



UNITED NATIONS

الاستقوا
ESCWA

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

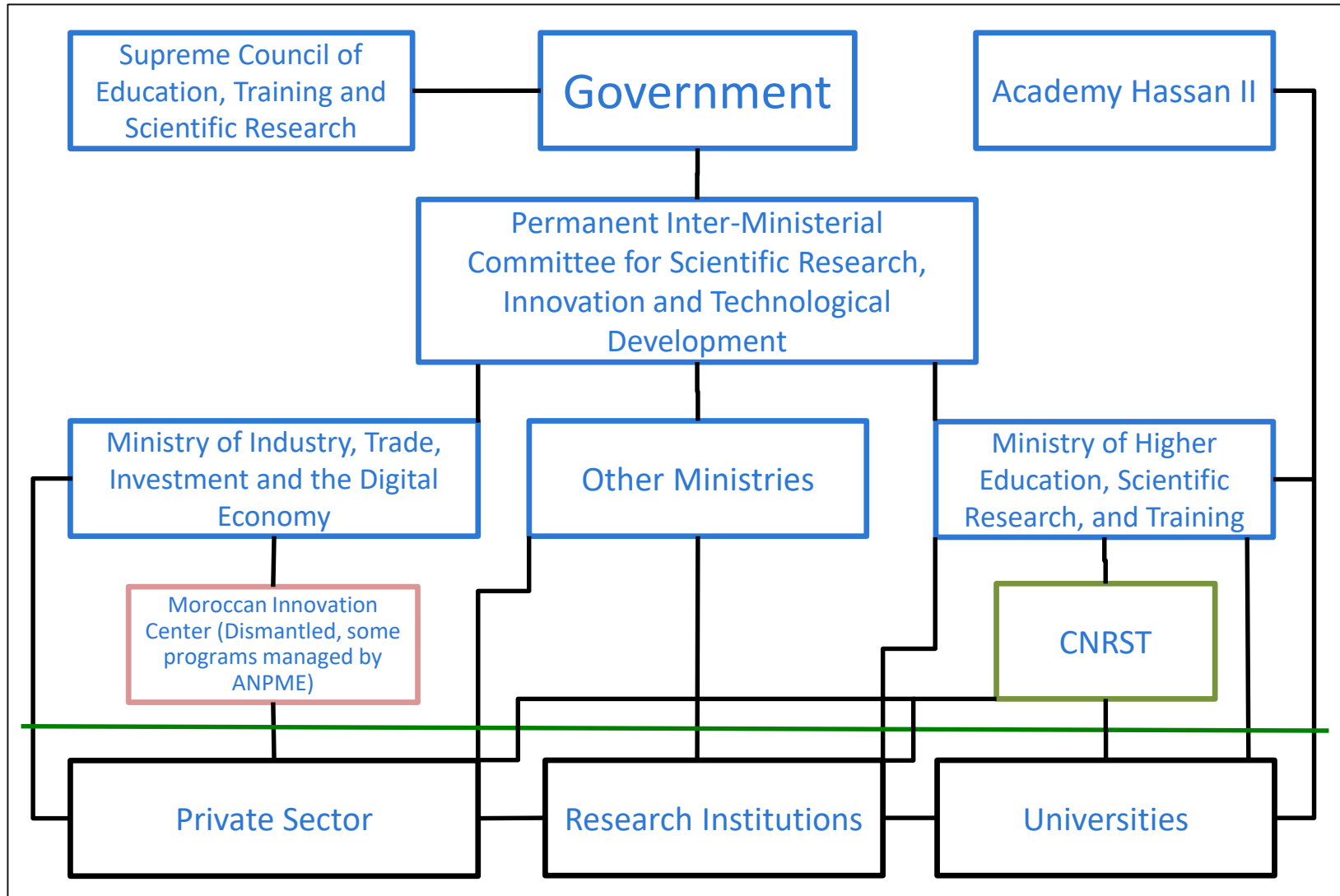
1. National STI System – Capacity and Gaps
2. Conclusions, Recommendations & Development Phases

STI NATIONAL SYSTEM – MAP

STI Impact MAP		Technology Transfer Value-Chain					
		Governance	Research	Prototyping	Publishing	Partnerships	Startups
		Research Orientation	Applied Research	Testing	Patents	Licencing	New Products
STI Categories	Academia	Universities Engineering Schools	Universities Engineering Schools	Universities Engineering Schools	Universities Engineering Schools		
	R&D Institutions		R&D Institutions	R&D Institutions	R&D Institutions	R&D Institutions (limited)	
	STI Related Ministries and Governance	Ministries CPIRSIDT Hassan II Academy CSEFRS					
	STI Support			CNRST Ministries Sponsored Programs	CNRST OMPIC IMANOR	CNRST Ministries Sponsored Programs	CNRST Ministries Sponsored Programs
	Industrial and Business Sectors					Clusters Incubators Industrial Representative	Incubators Companies 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.

STI NATIONAL SYSTEM – GOVERNANCE



3. STI NATIONAL SYSTEM – CAPACITY AND GAPS

Research and Development	
Capacity	Gaps
Research infrastructures	R&D spending - Short of 1% goal of GDP spending on R&D
Availability and quality of researchers, scientists and engineers	Lack of global R&D strategy, researchers are not well distributed among research sectors and industries
Sectorial research areas, ex: Math publication 3 ‰	Most researchers are Ph.D. students
	Lack of research in private sector
	No result driven research strategies and measure systems

3. STI NATIONAL SYSTEM – CAPACITY AND GAPS

Governance	
Capacity	Gaps
Governing bodies	Status of the researcher is not well defined in the context of innovation
	Mindset, Trust
	Researchers have no incentives for innovation and quality research
	Regulations on university and R&D centers startup rights
	Lack of fiscal incentive framework for companies that fund R&D
	Heavy financial procedures, and long cycles

3. STI NATIONAL SYSTEM – CAPACITY AND GAPS

Innovation and Industry	
Capacity	Gaps
Industrial sectorial strategies	Industry not capable and not equipped to absorb university developed products and innovations
Morocco's position in certain export markets	Little research in the industry and in the private sector
	Lack of trust and outreach among stakeholders, and between public and private
	Lack of innovation culture, and environment that promotes innovation

3. STI NATIONAL SYSTEM – OPPORTUNITIES

National Innovation System

Opportunities

Innovative high-growth sectors, ex: IT, Energy
Industry sectorial strategies

Visibility and cooperation at the international level

Development of new regulatory framework and fiscal incentives
Governance of research, and Autonomy of universities and research centers

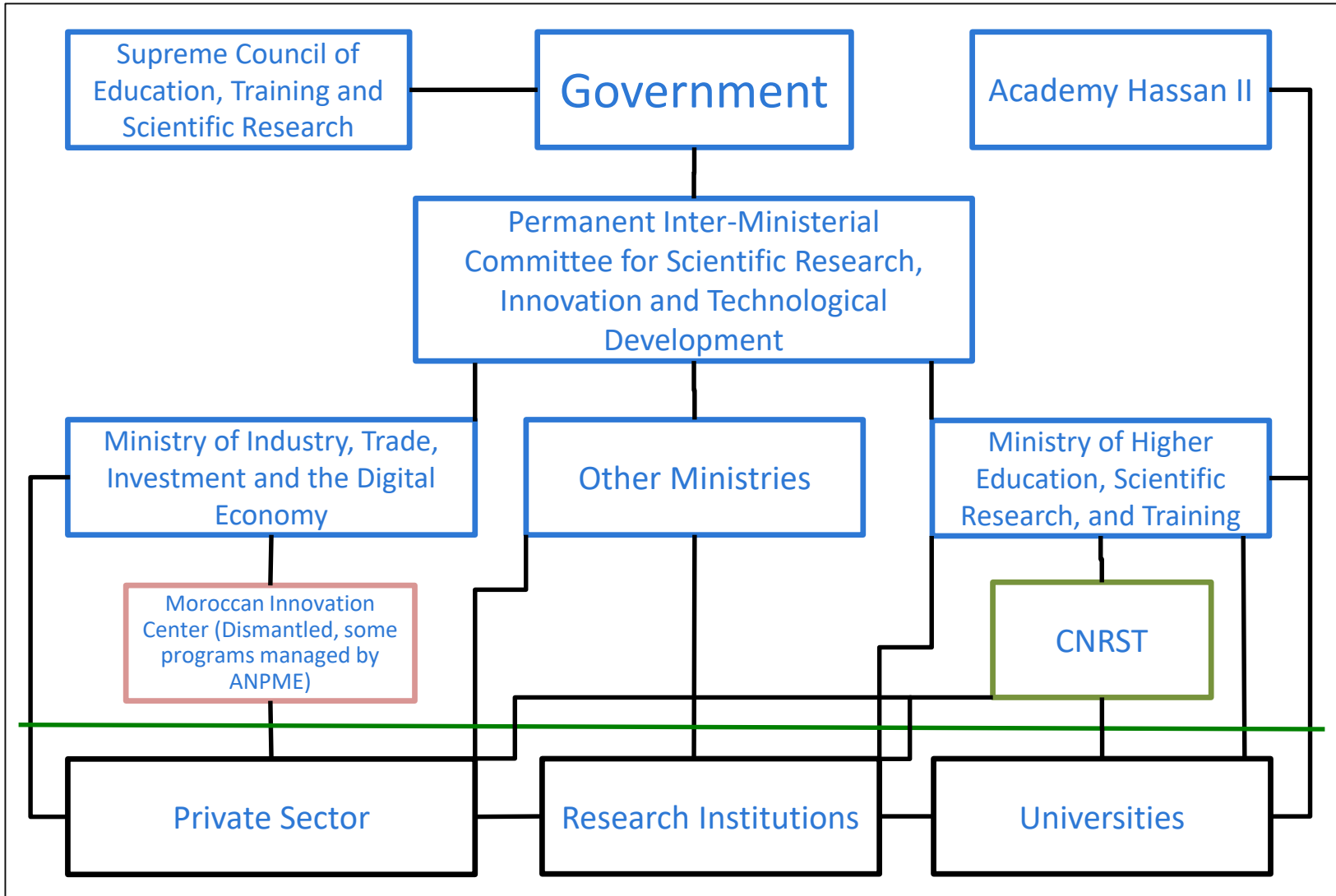
Regional development, and decentralization of policies
Establishment of structures for innovation promotion at regional level

Involvement of large corporations to innovate at national level

AGENDA

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

STI NATIONAL SYSTEM – GOVERNANCE



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!



Fouad Mrad
Nizar Halasah
UN ESCWA



Selma Dinia
Amine Maliki
CNRST



Ali El Amrani
ibtiquar.com
amrani@alum.mit.edu

