Building the Ecosystem for Technology Innovation

Technology Innovation, Entrepreneurship and Incubation in the Kingdom

Dr. Abdulaziz Alhargan
KACST BADIR Program Director
... supporting our journey to join knowledge-based economies by 2025

Long Term Plan from National Science and Technology Policy

<table>
<thead>
<tr>
<th>1st 5-Year Plan</th>
<th>2nd 5-Year Plan</th>
<th>3rd 5-Year Plan</th>
<th>4th 5-Year Plan</th>
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</thead>
<tbody>
<tr>
<td>Establish infrastructure for science, technology and innovation</td>
<td>Become a leading country in science, technology and innovation in the region</td>
<td>Become a leading country in science technology and innovation in Asia</td>
<td>Transform to a knowledge-based economy</td>
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<td>– Development of national eco-system</td>
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<td>– BADIR program</td>
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<td>– SBIR</td>
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<td>– Technology Innovation Centres</td>
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Source: KACST
Our ability to enhance our innovation capacity is driven by Saudi Arabia’s focus on building the STI ecosystem.

### Key Enablers of STI Ecosystem

<table>
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<tr>
<th>Enabler</th>
<th>Impact</th>
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<tbody>
<tr>
<td>Regulatory Framework</td>
<td>Entrepreneurship ecosystem enablement through public policies and business procedures</td>
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<tr>
<td>Infrastructure</td>
<td>Innovation enablement through public infrastructure</td>
</tr>
<tr>
<td>Lobbies &amp; Entrepreneurial Organizations</td>
<td>Entrepreneurship support through public and private initiatives</td>
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<td>Media and Culture</td>
<td>Entrepreneurship culture communication through events, conferences, etc.</td>
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<td>Education</td>
<td>Provision of higher and specialized learning to develop human capabilities</td>
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<td>R&amp;D</td>
<td>Innovation and national competitiveness through research and development</td>
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<td>Incubation</td>
<td>Incubate and develop entrepreneurs through value added services, access to funding, etc.</td>
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<td>Commercialization</td>
<td>Enable go-to-market for products and services developed through entrepreneurship</td>
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<td>Micro-SME Finance</td>
<td>Provision of seed funding for start-ups</td>
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<td>Financial Institutions</td>
<td>Provision of favorable lending schemes to support start-ups</td>
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<tr>
<td>Government Programs</td>
<td>Provision of grants to promote innovation and entrepreneurship</td>
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1) Science and Technology Innovation
Source: Booz & Company analysis
KACST has focused all its efforts to ensure the building blocks of the ecosystem are in place

STI Ecosystem – KACST Contribution

**R&D**
- Technology Incubator and Innovation Centers setup
- King Abdullah Prize for Innovators
- Patents development

**Media & Culture**
- International technology and incubation conferences
- Innovation and technology entrepreneurship awareness

**Education**
- 15 technological research areas, of which
  - Solar water desalination
  - Arabic content
  - Next generation electronic chips
  - Date palm and camel genome project, etc.

**Regulatory Framework**
- National Science and Technology Policy
- National Incubation Policy
- Intellectual Property Registration

**Incubation**
- Saudi Arabia incubators support and establishment
- Innovation, incubation, and entrepreneurship support through training programs

**Financial Institutions/ Micro-SME Finance**
- BADIR Technology Venture Capital Fund (pending CMA approval)
- Financial institutions partners
However, KACST cannot achieve its objectives without the continued support of all players in the ecosystem.
Entrepreneurship plays a critical role in boosting the STI ecosystem

BADIR STI Ecosystem Development Contribution

Entrepreneurship Impact on Ecosystem

Stimulating Entrepreneurship – BADIR Mandate

- Promote technology entrepreneurship culture
- Provide business support to entrepreneurs through owned incubators
- Support incubation industry development through best-in-class expertise

Crossing the Commercialization Chasm

Entrepreneurship

- Research and Development
- Production and Dissemination
Over the last four years we have substantially grown – we are now in a new phase of maturity ...

BADIR Program Timeline and Development

<table>
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<tr>
<th>Establishment</th>
<th>Ramp-Up</th>
<th>Growth</th>
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<tbody>
<tr>
<td>Establishment of BADIR Program</td>
<td>AMI and Biotech launch</td>
<td>Launch new BADIR incubators and manage Saudi Arabia network</td>
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<tr>
<td>Establishment of BADIR ICT Incubator</td>
<td>Incubator support and entrepreneurship pilot</td>
<td>Enhance financial support activities</td>
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<tr>
<td>Raised incubation awareness</td>
<td>Incubator monitoring and evaluation system</td>
<td>Enhance technology entrepreneurship support</td>
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<td>Provided international forum for knowledge sharing</td>
<td>Support services in BADIR program</td>
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<tr>
<th>12 incubated clients</th>
<th>25 incubated clients</th>
<th>43 incubated clients</th>
<th>56 incubated clients</th>
<th>73(^1) incubated clients</th>
</tr>
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<tbody>
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<td>2008</td>
<td>2009</td>
<td>2010</td>
<td>2011</td>
<td>2012+</td>
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1) Number of clients incubated to-date at BADIR
We are well on track in achieving the set milestones

BADIR Noteworthy Achievements

5 incubators set up by 2012 – three of which fully operational

71 clients currently supported within BADIR incubators

11 incubators supported in setup, training, and human resources – value of SR 1.9 Mn in 2012

SR 51 Mn\(^1\) funds secured in 2012 of which 16% are “smart”\(^2\) investments

388 jobs created since 2008

4500 innovators, researchers, and entrepreneurs reached\(^3\)

14% acceptance rate of new clients to guarantee high quality of ventures

SR 1 Mn in value added services to clients

SR 17 Mn revenues generated by BADIR clients in 2012

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1) Funding secured through development funds, private and angel investors, banks and financial institutions, academic investments, and KACST support
2) Private and angels investors contributing to clients equity qualify as smart money given investors involvement in client counseling and company growth
3) All entrepreneurs reached through entrepreneurship awareness initiatives such as events, conferences, workshops, etc. and pre-incubation support

Note: 2012 figures based on half-year results of BADIR
Going forward, KACST will focus on key imperatives to further enhance the STI ecosystem

### STI Ecosystem Imperatives

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<th>Enabler</th>
<th>Imperatives</th>
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| **Environment** | ▪ Lobby for policies and regulations favorable to technology entrepreneurship  
▪ Promote entrepreneurship culture and awareness nationally |
| **Education** | ▪ Focus R&D efforts on key development opportunities and strengthen investments  
▪ Foster technology entrepreneurship academically |
| **Business** | ▪ Maintain momentum on incubation industry development  
▪ Further involve private sector in Saudi Arabia incubator landscape  
▪ Focus on national R&D commercialization to enable technology outputs |
| **Finance** | ▪ Develop STI funding ecosystem through investors networks and supportive policies  
▪ Increase angel investors, venture capital, and private equity attractiveness  
▪ Facilitate financing of SMEs |
| **Ecosystem** | ▪ Push for a comprehensive and efficient ecosystem for STI  
▪ Limit overlaps in public/private initiatives related to STI and entrepreneurship |
Thank you..