

Jordan TRC Green Paper on IoT

1. Introduction

Question 1. Is the definition of IoT mentioned previously complying with your vision and the services you provide. If not please elaborate.

Sigfox agrees with the definition in the TRC green paper but would like to highlight the important weight that LPWAN on unlicensed band has in the worldwide IoT development. See section 1.1 of the Sigfox contribution.

2. Implementing IoT and M2M Services

See section 2 of the Sigfox contribution.

Question 2.1. Do you offer any IoT services in the Jordanian market?

If Yes answer the following:

Question 2.1.2. Kindly, list and briefly explain those services.

If No answer the following:

Question 2.1.3. Do you have future plans to offer new IoT services in Jordan? What Services? And timeframe? Please elaborate.

3. IoT implementation challenges

See section 2.2 and 2.3 of the Sigfox contribution

Question 3.1. What are your expectations to the IoT traffic capacity in Jordan for the next 5 years?

Question 3.2. In which fields of implementation it's expected to have the highest "data interaction" traffic and which is expected to be the lowest?

Question 3.3. Please arrange the above-mentioned challenges in terms of limiting the IoT wide implementation, from the most affecting factor to the least. Please justify and elaborate

Question 3.4. Are the data rates offered in Jordan sufficient to handle the IoT traffic especially for time-sensitive services?

Question 3.5. Please suggest at least three categories that classify the services that reflects reliability levels that can be needed.

Question 3.6. Please classify the services in term of latency acceptance ranges

Question 3.7. Please list any further challenges that might affect the implementation

4. IoT and M2M Regulatory, Legal, Consumer right issues

+ see section 3 on regulatory issues.

Question 4.1. Do you think that at the current stage of time there should be a specific regulation for IoT and M2M?

No Sigfox believes that there is a need to alleviate any regulatory conditions not strictly necessary to foster innovation and support the development of the IoT. This way forward adopted in Europe has permitted a dynamic IoT ecosystem and vibrant innovative companies to flourish and develop in this very innovative and new market. We would be pleased to be instrumental in replicating this in Jordan. A voluntary action from the regulator would be needed regarding the spectrum access and availability of unlicensed spectrum where the regulator has an important role to play.

Question 4.1.1.: If yes, what are the suggested topics that should be covered in the IoT regulation?

If No:

Question 4.1.2. From your point of view:

- What is the possible solution for handling the IoT issues at the current stage?
- Do you think that TRC should deal with the impacts of IoT services on security, privacy, numbering, spectrum and competition and be ready if companies chose to provide them at large? Or not doing anything until these issues become mature and regulated globally?

Question 4.2. How can you solve the above-mentioned challenges that face the consumers?

Question 4.3. What indicators and when do you think is the right time to regulate IoT?

i. Spectrum management and Licensing for connectivity

Question 4.4. Do you think at the current stage of time an intervention by TRC should be taken to regulate licensing and spectrum management to enable/allow providing IoT service in the Kingdom through allocating spectrum for IoT services?

If yes, how can that be achieved ? Please elaborate

If No:

Question 4.5. When the review should take place to specify the need to take action?

Question 4.6. If you offering or planning to offer IoT services in the Jordanian market, please list what type of connectivity methods and technologies you are using (or will use)?

Question 4.7. Do you think that the spectrum and backhaul capacity you have will meet the demand of IoT needs?

Question 4.8. Regarding the millimetre wave bands, do you think they will be useful and meet the requirement of IoT?

ii. Switching and Roaming

Question 4.6 When do you think such development of mobile networks as mentioned previously (in section ii.) will be needed in Jordan?

Question 4.7. Is there any need for a regulatory framework by the TRC to regulate the IoT roaming issues?

Question 4.8. Do you think that the current signed roaming agreements are appropriate to encourage IoT services in Jordan? Or do these agreements need update?

Question 4.9. Is your company willing to dedicate SIMs for M2M communications? If yes, will the cost rates vary from normal roaming services?

Question 4.10. Is there any need to draw a distinction between person-to-person communications and IoT connected devices in terms of roaming?

Question 4.11. Is there any need for TRC to intervene in switching process, mechanisms, and cost for the purpose of achieving a competitive market for IoT services? If not, explanation is needed.

iii. Competition

Question 4.8. When do you think that regulating market competition issue of IoT in Jordan will be a critical issue?

Question 4.9. Are the competition regulations in Jordan sufficient to handle the above IoT issue? Or a modification on the current regulations is needed? Or a new separate regulation for the competition in IoT issues should be adopted? Please elaborate on more details.

Question 4.10. Is there a need for issuing market structures and pricing schemes that defines IoT services pricing and describing how IoT can drive competitive advantage through better information and more localized decision making? Please elaborate.

iv. Security

Question 4.11. Do you have a policy for visibility and secure management of “things” on your network today?

Question 4.12. Are you collecting management or visibility information from the things on your network ?

Question 4.13. How are you collecting security and operations data about things on your network?

Question 4.14. How would you rate your ability to provide security to the IoT services?

Question 4.15. What controls do you plan on deploying in the next 5 years to protect against security risks?

Question 4.16. What do you think the greatest security threat to the IoT will be over the next 5 years

Question 4.17. Who should take responsibility for managing the risk imposed by new things connecting to the internet and the local network? And when is the best time that to issue to protect security?

Question 4.18. Do you think that there is a need for security protection regulation to be issued in the current time? If no, when is the best time that a regulation to protect security should be issued?

Question 4.19. Do you think that securing IoT will demand to restructure your current organisation’s security policies and directives? If yes please explain how. If no, how are you planning to handle IoT services and devices security?

Question 4.20. Are you dedicating Gateways, IPS and Network monitoring systems connected things? OR you are utilizing your current Network infrastructures and systems?

Question 4.21. What kind of encryption algorithms your organization uses for your network communications?

v. Privacy

Question 4.19. Do you have a policy for data privacy and protection of IoT services today? If yes, how do you apply this policy? And do your consumers aware of such policies?

Question 4.20. How would you rate your ability to protect privacy of the “IoT data”?

Question 4.21. What controls do you plan on deploying in the 5 years to protect data privacy?

Question 4.22. Do you think that there is a need for data privacy protection regulation specific for IoT services to be issued?

Question 4.23. From your point of view, do you think customers and end users should have any assurance of privacy when subscribing to IoT services? If yes, please mention how should this be achieved? If no, please elaborate.

vi. Addressing and numbering

Question 4.23. If you are providing IoT services, what do you are using to differentiate the numbers used for IoT services. Is there any specific numbers or ranges for IoT services? Please, list if any.

Question 4.24. Do you think that there is a need for specifying a numbering range (in the National numbering Plan) for IoT services in the current time? If yes, please suggest a numbering range for IoT services.

Question 4.25. Do you think that the late migration to IPv6 will limit the IoT expansion ?

Question 4.26. Do you agree to use specific code (MCC) in IMSIs permanently for M2M services abroad?

Question 4.27. In case of MVNO, what are your arrangements to enable them to use your network to provide the IoT services to those using version four in your network ?

Question 4.28. What is the percentage of Internet addresses using version 6 that are used to provide IoT services to those using version 4 in your network?

Question 4.29. List and clarify the percentage of the IoT services interim their identifiers that used by your network (IP address, MAC address, etc.) to provide IoT services?

Question 4.30. Any recommendation about the addressing and numbering for IoT services provided by non-telecommunication licensed companies?