



Innovation-Employability Training – Tunisia

Linking academic research to industry

Location	Remote – Zoom
Meeting date/times	Thursday 21 October 2021 09:30-12:00 UCT + 1 (Tunisia) Friday 22 October 2021 09:30-12:00 UCT + 1 (Tunisia)
Language	English/French/Arabic with live interpretation in French/Arabic/English
Method of presentation	Subject area speakers, case presentation (best practice), guided discussion
Participant profile	High level decision-makers of HEIs & research centres, policymakers, and representatives from industry and intermediaries in Tunisia
Closed number	60 participants
Cost	Training is provided by UfM with support from GIZ
Completion	Participants attending both sessions receive a UfM Certificate of Completion

Description

Alliances and networking with higher education institutions and research centres have become critical success factors for industry to stay competitive. The interactions between knowledge centres and industry have moved **beyond a one-way flow of knowledge** from universities to industry in many parts of the world. Tunisian graduates, especially in scientific fields have increased dramatically, yet the industry lacks confidence in the potential value added that these graduates can bring. This calls for **re-examining the interaction between academia and industry** with the support of policymakers to enact enabling conditions for productive research collaborations that can **support academic requirements through degree programmes** while strengthening industrial output. Tunisia currently faces a struggle to move **from a closed to open system of innovation** – true collaboration can valorise higher educational research through growing innovation.

Academia is therefore confronted with expectations and demands that position them as a central player of the Triple Helix Model (Leydesdorff & Etzkowitz, 1998). This new and challenging role not only calls for **academia to be closely interlinked with its industry partners**, but also requires them to become embedded in the regional and national ecosystem amidst the many different actors that range from business and policymakers to civil society organisations and investors.

This training provides participants with a **theoretical overview** of the Triple Helix Model of Innovation (with the Quadruple (Carayannis & Campbell, 2009) and Quintuple (Carayannis, Barth & Campbell, 2012) expansions), as a framework for **linking academic research to industry**. The training invites participants to rethink cooperation between higher education institutions and research centres to **address needs of industry through research** topics. Potential approaches are presented, including collaborative doctorates, industrial placements in master’s programmes and other hybrid degrees that **connect theory to practice**, and develop theory through practice via cooperation between academia, industry, and policymakers.

Examples of **best practice initiatives in Tunisia** and elsewhere are presented as viewed through the lens of the Triple Helix in terms of how the different players can strengthen collaboration and move towards a **community of practice in the region**.

Evaluation of Course

Participants complete a survey at the end of the training.

Certificate

Participants in both sessions receive a UfM Certificate of Completion.

Schedule

Session 1 of 2 Thursday 21 October 2021 09:30-12:00 UCT + 1 (Tunisia)	
09:30 – 09:40	Open and welcome <i>Giuseppe Provenzano UfM, Andreas Garbade GIZ, Prof Mokhtar Mahouchi, Head of the Cabinet, MHESR Ministry of Higher Education and Scientific Research of Tunisia</i>
09:40 – 09:45	UfM initiative “Reinforcing the innovation-employability nexus in the Mediterranean” <i>Giuseppe Provenzano UfM</i>
Part I: Applying the Triple Helix	
09:45 – 10:05	The Triple Helix of Innovation as a theoretical lens <i>Dr Nina Volles, Paeradigms</i>
10:05 – 10:15	University governance and internationalisation in North Africa <i>Silvia Marchionne, Project Manager, Sub-network on Employability UNIMED Mediterranean Universities Union, Italy</i>
10:15 – 10:25	Knowledge exchange between the blue economy and higher education <i>Prof Mounir Ghribi, Director, Research Internationalisation, communication, promotion National Institute of Oceanography and Experimental Geophysics, Italy</i>
10:25 – 10:30	<i>Coffee Break</i>
Part II: Tunisian Context	
10:30 – 10:50	Student employability via university-industry linkages: best practices in Tunisia <i>Prof Ahlem Dakhlaoui Chateur, Director, Observatory of Sciences and Technology MHESR Ministry of Higher Education and Scientific Research of Tunisia</i>
Part III: Examples of best practice in Tunisia	
10:50 – 11:00	Tunisian Start-up Act <i>Dr Sihem Laarif Oueslati MHESR Ministry of Higher Education and Scientific Research of Tunisia</i>
11:00 – 11:10	Student Entrepreneur Center of Carthage (PEEC): missions and challenges <i>Dr Walid Barhoumi, University of Carthage, Tunisia</i>
11:10 – 11:20	Technopole experience <i>Ms Rim Saied, Director, Valorisation of Scientific Research MHESR Ministry of Higher Education and Scientific Research of Tunisia</i>
11:20 – 11:30	10 years of the PNRI program: successes and failures <i>Mr Kais Mejri, Director, Innovation and Technology MIPME Ministry of Industry, Energy, and Mines</i>
11:30 – 11:40	PRIMA projects with industrial partners <i>Prof Samia Charfi Kaddour, Director, Scientific Research MHESR Ministry of Higher Education and Scientific Research of Tunisia</i>
Part VI: Discussion and key learnings	
11:40 – 11:50	Guided discussion – best practices <i>Moderators: Giuseppe Provenzano, UfM and Prof Chedly Abdelly, Director ANPR National Agency for the Promotion of Scientific Research MHESR Ministry of Higher Education and Scientific Research of Tunisia</i>
11:50 – 11:55	Key learnings <i>Dr Nina Volles, Paeradigms</i>
11:55 – 12:00	Close and reminder <i>Giuseppe Provenzano, UfM and Prof Ahlem Dakhlaoui Chateur</i>
end	

Session 2 of 2 Friday 22 October 2021 09:30-12:00 UCT + 1 (Tunisia)	
09:30 – 09:40	Open and review <i>Giuseppe Provenzano, UfM, Prof Ahlem Dakhlaoui Chateur</i>
Part I: Valorising existing capacity	
09:40 – 10:00	From knowledge transfer to open innovation <i>Dr Nina Volles, Paeradigms</i>
10:00 – 10:10	Examples of collaborative doctorates and master’s programmes <i>Moderator, Prof Ahlem Dakhlaoui Chateur, Director Observatory of Sciences and Technology MHESR Ministry of Higher Education and Scientific Research of Tunisia</i>
10:10 – 10:20	Technology transfer tools at the National Agency for Scientific Research Promotion <i>Prof Chedly Abdelly, Director ANPR National Agency for the Promotion of Scientific Research MHESR Ministry of Higher Education and Scientific Research of Tunisia</i>
10:20 – 10:30	Co-creation to bring academia and industry <i>Dr Rafla Hfaiedh, Higher Education Institute of Economic and Commercial Sciences University of Tunis, Tunisia</i>
10:30 – 10:40	Co-creating a certification centre in Libya in non-destructive testing POLYTECH / VIBRATECH <i>Prof Nidhal Rezg Polytech Central, Central University Group, Honoris United Universities Network</i>
10:40 – 10:55	Digital companies and research laboratories: concrete collaboration for research applied to real innovative projects <i>Mr Kais Sellami, President, National Information and Communication Technologies MIPME Ministry of Industry, Energy, and Mines</i>
10:55 – 11:00	<i>Coffee Break</i>
Part II: Organisational change	
11:00 – 11:20	Leadership perceptions of knowledge exchange and culture shift <i>Amine Moussa, Paeradigms</i>
11:20 – 11:35	Guided discussion <i>Moderators: Giuseppe Provenzano, UfM and Prof Chedly Abdelly</i>
Part III: Way forward and conclusion	
11:35 – 11:50	Ideas on concrete actions <i>Moderators: Giuseppe Provenzano, Prof Ahlem Dakhlaoui Chateur</i> <ul style="list-style-type: none"> • Linking initiatives for greater impact • Enabling policies
11:50 – 11:55	Key learnings <i>Dr Nina Volles, Paeradigms</i>
11:55 – 12:00	Close and thanks <i>Giuseppe Provenzano UfM, Prof Ahlem Dakhlaoui Chateur</i>
end	

Speaker profiles



Prof Chedly Abdely obtained his Doctorate of State in Natural Sciences from the Faculty of Sciences of Tunis (1997). He coordinated several national and international research projects. He is internationally recognized as an accomplished ecologist and eminent halophyte specialist. He serves as CEO of the Tunisian National Agency for the Promotion of Scientific Research since 2017, CEO of the Centre of Biotechnology of Borj Cedria, CBBC, 2011-2017; Director of the laboratory of Extremophile Plants (2010-2018) and the Laboratory of Plant Adaptation for Abiotic Stresses (2002-2010). Professor Chedly Abdely has actively and remarkably contributed in the field of Biological Sciences, with particular emphasis on the characterization of the of plant responses to abiotic constraints using physiological, biochemical and molecular parameters, addressing plant behavior to combined environmental constraint, the valorization of extremophile plants in the rehabilitation of marginal areas and the characterization of extremophile plants in order to identify promising species which combine stress tolerance and economic potential, new sources of biomass for human nutrition and the production of energy biomaterials and biomolecules of interest. He has an outstanding proven track record of publications in distinguished journals (440 publications, h index 68, 18294 citations) and edited the book "Biosaline Agriculture and High Salinity Tolerance". Besides 03 patent inventions, he supervised 73 PhD thesis and 37 Master students. He obtained several prestigious prizes: the Presidential Prize of the Graduation Diploma from the Higher School of Teaching (1980), the Presidential Award for the Best Researcher in Biotechnology (2016); the National Order of Merit for Science and Education (2017), the Presidential Award for the best Laboratory (2018) and Continental Prize for scientific excellence "Kwame Nkrumah" (2020). Finally, he was elected as full member of the Tunisian Academy of Sciences, Letters and Arts (2019) and Fellow African Academy of Sciences 'FAAS' (2019).



Dr Walid Barhoumi is the Director of the Student Entrepreneur Center of Carthage (PEEC) – University of Carthage. In 2006, he joined the National Engineering School of Carthage (ENICarthage), where he is currently an Associate Professor. From 2009 to 2010, he served as the ICT National Contact Point of Tunisia in the context of the FP7 Program, and since 2015 he is ICT-NCP of Tunisia within the Horizon 2020 program of the European Commission. From 2015 to 2021, he served as the director of the Career and Skills' Certification Center (4C) of the University of Carthage.



Prof Samia Charfi Kaddour has been Director General of Scientific Research at MHESR Ministry of Higher Education and Scientific Research of Tunisia since 2019 after having been Director General of Research Valorization between 2016 and 2019. She is the representative of Tunisia on the board of administration of the PRIMA program based in Barcelona, Spain, and a Professor of Higher Education at the Faculty of Sciences of Tunis at the University of Tunis El Manar since 2006. She began her academic career in this same establishment as an assistant in 1993. She was Director of the laboratory of condensed matter physics between 2016 and 2017 and head of the "conductors and superconductors" research group within the laboratory since 2001. Prof Charfi Kaddour obtained her diploma at the Faculty of Sciences of Orsay at Université Paris-Sud (XI) in-depth studies of solid-state physics and the Magistère de physique d'Orsay in 1989 and a Doctorate in Physics 1992. She then obtained her university qualification in physics at the University of Tunis el Manar in 2001, where she had an activity of sustained research with the publication of scientific articles in internationally renowned journals.



Prof Ahlem DAKHLAOUI is currently the director of the observatory of sciences and technology at MHESR Ministry of Higher Education and Scientific Research of Tunisia. She is full professor in quantitative methods at the Carthage High Commercial Studies Institute and researcher at the Polytechnic School of Tunisia in the Laboratory of Industrial Economics and Management, LEGI - University of Carthage and associate researcher at CREATE, Laval University, Canada. She is vice-Dean of the faculty of Economics and Management of Nabeul, University of Carthage, Tunisia. Previously, she was vice-Dean of the faculty of Economics and Management of Nabeul, University of Carthage (2017-April 2021); she has chaired the department of quantitative methods

(2003-2008) and director of Ph.D. program in economics (2015-2018). She received a Ph. D in quantitative economics and econometrics from Toulouse School of Economics (TSE) in 2002. She has 20 years of professional experience in academic research in the fields of Modelling and numerical simulation of public policies, statistic and applied econometrics, computational economics, industrial organization, energy, and environmental modelling. She has recipient several national and international scholarships: National Excellence Scholarship for Graduate Studies in France, High-level Research scholarship from university of Duisburg-Essen for training program, High-level Research scholarship French Institute of Cooperation (IFC), Research Fellowship TSE and University of Laval. She is also reviewer of many peer-reviewed international journals. She is also senior fellow-WTO Chair program, Tunis Business School, University of Tunis and member of econometrics Society and member of Eurasia Business and Economics Society.

Andreas Garbade is an Advisor in the GIZ project “Support to the Union for the Mediterranean (UfM) on Employment and Trade”. The project closely cooperates with the UfM in order to enhance regional cooperation on employment in the Southern Mediterranean. Previously, Andreas worked in employment promotion and private sector development projects in Jordan and Egypt.



Prof Mounir Ghribi is the Director of International Cooperation and Strategic Partnerships and coordinator of the Blue Growth Initiative at OGS National Institute of Oceanography and Applied Geophysics in Italy. He is a professor of Sustainable Development and Science Diplomacy at the Euclid Intergovernmental University. Previously, he led technical assistance programmes on coastal zone management, sustainable industrial development, cleaner production, and renewable energy technologies at the United Nations Industrial Development Organization (UNIDO)

Centre for Science and High Technology. He has been nominated by the MIUR, the Italian Ministry for Education, University and Research to represent Italy in international initiatives such as the Euro-Mediterranean Dialogue Forum (Dialogue 5+5) and the G7 Future of Seas and Oceans.



Dr Rafla HFAIEDH is an Assistant Professor in Management at ESSEC Higher Education Institute of Economic and Commercial Sciences at University of Tunis. She holds a doctorate in management, is the Director of Training and External Relationship at the ESSEC Tunis, and co-founder and co-director of the Professional Master “Management and Marketing of Luxury”.



Dr Sihem Laarif Oueslati holds a PhD in Management and a master's degree in accounting, decision making and control from Paris-Dauphine University, France. She is an advisor to the MHESR Ministry of Higher Education and Scientific Research of Tunisia in charge of employability and openness to the environment. She is also an Associate Professor of Management at ESSEC University, Tunis and has lectured at Paris-Dauphine University. She worked with Deloitte and Touch (Tunisia) and on the implementation of the ERP system of Air France (Paris). She also worked in the Controllers and Corporate Portfolio Department of the International Finance Corporation in Washington, DC (IFC, World Bank Group). Besides teaching, Sihem Laarif is a consultant in entrepreneurship and a founding member of the entrepreneurship competition Open Start Up Tunisia (OST). She was director of the entrepreneurial program OSTX, fostering Tunisian entrepreneurial ecosystem and promoting youth engagement in entrepreneurship. OSTX is developed in partnership with public and private partners including Columbia University (NYC), the Tunisian Ministry of Higher Education, the US Embassy in Tunisia, Africinvest, Fondation Drosos, Flat6 Labs and Columbia Global Center, Tunis.



Silvia Marchionne holds a postgraduate master's degree in International Cooperation and Development, with a focus on Middle East and North Africa region, a master's degree in "Arabic Language and Islamic Studies" at the L'Orientale University of Naples and a bachelor's degree in Languages and Intercultural Communication. She has been part of the UNIMED team since 2013, she works within UNIMED in the International Projects and Networking Team as Project Manager. She gained experience in research activities and analysis for Euro-Mediterranean and international projects, in proposals writing, monitoring and evaluation and in project

management (with particular focus on governance of higher education and employability issues in the MENA region). She is also in charge of networking activities with UNIMED university members. Furthermore, she acts as external consultant for the World Bank programme "University Governance and Quality Assurance of higher education in the MENA region".



Kais Mejri, is the Director General of Innovation and Technology Development at the Ministry of Industry, energy, and Mines in Tunisia. He is responsible for steering the "national research and innovation program", a program that intends to develop the innovation potential of Tunisian SMEs in collaboration with public research laboratories. He is also in charge of setting up and harnessing emergent and future technologies, including artificial intelligence and robotics. Mr. Mejri has held several senior positions in the Ministry of Industry, Energy and Mines, and Trade. During his various functions, he was sensitive to the problem of modernizing the administration

through a process of digital transformation and data valorisation. He actively initiated and led projects for the digitization of administrative procedures, especially in foreign trade, foodstuffs, and others. He is also the initiator of the ministry's open data and transparency strategy in the extractive industries sector. Mr. Mejri is a Graduate of the National School of Administration of Tunis and holds a master's degree in Legal, Political and Social Sciences.



Amine Moussa is Lebanese and was educated there, in the UK and Germany. He is a computer scientist who began his career in industry and has over 10 years of experience with online teaching. In 2013, Amine joined Notre Dame University (Lebanon) as Senior Specialist and Head of the Library Information Systems Department, where he is involved in digital transformation processes. Since 2009, Amine has also been part-time faculty of the Arab Open University (HEI partner of the Open University UK). He holds a bachelor's and master's in Computer Information Systems from Notre Dame University (Lebanon) in Lebanon and has

participated in certificate courses in the US and the UK. He is currently pursuing his Doctorate in Higher Education Management at the University of Bath, where he is researching the role of ethical leadership in higher education and its implications for employee knowledge sharing behaviour.

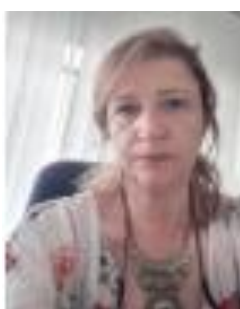


Giuseppe Provenzano is an Advisor for Research and Innovation at the Secretariat of the Union for the Mediterranean, where he focuses on topics connected to research, innovation, and employability. He has previously published on Blue Economy, the EU external policies towards Southern and Eastern Mediterranean, and on sustainability issues of the Iranian energy policies. He holds a second-level MA in International Public Affairs from LUISS School of Government and a Master's in Relations and Institutions of Asia and Africa at L'Orientale University.



Prof Nidhal Rezg is an electrical engineer from ENIT (Ecole Nationale d'Ingéneurs de Tunis), obtained his doctorate in Industrial Automation from INSA Lyon in 1996, and his habilitation in 2003 from Paul Verlaine University in Metz. He was a teacher-researcher at the Ecole Centrale de Lyon from 1996 to 1997 and then an Assistant Professor at the School of Engineering of the University of Moncton in Canada, from 1997 to 1999. He was MCF at the Paul Verlaine University of Metz during the period 1999-2004, then Professor in Industrial Engineering at the Paul Verlaine University (Metz) until 2014, and finally Professor of Exceptional Class at the University of

Lorraine. He is currently the director of the Ecole Centrale Polytechnique of the Central University of the Honoris United Universities group. As a specialist in the field of simulation and optimization of maintenance policies coupled with production and logistics, Prof Rezg is interested in the use of Artificial Intelligence tools in simulation models. He is co-author of two books, two book chapters, and 90 publications in international journals with a high impact factor. Prof Rezg has also organised and been invited to speak at several international conferences, including the IEOM Society for the IEOM Zimbabwe Conference from 7-10 December 2020 with the Distinguished Professor Award. He has supervised 28 theses, 25 of which were defended, and has been the leader of numerous industrial contracts with major companies such as Dassault Systèmes, RENAULT, DACIA.



Ms Rim Saied is the Director of Research Valorisation at MHESR Ministry of Higher Education and Scientific Research of Tunisia where she previously held the position of Director of Technology Parks. She has a general architecture qualification and earned a Master's in Architecture and Urbanism. She has taught urbanism in Higher Education Institutes of Technological Studies and geometry at the National College of Architecture and Urbanism. She has managed a wide range of projects financed by the European Investment Bank, the World Bank, and the Japan International Cooperation Agency (JICA), including "Tunisian Techno parks program" and "Higher Institutes of Technological Studies Program". She currently heads the structure in charge of

research valorisation including: monitoring Tunisian technology parks programmes "EIB, Loan 23060" and "Borj Cedria Science and Technology Park Development Project" (JICA Loan TS-P26); monitoring of valorisation strategy, programs and mechanisms in MHESR; coordinating bilateral projects in research valorisation implemented with different partners (Wallonie-Bruxelles, AUF, BMBF from Germany, Japan, ...), African partners especially South Africa, and is president of the Arab network of incubators and techno-parks "ARTECNET".



Mr Kais Sellami is an engineer who graduated from the Ecole Centrale de Paris and holds an Executive MBA. Since 1995, he has been CEO of Discovery Group, a leading group in the integration and development of solutions for the digital transformation of businesses and covering the markets of the Maghreb, Europe, and Sub-Saharan Africa. In 1988, he began his professional career at Cap Sesa Telecom, a leading group in Europe in the field of services and computer engineering. From 1990 to 1995, he was Director of Offshore Projects then Director of the Center for Development and Telematics Studies at Alcatel Tunisia, the 1st Offshore Development Center in Tunisia.

In 2006, then in 2011 and 2017, he was elected President of the National Chamber of IT services companies (INFOTICA) under the National Federation of ICTs of UTICA. In April 2012 and then in 2017, he was elected and re-elected President of the National Federation of ICT. He was also elected and re-elected Member of the National Executive Board of UTICA in January 2013 and January 2018. He was appointed, in May 2015, member of the National Strategic Council for the Digital Economy, a public-private body chaired by the Tunisian Head of Government. He is also the Tunisian Referent for the Alliance Numérique Franco-Tunisienne, a founding member of the Tunisian Economic Interest Grouping Get'IT, and a founding member of the TACT Association (Tunisian Association for Communication and Technologies).







Dr Nina Volles is German/Iranian-born and was educated in Germany, France, the UK, and Switzerland. She is the Managing Director of Paeradigms and has over two decades of experience in education, communications, and international cooperation, working in industry, academia, and development sectors. A social scientist by training with a background in higher education management, she has been involved in the design, implementation, monitoring, review, and quality assurance of a wide spectrum of higher education programmes in Africa, Europe, North America, and Asia. In recent years, her interest has shifted to capacity

development in international cooperation with a focus on education and training through university-industry-government partnerships (e.g. industrial doctorates, strategic partnership development, academic policy-making, stakeholder engagement, and change management through development principles). She holds a doctorate in Higher Education Management, an Executive Master of Science in Communications Management, a Master's in International Relations and a Bachelor's in English and French Literature and Civilisation.

Technical assistance from

PÆRADIGMS

Developing Capacity for Change

<p>Address</p> <p>Web</p> <p>Higher Education & Research</p> <p>Phone</p> <p>E-mail</p>	<p>Union for the Mediterranean (UfM) Palacio de Pedralbes Pere Duran Farell, 11 ES-08034 Barcelona, Spain</p> <p>http://www.ufmsecretariat.org</p> <p>+34 93 521 41 51</p> <p>education@ufmsecretariat.org</p>	<p> ufmsecretariat</p> <p> @UfMSecretariat</p> <p> union-for-the-mediterranean</p> <p> @ufmsecretariat</p>
---	--	--