HOW STANDARDIZATION ENABLES THE NEXT INTERNET EVOLUTION

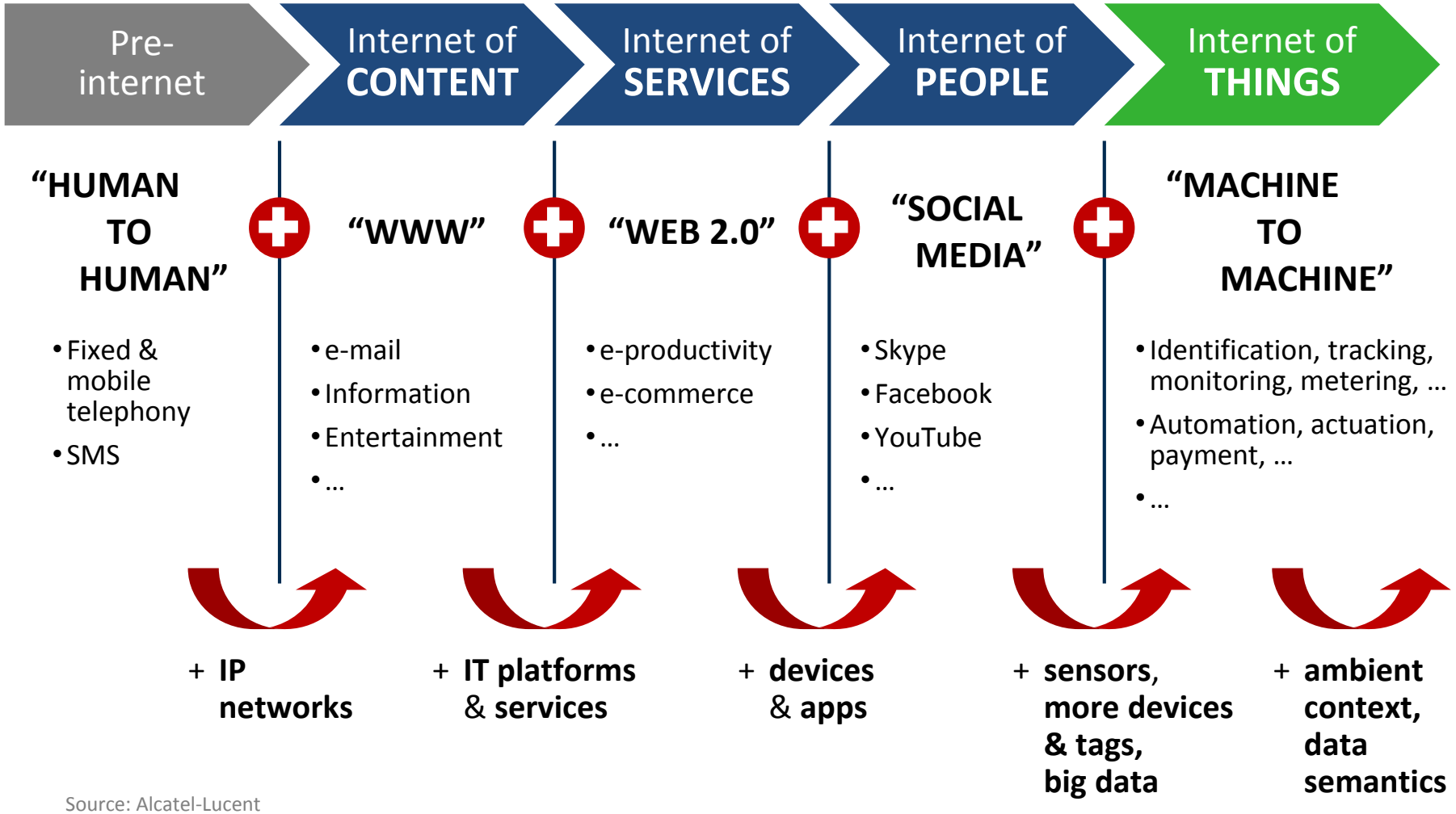
Marc Jadoul
Strategic Marketing Director, Alcatel-Lucent
marc.jadoul@alcatel-lucent.com
oneM2M www.oneM2M.org

About this webinar

First in a series of 4 webcasts, introducing **oneM2M**, the global standards initiative for **Machine to Machine** communications and the **Internet of Things**

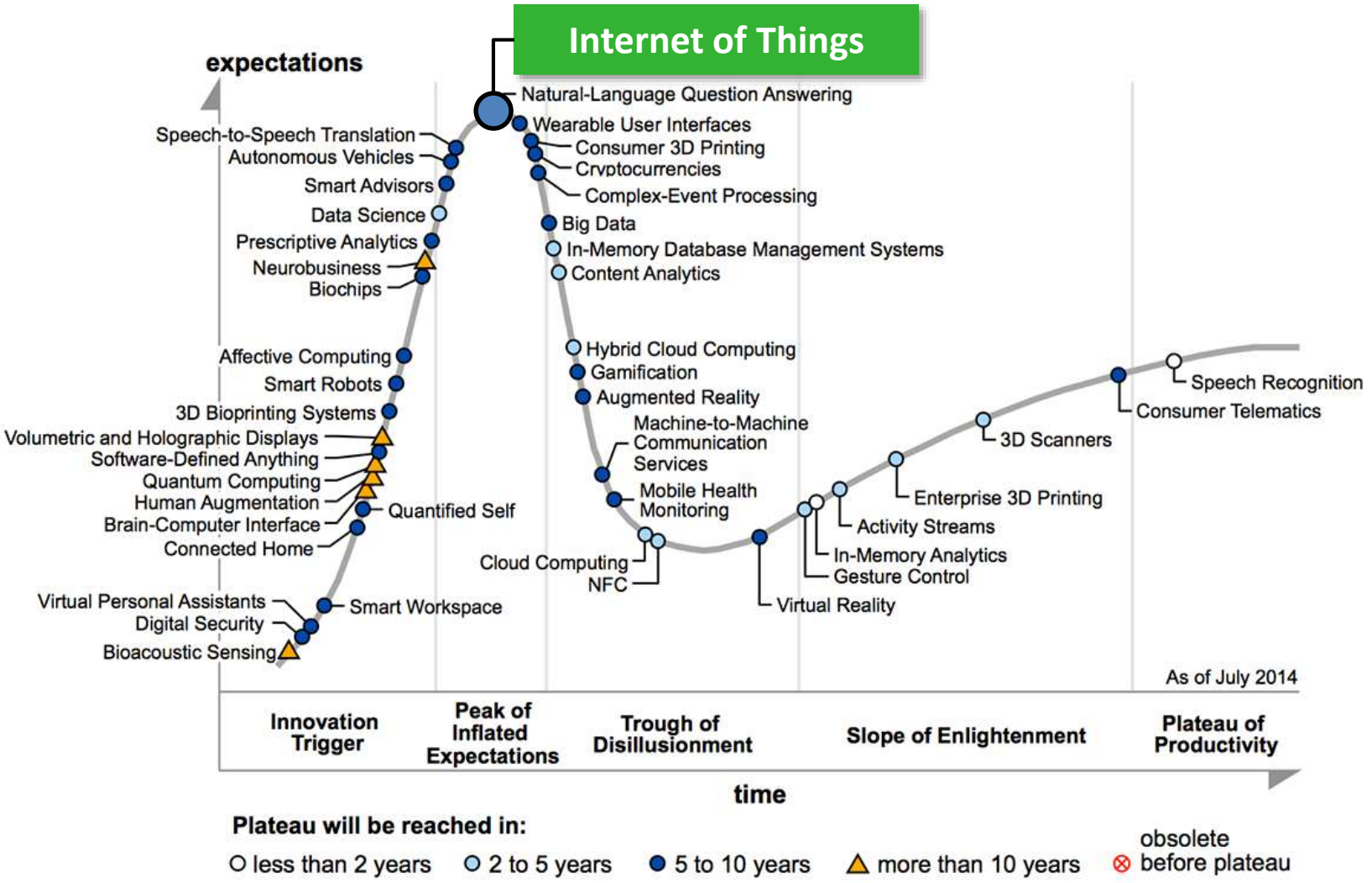
Today: part 1, looking at M2M business opportunities, challenges and drivers for standardization.

The next step in internet evolution



Source: Alcatel-Lucent

Topping Gartner's hype cycle



Source: Gartner, July 2014

The IOT is going to be big
(though nobody really knows how big…)

IDC Analyze the Future

28.1 BILLION
"UNITS" IN 2020

$7.1 TRILLION
GLOBAL SOLUTION REVENUES BY 2020

Source: IDC, May 2014

Gartner

26 BILLION
"UNITS" BY 2020

$300 BILLION
SERVICES REVENUES IN 2020

$1.9 TRILLION
GLOBAL ECONOMIC VALUE IN 2020

Source: Gartner, March 2014

Machina Research

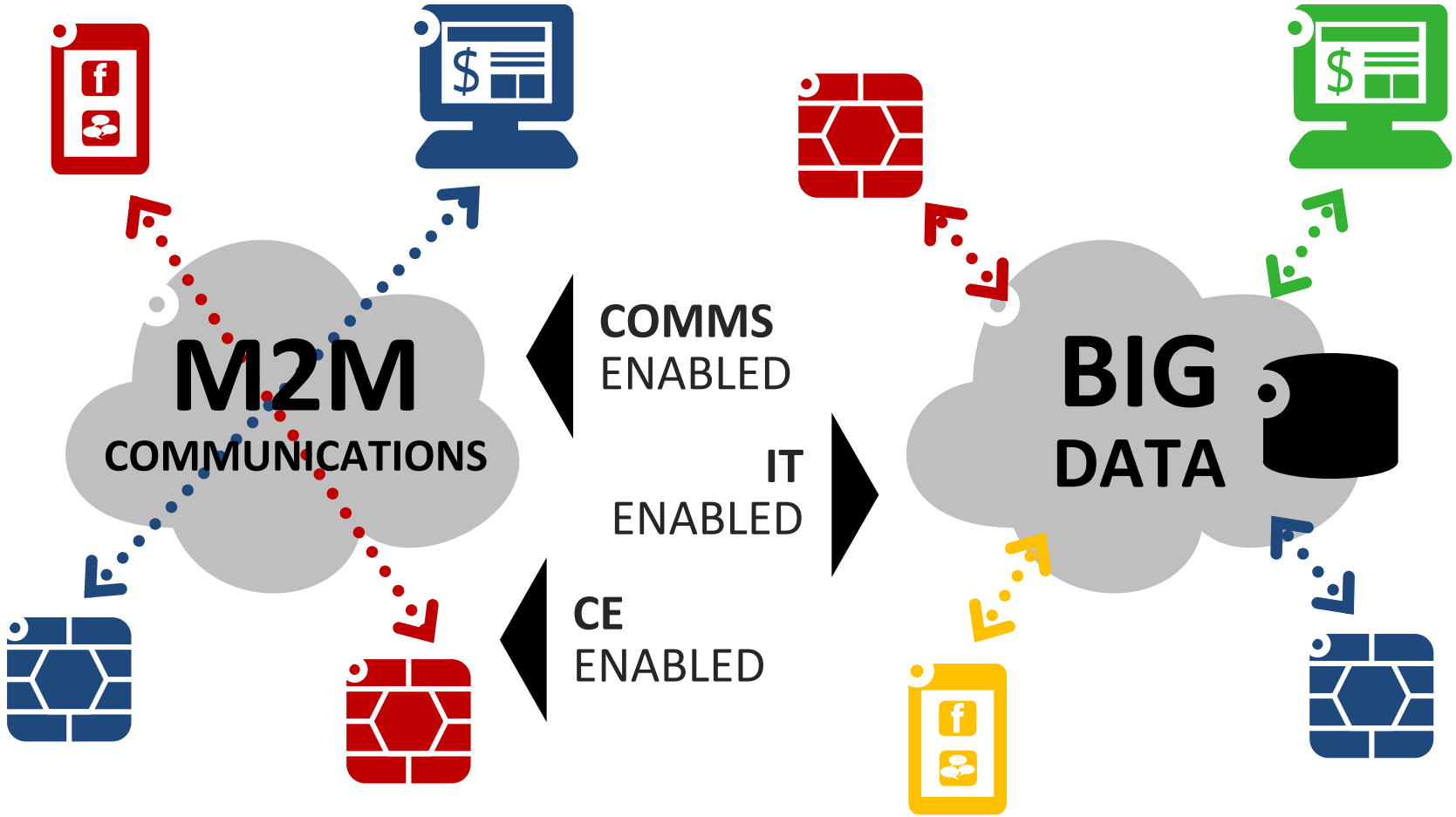
25 BILLION
M2M "CONNECTIONS" BY 2022

OF WHICH
2.6 BILLION
ARE CELLULAR

$1.2 TRILLION
GLOBAL OPPORTUNIY BY 2022

Source: Machina Research, January 2013

When communications, IT and CE industries meet



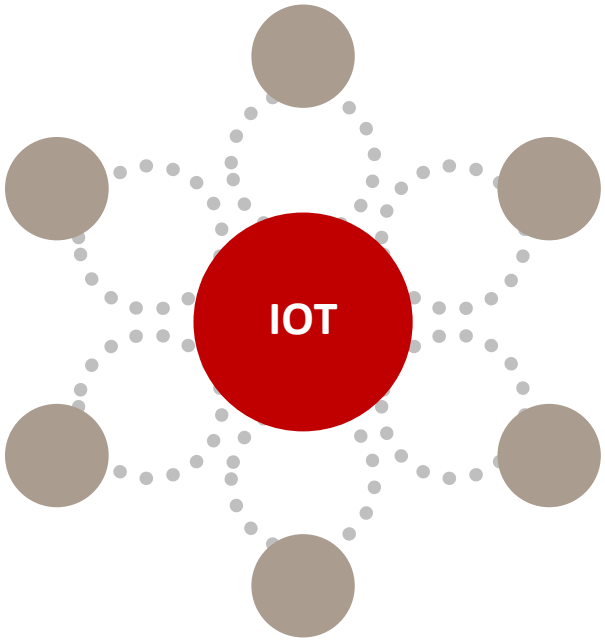
Source: Alcatel-Lucent

Why now?

Lower **hardware costs** and ubiquitous **mobile access** enabling more intelligence and seamless connectivity

Consumers and business users looking for new **services** and **applications** to enrich the way they live, work, commute, shop and care for their community and environment

Network operators, enterprises, utility providers and public administrations are **transforming** the way they **interact** with their customers, suppliers and partners

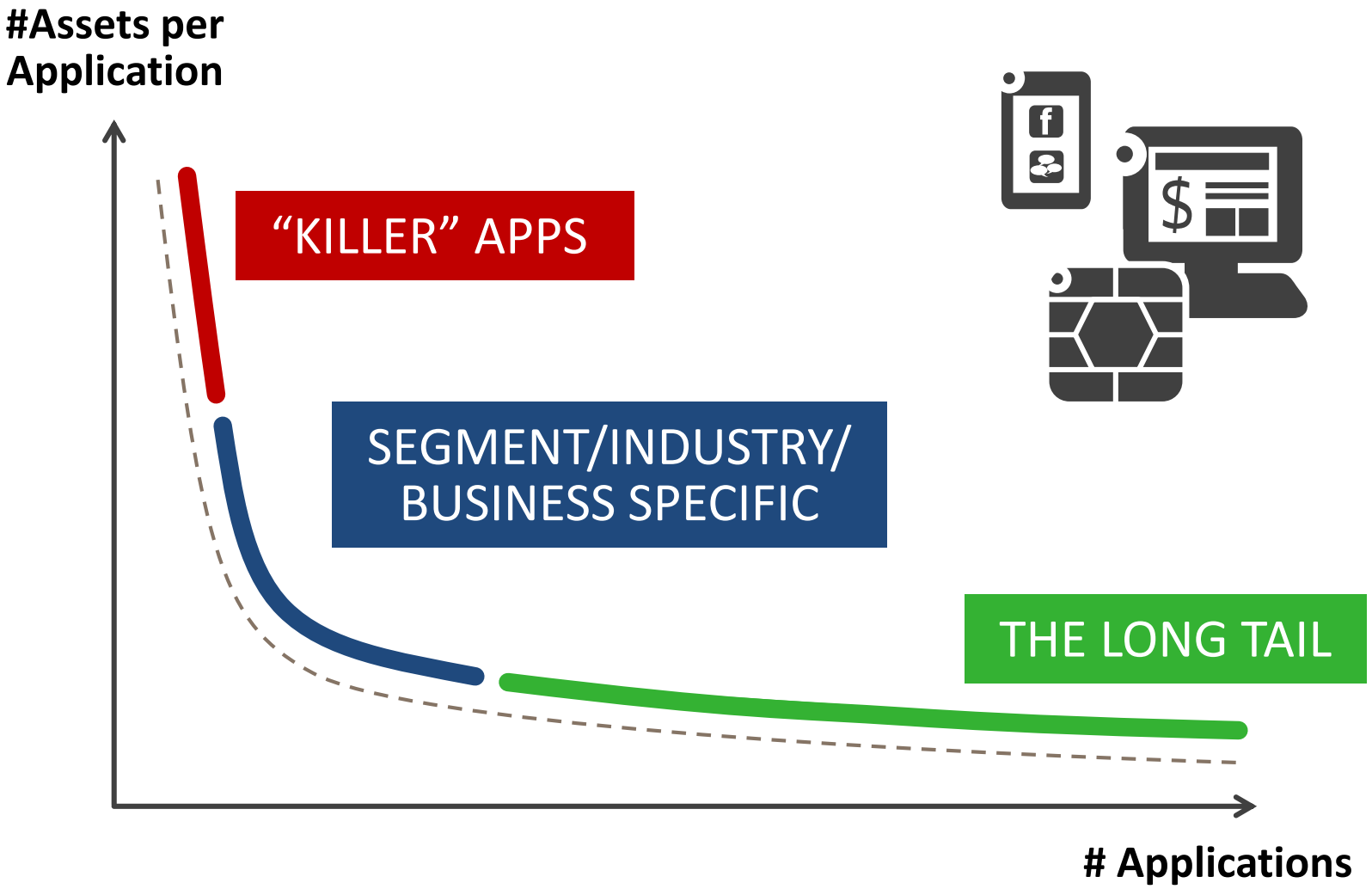


Proliferation of **mobile devices** and **M2M endpoints** creating a customer base for deploying new applications

Abundance of **data** and **information** combined with a growing understanding of how collective data can be used to add greater efficiency to our lives

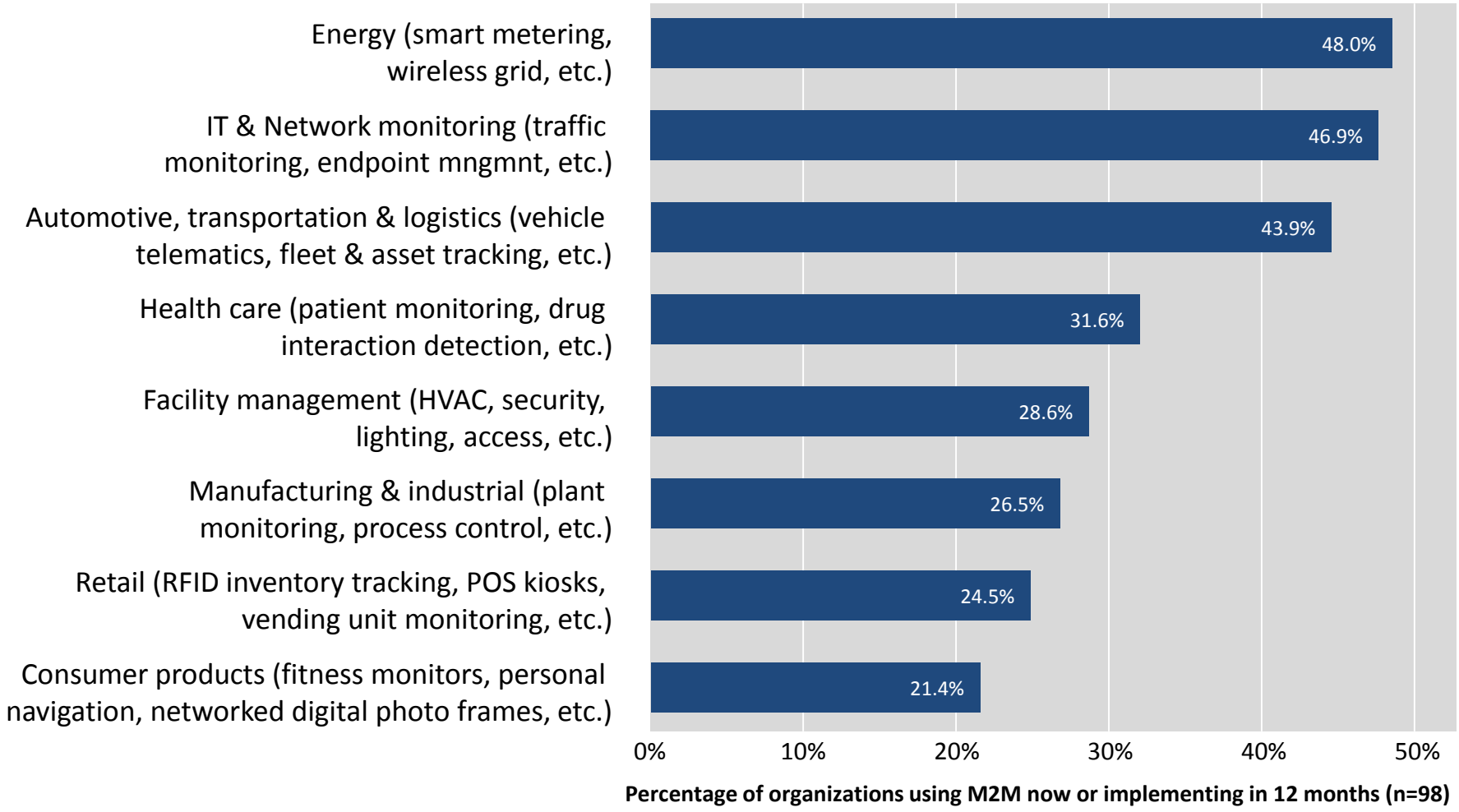
M2M standardization addressing the need for end-to-end architecture, security and interoperability, facilitating applications development, and global services rollout

A long tong tail of applications



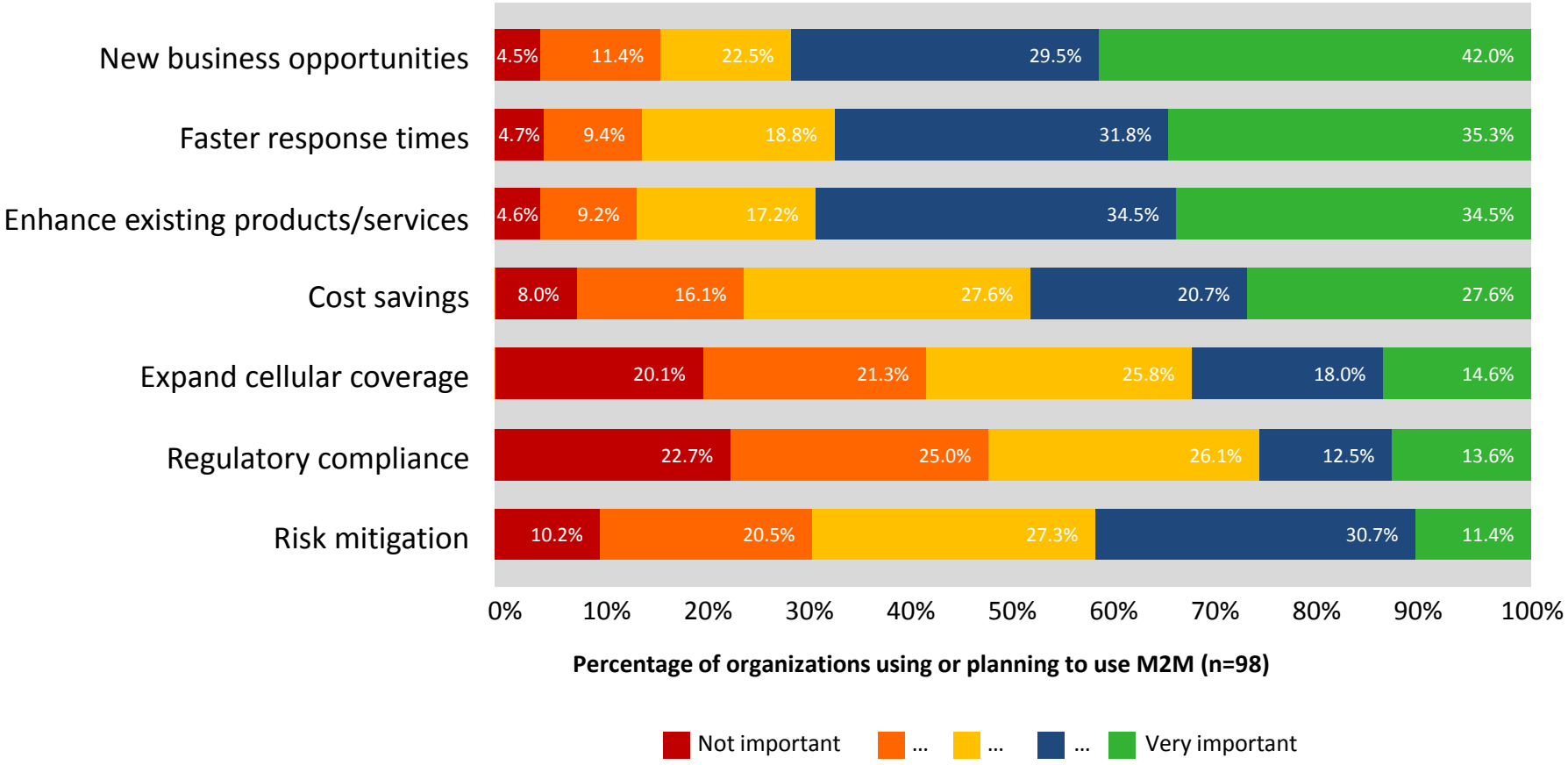
Source: Alcatel-Lucent

Where is M2M used today?



Source: TechRepublic & ZDnet, 2013

Businesses say it's about developing new opportunities



Source: TechRepublic & ZDnet, 2013

End-to-end network view

“ANY APP”

“ANY NETWORK”

“ANY DEVICE”

application creation & analytics

connectivity, onboarding, AAA, management, security, …

devices & gateways

sensors

Source: Alcatel-Lucent

A fragmented ecosystem

Based upon: Matt Turk, Sutian Dong, FirstMark Capital, 2013

Current state of affairs

BUSINESS INSIDER

The IoT lacks a common set of standards and technologies that would allow for compatibility and ease-of-use. There are currently few standards (or regulations) for what is needed to run an IoT device. Consortia that group together global industrial, tech, and electronics companies are involved in an effort to standardize the IoT and solve the most pressing security concerns.

HR Harbor Research

To date, the machine connectivity (M2M) and smart systems opportunity has largely been comprised of "simple" remote services applications and related tracking/location services….. future technology development will be focused on **collaboration between devices, people and systems**, but will **require new technology and architecture**.

STRATEGY ANALYTICS

… a key challenge for the industry remains the complexity of **developing, deploying, and managing M2M applications** ... This is a challenge both for mobile network operators that are trying to offer profitable services tailored to the M2M market, as well as for application developers and service providers that are trying to **reduce costs, speed time to market, and simplify robust application deployments**.

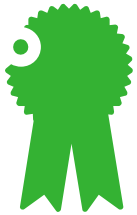
ABIresearch®

For many years M2M was held back by the lack of a low cost, global access medium, the fragmented nature of the ecosystem, the lack of any single killer application driving demand and **the complex nature of M2M solutions leading to high-cost development and systems integration.**

Why standardization is needed

Improved **Functionality-Cost-Quality** (FCQ) tradeoffs

More **partnering choices** and **opportunities** for M2M/IOT industry stakeholders



Enhanced **experience** through security, interoperability, device management and interaction with underlying networks

Improved Functionality-Cost-Quality (FCQ)

- Anticipate massive growth in devices, applications, traffic and profile/usage data; reduce signalling overhead
- Develop a ‘horizontal’ M2M platform, scalable by design
- Improve end-to-end product quality
- Optimized network use, performance & traffic volumes
- Fascilitate sourcing, development, integration and monetizatation of M2M solutions & components
- Reduce investments, time-to-market and onboarding costs of new devices and applications
- Efficient administration and management

Partnering choices and opportunities

- More suppliers to source M2M solution components from
- More providers who can develop and integrate M2M solutions and applications
- Partnering with other stakeholders to store, discover, access, exchange and share data and content
- Partnering with wireline and wireless service providers and extract more value from underlying networks
- Cross-vendor device configuration and management

Enhanced experience

- Abstract devices and applications from underlying access networks and technologies
- Interoperability between devices, platforms, data formats, protocols and applications
- Remote provisioning, control, management and billing of devices and applications; lightweight protocols for minimal power consumption
- Deal with small power, memory and processor footprints
- Privacy, security & access control; authentication, authorization, encryption, data protection, …

Introducing the oneM2M partnership

In July 2012, seven of the world's leading ICT Standards Development Organizations launched the **global oneM2M partnership** to:

- Cooperate in the production of globally applicable, access-independent M2M Service Layer specifications, including Technical Specifications and Technical Reports
- Ensure the most efficient deployment of M2M communi-cations systems

www.oneM2M.org

Partners and members

Partner SDOs:

- ARIB (Japan)
- ATIS (N-America)
- CCSA (China)
- ETSI (Europe)
- TIA (N-America)
- TTA (Korea)
- TTC (Japan)

Industry consortia:

- Broadband Forum (BBF)
- Continua Health Alliance
- Home Gateway Initiative (HGI)
- New Generation M2M Consortium (Japan)
- Open Mobile Alliance (OMA)

+ over 200 service providers, industry, government, university, research, … members

oneM2M provides …

- A common set of Service Layer capabilities
- Access independent view of end-to-end services
- Open/standard interfaces, APIs and protocols
- Security, privacy, and charging aspects
- Reachability and discovery of applications
- Interoperability, test and conformance specs
- Identification & naming of devices and applications
- Management aspects (including remote management of entities)

First set of specifications delivered in August 2014

will be live demonstrated at the oneM2M showcase event, December 9 at ETSI

Join us for the next webinar

“Taking a look inside oneM2M”

by Nicolas Damour

Senior Manager for Business and Innovation Development
at Sierra Wireless

30 October 2014 at 1PM EDT = 5PM UTC

http://www.onem2m.org/btchannel.cfm

Join us at the oneM2M showcase event

- OneM2M project partners, rationale and goals
- OneM2M Service Layer Specification release
- Showcase demos that demonstrate oneM2M “live"

9 December 2014, Sophia-Antipolis, France

(free of charge, but online registration is required)

http://www.onem2m.org/Showcase

Followed by the ETSI M2M workshop.

Thank You!

Q&A