

# Research priorities and steps for the definition of the institutional Research Agenda. State of the art and workshop idea.

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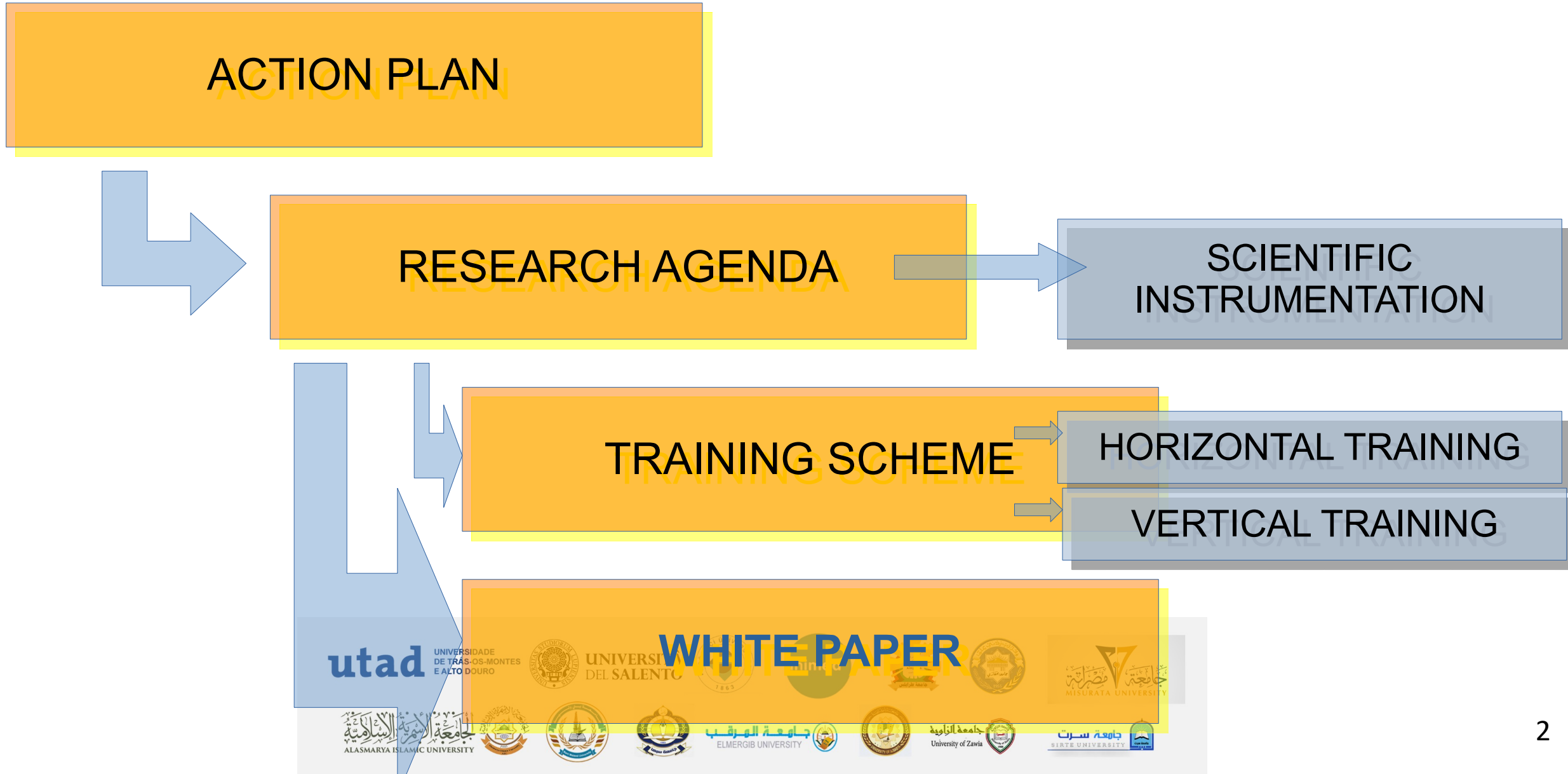


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# IBTIKAR - Institutional Research Agenda

## WP2: Definition of an Action Plan



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# ACTION PLAN

## 1) RESEARCH AGENDA

### – SCIENTIFIC INSTRUMENTATION



# IBTIKAR - Institutional Research Agenda

## WP2: Definition of an Action Plan

- ◆ WP2: Definition of an Action Plan confirming the training scheme and institutional research agenda for research technology and innovation (RTI), will define a proper action plan for training as well as will define an Institutional research agenda designed by Libyan Universities and White Paper for the reform of Libyan research national strategy.
- IBTIKAR WP2 Tasks
- IBTIKAR WP2 Premises
- IBTIKAR Research Agenda (T2.2)



# IBTIKAR - Institutional Research Agenda

## WP2: Definition of an Action Plan

- ◆ T2.2 - Institutional research agenda
- ◆ In order to identify research strategies and possible implementing actions, a **workshop** will be organized between the project's partners to have an overview of best international practices and the ones that best fit the Libyan universities' needs and expectations. At the end of this task, **a document will summarize the identified strategic research objectives for each Libyan partner** and a list of possible implementing actions setting the objectives to be reached and related activities in the Work Package 5.



# ◆ RESEARCH PRIORITIES



**CLEAR PICTURE OF THE RESEARCH ACTIVITIES FOR EACH INSTITUTION WITH A STRATEGIC VIEW FOR ALL THE PROJECT**

): Research priority for each university



	The First priority	The Second priority	The Third priority	The Forth priority	The Fifth priority
SEBU	recycling of organic wastes and bio-energy production.	biotechnology and agriculture.	the environmental (greenhouse gas emission).	Molecular Biology and microbiology.	nanotechnology.
SU	Defining and achieving research excellence	enhancing the integration of research and education	expanding partnership, innovation and entrepreneurship	improving research competitiveness through differentiation and specialization	enhancing and optimizing, the provision of research services
BWU	Preparing a database	Processing labs	Holding scientific conferences, seminars and training courses aimed at serving society and its institutions	Inventory local environmental problems	Inventory local environmental problems
ASM	Humanities Science	Basic Science	Engineering and IT Science	Health Science	Medical Science
ZU	Developing the infrastructure and services to provide a stimulating and attractive research environment.	Establishing a database for researchers in various disciplines and fields of knowledge.	Create a database for published research.	Identify community problems and conduct necessary research.	Activating local and international agreements to serve scientific research.
LIMU	Health care	N/A	N/A	N/A	N/A
UOT	UOT DataBase	Engineering Projects	Medical Projects	Environmental Projects	Research excellence
AJDU	teaching	N/A	N/A	N/A	N/A
UOB	research and scientific studies in all disciplines related to different development sectors.	Scientific research and studies in the field of economic and social development	applied science, medical, engineering research,.	creating bridges of cooperation with international universities and institutions in the field of scientific research and exchange of experiences	

# IBTIKAR - Institutional Research Agenda ACTION PLAN

Table (11): Research priority for each university

	The First priority	The Second priority	The Third priority	The Forth priority	The Fifth priority
ELMU	English language courses training for Academic and Non-academic staff	Development of the research consultation center	Financial aid for research activities		
MISU	Training courses for teachers and staff in language and basic computer skills	Maintenance of research laboratories	Financial support and rewards	Providing the infrastructure for research centers from the Internet, electricity and transportation to researchers	Cooperation with other universities and access to the latest research developments



# ◆ UPDATED RESEARCH PRIORITIES





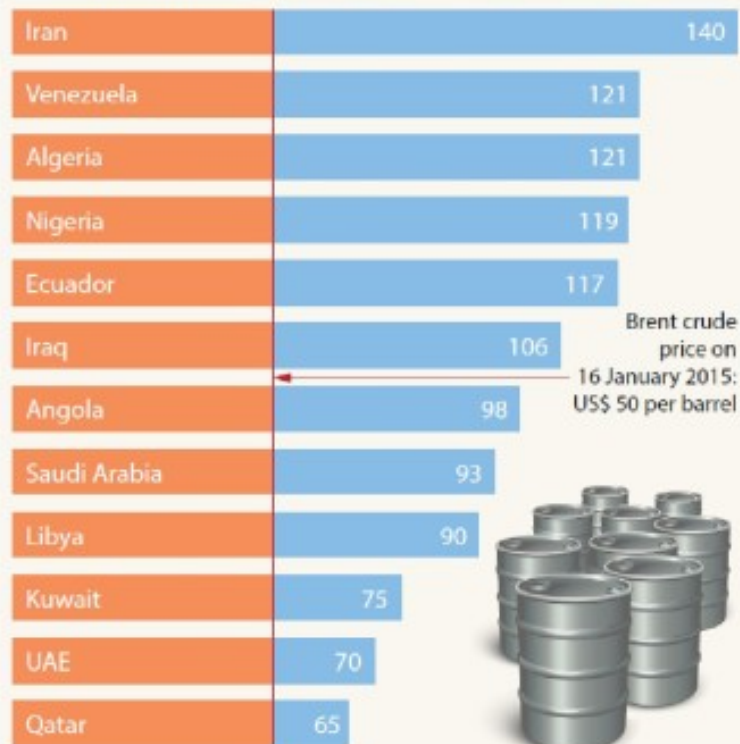
# IBITKAR Research Agenda (1)

## Research Topics

UNIFYING RESEARCH CHALLENGE/TOPIC: From Oil to Renewable Energy Sources

OVERARCHING OBJECTIVE: Fostering Clean Energy Transition in Libya for Sustainable Economic Growth

Figure 17.2: Estimated oil price needed to balance the government budget in OPEC member states, 2014



Source: adapted from Wall Street Journal (2014), based on data from the Government of Libya, Angolan Ministry of Finance, International Monetary Fund, Arab Petroleum Investments Corp., Deutsche Bank

### Arab Strategy for STI (UNESCO 2030)

- ➔ Development and management of water resources
- ➔ Renewable energy: hydropower, solar, wind and bio-mass
- ➔ Oil, gas and petrochemical industries
- ➔ Nano-tech applications in (organic) food-industry, environment, desalination, energy production, etc...
- ➔ Desertification, climate change and its impact on agriculture

### Libya 2030 Vision

- ➔ Minimize leakages from water supply pipes
- ➔ Encourage Renewable and low-carbon energy generation (solar and wind power, improving energy grid, conservation and efficiency)
- ➔ Reduce harmful emissions of fossil fuels
- ➔ Enact minimum process efficiency standards for energy intensive industries and limit harmful emissions (reduce industrial consumptions of domestic fuel)
- ➔ Fuel efficiency and vehicle emissions standards
- ➔ Pollution monitoring and enforcement
- ➔ Increase the use of renewable energy in desalination and pumping water from the man made river



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# IBITKAR Research Agenda (1)

## Research Topics

Labs da coinvolgere  
short-list da qui e  
dettaglio da  
preferenze

### IBITKAR Research Groups

Horizon EU Work Programme 8 and 9

Le singole università  
o gruppi sceglieranno  
obiettivi compatibili  
nei WP

1 Renewable Energies Generation & Use

Climate Sciences and Responses

2 Clean and Efficient Manufacturing & Transport

Cross-Sectoral Solutions for Climate Transitions

3 Management and Protection of Water Resources

Sustainable, secure and competitive energy supply

4 Desertification, climate change and agriculture

Efficient, sustainable and inclusive energy use

5 Nanotechnologies applications

- Energy
- Pollution
- Desalination
- Agriculture

Clean and competitive solutions for all transport modes

Safe, resilient transport and smart mobility services

Bio-diversity and ecosystem services

Fair, healthy & environmental-friendly food systems

Circular economy and bioeconomy sectors

Clean environment and zero pollution

Land, ocean and water for climate action

Resilient, inclusive, healthy and green rural, coastal and urban communities



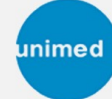
## Elmergib University, Al khums, Libya

### Impact Assessment of Sewage Effluents on Sea Water Quality at Al khums City, Libya.

- ◆ 1 - Seroprevalence and Detection of Helicobacter pylori in Drinking and Environmental Water in Urban and Rural Regions of Libya.
- ◆ 2 - Reduction of fuel consumption and its air pollutants in vehicles' motors by using hydrogen cells
- ◆ 3 - DETERMINATION OF SOME PHYSICAL AND CHEMICAL PARAMETERS OF GROUNDWATER IN ASHAFYEEN-MASALLATA AREA, libya
- ◆ 4 - Sustainable Technologies for Green Building Structures Made of Recycled Concrete Aggregates from Bombed Concrete Buildings
- ◆ 5 - WARM MIX ASPHALT
- ◆ 6 - Impact Assessment of Sewage Effluents on Sea Water Quality at Al khums City, Libya.



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# IBTIKAR - Institutional Research Agenda

## Sirte University SU

- ◆ 1. Renewable Energies Generation & Use.
- ◆ 2. Management and Protection of Water Resources.
- ◆ 3. Desertification, climate change and agriculture.
- ◆ 4. Medical researches.
- ◆ 5. Nanotechnologies applications (Energy, Pollution, Desalination, Agriculture).



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## The University of Ajdabiya AJDU

- ◆ 1. Renewable Energies Generation & Use
- ◆ 2. Clean and Efficient Manufacturing & Transport
- ◆ 3. Management and Protection of Water Resources
- ◆ 4. Desertification, climate change and agriculture
- ◆ 5. Nanotechnologies applications (Energy, Pollution, Desalination, Agriculture)



# BANI WALEED UNIVERSITY LIBYA



## SCIENTIFIC RESEARCH PRIORITIES

- 1- Environmental studies and climate change
- 2- Agriculture and desertification control
- 3- Managing and protecting water resources
- 4- Renewable energies (Solar energy in particular)

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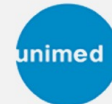


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## IBTIKAR PROJECT RESEARCH PRIORITIES IN UNIVERSITY OF TRIPOLI 30/8/2022



1. Nanotechnologies applications (Energy, Pollution, Desalination, Agriculture)
2. Renewable Energies Generation & Use
3. Management and Protection of Water Resources
4. Desertification, climate change and agriculture
5. Clean and Efficient Manufacturing & Transport



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- ◆ 1. Medical and Biomedical Research
- ◆ 2. Information Technology
- ◆ 3. Business Management
- ◆ 4. Healthcare Administration and Management
- ◆ 5. Education and Learning



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## Alasmarya Islamic University – AIU

### RESEARCH TOPIC PRIORITY

- ❖ Clean and Efficient Manufacturing & Transport.
- ❖ Management and Protection of Water Resources.
- ❖ Renewable Energies Generation & Use.
- ❖ Desertification, climate change and agriculture.
- ❖ Nanotechnologies applications (Energy, Pollution, Desalination, Agriculture).



# MISURATA UNIVERSITY

## Top 5 research priorities

Cancer research (improving diagnosis and treatment methods).

Research on pesticides used in field of agriculture.

Nanotechnologies applications (Energy, Pollution, Desalination, Agriculture).

Management and Protection of Water Resources.

Renewable Energies Generation & Use.





# IBTIKAR PROJECT Research priorities in University of Benghazi

25/7/2022

## Research 5-top priorities

1- Renewable Energies Generation & Use

2-Desertification, climate change and its impact on quality of life.

3.Population health related problems (AMR in Libya: one health consortium)

4. Management and Protection of Water Resources

5. Scientific researches and studies in the field of economic and social development

others

6.Population health related problems (AMR in Libya: one health consortium)

7. Scientific researches and studies in the field of economic and social development

8. Engineering research and consultancy different researches( in communication, construction, design.....)

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# IBTIKAR - Institutional Research Agenda

## Sebha University SEBU

- ◆ 1. Management and Protection of Water Resources
- ◆ 2. Desertification, climate change and agriculture
- ◆ 3. Nanotechnologies applications (Energy, Pollution, Desalination, Agriculture)
- ◆ 4. Renewable Energies Generation & Use
- ◆ 5. Clean and Efficient Manufacturing & Transport





# Five priority areas for University of Zawia (1 → 5 )

01

Renewable Energies Generation & Use

02

Desertification, climate change and agriculture

03

Management and Protection of Water Resources

04

Nanotechnologies applications (Energy, Pollution, Desalination, Agriculture)

05

Clean and Efficient Manufacturing & Transport

International Cooperation Office e-mail [ico@zu.edu.ly](mailto:ico@zu.edu.ly)



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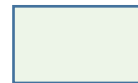
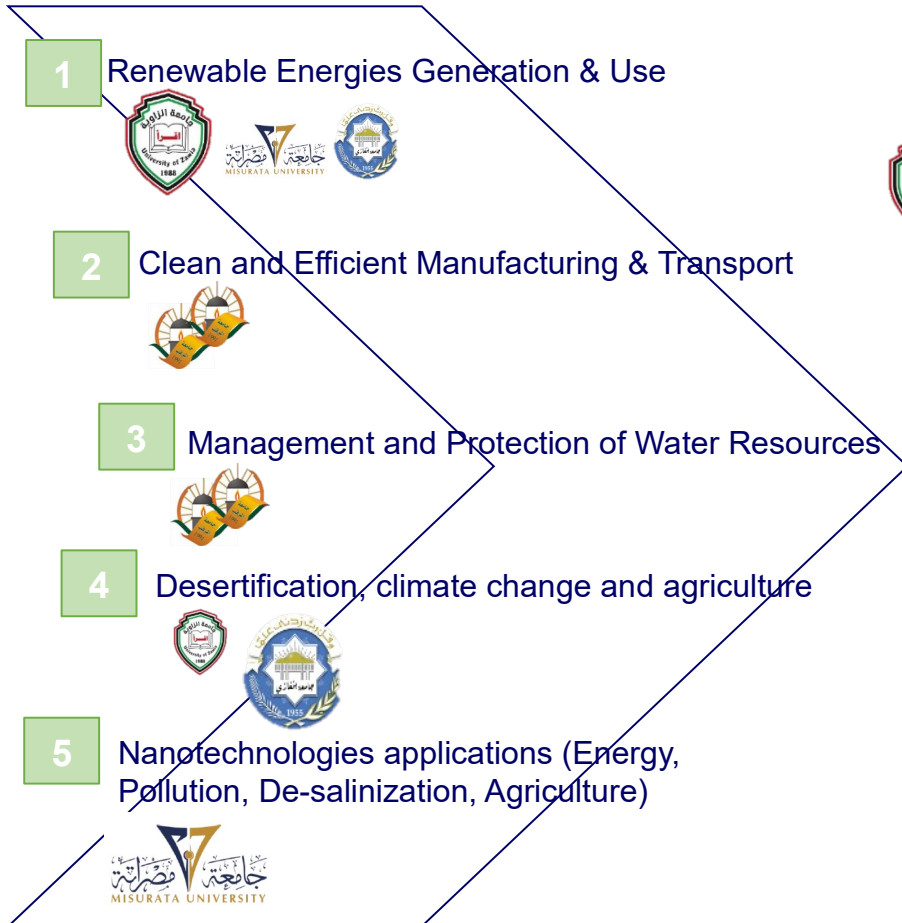




# IBITKAR Research Agenda Partners' Priorities Mapping

## Partners' Universities Priorities

### IBITKAR Research Groups



- Cancer research (early diagnosis and treatment)
  - Molecular, biomedical and health sciences / Pesticides used in agriculture
  - Nano-tech Applications (Energy, Pollution, Desalinisation, Agriculture)
  - Management and Protection of Water Resources
  - Renewable Energy Generation and Use
- Desertification, Climate Change & its impact on quality of life
  - Renewable Energies Generation & Use
  - Management and protection of water resources
  - Clean and Efficient Manufacturing and Transport
  - Nanotechnologies and its applications
- Medical and Bio-Medical Research
  - Information Technology / Business Management
  - Healthcare Administration and Management / Education and Learning
- Reduction of fuel consumption and its air pollutants in vehicles' motors by using hydrogen cells (P2)
  - Determination of some physical and Chemical parameters of groundwater (P3) Impact Assessment of Sewage Effluents on Sea Water Quality (P6)
  - Recycled Concrete Aggregates from Bombed Concrete Buildings (P4) Warm Mix Asphalt (P5)

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WP2: Definition of an Action Plan

◆ RESEARCH AGENDA





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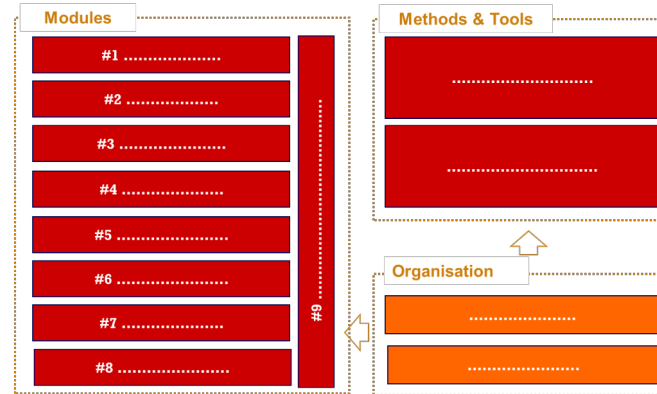
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# IBITKAR Research Agenda (2)

## Development and Implementation

Joint Working Group to develop:

- Workplan
- Trainer's Handbook
- Institutional Research Agendas
- & Inter-Institutional Agreements



### Trainers Handbook (Components)

1. **PPT PRESENTATIONS AND TRANSCRIPTS** on key concepts, trends and challenges to frame discussions and stimulate interactions among participants in order to actively contribute with their knowledge, experiences, and needs to the development of the topics and share learning with other participants.
2. **CASE STUDIES** edited with a pre-defined schema (different accordingly to the topic) conceived to help the participants to identify relevant issues and best practices and to recognize practical business lessons that can be applied on a case-basis.
3. **SELECTED REFERENCES** reports, statistics, working papers, web-site links and other material (including audio/video) to give the opportunity to deepen autonomously and in a personalized way knowledge about particular issues and increase interactivensness during program sessions. References must be organized and described in order to be retrieved in the K-Portal.
4. **TEST & EXERCISES** aimed at ascertaining and monitoring participants learning as well as to lead and manage learning in action activities during the delivery of the modules.
5. **E-LEARNING & MOOCs**. Asset and Content Tables (following specific formats that will be provided) to enable the distance delivery of the program.

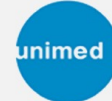


# IBTIKAR - Institutional Research Agenda

## THE RESEARCH VISION

- ◆ Solve complex global challenges
- ◆ Empower whole communities
- ◆ Reputation
- ◆ infrastructure, services and platforms
- ◆ strategic plan
- ◆ mapping you strengths
- ◆ consulting with the research community
- ◆ identifying the most critical challenges
- ◆ identifying thematic areas that will form a framework for the University's continuing cross-disciplinary research efforts
- ◆ ensuring that the research discoveries are translated into relevant real-world solutions
- ◆ strengthen and expand key international partnerships with universities, enterprise, government and communities

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# IBTIKAR - Institutional Research Agenda Strategic Research Agenda Template

## ◆ Creating the Strategic Research Agenda

- ◆ Putting together the team -
- ◆ Steering Committee, This group provided high-level decisions and guidance on the development of the SRA
- ◆ Scientific Committee
- ◆ Expert Group - highly operational role

IDENTIFY PARTICIPANTS  
TO COMMITTEES AND  
WORKING GROUPS

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Strategic  
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# Thank you! Grazie! Shukran اشكرا

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