



# OECD country reviews of national innovation system- An introduction

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# Outline

- OECD country reviews of NIS:
  - Background of the new innovation reviews
  - Features, objective and focus of the new reviews
  - Scope and Process
  - Impact
- Insights from OECD China innovation review: a special full-fledged county review
  - Background and rationale
  - Objectives and design
  - Implementation
  - Roadmap
  - Experience learned

# OECD Country S&T reviews

## Historical background of OECD S&T reviews

- Reviews of *S&T policy* were carried out since early 1960s, until mid-1990s, concentrating in two periods:
  - 1963 - 1974 (19 reviews)
  - 1981 - 1996 (19 reviews)
- 1996-mid-2000: no reviews; a shift of focus on
  - NIS approach as an organising framework for new reviews;
  - thematic reviews to explore specific aspects of S&T policies more in-depth, and for comparisons among smaller groups of countries.

# A new wave of country innovation reviews since mid-2000s

- Since 2005, a renewed interest in NIS reviews;
- Completed: Luxembourg, Switzerland, New Zealand, Chile, South Africa, and China;
- Ongoing I: Norway, Korea and Mexico;
- Ongoing II: Hungary, Greece, Turkey;
- Reviews requested for 2008-9: Russia, and a number others under discussion, etc.

## Factors behind the renewed interest in innovation policy reviews

- **Knowledge economy:** Innovation a driver for growth, and Innovation policy has moved up on the policy agenda, and has become closer to the core of economic policy making;
- **Globalisation:** Many countries perceive a need of making their innovation policy more effective, not least to better respond to the challenges and opportunities of globalisation;
- **NIS framework approach:** Recently there has been renewed interest in *overall* assessments of innovation policy, based on an innovation systems framework
- **Competitiveness concern:** There is a strong interest in the relation between innovation policy and innovation performance and economic performance/competitiveness
- **Broad interest:** The interest for an OECD review is shared by countries of different levels of economic development and innovation performance, both Members and non-Members of the OECD, reflecting an interest in int'l benchmarking and learning.

# Features of new NIS reviews

- Carried out under the auspices of the OECD's Committee for Scientific and Technological Policy (CSTP) –benefits from many thematic work of the Committee/ and the review, which mutually reinforce each other
- Scope: S&T and innovation
- Voluntary: self-funded
- Timing of the reviews is often chosen according to the client country's political and strategic policy needs
- An individualized service: Reviews are tuned to specific needs of countries and to address country specific priority issues, etc., through more tailor-made design (scoping and formulation of Terms of Reference)
- Strong orientation towards concrete recommendations across a spectrum of innovation-related policies
- Meanwhile it keeps a common core in terms of approach and cross-cutting issues (such as the impact of globalisation, and systematic efficiency etc.)
- Collective learning process: Coverage of OECD Members and Non-members, contributing to a mixed portfolio of countries, and expertise

# Objectives and focus of the new OECD innovation review

- It does not attempt to address all issues which might arise in building a stronger innovation system, but rather concentrates on those concerning the contribution of the public research organisations, including its interaction with business, and public policies
- It focuses on the governance of public research ...
- It builds on recent OECD work, especially on the links between innovation and economic performance, and on best practice policies to foster innovation
- It formulates a set of policy recommendations, but does not attempt at detailed policy design
- The deliverable comprises two parts: A short overall assessment with policy recommendations, and a background report

# Scope of the reviews: Mandatory Items

## ✓ *Mandatory items:*

- ✓ Innovation and economic performance;
- ✓ International benchmarking of innovation performance;
- ✓ Framework conditions for innovation;
- ✓ Governance of the innovation system;
- ✓ Promotion of business R&D and innovation;
- ✓ Industry-science relationships,
- ✓ Human resources for science and technology (HRST);
- ✓ Knowledge infrastructures;
- ✓ Internationalisation of R&D;
- ✓ Evaluation.



# Scope of the reviews: Special emphasis

- ✓ Special emphasis *depending on the country being reviewed*, e. g.
  - ✓ The role of higher education,
  - ✓ Entrepreneurship and SMEs;
  - ✓ Sectoral innovation issues and case studies (including services);
  - ✓ The regional dimension
  - ✓ and specific policy instruments e.g. the role of innovative clusters, etc.

# Process

- Joint drafting of Terms of Reference (ToR) signed between the OECD and an agency of the reviewed country (which coordinates with other stakeholders)
- Preparation of Background Report by the reviewed country, based on specifications provided by the OECD, which can be used as a template for self-review.
- Forming of a review team: OECD Secretariat, consultant(s), in the case of complex arrangement (e.g. China) co-ordinator
- A Fact-finding Mission (normally one week) to interview the major stakeholders in the national innovation system
- The OECD Secretariat prepares a (150-pages) draft final report containing assessments and recommendations which serves as a basis for a peer-review meeting within the OECD
- Comments by reviewed country on the draft report:
- Peer review meeting held in the OECD
- Presentation at a national conference of findings and recommendations of the country review, typically involving high-level decision makers, stakeholders and media in the country being reviewed
- Publication of the Review under the responsibility of the SG of the OECD

## An illustration: the case of Luxembourg

- Concern over the risk of erosion of current comparative advantages (in banking and legal services) under knowledge economy, and EU integration and globalisation
- Invested resource in past years to establish a public research infrastructure (government labs and, recently, the University of Luxembourg)
- Need for strategic direction for investing into future comparative advantage (innovation)
- Ready to implement OECD recommendations

# IMPACT: Luxembourg

- 9 May 2006: The main findings of the Review were presented to and discussed with **key stakeholders** at a working meeting, hosted by the **Minister of Culture, Higher Education and Research and the Minister of Economic Affairs and Foreign Trade**.
- 22 May 2006: the main recommendations of the Review were presented to the **Parliamentary Commission** for Culture, Higher Education and Research of the Luxembourg Chamber of Deputies (Chambre des Députés).
- 31 May 2006: The Draft Final Report was presented to the **public in Luxembourg at a high-level event** with the participation of the Minister of Culture, Higher Education and Research, the Minister of Economic Affairs and Foreign Trade, and the State Secretary for Culture, Higher Education and Research.
- June 2006: the **Luxembourg Chamber of Deputies had in-depth discussions** of the findings of the Review,
- Since then: Major recommendations (improving stirring/funding mechanism for PRIs, moving to performance contracts, creation of high-level advisory board for S&T policy, etc.) of the Review are already put in the process of implementation

# The outlook of the review

- Continuing strong demand for Innovation Policy Reviews
- Growing portfolio of countries examined;
- Different clusters of countries, different in terms of needs and policy agendas
- Identification of “good practices”, feedback to thematically oriented OECD work, and collective policy learning



# OECD China innovation review: a special full-fledged review

# Background and Rationale

- China is Observer in CSTP since 2001:
  - Readiness for the review
  - a search for a sustainable growth model
- China is an increasingly important player in global R&D
- Chinese government embarked in an ambitious strategy for building an innovative nation (2006-2020)
- China wishes to learn from OECD experience in promoting science and innovation
- OECD countries need to better understand Chinese innovation system and policy and its potential

# Objectives of the Review

- An in-depth and comprehensive review of the Chinese National Innovation System
- Recommend policies and fine-tuning of existing policies for improving the Chinese NIS performance and for facilitating a smooth integration of the China into the global innovation system
- Facilitate China's learning from the OECD countries' experiences
- Improve the OECD expertise on China's NIS
- Strengthen policy dialogue between China and OECD countries, notably on issues of mutual interest and impact (e. g. international mobility of Chinese researchers and the globalisation of R&D, etc.)
- In sum: *Mutual interest, benefit and two-way learning*



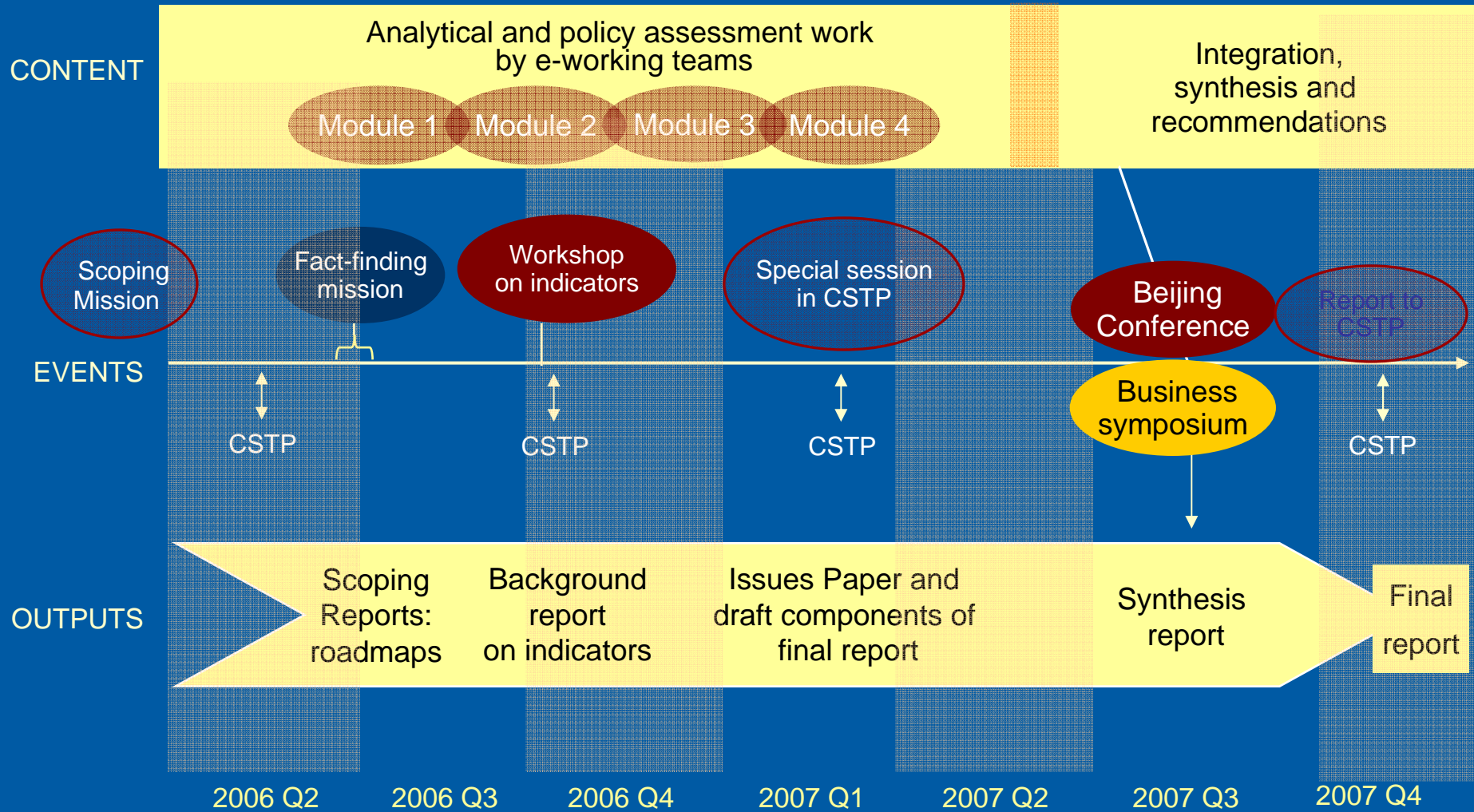
# The focus and design of the Review

- Four interrelated yet standalone modules:
  - An international comparison of innovation *indicators* in China and selected OECD countries
  - Policy and institutional analysis of Chinese NIS.
    - Case studies of regional innovation systems
  - Globalisation of R&D and implications for Chinese NIS.
  - Supply, demand and mobility of Chinese human resources for science and technology.

# Review implementation

- A joint project between OECD and Ministry of Science and Technology, China
- 2 years for implementation
- Experts from OECD member countries (Australia, Austria, Finland, France, Germany, Japan, Korea, Norway, Sweden, United States, etc), participate
- Chinese MOST funded local costs and provided experts to work with the OECD review team

# PROJECT ROADMAP



# Some experience learned

- The quality of the background paper is important to the quality of the review.
- Participative approach throughout the process is important: officials responsible for S&T policy should find time to participate in the review meetings and interviews;
- Scoping is important to help identify priority issues: a review cannot address all problems.
- Benchmarking is the means, and problem solving is the end;
- Policy recommendations are what the review can add most value;
- Due attention given to indicators and statistics - infrastructure for informed decision making, this is particularly, but not exclusively, important to developing countries.
- Field mission should reach all stakeholders at appropriate levels (policy making and implementation)
- Capacity building through participation at appropriate levels is key to maximize the learning effect: policy makers, government, researchers;
- Capacity building seminars can be a valuable side-product.
- Dissemination should be planned carefully from the outset of the project (translation of the report into national language).
- Communication of review results should aim at the highest possible level of decision-making, media and general public as well.



Thank you for your  
attention!

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