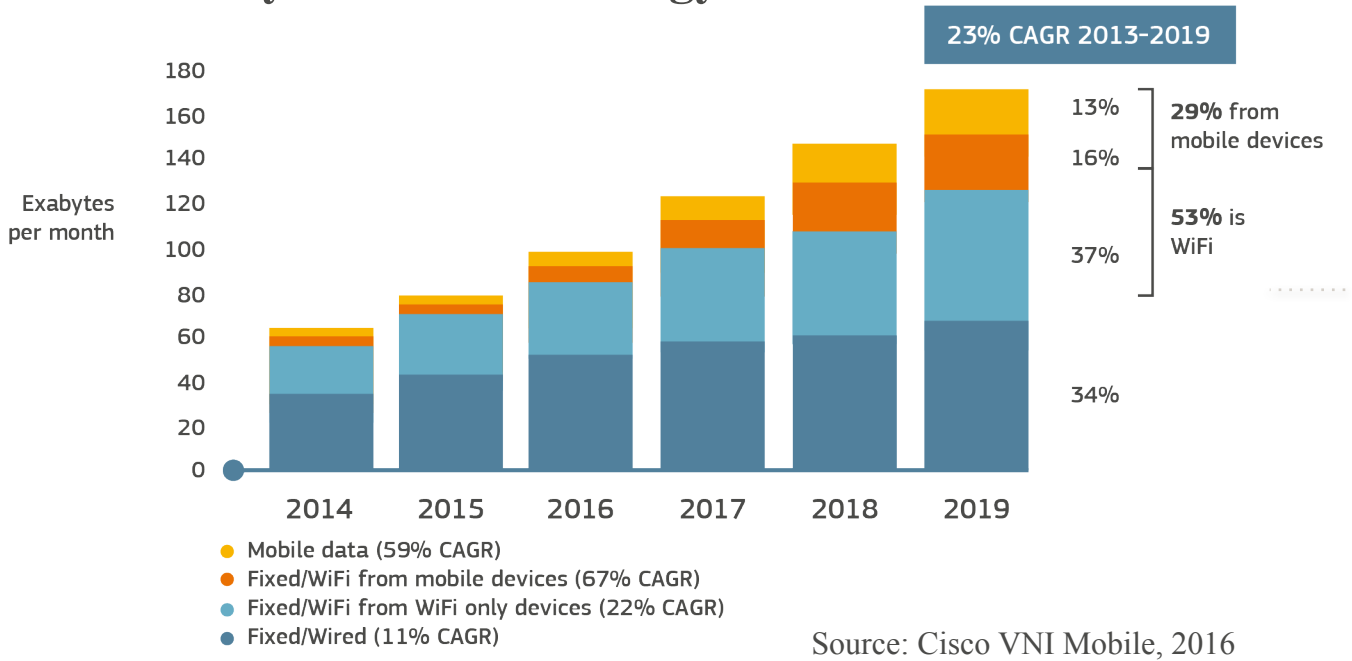
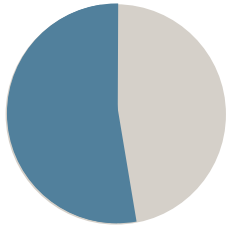
fon
Solutions
Building the Carrier WiFi networks of the future:
Connectivity, Coverage & Cloud
Enrique Farfán,
COO

Consumers demand unlimited data: WiFi to carry most of this traffic

IP Traffic by Access Technology



Source: Cisco VNI Mobile, 2016

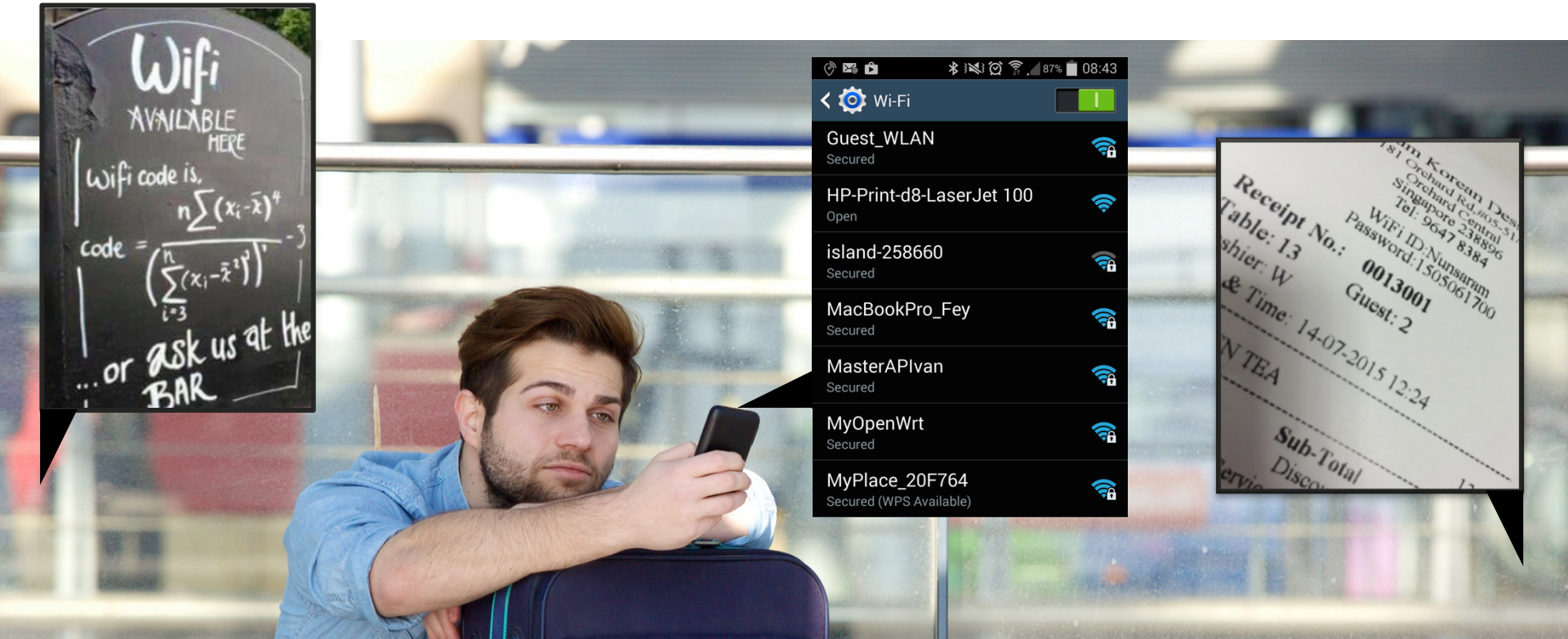


53%
of traffic will be WiFi

16%
From Mobile

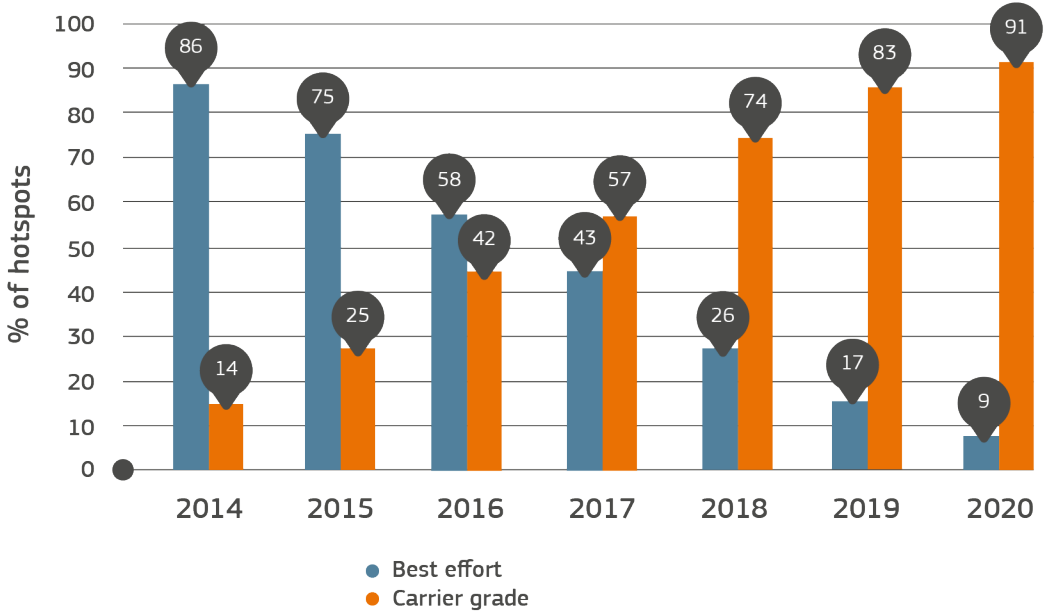
37%
From Fixed

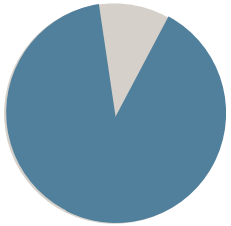
But the connection experience is still far from great…



By 2020, Carrier-grade WiFi will be everywhere

Carrier-grade hotspots will outnumber “best effort” access points





92%

of operators will have a next-generation hotspot network by 2018

Source: Wireless Broadband Alliance’s annual report by Maravedis Rethink

New technologies will enable high speed access and better Quality of Experience

Hotspot 2.0

> 6 M

Hotspots supporting Hotspot 2.0 will be deployed worldwide by 2020 (source ABI research)

802.11ac

80%

Hotspots shipped in 2020 will be 802.11ac Wave2 (Source Strategy Analytics)

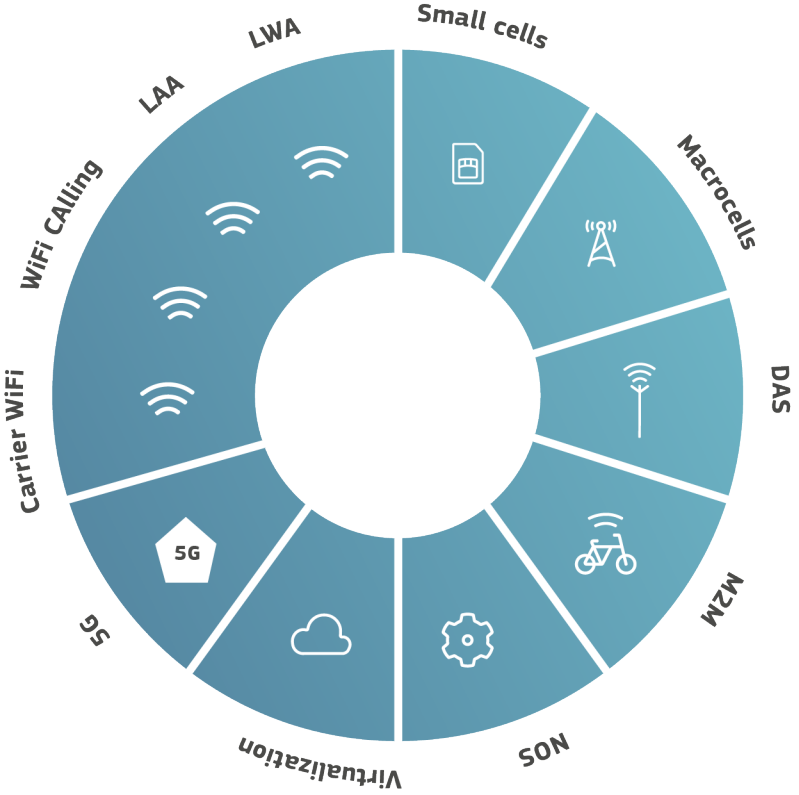
HetNets will bring new challenges and opportunities

> 13 Billion

Investment in small cell, carrier Wi-Fi, C-RAN and DAS by the end of 2016.

15 %

CAGR from 2016 to 2020



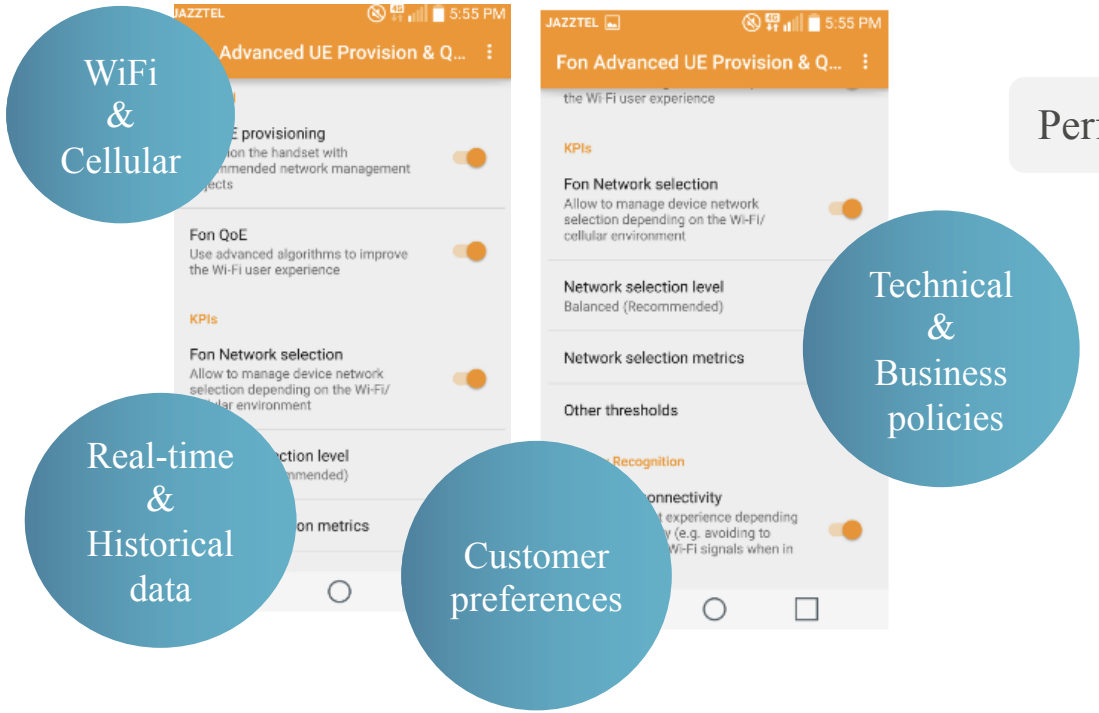
(Source: Radiant insights)

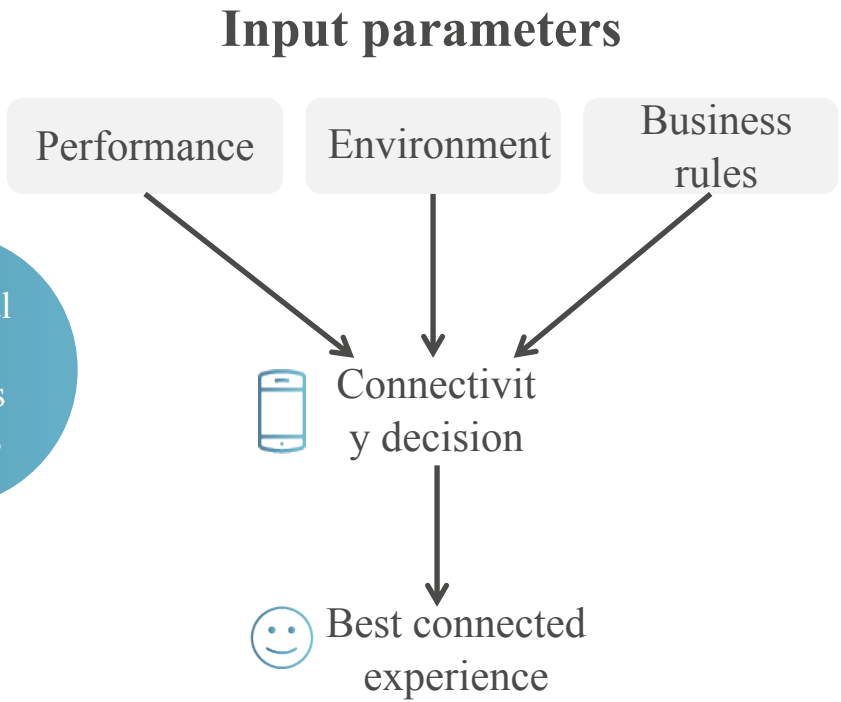
LIVE VOTING QUESTION #1

Who should control the connectivity experience?

(a)Network (Service Provider)
(b)Mobile APP
(c)Mobile OS (iOS, Android…)
(d)Let the user decide

Enhanced connectivity solutions will leverage mobile apps





Use informed decision-making for best connected experience

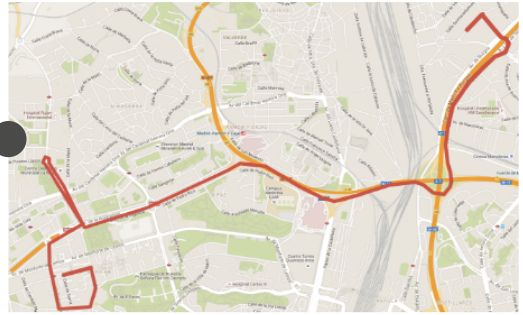
Criteria:

Mobility

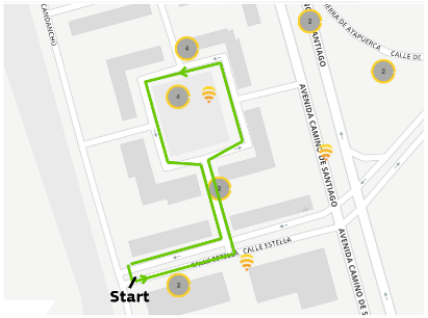
Density

Avoid useless connections

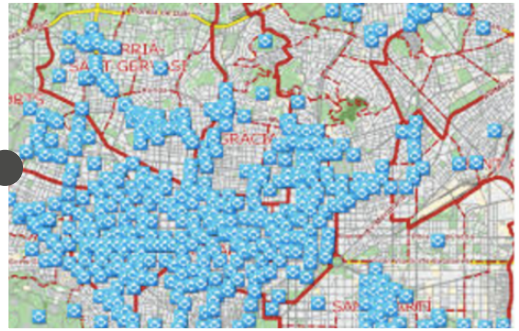
Transport (Fast)



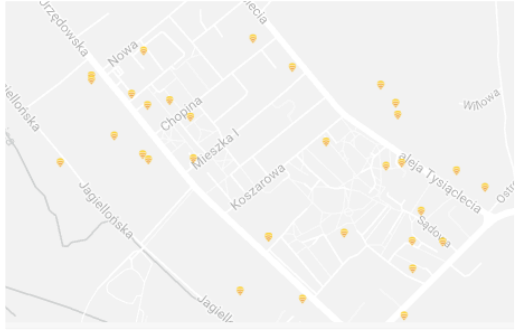
Walking (Slow)



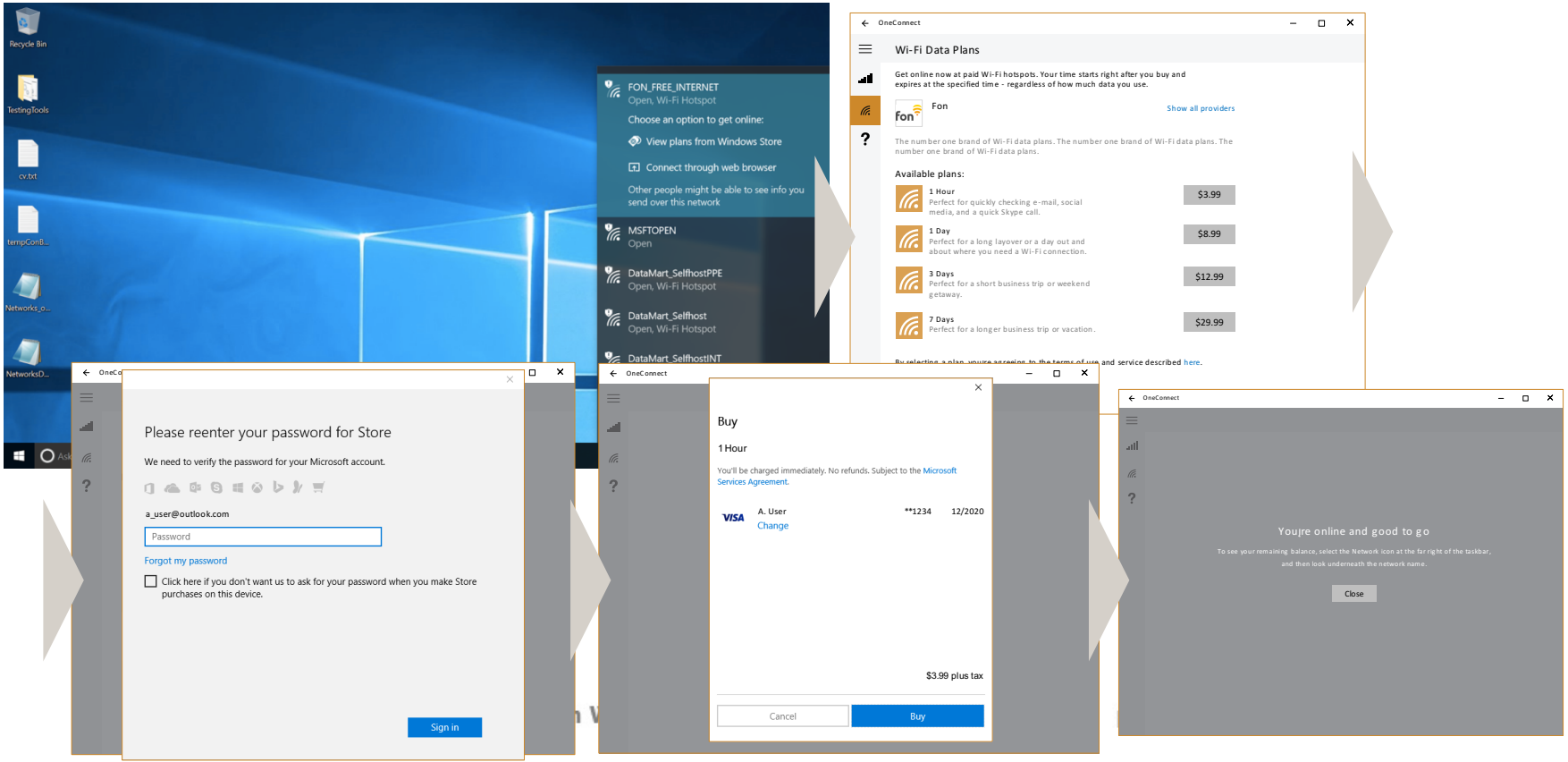
High Coverage



Low Coverage

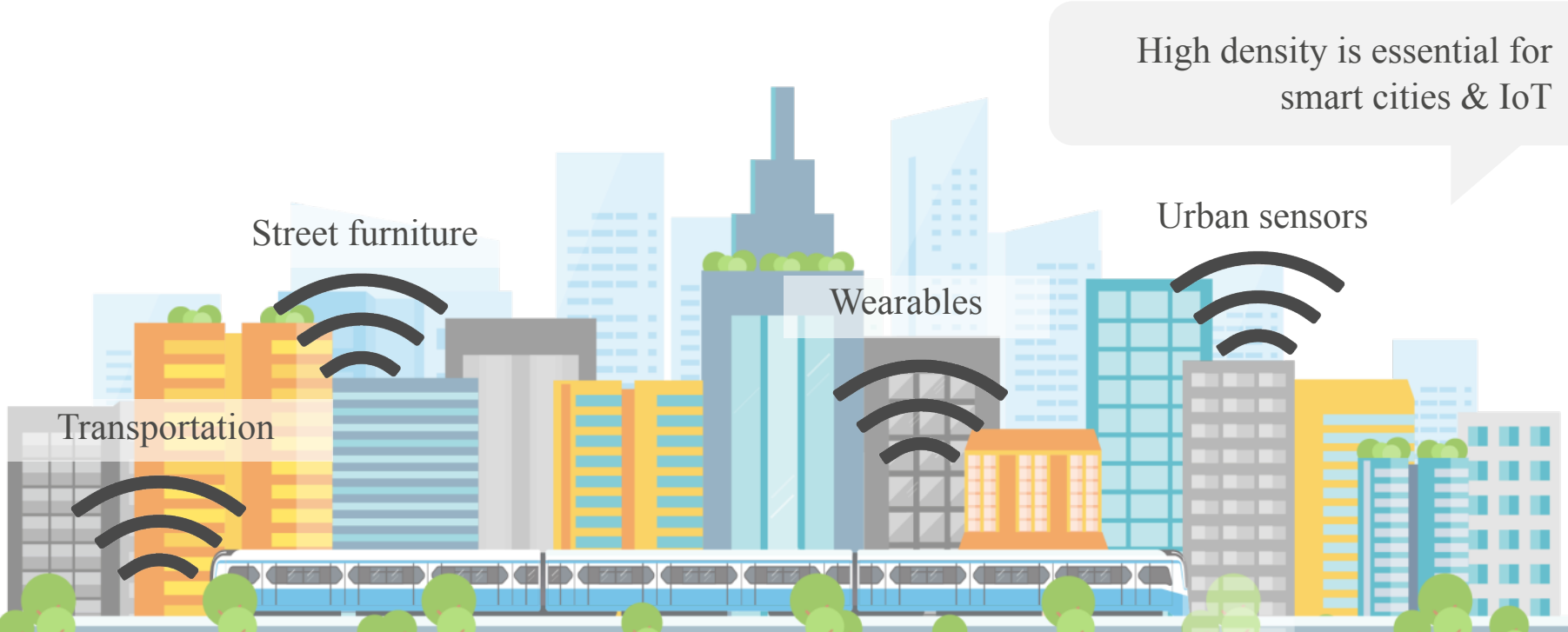


When you need interaction, make it simple



Coverage: Dense networks needed for future applications

People and things will need data everywhere, on the move, particularly in urban areas



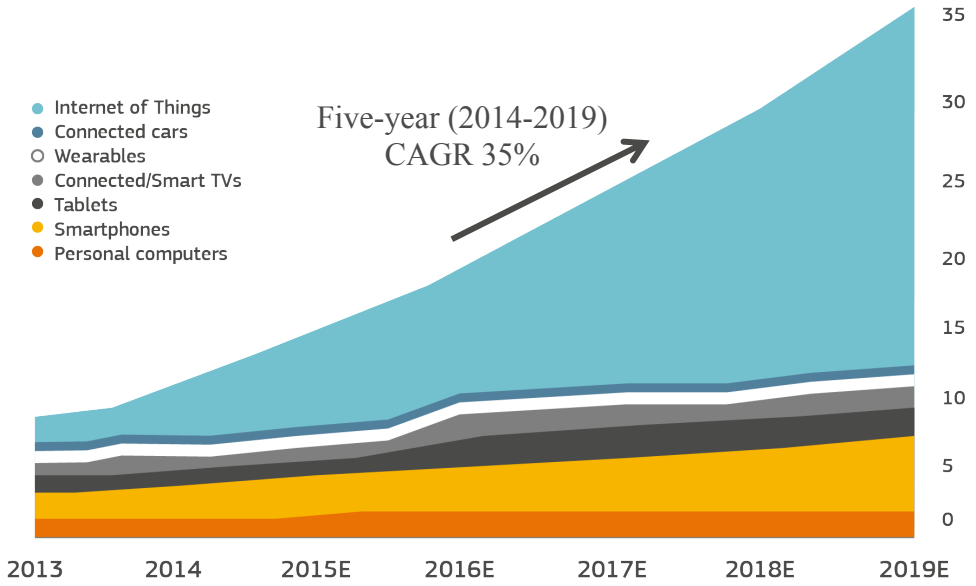
LIVE VOTING QUESTION #2

What network will IoT use the most?

(a)Home WiFi
(b)Carrier WiFi
(c)Mobile (SIM)
(d)Other networks

Connected “things” will outnumber connected people

Diversification of connected devices market



Source: BI Intelligence

The vast majority (80%+) of IoT connections will occur on unlicensed wireless frequencies

WiFi to be the enabler of the IoT, like copper was to the landline and 3G-4G to the mobile Internet
Goldman Sachs Research

“WiFi will emerge as essential to the IoT”
Wi-Fi Alliance

Service providers will pursue aggressive deployments

Residential

377 million

Households with ISP-supplied 802.11ac supporting an open second SSID by 2019

Public

11 million

Public Wi-Fi access points by 2019

WBA full industry report 2015

Third-party initiatives offer alternatives to traditional service providers

LinkNYC

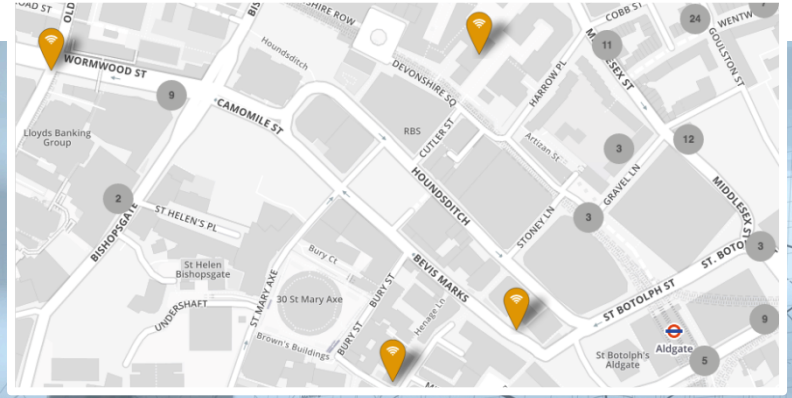
European Union Initiative

Google Station

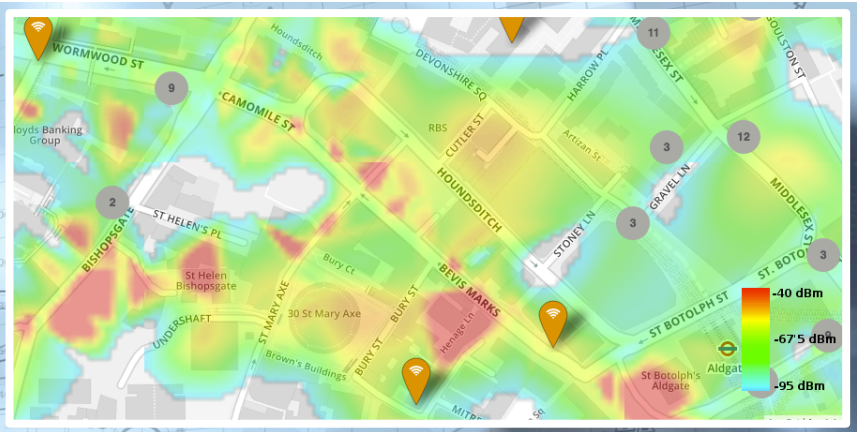
A new internet access platform

How will we measure coverage?

of hotspots not the best indicator



Understand network quality instead



Contextual data and QoE metrics help understand coverage and gaps

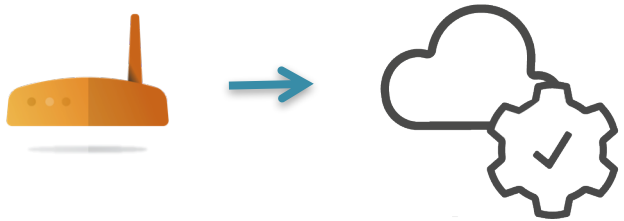
Massive amounts of information can be fed into SP's systems for continuous improvement strategies

The role of cloud in Carrier WiFi

Cloud managed WiFi was born out of the need to:

- Reduce TCO
- Provide centralized management plane
- Gain flexibility & reduce upgrade cycles

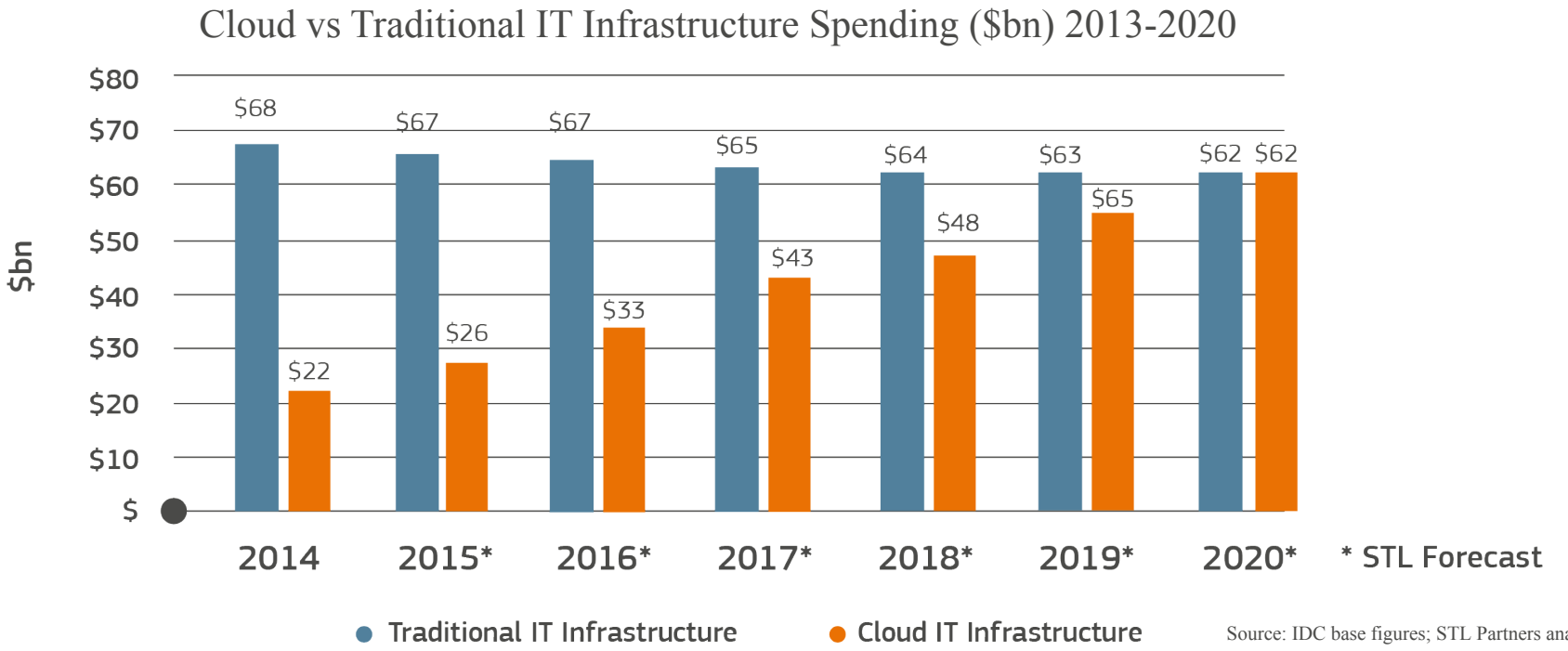
Move intelligence from the access point to the cloud:



The cloud is being increasingly relied on as a vehicle for agile, scalable and elastic solutions - Gartner

Investment shifts from on-premises to cloud

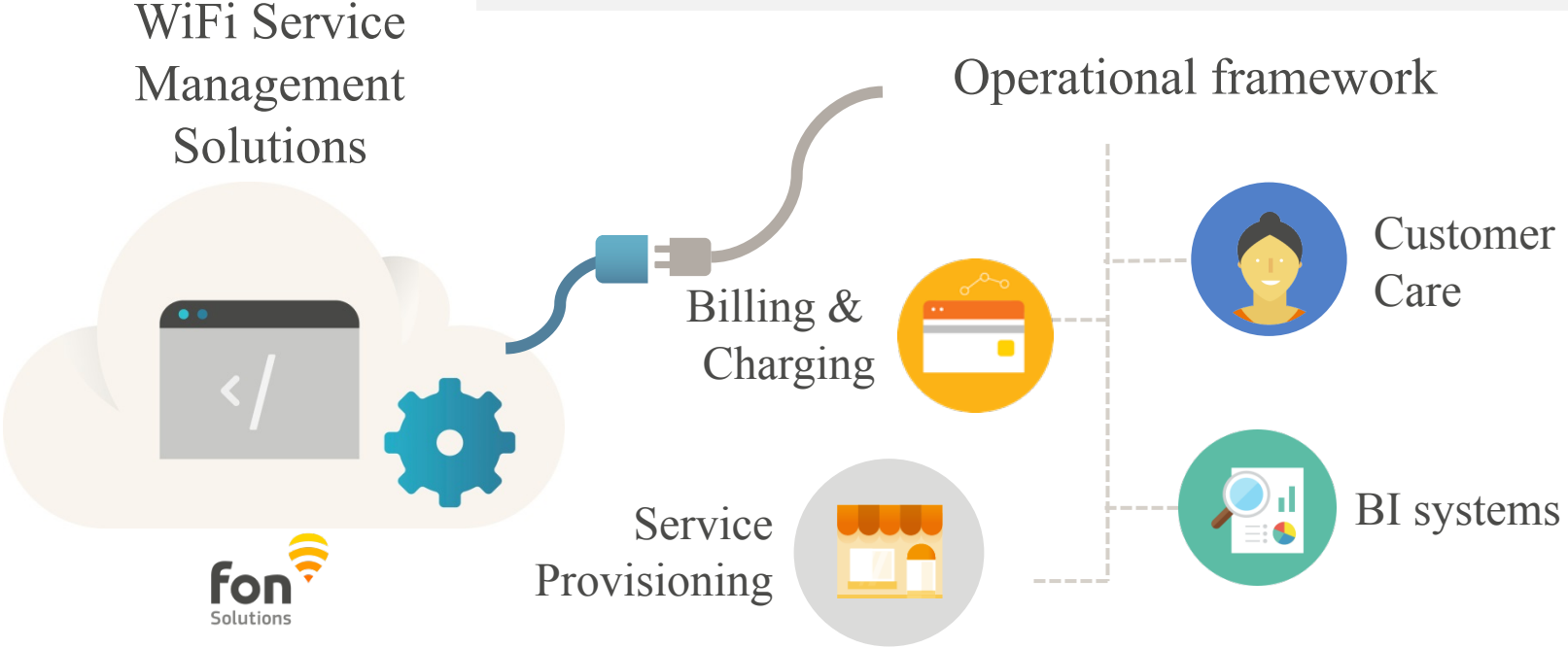
By 2018 CSP digital platforms investment will be **10% to 30%** of total CapEx



Source: IDC base figures; STL Partners analysis

Cloud solutions integrate into CSP's operational framework

*"**Hybrid** will be the most common usage of the cloud - but this requires the public cloud to be part of the overall strategy"*
(Gartner)



Cloud as revenue generator: CSPs adopt a “marketplace” approach to SaaS

$ 31 billion

In revenue generated by Cloud applications and services in 2015

20 %

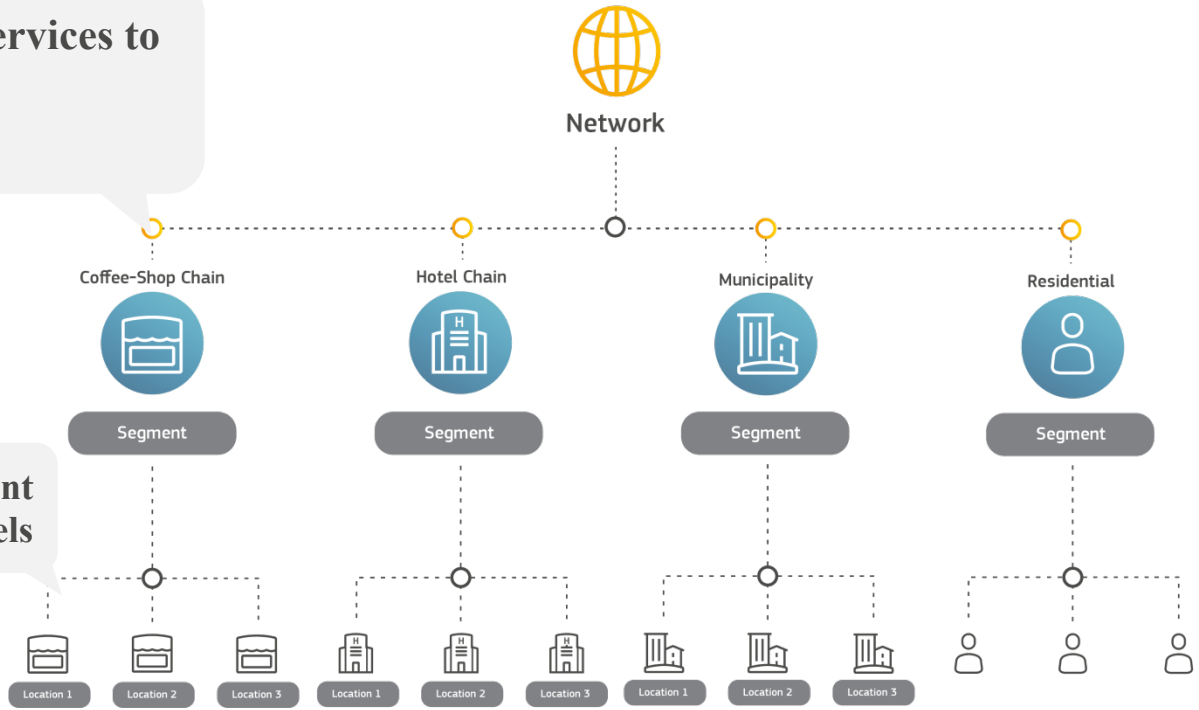
Estimated growth in 2016

Source: Gartner

How about Wi-Fi as a Service?

Deliver WiFi services to verticals with one platform

Tailor to different business models



Bringing it all together: WiFi Service Management Platforms

fon
Solutions
The **solutions** you need
to provide the **WiFi services**
your **customers** want