



The Quantum™ Leap towards Mobile Data Monetization

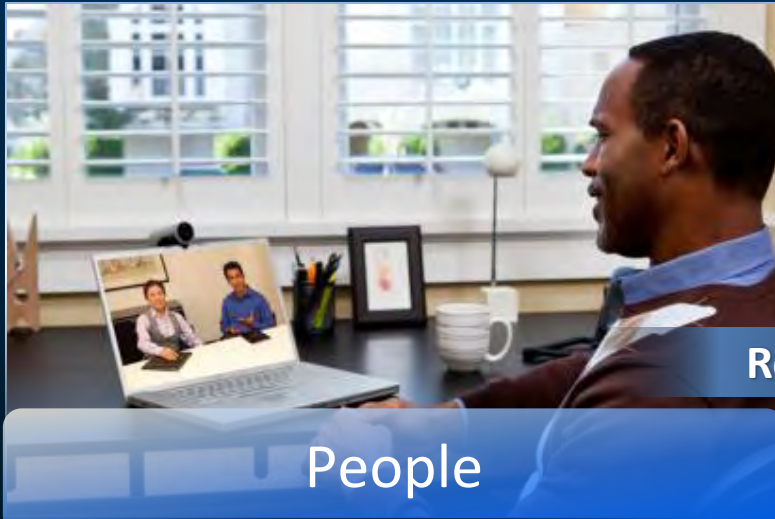
Reuben Yap
APAC Mobile Architectures



People and Things Connect Differently



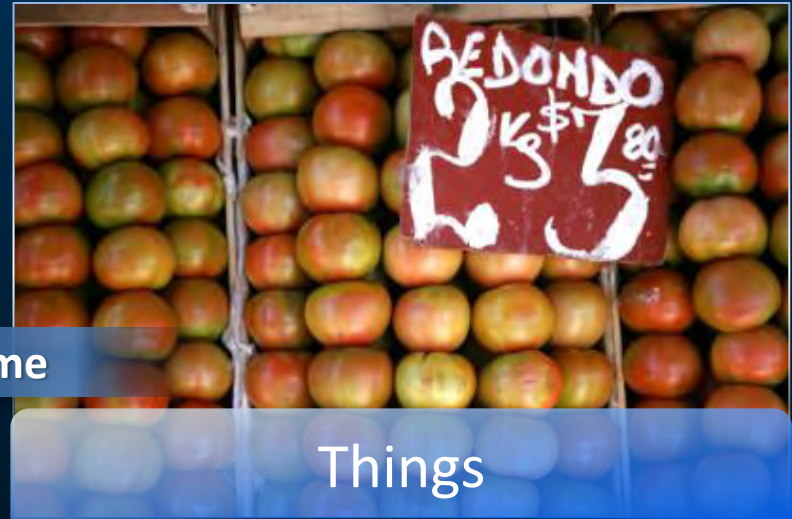
TOMORROW
starts here.



People



Real Time



Things

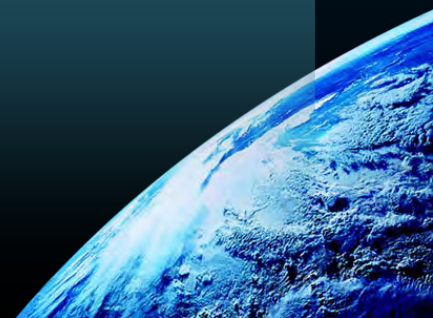
ConDataions

Always on

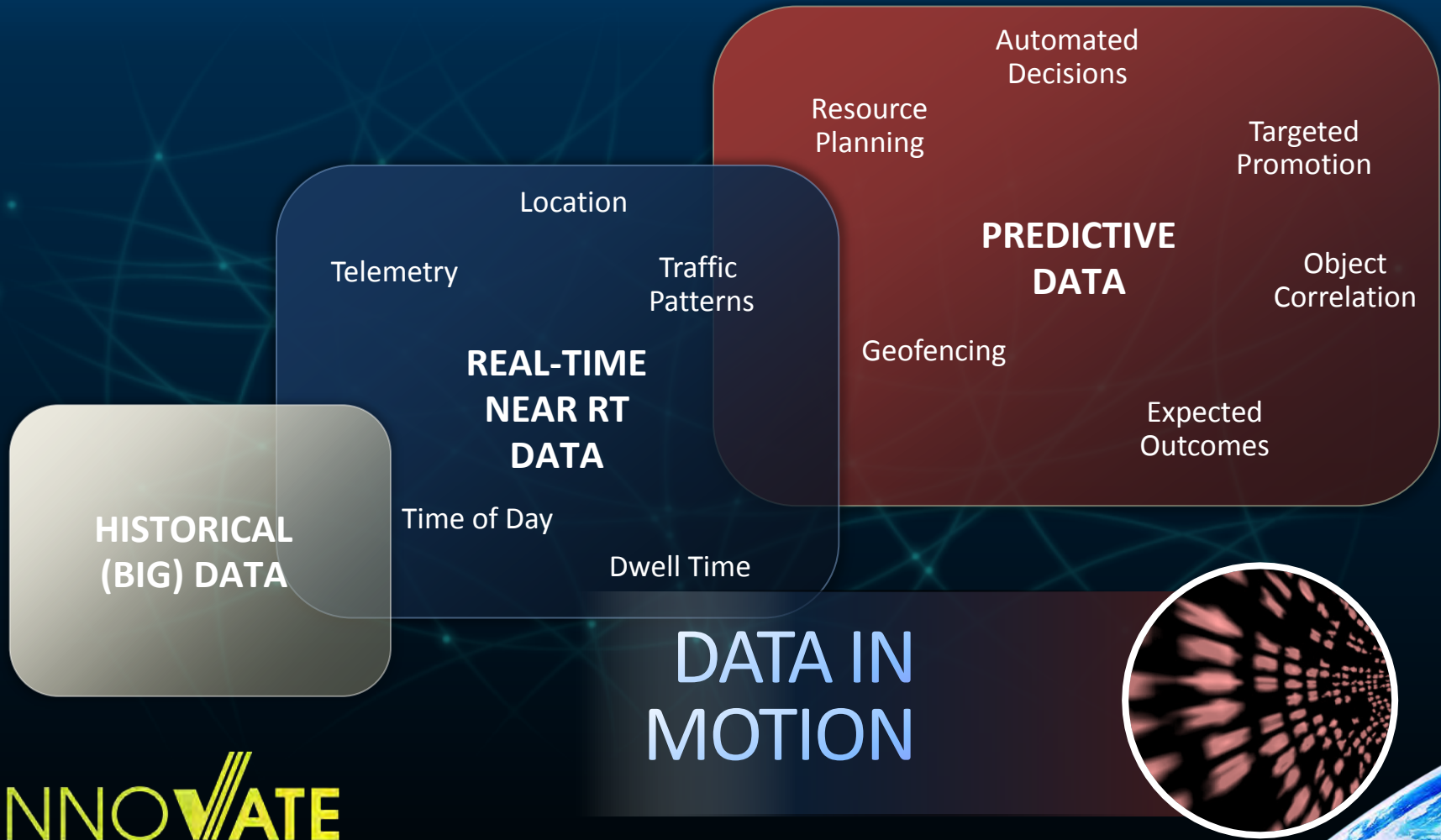
Generally moderate to high bandwidth

Switched (frequent setup, teardown)

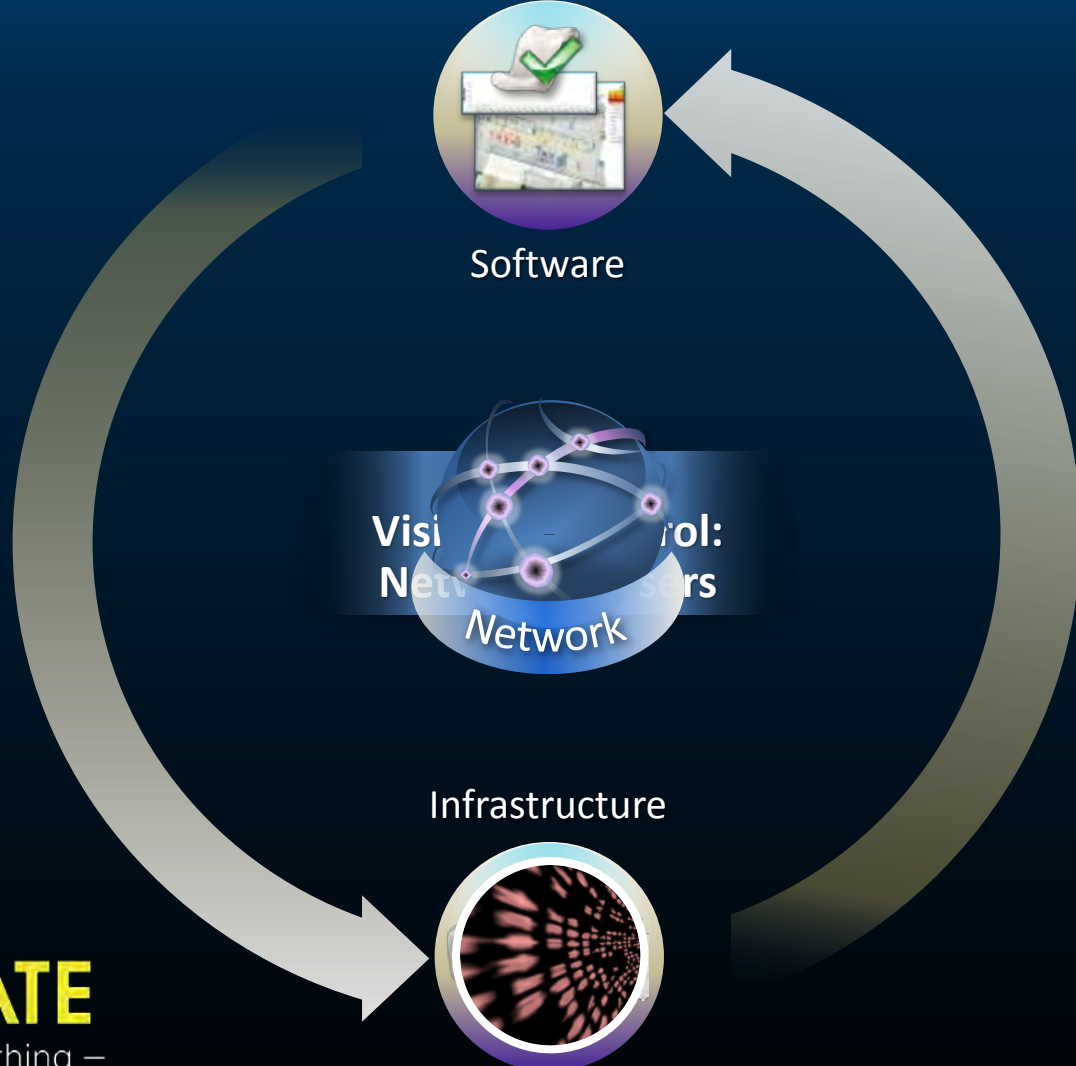
Generally low bandwidth



Data-in-Motion: Greater Monetization, Optimization



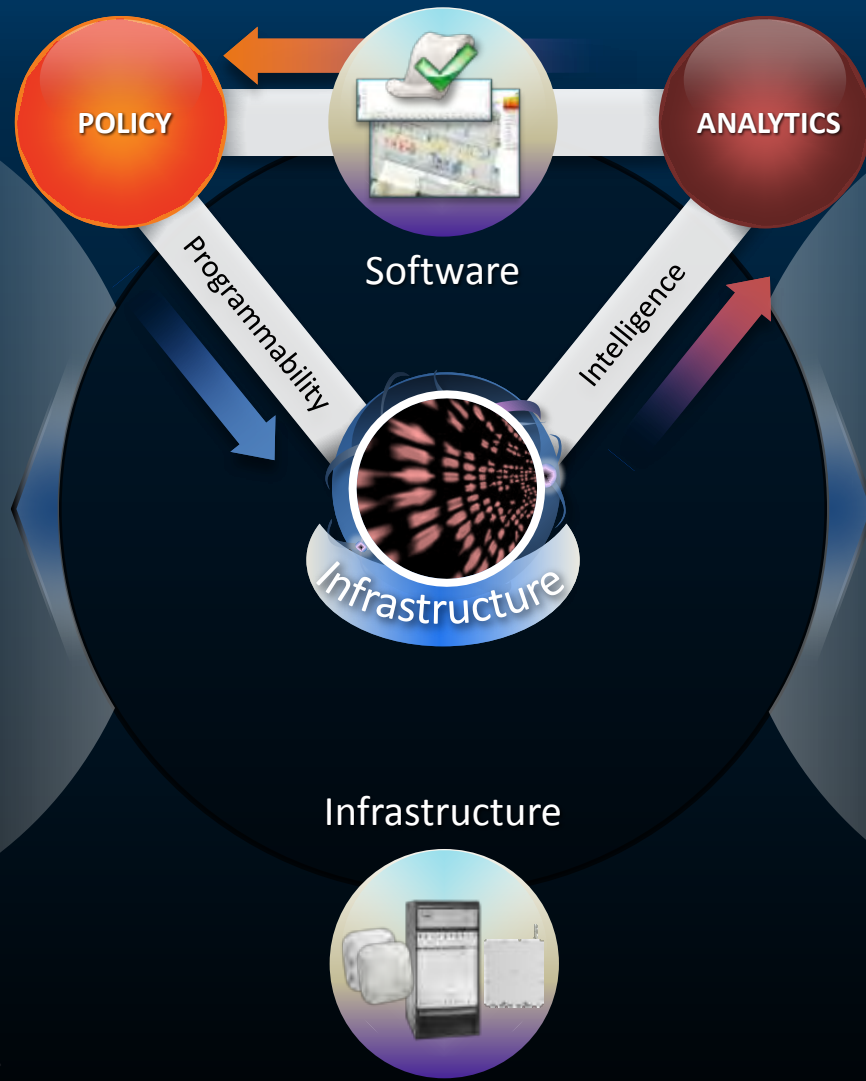
Elastic, Intelligent Network Foundational to Capturing Opportunity



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Open, Programmable Framework to Monetize, to Optimize



Monetization
Indoor Location
Premium Video
Sponsored Data



Optimization
Access
Transport
Cloud



Optimizing Experiences in High-density Venues

Quantum
NW Abstraction
Suite



Quantum
Analytics
Suite



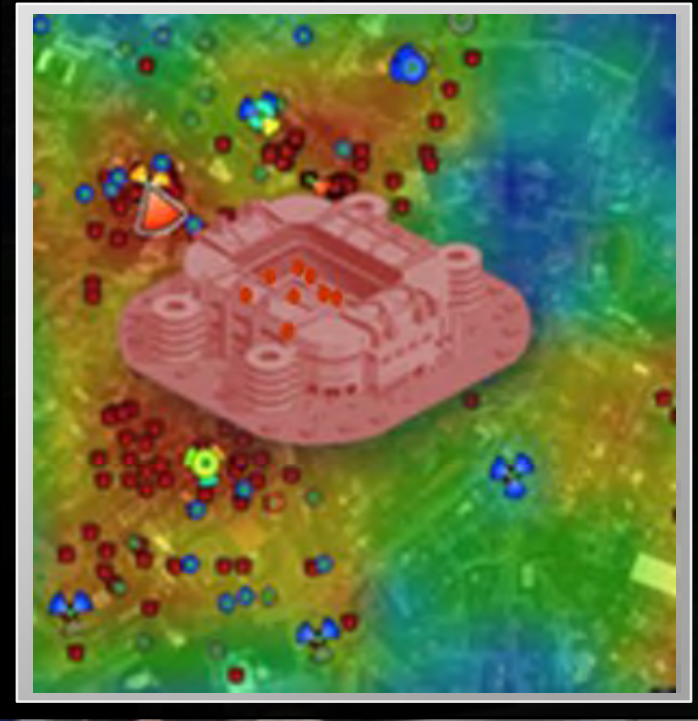
Quantum
Policy
Suite



Quantum
RAN Optimization
Suite



3G Small Cell
for Aironet



EARTHCOM

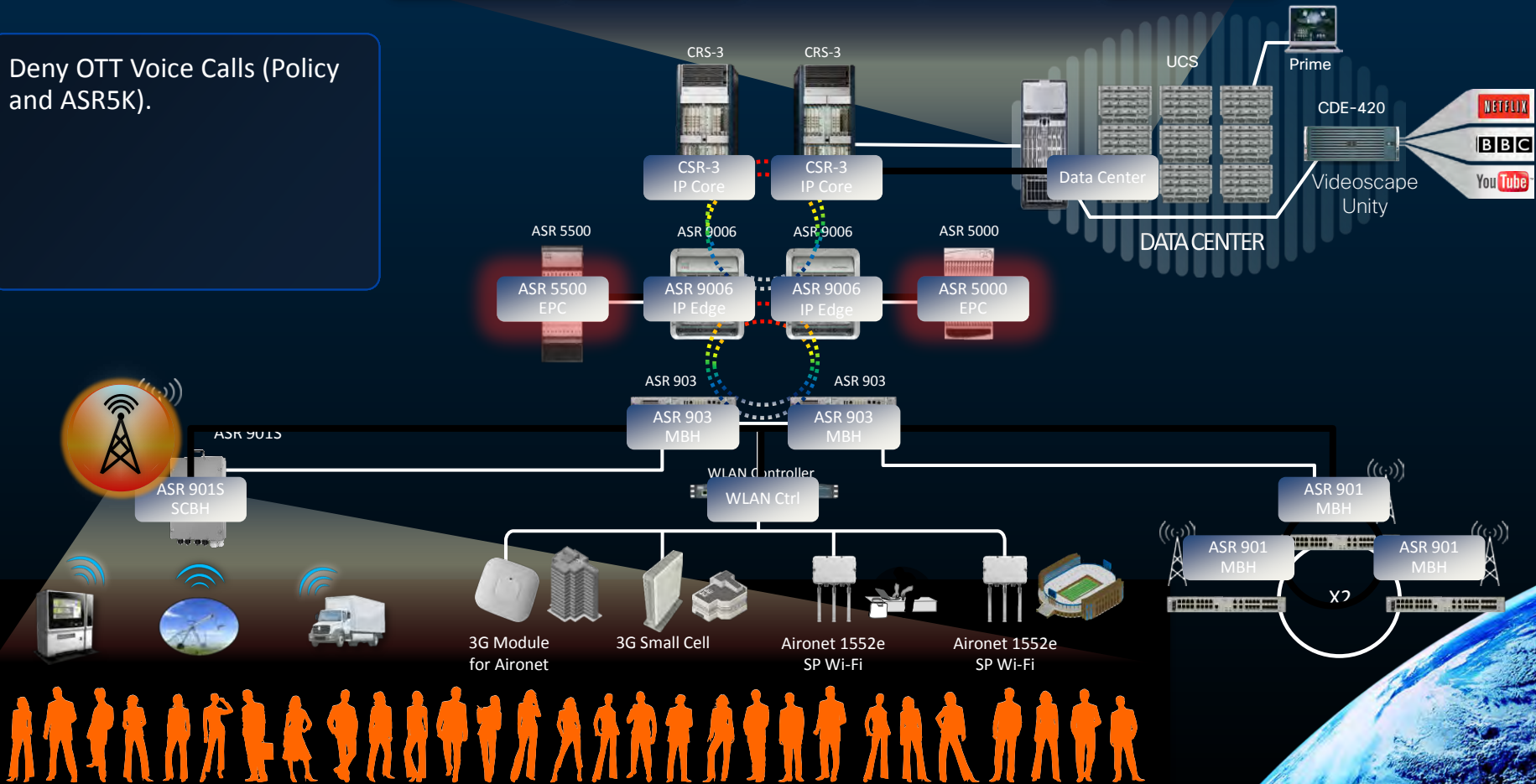
MICROCELL



Optimizing Experiences in High-density Venues



Deny OTT Voice Calls (Policy and ASR5K).



Providing Network Reliability for Critical IoE Applications

Quantum
NW Abstraction
Suite



Quantum
Analytics
Suite



Quantum
Policy
Suite



SaMOG and
Cisco ANDSF



3G Small Cell
for Aironet



Monetizing Seamless User Experience

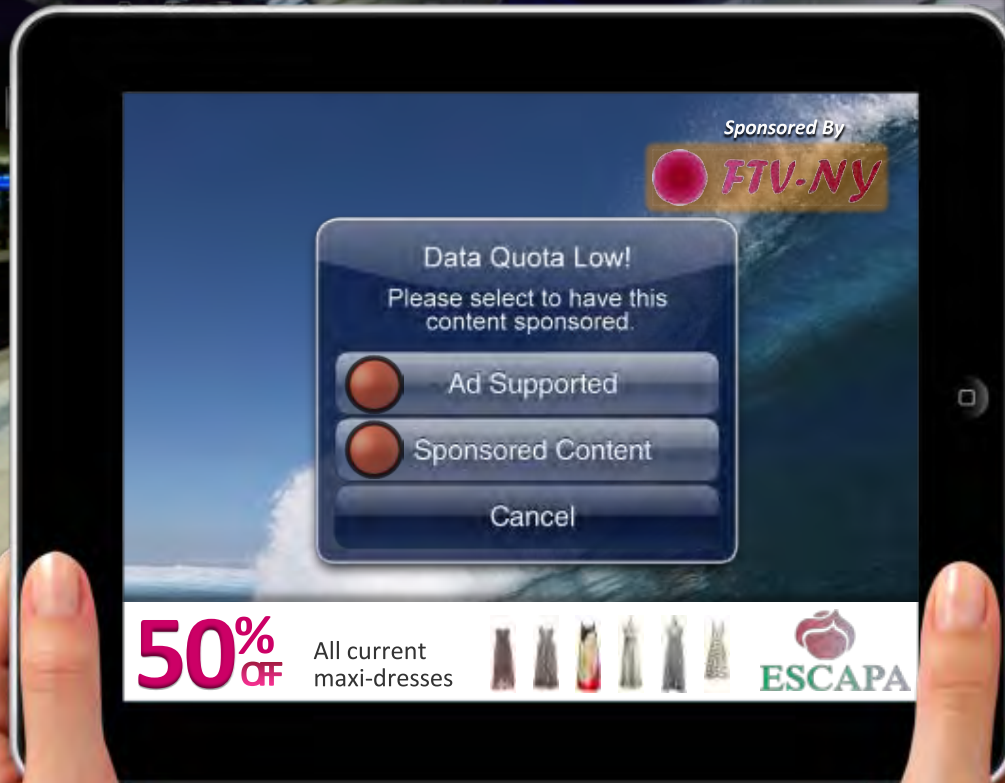
Quantum
NW Abstraction
Suite




Quantum
Analytics
Suite



Quantum
Policy
Suite



 **New York City, NY**
40.773639N, -73.95992W

 **Device**
iPad 4

 **Connection**
LTE

CONNECTION SPEED



DATA QUOTA BALANCE



MOBILE USAGE ANALYTICS

 **Web:**
Fashion, Lifestyle, Fitness, Film

 **Apps:**
Yelp, Facebook, Twitter, IMDB,
MyFitnessPal

Introducing the Cisco Quantum™ Software Suite



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starts here.*

Quantum Network Abstraction Suite

extracts and harvests intelligence from the network

Quantum Policy Suite

programs network for customized user experiences

Quantum Analytics Suite

real-time analytics including location

Quantum RAN Optimization Suite

SON for Mobile

Quantum WAN Orchestration Suite

SON for IP/MPLS



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Cisco Quantum™ Policy Suite



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A Converged Policy Platform for Network Service Innovation

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Cisco Quantum™ Policy Suite

Key Advantages



4G Scalability and Reliability

- Purpose-built to embrace virtualization and linear scalability
- Unmatched TCO through solution virtualization – no third-party software licensing
- EANTC benchmarked: 75M concurrent sessions w/ 250k TPS

Service Velocity

- Rapid solution and rules customizations at time of deployment w/o core software development
- Supports outsourcing integration modules to solution and development partners

Multi-Access Flexibility

- Support for multiple access and converged architectures including 3G/4G, DSL, FTTH, WiMax, WiFi and legacy platforms

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Quantum™ Policy Key Accomplishments



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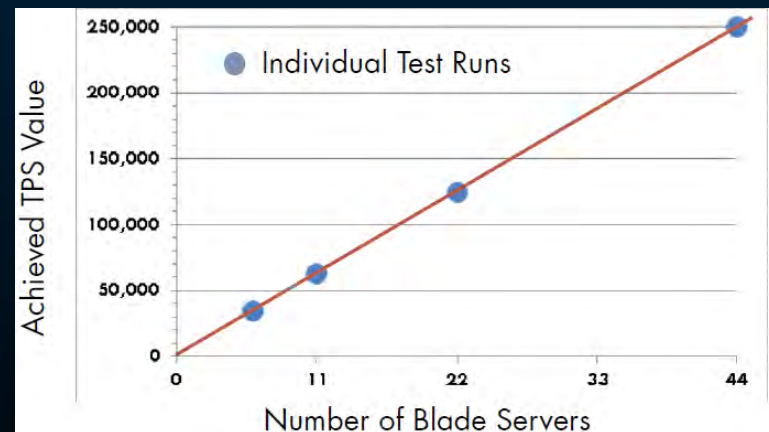
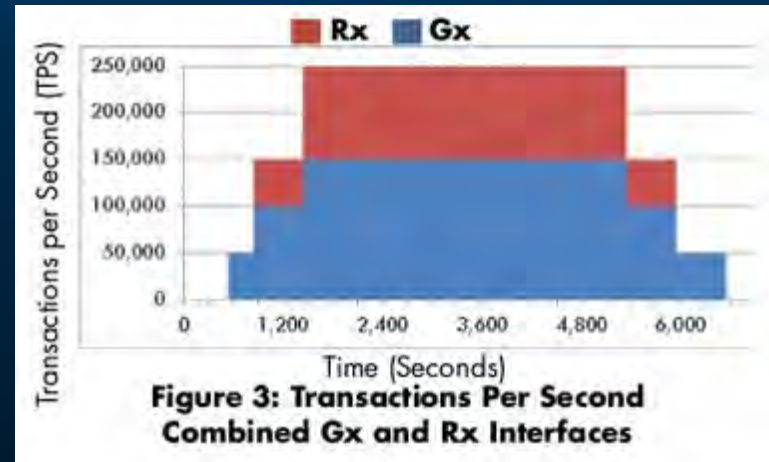
- 75M concurrent subscribers
- 195M Rx/Gx sessions
- 250K Rx/Gx TPS with linear scalability
- 14ms average transaction latency
- Virtualized for Cloud Scale
- Full PCRF solution - SPR included and no DRA required for scale

Source:

http://www.eantc.de/fileadmin/eantc/downloads/test_reports/2013/EANTC-Cisco_Quantum_Policy_Suite-Test_Report-v1.0.pdf

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Quantum™ RAN Optimization Suite

Automatic, Closed Loop, Dynamic



	Data Collection	Analysis	Implementation	Feedback
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Typical Approach

Reactive, manual, partial

Manual, labor intensive, expertise

Manual

Manual validation, complaints

Cycle: days to weeks → “one size fits all” optimization

intucell

Proactive, frequent, automatic

Automatic, RT

Automatic

Instant, continuous

Cycle: 15 minutes → dynamic optimization

Intucell provides near real time optimization enablement

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SON with Proven Field Results



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20% More Traffic Retained in 3G

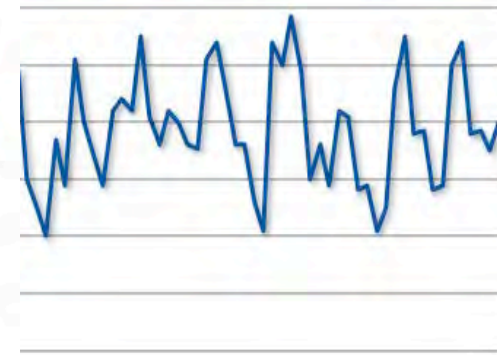
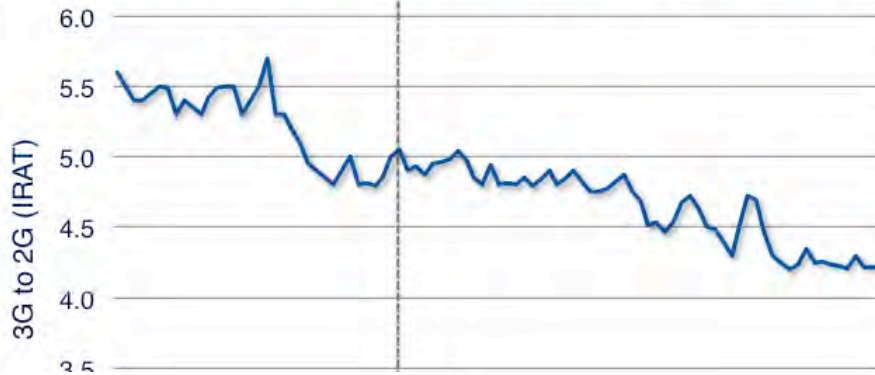
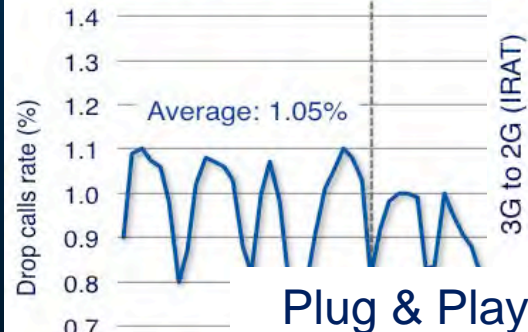
12% Reduction in

Results from a major ma

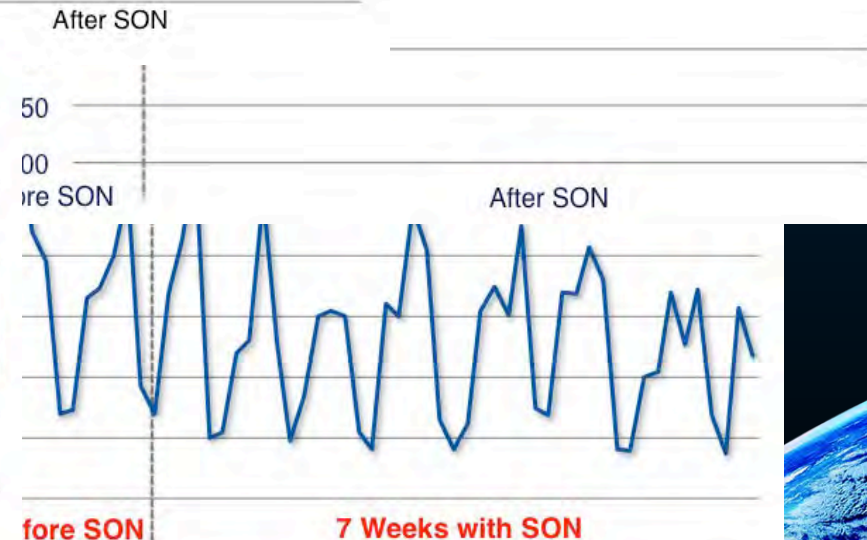
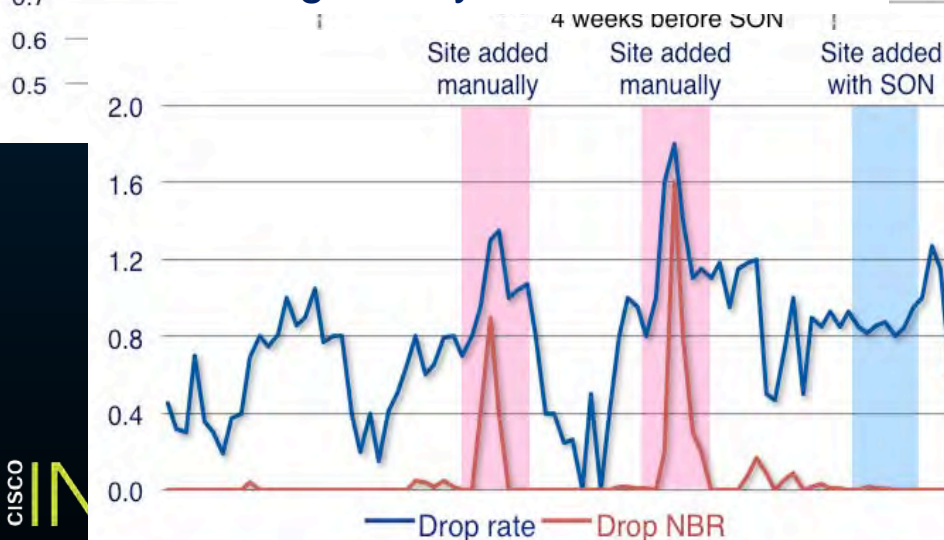
Results from a major market (42 RNCs, 15k cells)

roughput Increase

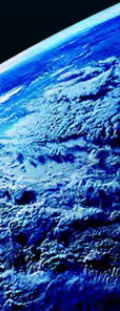
arket (29 RNCs, 14k cells)



Plug & Play Site Introduction



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AT&T Advertising Network Improvements

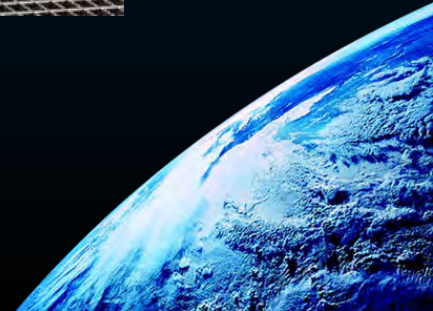


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Summary

The Quantum™ Leap towards Network Data Monetization



Data in Motion

- People & Things connect differently
- Data-in-motion combines historical, near RT, predictive network data
- New opportunities for network monetization

The Quantum™ Proposition

- Leverage intelligence in the Network
- Convergent solution across multi-access technologies
- Dynamic, automated & closed loop

Proven Track Record

- Proven policy performance and scaling by independent 3rd party, EANTC
- Proven SON in one of world's most advanced networks, AT&T



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Questions?

Thank You



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