

The Current Jordanian Market experiences related to IoT services

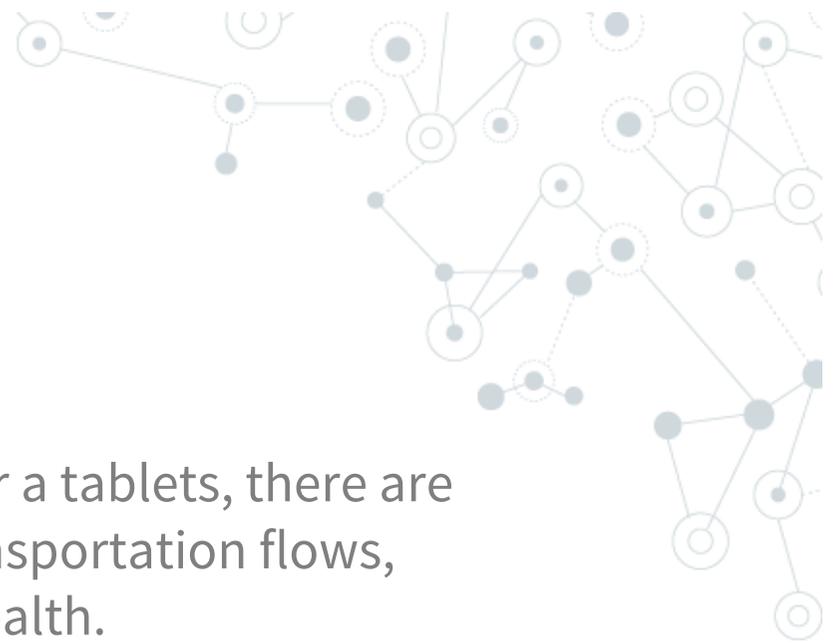
Enas H.Kanaan •



MEAC-SIG 2017

IoT Services

- The **THINGS** are not just smart phones or a tablets, there are sensors enabling smart grids ,smarter transportation flows, medical devices monitoring the patient health.
- In the Arab world, surveillance and security services ,tracking services are offered for individuals and corporate users as IoT services .



In Jordan IoT still at an early stage in terms of regulation and implementation

REGULATION

IoT issues in Jordan as in almost the rest of the world are currently regulated by the traditional legal and regulatory frameworks governing the telecommunication sector, where no IoT dedicated regulation is issued.

IMPLEMENTATION

There are many factors that should be taken into consideration when implementing IoT :

- Traffic Capacity
- Mobility
- Network and device energy efficiency
- Massive number of devices
- Reliability
- Latency
- Spectrum and bandwidth flexibility
- The economic factor
- Interoperability and standardization





Legal Issues

- Spectrum management and licencing connectivity
 - Switching and roaming
 - Competition
needed to avoid IoT users lock -in and new barriers to entry
the IoT market
 - Security
 - Privacy
 - Addressing and naming
- 

Security

Some Companies have identified challenges within IoT Systems :

1. Efficient Encryption algorithms running IoT devices and networks need higher processing power. (Low CPU power vs effective encryption)
2. Small, inexpensive devices with little to no physical security .
3. Crypto algorithms have a limited lifetime before they are broken.(ex: smart metering systems may last 40 years)
4. Authenticating to multiple networks securely .
5. Data availability to multiple collectors synchronously and securely.
6. Manage Privacy concerns between multiple consumers.
7. The attack surface is dramatically increased ,an extensive leverage of open networks will be exposed.



Privacy

we still don't have a policy for data privacy and protection for IoT services,

Need to plan to get controls on deploying in the next 5 years to protect data privacy.

For regulating Data privacy issues ,MOICT Jordan produce a public consultation on personal Data Protection law and expected to be finalized for approval in 2017



Addressing and numbering



To realize the IoT services and increase its spread ;the exciting information and communication technologies should evolve to support the characteristics of the IoT and the most enabler for that increasing in the addressing and numbering.

- Large address space needed for addressable thing
- Deploying IPv6 by ISPs, public and private sector organizations is the key to have this large number of needed addresses .
- Uses of IMSI (the international mobile subscriber identity)is also required to address devices at some certain IoT services .



Drones!

it's allowed in Jordan
but ,You must apply for and recive a permission from the
jordanian aviation authority before flying a drone .





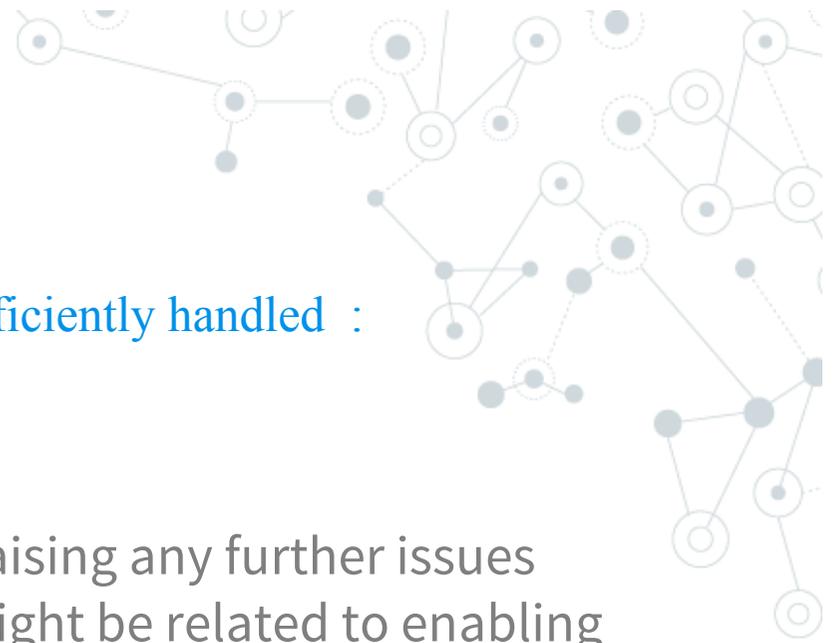
April 2017

*The Jordainan parliament approved that the law punishes imprisonment for a term not exceeded two years OR pay a fine not exceeded **15,000 JOD** (which is approxematly **21,000 \$**) OR both penalites for anyone who acquired ,imported ,exported,manufactured or used a drones without obtaing the licenes*

Recommendation

How IoT implementation challenges could be efficiently handled :

- Start with a realistic and reasonable approach for IoT in Jordan ,which needed for the next step
- Ready for a proof of concept regarding the next step toward a regulatory framework IoT
- Raising any further issues might be related to enabling and encouraging IoT services awareness in the Jordanian market
- TRC may invite any entity to present the specifications of IoT services .



References:

- TRC Jordan, [Green Paper of Internet of Things](#), April 2017 .
- Ghazi Jbour, [Economics of Internet of Things](#) .
- Ammon News [,Drones Law](#) , April 2017.





Thanks!



MEAC-SIG 2017