IOT e Digital Transformation: siamo pronti?
Torino, 9 maggio 2018

Primo Bonacina

Managing Partner

PBS – Primo Bonacina Services

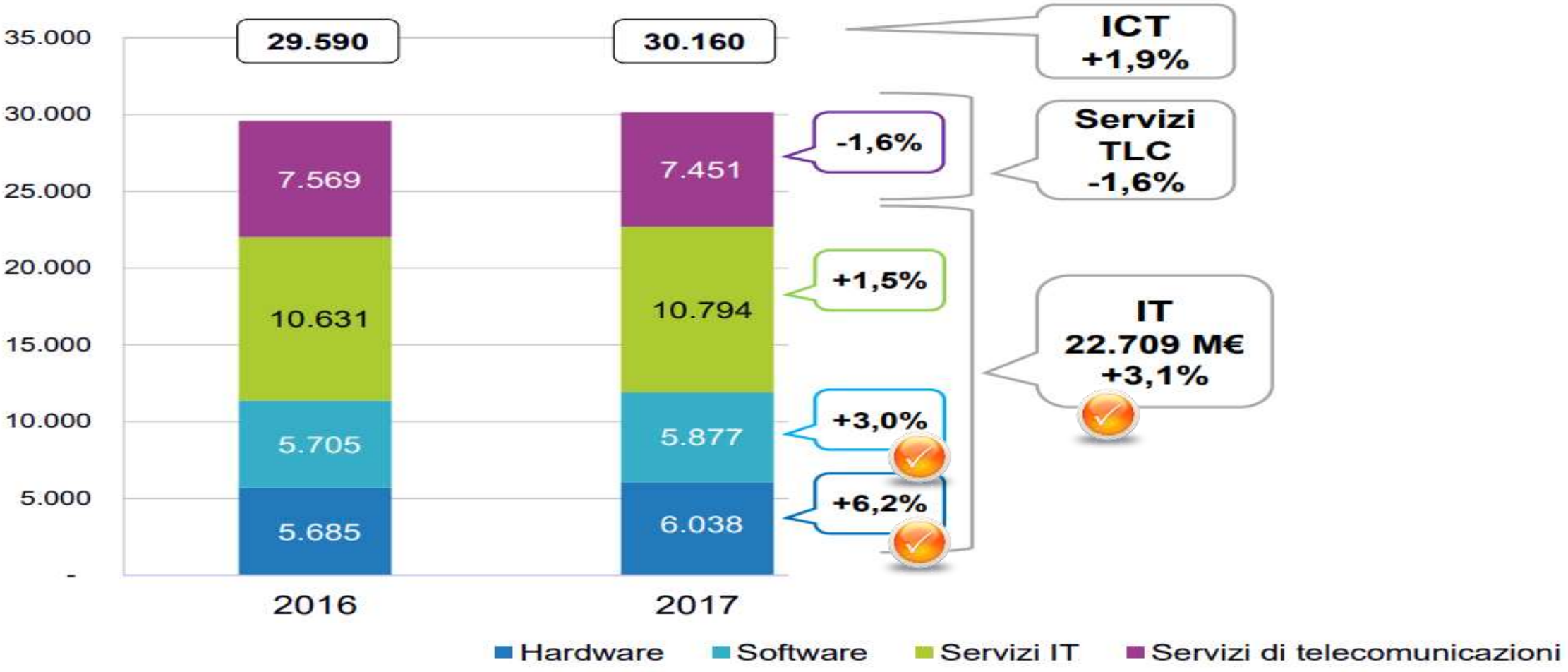
www.primobonacina.com

Agenda

- IT: numeri e scenari
- Digital Transformation e IOT
- IOT readiness: una metodologia
- Il Go-To-Market per l'IOT
- Restiamo in contatto!

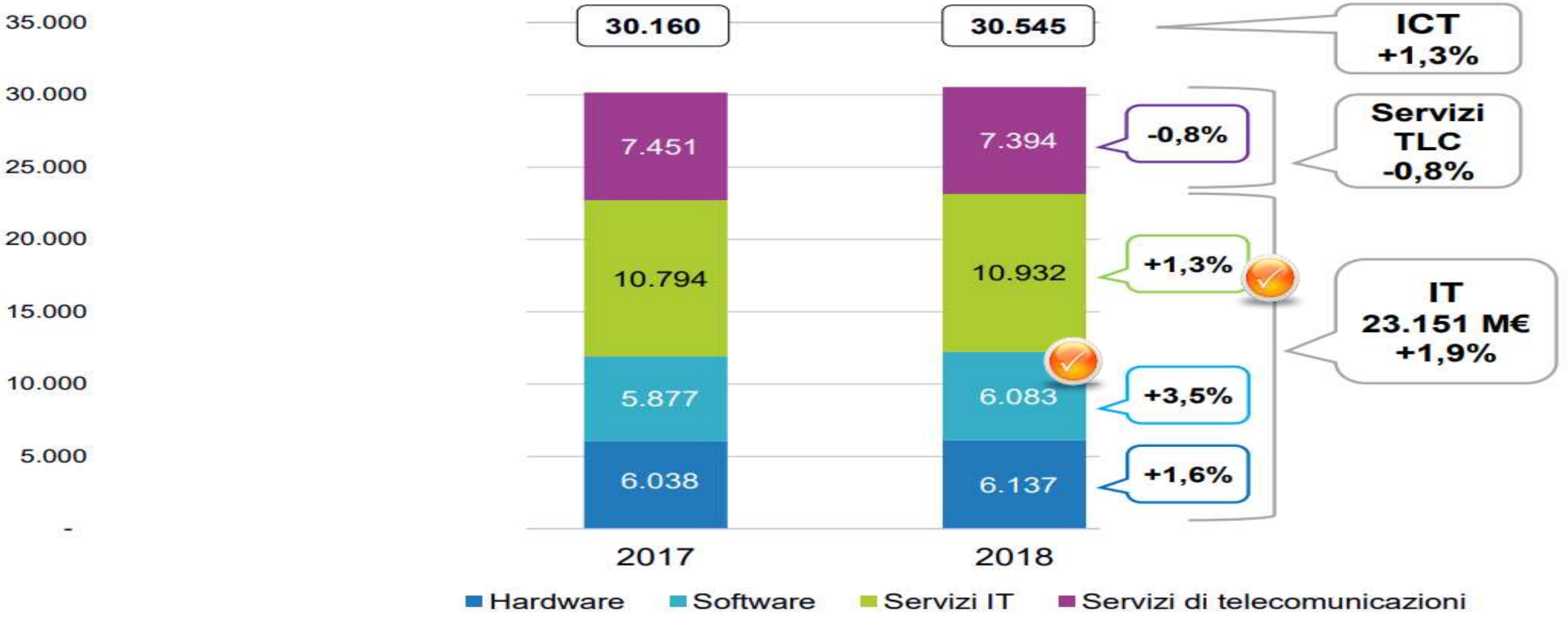
IT 2017 in Italia: +3.1%

Mercato ICT In Italia, M€



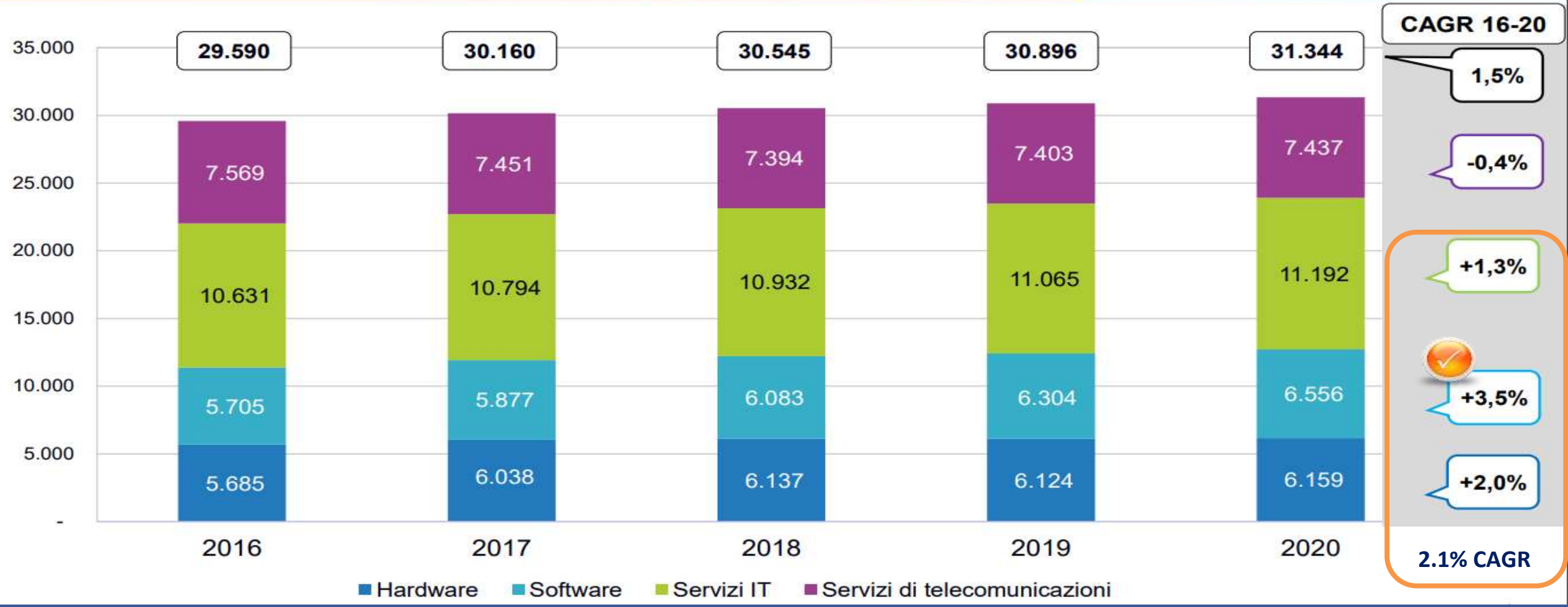
IT 2018 in Italia: +1.9%

Mercato ICT In Italia, M€



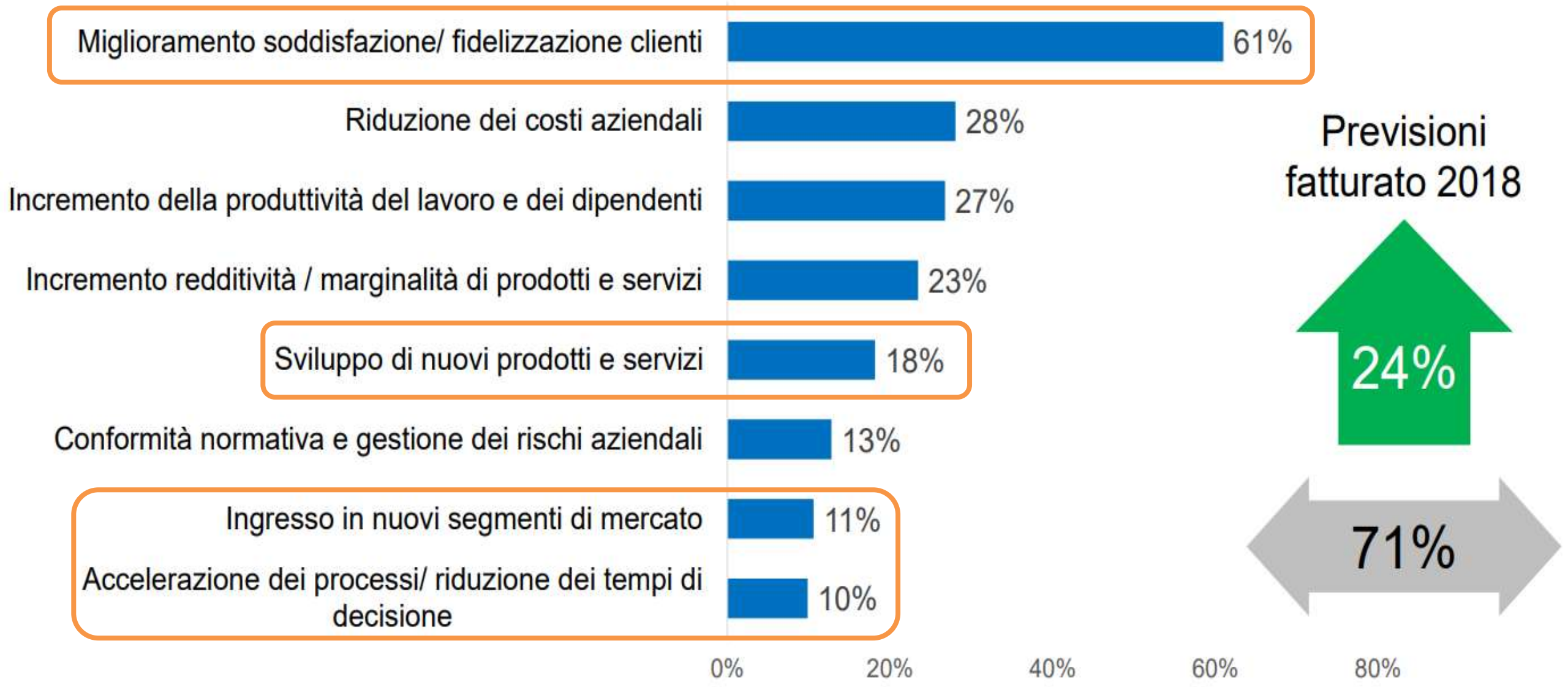
IT 2016-2020 in Italia: +2.1%

Mercato ICT In Italia, M€



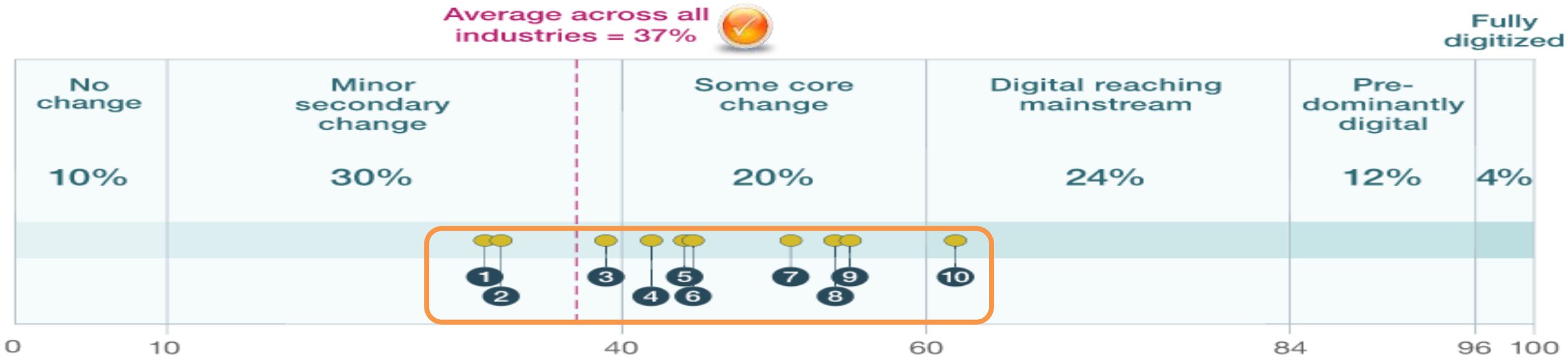
Digital Transformation

2018 è l'anno della trasformazione digitale: le priorità di business (IDC Assintel Report)



Trasformazione Digitale? Siamo al 37% del percorso (McKinsey)

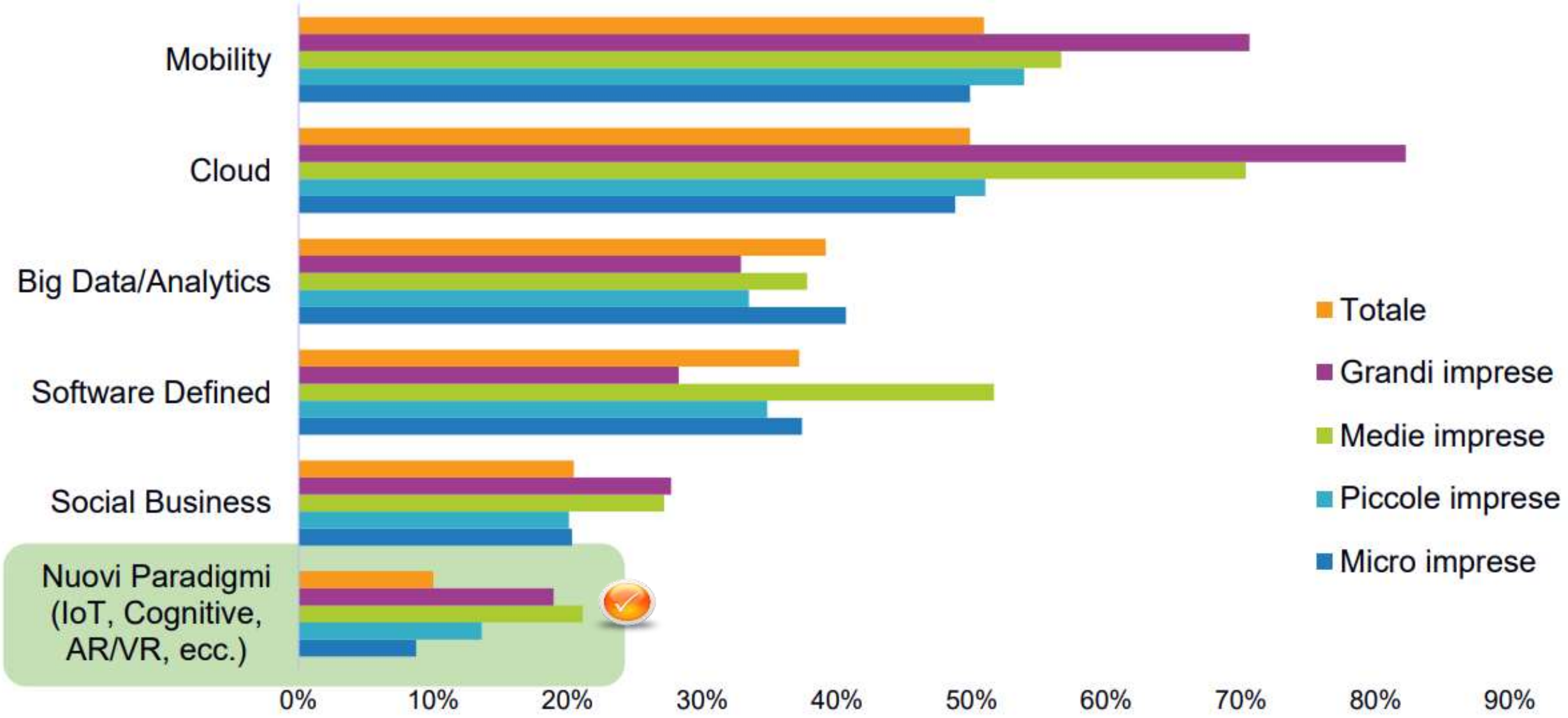
Perception of digital penetration by industry,[1] % of respondents



Selected industries[2]

1. Consumer packaged goods (31%)
2. Automotive and assembly (32%)
3. Financial services (39%)
4. Professional services (42%)
5. Telecom (44%)
6. Travel, transport, and logistics (44%)
7. Healthcare systems and services (51%)
8. High tech (54%)
9. Retail (55%)
10. Media and entertainment (62%)

Nuovi «paradigmi tecnologici» accelerano la Trasformazione Digitale (IDC Assintel Report)

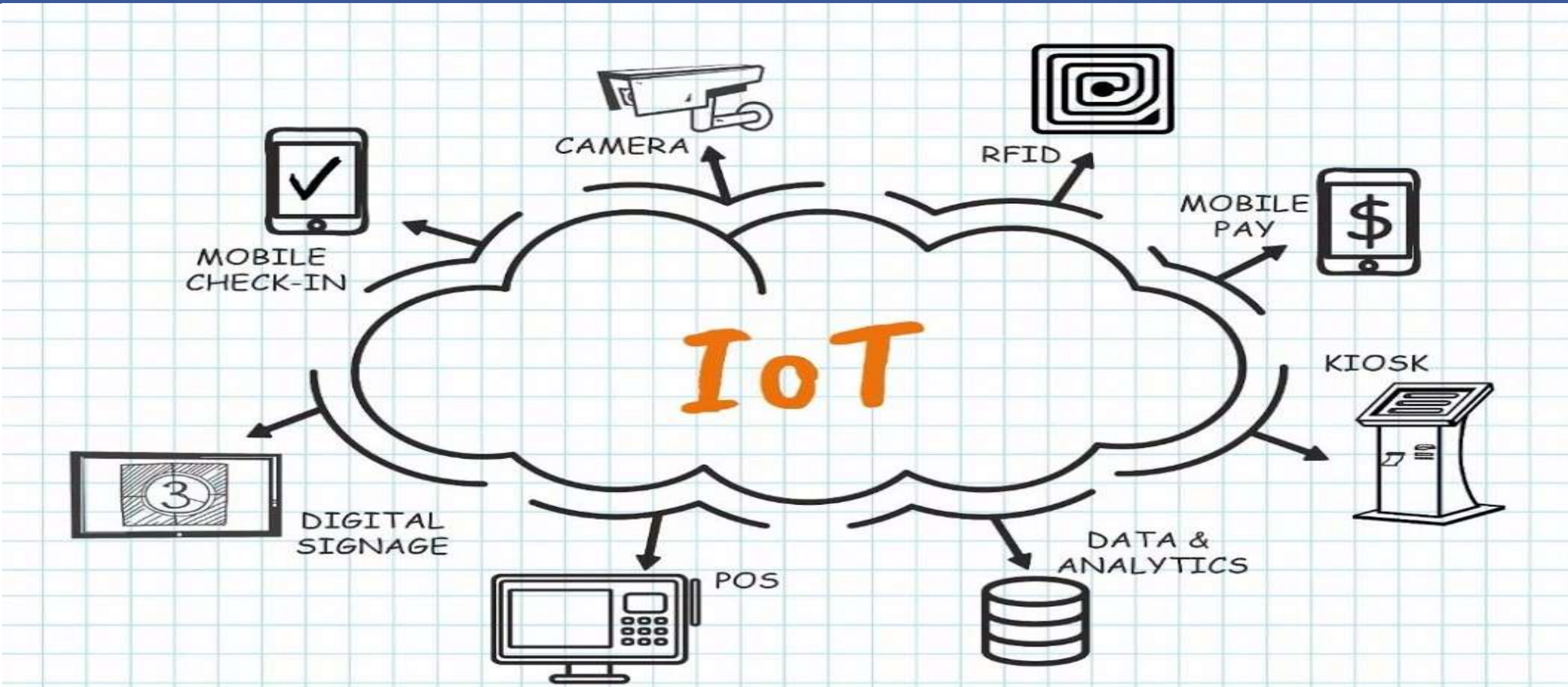


Trasformazione Digitale: i driver della crescita

		Cognitive 2017 +20,5%	**Cognitive** 2018 +25,6%	**Big Data & Analytics** 2017 +20,9%	**Big Data & Analytics** 2018 +26,4%
IoT 2017 +16,4%	**IoT** 2018 +15,1%		**AR/VR** 2017 +335,6%	**AR/VR** 2018 +86,4%	
Wearable 2017 +155,7%	**Wearable** 2018 +84,8%	**Cloud** 2017 +27,8%	**Cloud** 2018 +25,8%		

Fonte: elaborazioni IDC per Assintel Report 2018

IOT: connettere dispositivi fisici al mondo digitale per acquisire nuovi livelli di «interazione»



Perché IOT è importante? (IDC)

The analysts at IDC believe the Internet of Things (IoT) will encompass nearly

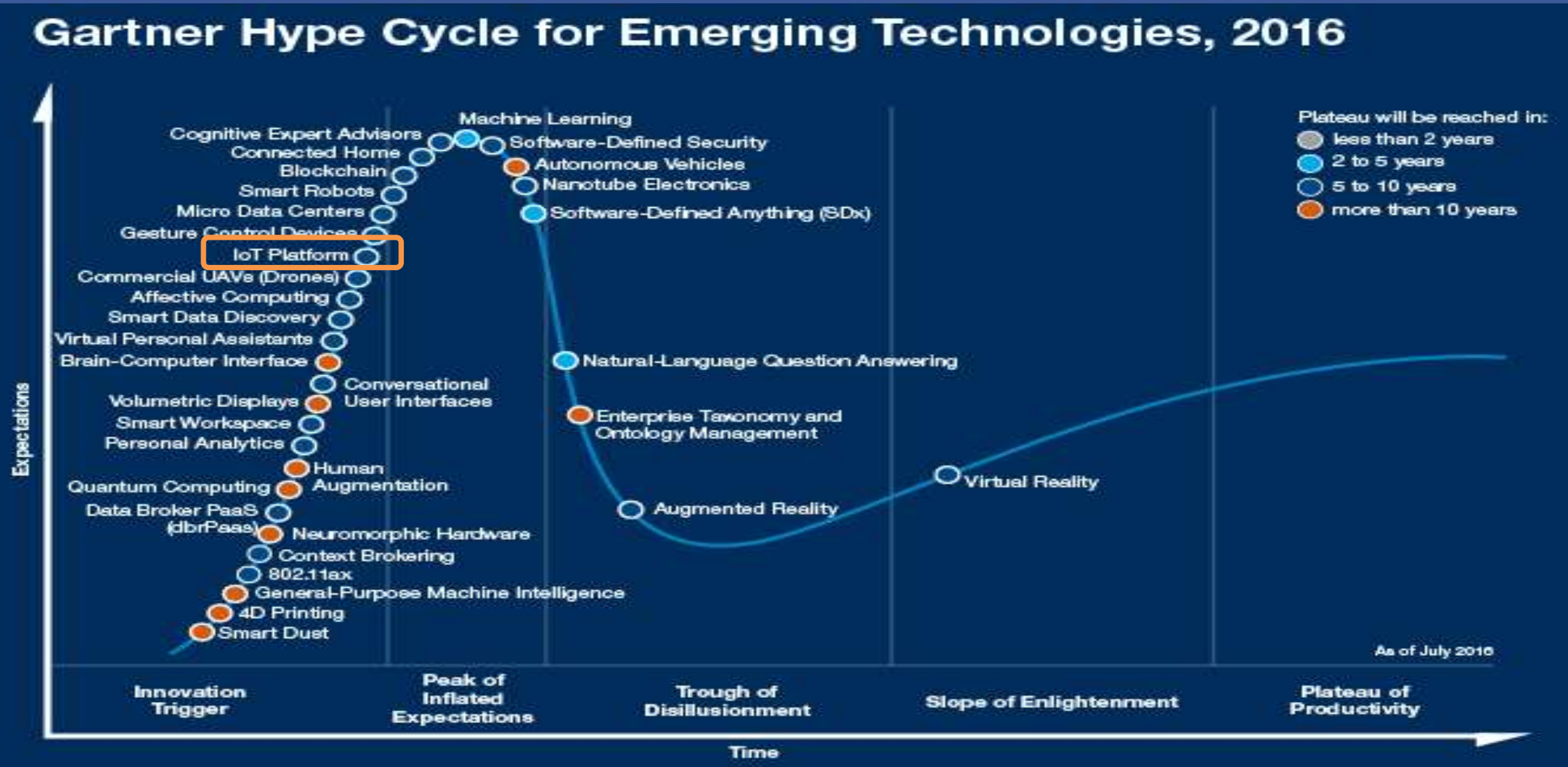
30 billion connected devices by 2020[1]

That's **4X** the global population.

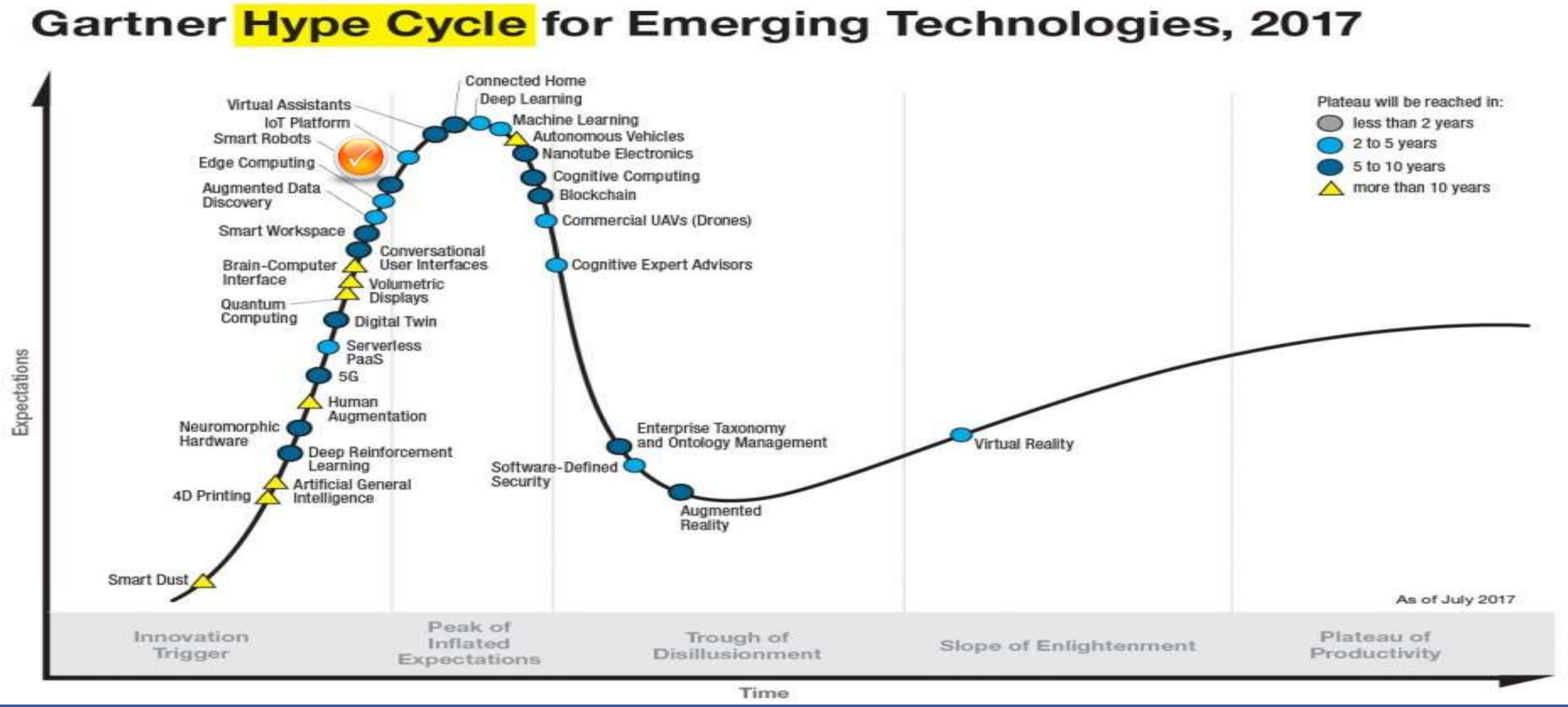
All those devices will create an unprecedented amount of data—data that needs to be:

CAPTURED · TRANSMITTED · STORED · BACKED UP · ANALYZED · DELIVERED

IOT: dove eravamo (2016-2017)



IOT: dove siamo (2017-2018)



I trend più importanti (2018 e oltre)

Three Trends

AI Everywhere

Deep Learning
Deep Reinforcement Learning
Artificial General Intelligence
Autonomous Vehicles
Cognitive Computing
Commercial UAVs (Drones)
Conversational User Interfaces
Enterprise Taxonomy
Ontology Management
Machine Learning
Smart Dust
Smart Robots
Smart Workspace

Transparently Immersive Experiences

4D Printing
Augmented Reality
Brain-Computer Interface
Connected Home
Human Augmentation
Nanotube Electronics
Virtual Reality
Volumetric Displays

Digital Platforms

5G
Digital Twin
Edge Computing
Blockchain
IoT Platform
Neuromorphic Hardware
Quantum Computing
Serverless PaaS
Software-Defined Security

gartner.com/SmarterWithGartner

«IOT 2020: the readiness indicator»

- **Ricerca su medie e grandi 600 aziende** (500+ dipendenti)
- **Hanno piani e strategie IOT**
- Sono stati analizzati i loro comportamenti «Digital» e quindi suddivise in **4 categorie per IOT:**
  1. ***Amateurs («non pronti»)***
  2. ***Rookies («poco pronti»)***
  3. ***Pros («sostanzialmente pronti»)***
  4. ***All-Stars («pronti»)***

Le aree di attenzione

1. Cloud First: non c’è IOT senza Cloud

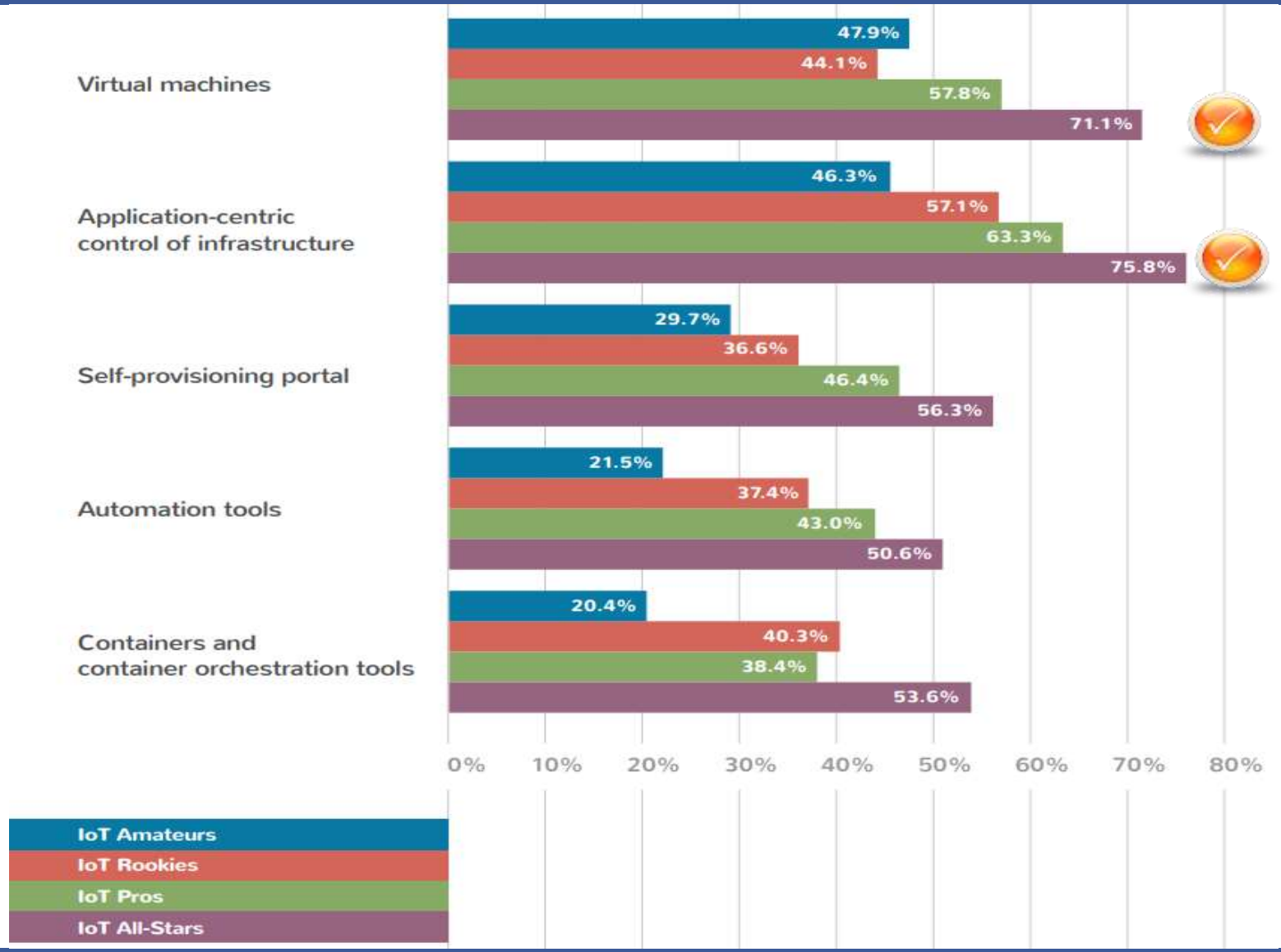
1 Cloud-first Delivery Model

The first indicator of IoT IT infrastructure readiness is the use of cloud-first development and deployment models and the ability to utilize dispersed assets and services. These include on- or off-premises cloud infrastructure and (to the extent they are allowed by industry regulations) public cloud services.

Cos’è una «Cloud First Strategy»?

- L’idea che la **soluzione** a qualsiasi nuova esigenza applicativa o infrastrutturale **vada prima cercata nel Cloud**
- **Solo dopo** che si è verificato che il Cloud NON può dare risposta soddisfacente, si cercheranno **strategie alternative**
  - Più tradizionali oppure declinate in modo ibrido (mix di cloud e data center)
- Un nuovo approccio mentale

Le componenti di un modello «Cloud First»

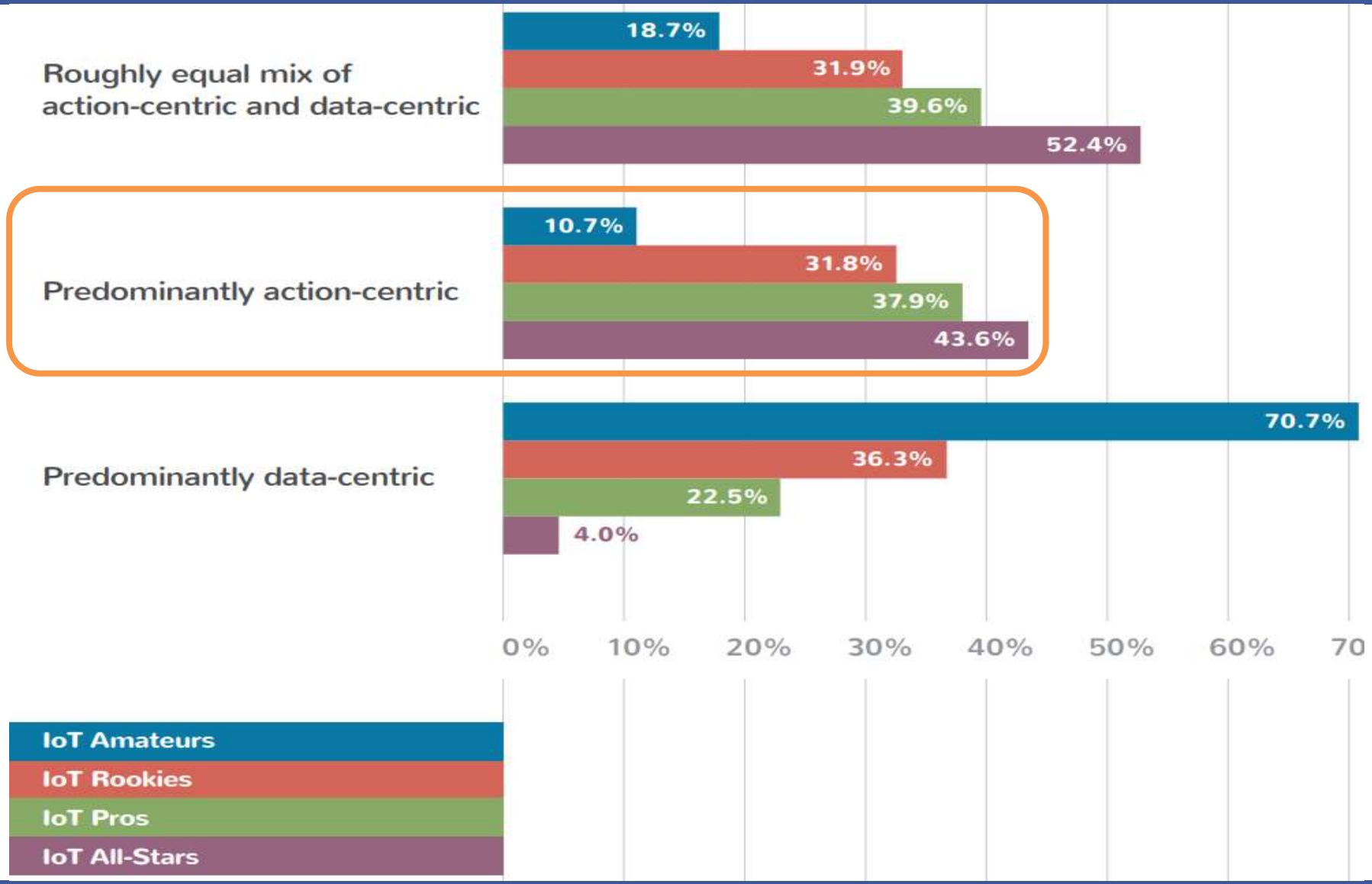


2. Il ruolo dell'infrastruttura IOT

2 Data Flow and Action Control (Data vs. Action-centric IoT)

IoT requires use of a distributed data flow and control paradigms for compute and storage infrastructure, a strategy allowing the IoT infrastructure to span from massive datacenters at the core to micro-datacenters and intelligent devices in critical edge locations. This infrastructure is tied together (or controlled) by networks that may often lack reliable or economical connectivity, depending on the location and nature of the endpoints.

L’approccio all’IOT

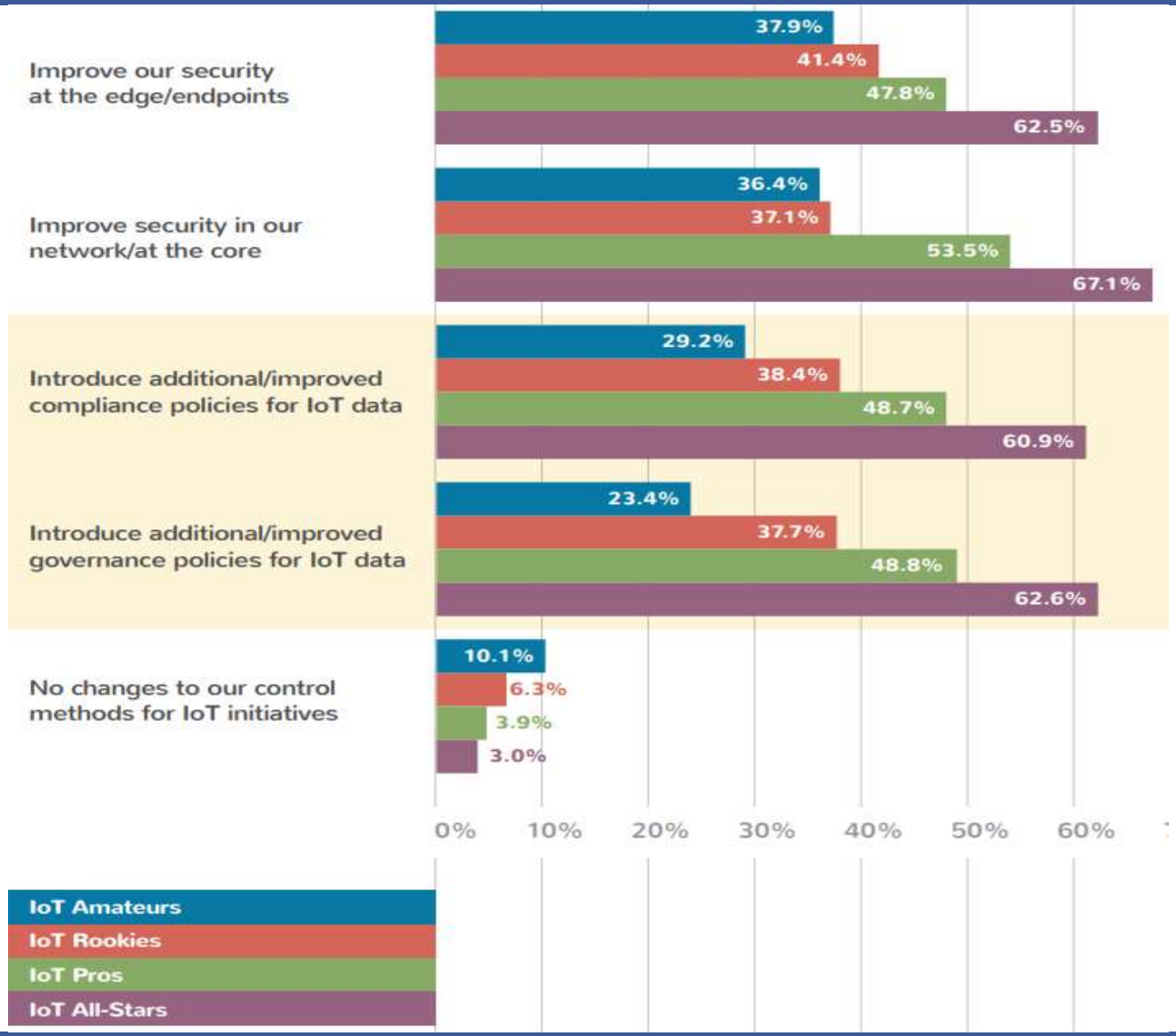


La «Governance»

Governance, Risk Management, and Compliance (GRC)

Data-related governance, risk management, and compliance is another area in which high IoT IT readiness firms stand out from others.

L’importanza della «Governance»

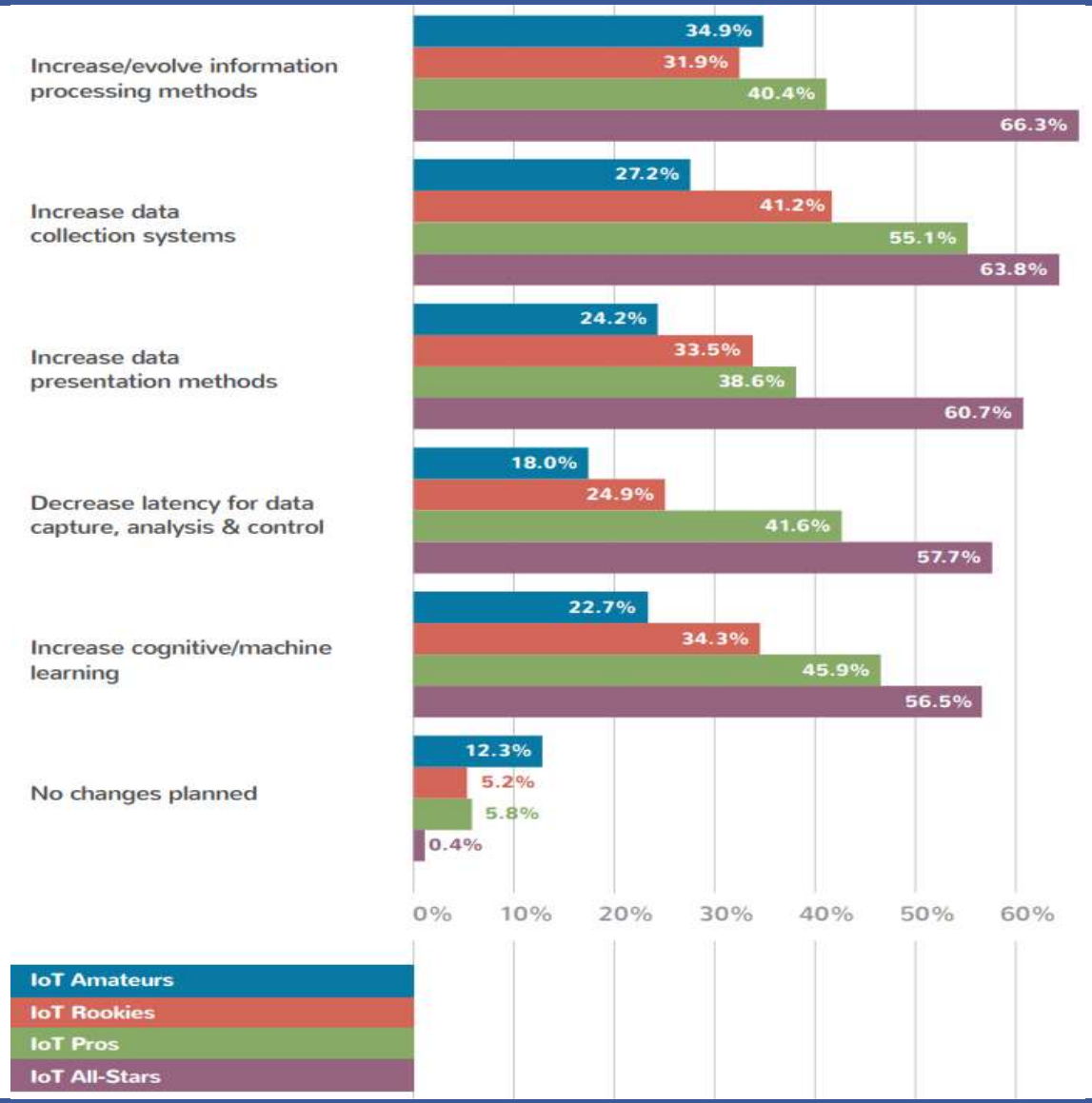


Big Data & Analytics

Advanced Analytics and Insight

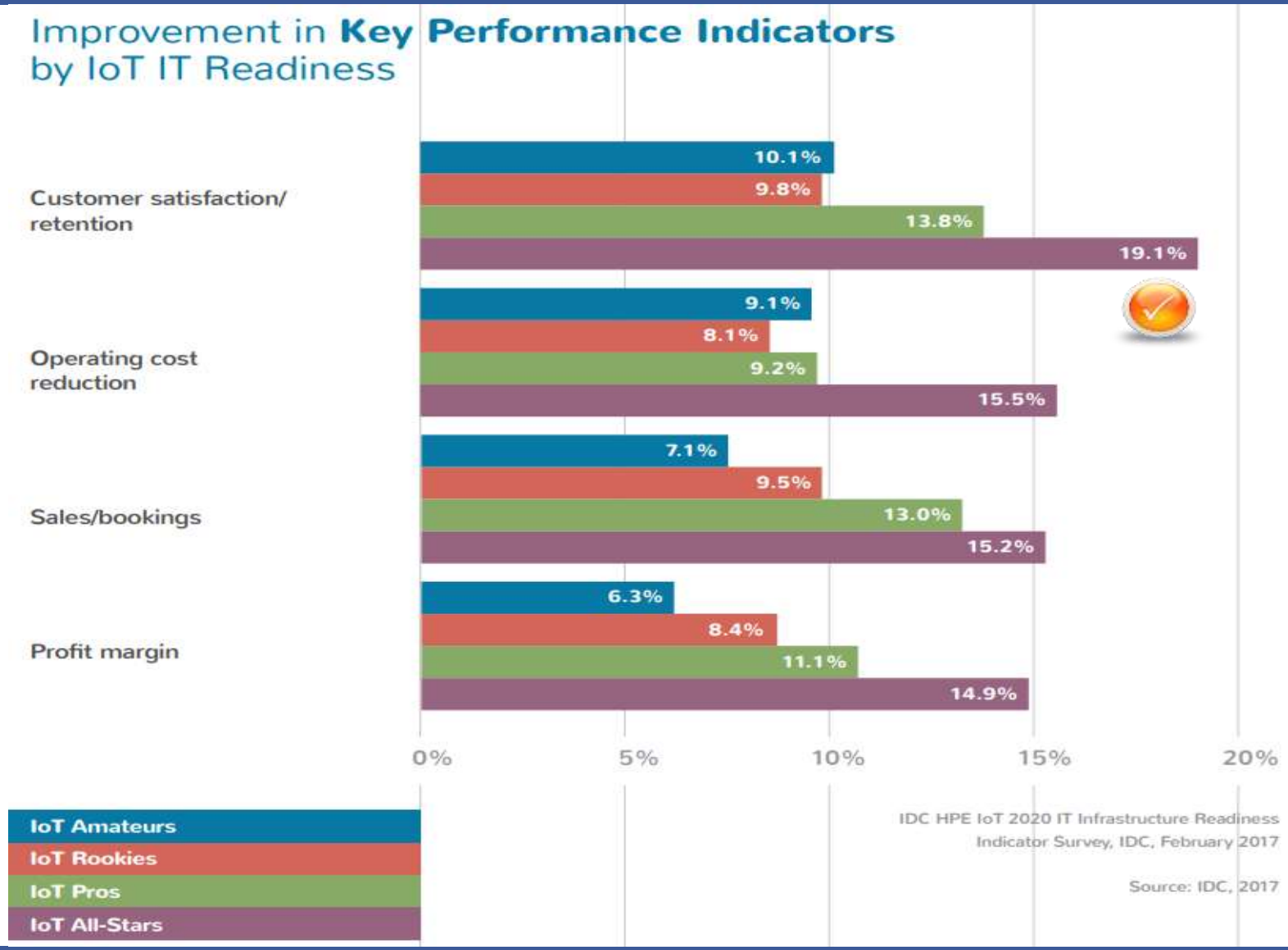
Maximizing the business value of IoT requires organizations to analyze and gain insight from large data sets and have the future vision to reduce the complexity while accelerating prescriptive action from analyses. These efforts must be consistent and compatible with edge analytics.

Come migliorare la «Governance» dei Big Data

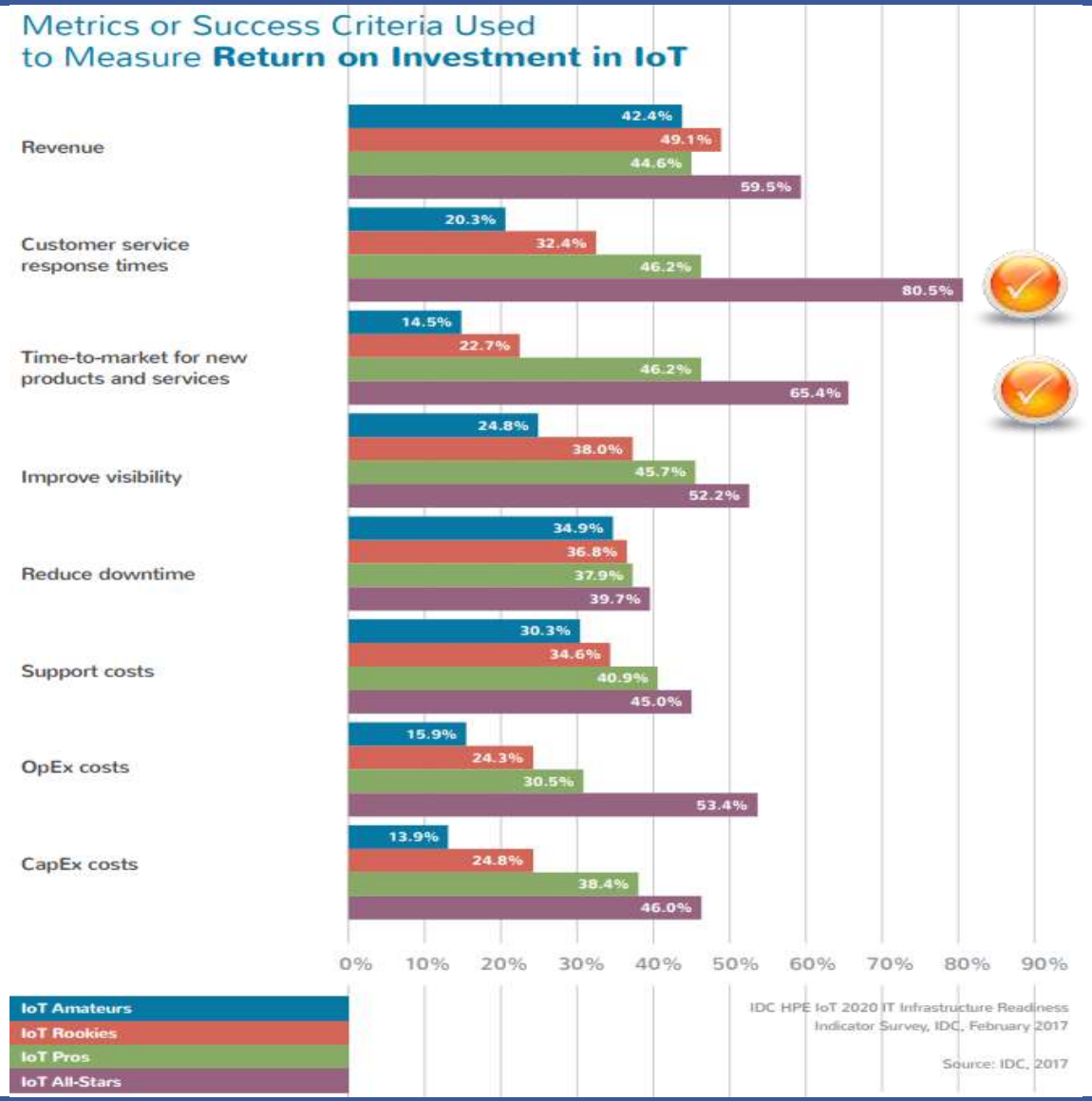


E l’impatto sul business?

Gli All-Star vincono facile

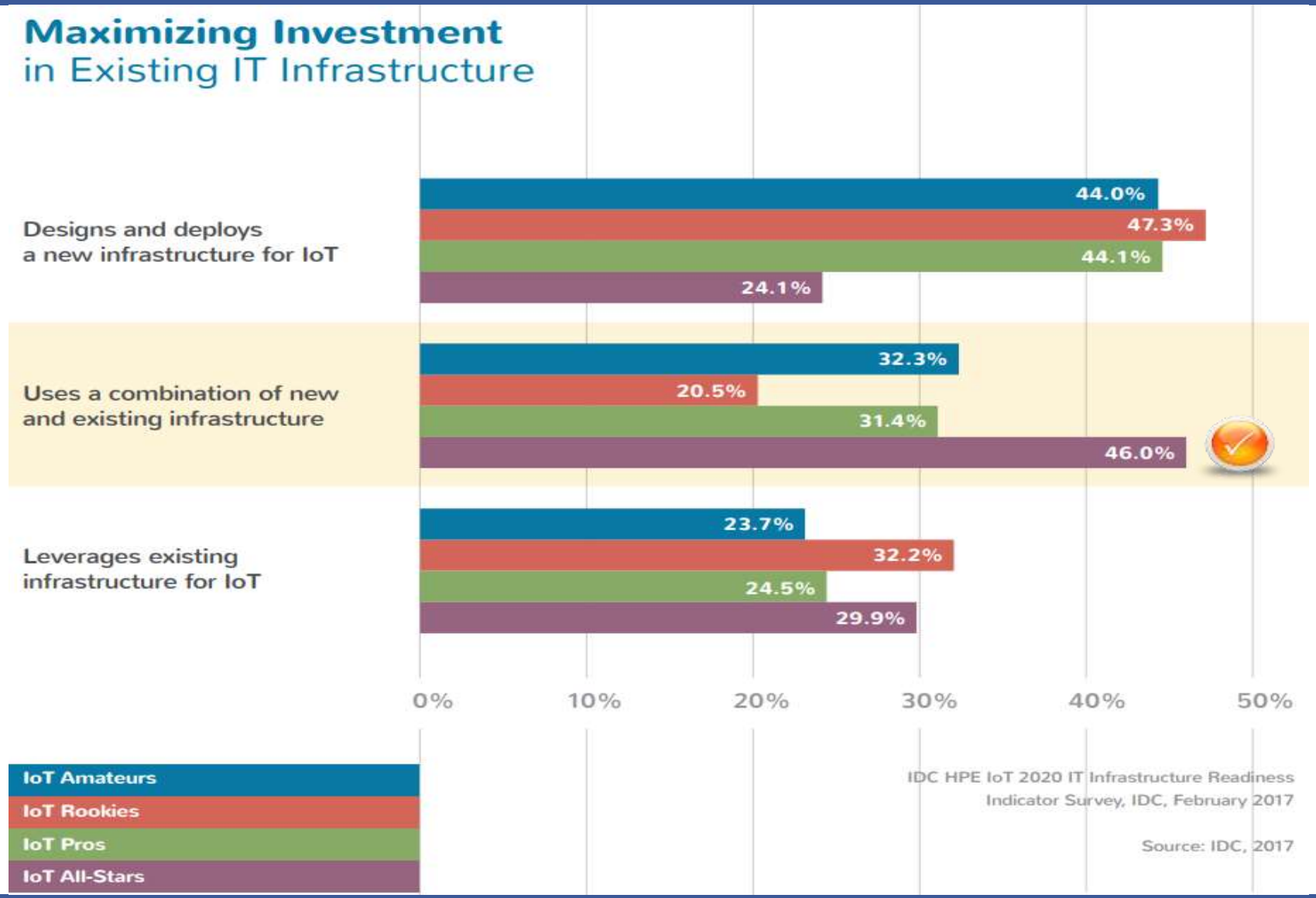


Gli All-Star vincono facile, #2



Ok, ma quanto costa?

«Meno di quanto pensiate»



Come fare? 3 linee guida

«Big Picture»

Dati, Applicazioni, Infrastruttura

IOT e Sicurezza

1. «Commit to the Big Picture»

- Focus sui ritorni di business
- Investi prontamente, consistentemente, coerentemente

2. Dati, Applicazioni, Infrastruttura IT

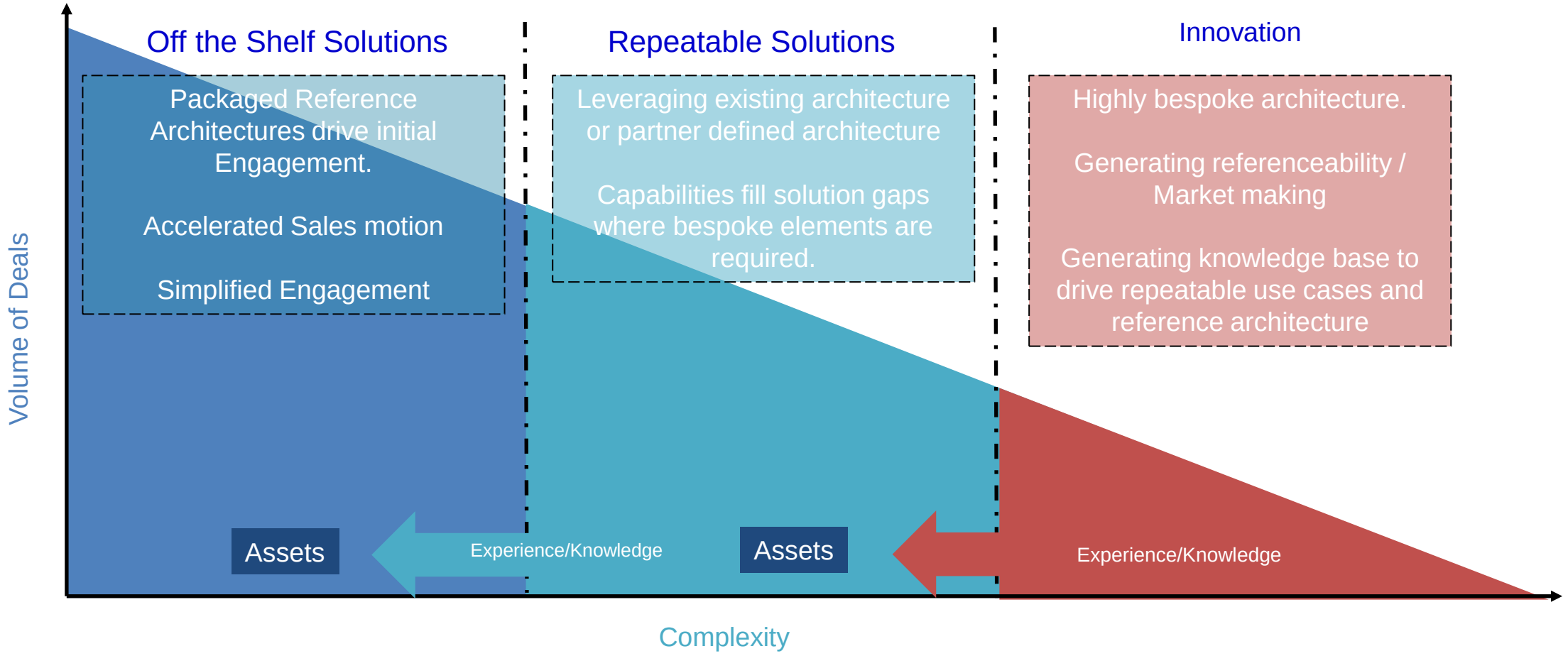
Verso un’infrastruttura software-defined, (hybrid) cloud-based, con intelligenza distribuita

3. IOT e Sicurezza

Cosa intendi per «sicurezza IOT»? *Ad esempio che FDA ha approvato la prima «Pillola Digitale» (2017)*

Quale IOT Go-To-Market?

IOT Go-to-Market Strategy *(fonte: Tech Data)*



L’IOT guida 5 opportunità di business per i VAR

1. Cloud, Data Center Automation
2. Converged Infrastructure
3. Big Data & Analytics
4. Mobility
5. Security

Nuove professioni emergono: *l'IOT Architect* (Gartner)

The IoT architect has five main responsibilities:

1 Spearhead development of the IoT vision and technical strategy

The IoT architect must work with key business and IT leaders to develop an IoT vision that sets objectives for the business to shoot for and to communicate that vision to key stakeholders. Part of this involves documenting the business's critical success factors, and part of it entails using the business value to drive engagement. An effective IoT vision is not merely aspirational; it's rational and deliberate.

2 Design an end-to-end IoT architecture

The IoT architect must identify and document the IoT target state for the organization and ensure that the target architecture will address current and future business requirements. An end-to-end IoT solution typically spans a wide variety of technology areas ranging from data collection sensors, equipment or appliances at the edge all the way to integration with enterprise applications and systems. "Because an IoT solution has so many integrated components, creating a target IoT architecture is particularly important — especially if the organization is likely to create and deploy multiple solutions over time," Heidt says.

3 Enable the design and construction of IoT solutions

The IoT architect collaborates with and enables solution architects in their design and implementation of IoT solutions. The target architecture is a valuable asset, but not the only one the IoT architect has to contribute. IoT architects bring lessons learned and design experience from across the portfolio of implementations in which they have participated.

4 Create a process to build IoT solutions

Developing and standardizing the process for building IoT solutions and then guiding the evolution and improvement of that process is key. This will help make the organization's creation of IoT solutions easier and more reliable because these initiatives will follow a process that incorporates the organization's experience and accrued best practices in IoT solution development.

5 Collaborate with diverse enterprise groups to deliver value

IoT unites business activities in the physical world with back-end processes while increasing the involvement of IT and non-IT groups, such as business units and operational technology (OT) teams. The IoT architect needs to engage effectively with teams across the organization to develop clear business objectives for IoT solutions and to ensure they integrate well with existing operations.

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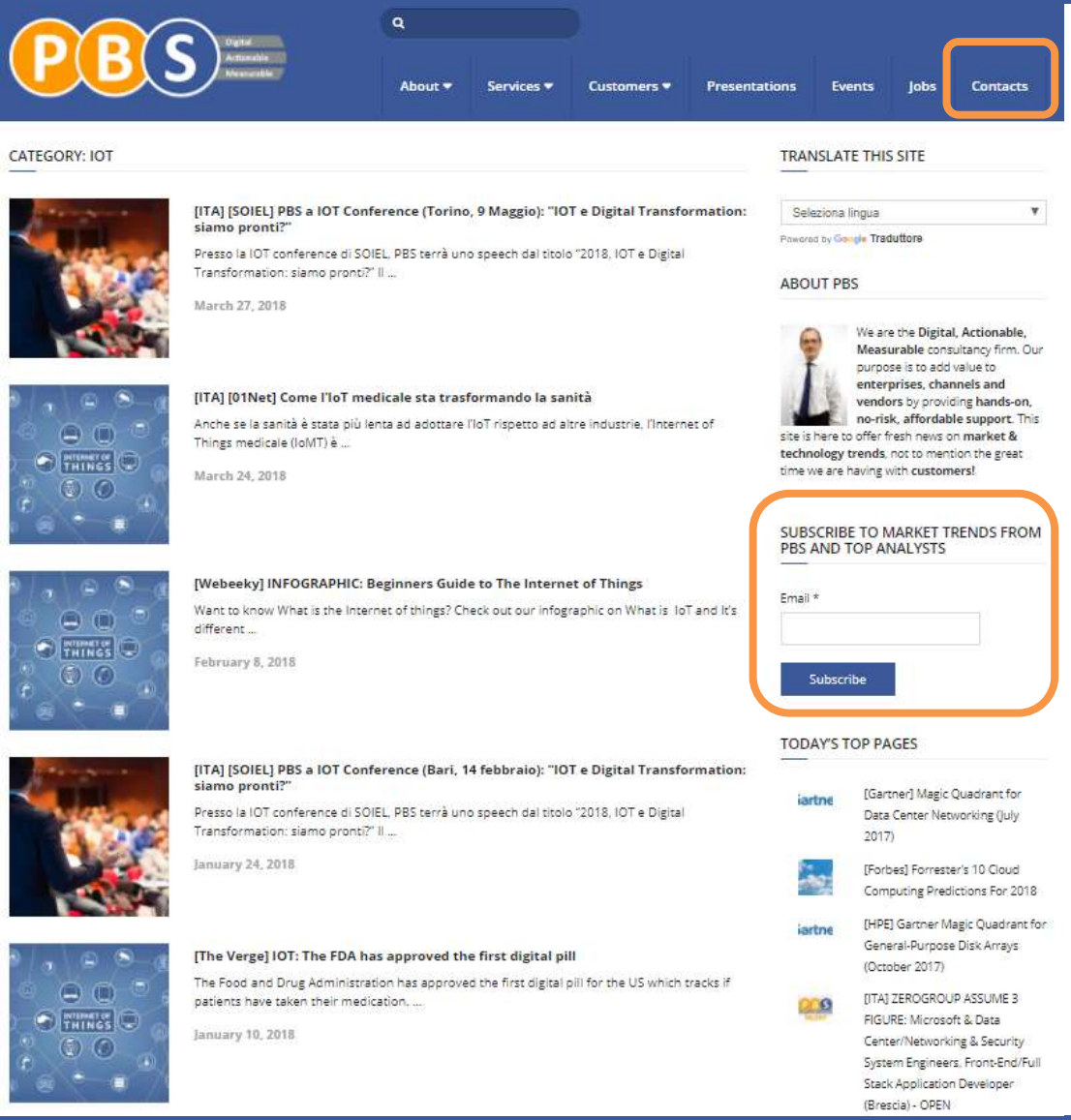

PBS Digital Actionable Measurable

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