



Update on IoT Regulations

2022

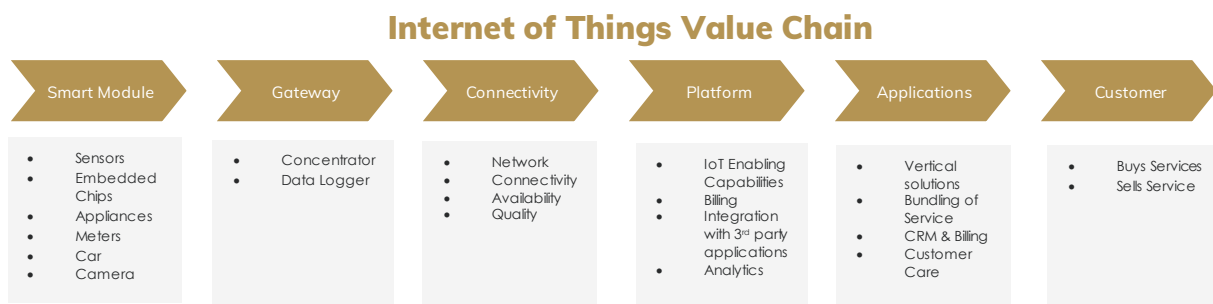
In January 2022, the National Telecommunication Regulatory Authority (“NTRA”) issued the Internet of Things (“IoT”) regulatory framework (the “Regulatory Framework”), identifying IoT regulated aspects and stipulating the prerequisites and licenses required for establishing and providing IoT related networks and services and conditions relating to IoT devices.

❖ **Legal basis of the Regulatory Framework:**

NTRA is authorized in chapters 2 & 3 of the Telecommunications Law 10/2003 to regulate telecommunications and to dictate the licenses and prerequisites necessary for providing telecommunication services to third parties as well as the fees to be paid to obtain such licenses.

❖ **What is IoT, as per the Regulatory Framework?**

The Regulatory Framework essentially defines IoT as a comprehensive structure that includes all physical as well as digital devices and ecosystems interconnected to utilize data collected by sensors and embedded systems, within other physical objects and machines, and then sharing such data via telecom networks where it can be processed and used for different purposes. The diagram below illustrates the value chain of IoT.



❖ **What are the regulated activities and devices?**

The Regulatory Framework regulates two types of activities and one type of device:

I. Regulated activities that require a license:

1. IoT networks: Establishing and operating telecom networks that support IoT services.
2. IoT services: Providing IoT services¹ in Egypt in return for tariffs to be paid by users; whether corporations, authorities, or individuals.

II. Regulated activities that don't require a license:

Private IoT networks: Establishing and using private IoT networks, for non-commercial purposes.

III. IoT devices: Devices used in IoT structure.

❖ **Regulated activities that require a license:**

1. Establishing and operating IoT networks:

¹ IoT services is defined as the services structured on using all technical means to allow automatic communication among objects to interexchange, analyze, process and provide information for users, given that thing could be any physical object with digital/electronic identity added thereto, to enable telecommunication, such as, refrigerators, vehicles, power stations, etc..

- a. **Annex to mobile service provider license**: existing licensed mobile service providers may apply for an IoT annex to their existing license, which grants them the right to: i) establish and operate IoT networks using LTE-m / NB-IOT technologies, ii) establish and operate non-cellular LPWAN, and; iii) provide IoT connectivity services for users. Such Annex will be valid until the expiry of the mobile service provider's original license.
 - b. **Non-cellular LPWAN (Low Power Wide Area Network) license**: telecommunication companies (non-mobile service providers) may apply for a license, which grants them the right to: i) establish and operate non-cellular LPWAN and ii) provide IoT connectivity services for users when required.
 - c. **IoT networks via satellite**: licensed satellite networks operators may apply for a license, which grants them the right to operate their satellite networks to be used for IoT connectivity by IoT licensees only (not end users).
2. Providing IoT services²:
 - a. **Licensed IoT networks operators**: mobile service providers and telecommunications companies (excluding satellite networks operators) who already obtained a license from NTRA to establish and operate IoT networks, are authorized to provide IoT services.
 - b. **Other Companies / entities**: companies wishing to provide IoT services for others in Egypt must apply for a license. Such IoT services must take place via the network operators licensed to establish and operate IoT networks.

All of the abovementioned licenses are associated with financial commitments that include a one-time upfront payment, fixed % of the licensee's total revenue, annual fee and performance bond (insurance). In addition to non-financial commitments there are several obligations relating to the authorized use of the services, data security and confidentiality.

❖ **Regulated activities and devices that don't require a license:**

1. Private IoT networks:
 - a. **Non-cellular LPWAN**: companies/ authorities/ organizations are allowed to establish and use Non-Cellular LPWAN operating within 863-870 MHz within the facilities and establishments, for non-commercial purposes, after obtaining a permit from NTRA, provided that such networks are not to be connected with public networks (e.g. Public Land Mobile Network), unless written approval from NTRA is obtained. Also, the relevant entity must abide by a number of commitments including conditions relating to technical specifications of the used devices and data security requirements.
 - b. **WPAN (Wide Personal Area Network), WLAN (Wireless Local Area Network) and wired networks**: users may establish and use those networks, for non-commercial purposes, and may establish IoT platforms and connect them with their private network for personal purposes.

❖ **IoT devices:**

- importers / manufacturers must obtain type approval certificates for IoT devices, from NTRA.
- IoT devices must support username and password changing per user and must have factory reset option.

² See footnote #1 for IoT services definition.

- SIM cards of the IoT devices operating via mobile networks must be procured from a licensed mobile service provider. SIM cards could be procured from foreign service providers, provided that they have previously obtained NTRA's approval on IoT roaming agreement.

❖ **Note on Machine-to-Machine services (M2M services)³:**

The Regulatory Framework clarifies that mobile service providers are currently licensed to provide M2M related services including end to end solutions through their traditional networks, using data SIMs with a special tariff, their platforms, and applications. Entities may also establish their own private networks for non-commercial purposes using LPWAN, WLAN, WPAN or wired networks, provided that the entities and importers of the M2M devices adhere to NTRA rules pertaining to import or manufacture and assemble M2M devices. The Regulatory Framework also clarifies the existing prerequisites, approvals and undertakings required for importing or manufacturing and assembling M2M devices.

³ services of devices-networking and data transfer between them either by wired or wireless connections.

Our Technology, Media & Telecommunication team

Welcomes your questions



Ahmed El Sharkawy

Partner

a.sharkawy@sharkawylaw.com



Omar Elkhawas

Associate

o.elkhawas@sharkawylaw.com