



Cisco  
Networkers 2011

May 19, Toronto, Canada

# Building The Future: The Next 5 Years

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CTO and VP/GM,  
Emerging Technologies Group



# Agenda

- Industry Trends
- Cisco as an Innovator
- What's Next:  
The Future of Connected Business
- Summary and Conclusions



# Industry Trends



# The World Is Changing





Cisco  
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# What's Next?

## GREATEST ENGINEERING ACHIEVEMENTS OF THE 20<sup>TH</sup> CENTURY

1. Electrification
2. Automobile
3. Airplane
4. Water supply & distribution
5. Electronics
6. Radio & Television
7. Agricultural mechanization
8. Computers
9. Telephone
10. Air-conditioning & refrigeration
11. Highways
12. Spacecraft
13. Internet
14. Imaging
15. Household Appliances
16. Health Technologies
17. Petrochemical Technologies
18. Laser & Fiber Optics
19. Nuclear Technologies
20. High-performance materials

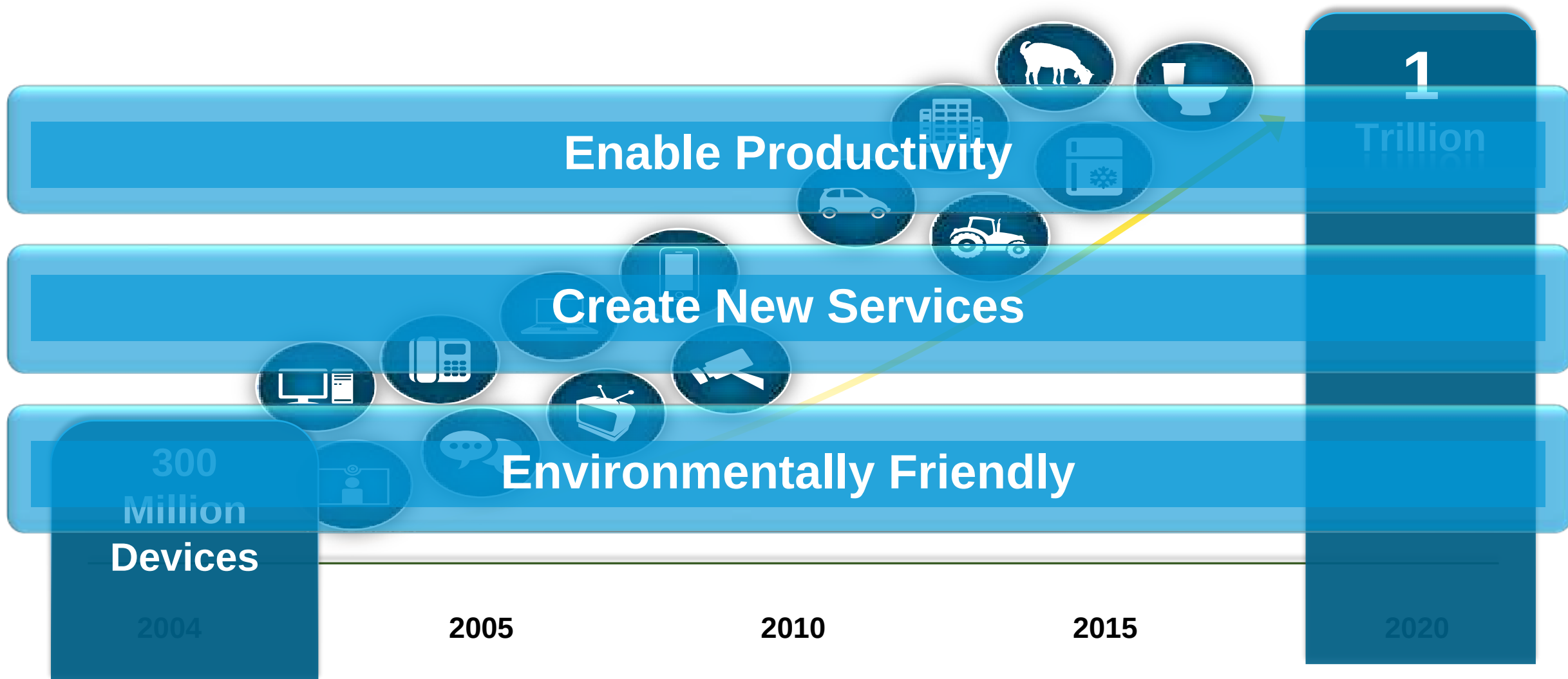
Knowledge  
Is Power.  
Learn. Share. Collaborate.



## ENGINEERING'S GRAND CHALLENGES

1. Make solar energy economical
2. Provide energy from fusion
3. Develop carbon sequestration methods
4. Manage the nitrogen cycle
5. Provide access to clean water
6. Restore & improve urban infrastructure
7. Advance health informatics
8. Engineer better medicine
9. Reverse engineer the brain
10. Prevent nuclear terror
11. Secure cyberspace
12. Enhance virtual reality
13. Advance personalized learning
14. Engineer the tools of scientific discovery

# Technology's Role in Sustained and Balanced Growth



# Market Trends and Opportunities

## Did You Know...?

### Pervasive Video

- In 2014, 91% of traffic on networks will be Video
- 2 billion videos are watched each day on YouTube
- Mobile video will increase 66x from 2009 to 2014

### Communications

- Nearly 1/3 of the Collaboration market will be Hosted by 2013
- 40% of professional PC's will be managed under a hosted virtual desktop model by 2013
- By 2014, over 400 million of the world's Internet users will access the network solely through a mobile connection.

### Mobility

- 28% of employees use their mobile phone as the primary work phone
- From 2010 to 2015, global mobile data traffic will grow 3.3x faster than global fixed broadband data traffic.
- Mobile traffic originating from tablet devices will grow 205x from 2010 to 2015!

### Globalization

- Urbanization of 700 million people over next decade
- Big cities getting bigger...100 new 1M+ cities by 2025
- 3 Billion people connected to the internet—next 10 years

# Pervasive Video

## A Market Transition

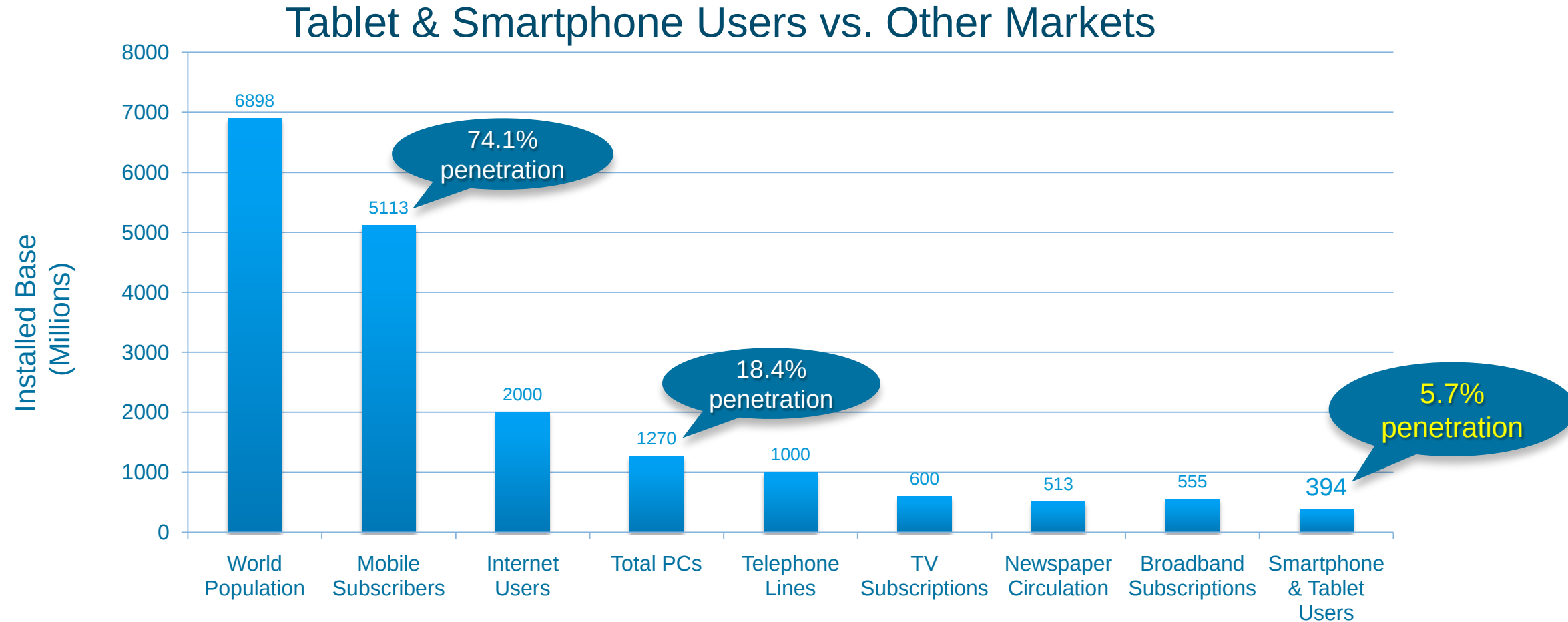


|                           | Web                                                                              |
|---------------------------|----------------------------------------------------------------------------------|
| Market Transition         | Pervasive Web<br>(start: 1995–achieved: 2000)                                    |
| Business Disruption       | Virtualized Transactions                                                         |
| New Businesses            | eCommerce                                                                        |
| Smarter Endpoints         | Java, Flash, HTML-5                                                              |
| New Shared Infrastructure | Web Services<br>(web-servers, application acceleration,<br>load Balancers, etc.) |
| Network Impact            | 50% of Internet traffic after 5 years                                            |
| Architecture              | Service Oriented Architecture                                                    |

|                           | Video                                                                                 |
|---------------------------|---------------------------------------------------------------------------------------|
| Market Transition         | Pervasive Video<br>(start: 2010)                                                      |
| Business Disruption       | Virtualized Services                                                                  |
| New Businesses            | eHealth, eEducation, etc.                                                             |
| Smarter Endpoints         | Medianet Service Interface (MSI)                                                      |
| New Shared Infrastructure | Media Services<br>(media transformation, recording,<br>streaming, intercompany, etc.) |
| Network Impact            | 90% of Internet traffic after 3 years<br>(forecast)*                                  |
| Architecture              | Medianet                                                                              |

# Innovative Technologies

## The Potential for Growth is Still Huge



Source: RBC Capital Markets

# Embrace Consumerization of IT



BUSINESS



CONSUMER



network

INTEROPERABILITY

TRANSCODING

RECORDING

OPTIMIZATION

MULTIPOINT

DIRECTORY

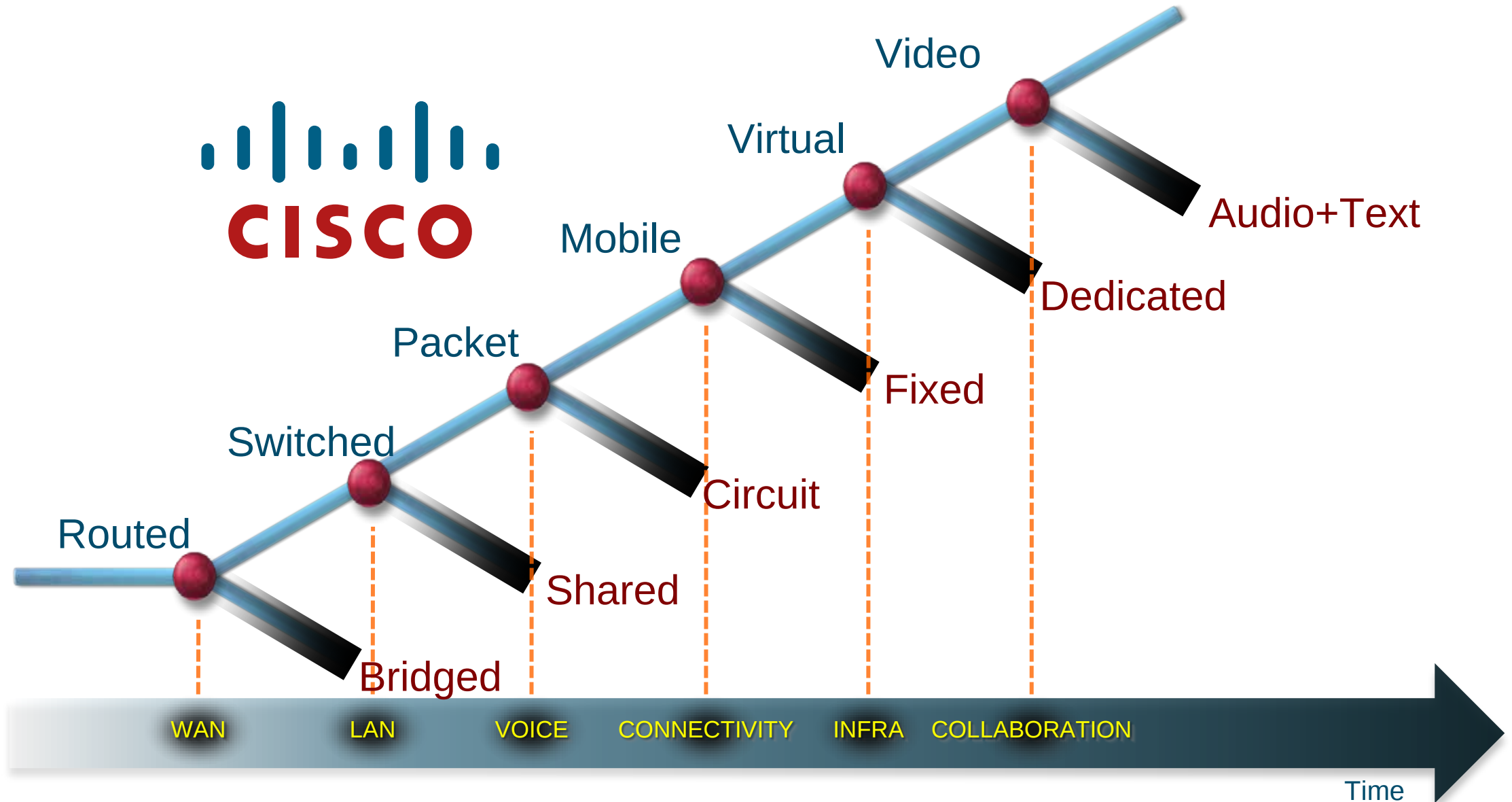
ANALYTICS

# Cisco As An Innovator



# Cisco's Innovation Strategy: Disruption

## Jump on Market Inflection Points



# Disruption: Technology x Business Model

|            |                            | Business Model          |                            |                          |                   |
|------------|----------------------------|-------------------------|----------------------------|--------------------------|-------------------|
|            |                            | Hosted &<br>Pay per Use | Employee<br>Empowerment    | Workplace<br>Flexibility | User Contribution |
| Technology | Rich Internet Applications | • Software as a Service |                            |                          |                   |
|            | Virtualization             | • Cloud Computing       |                            | • Desktop Virtualization |                   |
|            | Video                      |                         | • Rich Media Collaboration |                          | • YouTube         |
|            | Wireless                   |                         | • IP Communications        | • Mobility               |                   |
|            | Consumer Electronics       |                         | • Consumerization          |                          |                   |

# Sustaining Innovation

## With Technologies and Business Processes

### Business Models & Processes

Linksys,  
WebEx,  
NetSolve



### Acquisitions

140+ Acquisitions



### Incubate New Technologies

TelePresence,  
IP Telephony,  
Wireless,  
Quad,  
Pulse



### Partner w/ Other Companies

Network Admission  
Control  
(Microsoft,  
Symantec, others)



### Design New Products

CRS-3,  
IOS XR,  
ASR,  
Nexus



### Spin in Investments

Andiamo



1986: AGS  
multi-protocol router



1993: Cisco 7000  
Series Router



2010: Carrier Routing  
System (CSR)-3

# Leadership in Innovation

## One of the Best Companies for Innovation

**Bloomberg BusinessWeek**

#12 in 2009

Exclusive Webinar Invitation:

### The Next Billion Dollar Idea is Here. UNCOVER IT.

Great Companies Know How to Uncover Great Ideas.

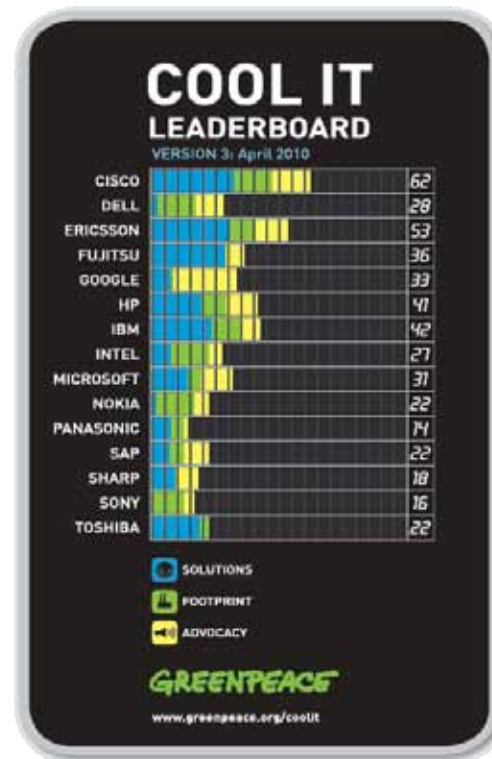
Join us for an exciting webinar series that reveals how companies are using new Platforms, Processes and People to uncover new ideas within their companies.

**Paul Pluschkell**  
CEO & Co-Founder

**Featured Client:**  **CISCO**  
**Date:** June 29th  
**Time:** 10:00am PST - 10:45am PST  
**Contact:** rtso@spigit.com, eschumpert@spigit.com

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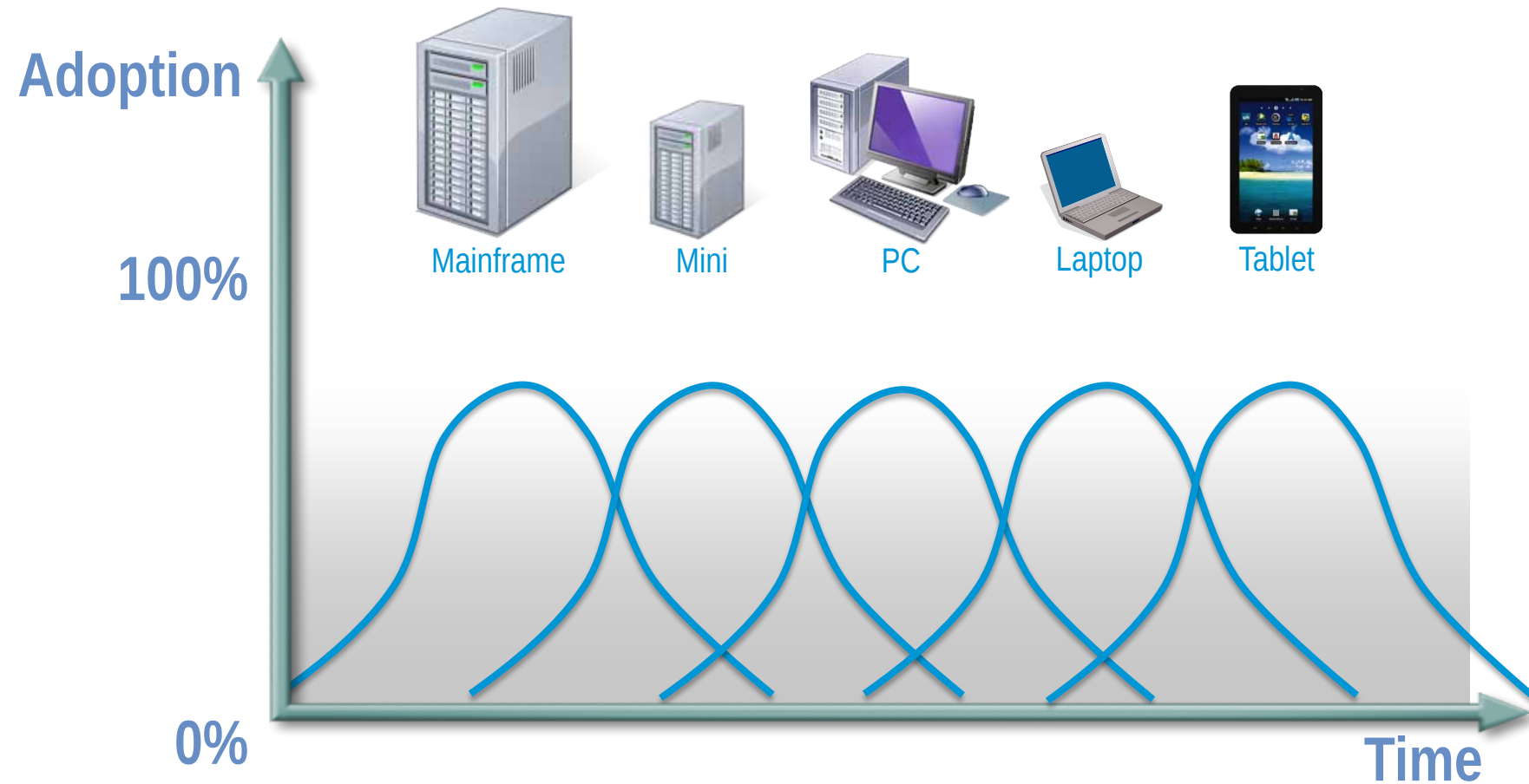


# Forbes

“The absolute best-in-class implementation of innovation is what Cisco is doing with its emerging technologies group.”

Forbes Magazine  
Geoffrey Moore  
Managing Director, TCG  
Advisors

# Technology Architectures Wax & Wane



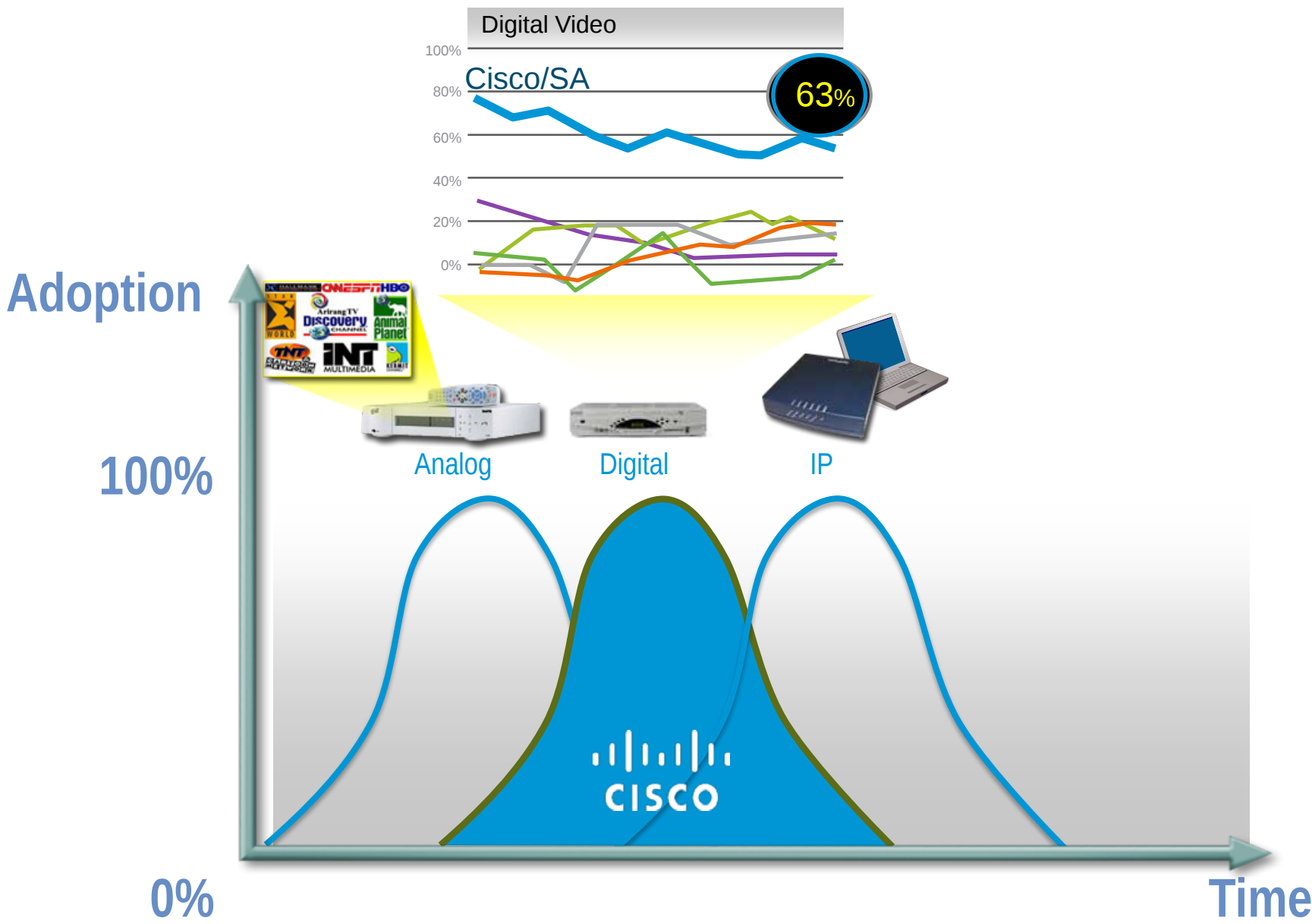
I think there is a world market for maybe five computers

TJ Watson, IBM

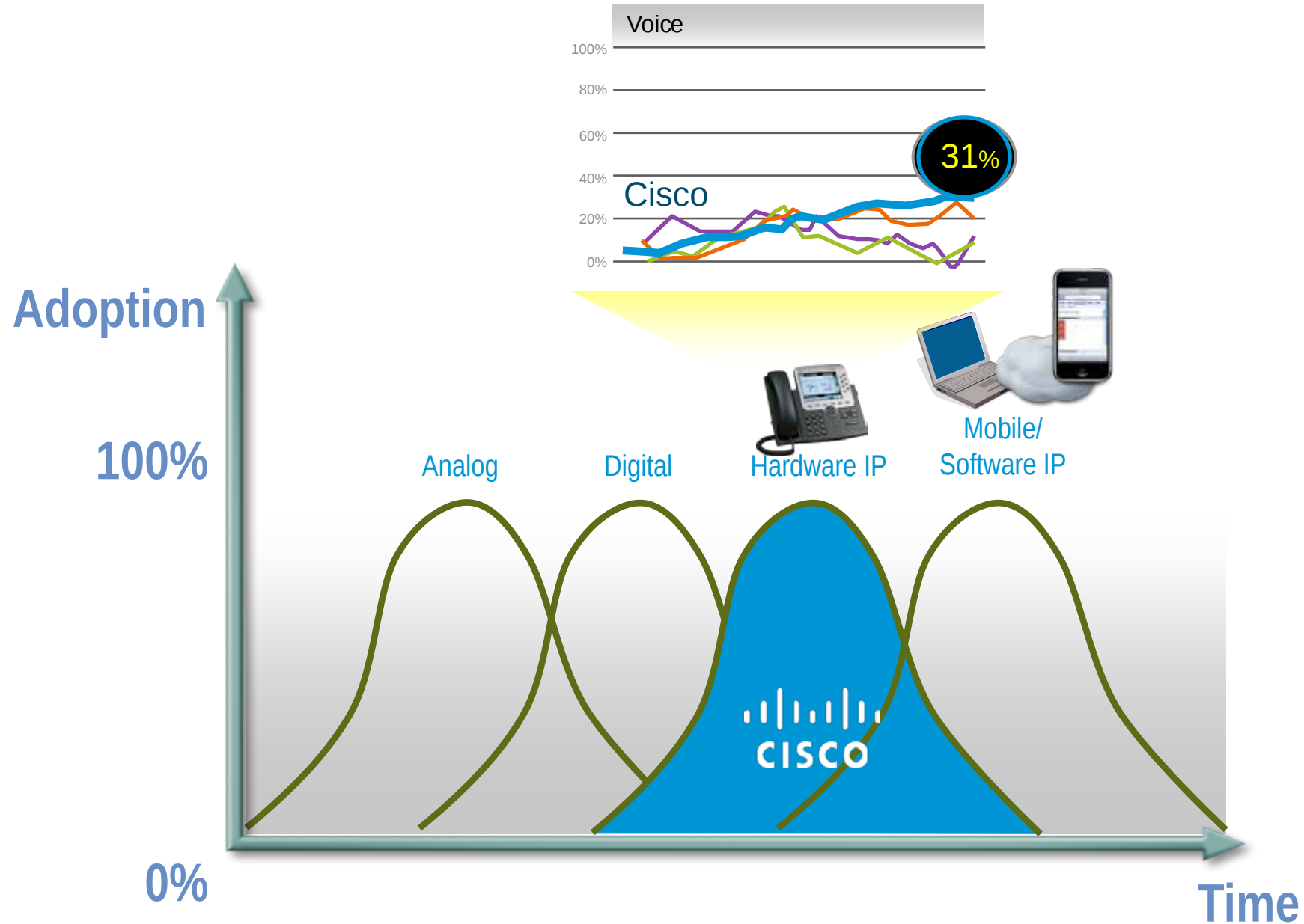
In 2005, laptop computer sales accounted for 50.9 % of all PC sales.

Cnet.com

# The Future of Television

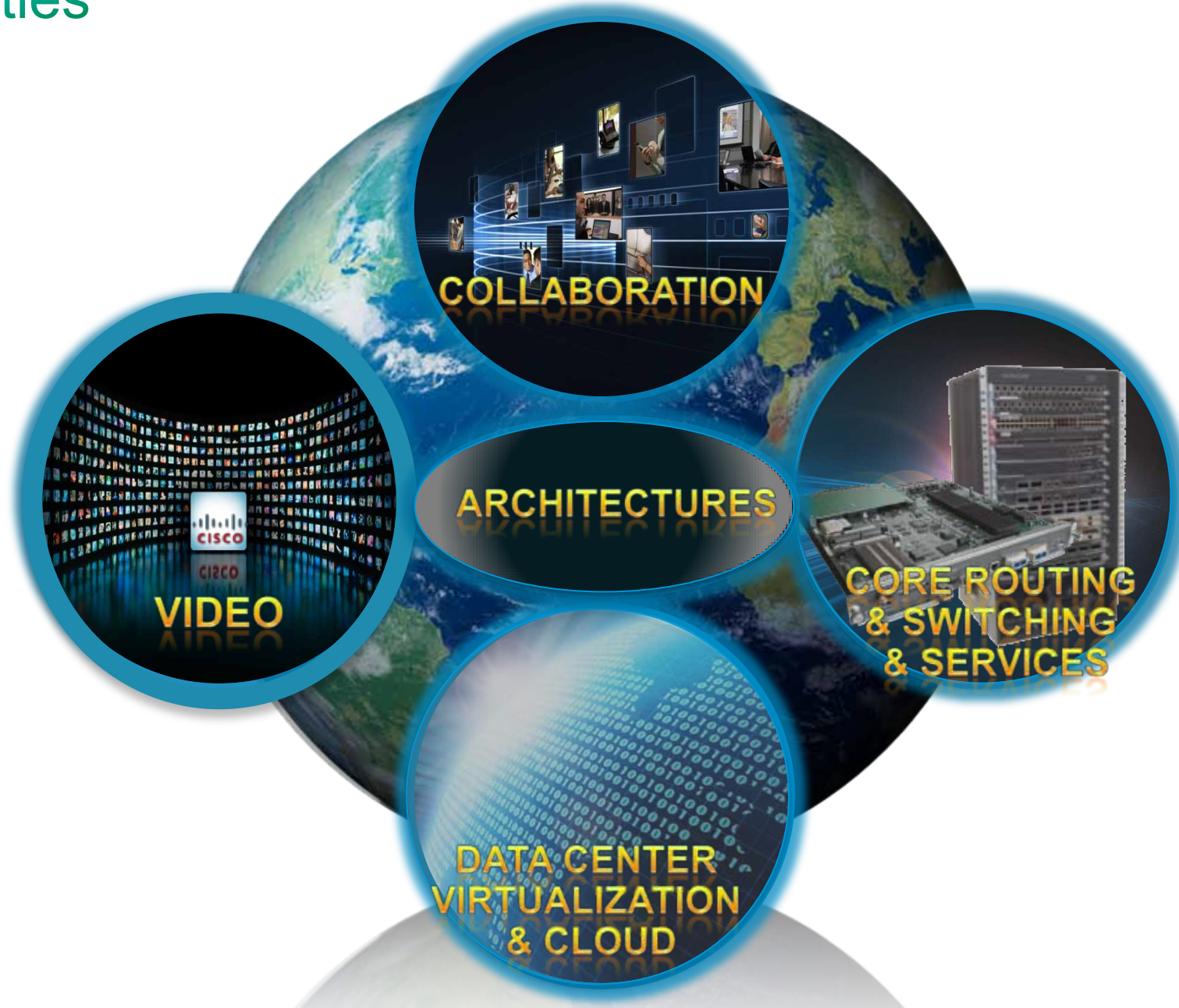


# The Future of Telephony



# Cisco's Search for Opportunity

## Top 5 Priorities



# Collaboration is Changing...

**From...**

PC



Documents



Intranet



Search



**To...**

Multiple  
Devices



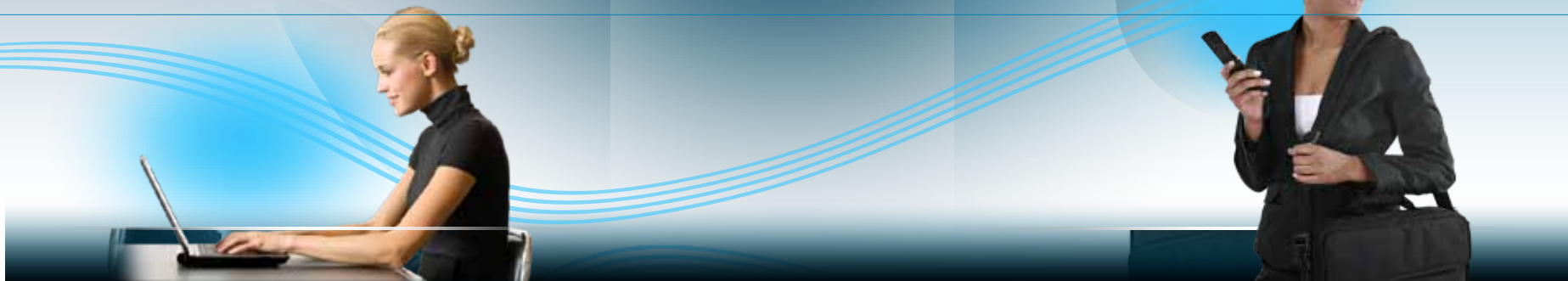
Rich Media



Extranet



Information  
Finds You



# Core Technologies

## Routing Innovation Continues

### Video and Collaboration



### Cloud and Virtualization



### Wired-Wireless



Cisco ISR G2

UCS Express

TrustSec

Medianet

Application Velocity

Virtual Desktop Services

WebEx on ASR

4G

WAN Optimization

S/W Redundancy (ASR)



Cisco ASR 1000

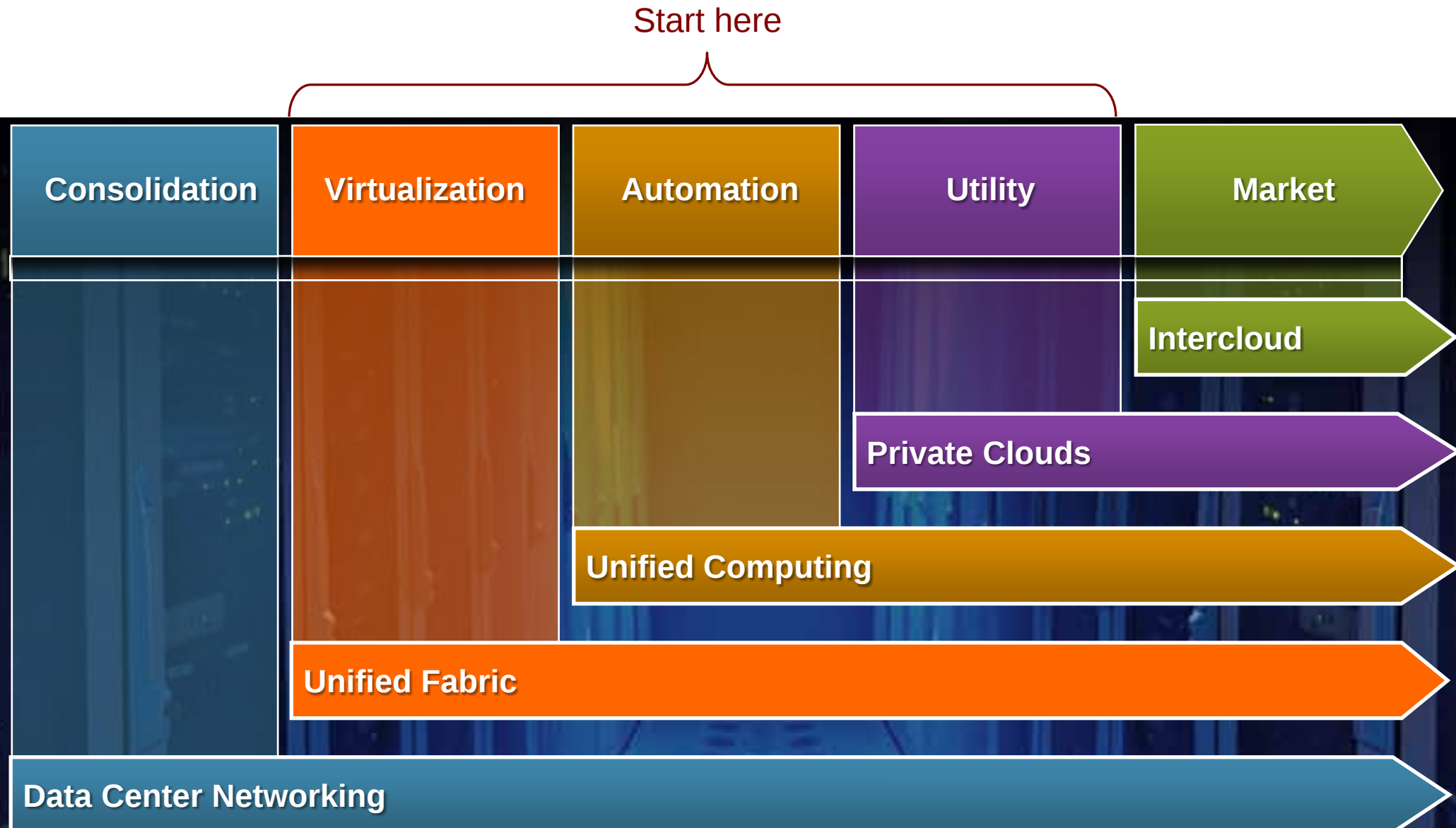
Smart Install

EnergyWise

Scalability to 360 Gbps (ASR 1013)

40-Gbps ESP (ASR)

# Virtualization Enables Cloud Models



# Accelerating Pervasive Video

## With Use Cases

- Meetings
- Training / Education
- Safety & Security
- Events
- Customer / Patient Interaction
- Advertising
- Organizational Communications



# Cisco Architectures

## The Foundation for Transforming Business



# Bank of Montreal

## Boosting Revenue With A Fresh Client Experience in Wealth Management & Private Banking

### Engagement and Solutions

- “Virtual Advisers” via TelePresence

### Results

- Increased revenue
- Shorter sales cycles
- Higher customer satisfaction
- Increased trust
- Improved productivity



# Toronto Waterfront

## A Smart & Connected Community

### Engagement and Solutions

- IP convergence and integration over Cisco IP backbone
  - Lighting Systems
  - Physical Security
  - HVAC Systems
- Deployed lighting controls from Cisco IP phones
- 'Virtual Security Guard' using TelePresence
- IP-based Centralized Management System

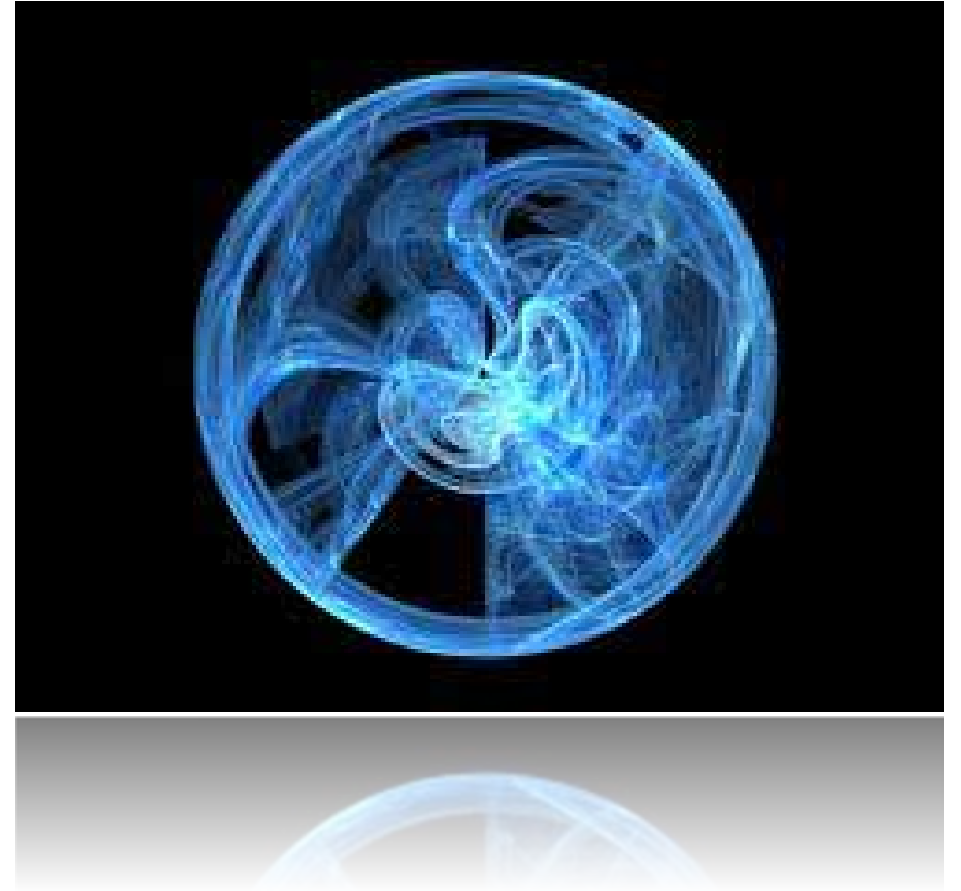
### Results

- 60% energy savings

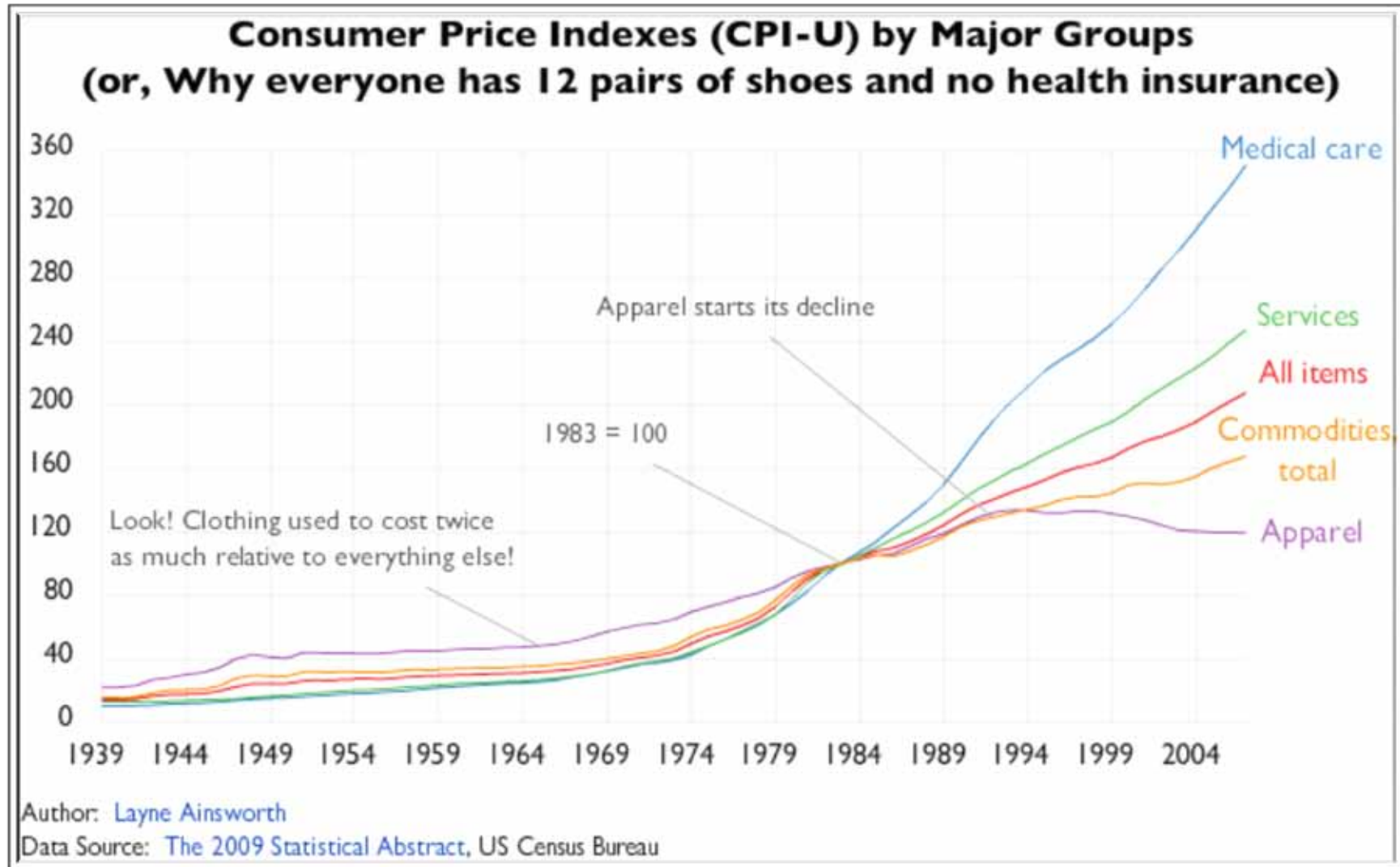


# What's Next?

## The Next 5 Years



“When there's an imbalance of supply and demand, innovation thrives” – Geoffrey Moore



# Medicine 2.0



Stan

weeks

## **Solid-State Systems Could Sequence a Genome For \$100**

**2015: hours, \$100**

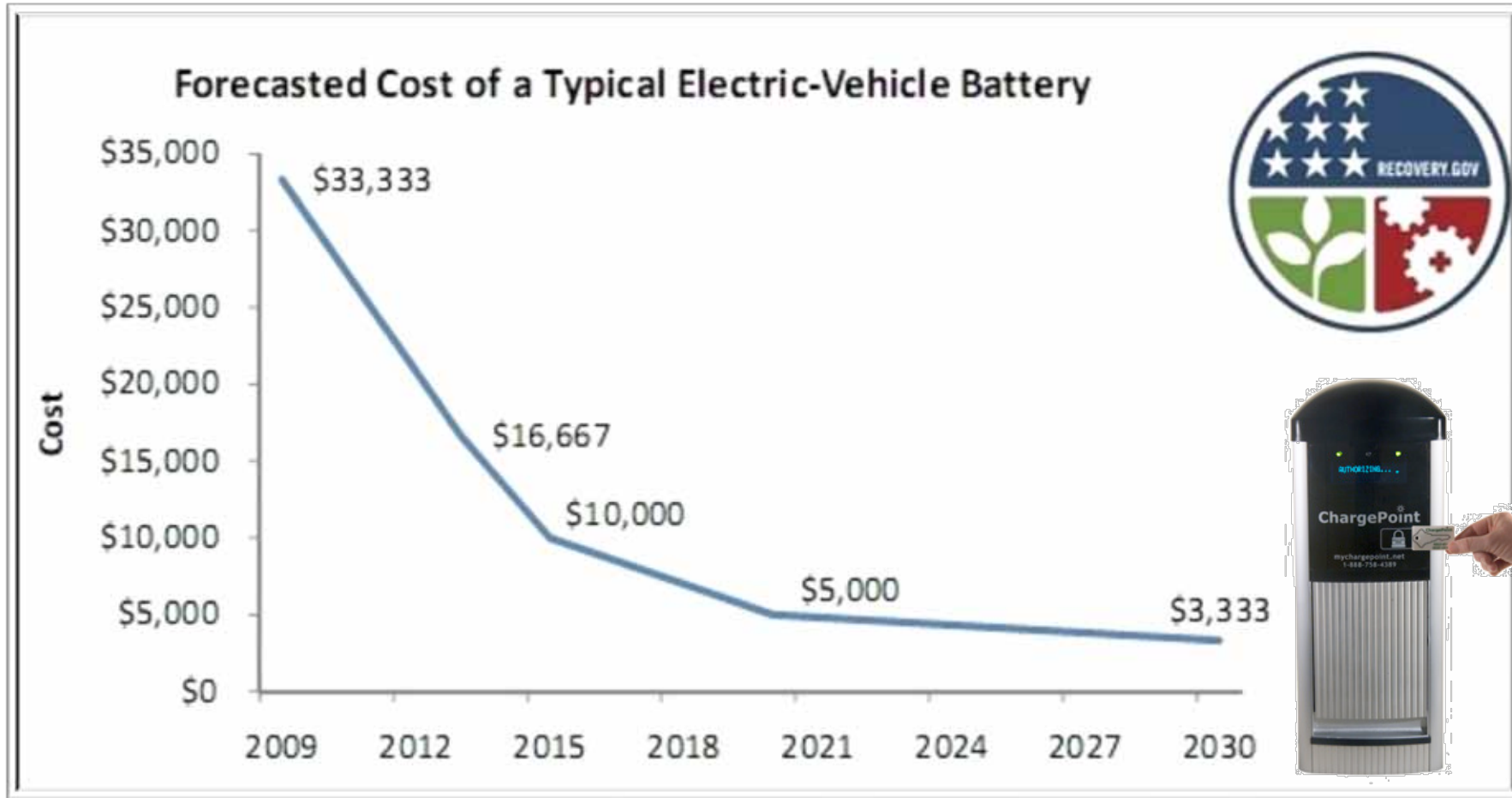
2010: 3 weeks, \$50K

2004: 13 years, \$3B

<http://inform.com/science-and-technology/stanford-prof-sequences-genome-weeks-627084a>

<http://gizmodo.com/5581377/solid+state-systems-could-sequence-a-genome-for-100>

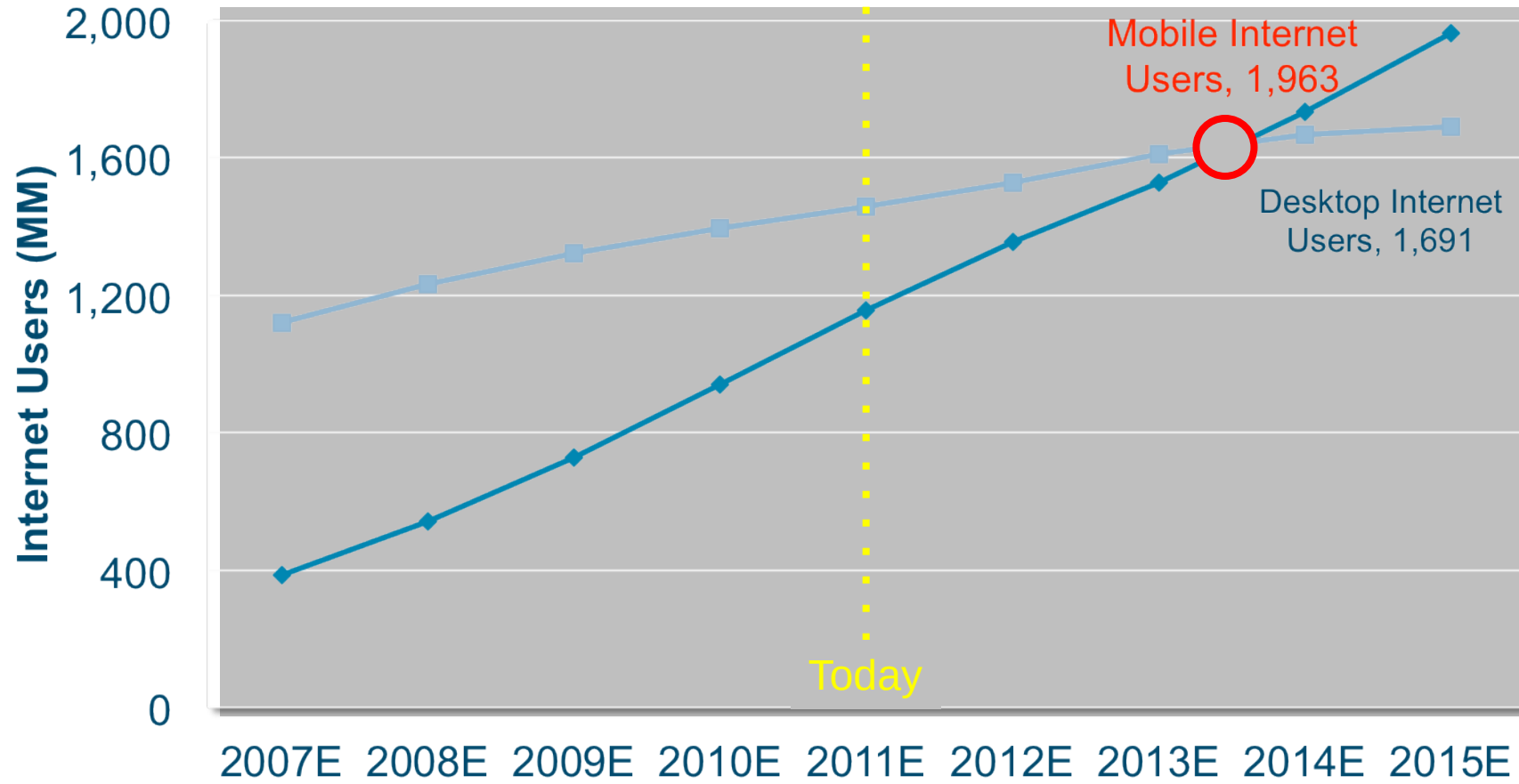
# The Migration to Electric Vehicles has Started



# Mobility Will Dominate Connectivity

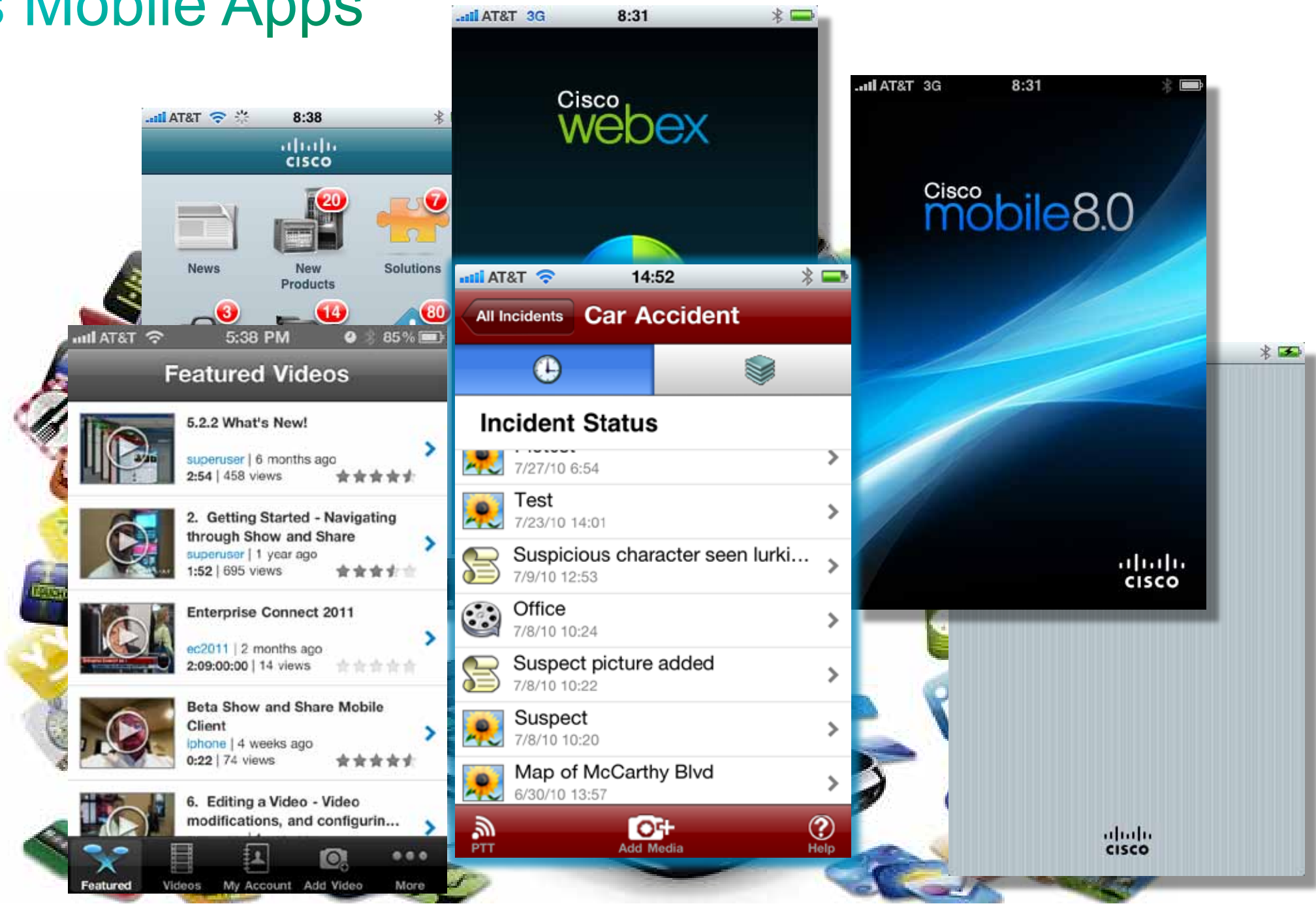
## Users > Desktop Internet Users Within 3 Years

Global Mobile vs. Desktop Internet User Projection, 2007 – 2015E



Source: Morgan Stanley Research

# Cisco's Mobile Apps



# The Next 5 Years...



**Virtual  
Desktop**



**3D IP TV**



**Events**



**Biometrics**



**Education**



**Online  
gaming**



**Connected  
Transportation**



**Analytics**

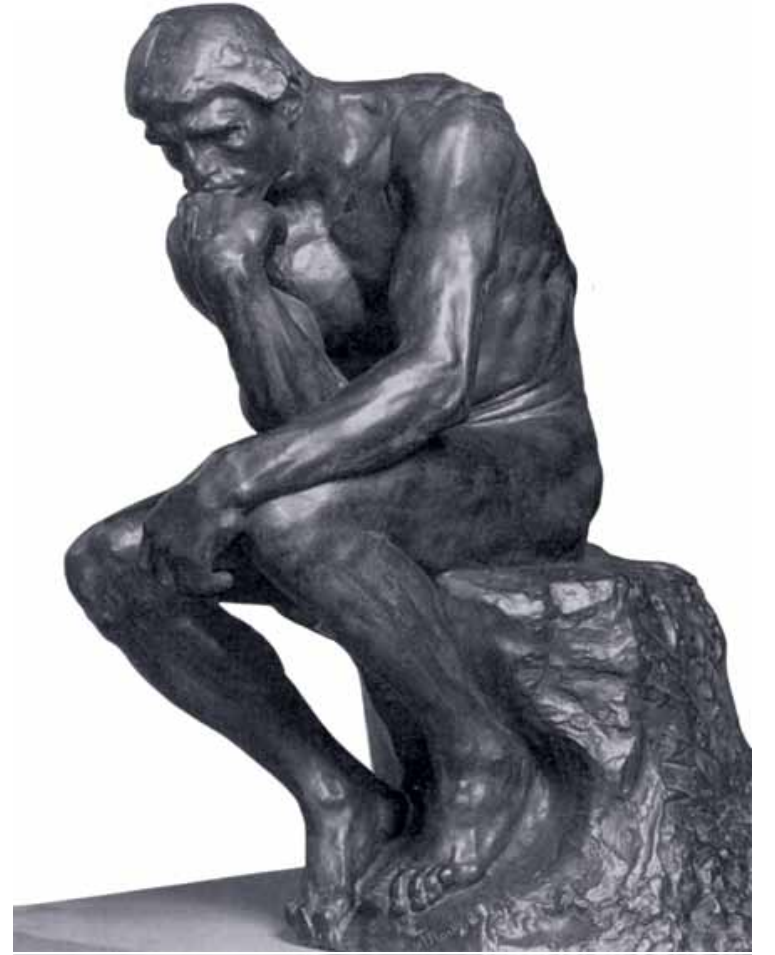


**Video  
Storage**



**Healthcare**

# Summary & Conclusions



# The Network Is the Common Medium

**Sensing**

**Computing**

**Energy**

**Mobility**

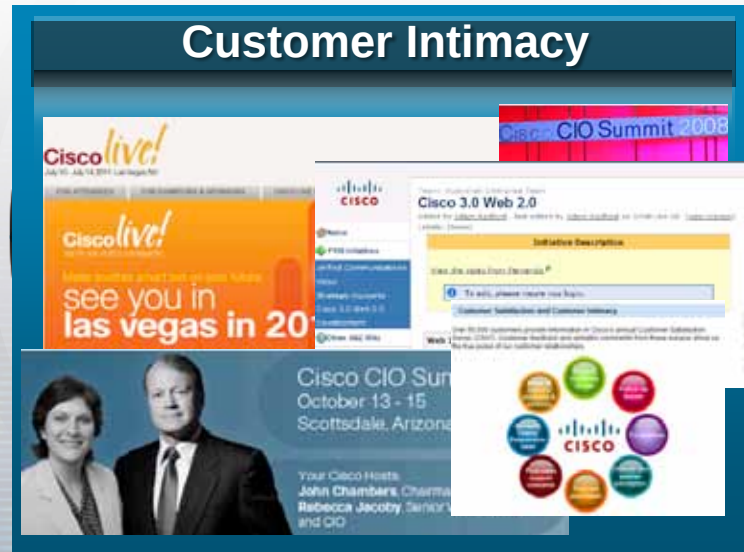
**Video**

**Collaboration**

**Voice**

**Data**

# Cisco: Your Partner for Innovation



Thank you.

