



TRAINING WEEK

Italy-Palermo

March 06 -10,2017



Promotion of innovation culture in the higher Education in Jordan

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Training participants:

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ARCA – University of Palermo, Viale delle Scienze Palermo, Italy

March 06 –10

ARCA,Palermo

Day1: Monday March 06

PRESENTATION: ARCA: Structure, main activities & aims

Arrival and welcoming by ARCA staff. We were introduced to the Stefania and silvana of ARCA who focused on the importance of exchanging Technology innovation according to the two countries.

After that, introduced by the Jordanian team who presented each one of us and spoke about research and programs supporting it in Jordan.

ARCA is a consortium for the application of research and the creation of innovative enterprises, which has been active since 2003 and has exploited a partnership between the University of Palermo and a private entrepreneurial group committed to industrial research and technological transfer.



one presentations was presented in the morning session of the day:

1. The role of the incubator in enhancing technology transfer and open innovation and its social relevance for the growth of sustainable economy, Fabio Maria Montagnino, ARCA General Director.

fabio talked about Business incubation, Technology transfer and development of new products for SMEs and their networks Management of territorial and social innovation projects related to the promotion of the entrepreneurial culture. this approach which is 5D , (People , Profit, People, Innovation, Scalability).

In addition, he talked about technology transfer and how they build with the partners the path to bring innovation to the market Moving from an economy based on low added value activities to the production of knowledge-based assets and service and Increasing collaboration between those who generate innovation and those who are able to apply it and exploit it through business.

Arca working to promote industrial research and technological transfer programs customised to the needs of small and medium-sized enterprises, networks and industrial districts. also Arca carry out social innovation initiatives in collaboration with other local development actors,The technological areas related to scientific production and specific expertise within the region: renewable energy and sustainable building, digital technologies, environmental monitoring, GIS systems and remote sensing, biotechnology and human health.

Afternoon session:

The afternoon session started with a visit to the Incubator, Fabircation lab, training room and all the faciliate inside ARCA.

Several presentations were given by ARCA team:

1. The first presentation was about Digital and industrial innovation: innovation processes and strategic innovation management.

focused on innovation processes and he given us Michael Porter created the model to demonstrate the value chain According to Porter, primary activities relate directly to how value is created for a product or service. Support activities make the primary activities possible through the management and coordination of the different activities.

The idea of this model is to demonstrate how any firm should have the primary activities and support activities aligned to attain maximum enterprise value. The key idea here is that support activities provide the backbone and the infrastructure upon which the primary activities can be executed for maximum efficiency.

2. The second one was about Communication techniques: "how to transmit innovation through networking", by Monica Guizzardi.

Technology transfer process from universities to the market can take place mainly through the grant of patents or through the creation of new ventures promoted by academicians and researchers, called "academic spin-offs", Due to their strategic role in enhancing the development of technological innovation, academic spin-offs can attain high levels of social performance and consonance with their environment. At the same time, they must overcome many difficulties if they are to achieve a high level of financial performance and growth.

3. The Next presentation was about The Nexus Knowledge-Market, by President of ARCA (Mr. Umberto).

The presenter focused on University incubators seek to eliminate the gaps between the resources possessed by researchers and financial, and managerial resources needed to start a business. Incubators attract talent, technologies, and know-how, aiming to enhance the entrepreneurial spirit within the academia; this is an important way to promote the creation of innovative enterprises and to accelerate the commercialization of research.

He discussed Technology Readiness Level (TRL) وTRL are a method of estimating technology maturity of Critical Technology Elements (CTE) of a program during the acquisition process. They are determined during a Technology Readiness Assessment (TRA) that examines program concepts, technology requirements, and demonstrated technology capabilities. TRL are based on a scale from 1 to 9 with 9 being the most mature technology. The use of TRLs enables consistent, uniform discussions of technical maturity across different types of technology. TRL 1 (Basic research) / TRL 2.3.4 (Applied Research) / TRL 5.6.7.8 (Proof of concept and product development) TRL 9(market ready) .

Mr. . Umberto he mentioned the five dimension of knowledge and how we connective with University and public research center which contains (Theoretical ,Experimental, Manufacturing, Economic) Connective high level knowledge organized by disciplines. Companies connective (specific knowledge organized around problems) and he mentioned ARCA Methodology , startup supported by ARCA.

4. The last presentation was about Enterprise Europe Network: support schemes to SMEs start-up, innovation and internationalization.

What is the EEN:

The Enterprise Europe Network is the world's largest support network for small and medium sized businesses (SMEs) with international ambitions. It has 3,000 experts across 600 member organizations in more than 60 countries. Member organizations include chambers of commerce and industry, technology centers, and research institutes.

This network aims at facilitating SMEs access to international markets by providing business, innovation and technology transfer support services that help strengthen their competitiveness and sustainability. Being a member in this network allows Jordanian SMEs to access the European market, to attend B2B brokerage and matchmaking events.

Types of services provided by EEN:

1. Business Offer
2. Business Request
3. Technology Offer
4. Technology Request
5. Research and development Request

Jordan Contact point at EEN

1. Jordan Enterprise Development Corporation
2. Higher Council for Science and Technology

The call for contact point is open each seven years the next call will open in 2020

EEN Services:

1. Support packages for innovative SMEs
2. Technology transfer
3. Access to finance
4. Advice on EU law and standards
5. Intellectual Property Rights (IPRs)
6. Speak up on EU law
7. Research funding

Partnering opportunities

On the EEN website you can search for partnership opportunities.

Three presentations were presented in the day:

1. EU Opportunities: H2020 and other programmes available for Jordan by Silvana Di Bono, Project manager at Consorzio ARCA.

Horizon 2020 reflects the policy priorities of the Europe 2020 strategy and addresses major concerns shared by citizens in Europe and elsewhere.

- Health, demographic change and wellbeing
- Food security, sustainable agriculture, marine and maritime and inland waterway.
- Research and the Bio economy.
- Secure, clean and efficient energy.
- Smart, green and integrated transport.
- Climate.
- action, environment, resource efficiency and raw materials
- Inclusive, innovative and reflective societies.
- Secure societies.

We also learned that Horizon 2020 offers opportunities for Collaborative research & innovation projects carried out by consortia of organizations working together on specific research & innovation areas. A consortium must include at least 3 participants from 3 different EU Member States or Associated countries. In addition to these three partners, any legal entity from anywhere in the world can be included in the consortium. And Individual researcher projects. The European Research Council and the Marie Skłodowska-Curie actions offer unparalleled funding opportunities for individual researchers who want to work in Europe.

The MSCA also support industrial doctorates, combining academic research study with work in companies, and other innovative training that enhances employability and career development.

Types of MSCA: • Research networks (ITN): support for Innovative Training Networks that develop new researchers • Individual fellowships (IF): support for experienced researchers undertaking mobility between countries, with the option to work outside academia • Research and Innovation Staff Exchanges (RISE): for international and intersectoral cooperation • Co-funding of regional, national and international programmes that finance fellowships involving mobility to or from another country.

She also discussed about Concepts of budget planning and main common financial measures/ conditions of EU grants and talked about How to get benefit of European support and build partnering with European countries.

2. Coaching and mentoring processes for young entrepreneurs by Fiammetta Pantò, Business Plan developer at Consorzio ARCA.

Fiammetta focused scouting of new business initiatives, supporting aspiring entrepreneurs and new companies in the pre-feasibility stage of analysis and business planning and discussed business model canvas. And how they evaluate the idea , enable great entrepreneurs to transform their viable ideas or creative talents into scalable businesses. That includes finding those entrepreneurs, investing in their startups, bridging their know-how gap, and eventually helping them get follow-on funding.

Also, she talked about coaching and mentoring ,Similarities are due to process items such as opportunity or idea assessment, meeting environment, operative role, and confidentiality. The extent of the relationship is basically the same and there are similarities when it comes to personal engagement, integrity, social skills, and role (ethics).

3. Tools for supporting start-uppers by Salvatore Lanza, Business Plan developer at Consorzio ARCA.

The presenter focused on developing the mindsets of the university youth to encourage them to take their projects from concept level to implementation level , and ending it with incubation phase at ARCA which is the other supporting part for entrepreneurs.

In addition, She talked about branding and gave us example about a success stories of Zara and other national company in Italy .

Salvatore Lanza talked about The CTI toolkit “Tools for supporting start-uppers”,he played a successful video discussed Tools how we can support the start –uppers.

Field visit to Engineering:

Engineering is a European Community technological partner and operates with the subsidiary Engineering International Belgium also on International organizations and in the public and private market in the Belux area and EMEA area.



Engineering operates through companies that are specialized by business segments.

Engineering.mo, reference point for application and infrastructural outsourcing services, thanks to the union between state-of-the-art technological standards and thorough knowledge of business processes.

MHT, leading company in ERP and CRM management systems, a Microsoft Partner with Gold ERP competency, thanks to the unique focus and broad-spectrum solutions on Microsoft Dynamics.

Municipia, specialized in solutions for the Local PA and established in local bodies for the management of tax revenue activities.

Nexen, focused on managerial consultancy, creation, design and realization of organizational, control and performance models for supporting commercial, management and governance activities.

OverIT, specialized in Mobile Business solutions, Workforce Management, Sales Force Automation and Geographical Information Systems (GIS), via the application platform Geocall.

Webresults, customized cloud services and applications to support company sales, marketing and customer services processes.

Engiweb Security, integrant part of Engineering Software Lab, the parent company's structure specialized in software design, development and testing within systems integration projects.

Part I: Field visit to CHAB, Mediterranean Centre for human health advanced biotechnologies

During the visit, a presentation on genlio chersi Mediterranean Centre for human health advanced biotechnologies and a tour in the labs was made.

the Aten Center, Advanced Technologies Network Center, activated by the University of Palermo to offer, one of the few research centers in the world, the availability of a production chain from materials synthesis to the test in vivo. An articulated research infrastructure able to provide excellent services to the public and private sectors; Biologists, biotechnologists, chemists, physicists, engineers, and Computer Doctors who work together to create high technological value knowledge and competitive products for the domestic and international market.

The CHAB, the Mediterranean Center for research in the field of Advanced Biotechnology for Human Health, was funded with about 30 million Euros by the European Union and is characterized by interdisciplinary and convergent skills, different services and advanced biotechnology. The Palermo University has also decided to make the system in a broader center of the University Services, even the pre-existing Center Large equipment (CGA), in order to expand the supply of services and expertise.

The tour included visits to the:

1. EPR PULSATO LAB
2. NMR LAB
3. NANO MECHANICS LAB
4. PROTEOMIC AND GENOMIC LAB
5. MASS – SPECTROMETER LAB
6. MICROSCOPY-AND-BIO-IMAGING LAB
7. PREPARAZIONI BIOMATERIALI LAB

Part II: Field visit to University of Palermo, Department of Industrial and Digital Innovation

Engineer Faculty

The Department of Industrial Innovation and Digital (DIID) - Chemical Engineering, Management, Computer Science, Mechanics at the University of Palermo, constituted in 2011, has about 80 teachers.

The DIID inspired by the innovative concept of Triple Helix in which the University Research, Education and Technology Transfer are integrated into a single training model. Therefore, study at the DIID a unique opportunity to successfully invest in their training and in their future.



A presentation was given by the kinds of Water contamination:

accidental spills during truck transportation, leakages through cracked or corroded cement, casing of the wells, fugitive gas through the rock fractures Wastewater (“produced water”) and chemicals, traces of oil-laced drilling mud, iron, chromium, salt, radioactive materials including Radium 226.

And another presentation talked about seawater desalination project:

One intriguing solution to bringing clean water to communities facing water scarcity is desalination. Desalination “is the process of removing dissolved salts from water, thus creating fresh water from seawater or brackish water Desalination technologies expand the existing water source by producing clean, drinkable water from seawater, and sea salt, and magnesium, and energy.

Part III: Field visit to ISMETI hospital

ISMETT, Istituto Mediterraneo per i Trapianti e Terapie ad Alta Specializzazione, is a government-approved research hospital (Istituto di Ricovero e Cura a Carattere Scientifico - IRCCS) for the treatment of, and research on, end-stage organ diseases. ISMETT is a center of excellence in the field of transplantation and a point of reference for other Mediterranean countries. Important research projects, to ensure the most advanced therapies for patients and treat end-stage organ diseases, as ISMETT is the first hospital in Southern Italy to receive Joint Commission International (JCI)



ISMETT Hospital : An example of innovative and efficient clinical management, ISMETT is a joint public-private partnership between the Region of Sicily, through ARNAS Civico hospital in Palermo, and UPMC, the University of Pittsburgh Medical Center.

ISMETT is a national and international point of referral for transplantation and advanced therapies serving the Region of Sicily and Mediterranean countries. Through a health care model embracing both the public and private sectors, ISMETT embodies UPMC's philosophy and commitment to cooperation with other regional health care providers and with the local medical community.

ISMETT is the first hospital in Southern Italy to receive Joint Commission International (JCI) accreditation, one of the most advanced accreditation systems to assess the quality and safety of hospital facilities. JCI accreditation confirms ISMETT's top standards of patient care and patient safety and its commitment to continuous improvement of clinical outcomes, management, and training programs that every year involves hundreds of nurses, physicians, technicians, and administrators.

Comments

1. ARCA was perfect for innovation, training, and incubation, the experience and knowledge was remarkable.
2. The training program was theoretical and did not contain practical training.
3. We need to learn some skills like Industry and Law languages which support us in case of Negotiation when transfer a new technology.
4. Hoping this was a start to establish stronger links with Jordan for further future cooperation of mutual benefits
5. In general, all visited institutions were perfect and all were welcoming
6. Working hours was too long during the day.
7. The schedule for training was compressed, and had no days off