IoT Global Good Practice
www.iot-dynamic-coalition.org

To: National Telecommunications and Information Administration
      U.S. Department of Commerce
      1401 Constitution Avenue NW.
      Room 4725, Attn: IOT RFC 2017
      Washington, DC 20230

1 March 2017

Reply to the request for public comment with reference 01132017 on the Benefits, Challenges, and Potential Roles for the Government in Fostering the Advancement of the Internet of Things

Dear Assistant-Secretary,

Thanks again for the excellent initiative of your Department with regards to developing the opportunities offered by the Internet of Things in a sustainable way. With your initiative you recognise the transforming character of the increasing penetration of the Internet of Things, the prospective benefits of IoT to personal convenience, public safety, efficiency, the environment, and the economy, as well as the needs to ensure the necessary infrastructure and policies must be in place, including strategies to respond to the challenges raised in areas such as cybersecurity and privacy.

Your initiative to champion the development of a robust IoT environment that benefits consumers, the economy, and society as a whole is timely, and well placed within your Department – recognizing that this work will touch upon the work of multiple other Departments and cannot be contained to the jurisdiction of the USA alone.

The Dynamic Coalition on the Internet of Things that was set up during the 2008 meeting of the Internet Governance Forum in Hyderabad aims to come to a global, multistakeholder understanding of "good practice" in the Internet of Things. We have developed a draft paper on global good practice and embraced the following Principle:

"*Internet of Things Good Practice aims at developing IoT systems, products, and services taking ethical considerations into account from the outset, both in the development, deployment and use phases of the life cycle, thus to find an ethical, sustainable way ahead using IoT helping to create a free, secure and rights enabling based environment: a future we want, full with safe opportunities to embrace.*"[1]

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[1] See the document at the official IGF website https://www.intgovforum.org/cms/documents/igf-meeting/igf-2016/827-dciot-2015-output-document-1/file

We fully support the principles you indicated in the Green paper, and in particular the recognition that IoT is global (and cannot be developed within the US, in isolation, but needs to consider both the opportunities to export products and services as well as the use of products and services in the USA that origin from other markets), and that sustainable development (in the sense of the Brundtland definition: a balance of social, economic and environmental factors) can only be the result of an approach in which all stakeholders work together (multistakeholder approach).

Your expressed intent to champion this on a global level is also well appreciated and necessary. Over the years, NTIA has contributed importantly to the development of an understanding of global good practice within the Dynamic Coalition, in a very consistent way.

Suggestions for extra attention, tasks up and beyond the current text could go to the following domains:

1- *Active pursue of developing clarity on what is legally allowed and/or what is crucial for responsible advancement of IoT, and what not, by developing a (global) taxonomy.*

   We believe it would be important to develop a taxonomy on **security sensitivity** (need to secure access to IoT data and actuators); on **privacy sensitivity** (access and integrity of data that can be related to persons), and **safety** (potential impact of the IoT operations on human beings, for instance driverless cars, health regulators in the body, etc.).

   a. Such clarity will make developers and deployers of IoT products and services more aware of requirements with regards to these aspects, whereas otherwise the danger is "time to market" will prevail to other considerations;

   b. Such clarity will take away unnecessary hindrances of IoT developments in areas where there is no need for high attention to security, safety and/or privacy protection which will open the way to more rapid development and deployment;

2- *Empower the multistakeholder approach by raising awareness towards citizens.*

   In order to be able to truly develop IoT in a multistakeholder way, all stakeholders need to become aware of the stakes: not only industry and government, but also citizens. An active role towards providing balanced information regarding to IoT related developments would help ensure people step in to the discussion and development at the right time, rather than "wake up one day and realize what they missed – and what has become common practice."

3- *Consider future developments to "guide responsible development" by foresight, while choices are still possible.*

   Hand in hand with the increasing penetration of IoT devices in our societies, also the intelligence of devices and cyber physical systems (i.e. systems in which IoT devices jointly deliver an more or less autonomous service, such as a vehicle, and towards the future maybe even public and private spaces with automatic climate control and other services), it is foreseeable that artificial intelligence will become much higher than human intelligence at some point in the future. How do we ensure the IoT enabled environments that are managed by autonomous and developing

(learning) intelligence will continue to serve us in healthy ways? It is important to consider the moral and ethical dimension in this prior to these practices becoming "normal".

Again, we commend you for your support of the global dialogue in this, and wish you well with your initiative in advancement of the Internet of Things – noting that your actions will not only affect citizens and businesses of the United States but indeed the whole world.

We very much look forward to continue to work with you in the IGF context, and wish you well with furthering of your excellent work in this area.

Best regards

(signed)

Maarten Botterman   Wolfgang Kleinwaechter
Chairman, Dynamic Coalition on the Internet of Things,   Co-founder and former Chairman