



**Hospitality  
Wireless  
Broadband  
+  
Field  
Experience**



**Cambium Networks**

# Wi-Fi continues to be #1!

Free WiFi is the #1 hotel amenity

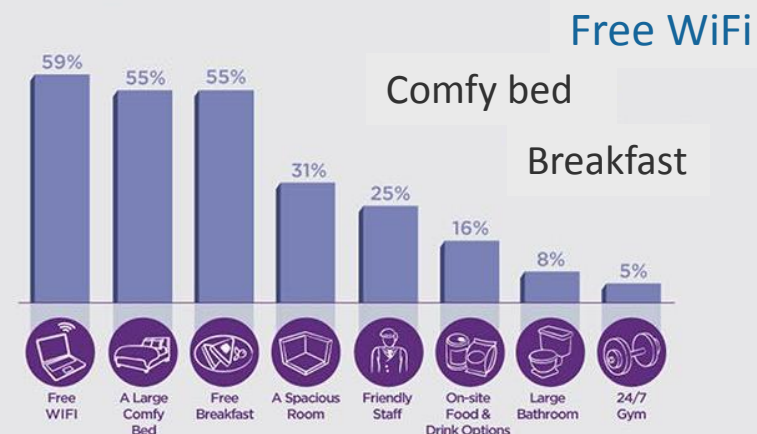
Hotels.com Survey  
JD Power Study

Wi-Fi beats proximity to Destination, Free Food and Loyalty program enrollment

Wi-Fi #1 need in camp grounds

The Wi-Fi alliance

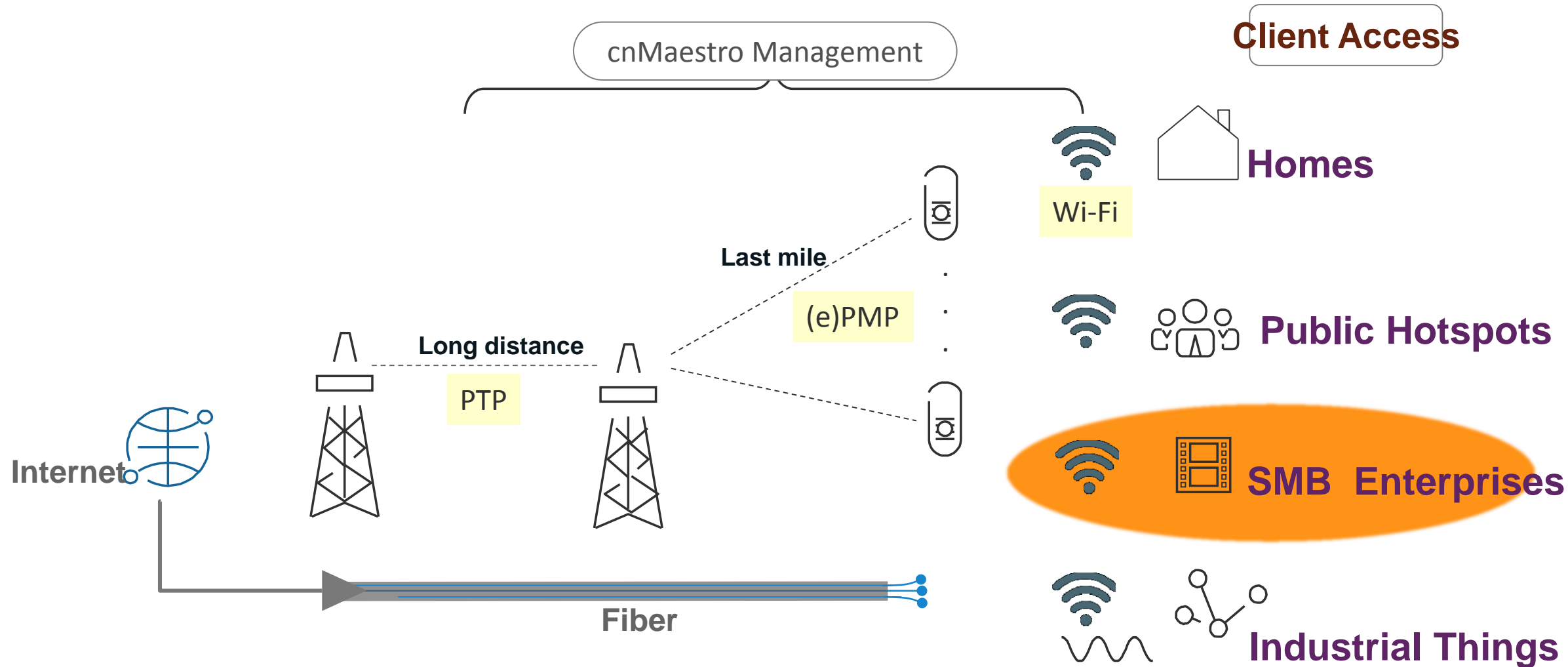
## MOST IMPORTANT HOTEL AMENITIES



**Free W-Fi (#1) is beats bed (#2)**

- Hyatt Survey

# Cambium Wireless Fabric: from 2m to 245 Km



# The cnPilot Journey continues

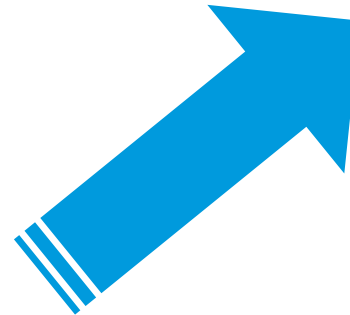
## cnPilot 1.0

- **Creating Disruptive value**

*Affordable 802.11ac wave 1*

- **Easy Operation**

*Free, Secure and Scalable Cloud*



**2016**

## cnPilot 2.0

- **Performance/Quality at Disruptive Value**

More premium products

802.11ac wave 2

- **Adaptive and Easy to operate**

Rich controller: autoPilot- Controller AP

Richer Graphical Reports

- **Managed Service Provider Friendly**

RESTful API for analytics and mgmt.

MSP View with multi-tenancy

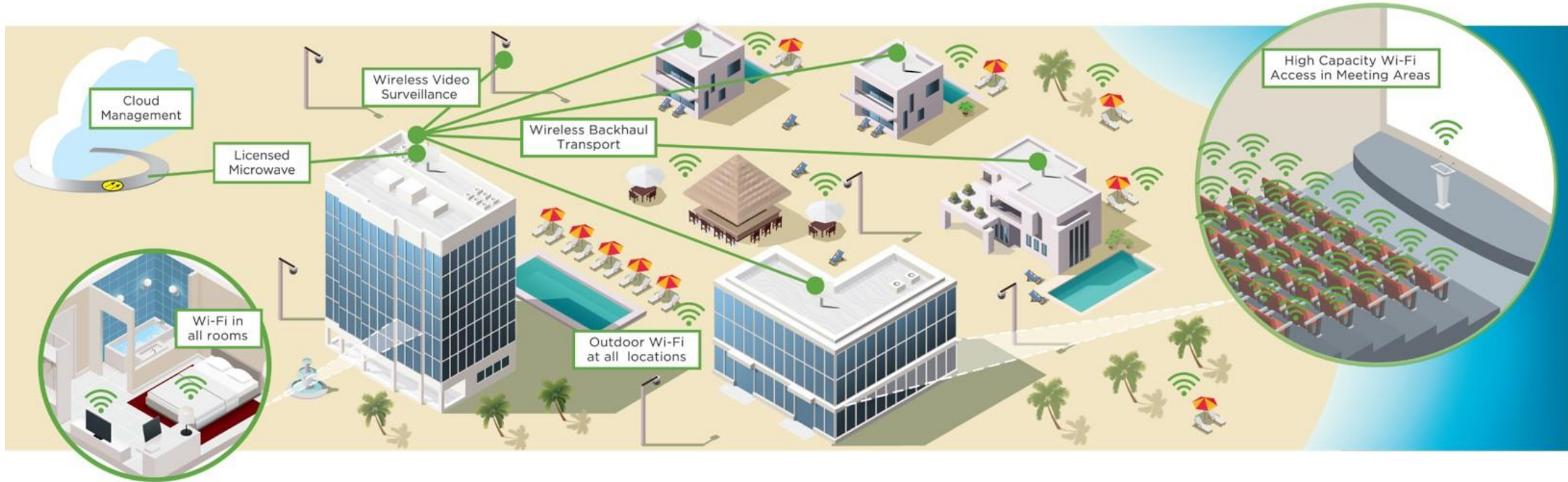
**2017**

# The cnPilot 2.0 Wi-Fi Family





# Wireless Connectivity Applications



- Wi-Fi in guest rooms
- Wi-Fi in meeting areas
- Outdoor Wi-Fi at all locations
- Wireless backhaul transport
- Wireless video surveillance
- Commerce: Point of Sale

# Case Study: Heritage Hotels Resort, Kenya



- Over 300 rooms at the resort.
- Coverage provided by 147 cnPilot E400 APs.
- Wireless Distribution with ePMP 1000 APs and SMs.
- Internet connectivity to resort through Cambium PTP
- End to end Cambium Wireless, managed through cnMaestro single pane of glass



# Case Study: Holiday Inn Baruna, Bali

- **100+ cnPilot E400 for indoor access**
- **cnPilot E500 for outdoor**
- **100 subs attached per AP**
- **WiFi for guest access as well as hotel operations (separate SSIDs)**





# Infogamer, Croatia: High capacity Wi-Fi for Gaming event



- 6 Halls. 15,000 m<sup>2</sup>. 70,000 visitors.
- Connecting convention center, gaming areas, Common areas
- cnPilot E400, E500

“... **huge ... simultaneous users**

connections connected wirelessly ...

Cambium delivered spot on in every single

aspect – ***reliability, capacity and easy management***”

- Damir Durovic, the event CEO,



# Hospitality in the hills – Mount Everest base camp



- 100 ~ 200 Mbps to remote communities,
- Altitude of over 18,000 feet (more than 5,000 meters)
- connecting more than 16,000 climbers!
- Over 200 hotspots - more than 40 villages
- 34,000 locals + 40,000 tourists annually
- Guest access features
- Distance learning to the locals  
+  
Transporting the sights and sounds of Nepal to the rest of the world!

# cnPilot Differentiation

## Frictionless Operations

ezTouch  
ezDetect  
ezCheck-In

## Adaptive Architecture

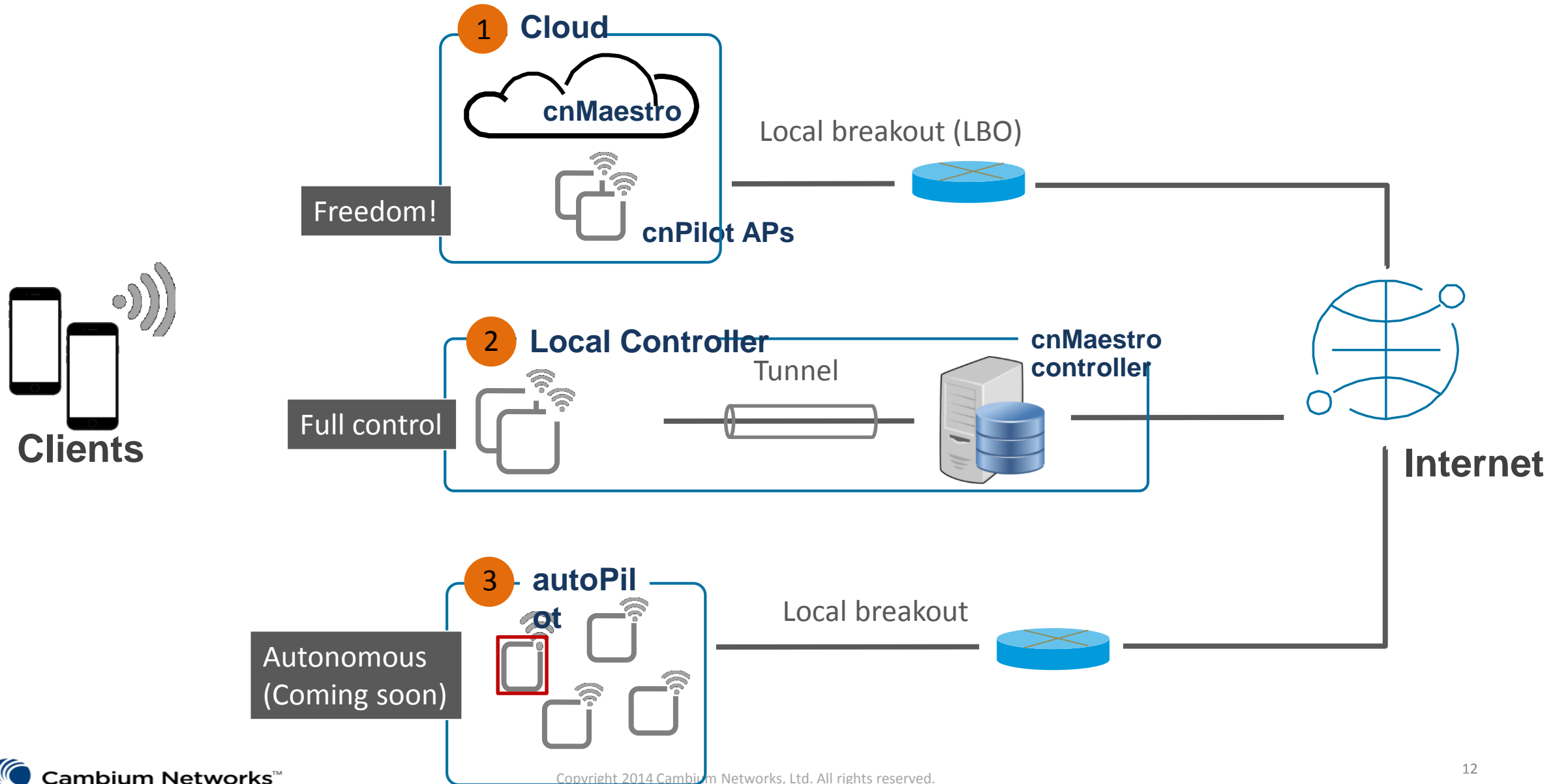
Indoor & Outdoor  
autoPilot  
autoTune

## Affordable Quality

Price for Performance



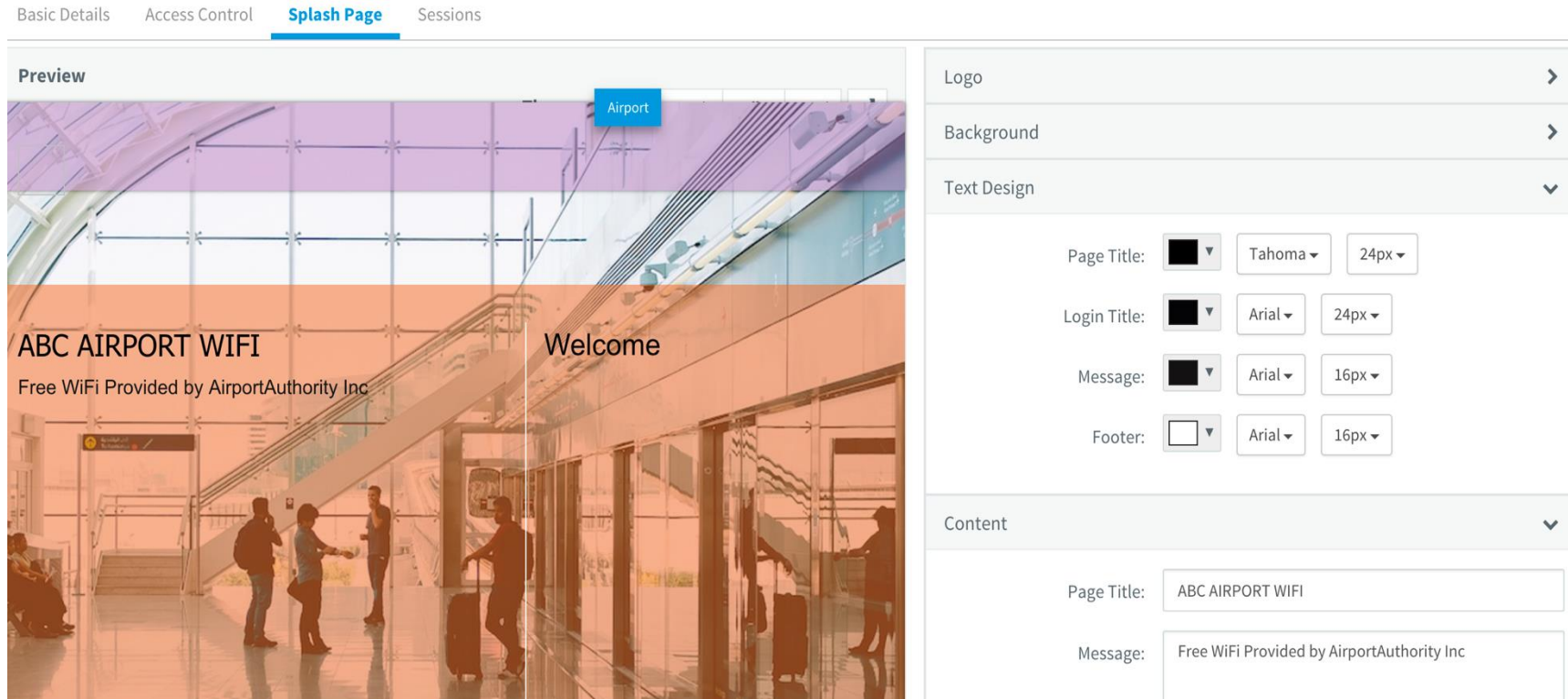
# Adaptive Architecture – 3 Flexible ways to deploy



# cnMaestro captive portal

Basic Details   Access Control   **Splash Page**   Sessions

Preview



Logo >

Background >

Text Design ▾

Page Title:  Tahoma 24px ▾

Login Title:  Arial 24px ▾

Message:  Arial 16px ▾

Footer:  Arial 16px ▾

Content ▾

Page Title: ABC AIRPORT WIFI

Message: Free WiFi Provided by AirportAuthority Inc

- ✓ Fully customizable : images, text, colors, fonts.
- ✓ Four built-in templates to get you started
- ✓ Preview changes as you make them

# Time and Data control over User Sessions

## Client Session

**Set user session time**

**Eg: 1 Hour free every 24 hours**

Session Duration::

Min(s) ▼

Renewal Frequency::

Min(s) ▼

## Client Rate Limit

**Set traffic rate limits**

**Eg: 2Mbps Down, 1Mbps Up**

Downlink::

Kbps

Uplink::


Kbps




# Leverage Social platforms

— Social Login —

Domain URL:  ⓘ

 Login with Facebook


 Sign in with Google+

☒ Google  
Id:

☒ Facebook  
Id:   
Secret:

- **Support login with Google or Facebook IDs**
- **Use client demographic information to customize experience**
- **Data export for offline analytics**

# Monetize with Access Vouchers

 Cambium Networks™

cnMaestro™

89

1229

0

1

admin@tata.com

Home

Monitor

Configure

Operate

Manage

cnMaestro Services

cnMaestro Services: Guest Access Portal

CoffeeShop

Title  
CoffeeShop at International Airport, Mumbai

Famous Restaurant

Title  
Outlet at Alpha One Mall, Bangalore

Hotel

Title  
Hotel at Los Angeles International Airport, Los Angeles

+

Add upto 3 guest portals

Basic Details

Splash Page

Access Portal

Sessions

Free

Yes

No

Vouchers

Yes

No

Plans

Add New Plan

Gold

Silver

Bronze

Default

Internet Access Card

Enjoy the complimentary internet services for 1 hr

Here is your access code

ASWE453DF

Total Generated

100

Claimed

60

Export

Add Vouchers

Delete Expired

Delete Selected

Voucher ID

Search

Voucher ID	Status	Claimed Time	Claimed By	Delete
C1:C0:01:00:00:66	CNSNGSSID2	Click-Through	April 02 2016 02:00 PM	✕
C1:C1:01:10:00:29	CNSNGSSID2	Voucher ID: DERT4534	April 05 2016 11:00 PM	✕
C1:C0:11:10:10:61	CNSNGSSID5	301 Dove Ave	April 07 2016 03:00 PM	✕
C1:B0:01:00:01:33	CNSNGSSID8	301 Dove Ave	April 12 2016 05:00 PM	✕
C1:C0:11:00:00:56	CNSNGSSID8	301 Dove Ave	April 20 2016 12:00 PM	✕

Previous

1

Next

10


# Create, export, distribute customized vouchers


Design


Title: Internet Access Voucher


Message: 1 Hour Complimentary Access

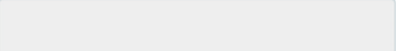
Access Code Message: Access

Title Color: 

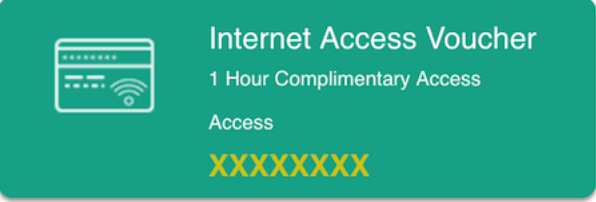
Message Color: 

Code Color: 

Background Color: 

Background Image:  [Browse](#)

Preview



Export ▾ Add Vouchers Delete

- Export current page as PDF
- Export Valid as PDF
- Export all as PDF
- Export current page as CSV
- Export Valid as CSV
- Export all as CSV

**Voucher App (for iOS and Android) planned for the future**



# Standalone AP Captive Portal

- AP has built-in captive portal
  - Click-through access
  - RADIUS authentication
  - Built-in username/password authentication
  - Not dependent on link to controller
  - Customizable images and text
- Controller-less roaming

## Passpoint (Hotspot 2.0)

- Supported on cnPilot Access Points
- Driven by larger carriers
- Mobile-phone-like roaming to WiFi networks
  - Seamless connectivity everywhere
  - Secure connections (802.1x/EAP with AES)
- Supported only on newer devices
  - Splash page based hotspots not going away

### INTERNATIONAL TRAVEL

The United States receives a larger share of world international tourism receipts than any other country in the world. In 2014, international travelers spent an

International visitors to the US

- \$220.6 Billion Dollars
- 20% of all lodging sales

17.5%, while arrivals from Canada saw a slight decrease of 1.7%.

The top 10 countries in terms of U.S. arrivals for 2014 were:

- |                                 |                              |
|---------------------------------|------------------------------|
| 1. Canada (23.0 million)        | 6. China (2.2 million)       |
| 2. Mexico (17.3 million)        | 7. Germany (2.0 million)     |
| 3. United Kingdom (4.0 million) | 8. France (1.6 million)      |
| 4. Japan (3.6 million)          | 9. South Korea (1.4 million) |
| 5. Brazil (2.3 million)         | 10. Australia (1.3 million)  |

These 10 countries accounted for **78.5% of U.S. visitors.**

# Monetizing Wi-Fi

cnMaestro™

## Services: Guest Access Portal

Starbucks Cafe\_Delicious test Add Portal

Basic Details **Access Control** Splash Page Sessions

Free **Paid** Vouchers

☒ Enable

### Paypal Payment Gateway

☒ Enable

Auto return URL:

PDT Identity Token:

☐ Use Sandbox

Update Button Code

Save

**Note:** Splash page needs to be saved to reflect any changes in Access port

cnMaestro™

## Client Quota Limit

Quota Type:

### Social Login

Guest Portal Hostname:

☐ Google

☐ Facebook

☐ Bypass Captive Portal Detection

### SMS Authentication

☒ Enable

SMS Gateway Provider:

Auth Token:

Account SID:

From:

### Add Whitelist

IP Address / Domain Name:

IP Address / Domain Name	Delete
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## cnPilot APs support various hotspot providers

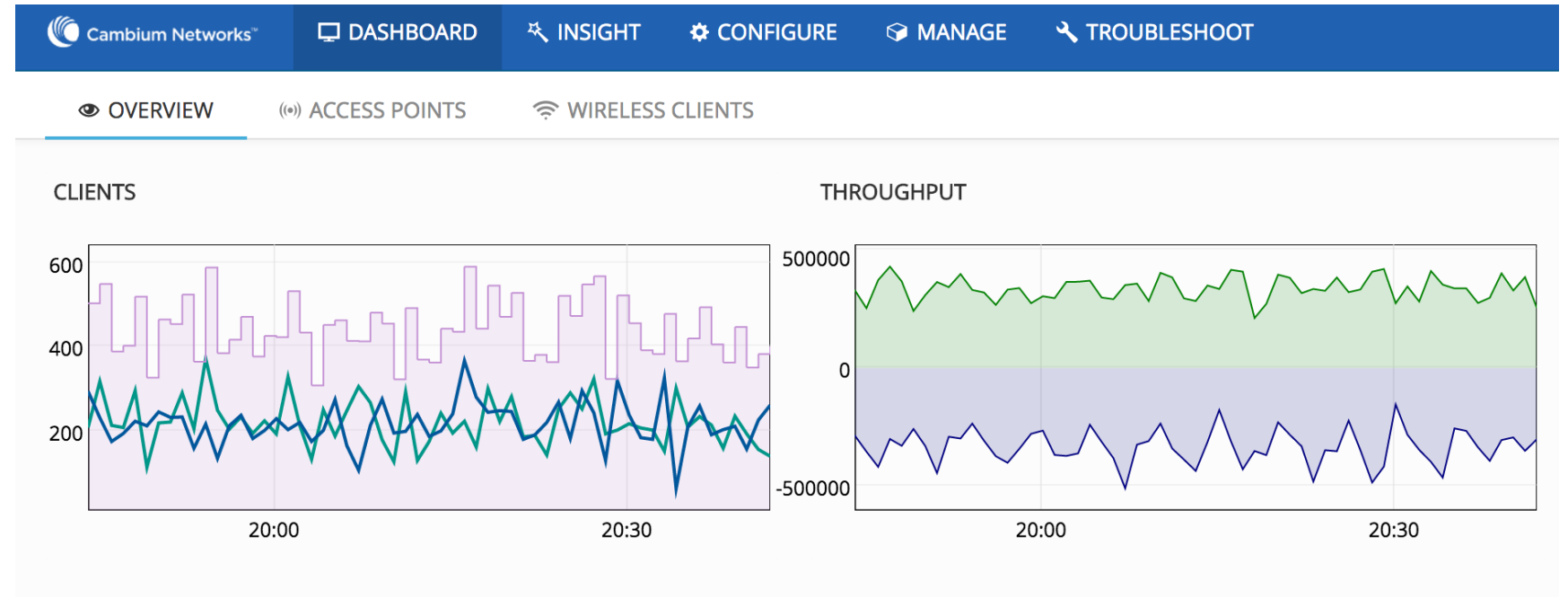


**& many more...**

# autoPilot – Making the Controller optional

Coming Soon

May 2017



- ❑ AP is the controller

- ❑ 32 APs, 1000 Clients

- ❑ Network dashboard views

- ❑ No License Fees

- ❑ Active/Standby modes\*

- ❑ Investment protection

- ❑ Migrate & Fallback  
from Cloud/NOC\*

\*Phase 2: 2H 2017

# Beyond the Product ...

- **For Hospitality VARs and System Integrators**
  - Deal registration
  - Tiered benefits: Authorized/Gold/Platinum levels
  - Marketing coop dollars
  - Deep discount on products

# Hotel Aqua Rio



Baja California, Mexico

The best feature is ... everything is hosted on the cloud and with a few simple clicks, we can configure a template in minutes. No hosting of any kind is required for the guest portal to work.

“Magnificent feature” – Jose Barrios Diaz

What's so special about Baja California?  
... only three places in the world  
gray whales will give birth to their  
babies, all three are in Baja!



*More case studies and solution papers at:*  
[www.cambiumnetworks.com/industries/hospitality/](http://www.cambiumnetworks.com/industries/hospitality/)

*including:*

## **Five Ways to Get a 5-Star Rating for Hotel WiFi**



## Resources for more information

*KnowledgeBase articles, User Forums at:*  
**[community.cambiumnetworks.com](https://community.cambiumnetworks.com)**

*Software, User Guides at:*  
**[support.cambiumnetworks.com](https://support.cambiumnetworks.com)**

# The Cambium Advantage - Beyond the Product



Support

## **Rich Options**

Field Support

24x7 Tier1/2/3

Community Forum



The Team

## **Successful track record**

Wi-Fi & Cellular



Innovation

We will keep going  
**(Continuous  
Innovation)**

*Thank you for your time.*

*Questions?*

