



# THE ROLE OF SCIENTIFIC RESEARCH SUPPORT FUND IN ADVANCING RESEARCH IN JORDAN

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# OUTLINE

- Introduction
- Background of SRSF
- SRSF Strategic Plan
- Role of SRSF in Advancing Scientific Research
- Summary

# INTRODUCTION

- In the near future, We, in Jordan, will not be able to compete on the world stage with natural resources such as exploiting available reserves of mineral resources. We will have to compete with our brains and with our sciences.
- It is recognized that the Higher Education and Scientific Research are among the pillars to achieve sustainable development, specially the economic one.
- Scientific Research is the Engine to Drive the Country toward Knowledge Economy

# INTRODUCTION, Cont.

- The lack of knowledge commercialization and weak linkage between the findings of scientific research and the industrial sector is preventing the contribution of scientific research in improving the lives of individuals and increase the national income.
- Hence, there is an urgent need to create a true partnership between the productive sectors and the academic and research sector.

# Background

- In 2008 the decision to establish the Scientific Research Support Fund (SRSF) was taken
- The by law was passed in 2010.
- Over the past years, the SRSF was much concerned with how Jordanian universities and research centers can play a more effective and active role in promoting applied scientific research and innovation.
- Since it was established, SRSF contributed to increase spending on scientific research from 0.38% of the GDP to 0.62% of the GDP, and aspires to reach more than the proportion 1% of the GDP in 2025.

## Background, Cont.

- During the past 8 years SRSF funded:
  - 305 Research projects with a total cost of 20,930,079 J.D.
  - issuing 22 refereed scientific journals that are hosted at Jordanian universities and covering various fields of science, technology, arts and humanitarian sciences.
  - Sponsoring 89 scientific conferences
  - 470 scholarships for graduate students in Jordanian Universities, with a total cost of 5.6 million J.D.



# SUCCESS STORIES

Development of new technology for -  
collection of solar



Emergency evacuation of plans for -  
Amman down town, and many  
ot





# Sectors covered by SRSF's mandate

- Commensurate with national development needs, SRSF sponsors research ventures in:
  - Engineering and Nanotechnology
  - Communications and ICT
  - Energy
  - Water and the Environment



# Sectors covered by SRSF's mandate

- Basic Sciences
- Medicinal and Pharmaceuticals sciences
- Agricultural and veterinary sciences
- Humanities and social sciences



# RESEARCH PRIORITIES

- For each research sector, a set of research priorities are announced every year.

# ENERGY SECTORS

- Studies related to the electrical grid systems and smart networks.
- Applied research on renewable energy sources (storage and transport).
- Fuel cell technology systems and hybrid power.
- The stability of the network due to the introduction of electric power generated by nuclear reactors and renewable energy sources.

# WATER RESOURCES AND ENVIRONMENTAL SCIENCES SECTOR

- Flood management.
- Drought and its impact on the quality and quantity of water resources.
- applied research on the purification and desalination of water and the treatment of gray water.
- Integrated waste management.

# How does SRSF sustain its financial resources?

- 1% of the profits of industrial establishments
- Unutilized research and scholarships money from national academic institutions
- Other government grants, where available
- Other donations



# Procedures pursued by SRSF to fund research pursuits

- Open up call for proposals -- 2 cycles a year
- Run preliminary screening of submitted proposals
- Based on pre-screening, solicit more detailed proposals
- Assess detailed proposals through a peer review process commensurate with international standards
- Award grants through official MoU's

# SRSF Vision and Mission

## **Vision**

Jordan will compete in scientific research, innovation and creativity and leadership to build a knowledge-based economy.

## **Mission**

Create a supportive environment for scientific research, innovation and creativity, and develop technological capabilities.



# SWOT ANALYSIS

## STRENGTHS

- Higher political desire for the advancement of higher education and scientific research sector and the transition to knowledge-based economy.
- The possibility for the SRSF to play prominent role in the development of the economy and national development.
- Availability of qualified human resources in the national universities and research centers.
- Possibility of providing financial support for some research in partnership with regional and international destinations.
- Availability of research infrastructure in most of the universities.
- Generous financial support from the SRSF, compared with the national universities.

# SWOT ANALYSIS, CONT.

## ■ Weaknesses

- Unstable governance and the absence of a clear policy and appropriate legislation to set priorities.
- Weakness in coordination and cooperation with the concerned authorities
- Weakness of interest in scientific research of the beneficiaries.
- Bureaucracy within the academic institutions
- Brain drain.

# SWOT ANALYSIS, CONT.

## Weaknesses

- Weakness of the researchers evaluation systems
- Lack of communication with international research centers and fund institutions.
- The weakness of economic returns from the scientific research, innovation and patents.
- Freezing the deduction of 1% from the profits of industrial establishments for the benefit of the Scientific Research Support Fund.
- Lack of real R&D departments in most of these industries

# What is the Role of SRSF to Opposite All That?

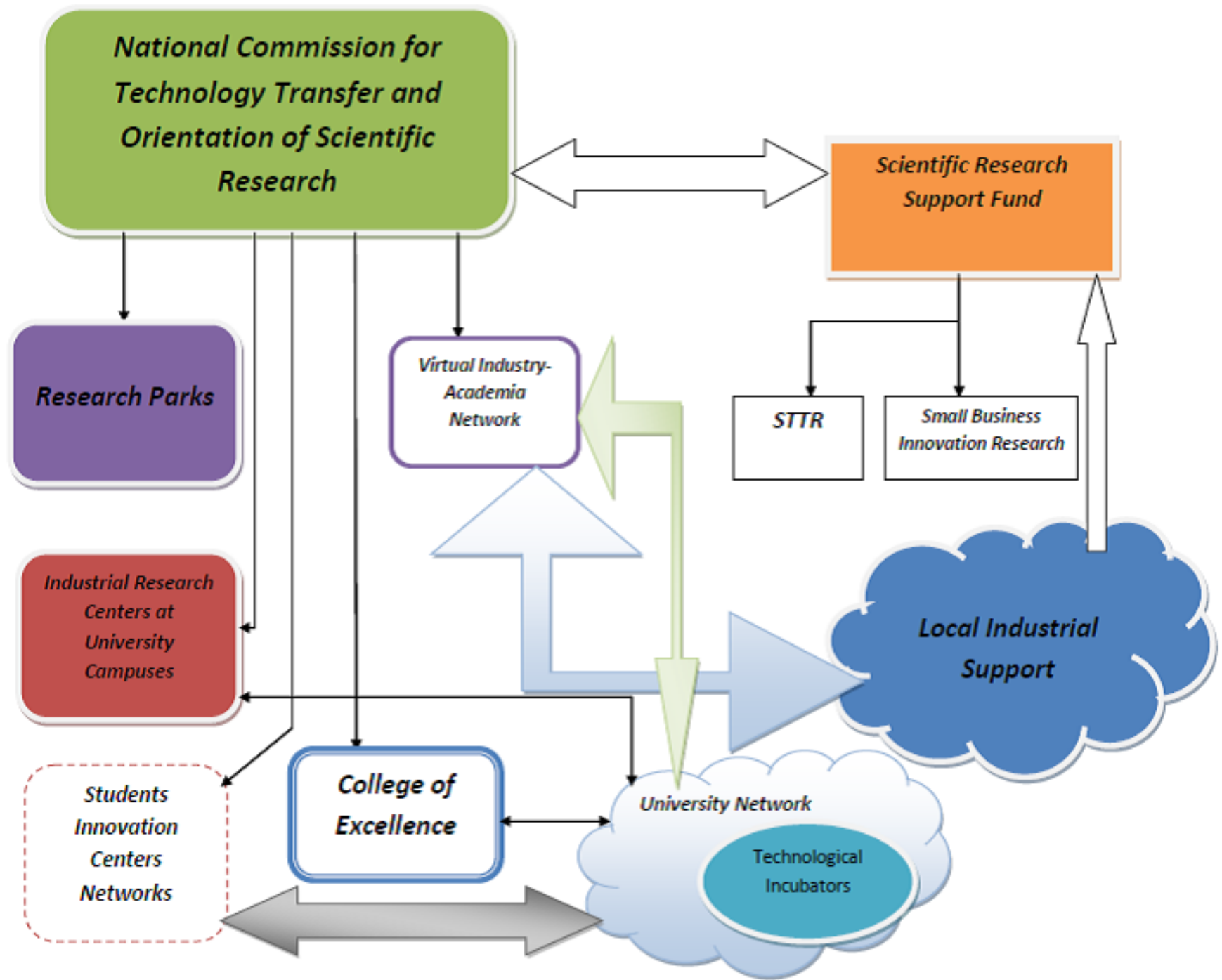
- Further development of human resources in Jordanian scientific research institutions.
- Supporting scientific research, innovation, creativity and development projects in scientific research institutions.
- Developing national institutions scientific research infrastructure.

# What is the Role of SRSF to Opposite All That?, Cont.

- Improve the cooperation and coordination with the relevant national institutions.
- Develop more financial resources for funding scientific research projects.
- Further development of the SRSF entity.
- Strengthening the role of graduate students in sustainable development,
- Sponsors development or empowerment national research centers that have immediate economic impact on GDP.

# ADVANCE RESEARCH CENTERS

- National Nanotechnology Center
- Advanced Robotics Research & Applications
- National Center for Supercomputing
- National Virtual Reality Center
- National center for network forensics & cyber security research
- National Center for Desalination, Water, and Waste Water Research
- Center for applied medical & pharmaceuticals research
- Students Innovations Centers
- Colleges of excellence at selected universities



# *Towards the end... What can all of this do to help?!!*

- Will help fix problems with the system of Scientific Research both on the short as well as long runs
- Will improve quality of the graduates by making them more market ready, thereby improving their chances for rewarding careers
- Will help bring about a nucleus for a core industry



# *Towards the end... What can all of this do to help?*

- Will bring about the long-awaited research Institutes-industrial collaboration
- Will bring about a cultural paradigm shift
- Will revolutionize our way of thinking through innovation

# Summary

- SRSF working to build a country who is a dynamic competitor at international level through strategic investments in human resources and in innovative ideas based on partnerships working on the development of scientific research, innovation and creativity with a real impact on the economic and social development in Jordan and the region.

**Questions - ?**

