



DEPUTY MINISTRY OF
RESEARCH, INNOVATION
AND DIGITAL POLICY
REPUBLIC OF CYPRUS

Cyprus – The road to 5G



Dr Stelios D. Himonas
Permanent Secretary

Our Vision



DEPUTY MINISTRY OF
RESEARCH, INNOVATION
AND DIGITAL POLICY
REPUBLIC OF CYPRUS

“ To build a knowledge-based, digital economy and society, supported by modern, efficient and reliable structures, and driven by research, innovation and technological advancement, as enablers of:



Sustainable economic growth



Social prosperity



International competitiveness



Digital Policy

eGovernment & Digital Public Services

- Optimisation of systems, structures and processes
- Offering end-to-end quality services to citizens/businesses

- Development & usage of new technologies (eg. AI, Blockchain)
 - Digital skills and fitness
 - Support to businesses

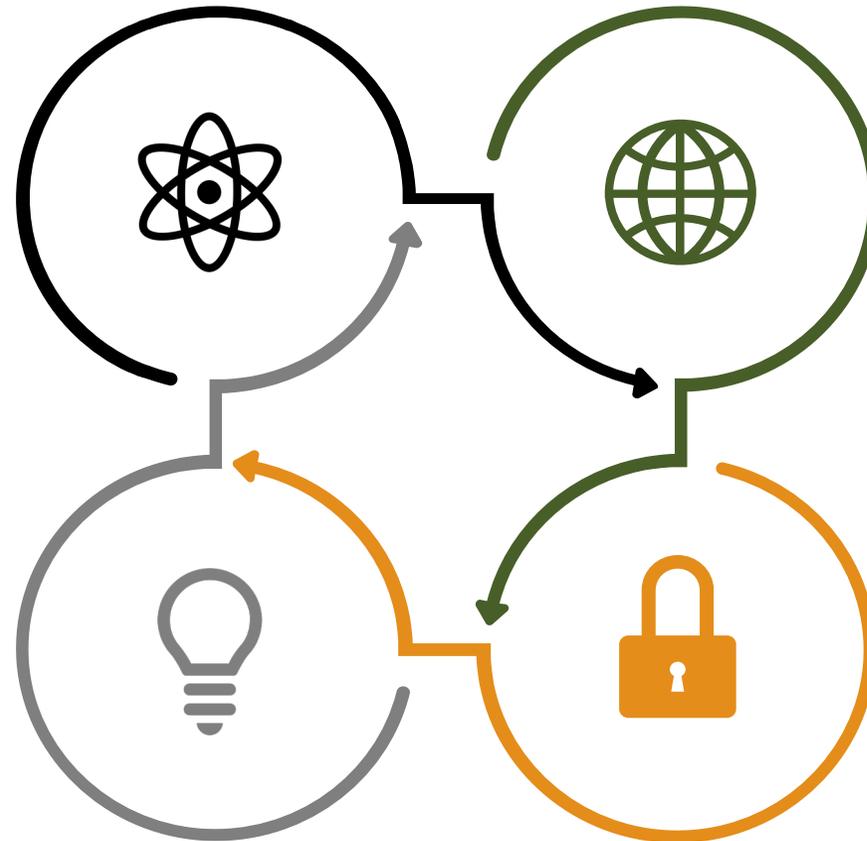
Enablers

Electronic Communications

- Boost of our Broadband infrastructure
- Rollout of 5G by 2021 – Auction by 2020
- Satellite comms & space applications

- Safeguard the integrity, security and resilience of our digital infrastructure, data, communication networks and services.

Cybersecurity



Towards a Gigabit society



DEPUTY MINISTRY OF
RESEARCH, INNOVATION
AND DIGITAL POLICY
REPUBLIC OF CYPRUS

Strategic objectives for 2025



Gigabit connectivity for all main socio-economic drivers

All premises in organized communities to have access to internet connectivity offering a download speed of ≥ 100 Mbps (upgradable to 1 Gbps)

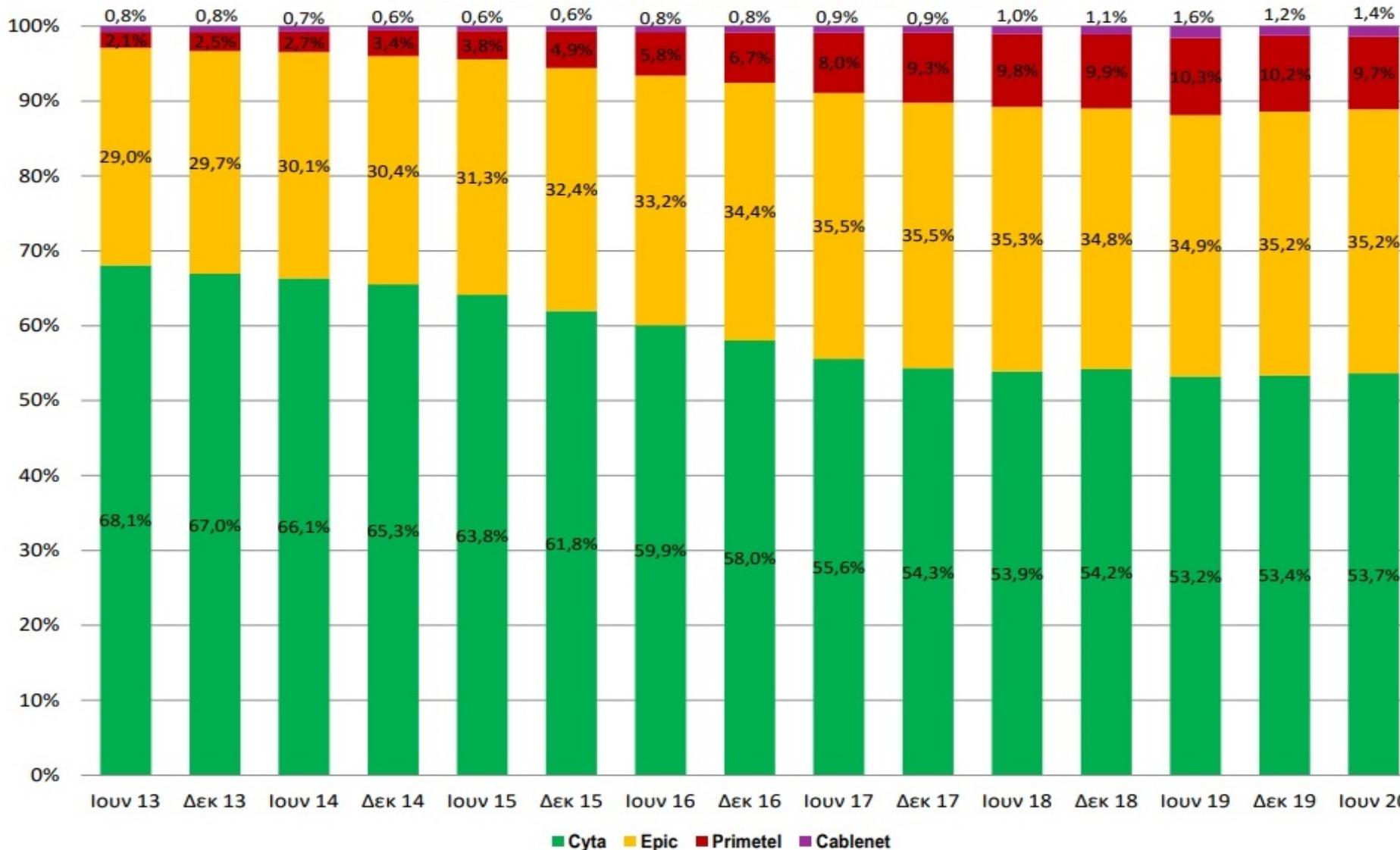
100% of the population & all major terrestrial transport paths to have uninterrupted 5G coverage with a download speed of ≥ 100 Mbps

70% of households to have an internet connection (take-up) with a download speed of ≥ 100 Mbps

Landscape (mobile telecoms)



DEPUTY MINISTRY OF
RESEARCH, INNOVATION
AND DIGITAL POLICY
REPUBLIC OF CYPRUS



Marketshare (%)
(1,243,000 subscribers)

CYTA – 53.7%

EPIC – 35.2%

Primetel – 9.7%

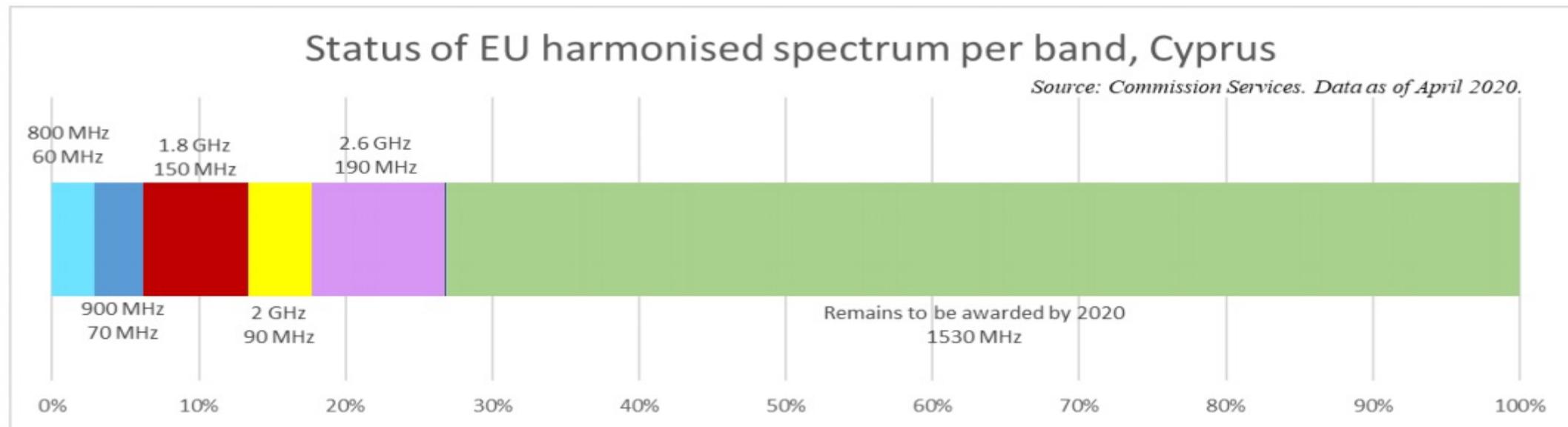
Cablenet – 1.4%

Source: OCECPR,

<http://ocecpr.ee.cy/el/content-menu/1-paratiritirio-agoras/1-enimerotika-deltia>

Spectrum assignments

- Awarded spectrum: 26.8% of the total 2,090 MHz harmonised spectrum for broadband, in the 800 and 900 MHz and the 1.8, 2 and 2.6 GHz bands
- Remaining spectrum: in the 700 MHz and the 3.4-3.8 band
- No clear market demand for the 26 GHz band



- Following the auction, **frequencies available for mobile will increase by 82%**

5G Auction Schedule

24 July 2020

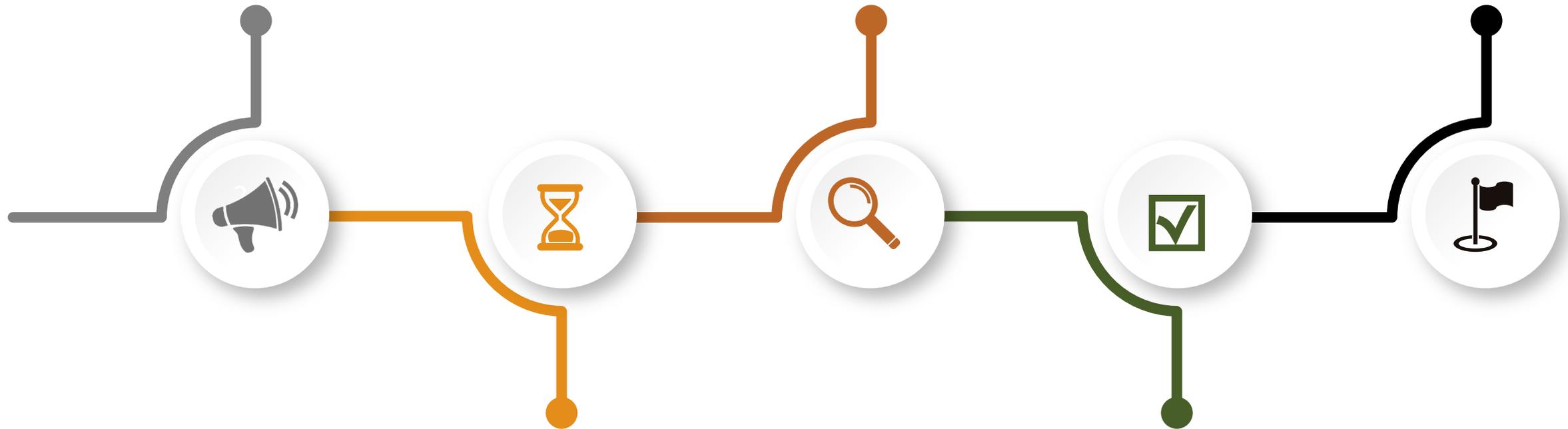
Announcement of Auction

End November 2020

Evaluation (selection → bidders)

End January 2021

Granting of 5G licenses



23 October 2020

Deadline for submission
of applications

Mid December 2020

Auction → nomination of
provisional winners

Auction process

Spectrum to be auctioned

- 1** Total of 460 MHz in the **700 MHz** and **3.6 GHz** bands
- 2** 6 lots (2x5MHz) in the 700 MHz band and 8 lots (50MHz) in the 3.6 GHz band
- 3** Spectrum Cap: 2x10MHz - 700 MHz band and 100MHz - 3.6 GHz band

Framework of the bidding process:

- 1 Basic Package:**
Each of the 4 basic "packages" → one lot (2x5MHz) in the 700 MHz band and one lot (50MHz) in the 3.6 GHz band
- 2 Additional Spectrum:**
Remaining lots → 2 lots of 2x5MHz in the 700MHz band and 4 lots of 50MHz in the 3.6GHz band

Stages of Auction



01

Auction of the 4 basic "packages" (multiple rounds, at an ascending price)
Each participant can obtain only 1 package
Participation in this stage is mandatory for all participants

02

The additional spectrum will be put up for auction in this stage:

- 2 lots with a bandwidth of 2x5MHz in the 700MHz band
- 4 lots with a bandwidth of 50MHz in the 3.6GHz band

Participation in this stage is not mandatory
Participants can acquire spectrum in one and/or both bands

03

Spectrum Assignment stage will determine the specific frequencies that winning bidders will be allocated in the 700 MHz and 3.6 GHz bands
The order of priority will be determined through bidding procedures similar to those performed in the previous stages.

License obligations



DEPUTY MINISTRY OF
RESEARCH, INNOVATION
AND DIGITAL POLICY
REPUBLIC OF CYPRUS

By 31 December 2025:

- 70% of the population
- All highways and main roads



Coverage



Access speed



Operators are obliged
to offer end users Internet
access at speeds of at least 100Mbps

Permitting Framework



DEPUTY MINISTRY OF
RESEARCH, INNOVATION
AND DIGITAL POLICY
REPUBLIC OF CYPRUS

Sets the national EMF
exposure limits

Ministry of
Health



Dep. of
Electronic
Communications



Oversees the operation of
radio stations and
compliance with national
EMF exposure limits

Issue planning permits
(ensuring integration
into the built and
natural environment)

Planning
authorities



Building
authorities



Issue building permits
(ensuring the safety and
static adequacy of the
construction)

Health concerns



DEPUTY MINISTRY OF
RESEARCH, INNOVATION
AND DIGITAL POLICY
REPUBLIC OF CYPRUS

The health of our citizens
is our **TOP** priority



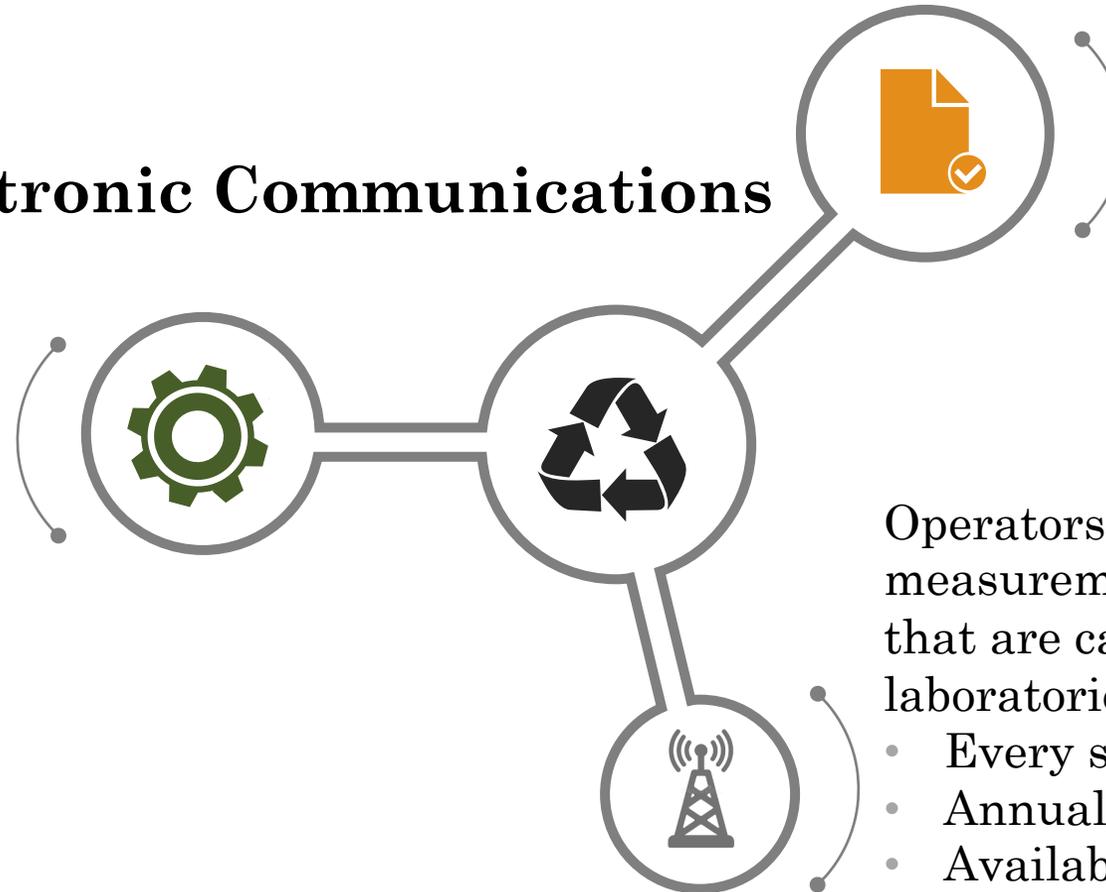
- Cyprus follows the recommendations of the competent international organizations (WHO, ICNIRP, European Parliament etc)
- Public concerns on health issues
- Cyprus has co-signed a letter - proposal to the EU to create a communication strategy that provides reliable information related to EMF
- Cyprus supports a 5G Joint initiative on counteracting the spread of disinformation related to 5G
- Our Ministry → public awareness campaign

Supervision – EMF Exposure Limits

EMF checks before the installation of a mobile base station

Department of Electronic Communications

- Evaluates measurements
- Performs sampling checks to verify measurements
- Performs spontaneous checks and checks upon complaints



- EMF exposure estimation study
- Calculation of total exposure
- Comparison with national exposure limits

Operators submit to DEC field EMF measurements for all existing stations that are carried out by accredited laboratories (ISO/IEC 17025)

- Every six months in urban areas
- Annually in rural areas
- Available on map

EMF checks after the installation of a mobile base station



DEPUTY MINISTRY OF
RESEARCH, INNOVATION
AND DIGITAL POLICY
REPUBLIC OF CYPRUS

5G



THANK YOU!