











EuroMed Cluster Innovate Webinar

The ICT sector in the South Med countries: A Driver for Economic Growth and Innovation (1)

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INTRODUCTION

The EuroMed Cluster Innovate Webinar on "ICT as a Driver for Economic Growth and Innovation in the South Mediterranean", held on February 25, 2025, was organized under the EuroMed Cluster Forward (ECF) project led by ANIMA in collaboration with the Economic Research Forum (ERF) and the Euro-Mediterranean Forum of Institutes of Economic Science (FEMISE). This event is part of the EuroMed Cluster Innovate Webinar Series, a dynamic platform designed to address the evolving needs and challenges of various sectors in the Mediterranean region.

The ICT sector was selected for its pivotal role in innovation driving and bridging multiple industries. including healthcare, education, manufacturing, and agriculture. As a highly interconnected sector, ICT presents significant opportunities for the region's integration into Global Value Chains (GVCs). Through the of ICT development clusters—comprising businesses, universities, and government bodies —the sector can enhance productivity, promote knowledge sharing, and unlock new growth areas in e-health, fintech, agritech, and smart cities, all of which hold great potential for sustainable development in the Mediterranean region.

The webinar gathered industry experts, cluster managers, policy makers, academics, and entrepreneurs from across the South Med to explore the performance and potential of ICT clusters in the South Mediterranean, examining their contributions to regional value chain integration, innovation, and economic development.

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The EuroMed Cluster Innovate Webinar on "ICT as a Driver for Economic Growth and Innovation in the South Mediterranean" brought together experts and stakeholders from nine countries to explore the role of ICT clusters in advancing regional cooperation, value chain integration, and economic development. The discussions were structured into three panels, each addressing critical aspects of the ICT ecosystem in the region. The report consolidates these discussions into key insights and policy recommendations to support the integration of ICT clusters into regional value chains and promote sustainable economic growth. **The key discussion points included:**



Role of ICT Clusters in Strengthening Ecosystems

- The importance of cross-sectoral collaboration between businesses, universities, and government institutions to create innovation ecosystems.
- How ICT clusters act as platforms for knowledge exchange, capacity building, and business acceleration across the region.
- Challenges faced by clusters, including skills gaps, brain drain, and access to finance.
- The role of public-private partnerships (PPPs) in supporting clusters, with examples from Morocco, Jordan, and Tunisia.
- Best practices in digital infrastructure development, entrepreneurship support, and collaborative research projects.

2. Enhancing Value Chains and Export Opportunities

- How ICT clusters can support SMEs in integrating into regional and global value chains by providing market access and export facilitation services.
- The importance of trade policy reforms to accommodate the growing share of ICT services in the region's exports.
- Challenges posed by outdated trade agreements that primarily focus on goods rather than digital services.
- The role of clusters in harmonizing cybersecurity and data protection standards across countries to enable cross-border service provision.



3. Innovation, Startups, and Talent Development

- The role of universities and technoparks in bridging the gap between academic research and market needs.
- The importance of intellectual property protection in fostering collaboration between academia and businesses.
- Start-ups' growing role in AI innovation, smart cities, and blockchain solutions, with case studies from Jordan, Tunisia, and Lebanon.
- The need to provide technical training, mentorship, and funding opportunities to help entrepreneurs succeed.
- The critical importance of regional partnerships in creating knowledge exchange platforms and business matchmaking opportunities.

4. Gender Inclusion and Youth Empowerment

- The high participation of women in the ICT sector across the region, particularly in Jordan and Lebanon.
- How ICT clusters can promote equal leadership opportunities and empower young entrepreneurs through incubation programs and digital skills development.

5. Cross-Border Collaboration and Future Outlook

- The potential for regional ICT clusters to serve as catalysts for cross-border cooperation and joint innovation projects.
- The need to strengthen regional partnerships to promote digital talent exchanges, joint ventures, and market intelligence sharing.
- Recommendations on expanding the role of ICT clusters in promoting green technologies, smart cities, and inclusive innovation across the South Mediterranean region.



Panel 1: ICT Clusters & Ecosystems

This series of discussions explored the evolving ICT clusters and ecosystems in Jordan, Egypt, Tunisia and Lebanon. The following sections summarize the interventions of each speaker, offering insights into the current state of the ICT sector, key barriers, and opportunities for growth.

Ziad Al-Masri, Chief Programs Officer, Int@j, Jordan

The discussion on Jordan's ICT sector highlighted its rapid evolution driven by technological advancements, particularly the rise of AI and digital transformation. While the country has made significant progress in infrastructure development—such as 5G networks, fiber connectivity, and data centers—the sector faces mounting challenges in delivering AI-powered solutions and addressing the growing digital skills gap. A critical shortage of AI, data analytics, and cybersecurity talent—exacerbated by brain drain—underscores the urgent need for stronger collaboration between universities and the private sector to align academic curricula with market demands and introduce microcredentials in emerging technologies. Regulatory delays, especially in areas like cybersecurity, data privacy, and block chain, further hinder the sector's competitiveness.

However, public-private partnerships (PPPs) and regional cooperation across the South Mediterranean present key opportunities to drive innovation and build robust digital ecosystems. The ICT sector currently contributes over 4% of Jordan's GDP, with ambitious plans under the Jordan Modernization Vision 2033 to create over 103,000 jobs and position the sector as a leading driver of economic growth.

The role of Int@j is pivotal in this transformation, supporting the ecosystem through advocacy, market access, human capital development, and women's inclusion initiatives —a crucial step given that women constitute 40% of ICT graduates but hold less than 5% of management roles. The discussion emphasized the urgency of proactive policymaking, talent development, and cross-border collaboration to unlock the full potential of Jordan's ICT sector in the AI era.

Mohamed Shedeed, Cluster Manager, Borg Alarab Innovation Cluster & CEO of EiTESAL, Egypt

The discussion highlighted the crucial role of ICT clusters in strengthening the resilience of the ICT ecosystem in Egypt, with a focus on the work of EiTESAL, one of the largest non-profit ICT organizations in the country. Since its establishment in 2015, EiTESAL has played a key role in supporting the sector through regional collaborations across the Mediterranean and fostering multi-stakeholder partnerships. The organization's, Borg Alarab Cluster, launched in 2017 in Alexandria, has provided start-ups with an alternative innovation hub outside Cairo, offering incubation and acceleration programs supported by both government and international funding.

A notable feature of EiTESAL's work is its commitment to inclusion, with recent incubation programs prioritizing entrepreneurs with disabilities (PWDs), currently supporting 20 PWD-led start-ups with funding from the Canadian Embassy and GIZ. ICT clusters like, Borg Alarab play a vital role in helping companies navigate challenges such as skills gaps, technological disruptions, and limited access to finance, by facilitating market matchmaking, regional collaborations, and access to international funding sources. Moving forward, EiTESAL aims to scale its matchmaking efforts, expand international partnerships, and enhance support for vulnerable groups, positioning ICT clusters as key drivers of inclusive and resilient digital ecosystems.



The discussion highlighted the pivotal role of Novation City Cluster, a private innovation company established through a public-private partnership to drive the technological and industrial ecosystem in Tunisia. The cluster focuses on fostering innovation in mechatronics, IoT, AI, smart cities, connected transportation, and Industry 4.0 to enhance both regional competitiveness and international visibility. Novation City's mission revolves around three core pillars: developing intelligent industrial parks that optimize production processes and encourage cross-sector synergies; strengthening collaboration between education, research, and industry to align academic research with market needs and facilitate technology transfer; and creating an entrepreneurship-friendly environment by supporting start-ups with tailored resources and networking opportunities.

Key programs include the Industry 4.0 Competence Center, the first of its kind in the region, offering personalized digital transformation support for SMEs in partnership with GIZ; Start4, an incubator dedicated to Industry 4.0 start-ups; and Techno real, a program that transforms scientific research into market-ready solutions by protecting intellectual property and supporting technology transfer. Through these initiatives, Novation City fosters synergies between start-ups, researchers, and industrial players, driving innovation, job creation, and the modernization of Tunisia's technological landscape.

Zakie Karam, Co-founder & General Manager, DON TELECOM, Lebanon

The discussion explored the ICT sector in Lebanon, emphasizing both its challenges and opportunities, with a particular focus on the role of ICT clusters and women's participation. Despite economic instability and political turbulence, Lebanon's ICT sector remains one of the least restricted industries, benefiting from a highly educated, trilingual workforce that strengthens its position as a hub for outsourcing and offshoring. However, key barriers such as lack of tailored tax incentives, outdated regulatory frameworks, and limited government support hinder the sector's growth. The digitization of public services and the adoption of emerging technologies like cloud computing, AI, and digital transformation present significant opportunities for expansion.

Notably, women make up 50% of ICT graduates, and the sector's remote work flexibility provides a promising avenue for greater gender and rural inclusion. Angel investors, particularly from the Lebanese diaspora, play a pivotal role in funding ICT start-ups, with their trust often sparking further investment momentum. Moving forward, ICT clusters will be instrumental in connecting start-ups with investors, advocating for regulatory reforms, and fostering women's participation, while diaspora engagement and tailored funding programs will be key to unlocking Lebanon's full ICT potential.

Panel 2: Strengthening Value Chains and Export Opportunities

Mohammed Aljafari, Director of the Intellectual Property Commercialization Office, Higher Education, Jordan

The discussion explored the evolving role of ICT clusters in promoting regional trade, export, and innovation across the Mediterranean region. Initially, clusters were perceived as geographically confined ecosystems, bringing together businesses, academia, and government entities within the same local environment. However, a new understanding is emerging—clusters can serve as platforms for cross-border collaboration and export promotion, especially for countries like Jordan, Lebanon, and Egypt, which have diverse ICT capabilities.

In Jordan, the ICT sector is driven by start-ups and SMEs geared toward export rather than large-scale local markets, unlike Egypt's market-oriented SMEs. The discussion highlighted how inter-cluster cooperation between different countries could facilitate market access, knowledge exchange, and joint innovation efforts. This model has already proven effective in sectors like green tech and agri-food, with hopes to expand its success to ICT.

The role of academia in clusters was a key point, with a distinction made between sectors like agri-food and Industry 4.0, where university research directly feeds into technological innovation, and ICT, where universities primarily serve as skill providers rather than sources of technological breakthroughs. Given the acute skills gap in AI and emerging technologies, stronger partnerships between academia and industry should focus on developing talent pipelines and upskilling graduates to meet market demands.

Regarding the labs-to-market process, Mohammed Aljafari emphasized that turning research into market-ready innovations is fundamentally an economic challenge rather than just a policy or intellectual issue. Encouraging consulting services, contract research, and gradual commercialization—rather than large-scale spin-offs without sustainable business models—was recommended as a more realistic approach to bridging the gap between academia and the private sector. This incremental method could foster both economic viability and better educational outcomes by aligning academic output with industry needs. Ultimately, the discussion called for a regional approach that prioritizes cross-cluster collaboration, capacity building, and skills development as the foundation for unlocking the full potential of the Mediterranean ICT sector.

Loubna Elmekaoui, Head of Communication and Incubation, CE3M Cluster, Morocco

The discussion also explored Morocco's ICT cluster ecosystemand the role of public-private partnerships (PPPs) in driving innovation, competitiveness, and regional market integration, presented by Loubna Elmekaoui, Head of Communication and Incubation at CE3M Cluster, Morocco.

Morocco's ICT cluster ecosystem demonstrates the critical role of public-private partnerships (PPPs) in fostering innovation, competitiveness, and regional market integration. The country hosts several clusters operating in technology, information, and communication sectors, with considerable potential to enhance the sector's overall competitiveness. These clusters act as platforms to connect SMEs, start-ups, universities, and engineering schools, stimulating collaborative innovation by leveraging diverse expertise to develop integrated technological solutions tailored to industry needs. A key strategic action is the acceleration of technological transfer, where clusters act as bridges between academic research and the private sector, facilitating the transfer of innovations to local businesses.

Additionally, clusters play a role in capacity building by organising specialised training, workshops, and seminars to enhance skills, address expertise gaps, and boost productivity. They promote synergy along the value chain by fostering partnerships between suppliers, manufacturers, and solution developers, ultimately strengthening local value chain integration and reducing reliance on imports. To bolster international competitiveness, Moroccan clusters actively participate in international forums and trade fairs, offering companies opportunities to export "Made in Morocco" products.

Furthermore, the clusters encourage entrepreneurship and start-up incubation by establishing tech centres with incubators, providing access to financing, prototyping platforms, and a rich network of experts and mentors. Collaborative projects, international partnerships, and participation in European-funded programs further amplify knowledge exchange and market access.

PPPs have been the backbone of Morocco's cluster development, with the Ministry of Industry and the General Confederation of Businesses in Morocco co-establishing clusters as part of the country's innovation ecosystem. This partnership supports open innovation platforms, incubators, and tailored training programs in emerging fields like AI, Industry 4.0, and automation, improving the skills and productivity of engineers. Flagship initiatives like Digital Morocco 2030 aim to integrate digital and e-commerce solutions across Moroccan businesses, while cluster-specific projects like E3M promote collaborative Industry 4.0 projects with government backing. To maximise impact, Morocco continues to invest in advanced infrastructure and strengthen synergies between public actors, private companies, and research institutions, positioning the country as a regional hub for innovative, exportable ICT solutions.

Adel Ben Youssef, Professor of Economics at the Université Côte d'Azur, Tunisia

The discussion also delved into the evolving landscape of the ICT sector in the South Mediterranean region and its intersection between industrial products and service-based solutions, as highlighted by Adel Ben Youssef, Professor of Economics at the Université Côte d'Azur, Tunisia. In the ICT sector, one of the major challenges faced is the classification of ICT products and services due to the intersection between hardware devices (industrial products) and service-based solutions. This interplay has prompted regions like the European Union to revise their industrial policies, as traditional industrial policies focus on goods rather than services. The South Mediterranean region's ICT sector has gone through three main stages of development. The first stage involved the offshoring of basic services such as data centers and e-services, similar to the outsourcing models seen in India. The second stage saw the establishment of more sophisticated value chains, with international companies setting up local operations. The third stage, which is ongoing, focuses on the production of integrated products combining hardware and services, particularly those linked to Industry 4.0 technologies. A key observation is that the ICT sector has been one of the few sectors consistently creating jobs in the region over the past five years, making it a strategic priority for economic development.

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To support the sector, several initiatives have been implemented. One strategy involves using ICT tools to expand existing industrial clusters by linking ICT companies with other industries, such as automotive and banking. For example, Egyptian ICT companies have been connected to the automotive sector in Germany, particularly in the context of electric vehicles and software-driven solutions. Another approach focuses on forming ICT clusters from scratch, despite initial challenges related to competition and trust among companies. This was addressed by encouraging companies to self-manage clusters, ensuring economic sustainability even after donor support ends. An example of this model is the creation of clusters where companies collectively engage in business opportunities that they would not have been able to pursue individually.

A third initiative highlights the development of geographical concentrations of innovation hubs. One example is the Industry 4.0 Innovation Center in Egypt's Knowledge City, where international companies, SMEs, start-ups, and academic institutions collaborate to drive innovation. This initiative involves partnerships with government agencies such as the ITDA (Ministry of Communication and Information Technology) and the IMC (Ministry of Industry), along with private sector players like Siemens. The center not only supports technological development but also focuses on capacity building to ensure the long-term sustainability of the ecosystem.

From a trade policy perspective, ICT SMEs face several challenges. Many existing trade agreements in the region were designed with a focus on goods rather than services, even though the ICT services sector is experiencing significant growth. Updating these agreements to cover digital services, data flows, and software exports would greatly enhance trade opportunities. Additionally, double taxation treaties and withholding tax regulations pose significant barriers for SMEs, as they complicate cross-border service provision and reimbursement processes. Addressing these issues would significantly boost ICT exports. Harmonizing cybersecurity, data protection, and data governance standards across countries is another critical step, as disparities in these regulations hinder cross-border collaborations, particularly with European partners.

Moreover, fostering cross-border R&D collaboration between countries and aligning trade policies to encourage joint innovation projects would strengthen the region's position in global value chains. The clustering of donor agencies and development organizations working together—such as GIZ, UNIDO, and local clusters—further amplifies the impact of these initiatives. This collaborative approach enhances the integration of ICT SMEs into regional value chains, improves their access to international markets, and ultimately contributes to the sector's long-term competitiveness and sustainability.



Sanaa outlined four key success factors for thriving ICT clusters, particularly drawing from Morocco's experience: strong governance and policy frameworks, access to talent and R&D, digital infrastructure and connectivity, and smart funding mechanisms. Effective governance with clear digital transformation policies, cybersecurity regulations, and dynamic cluster management fosters innovation and attracts investment. Talent development is essential, with specialized training programs in AI, IoT, and blockchain strengthening university-industry collaborations, exemplified by the partnership between UM6P University and OCP Group, which led to the creation of Inovex—a company supporting startups through fab labs and incubators. Digital infrastructure, including 5G and IoT deployment, is vital to ensure inclusive integration, especially in rural areas. Smart funding mechanisms through venture capital, angel investors, and multilateral funds such as the EU, African Development Bank, and World Bank enable ICT clusters to scale regionally and globally.

Additionally, Sanaa highlighted African Smart Territories (AST), an initiative delivering open-source digital solutions tailored to local needs, promoting social entrepreneurship, job creation, and collaborative regional integration. The initiative facilitates technology transfers, digital infrastructure deployment, capacity building, and digital talent exchange between Morocco, Tunisia, Senegal, and Ivory Coast—strengthening South Mediterranean countries' position as digital leaders while fostering sustainable development and reducing brain drain.

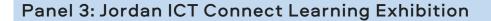
Sameh Hammad, Head of Component at Job Partnerships and SME Promotion Project, GIZ, Egypt

The discussion explored the transformative role of the ICT sector in driving economic growth and job creation in the South Mediterranean region, while addressing the opportunities and challenges facing the sector's integration into regional and global value chains. Sameh Hammad, Head of Component at Job Partnerships and SME Promotion Project, GIZ Egypt, emphasized that ICT has been one of the few sectors consistently creating jobs over the past five years, particularly amid global economic challenges.

He explained how the region's ICT development evolved through three stages: initial delocalization of basic e-services due to language advantages, followed by the integration of more sophisticated value chains, and now progressing toward advanced Industry 4.0 technologies that incorporate both products and services. Several initiatives have been implemented to support ICT clusters, including using ICT to expand existing industrial clusters, such as the automotive industry in Germany, through business linkages with Egyptian ICT companies.

This model can be replicated in sectors like banking and education to enhance geographical presence and global integration. Another strategy focused on fostering collaboration among ICT companies to form clusters, overcoming initial competitiveness concerns by building trust and encouraging joint product development, which allowed companies to engage in larger business opportunities collectively. A key principle was ensuring cluster management by the companies themselves to promote long-term economic sustainability beyond GIZ project support. Notable examples include the establishment of Industry 4.0 Innovation Centers in Egypt's Knowledge City, developed in collaboration with the Ministry of Communication and Information Technology (ITDA), the Ministry of Industry (IMC), Siemens, academia, startups, and accelerators, with a focus on building local capacities.

However, ICT companies, particularly SMEs, face significant challenges in accessing regional and global value chains due to outdated trade agreements that primarily focus on goods rather than services. Addressing taxation issues, such as double taxation treaties and withholding taxes, would significantly boost ICT exports. Harmonizing cybersecurity and data protection standards across countries is critical to fostering trust and enabling cross-border service provision. Additionally, promoting collaborative R&D initiatives and clustering efforts among ICT companies, facilitated by development agencies like GIZ and UNIDO, further enhances the sector's export potential and strengthens its integration into regional value chains. These collaborative models not only showcase the importance of partnerships between governments, private sector actors, and academia but also highlight the role of ICT in driving sustainable economic growth in the region.



Dina Zabaneh, Projects Manager, Leaders International, Jordan

The final panel featured Dina Zabaneh, Projects Manager at Leaders International, Jordan, who presented insights on the Jordan ICT Connect—a pivotal learning exhibition organized under the ECF project. It is designed as a benchmarking academy to foster cross-border knowledge exchange and collaboration in the ICT sector between South and North Mediterranean countries. The academy aimed to strengthen the ICT ecosystem in Jordan and the region by bringing together clusters, private sector companies, and public sector representatives to exchange expertise, bridge industry-academia gaps, and enhance networking opportunities.

The event highlighted emerging ICT trends in AI, cybersecurity, and software development, with a particular focus on addressing the region's brain drain issue and fostering skills development. Over three days, the academy facilitated discussions on how to align educational programs with market needs to equip the youth with future-ready digital skills. It also showcased Jordan's ICT advancements and best practices while providing a platform for regional participants to explore joint ventures, cross-border partnerships, and access to funding and acceleration programs. A key outcome was the identification of 71 partnerships, with many participants later engaging in ICT events and collaborations across the region.

The event also prioritized gender inclusivity, recording high female participation, reflecting the growing role of women in the ICT sector. Nine Arab countries were represented, along with 10 clusters and 17 companies, fostering a dynamic environment for knowledge transfer. Moving forward, the project aims to expand regional partnerships, enhance industrial digitization and AI innovation, and promote joint ventures through stronger cooperation in research, business acceleration, and skill development.

The initiative also seeks to scale new market intelligence tools and strengthen the regional impact through matchmaking, digital talent exchanges, and deeper engagement with universities, incubators, and digital hubs—positioning the Mediterranean region as a more integrated and competitive digital ecosystem.

Anissa Lahdhiri, Project Management & Development in MFCPOLE, Animator of Cluster of Technical Textile of the Sahel (2TS), Tunisia

Dr. Anissa highlighted the shared ICT challenges and opportunities between Jordan and Tunisia, emphasizing the role of collaborative ecosystems in fostering innovation. Drawing on her visit to Jordan's King Hussein Business Park, she described it as a vibrant hub for innovation and entrepreneurship, similar to Tunisia's Monastir Technopark, which is becoming a growing pool of talent, young innovators, and entrepreneurial pride. She underlined both countries' potential in emerging technologies such as AI, smart cities, and block chain, stressing that local universities, technoparks, and engineers are well-equipped to lead in these fields if given the right opportunities. However, she noted that the missing link is the effective connection between highly skilled graduates and the business world.

Dr. Anissa praised Jordan's commitment to investing in future talent through educational programs, technical training, and start-up accelerators, and encouraged Tunisia to expand its efforts in providing more business-oriented opportunities for youth. As a researcher, she emphasized the crucial role of bridging the gap between academia and the ICT sector by aligning academic curricula with industry needs, encouraging cross-sector collaboration, and fostering joint research projects. A key recommendation was to strengthen intellectual property (IP) protection to incentivize knowledge-sharing between researchers and companies. She argued that without clear IP frameworks, researchers may hesitate to share their innovations, which ultimately hinders the transfer of cutting-edge technologies into the market. By addressing these gaps, both Tunisia and Jordan could unlock their full potential, positioning themselves as regional hubs for digital innovation with integrated and competitive ICT ecosystems.

Walid Semaan, Founder and CEO, Matrix TRC, Lebanon

Walid Semaan, Founder and CEO of Matrix TRC, Lebanon, reflected on the ICT Connect event, describing it as an exceptional experience both socially and technically. He praised the event's warm atmosphere, where participants quickly formed a close-knit community, fostering a sense of collaboration and shared purpose. From a technical perspective, Mr. Semaan was pleasantly surprised by Jordan's advanced ICT ecosystem, particularly the country's structured approach to entrepreneurship, data science, and AI innovation. The visit to universities, practical labs, and start up projects demonstrated how Jordan is significantly ahead of Lebanon in its digital transformation journey, with well-defined project dashboards and industry-aligned initiatives.

Reflecting on the future of the ICT industry in the MENA region, Mr. Semaan emphasized that the market is rapidly shifting towards AI and automation. However, he cautioned that many entrepreneurs have misconceptions about AI, often confusing widely available AI tools like ChatGPT with corporate AI solutions that require comprehensive data science knowledge and infrastructure. He stressed the importance of horizontal AI solutions — systems that can automate entire business processes — rather than fragmented, vertical AI applications. For start-ups to thrive, Mr. Semaan recommended that entrepreneurs gain a holistic understanding of AI foundations, including data science, machine learning pipelines, and system integration. He warned that without this knowledge, many small companies risk being overshadowed by large tech giants offering more robust AI solutions.

Mr. Semaan encouraged start-ups to identify niche markets and develop highly specialized solutions to withstand competition from global players. He concluded by expressing his admiration for the enthusiasm of young entrepreneurs and urged them to pursue continuous education, realistic business models, and strategic partnerships to navigate the fast-evolving ICT landscape.

KEY TAKEAWAYS & POLICY RECOMMENDATIONS

The EuroMed Cluster Innovate Webinar on "ICT as a Driver for Economic Growth and Innovation in the South Mediterranean" generated valuable insights into the current state of the ICT sector across the region, highlighting both its transformative potential and the pressing challenges it faces. The discussions reinforced the critical role of ICT clusters in driving digital transformation, enhancing regional cooperation, and fostering inclusive economic growth. The following section summarizes the key takeaways and outlines detailed policy recommendations to further strengthen the ICT sector in the South Mediterranean.



1. ICT as a Catalyst for Economic Growth and Innovation

- The ICT sector is a major driver of economic growth, job creation, and societal transformation across the South Mediterranean region. Countries like Jordan, Egypt, Tunisia, Morocco, and Lebanon are leveraging ICT to promote digital transformation and value chain integration in key sectors such as agri-food, healthcare, automotive, and renewable energy.
- Digital solutions enable SMEs to become more competitive and expand their access to regional and international markets.
- Cross-sectoral digital integration is particularly vital in addressing climate change challenges and accelerating the green transition.

2. Challenges Facing the ICT Sector

- Persistent bureaucratic and regulatory hurdles impede innovation and discourage investment. Outdated trade agreements primarily focus on goods rather than digital services.
- Talent shortages and brain drain remain significant barriers, particularly in emerging fields like AI, cybersecurity, and data science.
- Infrastructure gaps, especially in rural areas, continue to limit equitable access to digital technologies.
- Lack of financial support mechanisms and early-stage funding opportunities constrains the growth of ICT start-ups.
- Cybersecurity risks and data privacy concerns necessitate robust regulatory frameworks and cross-border cooperation.



3. Role of ICT Clusters

- ICT clusters are crucial for fostering collaborative innovation, knowledge exchange, and business matchmaking across the region.
- Successful clusters like Int@j in Jordan, Borg Alarab Innovation Cluster in Egypt, Novation City in Tunisia, and CE3M in Morocco demonstrate how clustering can support startups, promote digital transformation, and enhance sector competitiveness.
- Clusters act as intermediaries between academia, industry, and government, facilitating technology transfer and skills development.

4. Gender Inclusion and Youth Empowerment

- The South Mediterranean region is witnessing a rising participation of women in the ICT sector, particularly in Jordan and Lebanon, where women constitute around 50% of ICT graduates.
- However, women remain underrepresented in leadership positions, and targeted interventions are needed to foster equal career opportunities.
- Clusters play a pivotal role in youth empowerment through incubation programs, technical training, and business acceleration initiatives.

Regional Cooperation and Cross-Border Collaboration

- Inter-cluster cooperation is emerging as a powerful tool for promoting regional trade, market access, and joint innovation projects.
- The Jordan ICT Connect Learning Exhibition served as a model for facilitating cross-border partnerships and strengthening ICT ecosystems across the Mediterranean.
- Harmonizing data protection regulations and aligning cybersecurity standards will be critical to enabling seamless cross-border digital services.



POLICY RECOMMENDATIONS

To unlock the full potential of the ICT sector and position the South Mediterranean region as a competitive digital economy, the following policy actions are recommended:



1. Strengthening ICT Clusters and Regional Networks

- Develop national and regional ICT cluster strategies to foster cross-border collaboration, knowledge sharing, and joint innovation projects.
- Establish cluster-to-cluster cooperation frameworks to promote market linkages and collective participation in international trade fairs.
- Provide long-term financial support to ICT clusters through dedicated funding programs and PPPs.

2. Talent Development and Skills Alignment

- Align academic curricula with market needs by co-designing digital skills programs with ICT clusters and private sector partners.
- Expand micro-credentialing and certification programs in emerging technologies such as AI, cybersecurity, and blockchain.
- Develop regional digital talent exchange programs to address skill shortages and promote cross-border mobility.

3. Policy and Regulatory Reforms

- Modernize trade agreements to incorporate digital services, data flows, and software exports.
- Introduce tax incentives and regulatory sandboxes to support ICT start-ups and encourage innovation.
- Harmonize cybersecurity regulations and data protection frameworks across the region to facilitate cross-border digital services.

4. Financing and Investment Support

- Design dedicated funding programs for ICT start-ups, including seed funding, grants, and venture capital schemes.
- Facilitate access to EU and international funding programs to support crossborder collaborations and technology transfer.
- Promote diaspora investment in ICT start-ups through targeted outreach and incentives.

5. Gender and Inclusion Policies

- Establish gender quotas and incentives for women-led ICT start-ups.
- Support mentorship programs and leadership training for women in ICT.
- Develop incubation programs specifically tailored to women entrepreneurs and PWD-led start-ups.



- Prioritize investments in broadband infrastructure, particularly in rural and underserved areas.
- Develop public-private partnerships to deploy digital infrastructure projects and promote inclusive digital access.
- Incentivize private sector investment in cloud computing infrastructure and Already data centers.

7. Cross-Border Collaboration and Innovation Ecosystems

- Establish a South Mediterranean Digital Innovation Network to promote crossborder R&D collaborations and innovation projects.
- Support the creation of regional technology transfer offices to facilitate joint research and commercialization of innovations.
- Organize regular benchmarking academies and matchmaking events to strengthen inter-cluster cooperation.

By implementing these policy recommendations, South Mediterranean countries can harness the transformative power of ICT clusters to drive inclusive economic growth, foster regional cooperation, and accelerate the transition toward a sustainable digital economy. The EuroMed Cluster Forward project will continue to play a key role in supporting these efforts, creating a vibrant ecosystem where innovation, entrepreneurship, and cross-border collaboration can thrive.