

# Foreword

JOHN CHAMBERS

Chairman and Chief Executive Officer, Cisco Systems

I never cease to be amazed by the speed of innovation. Change is the only true constant, and each year the pace of change only accelerates. Transitions that once took place over three or five years now happen in 12 to 18 months.

I believe we are currently experiencing the biggest fundamental change the world has seen since the initial development of the Internet as people, processes, data, and things become increasingly connected. We call this the Internet of Everything (IoE), and it is having a profound impact on individuals, businesses, communities, and countries. According to analysis conducted by Cisco, the Internet of Everything represents a US\$19 trillion global opportunity to create value over the next decade through greater profits for businesses as well as improved citizen services, cost efficiencies, and increased revenues for governments and other public-sector organizations.

Several major transitions in technology—each important in its own right—are combining to make the Internet of Everything possible. These include the emergence of cloud and mobile computing, the growth of big data and analytics, and the explosive development of the Internet of Things (IoT). These transitions are changing the role of information technology (IT), with Internet protocol (IP) networks playing an increasingly central part by seamlessly connecting disparate IT environments. Cisco's contribution to this edition of *The Global Information Technology Report* focuses on the how IP networks facilitate new information flows through the interaction between two of these transitions: IoT and data analytics.

The explosive expansion of IoT, or connections between context-aware machines and other physical objects, is changing how we utilize devices to improve our daily lives. And the shift in data and analytics—from being centralized, structured, and static to being distributed, mixed structured and unstructured, and real-time—is leading to a new era of real-time processing and decision-making.

More industries are moving their systems and processes to IP networks, and the rapid growth of IP-connected devices is driving exponential increases in data traffic. The migration to IP networks and the ability to turn “big data” into valuable, actionable information have demonstrable benefits—both economic and social—as well as positive financial impacts for firms.

In our 30-year history, our success has been based on our ability to see around corners, identify market transitions, and make big bets on what is next—such as the emergence of the Internet of Everything. We have seen this before, in the transitions from bridged networks to routed networks, shared networks to switched ones, circuit switching to packet switching, fixed connectivity to mobile connectivity, dedicated resources to virtual ones, data traffic to voice and video traffic, PC connections to any-device connections, and physical data centers to the cloud.

We see the network as the critical accelerator and enabler in all of these transitions, transforming processes to increase efficiency and decrease costs. In data centers, for example, the network is the common element for intelligence, scale, and flexibility. Data centers have evolved as more intelligence has been built into the network—from networking virtual machines and developing a platform optimizing computing to scaling applications and decoupling them from the server or data center in which they live.

The network also facilitates the growth of applications, a key driver of the Internet of Everything. Applications already provide an integral way that consumers experience the Internet of Everything, with the number of applications growing from 10 billion downloads in 2010 to 77 billion by 2014.

As this trend continues, we expect the Internet of Everything to drive massive gains in efficiency, business growth, and quality of life, helped along by thousands of new IoT applications. These applications will require building new end-to-end IoT infrastructures, which will enable the deployment of even more IoT applications.

We are pleased to collaborate again with the World Economic Forum and INSEAD to produce *The Global Information Technology Report* and the Networked Readiness Index (NRI). The NRI provides policymakers, business leaders, and concerned citizens with valuable insights into current market conditions and the state of connectivity across the world, and helps to identify where more can be done to accelerate the Internet of Everything's positive impact on the world in which we live.