



Next Generation Mobile Internet in APAC

APAC Analyst Session

Dirk Wolter , Director for Service Provider Mobility Architecture
Asia Pacific , Japan and China

August 2013

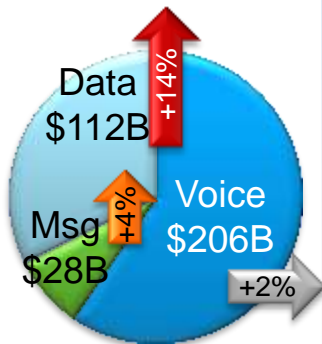


APAC Mobile Market Transitions



Revenue Shift

APAC 2012 Mobile Revenues

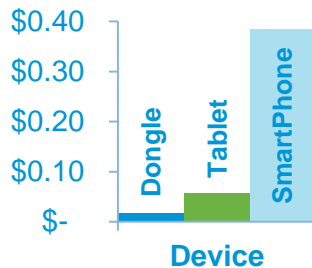


Pyramid Research, 2013



Smartphones & Tablets

Yield \$/MB



"Smartphones now exceed Featurephones in APAC"
"Tablet sales +54% CAGR"
IDC



Over The Top IP services



App Store

30 billion
Downloads
650,000
apps



Google Play

20 billion
downloads
600,000
apps

">1,000 Apps added to Android every day"
research2guidance

"1B OTT VoIP users in 2013" infonetics



BYOD service convergence

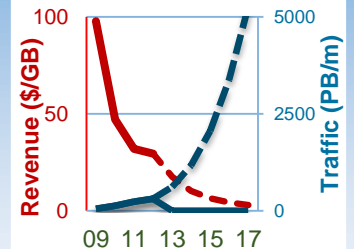


"95% of businesses allow personal devices"
Cisco IBSG 2012



Demand dilutes Yield

APAC Mobile Data



"5 year APAC Mobile broadband traffic x17,
Revenue per bit 1/10"
Cisco VNI, Pyramid Research

Turning Market Challenges into Opportunities

APAC Mobile Market Opportunities



The un-connected



*"3.2 B Mobile Subs,
0.5 B Mobile
Broadband Subs"
"78% prepaid"
Pyramid Research*



Internet of Everything



*"50 B things connected to
the internet by 2020"
Cisco IBSG*



Cloud & Managed Services



*"70% of mobile users
expect to use mobile
cloud services"
Cisco IBSG*



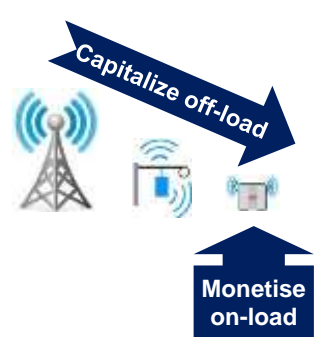
Mobile Commerce



*"Asia will be a US\$7 B
mobile advertising
market by 2015"
Amobee*



Wi-Fi and Smallcells



*"Smartphones use Wi-Fi
Internet > 1/3 of the
time"
Cisco IBSG, 2012*

Seeking new Market Opportunities

Innovation in OTT Strategies

Compete



vs



- China Mobile Fetion **competes** with OTT WeChat



- European operators offer **Rich Communication Services** for messaging



- EU regulator: "Mobile companies regularly **block VoIP** and prevent services such as **Skype** from functioning on their networks"

APAC Focus

Partner



- 'Free Zone' Google Search, Gmail, Google+

Gain **Subscribers**



- year free access to **Evernote**



- Unicomm offers OTT WeChat **plans**

increase **APRU**



- Plan **add-ons** for unlimited OTT messaging

Enable



- Direct operator billing** for Skype credits



- Network **APIs** for apps to manage QoS

New Revenue



- Major operators join GSMA **OneAPI** initiative to **expose network APIs** to developer programs



Cisco SP and Mobility Strategy

Shailesh Shukla, VP/GM

August 22, 2013

What Are Customers Asking For?

Cost, Agility, Flexibility

Reduce total Cost
of Ownership



Increase
Velocity/Agility



Reduce risk
of moving
Fast by simplifying



Industry Trends....Technology Choices

SDN

Open APIs

Software Controller

Virtualization

Orchestration

Cloud

Dev Ops

What Problems do these technologies address?

SDN

Open APIs

Software Controller

Virtualization

Orchestration

Cloud

Dev Ops

- Make the network **Programmable** for ease of creating and deploying new services/applications
- Use **Elasticity** to improve efficiencies as well as handle volatility
- **Automate** different parts of the network to speed up the ability to react to changing conditions
- **Resiliency** for improved availability and security

Cisco Open Network Environment (ONE)



Connecting the Network & Applications



Cisco Unified Framework

Model for Next-Gen IT

APPLICATIONS

Application Interfaces

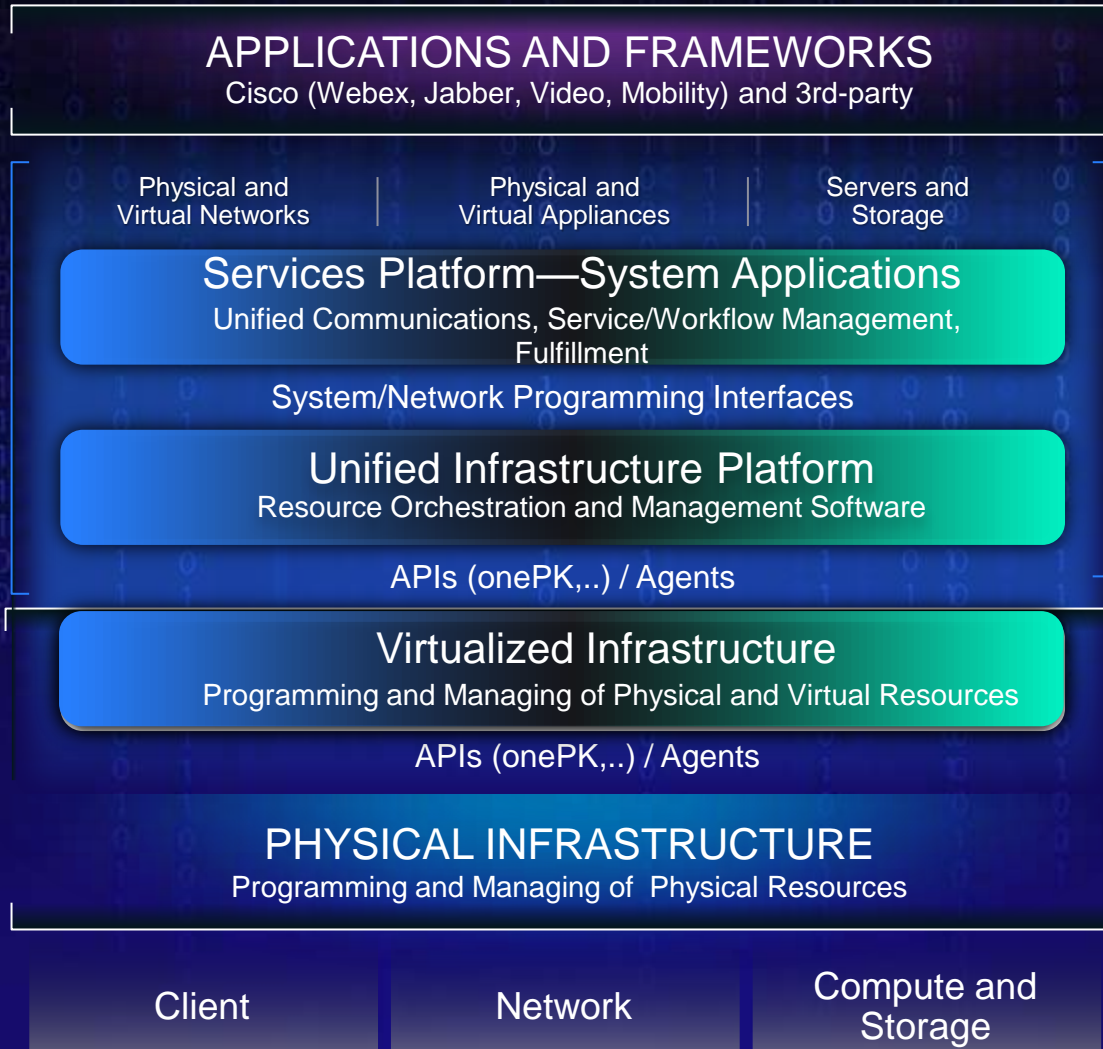
UNIFIED PLATFORM

Infrastructure Interfaces

INFRASTRUCTURE

The Technology View

THE
UNIFIED
PLATFORM

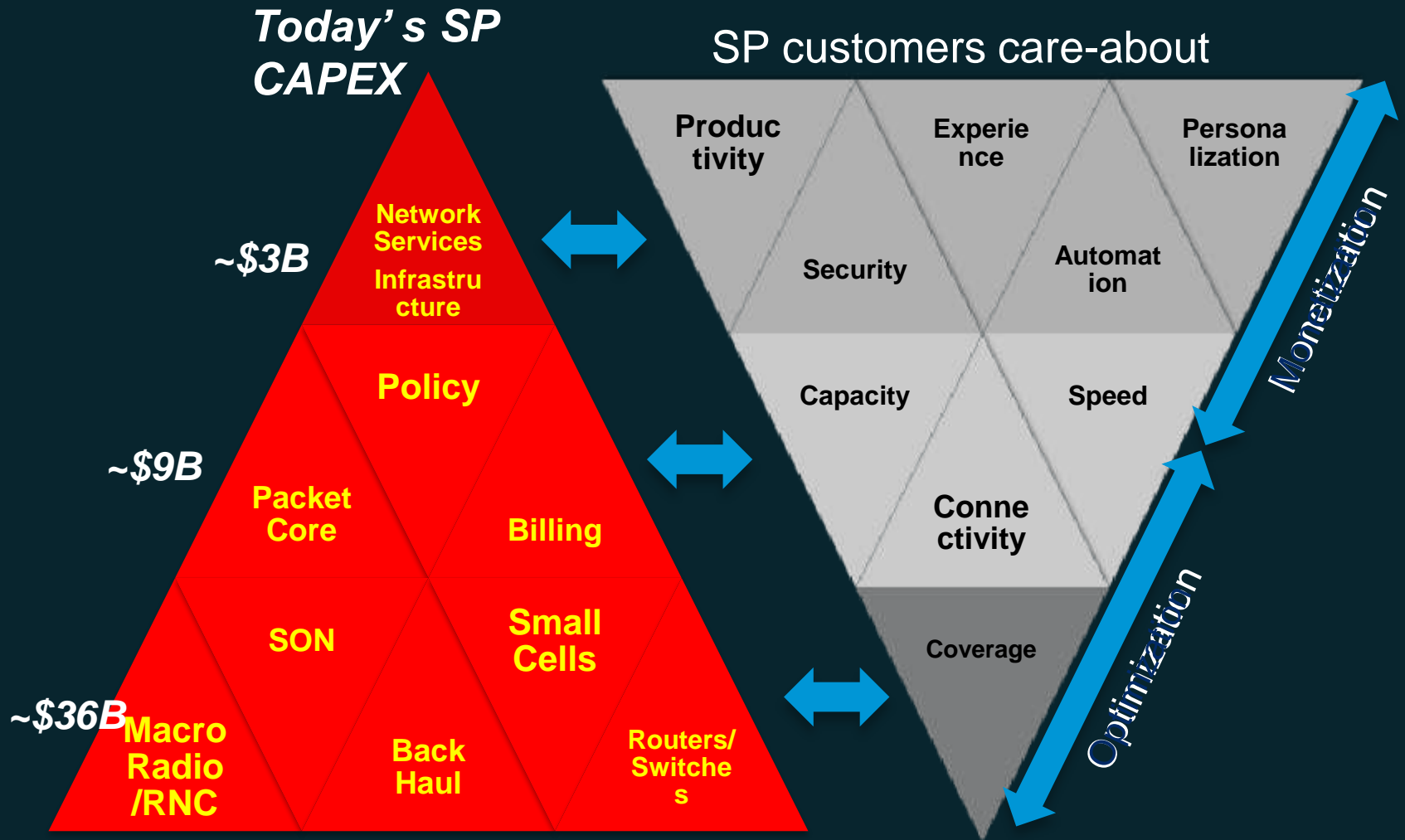


Consistent
Operational
Experience

Mask
Infrastructure
Complexity

Open and
Programmable

Addressing Mobile Internet opportunity



Cisco Service Provider Mobility Vision

Vision

Market Leader in Mobility

Delivering Solutions that **Enable** Service Providers to **Capitalise on market transitions** and **Exploit new opportunities** in the age of the Mobile Internet

Key Focus Areas

Heterogeneous Access



Seamless user experience
Spectrum optimization
Access independence

Intelligent Network



Auto sizing and scale
Network analytics
Network virtualization
Service-aware optimization

Mobile Cloud Services



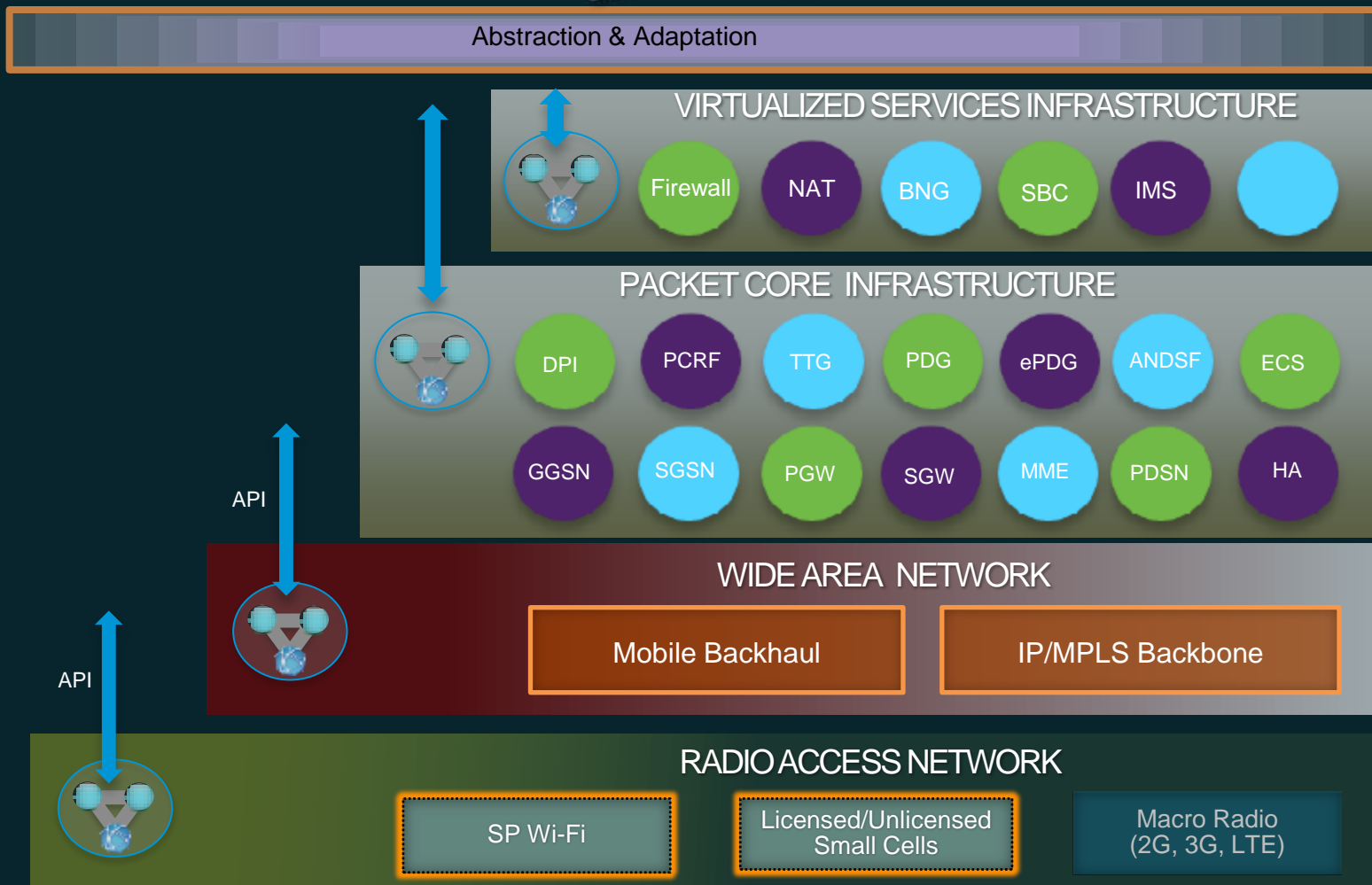
Compelling economics
New service velocity
Enhanced SLAs
Inspires incremental opportunities



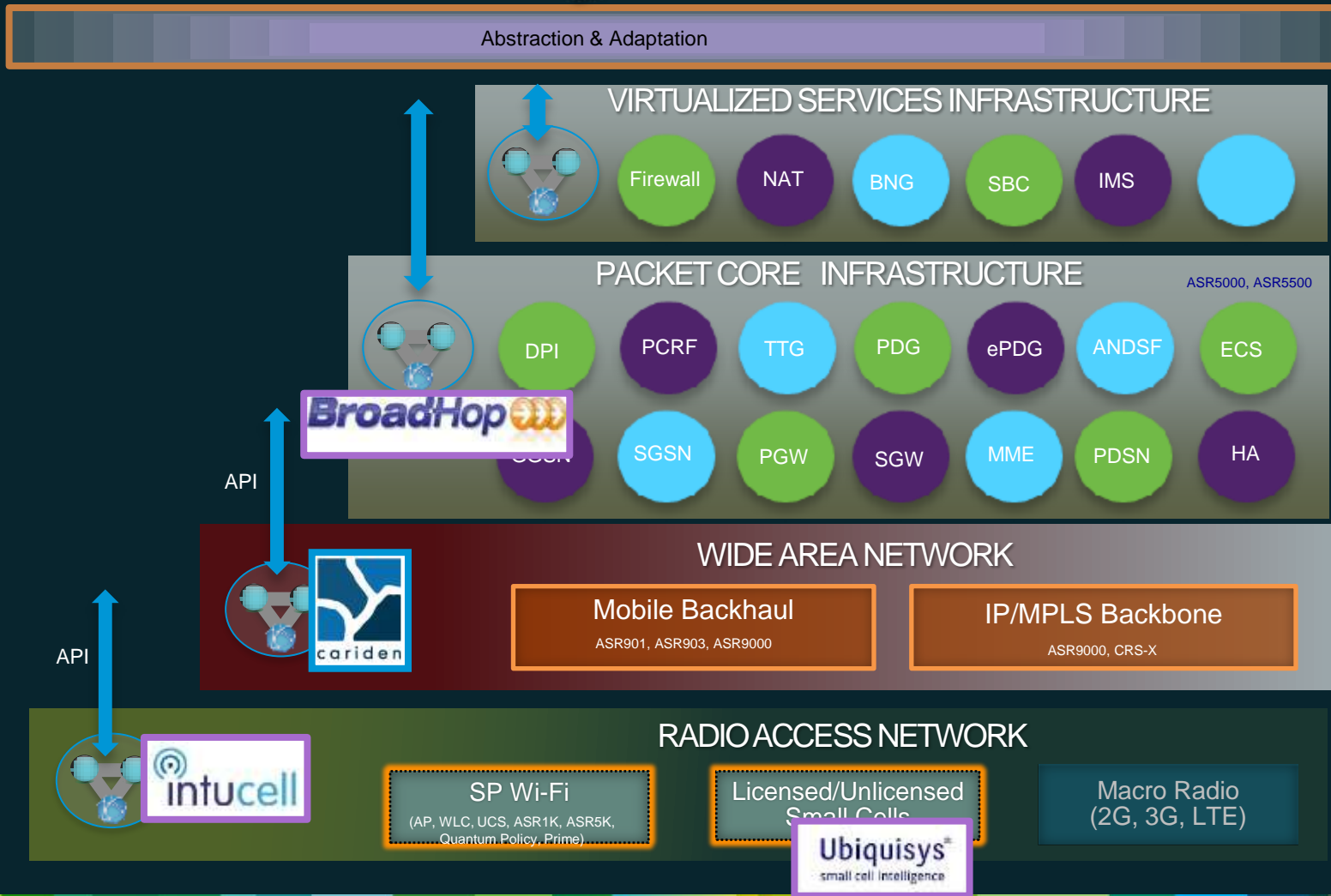
Key Enabler: The Closed Loop



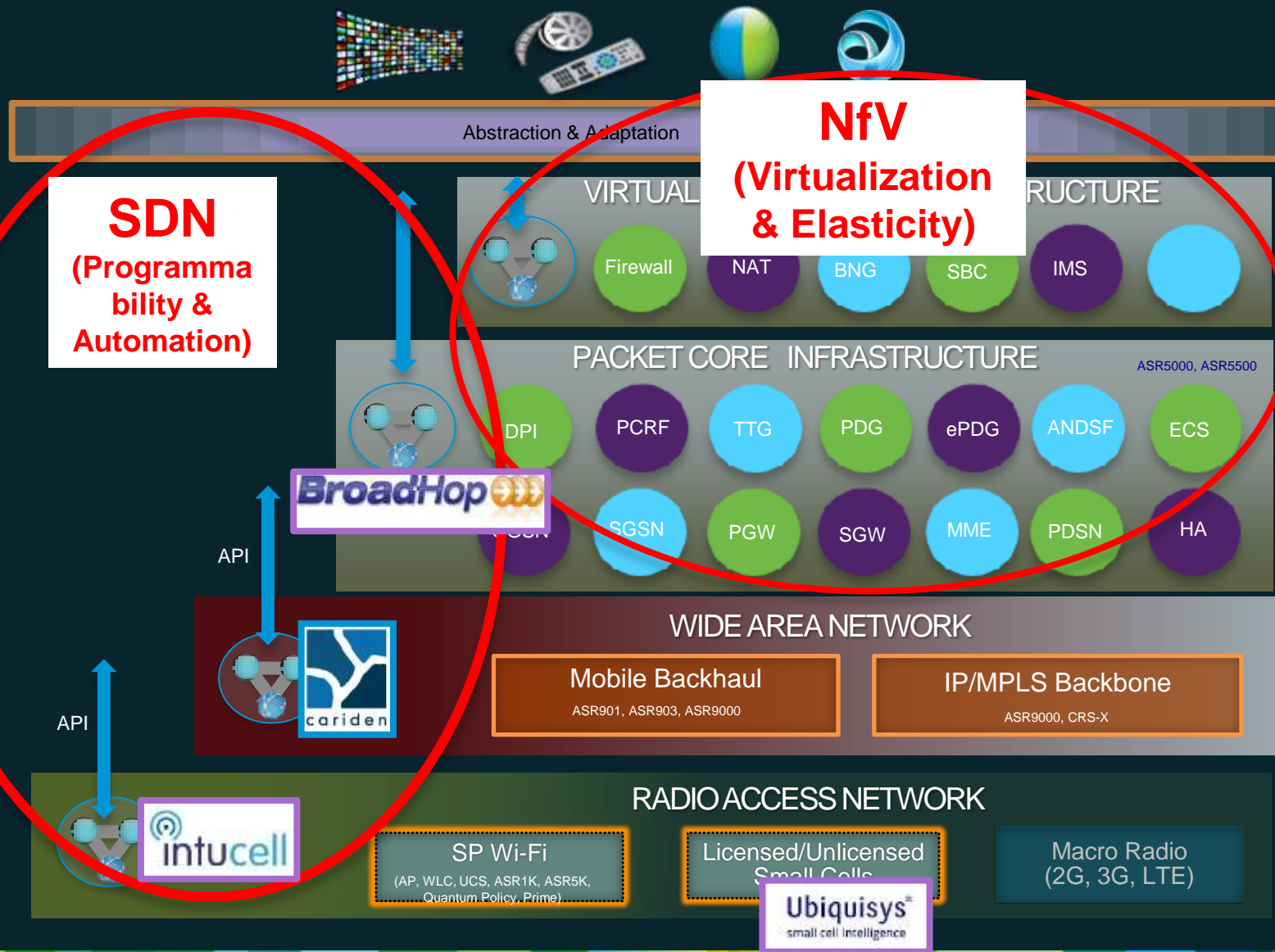
Cisco ONE for Mobile Internet



Cisco ONE for Mobile Internet



Cisco ONE for Mobile Internet



Quantifying Economics

Tier 1 SP Savings, Market Opportunities

Cisco Business Technology Arch. Team

32 Operator Interviews

12 Ecosystem Interviews



CapEx Savings: SC Backhaul
Technology Cost Advantages



CapEx Savings: SON*
10-12% lower call drop rates
10% higher user data throughput
10-40% reduction in congested cells



SP Sponsored Data**
66% Mobile Data traffic is video



SP Targeted Ads**
2X Higher CPM

**Small Cells &
Transport**



Software Suite

*2013-2016 CapEx savings for 25 Global Tier1 Carriers ** Incremental Global Cumulative impact 2013-2016

Source: ABI research, Frost & Sullivan, SNL Kagan, Infonetics, Cisco VNI, Cisco BTA Monetization & Optimization Models

Cisco Service Provider Mobility Portfolio



**SP Wi-Fi (Passpoint
NG HS, Connected
Mobile Experiences)**
**Licensed Small Cells
(3G, LTE, femto)**
ASR 9xx Series (MBH)



ASR 5000 Series (EPC)
ASR 5000 Services

- ANDSF
- SaMOG
- Small Cell GW (HetNet)
- WSG



Quantum™

- Network Abstraction
- Policy
- Analytics
- SON
- WAN Orchestration

Cisco Mobility

**Heterogeneous
Access**

**Intelligent
Network**

**Virtualized
Services**

Cisco Small Cells Solution



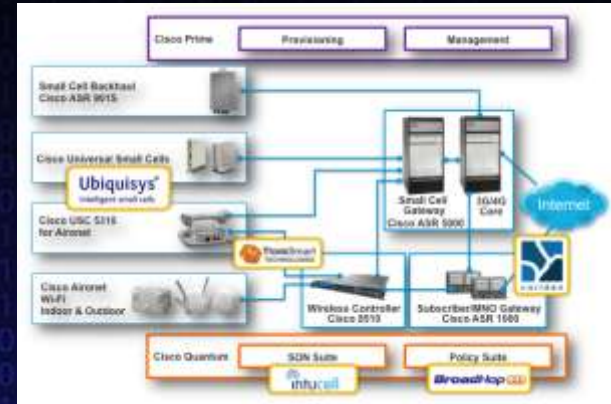
Comprehensive,
Intelligent
3G/LTE/Wi-Fi
Small Cells



Rapid deployment
with zero/low touch
provisioning



Robust Policy &
Subscriber services
with portal, LI,
online/offline charging



- Built on industry standards; 3GPP architectures
- Innovative features and capabilities solving coverage & capacity challenges
- Proven optimization & monetization models
- End-to-end, validated, carrier-grade network solutions (radio, access, backhaul, transport, core, policy/charging)

Both Cisco SP Wifi + Ubiquisys Small Cell



Cisco Quantum™

Intelligence for Multi-vendor, Heterogeneous Networks

Quantum Orchestration Suite

- Extracts and harvests Data in Motion

Quantum Policy Suite

- Granular/Fine-grained policy control for personalized services

Quantum Analytics Suite

- Real-time analytics, management for contextual experiences

Quantum SON Suite

- Real-time, automated performance and capacity optimization

Quantum Control Suite

- Real-time, automated software control of network resources (WAN Orchestration, SDN Controller)

Quantum Virtualization Suite

- Elastic virtualization of network services to enable monetization of devices and things

BroadHop 

 **ThinkSmart**
TECHNOLOGIES

 **intucell**


cariden

Cisco Quantum delivers on the promise of the intelligent network

#1 Across the Board! (Source: ACG Research)

Market Share of Leading Vendors 1Q 2013 Worldwide

Mobile IP Infrastructure

Mobile IP Backbone

Mobile IP Backhaul (Routing + Switching)

Packet Core (MPC + EPC)

#1



42.0%

Q-Q Point +/-



+5.9

Y-Y Point +/-



+4.1



65.5%



+0.2



+0.8



41.7%



+4.8



+7.1



35.2%



+6.8



+4.3

#2



15.5%

Q-Q Point +/-



-3.7

Y-Y Point +/-



-0.2



26.9%



+1.0



+0.8



28.0%



-4.5



-5.6



31.4%



-2.9



+1.2

#3



13.0%

Q-Q Point +/-



-1.0

Y-Y Point +/-



-1.0



4.5%



-0.8



+0.0



7.3%



+0.1



+2.9



15.4%



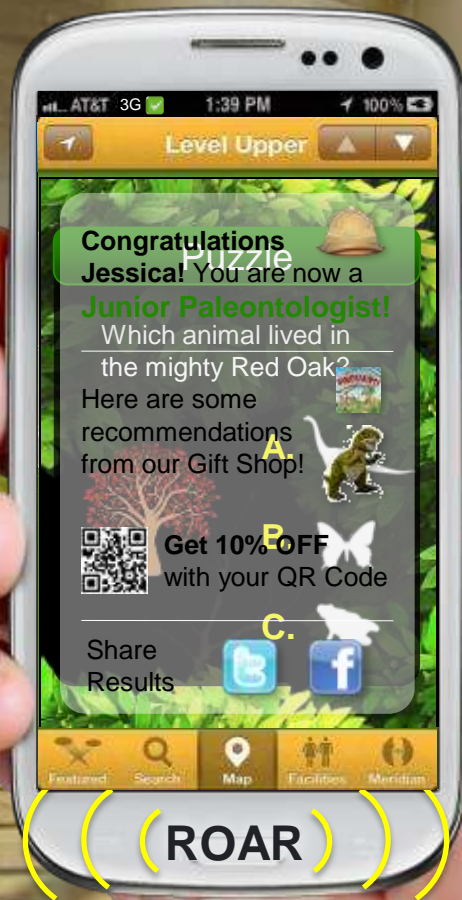
-3.3



-1.9

Fernbank Museum w/ AT&T: Indoor Location

Transforming Visitor Experience with Personalized, Managed Wi-Fi



- Self calibrating network, application
- New features added using software
- Ease, speed of customization for new displays, partner updates via APIs

Optimizing the Experience in High-Density Venues

Orchestration



Analytics



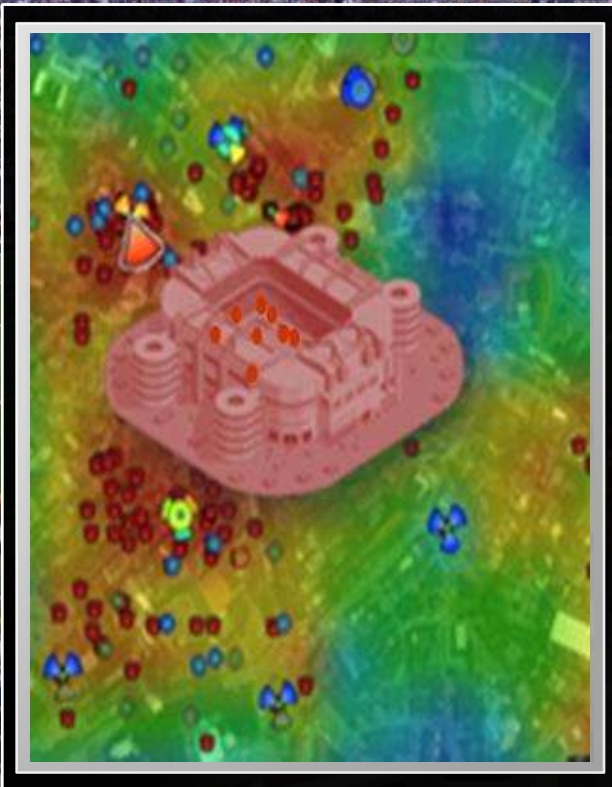
Licensed, Unlicensed
Small Cells



SON

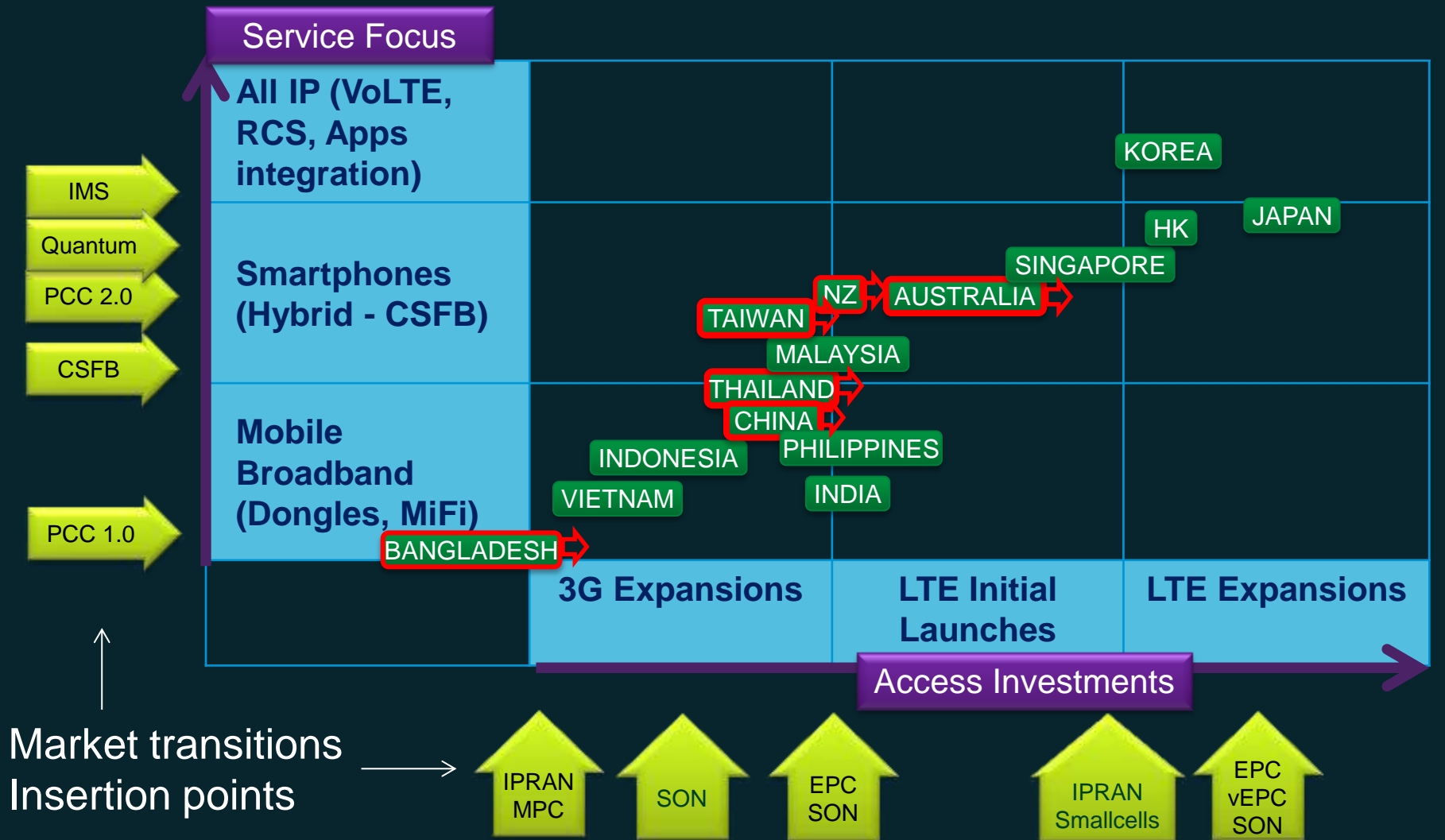


Control



EARTHCOM MICROCELL

APAC Mobile Data Markets



Thank You

