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# ON THE MENA REGIONAL INCUBATORS AND TECHNOLOGY PARKS

## PLENARY SESSION 5

The impact of STPs/AIs today and tomorrow

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# On the MENA Regional Incubators and Technology Parks

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## 1. EXECUTIVE SUMMARY

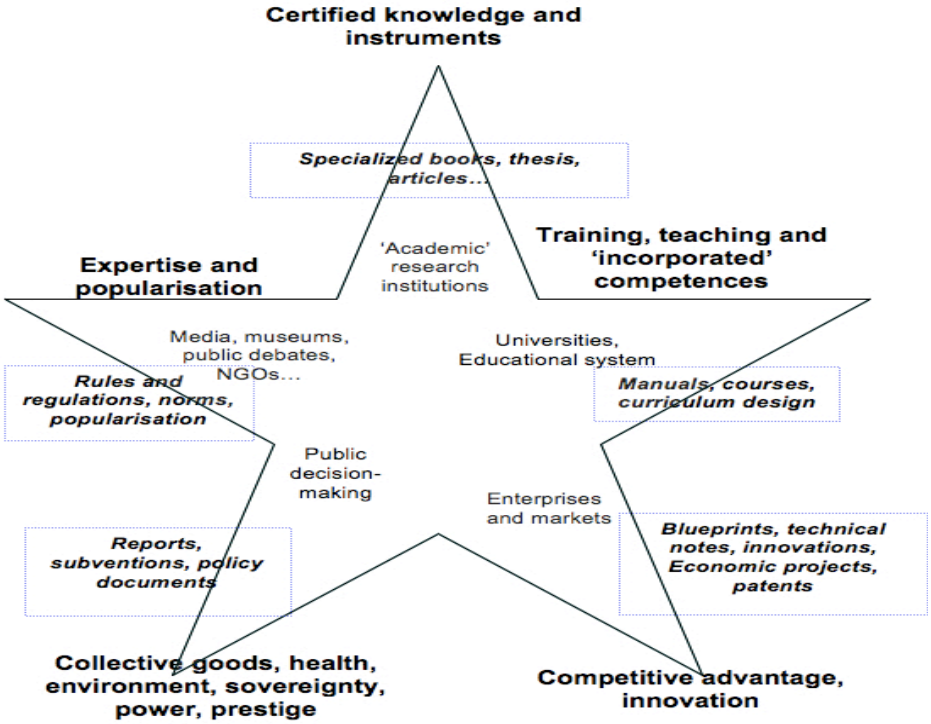
Countries in the MENA region established incubators and technology or science parks following the international trend and hoping to join the developed industrialized world in the knowledge production and knowledge based economy. After decades and much investment of resources, the catch up game seems more challenging today than ever before and the knowledge gap with developed economies is widening. The innovation related indexes have been describing ranking slippage of the Arab countries in the world ladder despite the growing interest and efforts in supporting local innovation. In this report, a mapping of available incubation and technology business parks in MENA countries is presented and innovation trends are analyzed for years 2011-2013. Recommendations are proposed to better harness return on investment to local community in this ecosystem and engage MNC and local industry in the MENA incubation system and technology parks through partnerships and business linkages.

## 2. Landscape of Incubators and Tech Parks

MENA region is home to about 100 million young people aged 12-24 and the region must create more jobs in order to stabilize its employment situation. One of the critical drivers of economic and social development falls under the umbrella of innovation and entrepreneurship. Hence, business incubation is an important tool to unleash human ingenuity, enable competitive enterprises and create sustainable jobs. Business incubators and technology parks are instrumental in developing new economic sectors, and expose entrepreneurs through information and communication technologies to abundant resources and markets to increase the productivity, market reach of enterprises across sectors, and finally enhance the chances and opportunities of success.

Of course, successful innovation is the outcome of a complex ecosystem melting ingredients from academia, business, education and finance. This rose of winds illustrates graphically this mosaic and highlights an unbalanced structure that is adaptive to the subject country and community.

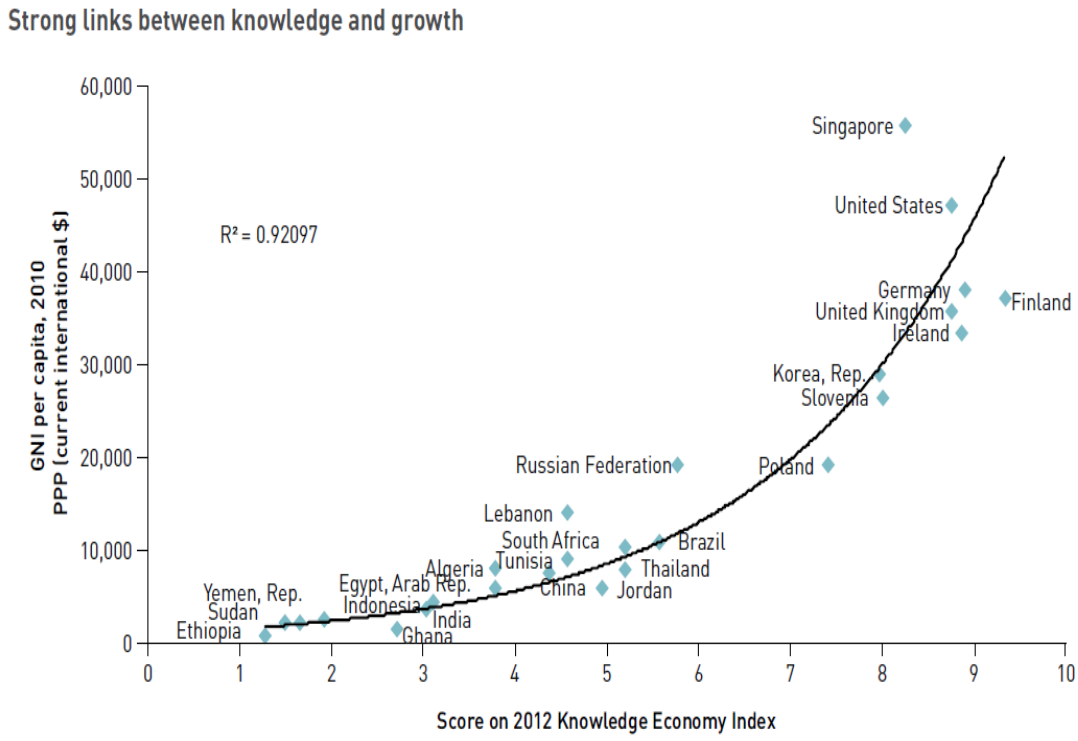
**Figure (1)** [1]**: The 'Rose of Winds' of research**




As expected, the business conditions are the platform for an effective innovation national system that can contribute to an inclusive economic development. The GDP growth data is not sufficient indicator for the social welfare of average citizens. This is especially frank in a region wealthy with natural resources that fueling mining industry and exports. Therefore, a relevant chart is the knowledge index correlation to individual income levels is important to relate the national wealth to the social fabric of the country.

[1] "The broken cycle: academia, industry and society in the Arab world." ESCWA Technology Centre 2013 www.etc-un.org

Figure (2)[2]




The role and impact of Incubators and Technology parks is solid in the middle of the Star of Knowledge.

### a. Common characteristics

Even though the definition and infrastructure of business incubators have changed over time, there are certain defining characteristics and common services that remain the same – these are:

- Access to physical resources
- Office support
- Access to financial resources
- Entrepreneurial start-up support
- Access to networks

The actual mix made of these five characteristics, depends on the focus of the organization as well as on the needs of the entrepreneurs and start-ups.

### b. Classification

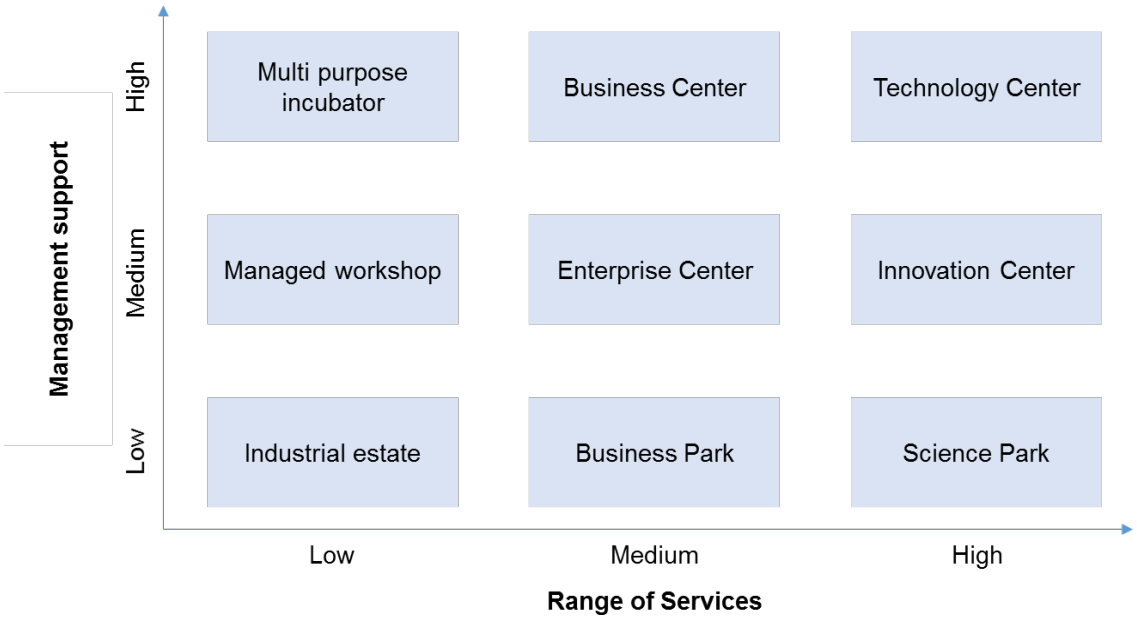
Classifying incubators and technology parks is based on several distinguishing features, including:

- Objectives (development, for-profit),
- Configuration (residential, virtual),
- Business model (property, venture capital),
- Lead sponsors (university, corporate (private), public),
- Type of enterprises (mixed, industrial, technology, life sciences … etc.),
- Stage of start-ups (idea, early stage … etc.)

However, classification is not an end in itself, but provides a relevant indicator to a framework to discuss issues such as evaluation and best practice.

[2] Authors' calculations: www.worldbank.org/kam.

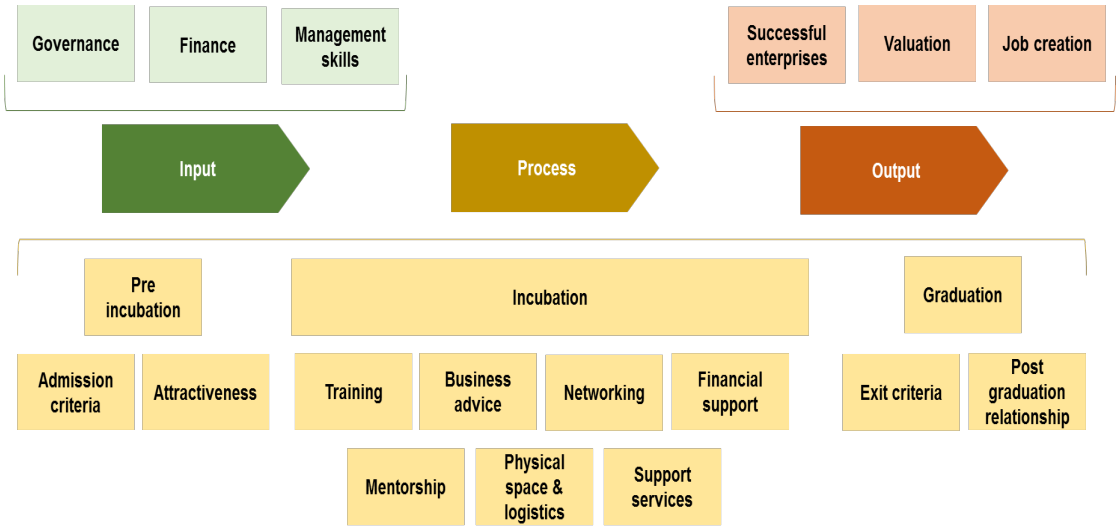
Table 1: Institutional Classification based on range of services and management support (footnote-1)




## BUSINESS MODEL

A generic business incubator model is used to set out the basic functions and operating procedures of the available incubators. A basic input-output model is the simplest way to describe the incubation process. A schematic example of such a model has been depicted in figure 3 below.

Figure 3: Business Model of typical innovation support organization (footnote-1)



## KEY INDICATORS

A number of factors exist that can influence the extent to which incubators are able to achieve their objectives. These are:

*Governance*

- A clear, current and relevant mission and strategic objectives
- An involved board of directors and/or advisory board
- A diverse representation from the business community, including current and former entrepreneurs
- Sufficient stakeholders of sponsors and community supporters

*Finance*

- Self-sustainability and/or sufficient sponsorship to ensure continued operations
- Appropriate pricing of business support services

*Management skills*

- Strong management competencies and qualifications
- Sufficient staffing to meet needs
- Community mentors, business advisors and other experts

*Pre incubation services*

- Effective application and screening process
- Appealing incubator's environment and culture

*Incubation services*

- Comprehensive range of services
- Business training and boot camps
- Regular meetings with incubated enterprises to assess needs and offer referrals
- Access to financing and funds
- Strong network with other ecosystem components – private and public sector
- Choice and range of incubator units to match needs
- Coaching and connection to mentors
- Start-up funding
- Wide range and types of incubated enterprises

*Graduation*

- Selection graduation criteria for incubated firms
- Post incubation performance reports
- Strong incubator occupancy rates and turnover

*Value for the ecosystem*

- Performance follow-ups of graduates
- Strong job and wealth creation indicators

The collected MENA region information was based on 2012 data[3] of innovation ecosystem components as listed below:

a) Incubators, 85
b) Technology Parks, 33
c) Relevant Associations, 17
d) Business Competitions, 9
e) Venture Capitalists, 92
f) Portfolio Companies of VCs, 340

[3] Landscape of Incubators in MENA region, ESCWA Technology Centre and iPArk 2013, www.etc-un.org

According to infodev statistics of 2011, the following is a summary of 40 incubators in the MENA (reference 2):

| | | |
|---|---|---|
| Type | Academic | 15% |
| | Private | 18% |
| | Other | 33% |
| | Government | 35% |
| Financial model | For profit | 20% |
| | Not for profit | 80% |
| Services | Incubation facilities | 96% |
| | Network and finance | 87% |
| | Technology transfer and international business | 71% |
| Objectives | Entrepreneurship and profitable enterprises | 98% |
| | Job creation and commercialization | 77% |
| | Income generation and policy impact | 50% |
| Number of clients | Clients > 21 | 45% |
| | Clients (11- 15) | 6% |
| | Clients (6- 10) | 39% |
| | Clients (1- 5) | 10% |
| Number of graduates | Graduates > 14 | 40% |
| | Graduates (10 - 13) | 10% |
| | Graduates (4-6) | 20% |
| | Graduates (1- 3) | 30% |
| | Jobs > 61 | 20% |
| | Jobs 1 – 30 | 40% |

Hence, the following general conclusions can be drawn:

- Government type of incubation remains the highest percentage of the benefits, 35%.
- A high percentage of existing incubators, 80%, follow a non-profit business model.
- The highest percentage of the number of client and graduate companies are 45 and 40%, respectively. Those companies created 40% of the jobs.
- The services offered by the incubators, about 96%, were mainly incubation business development and facilities.
- 98% of the incubators objectives are entrepreneurship and profitable enterprises.

## IMPACT

Business incubators and technology parks must be part of a broader strategic framework – e.g. geography, policy priorities (e.g. development), or a combination of these factors. In other words, they should not be stand-alone entities but rather work alongside other organizations and schemes to promote broader strategies; whether developmental or for-profit, they are more successful when promoted by inclusive partnership agreements of public and private sector stakeholders. Hence, leading incubators are promoted by a wide range of organizations from the public and private sectors including local authorities, universities, companies, etc. It is important for incubators to reflect their target market and industries in their eligibility criteria. Experience suggests that the most successful incubators have a particular technology and business focus. Although achieving high occupancy rates is important for any incubator (whether for-profit or non-for profit), this must be balanced against the importance of maintaining selective admission criteria. The provision of physical space is central to the incubator model. From experience, it is shown that physical clustering remains important for entrepreneurs as they learn from each other, support each other and are all clustered in one location for mentors, advisors and investors to visit. The value added of incubator operations lies in the type and quality of their business support services provided to

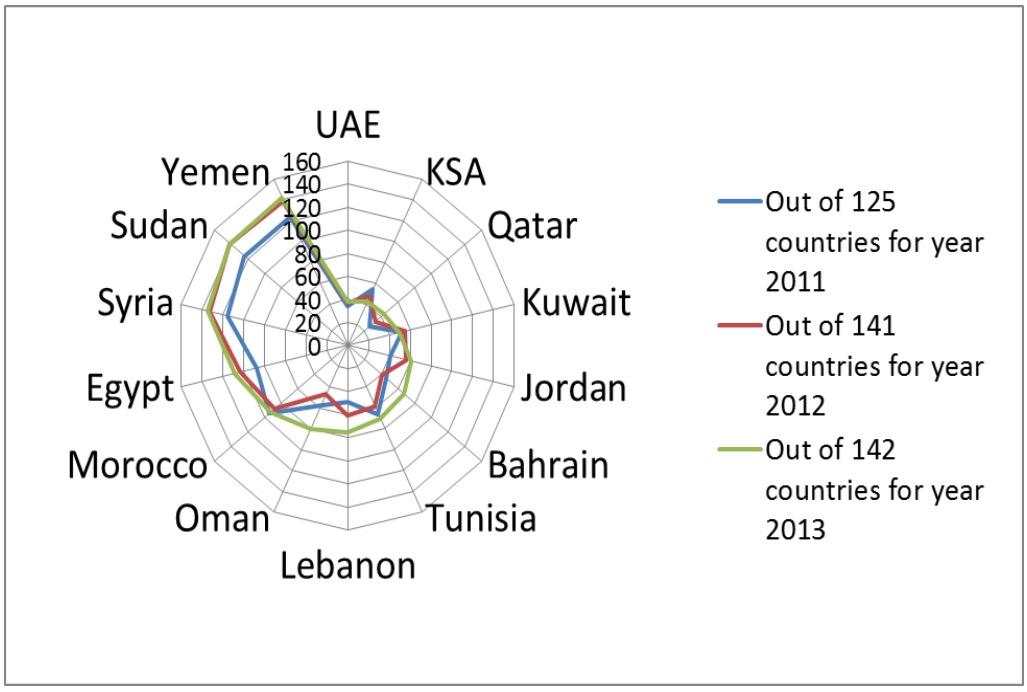
clients. Developing the following operations is a key priority for all incubators: entrepreneur training, business advice, financial support, and technology support. These services may be provided by the incubator management themselves, or they may rely on networking with other organisations. Adopting exit or graduation criteria is important to ensure turnover of client companies, even if such criteria makes reduces income from rental and other services. Graduation may be a result of:

- Deadlines (or time companies can stay in the program)
- Limited space needed for growth
- Increasing rental rates over time

However, specialized incubators, like biotechnology or life science incubators, may have longer tenancy periods reflecting the nature of business activities.

The performance of business incubators should primarily be judged in terms of the results achieved, i.e. the impact on businesses, rather than on short term measures such as occupancy rates. Impact can be measured for young incubators (or those less than 5-years old). However, for those that have had a longer time span, impact indicators that may be measured are: job creation, wealth creation, number companies established, revenues and exports, total valuation created, etc.
Overall, the Global Innovation Index ranking countries of the world based on pillars of input and output of the national innovation system and its impact to the local economy have shown trend of widened gap between countries in the MENA region and developed countries as ranking slipped between 2011 and 2013.

Figure 4: GII[4] combined ranking web chart of Arab countries 2011, 2012 and 2013




**Conclusion:**

In the pressing Arab Socio-political environment, the inclusive economic development especially of educated youth and women has reached top of priorities at all levels. The innovation eco system can contribute tremendously towards facing this situation and turning the youth challenge into an opportunity.

[4] GII Insead, WIPO 2011, 2012, 2013

The private sector role is critical in shouldering part of the responsibility beyond corporate social support, and more to establish true productive value chain partnerships with the public sector, universities, civic society, financial players, and the overall innovation eco system.

The current public spending on research and higher education is a major commitment. The private industry and enterprise sector must meet this commitment with a self-serving productive agenda making the sector more competitive globally based on innovation fueled by talents and facilitated by enlightened governments.

The action items that can be implemented on short and medium terms:

1. Technology Parks and Incubators must play a pivotal role in technology transfer in Arab countries especially as major construction and re-construction is being contracted (smart cities, defense, transportation, infrastructure, others). Hence procurement and contracting especially in public projects must engage local technology parks and incubators

2. The local private sector (industry) can become more competitive by harnessing innovation and local talents while deploying public research available funds in the development cycle of competitive products and services. Therefore, local spending on scientific research must be co-managed with local industrial productive sector associations.

3. Part of the available finance in Arab countries must go to productive sectors starting with incubators and technology parks as part of sharing productive values with the local community that is their markets and secure blanket. Hence, local strong financial institutions must be engaged with investments to SME and startups in various formats and with daring risks.

4. The Arab unemployment challenges that ignite social and security volcanos can be tackled with innovation based growth rather than consumption or natural resources options. Therefore, the large exporters of natural resources must bring downstream value added activities from their international clients through a win-win framework.

5. There are main incentives that governments must offer to encourage and sustain private sector engagement in R&D. The incentives range from tax creative saving opportunities to procurement bonuses and labor inclusion.

6. The impact of existent technology parks and incubators in Arab countries will be improved if:
    a. More entrepreneurship training embedded in University curricula
    b. More effective mentorship and networking is implemented in the innovation support