1) Developing National Innovation Systems

The concept of a National Innovation System (NIS) to understand a country’s technological development, productivity and economic progress, embraces the idea that a nation’s innovative performance is based upon the quality of the actors in the system and the linkages for knowledge and technology flows between them. These actors are not only universities and public research institutes, but also the local industrial and service sectors (e.g. customer base, competition, supply structure, international trade), public institutes that should enable innovative activities (e.g. Patent Offices, Academies of Science and Technology and Ministries), or Financial Institutions (Banks, Venture Capitalists, etc.). A NIS approach allows for a better identification of systemic shortcomings that impede a country’s innovation performance, which can serve policy-makers in better articulating their innovation policies and resource allocations to invest in a knowledge-based economy.

Traditional approaches in technological development have been oriented towards measuring inputs (research expenditures, researches) and outputs (articles, patents, license revenues). Indicators to measure the functioning of the actors within NIS include also indicators related to knowledge and technology flows, in terms of diffusion and adoption rates, as well as in term of impact and potential of
spill-over effects. They encompass factors like the national science base, business R&I, ICT infrastructure for innovation, entrepreneurship and human resources. They help to point to possible barriers to adoption of new technology, like lack of information, financing or technical expertise, and illustrate the technical path or trajectory that a country is following, which can then be subject to more detailed analysis in the course of its evaluation and for future policy analysis.

2) You can’t manage what you don’t measure

While all countries in the MENA region recognize the importance of innovation in the road to a Knowledge Economy, an articulated understanding of National Innovation Systems (NIS) is lacking as few data are available on the countries’ capacities and performance on innovation. In western industrialised countries, tools such as the Global Innovation Index, the European TrendChart, ERAWATCH, and the OECD STI scoreboard have become useful benchmarking tools to monitor and assess countries’ innovation performance and policies. They can also improve the transparency and accountability of the policy-making process. These platforms provide examples of good practices, analytical reports on national innovation policies, and allow for cross-country or/and regional comparison. The challenge is to develop similar tools for the countries in the MENA region.

For example, the European Union’s “Innovation Union Scoreboard” provides a comparative assessment of the research and innovation performance of the EU27 Member States and the relative strengths and weaknesses of their research and innovation systems. The assessment is based on a wide range of indicators covering structural conditions, knowledge creation, innovative efforts by firms, and outputs in terms of new products, services and intellectual property. The EU Innovation Union Scoreboard draws currently on 24 indicators that are grouped into three main categories and 8 dimensions (see annex 1for all indicators):

"Enablers": the basic building blocks which allow innovation to take place (Human resources, open, excellent and attractive research systems, and finance and support);

"Firm activities“: which capture innovation efforts in firms (firm investments, linkages & entrepreneurship, and intellectual assets); and
"Outputs": measuring benefits for the economy as a whole (innovators and economic effects, including employment).

3) Expert workshop for a MENA Innovation Scoreboard

In order to develop a comparable, innovation scoreboard for the countries in the MENA-region, the European Investment Bank, through the CMI, the ESCWA Technology Centre, ISESCO, and in cooperation with the League of Arab States, will organize on the 19-20 November 2014 an expert meeting at the Arab League headquarters in Cairo, Egypt. The workshop is tailored to people in charge of establishments within National Innovation Systems, like National Industry Chambers or Industrial Associations, National Councils for Science and Technology, Ministries of Planning, Science and Technology, or Industry, and Statistical Offices.

4) Expected outcomes

The participants will benefit from the international perspective provided in this workshop from both international experts and co-participants from MENA countries. As actors in their respective countries’ national innovation systems, they will engage in a discussion on the need and relevance of key indicators and tools to measure and to articulate the national innovation strategies.

The envisaged eventual “deliverable” will be an “Innovation Scoreboard for the MENA-region”

6. Organisation, Venue and Dates

The workshop is organized by the Marseille Centre for Mediterranean Integration (CMI) under the lead of the European Investment Bank (EIB), the ISESCO, and the UN-ESCWA Technology Centre, in cooperation with the League of the Arab States (LAS). It will be held on the 19th – 20th of November at the LAS headquarters in Cairo, Egypt.

7. Workshop format and language

The workshop will consist of invited expert lectures, group discussions and activities. The working language will be English. Arabic/English translation will be provided.
### EU Innovation Scoreboard Indicators

#### ENABLERS

**Human resources**
- 1.1.1 New doctorate graduates
- 1.1.2 Population completed tertiary education
- 1.1.3 Youth with upper secondary level education

**Open, excellent and attractive research systems**
- 1.2.1 International scientific co-publications
- 1.2.2 Scientific publications among top 10% most cited
- 1.2.3 Non-EU doctorate students

**Finance and support**
- 1.3.1 R&D expenditure in the public sector
- 1.3.2 Venture capital investments

#### FIRM ACTIVITIES

**Firm investments**
- 2.1.1 R&D expenditure in the business sector
- 2.1.2 Non-R&D innovation expenditure

**Linkages & entrepreneurship**
- 2.2.1 SMEs innovating in-house
- 2.2.2 Innovative SMEs collaborating with others
- 2.2.3 Public-private co-publications

**Intellectual Assets**
- 2.3.1 PCT patent applications
- 2.3.2 PCT patent applications in societal challenges
- 2.3.3 Community trademarks
- 2.3.4 Community designs

#### OUTPUTS

**Innovators**
- 3.1.1 SMEs introducing product or process innovations
- 3.1.2 SMEs introducing marketing/organisational innovations
- 3.1.3 Fast-growing innovative firms

**Economic effects**
- 3.2.1 Employment in knowledge-intensive activities
- 3.2.2 Contribution MHT product exports to trade balance
- 3.2.3 Knowledge-intensive services exports
- 3.2.4 Sales of new to market and new to firm innovations
- 3.2.5 License and patent revenues from abroad

*Source: EU Commission 2014*