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| **Plenipotentiary Conference (PP-18)Dubai, 29 October – 16 November 2018** |  |
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| PLENARY MEETING | **Document INF/3-E** |
|  | **15 October 2018** |
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| Information Document of Greece |
| The Ministry of Digital Policy, Telecommunications and Media contributes to the achievement of the Sustainable Development Goals of the United Nations |
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Greece recognizes the importance of telecommunications and ICTs and plans to accelerate development and contribute in the digital transformation of our society, paving the way for sustainable growth, so as to achieve the goals of Agenda 2030 of the United Nations.

During the ITU Council of April in Geneva, Greece submitted **Information Document C18/INF/13-F** (<https://www.itu.int/md/S18-CL-INF-0013/en>), in order to notify Councilors that the means to prove our commitment to bridge the digital divide is not only by improving connectivity across the country, but also by promoting digital cohesion. Bridging the digital divide requires a series of activities that are endorsed in the **National Broadband Plan** of Greece, that reflect to policies and frameworks related to Telecommunications and ICTs as to achieve the SDGs of the United Nations. As an example, in this Document an €160M nation-wide large-scale project was presented, the Rural Broadband project, that was awarded in the framework of **European Broadband Awards 2017,** in Category 3: “*Territorial cohesion in rural and remote areas*”. It provides broadband infrastructure coverage to almost 45% of the Greek territory in **white Rural Areas**, covering 95.96% of the population with services of minimum 30Mbps.

In the context of promoting digital cohesion and **the role of ITU as a global leader for telecommunications** that supports the ICT sector by making coordinated contribution to the **achievement of the United Nation’s SDGs**, the General Secretariat of Telecommunications and Post, as a competent authority for Telecommunications, **organized in 2018 two events** that aimed to provide a dialogue at international level that respond to **major challenges for telecommunications and ICTs.**

The first event was held on 12 July 2018 in NY, during the **High Level Political Forum of the United Nations,** which concerned **Smart Sustainable Cities** for implementing the SDGs. It was a vital proof that working hard to maximize the tremendous potential that emerging technologies such as artificial intelligence (AI), big data, blockchain, the Internet of Things (IoT), and 5G have, will facilitate the path for building smart sustainable cities. It is evident that Smart City technologies are not only transforming how we live work and play in our cities, but they are also transforming how governments operate Cities for the citizens. Quickly changing technologies are becoming more affordable and City departments are all taking advantage of the cost savings and societal benefits this provides. The Essential Technical Elements for being Smart within the context of smart sustainable cities are: to possess collaborative knowledge in operation, to enable compatibility in service and application, to ensure integrity in platform, to permit interoperability of data, and to establish interconnectivity of infrastructure. Local data on infrastructure, systems, and services such as culture, history, citizens’ behaviors, efficiency, economics, and other similar priorities and local specificities of the city should also be taken into consideration when deploying emerging technologies such as artificial intelligence.

1. Side Event during HLPF of UN on “**Shaping Smarter and More Sustainable Cities: Striving for Sustainable Development Goals**”



Greece presented herself in the **Voluntary National Review** on Sustainable Development during the **High-Level Political Forum of the United Nations** in July in New York, so as to elaborate the steps taken by the Greek government to accomplish the UN Sustainable Development Goals of Agenda 2030.

In this context, the **Greek Ministry of Digital Policy, Telecommunications and Media** co-organized with the International Telecommunication Union (**ITU**), the United Nations Economic Commission for Europe (**UNECE**), the United Nations Educational, Scientific and Cultural Organization (**UNESCO**) and the Permanent Mission of the United Arab Emirates (**PM UAE**) a HLPF Side Event on **"**[***Shaping Smarter and More Sustainable Cities: Striving for Sustainable Development Goals***](https://www.itu.int/en/ITU-T/Workshops-and-Seminars/20180712/Pages/default.aspx)**".**

The event provided a platform to: debate the impact of frontier technologies such as artificial intelligence (AI), blockchain, and internet of things (IoT) on cities; present the international key performance indicators (KPIs) for Smart Sustainable Cities (SSC), developed by U4SSC, that establishes a criteria to evaluate ICT's contributions in making cities smarter and more sustainable and that provides cities with the means for self-assessments in order to achieve the sustainable development goals (SDGs); and discuss the opportunities and challenges faced in shaping smart and sustainable cities at the local level. **The United 4 Smart Sustainable Cities (U4SSC) is a UN initiative coordinated by ITU and UNECE and supported by 14 other UN agencies and programs to achieve** the Sustainable Development Goal (**SDG 11**). The U4SSC encourages the use of ICTs and other emerging technologies in smart sustainable cities. The **Key Performance Indicators (KPIs) for SSC** have been developedto evaluate ICT’s contribution in making cities smarter and more sustainable, consisted of 54 core and 37 advanced KPIs concerning the economy, environment, and society/culture dimension of a smart city. These KPIs are based on Recommendation **ITU-T Y.4903/L.1603** “Key performance indicators for smart sustainable cities to assess the achievement of sustainable development goals” and they are developed with 16 UN Agencies and Programmes that are the members of U4SSC. Over 50 cities, including Dubai, Singapore, Moscow, Bizerte, and Pully have adopted these KPIs. **Greece** has adopted these KPIs through its newly developed **National Standard on Sustainable Communities** that was on public consultation as of 12 July, as it was announced during the event.

The second event was held on 11-12 October 2018 in Athens and concerned an **ITU Forum** titled **“*Towards 5G Enabled Gigabit Society*”.** This Forum was **hosted** by the Ministry for Digital Policy, Telecommunications and Media of Greece **and co-organized** with the **International Telecommunication Union** (**ITU**). This Forum is another evidence of the strong commitment of the General Secretariat of Telecommunications and Post of Greece to actively participate in the work of ITU. It is also the result of proactive position of the Ministry for Digital Policy, Telecommunications and Media on further improvement of the National Policy for Next Generation Access Networks and ICT. The fast evolution of related technologies does not only promise to offer tremendous opportunities for many industries, but also empowers governments to confront the challenges of the upcoming 4th industrial revolution. These challenges are not restricted to the dissemination of knowledge at national or international levels as this Forum aimed, but may also be extended to leverage a country’s strength in the global industry, using suitable promotion and supportive mechanisms. These mechanisms concern the preparation of a National Digital Strategy and the formulation of a technology ecosystem involving key stakeholders in the field, these being the Government, Academia and the Industry. Participation and collaboration with each of these stakeholders is essential, so that a new institutional framework policy may be prepared for the promotion of a new technology development. In this context, emphasis is first put on infrastructure development, security and upgrading of digital public services, sectors that are the foundations and the prerequisites for the digital transformation of Greece.

1. Forum on “**Towards 5G Enabled Gigabit Society**”



The key topics of the Forum primarily focused on the aspects of digital transformation of society and sustainable development of national economies including mechanisms to facilitate high-speed connectivity with resilient and synergistic 5G/IMT-2020 infrastructure deployment, to enable spectrum sharing, whilst ensuring a trusted and quality user experience. The organizers put special emphasis on numerous opportunities related to 5G/IMT-2020, as well as on challenges to be addressed in infrastructure roll-out, spectrum management and security aspects of future networks.

The Forum provided an excellent venue for expertise exchange on 5G-related topics open to all participants. More than **160 participants** of the Forum benefited from the presence of over **65 experts** representing policy makers, regulatory authorities, national and international standardization bodies, different industries and authorities - potential 5G users, equipment and infrastructure manufactures, academia and mobile network operators. Notably, the representatives of authorities and industries outside of traditional ICT took an active part in the discussions in Forum thus proving the highest interests of new verticals and users in fastest deployment of 5G/IMT-2020 networks.

It was the unanimously acknowledged that in the recent years**, telecommunications have become a pillar for growth and sustainable development** of national economies. With the arrival of the interconnected users and devices, new efficient technologies are developed that will be able to overcome booming of high traffic and security. The fast evolution of related technologies does not only promise to offer tremendous opportunities for many industries, but also empowers governments to confront the challenges of the upcoming 4th industrial revolution.

While referring to the vision of 5G/IMT-2020 infrastructure development, security and upgrading of digital public services and sectors that are the foundations and the prerequisites for the digital transformation, more than 65 speakers shared their most recent experiences on the series of topics, in particular:

* National policies and strategies for 5G
* Evolving Regulatory frameworks fostering 5g implementation
* Future networks and 5G: fixed and mobile
* Implementation of 5G Pilot Projects
* Spectrum issues related to 5G
* Challenges and Opportunities in the Telecom sector implementing 5G
* 5G for Smart Cities
* 5G for connected and automated vehicles
* 5G innovation ecosystem

As the matter of the greatest importance, the Forum pointed out the need to establish sustainable national policies and strategies relevant to implementation and promotion of 5G technology. These tasks are the cornerstones in the current evolution of regulation, since it is not just a traditional objective to satisfy spectrum requirements. There is the urgent demand to look at technology development and supporting standardization, business challenges and opportunities, for the ICT sector as well as for sectors such as automotive and Smart Cities. This ecosystem view is most critical.

The participants identified several areas where innovative regulatory regimes could foster implementation of 5G/IMT-2020 networks. The major challenge is how to align the existing regulation to avoid burdens in the access to public infrastructure. The ubiquitous small cells in future New Radio Access Network are assuming simplification of existing rules to afford the massive deployment of this equipment. The representatives of ICT had underlined the challenges in finding sufficient investment on the 5G deployment against the backdrop of revenues stagnation. This provides incentives to regulators to proceed with careful spectrum pricing policy as well as applying modified frameworks for licensing conditions and duration.

With regard to licensing of new spectrum for 5G/IMT-2020, improved practices are expected. In line with technology evolution, the licensing conditions and obligations should be further improved. Modern licensing policies include a comprehensive list of obligations making 5G spectrum utilization more flexible while ensuring its efficient usage and precluding unnecessary inflation of prices. Several administrations demonstrated their approaches in applying contemporary sets of obligations such as obligations on spectrum usage, renovated coverage obligations and network access obligations. The noted set of upgraded obligations would assist in solving the problem of allocation of the limited spectrum resources to the multiple users while avoiding risky segmentation and waste of scarce resources through unnecessary guard bands.

Network security is another aspect of 5G network that is of particular importance for the success of the whole concept. The services of future networks should be highly reliable and secure. It becomes even more important with penetration of 5G services into the verticals with the increased requirements for secure low latency communication links and decision-making process. Today more and more daily processes are relying on data exchange and data processing, effectively new digital era should guarantee the safety of life of the individual human beings and of the society as the whole.

The majority of speakers pointed out that 5G vision is one of great opportunities to improve the fundamental pillars of societies and economies. Today the highly reliable services to all end-users such as trusted communications supporting innovation in all industry sectors, automated driving, industrial robotics, advanced virtual reality, are all under discussion. Making this vision a reality will demand contributions from a wide range of technical and policy communities. From this perspective, **the Athens Forum brought multiple communities together to discuss the respective contributions to the 5G ecosystem.**

Inclusive discussion during the meeting assisted in combining unique strengths and in ensuring that the involved community is mutually reinforcing contributions to ICT innovation. The exchange of views is also in line with the philosophy underlying ITU’s approach to 5G. In this context, the Forum gathered experts and participants together in order **to build a trusted 5G environment** able to support social and economic development in all regions of the world.

Summarizing the results of constructive discussions at the Forum, the participants finally concluded that **dedication and commitment** of the full scope of stakeholders both on international and national levels to establish efficient regulatory, technical and market frameworks for 5G/IMT-2020 deployment will assist in bridging the digital gap as the primary task of ITU and the United Nations. It will also promote ITU’s global leadership in the sector of telecommunications and ICT, along with the initiatives at national level and cooperation agreements, so as to promote implementation of new technologies on the global level.

All presentations and outcome report of the Forum are available [here](https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Events/2018/5GForum/Towards_5G_Enabled_Gigabit_Society.aspx).

