



# The ITU Generation Connect Initiative

## Generation Connect - ARAB Youth Group

### Arab Regional Priorities towards 2025

The Generation Connect – Arab Youth Group, are committed to bringing essential objectives to the attention of ITU stakeholders through this Crowd-sourced document, giving a unified vision of the present, and proposing solutions for a better future ahead.

#### **Initiative Background**

The **Generation Connect – ARB Group (GC-ARB)** aims at providing a unique participative process for youth to contribute to the work of the International Telecommunication Union (ITU) in the Arab region.

It offers the Arab youth a virtual platform to discuss opportunities and challenges related to digital technologies. Through this platform, youth are able to share with the ITU membership their interests, concerns and perspectives on digital transformation, especially in the context of the World Telecommunication Development Conference 2021 (WTDC-21).

**GC-ARB Produced an elaboration of a crowd-sourced document** to be presented by the digital youth envoys at a specific meeting involving members of the ITU.

This initiative is carried out in the context of the ITU Youth Strategy, in particular, within the framework of the “Generation Connect” global initiative. It also contributes to the implementation of digital inclusiveness in the Arab region.



## Regional Thematic Priorities

The Generation Connect – ARB Group (GC-ARB) identified the following thematic priorities as priorities for the Arab region:

1. Cybersecurity.
2. Policy and Regulations.
3. Digital Inclusion.
4. Network & Digital infrastructure.
5. Digital Services & Applications; and
6. Digital Innovation Ecosystems.



## 1) Cyber Security

The cybersecurity thematic priority offers ITU members the opportunity and tools to increase cybersecurity capabilities at the national and the international level in order to enhance security and resilience, build confidence and trust in the use of ICTs and making as a consequence the digital realm more safe and secure for everyone.

Actually, the more our world relies on connecting through computers, the more the danger of theft and damage aimed at disrupting networks, software, or hardware grows. Cyber security is a set of approaches that should be used quickly to changing technology and safety concerned by safeguarding computers at every level. No matter the type of digital data, it needs to be protected, it is time to take cyber security into the heart of our Arab countries. Thus, we are going to take you through our ideas that can help protect our data by making a few smart changes.

### Challenges

- **Critical Infrastructure Information Protection:** Cyberspace and its underlying infrastructure are vulnerable to a wide range of risks stemming from both physical and cyber threats and hazards. Hackers exploit vulnerabilities to steal information and money and are developing capabilities to disrupt, destroy, or threaten the delivery of essential services. Cyberspace is particularly difficult to secure due to a number of factors such as, the ability of malicious actors to operate from anywhere in the world and the difficulty of reducing weaknesses and costs in complex cyber networks. In particular, we can evoke the non-secure national Tunisian websites namely the Tunisian office post website who was hacked recently in June 2021.



- Third party software: Due to the inability to afford shopping online and buying licensed programs, people tend to download malicious programs and games that could Inject the PC with Malware and the utmost concern and likelihood are that cracked games commonly have viruses packed with the download file. Maliciously installing a virus as part of game software makes it very difficult for antivirus software to detect and remove the malicious software. Viruses could include spyware, malware, and worse, ransomware.
- The law: The laws usually do not fully support cybersecurity because they need to be revised to cope with the dynamic cyber environment. Therefore, hackers can get away without getting arrested. For instance, the recent law about cybersecurity was enacted in 2004.
- Lack of expertise: There is lack in cybersecurity professionals due to either the inexistence of higher degrees on cybersecurity or the poor quality of cybersecurity education. Although Tunisia also has 7 professional master's degrees that aim to build competencies related to network and information security, but the quality is poor and students who graduates do not have the necessary skills to get jobs which also represents a huge crisis.
- Lack of awareness about required precautions to remain safe when working remotely. In fact, we were obliged during the Corona pandemic to switch to working online, without being aware of how to stay safe online.
- The misunderstanding of the cybersecurity concept: Indeed, cybersecurity is not only underrated but also people are thinking that it's only about hacking and black hat hackers.



## **Solutions**

- Methodology: Best Practices and Opportunities for Growth:

Oftentimes, learning is best achieved when it is tangible, applied, and straightforward. It allows users to experience first-hand the material that they are in the process of grasping.

Learning through action is fundamental to the success of gaining better quality for our students. The messages are contextualized in a game, scenario, or narrative, facilitating and challenging the thinking process of each participant.

We urge the ITU to hold free training courses and regional competition to attract talents and improve youth skills and knowledge in cybersecurity in the Arab region and avoid bad uses of the information

- We urge the ITU to investigate Blockchain (Distributed Ledger Solution), which is focused on building trust in an untrusting ecosystem, as a potentially strong cybersecurity technology. The technology, because it is all linked together, allows users to contribute to the security of the blockchain by creating blocks (when doing transactions), making it difficult to hack a block because it requires hacking the entire blockchain, which isn't easy, because the proof of work aspect requires the hacker to use so much computing power that no one can afford.
- The Importance of Cyber Security Awareness for children: it is very important to protect children through cybersecurity education so that they can



become aware of the potential risks they face when using internet communication tools, such as social media, chatting and online gaming. We urge the ITU to translate "Online Safety with Sango" to different language and share it with media, such as television and radio, on the 30th of November (the international Computer Security Day). Media must play an important role in educating children through cybersecurity campaigns because such campaigns are more interactive and interesting for children to understand.

- Cyber-attacks are on the rise, and they are increasingly using Artificial Intelligence (AI). The Internet of Things (IoT) age will further densify the attack surface. AI is thus a 'must' to help companies manage this range of cybersecurity risks, technical challenges, and resource constraints. AI can improve systems' robustness and resilience, that's why we demand that ITU encourage research in the uses of AI in cyber security.

### **Opportunities**

- Giving students the skills and experiences needed in the cybersecurity domain to find jobs considering the desperate need in the marketplace for cybersecurity professionals.
- Build confidence and trust in the use of ICTs.
- Using blockchain technology will reduce costs:

Banks charge millions a year for providing middle-man services such as clearing Payments and fraud-checking. Moving to blockchain systems can effectively automate much of this, bringing down costs.



## 2) Policies and Regulations

Governments have the power to establish and impose digital transformation prerequisites such as policies and regulations providing significant support to the rest of the thematic priorities. Moreover, to meet development targets, implementation must be regulated by an influencing authority of power. Promoting information and communication technology policies and regulations, would lead to significant growth in the Arab region. Taking into account the mission of achieving a universal access to telecommunication, information and communication technologies for social, economic and environmentally sustainable growth and development in the region; Policies and regulations could take place in many forms such as legislation, rules, guidance, programs, funding and more. Furthermore, to create sustainable impact the root challenges must be investigated, analyzed and mitigated properly. Below is a list of the main challenges facing the region, proposed actions to take place and resulting growth opportunities.

### Challenges

- Policy existence

Absence and de-prioritization of policies that provide holistic regulations to all information and telecommunication development aspects undeviatingly reflect on the digital growth in the region.

- Insufficiency in meeting targets



When targets and objectives are not realistically well defined, well prioritized nor accompanied with proper guidance it would be very difficult to achieve resulting to policy postponement and failure to meet objectives.

- Absence of a growth track system

A rule that is written down but not measured is unlikely to result in compliance. No matter how well-defined policies and regulations are if it is not communicated nor measured properly the region will suffer to witness results.

- Acceptance failure

When people lose faith in regulators and governments by being forced to follow some technical regulations that do not appear to serve any substantial purpose; the public will most likely lose faith and eagerness to peruse development goals as they fail to understand the purpose.

- Costs of regulatory compliance

Small and medium enterprises bear a disproportionate burden of new policy compliance costs in comparison to well established entities. Therefore, when a new regulation is imposed that would financially affect the entity, it is highly possible that entities will not participate in the regulatory transition holding back regional development.





## Actions

- Design result-oriented policies

Objectives must be specific, measurable, attainable, relevant and time-based to have clarity, focus and motivation needed to achieve development targets. Having result oriented policies that provide guidance and distinguish between regulatory compliance and policy effectiveness will improve the ability to meet the objectives and create courage to attain them.

- Establish a regulating entity that tracks performance

The entity would offer a track system and act as part of a performance measurement processes in organizations across the region. Having the required tools and models that aid performance measurement will provide clarity on progress and improved performance.

- Simplify policy requirements

The fine line of policy compliance should be well defined in a simplified manner where no unnecessary requirements would take part of the policy unless it is directly related and is a main pillar in it. This way entities would be able understand the requirements and comply with it without facing unjustified challenges.

- Communicate policies properly

Having a clear definition of policies and regulations that is accessible and well communicated to all involved parties establishing a common knowledge level will accelerate the development process by eliminating potential misalignment.



## Opportunities

- Achieve transparency

Transparency brings clarity and accountability to a system that is prone to corruption or failure if left uncontrolled. Furthermore, openness has been demonstrated to be a prerequisite for good economic policy.

- Meet targets

Setting goals for information technology development is best when it is an ongoing practice. Having clear expectations with well-defined policies and regulations will accelerate accomplishing targets.

- Ease strategic implementation

Policies and regulations it will provide a clear roadmap of what, when and how to take a step further and implement development objectives and anticipate challenges to be mitigated.

- Raise community awareness

Elevating the community awareness of the regulatory rules and policies would have significant impact on compliance and development of future policies. Reaching a common level of understanding strengthens connection between the regulatory entities and organization resulting to a steep growth.



### 3) Digital Inclusion

Digital Inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs), which facilitate access to thousands of information, work and leisure opportunities, is fundamental in today's society and their use must be independent of each person's condition. The objective of digital inclusion is to ensure that, for example, the elderly or those with less purchasing power or with motor, intellectual or audio-visual disabilities are not left out of a world that offers infinite possibilities.

#### Challenges

- Access: Availability and affordability.
- Adoption: Relevance, digital literacy, and consumer safety.
- Application: Economic and workforce development, education, healthcare, public safety and emergency services, civic engagement.

#### Solutions

- Accessible ICT:

making ICT more accessible for all and fostering new methodologies for technology development by providing free access to public access technologies (hardware, software, high-speed Internet connectivity).



- Assistive technologies:

supporting the development of ICT that assists people with disabilities for enabling them to perform activities that they have not been able to do before and to interact better with technologies

- Skills and digital skills:

empowering citizens to fight marginalization and social exclusion, including careers through ICT in Education.

- Social Inclusion:

increasing the participation rate of disadvantaged people in public, social and economic activities through social inclusion projects.

## **Opportunities**

- More job opportunities: in a connected world, digital profiles such as programmers and data analysts are in high demand. Access to networking platforms also makes it easier to get a job or fund a project.

- More educational opportunities: internet access opens up a universe of possibilities for training, digital skills, mobile learning, which enables people to learn from a smartphone, or access to educational video games, among others.

- Increased protection against digital crime: digital literacy provides greater knowledge of the internet environment and makes people less likely to fall victim to internet scams such as phishing.



•Greater access to information: access to digital media and shared content repositories contributes to better citizen education and enriches social and political life.

#### **4)Network and Digital Infrastructure**

Network and digital infrastructure are essential and vital nowadays just as any basic requirements that constitute a core to our everyday lives. We can't talk about development, innovation etc. when basic needs such as a reliable infrastructure is still not provided in certain areas all over the Arab region, especially in rural areas.

Without a reliable network and digital infrastructure, it's difficult and impossible even to access various digital services that we use on the daily, such as healthcare, banking, education and communication.

Taking Tunisia as an example of a developing country from the Arab region, we can't really admit to having a steady, efficient and accessible network and digital infrastructure. In a country with so much creativity and potential, it's very difficult to implement ideas, solutions and new up-to-date businesses on an "inefficient" infrastructure that's not really immune to breakdowns.

#### **Challenges**

- One reason that is considered as a challenge is; many are against a digital transformation where we can rely more on smart solutions via internet and technology. In Tunisia, many are threatened by the idea of transformation in the way we handle business and are against a new and different approach to "get the job done".



- So naturally focusing on developing such infrastructure where we can start a new era of digital transformation would be “postponed until further notice”
- A second reason that is considered as a challenge is; lack of resources. As a developing country, that has been facing a great number of challenges especially after the Arab Spring, focusing on building and improving a network and digital infrastructure may not be one of its top priorities. So providing resources and opportunities to make that happen might not be easy.

### **Actions**

- Encourage and urge “Developing and Less developing countries” to opt for a digital transformation and create a reliable network and infrastructure that can be a center system of digital services that are essential in daily lives.
- Encourage stakeholders to invest in building, upgrading and maintaining a reliable physical infrastructure since it might be a challenge for these countries to provide needed resources.
- Enable internet access in all parts of the Arab region and especially in rural places where it’s most lacking and promote it as technical infrastructure.

### **Opportunities**

- Encouraging local skills and open the way to innovation, creativity when it comes to digital solutions where it can be implemented on a strong and reliable infrastructure that supports new technologies.
- Enabling the multi-stakeholder approach



- Facilitating various services such as; healthcare, banking, education, provide training, employment etc.
- Enabling entrepreneurs to turn their ideas into real projects that benefit the area and turn it into income.
- Enabling various companies to become more efficient and more profitable.

## **5)Digital Services and Applications**

Humanity's dependence on digital services increases by the minute, which has especially proven true during the recent years due to the pandemic. We can do things much more efficiently thanks to these services. However, unfortunately the adaptation of such services is going at an unreasonably slow pace in most Arab countries, which is the issue we will be discussing in this document.

### **Challenges**

- Lack of strategies for digital services and applications development: Digitalizing services and developing high scale applications is not a simple task, as it requires massive coordination and cooperation for optimal utilization of said services and applications. Hence the need for a series of well-developed strategies.
- Standardizing digital services and applications introducing them to the common citizen: Allowing the people to get comfortable with digital services is also a challenge that needs to be addressed, as a society where said services and applications are minimal, a lack of user-base and/or user knowledge are to be expected.
- Lack of experience to lead digitalization initiatives: Developing digital services require a set of technical expertise, which is not exactly easy to



obtain whether it is software development skills, marketing skills or strategical skills.

## **Solutions**

- Adapting high scale strategies for the development of digital services and applications: In order to synchronize the development of digital services and applications, we need to set- up strategies to ensure their success. Starting from market studying all the way to Quality of Service.
- Hold training courses: for all sorts of skills required to work on digital services and applications, which would immensely bring out talents especially but not exclusively from young individuals.

## **OPPORTUNITIES:**

- Igniting a fresh market where many developers can thrive and make useful applications.
- Coordination opportunities for companies to synchronize their digital services.
- Allocating the human working force to more difficult tasks whilst the simpler parts are digitalized.

## **6)Digital Innovation Ecosystems**

The COVID-19 pandemic has led our world to become increasingly reliant on ICTs and digital tools in the light of remote business operations and the rise of new challenges requiring technological solutions.





Youth in the Arab region represent the fastest growing demographic with a median age of 22. The current figure estimates around 108 million citizens spanning all 22 Arab countries. Such a number cannot be undermined as the majority is ready for community engagement by generating ideas, projects and businesses with their willpower and ambition. However, most of these ideas never see the light because young ones do not have a solid platform to showcase their innovations, leading to a waste of potential and talent.

In a rapidly shifting economy like this one, especially in the Arab region, an inclusive digital transformation will allow to gradually close the digital divide and innovation gap, provided it is implemented through sustainable strategies and policies that allow fresh robust ideas to thrive and succeed.

One of the areas of this transformation is digital innovation ecosystems, which are defined by the interactions of the ICT sector with other industries and economic stakeholders to boost creativity and innovation through an exchange of resources.

### **Challenges**

- **Inclusion:** Not only do young people not know where and how to present their ideas, but they also find it difficult to implement, reach engagement and access the financial support and mentorship necessary to creating a digital technology.
- **Funding:** Young Arab men and women who come up with new ideas as digital solutions and business concepts often find it hard to access funding to implement those ideas. This is due to the lack of governmental financing of such initiatives, and the scarcity of private sector funding opportunities and



methods such as startup accelerators, venture capitalists and private investors.

- **Education:** A strong innovation ecosystem starts with a solid educational one. The current education system, notably in Lebanon, is characterized by outdated curricula that do not encourage independent thinking and innovation, but rather focus on information retention and memorization.
- **Collaboration:** The key to a solid digital innovation ecosystem is the partnerships between its different actors and stakeholders. Those include entrepreneurs, entrepreneurial support networks, the private sector, the public sector, financiers, and academia. Currently, those partnerships are not present, which hinders the advancement of digital transformation and innovation and the exchange of the knowledge and resources that constitute the core of digital innovation ecosystems.
- **Policy:** There exists an insufficiency in policy and strategy that create national visions for digital innovation. The first Sustainable Digital Ecosystem Summit was held in Lebanon in 2019, where different stakeholders showed their commitment to advancing the country's digital economy. However, when it comes to formal policy and implementation, there has been little to no progress on such endeavors.

## **Solutions**

- ITU can support more financing opportunities for young entrepreneurs entering the ICT sector and advancing the digital economy through innovation in the fields of AI, web development, telecommunications, and digital accessibility. This includes supporting existing accelerators, incubators, and technology hubs such as Berytech, Beirut Digital District,



Flat6Labs, and Speed@BDD (Lebanon) as well as creating new ones. This also includes supporting the government financially to provide zero or low-interest loans to those young innovators.

- ITU should foster collaborations and facilitate Public-Private Partnerships between relevant stakeholders and institutions to ensure maximized benefit from the mutual sharing of resources such as highly skilled labor, knowledge, R&D efforts, operational services, co-working spaces, etc. For example, this can include supporting formal partnerships between universities and technological hubs in the region or UN agencies whereby universities would provide research and bright students and fresh graduates, and the hubs and similar organizations would support implementation and internship programs.
- ITU can sponsor and initiate awareness campaigns in universities to allow students to understand the capabilities of the ecosystem's stakeholders and how they can both support the initiative and become part of it. This way, youth would be encouraged to start thinking of ways to utilize current digital technologies to improve their region's welfare and enhance social prosperity.
- ITU can organize "Innovation 2030" local or regional competitions, in collaboration with tech companies or ministries of telecommunication for youth to utilize current technologies to solve certain environmental and social issues that fall under the Sustainable Development Goals (Agenda 2030). The best prototype solution would win a reward. An example would be asking for ways the country can limit plastic pollution or make solar energy more affordable.
- ITU should ensure that its current and future youth-focused initiatives, such as Generation Connect are able to reach bigger numbers of young people



from all regions to engage the youth demographic as much as possible. This can be done by pushing for more exposure on social media platform with an associated marketing campaign through universities and other organizations.

- ITU can issue recommendations and policy papers to the Arab world’s ministries of education. Those would help shape an education system that encourages digital literacy (ICTs, coding, emerging technologies, ...), entrepreneurial mindset, design thinking processes and 21st century skills in general. This will enable Arab youth to be innovative, creative, and to use their ideas to solve society’s most pressing issues relating to people and the planet under the Sustainable Development Goals.
- ITU can support Arab states in setting up “National Digital Innovation Strategies” which would be long-term strategies leading up to 2025 then 2030, with set targets for all the years in between relating to different thematic areas of digital transformation, of which goals regarding enabling solid digital innovation ecosystems. They would also set out a roadmap and concrete implementation steps for that national vision.
- ITU should make sure that young people are present at every decision-making table and strategizing process regarding digital transformation and innovation, as they are the experts when it comes to those areas of policy. Taking their ideas into consideration and translating them into formal policy planning that reflects their interests, experiences and challenges can make those plans more meaningful and efficient.



## **Opportunities**

An enabling digital innovation ecosystem:

- Offers an opportunity for economies in developed and developing countries to become more competitive, by investing in research, digital innovation, sustainable solutions within a digital sphere.
- Can transform struggling nations into leading business centers and hubs that provide decent economic growth and job opportunities for their youth.
- Allows countries to diversify their economies by capturing value in new areas such as software development, AI, Blockchain, Fintech, etc., as well as new advancements in existing sectors such as agriculture, healthcare, and education.