Internet of Things

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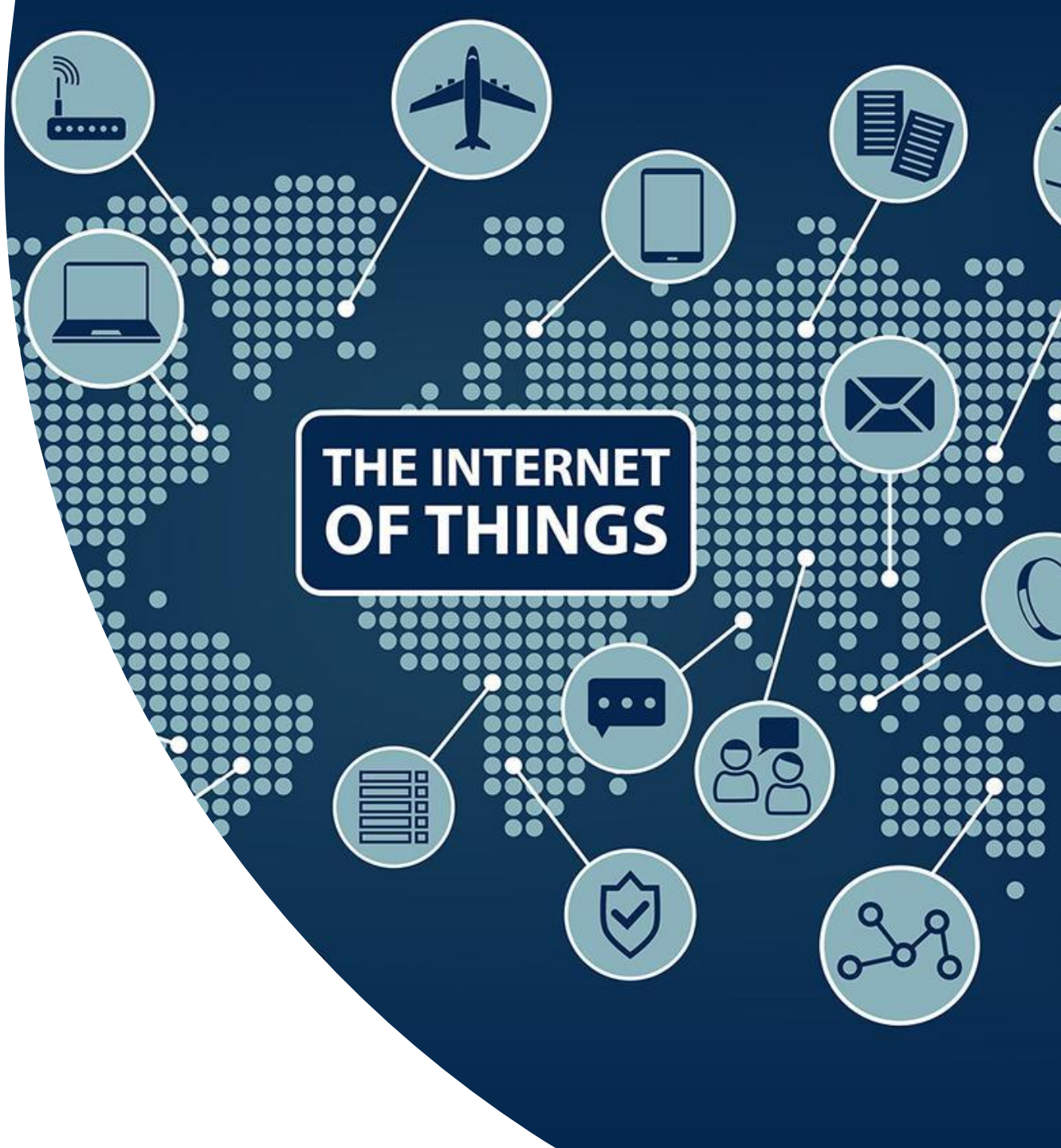

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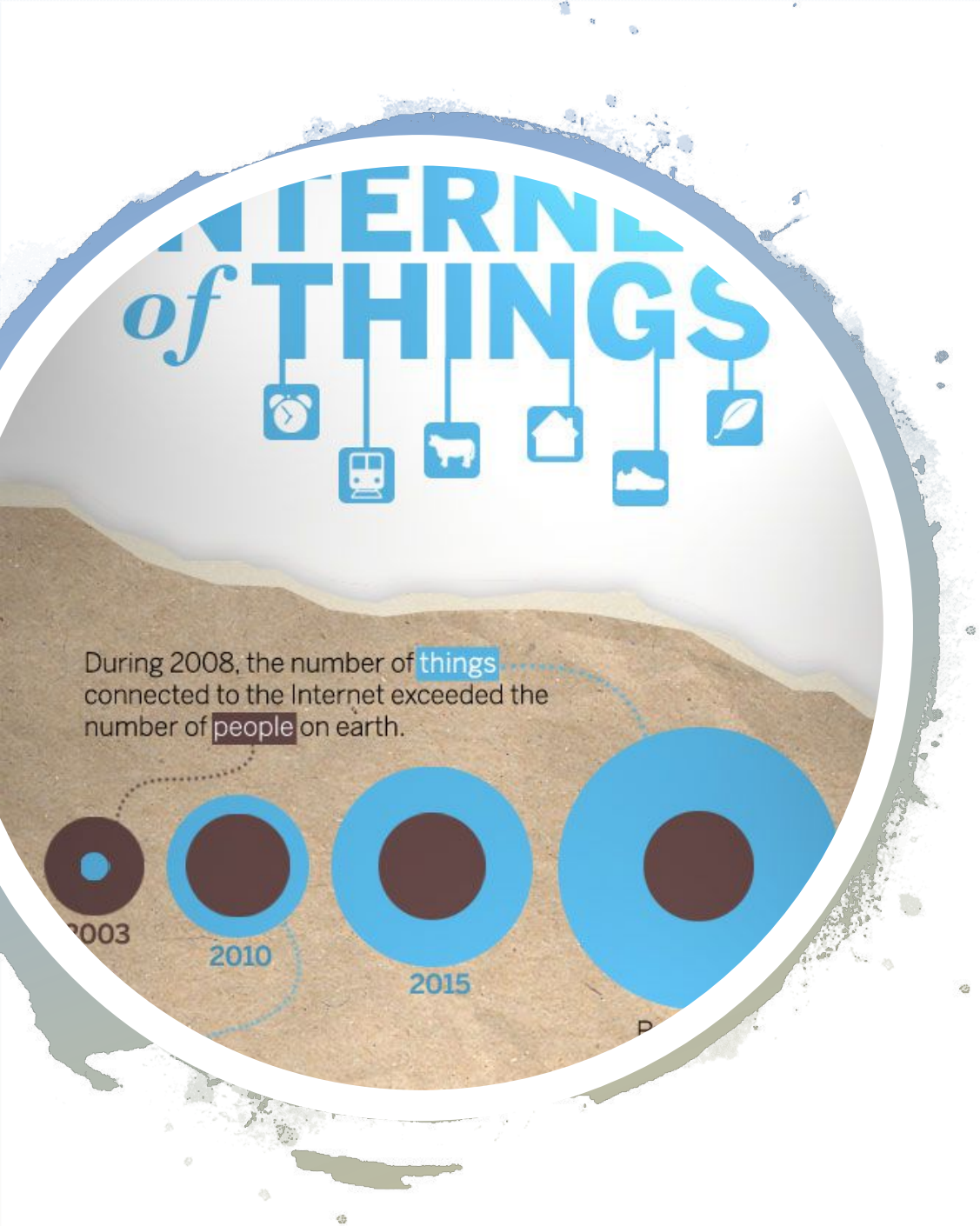
Glossary

- *Internet of Things* (IoT) – is the network of devices, vehicles, and home appliances.
- *RFID* – Radio Frequency Identification – uses electromagnetic fields to automatically identify and track tags attached to objects.
- *MEMS* – microelectromechanical systems – is the technology of microscopic devices, particularly those with moving parts.
- *Wireless Sensor Networks (WSNs)* – is a **wireless network** consisting of spatially distributed autonomous devices using **sensors** to monitor physical or environmental conditions.

What is the Internet of Things?

The Internet of Things (IoT) describes the connection of devices — any devices — to the internet using embedded software and sensors to communicate, collect and exchange data with one another



A Brief History Of IoT

- The first IoT device, developed in 1990, was a toaster that could be turned on and off over the internet
- The term “internet of things” was coined in 1999 by Kevin Ashton

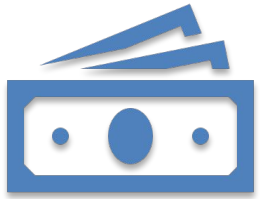
How does it work?

Devices and objects with built in sensors are connected to an Internet of Things platform, which integrates data from the different devices and applies analytics to share the most valuable information with applications built to address specific needs

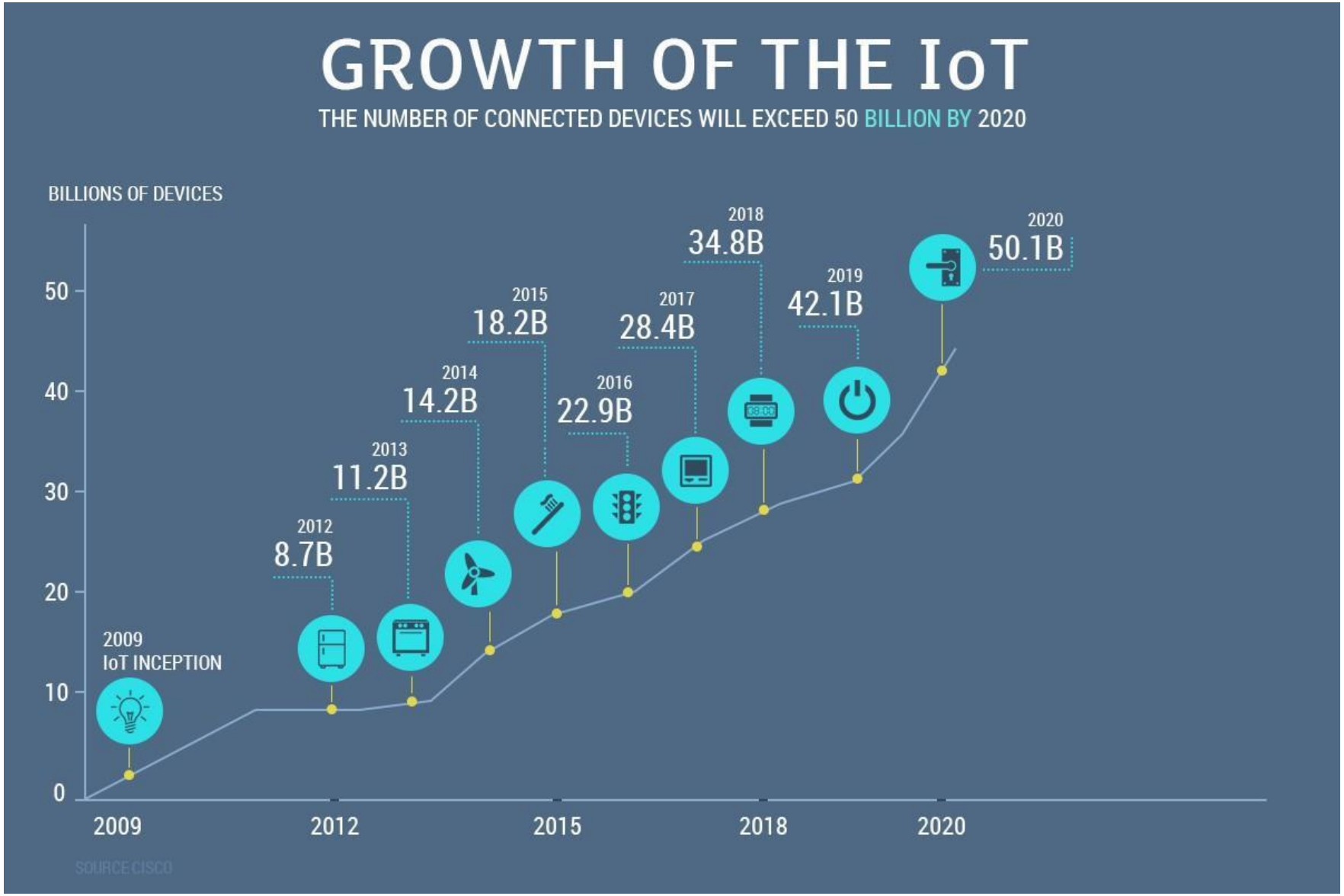
State of the Art

There were already more objects/things connected to the Internet than people from 2008

Predictions are made that by 2020: the number of Internet-connected devices will reach or even exceed 50 billion



The IoT becomes the most massive device market that enables companies to save billions of dollars


GROWTH OF THE IoT
THE NUMBER OF CONNECTED DEVICES WILL EXCEED 50 BILLION BY 2020
BILLIONS OF DEVICES
50
40
30
20
10
0
2009
IoT INCEPTION
2012
8.7B
2013
11.2B
2014
14.2B
2015
18.2B
2016
22.9B
2017
28.4B
2018
34.8B
2019
42.1B
2020
50.1B
2009
2012
2015
2018
2020
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Open Issues

- The problem with IoT devices is that they have little security and are virtually unprotected
- IoT devices are also being used to establish “backdoors” for cyberattacks

Top IoT Startups

- FLEET
- Hologram
- Evrythng
- Altizon
- Sight Machine

Conclusion

- The IoT is growing rapidly and has numerous applications and benefits
- Applications include: smart homes, municipal WiFi networks, smart grids, and supply chain management
- A network growing in size and complexity might rise questions of security and feasibility

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Thanks for your attention!