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Presentation

“A Policy and Regulatory Framework for Accelerating Internet of Things Innovation and Deployment”

The Internet of Things (IoT) is transforming the way we live, work, do business, and meet the needs of consumers and citizens. This emerging technology will influence virtually all industries and sectors. There is little doubt the scale of IoT will grow exponentially. It is estimated that the number of connected devices will grow from 20 to 50 billion units in 2020 and the market size will grow to several trillion dollars by 2025. While IoT has a great potential to contribute to economic growth as well as to social welfare, its success will require thoughtful and strategic government policy-making to drive a pro-innovation environment. IoT faces a number of technical, social, legal, and policy challenges relating to interoperability, radio spectrum, bandwidth, security, privacy, regulation, protectionism, and skill gaps in the workforce that must be addressed to enable the full breadth and reach of IoT innovation and deployment.

This paper first presents several use cases of IoT that demonstrate the early benefits of the emerging technology in various industries and settings, including energy, manufacturing, healthcare, auto, supply chain and logistics, and cities. This paper then discusses key challenges for IoT that are best addressed by the joint efforts of stakeholders from the public and private sector. This paper describes how two IoT forerunning countries -- the United States and South Korea -- have been attempting to develop pro-innovation policies and ease burdensome regulations to promote IoT. Based on field interviews with experts and literature review, this paper makes recommendations relating to IoT for policy makers in terms of general principles, specific policies, and process and structure. Below is a summary of the recommendations.

I. Principles of Policies and Smart Regulations

- Develop a consistent, well-coordinated regulatory framework
- Use a light-touch approach
- Regulate based on evidence, not on speculation
- Maintain technology neutrality
- No country-specific regulations or requirements

II. Policies Accelerating IoT Innovation and Removing Barriers

- Address spectrum requirements and needs
- Invest in 5G and new network infrastructure
- Promote adoption of IPv6
- Encourage development of international standards
- Promote security of IoT systems
- Protect data privacy
- Make public sector data freely accessible
- Ensure free data flow across borders
- Drive demand through public sector adoption
- Increase investment in IoT innovation, education, and training

III. Coordination, Collaboration, and Engagement

- Develop national strategies for IoT
- Ensure inter-agency coordination
- Promote public-private partnership
- Foster international coordination, collaboration, and engagement
- Pass the DIGIT Act

IoT has already arrived to transform all aspects of economic and social activities. However, we are only beginning to see a glimpse of the promising future that IoT can bring. In order to realize the great impact of IoT on economic growth and social welfare, the private and public sector should collaborate to foster innovation and remove roadblocks. Policy makers must make sure to shape pro-innovation policies and regulations that are evidence-based, consistent, light-handed, and technologically neutral to help their nations be global leaders in IoT space. With concerted efforts of government and the private sector both domestically and internationally, IoT is more likely to live up to its promise.

Speaker

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