



January 2, 2014

Mr. Donald S. Clark
Federal Trade Commission
Office of the Secretary
600 Pennsylvania Avenue, NW
Room H-113 (Annex B)
Washington, DC 20580

RE: Internet of Things, Project No. P135405

Dear Secretary Clark,

On behalf of the Center for Data Innovation (www.datainnovation.org), I am pleased to submit these comments in response to the Federal Trade Commission's (FTC) request for public comment on the privacy and security implications of the Internet of Things.¹

The Center for Data Innovation is a non-profit, non-partisan, Washington-DC based think tank that conducts high-quality, independent research and educational activities on the impact of the increased use of information on the economy and society. In addition, the Center for Data Innovation formulates and promotes pragmatic public policies designed to enable data-driven innovation in the public and private sectors, create new economic opportunities, and improve quality of life.

As we highlighted in our recent report *The Internet of Things* (attached) there is an enormous potential for the devices that make up the Internet of Things to address many important real-world problems, including how we manage health care, use energy, and protect the environment.² Many of these technologies, and their respective benefits, are already being realized, but policymakers have the potential to make or break the Internet of Things. Most importantly, its full potential will not be realized unless policymakers embrace a flexible and modern regulatory regime that fosters data-driven innovation. Specifically, policymakers should work to lead by example in the adoption of new technologies, reduce barriers to data sharing, give consumers access to their data, avoid inundating consumers with notices, and regulate the use, rather than the collection, of data.

¹ Federal Trade Commission. "Request for Comments." November 19, 2013. <http://www.ftc.gov/news-events/events-calendar/2013/11/internet-things-privacy-and-security-connected-world>.

² Daniel Castro and Jordan Misra, "The Internet of Things." Center for Data Innovation. November 2013. <http://www2.datainnovation.org/2013-internet-of-things.pdf>.



The FTC has an important role to play in many of these policies. For example, in the past, privacy on the Internet has been mostly based on the concept of notice and choice. Businesses provide consumers notice about the privacy practices of their websites, mobile apps, and online services through privacy policies or terms of service, and consumers can decide whether to use those products and services (and even whether to read these policies). This system, while imperfect, appropriately minimizes unnecessary privacy costs while providing consumers transparency, competition, and choice. Although many devices that will make up the Internet of Things will be tailored for consumers with strong privacy preferences, the current system of providing privacy notices will pose new challenges with the Internet of Things for the simple fact that many Internet-enabled devices will not have displays, will have small displays, or will not directly interact with individuals.

Some of these challenges will be resolved more easily than others. While some consumer devices might come packaged with a privacy notice on paper, doing so may limit the ability of manufacturers to send software updates to the device. Other non-consumer devices, such as parking sensors, roadway sensors, building sensors, or environment sensors, might simply not have an interface for consumers with which to easily share privacy policy information. In addition, as more and more devices collect and use data, mandatory privacy disclosure rules could end up inundating consumers with undesired notifications. A better approach would be to allow more permissive data collection but closely restrict uses that result in identifiable consumer harm. Focusing on use would allow more opportunities for innovations in both the devices that will make up the Internet of Things and the solutions proposed to address big societal problems.

The FTC should also be aware that much of the data generated by the Internet of Things will not be personally identifiable information. Many of the existing privacy rules and regulations are based on a framework where most information is assumed to be about people, whether it is health data or financial data. But with the Internet of Things the focus is no longer exclusively on data about individuals; instead it includes data about the environment, factories, vehicles, machines, infrastructure, and other electronic devices. For example, a smart refrigerator does not need any personal information to know that it is running low on milk. In fact, a substantial amount of data will be exchanged automatically between devices without any direct human involvement. Juniper Research estimates that the number of machine-to-machine (M2M) devices will exceed 400 million by 2017, with much of this market consisting of vehicle telematics (i.e. devices that remotely monitor a vehicle) and consumer electronics devices.

Finally, the FTC should recognize that regulatory principles designed for a “small data” world do not work in a “big data” world. The most notable example of this is the pre-Big Data privacy principle of data



minimization—the idea that an entity collecting data should limit the collection of information to what is directly needed to accomplish a specific purpose. This principle is based on the mistaken belief that it is always possible to predetermine what information is useful and collect only that minimum amount of information. The reality is that data-driven innovation often involves exploration and discovery, sometimes from unexpected data sources. Data-driven innovation is not a routine linear process of moving from step A to B to C, but rather it is a creative cycle with multiple feedback loops. Many of the benefits from data come from exploratory analysis that finds new correlations, trends, relationships, and insights that were not obvious at the outset. Restricting data collection with rules like data minimization could severely limit the potential opportunities of the Internet of Things.

We encourage the FTC to look further at our recent report which outlines many of the benefits from the Internet of Things that are being realized today and the policy principles we recommend so that this technology can be harnessed for further social and economic benefits moving forward.

Sincerely,

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