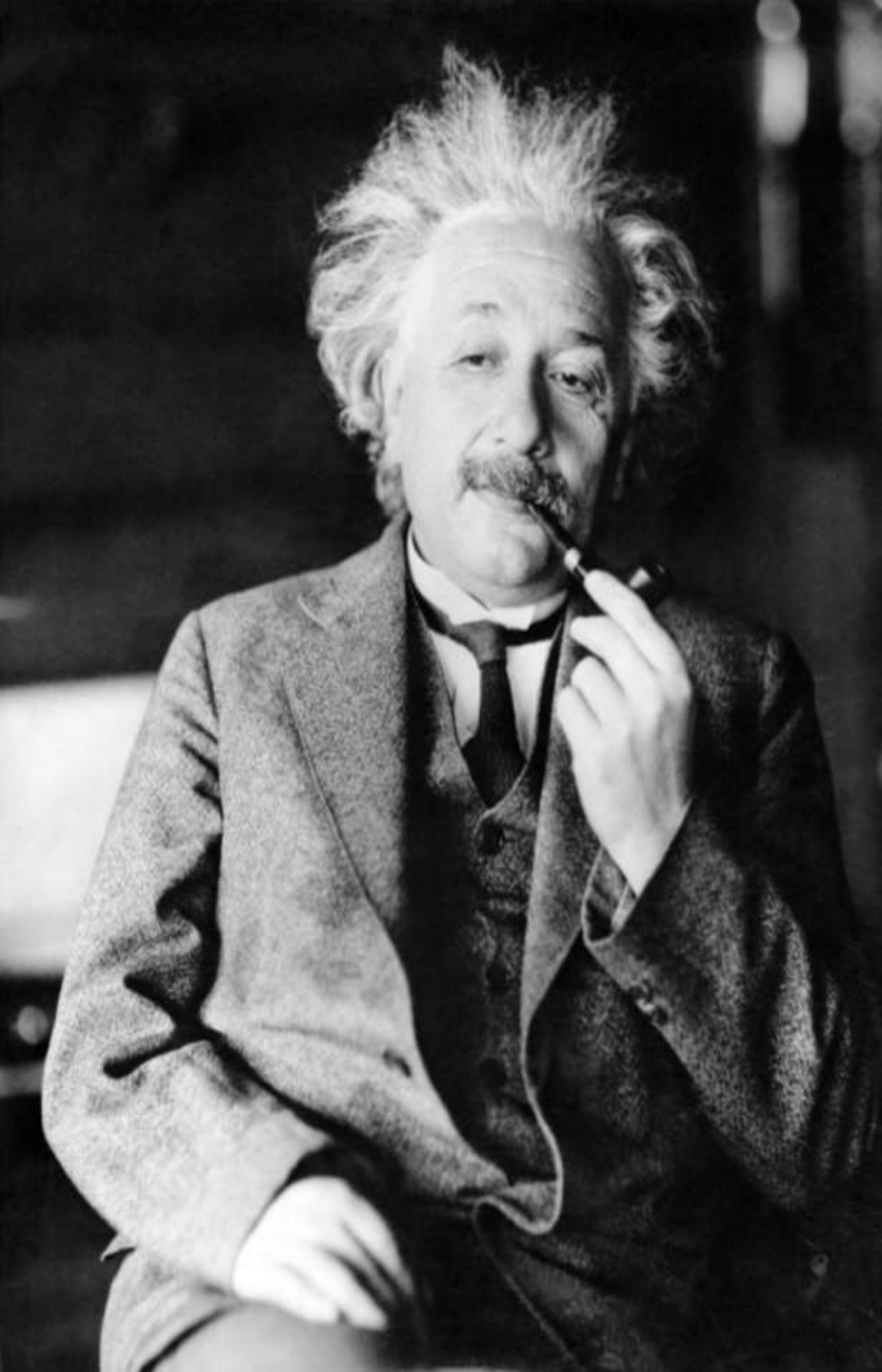


# ITU Arab Forum on Emerging Technologies Algiers – Algeria, 14-15 Feb. 2018

IOT AS THE NEXT MILESTONE FOR INNOVATIONS IN THE 21<sup>ST</sup> CENTURY

by: Osama Ghanim  
Nour Smart Solution

14<sup>th</sup> Feb 2018



*"If you can't explain it simply,  
you don't understand it well enough."*

*Albert Einstein*

# 60 years of the clicker



# Time Attendance Evolution

Manual Log Sheet

Magnetic card



Finger Print



Eye Sensor

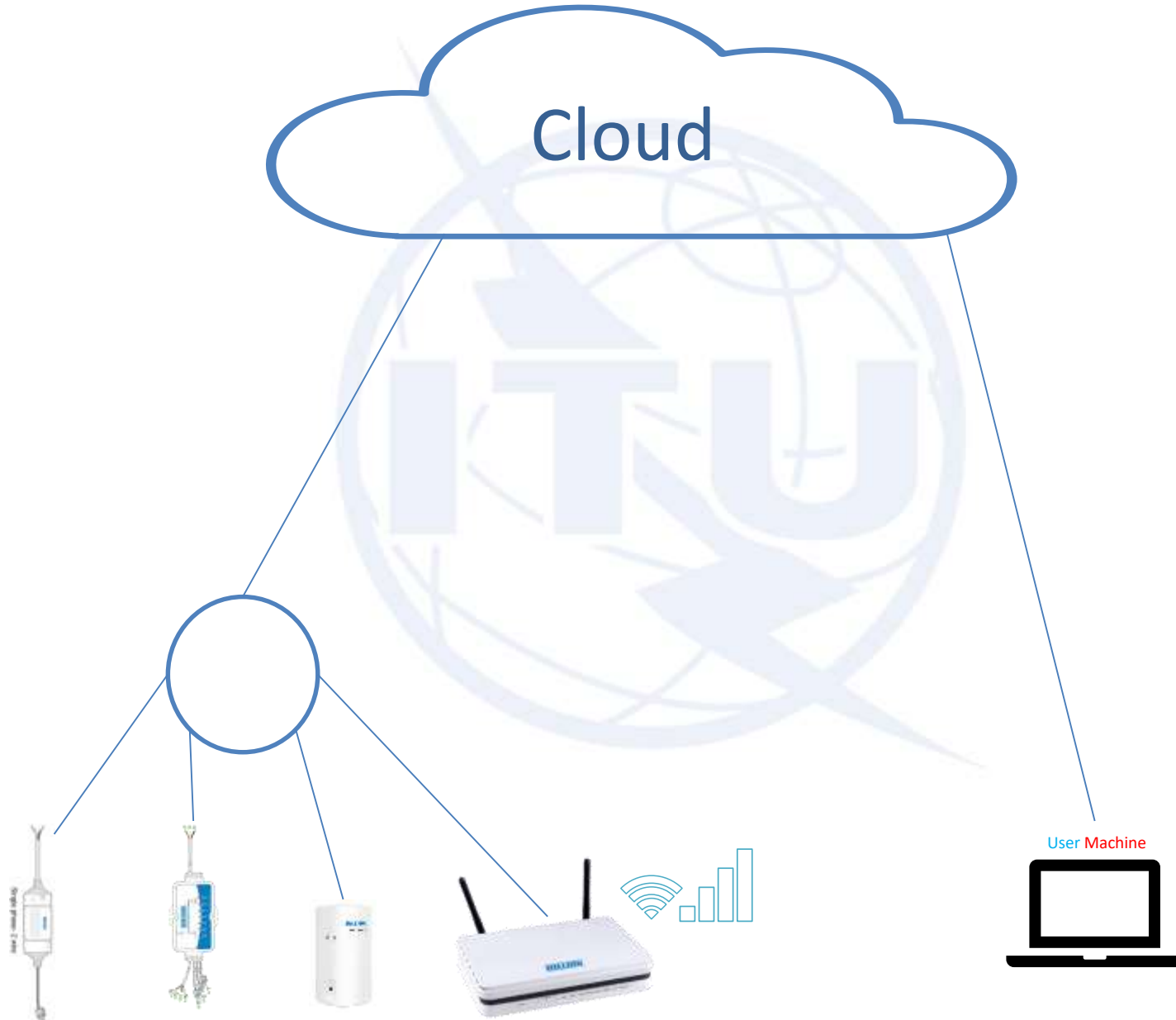


Face Recognition



Contactless Card

# Example of Simple Smart Power Monitoring Solution



**Again .. the presentation is about**

**IoT as the next milestone for  
Innovations in the 21st Century**





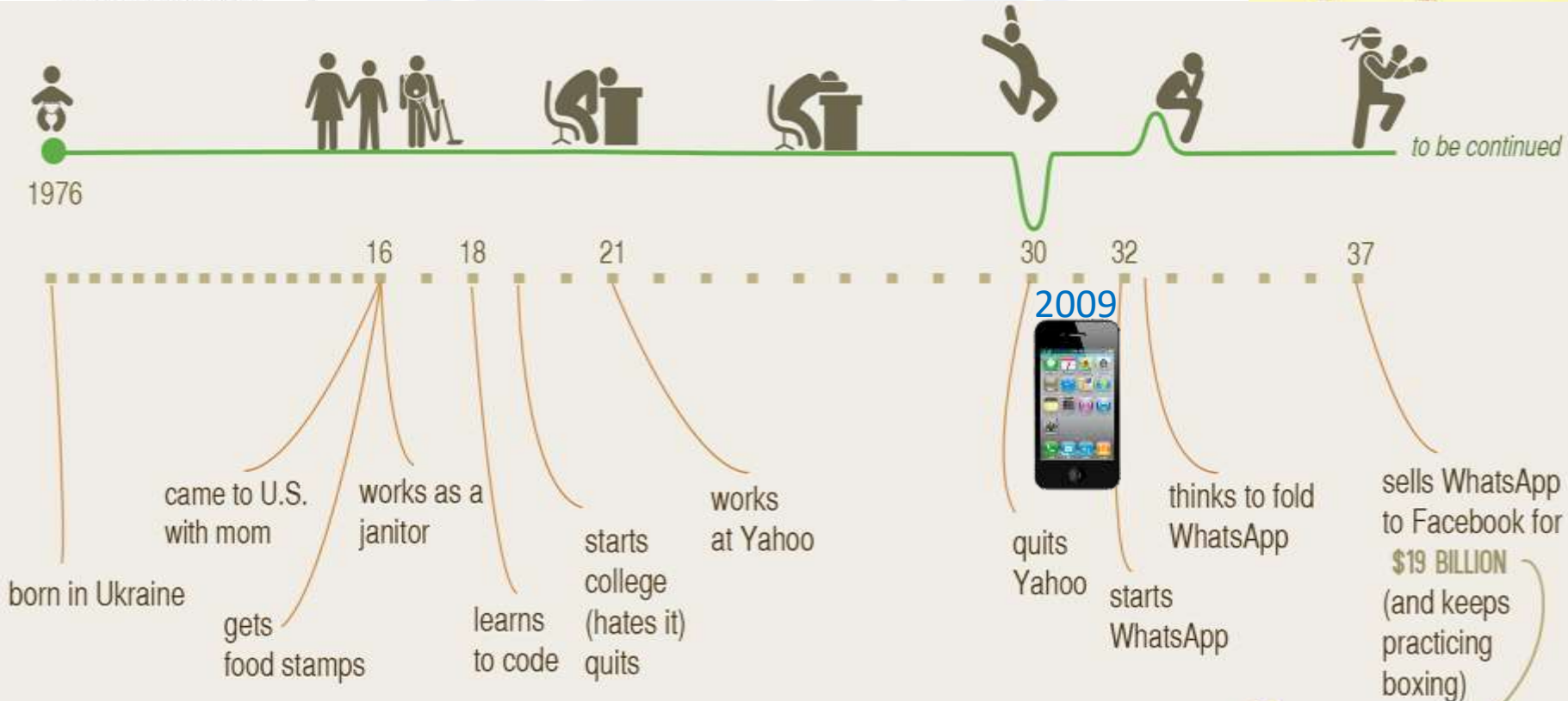
# Story of WhatsApp Founder

Jan Koum



Jan Koum, founder of WhatsApp

- Started in cleaning Job at 16Y.
- Was under **welfare**.
- Went college & **quitted**.
- Worked at **Yahoo**.
- **Quitted work** for one year **travelling** in South America.
- Saw **opportunities** in Apple Store start in 2009.
- In One year he started **WhatsApp**.



# IoT Story or Roots.....

## The story of IoT in 2009 ....

As of 2016, the vision of the Internet of things has evolved due to a convergence of multiple technologies, including ubiquitous wireless communication, real-time analytics, machine learning, commodity sensors, and embedded systems. This means that the traditional fields of embedded systems, wireless sensor networks, control systems, automation (including home and building automation), and others all contribute to enabling the Internet of things. The concept of a network of smart devices was discussed as early as 1982, with a modified Coke machine at Carnegie Mellon University becoming the first Internet-connected appliance, able to report its inventory and whether newly loaded drinks were cold. Mark Weiser's seminal 1991 paper on ubiquitous computing, "The Computer of the 21st Century", as well as academic venues such as UbiComp and PerCom produced the contemporary vision of IoT. In 1994 Reza Raji described the concept in IEEE Spectrum as "[moving] small packets of data to a large set of nodes, so as to integrate and automate everything from home appliances to entire factories". Between 1993 and 1996 several companies proposed solutions like Microsoft's at Work or Novell's NEST. However, only in 1999 did the field start gathering momentum. Bill Joy envisioned Device to Device (D2D) communication as part of his "Six Webs" framework, presented at the World Economic Forum at Davos in 1999.





# Kevin Ashton

The concept of the Internet of things became popular in 1999, through the Auto-ID Center at MIT and related market-analysis publications.

If all objects and people in daily life were equipped with identifiers, computers could manage and store them.



Radio-frequency identification (RFID) was seen by Kevin Ashton (one of the founders of the original Auto-ID Center) as a prerequisite for the Internet of things at that point.

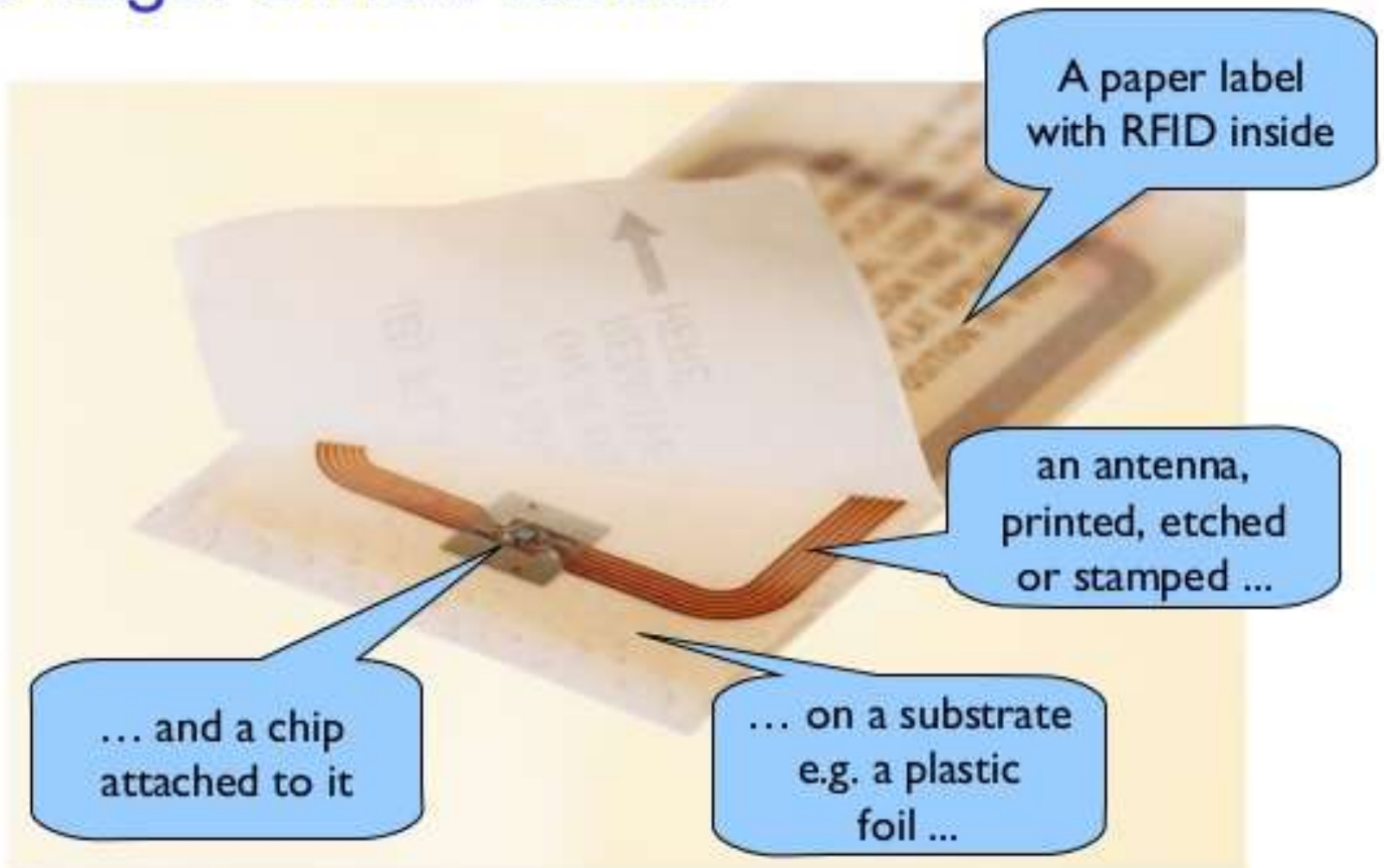
Besides using RFID, the tagging of things may be achieved through such technologies as near field communication, barcodes, QR codes and digital watermarking.



# Access Card Technologies

13.56 MHz

## RFID tags: Smart labels



# Possible Sensors in Mobiles



Source: Internet

**14 sensors!**

# Sensor devices are becoming widely available

- Programmable devices
- Off-the-shelf gadgets/tools



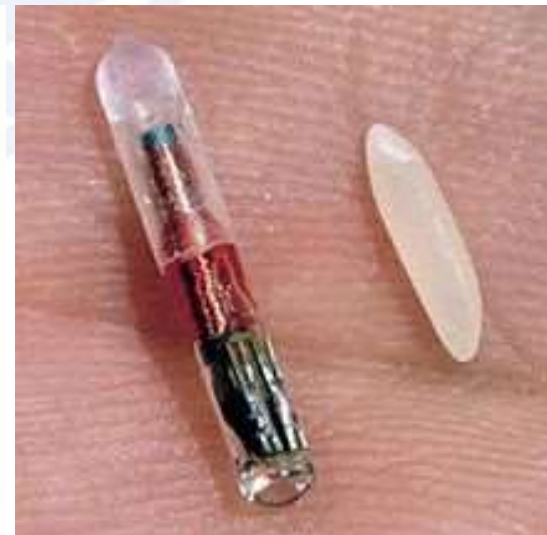
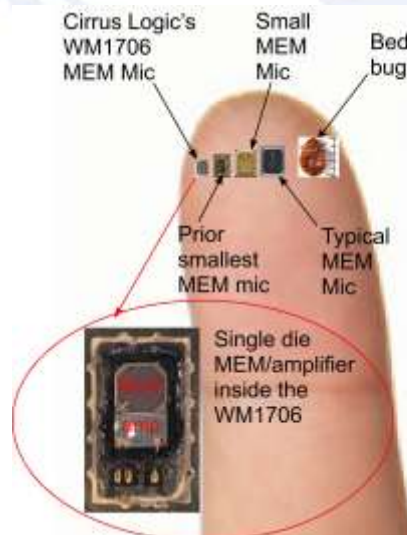
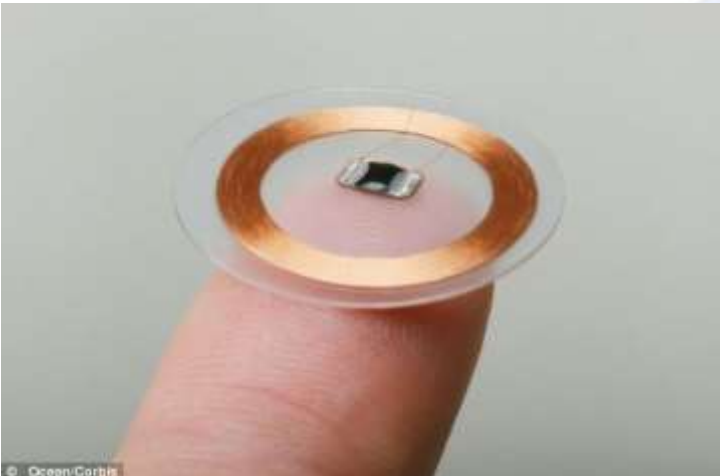
**Linker Intel Group**



**Image Sensor Device**



# Sensors Smaller & Smaller





**Why IoT is an  
Opportunity for future  
millionaire &  
billionaires?**

# Technology Breakthrough TimeLine

Wheel



Electricity



Tube  
Transistor  
IC



Internet



RFID



GPS



Mobile  
Phone



3G & 4G



# RFID & IoT Evolution TimeLine




A collection of logos and icons. On the left are the logos for 'YAHOO!' and 'Google'. Next is an image of a hand using an RFID card on a turnstile. To the right is a black mobile phone. Further right is a map with red location pins and a 'UBER' logo. Below these are several social media and utility icons: Instagram, Facebook, Twitter, G+, Snapchat, Android, Spotify, SoundCloud, YouTube, WhatsApp, LinkedIn, S, W, P, t, v, and Dribbble.

Be the next  
Millionaire &  
Billionaire







**What IoT means for  
different ones**

# What IoT means for each ...

## Individuals

More Luxurious life

TV Remote Control



Smart Frig



## Governments

Efficient Running to  
Country Resources.

Efficient Services to  
Citizens.

Efficient Safety,  
Security, Environment  
etc.

## Society

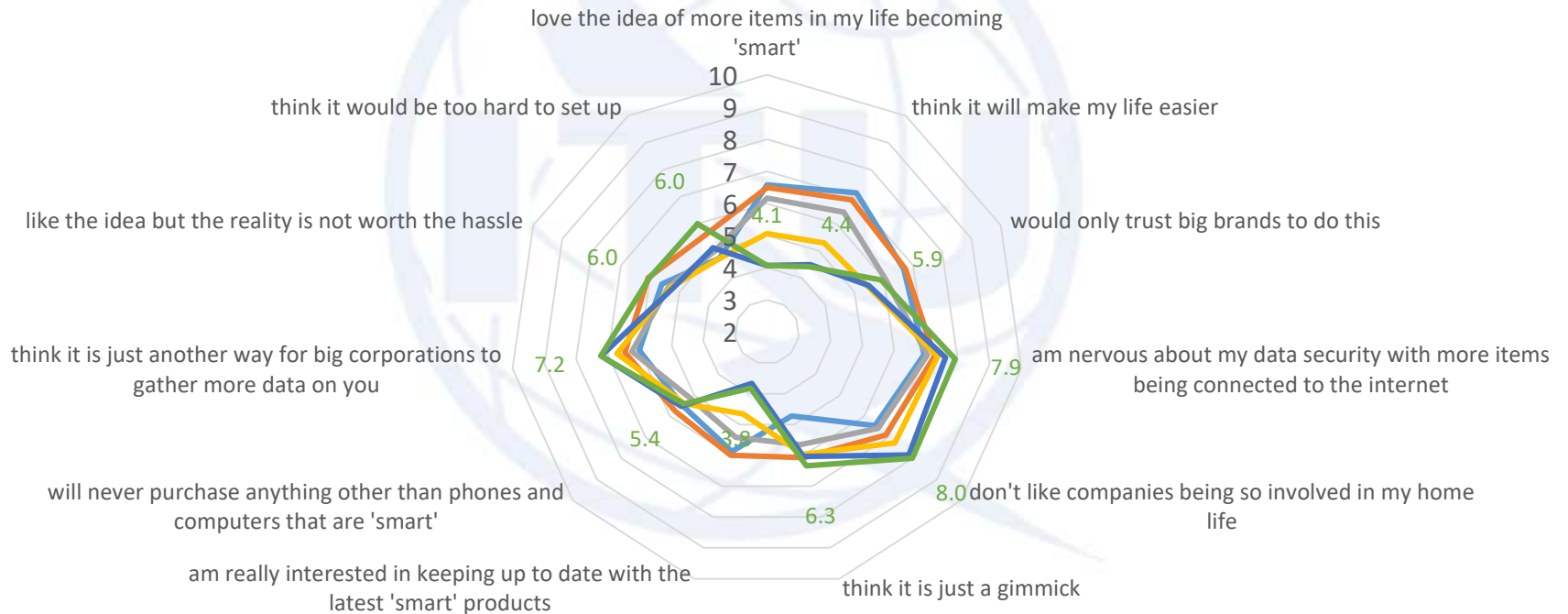
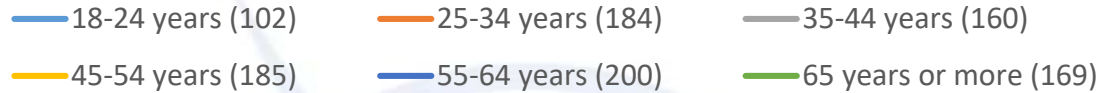
Convenient Living in  
City.

## Companies

Running Business  
more efficient.

New opportunity for  
business growth &  
diversification.

# So, where could it really work?



N = 1000

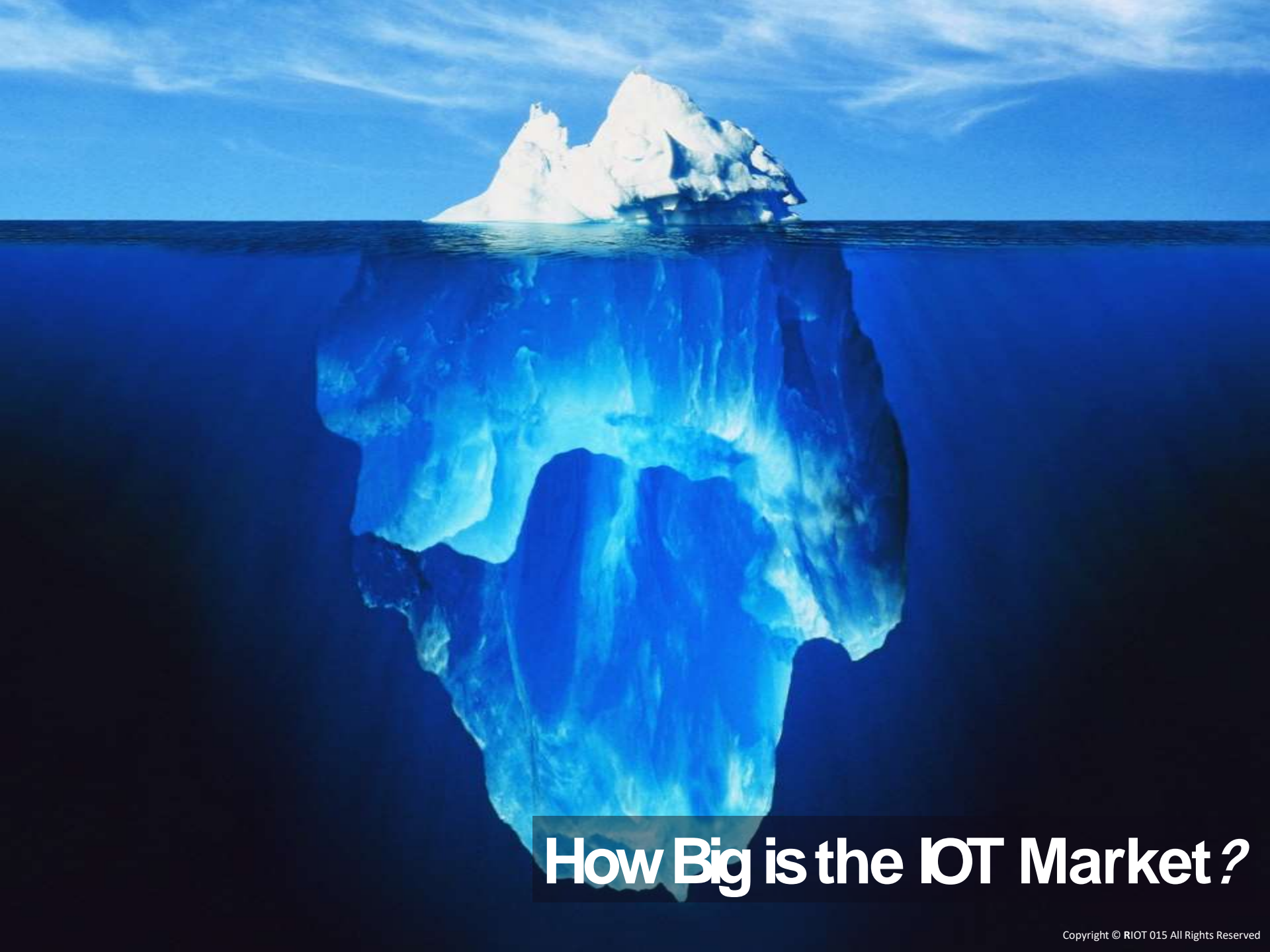


# The future of Telecom companies

Unless they provide the market with what their “use cases” need

Just Another Utility Provider





**How Big is the IOT Market?**

Thank you

