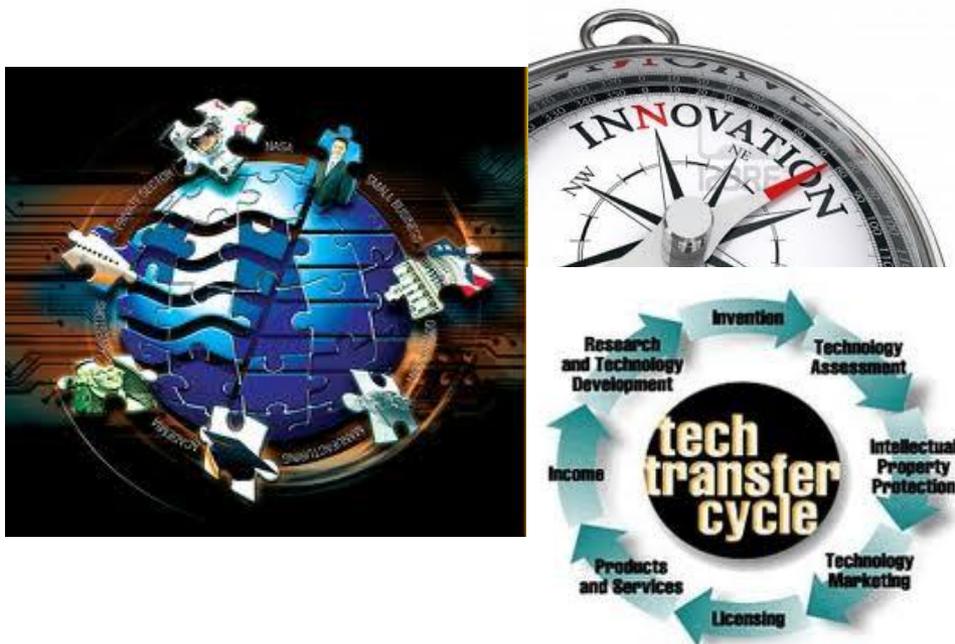


# Innovation Event

3rd of October 2013, Thursday  
Technopark El-Gazala, Tunisia

## Innovations Where we are today...



where we should go tomorrow

*Presented by Mondher Khanfir*



# Agenda

- Where is Tunisia in the global picture?
- Prejudices & preconception on innovation
- What innovation is not!
- So what is Innovation?
- Innovation and Technology Transfer
- Technological Capability
- How RBSO will play a role in boosting Innovation in Tunisia?

# Innovation index 2013

## Global Innovation Index (average)

Rank	Country	Score	Value	Percentage Rank	Score View
1	Switzerland	66.6	-	92.1	
2	Sweden	61.4	-	61.7	
3	United Kingdom	61.2	-	58.1	
4	Netherlands	61.1	-	82.2	
5	United States of America	60.3	-	39.7	
6	Finland	59.5	-	53.1	
7	Hong Kong (China)	59.4	-	23.4	
8	Singapore	59.4	-	14.8	
9	Denmark	58.3	-	45.3	
10	Ireland	57.9	-	60.2	
11	Canada	57.6	-	52.4	
12	Luxembourg	56.6	-	77.3	
13	Iceland	56.4	-	79.4	
14	Israel	56.0	-	73.7	
15	Germany	55.8	-	72.3	
16	Norway	55.6	-	43.2	
17	New Zealand	54.5	-	36.8	
18	Korea, Republic of	53.3	-	33.3	
19	Australia	53.1	-	18.4	



# Innovation index 2013

## Global Innovation Index (average)

Rank	Country	Score	Value	Percentage Rank	Score View
14	Israel	56.0		73.7	<input type="text"/>
27	Cyprus	49.3		70.2	<input type="text"/>
38	United Arab Emirates	41.9		6.3	<input type="text"/>
42	Saudi Arabia	41.2		57.4	<input type="text"/>
43	Qatar	41.0		31.9	<input type="text"/>
50	Kuwait	40.0		95.0	<input type="text"/>
59	Armenia	37.6		70.9	<input type="text"/>
61	Jordan	37.3		48.9	<input type="text"/>
67	Bahrain	36.1		13.4	<input type="text"/>
68	Turkey	36.0		80.1	<input type="text"/>
70	Tunisia	35.8		75.1	<input type="text"/>
73	Georgia	35.6		29.7	<input type="text"/>
75	Lebanon	35.5		19.8	<input type="text"/>
80	Oman	33.3		5.6	<input type="text"/>
92	Morocco	30.9		41.8	<input type="text"/>
105	Azerbaijan	29.0		17.7	<input type="text"/>
108	Egypt	28.5		24.1	<input type="text"/>
134	Syrian Arab Republic	23.7			<input type="text"/>



# Tunisian State perspective

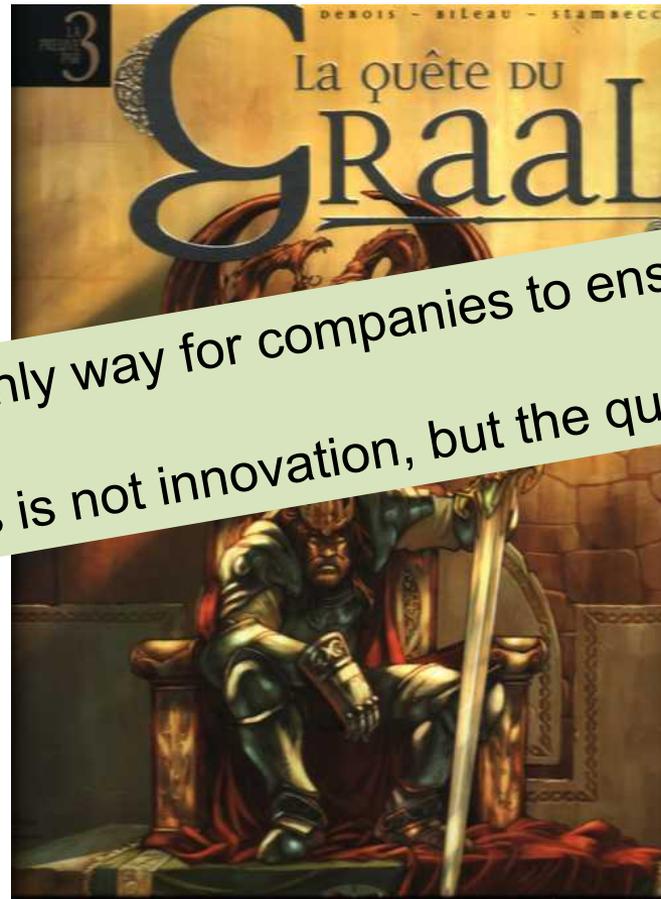
**Structure du SNI**

Acteurs de Production	Acteurs de soutien
<ul style="list-style-type: none"><li>Universités</li><li>Centres de Recherche</li><li>• Technopôles et Pôles de Compétitivité</li><li>• Incubateurs, Pépinières</li><li>Départements R&amp;DI</li><li>• ..</li></ul>	<ul style="list-style-type: none"><li>• Administration</li><li>• Agences, Instituts</li><li>• Sociétés de Gestion des Technopôles,</li><li>• SICARS</li><li>• Centres Techniques</li><li>• Centres de documentation.</li></ul>

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# Prejudices and preconception on Innovation



Innovation is the only way for companies to ensure « immortality »!  
So What counts is not innovation, but the quest for innovation.



# What Innovation is not?

- **Innovation is not creativity**
- **Innovation is not invention**

Innovation differs from invention in that innovation refers to the use of a better, and as a result, novel idea or methods, whereas invention refers more directly to the creation of the idea or method itself.

- **Innovation is not improvement**

Innovation refers to the notion of doing something different rather than doing the same thing better

- **Innovation is not R&D**

The number of patents is not an indicator of successful innovation.



# What is Innovation (1/2) ?

- The **process** of **translating** an **idea** or **invention** into a good or service that **creates value** or for which customers **will pay**.
- To be called an innovation, an idea must be **replicable** at an **economical cost** and must satisfy a specific need.
- Innovation involves deliberate application of information, imagination and initiative in deriving greater or different values from resources, and includes all processes by which new ideas are generated and converted into useful products.



# What is Innovation (2/2) ?

- Innovation is the development of new values through solutions that meet new requirements, inarticulated needs, or or old customer and market needs in value adding new ways.
- This is accomplished through more effective products, processes, services, technologies, or ideas that are readily available to markets, governnements and society.



# 3 types of Innovation

- **Efficiency innovations**, which produce the same product more cheaply, such as automating credit checks
- **Sustaining innovations**, which turn good products into better ones, such as the hybrid car,
- **Disruptive innovations**, which transform expensive complex products into affordable, simple ones, such as the shift from the mainframe to personal computers.



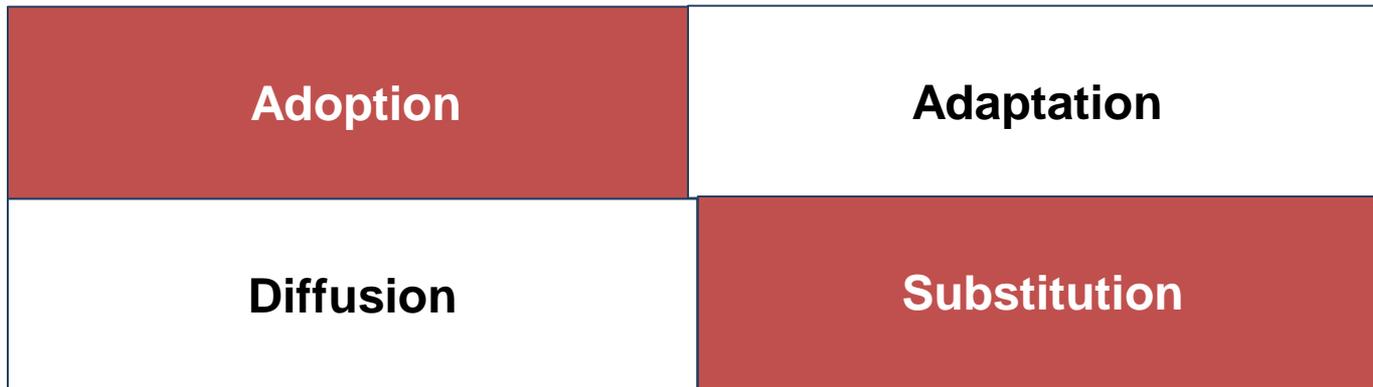
# Innovation is determined by Technology Transfer Process

Transferring research results to economic sectors is one of the missions of public research institutions. Three main ways to transfer research findings co-exist:

- Assignment of rights through licensing or collaborative research projects
- through spin-out (or spin-off)
- By technological integration (or spin-in)

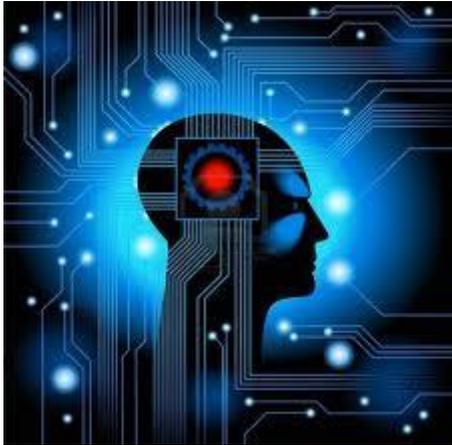


# 4 dimensions of Technology Transfer Process





# Technological Capability



Technological capability of an organization is composed of a variety of sources of knowledge and experiences. Some are subtle and intangible, such as new ideas and inventions. Others are embodied in equipment, machinery or infrastructure, while others are carried by human skills

- The technological capability extent acquired by a company depends on its learning culture. The accumulation of technologies can be accelerated if deliberate and effective efforts are made to measure, manage and develop the knowledge, which is then converted into processes within the company.



# Key drivers for Technology Transfer

- These are generally large companies or governments that determine the main axes of R & D (the trends)
  - The process of technology transfer requires collaboration and collective commitment
- A highly decisive role of universities and research laboratories for the production and dissemination of knowledge, in particular through RBSO.



# What is a Research Based Spin-Off (RBSO)

According to OECD, Research Based Spin-Off –also called Research Based Business- is an innovative Start Up company that has at least one of the five following characteristics:

- Founder(s) include public sector employees
- Key technology is licensed from public sector institution
- Founder(s) include public sector students or alumni
- Physically located in public-sector incubator or science park
- Equity investments were made by public sector

## Future Innovation will be generated by Research Based Spin-Off (RBSO)

- RBSO is the result of the process of creating a Start Up which seeks to commercially exploit a patent, technology or a scientific finding from a University or Research Institution, which usually requires the involvement of the Researcher (s) for technology transfer.
- Spin-offs are *one* measurable mx of tech transfer b/t public and private sectors. Spin-offs are an important indicator of the ability of countries to monetize the knowledge developed by the public R&D.



For more information, you can read  
the following study

<http://www.wikistartup.tn/nos-publications-16.html>

