



Capacity Building Workshop on Science, Technology and Innovation Observatories in ESCWA Member Countries Phase II

Setting up National STI Observatories

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Definitions

□ DATA

Group of info that represents the attributes of a variable.
Typically results of measurements. Lowest level of abstraction
from which info and knowledge could be derived

□ STATISTICS

Pertain to collection, analysis, interpretation or explanation and
presentation of data. Describe associations, correlations, time
series or modelling.

□ INDICATORS

Based on above relates to strategic intelligence for forecasting
and strategic vigilance

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Definitions cont'

□ National Information System (NIS)

- System connecting heterogeneous actors such as business, public institutions, R&D centres, universities consumers etc.
- A complex process requiring adequate quantitative and qualitative information regarding available resources, results obtained, future scenarios...
- As a result activities such as diagnosis, forecasting analyses, studies and production of indicators have become important as instruments of the administration of science, technology and innovation

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- Institutionalization of these activities becomes important. Thus many models of a Monitoring Evaluation Systems have been developed in order to:

- Provide info on basic inputs
- Produce studies and indicators
- Facilitate flow of info
- Produce studies and research
- Predict needs, problems and opportunities

□ The MES functions best if:

- It is participatory (diversity of actors)
- Databases are coordinated
- Standards are adequate
- Experiences are exchanged and shared

Objective formulation of problems essential through provision of adequate indicators, analysis and data processing mechanisms

□ STIOs are structures countries have developed in order to enhance capacities for developing indicators, for their diffusion, for monitoring the NIS as well as gathering strategic intelligence for decision makers and stakeholders.

These activities include:

- ❑ The analysis of changes in innovation processes, in research, development and innovation
- ❑ (RD&I) system dynamics and the role of public policies;
- ❑ The identification of the relevant actors' perspectives, interests and perceptions in the formulation, adoption and implementation of policies;
- ❑ The development of reliable indicators to assess the quality and intensity of relationships,
- ❑ interrelationships and networks in the NIS

Who Benefits from STIOs

POLICY MAKERS:

1. Measure of effectiveness of public sector measures and be able to review policies. Reviewing NIS justifies public spending in the eyes of the public;
2. Monitoring indicators allows objective knowledge about the contribution of the industrial sector- adjust incentives for the sector;
3. Analysis of technological domains helps target priorities: strengthen or shift balance;
4. Production of indicators allows comparisons within a country, region or internationally.

PUBLIC RESEARCH ACTORS:

1. Allows identification of weaknesses and strengths and thus adapt efforts accordingly, allows for justification of requests and comparison which will stimulate competition;
2. Knowledge of the public sectors allows for making bridges between public institution and the private companies.

THE INDUSTRIAL SECTOR:

1. Production of indicators on the public sector helps industry to assess the strengths and weakness of public institutions for better cooperation;
2. Development of indicators on the private sectors stimulates competition within a country, region and internationally;
3. Results provided by these indicators could form the basis for requests or for developing strategic sectors like education.

SOCIETY AT LARGE:

1. The production and diffusion of indicators contribute to the transparency of national policies. Society will be far more willing to contribute when it sees results of national efforts.

DESIGN CONDITIONS OF STIO'S

- Political support tied to a clearly defined mission. Continuity of support and financial commitment for a work programme and a time-line of operations;
- Balance between governing authority of the STIO and its autonomy. Necessary to delineate functions of management and leadership. Strong leader is important;
- Balance between resources and set goals. Adequate infrastructure, equipment and access to data bases should be guaranteed.

CONT'

- ❑ Portfolio of products and guarantees for quality assurance and usefulness;
- ❑ Generation of learning capacities and ability to evolves as needs and priorities evolve and change nationally and internationally;
- ❑ A mechanism of performance evaluation and ongoing contacts with similar structures;
- ❑ Part of a network of cooperation with institutions, individuals nationally and internationally

GUIDELINES FOR STTING UP STIO'S

- ❑ Strong political will;
- ❑ Review of the existing resources and structures;
- ❑ Organizational design of the STIO;
- ❑ Costs: operational and research;
- ❑ Human resources: Director, technical tam specialised in indicators, specialist in data base management, technical support;
- ❑ A network of experts and institutions.

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- A formal constitution of the STIO can follow when all the constituent elements described above are in place. This should be done at the highest possible level and based on the complete STIO project



Thank you

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