramoto Huaman
Policy specialist in innovation and territorial development.

Challenge: lack of policy instruments to promote local and territorial innovation.

Solution: design policy instruments for innovation based on bottlenecks detected in local production chains.



Robert D. Atkinson
Founder and president of the Information Technology and Innovation Foundation (ITIF), a think tank for science and technology policy. Leads a team of policy analysts that is shaping the debate on a host of critical issues at the intersection of technological innovation and public policy.

Challenge: to develop a broad understanding of the need for the right kinds of innovation policies and generating the support among policy makers; helping them to oppose harmful policies.

Solution: generate high quality and relevant research and policy analysis work to help policymakers, the media and others, of the importance of effective innovation policies.



STIXNET

Experts



Carlo Pietrobelli (PhD)
Professor and policy advisor on innovation and industrial development and policy. Currently Professor of Economics at University Roma Tre, Italy, and at United Nations University UNU-MERIT, Maastricht. Policy advisor to governments in Africa, Asia, Europe and Latin America

Challenge: develop and implement global value chains and cluster development policies to better promote innovation in firms and organizations.

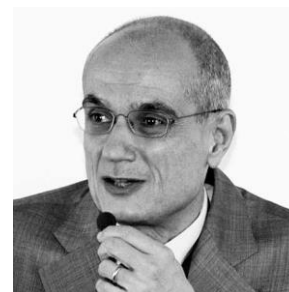
Solution: a systemic approach is required to enhance innovation, and that policy evaluation is a priority.



Faye Duchin (PhD)
Develops economic models to evaluate alternative paths to reduce inequalities and environmental pressures, with trade based on shifting comparative advantages. Scenarios consider technological alternatives, resources, and shifts in demography, consumption patterns, and policies.

Challenge: analysis are often biased from a one-country perspective; mega-projects have int'l and private support, but we have limited ability to learn from projects initiated locally.

Solution: global framework for country-studies should include examining total resource demand and sources and implications for regional jobs and incomes, pollution, and international trade.



Prof. Dr. Marco Vivarelli
Full Professor of Economics of Innovation. Director of the Department of Economic Policy Università Cattolica del Sacro Cuore, Milano, and Professorial Fellow UNU-MERIT, Maastricht

Challenge: the employment impact of new technologies.

Solution: innovation is labour-friendly when R&D and product innovation are considered, particularly in the high-tech sectors; potentially labour-saving when process innovation is considered (particularly in traditional sectors).



STIXNET

Experts



Mehdi Mohammadi (PhD)
 Innovation Policy and Assistant Professor at Faculty of Management, University of Tehran and also, Secretary General of Digital Economy and Smart Technology Development Council at Vice-Presidency for Science and Technology, Iran.

Challenge: the evolution mechanisms of Technological Innovation systems in developing countries: what is the role of government in the formation and growth of emerging technologies?.

Solution: STI policies need to be in context with the level of maturity of national technological systems and depend of different factors like size of market, historical path dependencies.



Prof Roberta Rabelotti
 Professor of Economics at the Università di Pavia. Research on development economics, innovation in developing countries, clusters, small enterprises, multinationals and Global Value Chains. Worked with IADB, EC, OECD, UNIDO, ILO, ECLAC-UN, UNCTAD.

Challenge: Global Value Chains interact with Innovation Systems in multiple ways and have implications for innovation capabilities of firms in developing countries.

Solution: Policies aimed at capturing gains from GVC integration include support for firms' innovation or collaborative innovation involving firms and universities, targeted training programs; and investments in services such as standards and certifications. .



Dr Adrian Ely
 Senior Lecturer in SPRU - Science Policy Research, Sussex University. Convened Innovation, Sustainability, Development: A New Manifesto. Worked on the "Rethinking Regulation" project. Responsible for SPRU's executive training strategy.

Challenge: develop thinking and analysis on how regulations can help improve the sustainable development impact of STI policy and practice.

Solution: deeper engagement with broad stakeholders and international community, given global nature of STI; developing better understanding of the transformative nature of STI.



STIXNET

STIXNET Blog



15 May 2019, Osterbek, Norland

Industry 4.0: Development-friendly policy options?

Dr. Mae B. Nowital

Bildenbrag Institute for Future Technologies

Industry 4.0 raises the need for changes in the labour market, education and skills. It puts more pressure on companies that, through the involvement of modern technologies, must adapt their approaches to managing operational processes. In order to succeed, Industry 4.0 has to deliver economic growth fuelled by renewable energy sources and discard coal and other fossil fuels, which have served humanity at least since the industrial revolution.

After centuries of mining, stocks of fossil fuels are seriously degraded, rapidly losing its former qualities. The change to renewable sources of energy is then an obligatory one. However, it is still unclear at what extent Industry 4.0 will impact on long-term sustainable growth. Only 1 in 10 studies on Industry 4.0 are concerned with sustainability, while even less deal with impact on developing countries and what could be the options for a needed policy response...

Previous blog posts:

- 1 May 2019
Dr. Frederic English
Technological progress and relations between labour and capital: was Marx right? [\[read\]](#)
- 1 April 2019
Prof. Donald Sweethill
Technology transfer in a post-truth political economy: social media blurs technology and market discovery [\[read\]](#)
- 15 March 2019
Dr. Michael Pendulum
Post-modern scientific research: implications for innovation systems policy framing [\[read\]](#)



STIXNET

News & Events



Commission on Science and Technology for Development

The twenty-second session of the Commission on Science and Technology for Development (CSTD) will be held at the Palais des Nations, in Geneva, Switzerland from 13 to 17 May 2019. Priority discussion themes will be the impact of rapid technological change on sustainable development and the role of science, technology and innovation (STI) in building resilient communities, including through the contribution of citizen science. [\[read more\]](#)



Capacity-building for STI for SDGs and Agenda 2030

The second IATT/WS6 regional workshop produced by UNCTAD, UNU, UNIDO, and ECLAC, in cooperation with local counterparts SENACYT will be held in Panama City, from 7 to 10 May 2019. [\[read more\]](#)



STI Policy Reviews: New requests in pipeline

The 17th STI Policy Review will be soon under way. The STIP team has received a request from the Government of Norland and will be engaging with STIXNET experts in defining the terms and scope of the review. [\[read more\]](#)

[Scroll down for more >](#)



STIXNET

Frequently asked questions

What is science?

Science is a system of knowledge that is concerned with the physical and natural world and its phenomena and works to unveil general truths and the operations of fundamental natural laws. Producing scientific knowledge requires unbiased observations and systematic experimentation using the scientific method.

What is technology?

Technology is the systematic theoretical and practical knowledge and skill used in the process of production or service delivery. Technology is not a finished product or service. Technology includes the entrepreneurial expertise and professional know-how needed to deliver products and services (UNCTAD; 1985, 2014a).

What is invention?

Inventions are new or novel practical applications of knowledge, technology and ideas that come from experience, scientific enquiry and research and development.

What is innovation?

Innovation is the process of using knowledge and technology to:

- develop new products, services and processes,
- improve existing products, services and processes , or
- improve the production or performance of products, services and processes,

... in ways that produce market value, or social benefit, or both.

The Oslo Manual (OECD/Eurostat, 2005), define innovation as “the implementation of a new or significantly improved product (good or service) or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.”



STIxNET

Contact

STIxNET

UNCTAD/DTL
Palais des Nations
1211 Geneva 10
SWITZERLAND

Email: stixnet@unctad.org
Telephone: +41 22 917 1234

