Representing:

Self

What additional details do you want to keep confidential?:

No

If you want part of your response kept confidential, which parts?:

Ofcom may publish a response summary:

Yes

I confirm that I have read the declaration:

Yes

1. IoT definition, applications and demand:

IoT is the extension of the traditional M2M business: it allows communication between devices and vertical applications whereas M2M was focused on dedicated vertical applications with a typical device in the field reporting into a back end server for data processing.

2. Spectrum requirements :

Spectrum requirements are extremely dependent on the type of application, reporting requirements, bi or uni directional. A noticeable trend is the reduction in proportion of cellular based solutions compared to alternate wireless transport technologies (UNB, Short range, etc...).

3. Network-related issues:

Depending on the final application:
- QoS
- Network availability at peak hours (for example 2G M2M solutions experienced issues due to 2G network overload)
- Lifetime of the wireless service being used (2G sunset management) for solutions with a long life cycle (Smart Grid) for example.

4. Security and resilience:

Security is a key item of IoT going forward. Standardization efforst are ongoing, but Security be design is a key criteria for large scale IoT deployment especially in smart grid for example. Interconnection of vertical solutions and vendors will require a Trusted Service Provider who can identify and authorize entities, devices to access only the data / API needed.

5. Data privacy:

Data Privacy will require the emergence of Trusted Service providers who can provide and distribute, update security credentials for all the players included in an IoT solution. It is no longer possible for companies to manage on their own credentials if they want to provide interoperability.

6. Numbering and addressing:

IPv4 addresses shortage and explosion of IP based devices will require an acceleration of the adoption of IPv6

7. Devices:

Emergence of new standards reduce the cost of the HW, for example in the case of UNB deployments. However, security must be carefully evaluated compared to Cellular based solutions

8. Digital literacy:

The industry must educate the consumers on the risks inherent to data sharing and multiplication of devices. Gemalto is involved in this educational process:
http://www.justaskgemalto.com/en
http://thatsemv.com/

9. Data analysis and exploitation:

Data explosion will require a development of data processing at the edge to reduce the overall amount of data saved and focus on the most business relevant data. Also Business data intelligence and Big Data processing will allow new services to emerge, especially in the combination of IoT Data + ERP Data to provide a single / efficient view to business leaders for decision making.

10. International developments:

Standards initiatives at the European level shall be be supported to reduce fragmentation and friction and allow a good interoperability between IoT applications.

11. Ofcom's role :

In my view, Ofcom should participate to European standardiwation and harmonization activities to allow solutions to be deployed at European level. Especially in critical industry like smart grid.

12. Additional comments: