National Innovation System
Enabling Technology Transfer in Morocco
To achieve industrial and commercial competitiveness

National Knowledge, Technology Development & Transfer Systems

November 27 2017
UN House, Beirut

Ali El Amrani
AGENDA

1. National STI System – Capacity and Gaps

2. Conclusions, Recommendations & Development Phases
# STI National System – MAP

<table>
<thead>
<tr>
<th>STI Impact MAP</th>
<th>Technology Transfer Value-Chain</th>
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<tbody>
<tr>
<td></td>
<td>Governance</td>
</tr>
<tr>
<td>Research Orientation</td>
<td>Applied Research</td>
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</tbody>
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## STI Categories

### Academia
- Universities
- Engineering Schools
- R&D Institutions
- Ministries
- CPIRSIDT
- Hassan II Academy
- CSEFRS

### R&D Institutions
- CNRST
- Ministries Sponsored Programs
- OMPIC
- IMANOR

### STI Related Ministries and Governance
- CNRST
- Ministries Sponsored Programs
- Clusters
- Incubators
- Industrial Representative
- Funds

### STI Support
- CNRST
- Ministries Sponsored Programs
- Clusters
- Incubators
- Industrial Representative
- Funds

### Industrial and Business Sectors
- CNRST
- Ministries Sponsored Programs
- Clusters
- Incubators
- Industrial Representative
- Funds
• Some industry sectors are well covered in terms of research centers, and others are not. Ex: Agri, Mining, Energy; vs Textiles, Tourism

• The private sector remains a small player in research activities with the exception in mining and pharmaceutical industries.
### 3. STI National System – Capacity and Gaps

<table>
<thead>
<tr>
<th>Research and Development</th>
<th>Capacity</th>
<th>Gaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research infrastructures</td>
<td></td>
<td>R&amp;D spending - Short of 1% goal of GDP spending on R&amp;D</td>
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<tr>
<td>Availability and quality of researchers, scientists and engineers</td>
<td></td>
<td>Lack of global R&amp;D strategy, researchers are not well distributed among research sectors and industries</td>
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<tr>
<td>Sectorial research areas, ex: Math publication 3 %</td>
<td></td>
<td>Most researchers are Ph.D. students</td>
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<td></td>
<td></td>
<td>Lack of research in private sector</td>
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<td></td>
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<td>No result driven research strategies and measure systems</td>
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3. STI National System – **Capacity and Gaps**

<table>
<thead>
<tr>
<th>Governance</th>
<th>Capacity</th>
<th>Gaps</th>
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</thead>
<tbody>
<tr>
<td>Governing bodies</td>
<td>Status of the researcher is not well defined in the context of innovation</td>
<td></td>
</tr>
<tr>
<td><strong>Mindset, Trust</strong></td>
<td>Researchers have no incentives for innovation and quality research</td>
<td></td>
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<tr>
<td>Regulations on university and R&amp;D centers startup rights</td>
<td>Lack of fiscal incentive framework for companies that fund R&amp;D</td>
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<tr>
<td>Heavy financial procedures, and long cycles</td>
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### Innovation and Industry

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Gaps</th>
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</thead>
<tbody>
<tr>
<td>Industrial sectorial strategies</td>
<td>Industry not capable and not equipped to absorb university developed products and innovations</td>
</tr>
<tr>
<td>Morocco’s position in certain export markets</td>
<td>Little research in the industry and in the private sector</td>
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<tr>
<td></td>
<td>Lack of trust and outreach among stakeholders, and between public and private</td>
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<td></td>
<td>Lack of innovation culture, and environment that promotes innovation</td>
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### National Innovation System

#### Opportunities

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<tr>
<td>Innovative high-growth sectors, ex: IT, Energy</td>
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<tr>
<td>Industry sectorial strategies</td>
</tr>
<tr>
<td>Visibility and cooperation at the international level</td>
</tr>
<tr>
<td>Development of new regulatory framework and fiscal incentives</td>
</tr>
<tr>
<td>Governance of research, and Autonomy of universities and research centers</td>
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<tr>
<td>Regional development, and decentralization of policies</td>
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<tr>
<td>Establishment of structures for innovation promotion at regional level</td>
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<tr>
<td>Involvement of large corporations to innovate at national level</td>
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</table>
AGENDA

1. National STI System
2. National STI System – Capacity and Gaps
3. Conclusions, Recommendations and Development Phases
STI NATIONAL SYSTEM – GOVERNANCE

- Supreme Council of Education, Training and Scientific Research
- Permanent Inter-Ministerial Committee for Scientific Research, Innovation and Technological Development
- Ministry of Industry, Trade, Investment and the Digital Economy
- Other Ministries
- Ministry of Higher Education, Scientific Research, and Training
- Private Sector
- Research Institutions
- Universities
- Academy Hassan II
- CNRST

Moroccan Innovation Center (Dismantled, some programs managed by ANPME)

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4. **RECOMMENDATIONS – DEVELOPMENT PHASES**

- Back to main objectives:
  1. National industrial and commercial competitiveness
  2. Commercialization of research outcomes

Both industrial and commercial competitiveness, and the commercialization of R&D, are directly linked to the **industry** and to the **enterprise**
4. RECOMMENDATIONS – DEVELOPMENT PHASES

Vision:

✓ The enterprise and the industry must be at the center of the strategy.

✓ Take into account the national capacities mentioned earlier.

✓ Mutualize ESCWA efforts in other Countries, and current work led by stakeholders. Ex: OMPIC, and Ministries
4. **Recommendations – Development Phases**

1. **Next development phase for the national innovation system: Mid-term solution**
   - Interconnectivity of stakeholders
   - Central vision and strategy
   - Synchronized technology transfer value chain
   - Regulations and policies

2. **Final state of the national innovation system in Morocco: Long-term solution**
   - Well identified areas for competitiveness
   - National innovation system in sync with the national strategy
   - The enterprise and the industry at the center of the system
THANK YOU!

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Amine Maliki
CNRST

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