

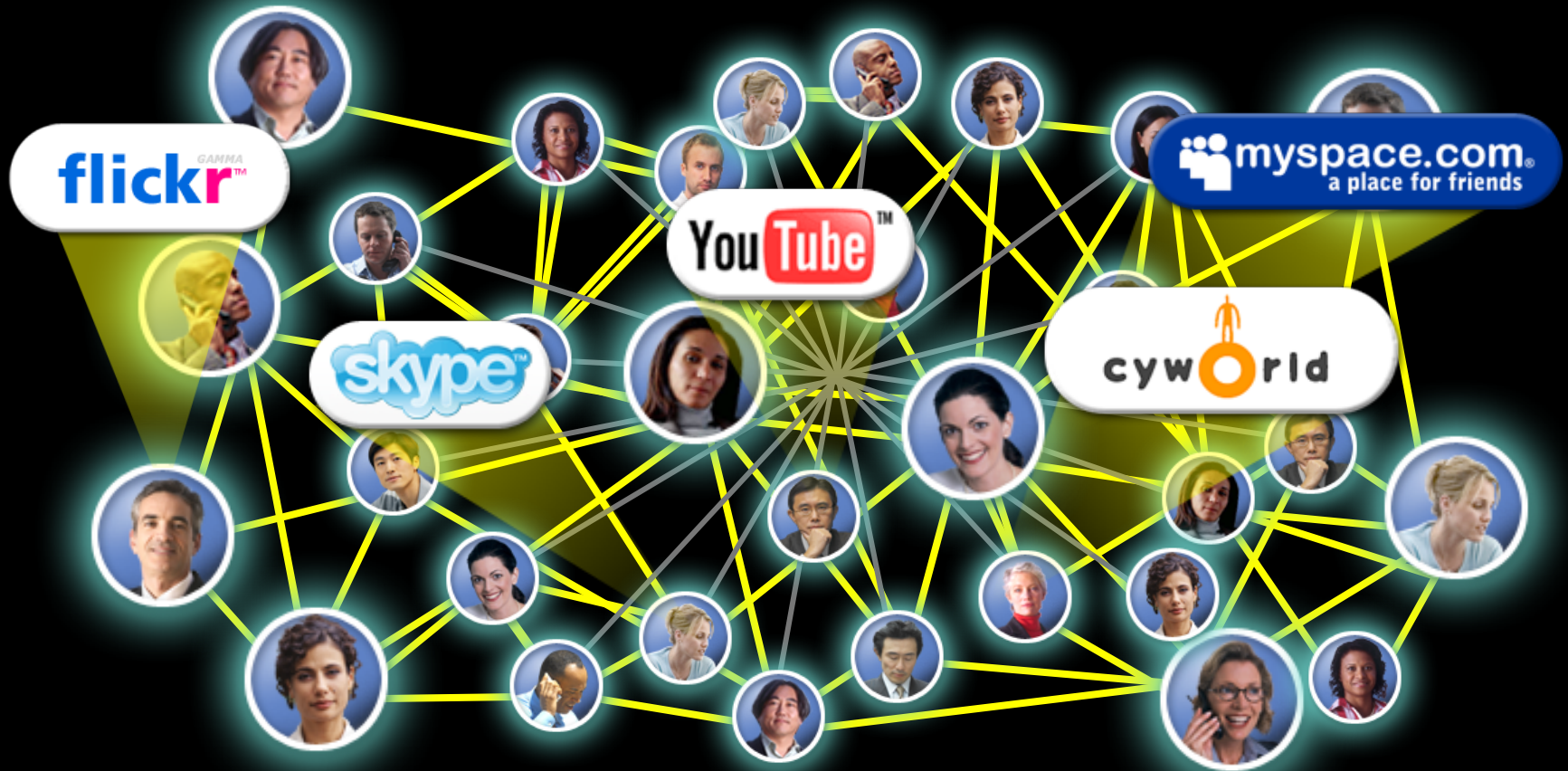


Cisco och IP-NGN



Henrik Bergqvist
Teknisk Direktör
Cisco Sverige

The Human Network



Connecting People

Consumer/Data Center

The Connected Life On the Move...

**Get the
high score**



**Download the
latest tunes**



**Share photos
with family**



**Watch TV
on train,
program
DVR for
tonight**



**Use phone
as a wallet
and ticket**



**Schedule
a meeting**



Cisco Service Provider Vision

Connecting Customers with Services,
Services with Networks,
and Networks with Each Other

Consumer



Small/Medium
Business



Enterprise



SP
Wholesale



IP Next-Generation Network



VPNs



Content



Transport



Mobility



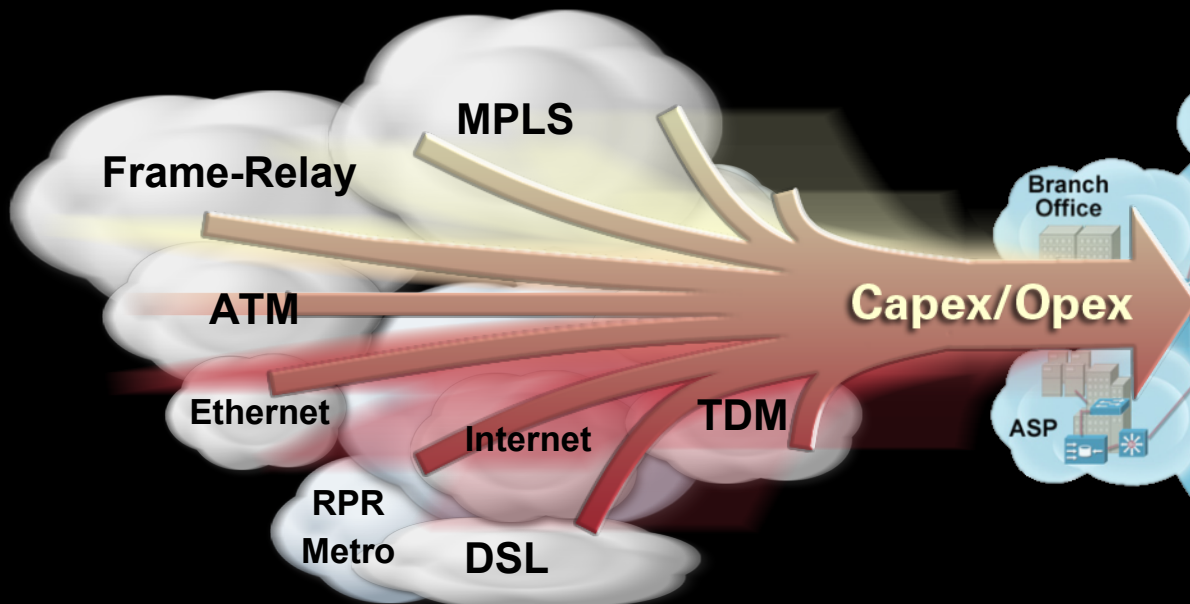
Internet



Voice and Video

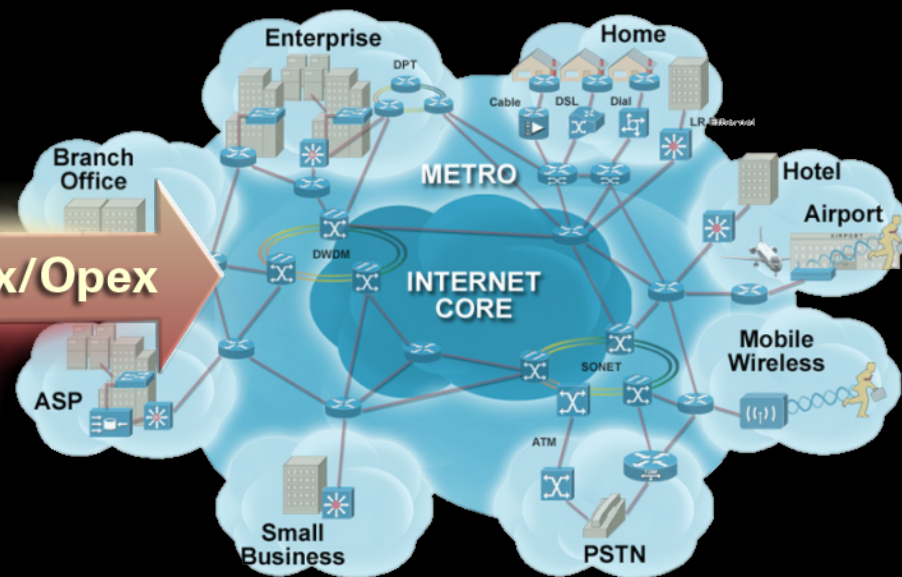
Mobile Core Networks need to change

Multiple Interworked Networks



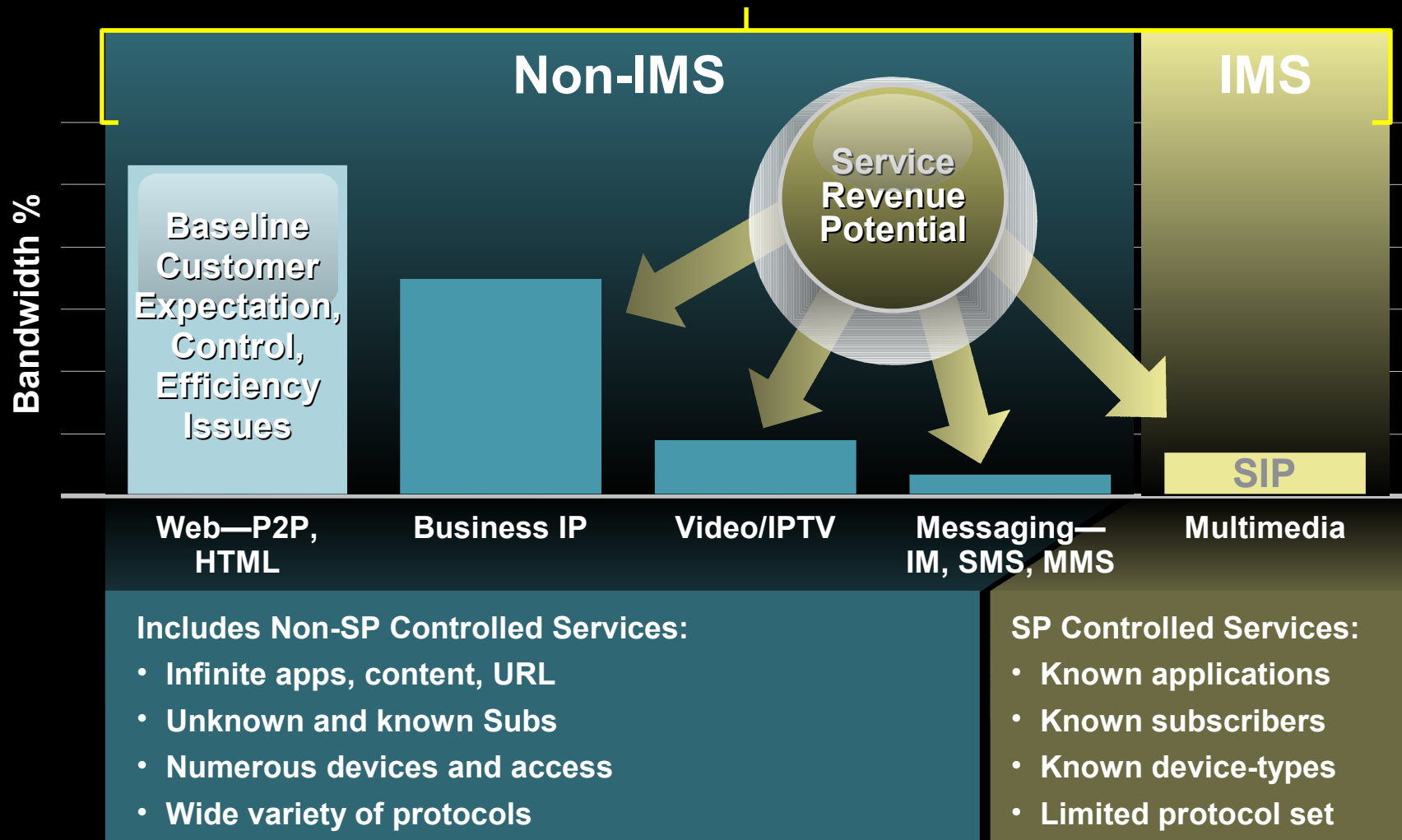
- Often connection oriented
- End-to-end provisioning
- Scalability issues
- Capex intensive
- Less Opex efficient

Converged Core



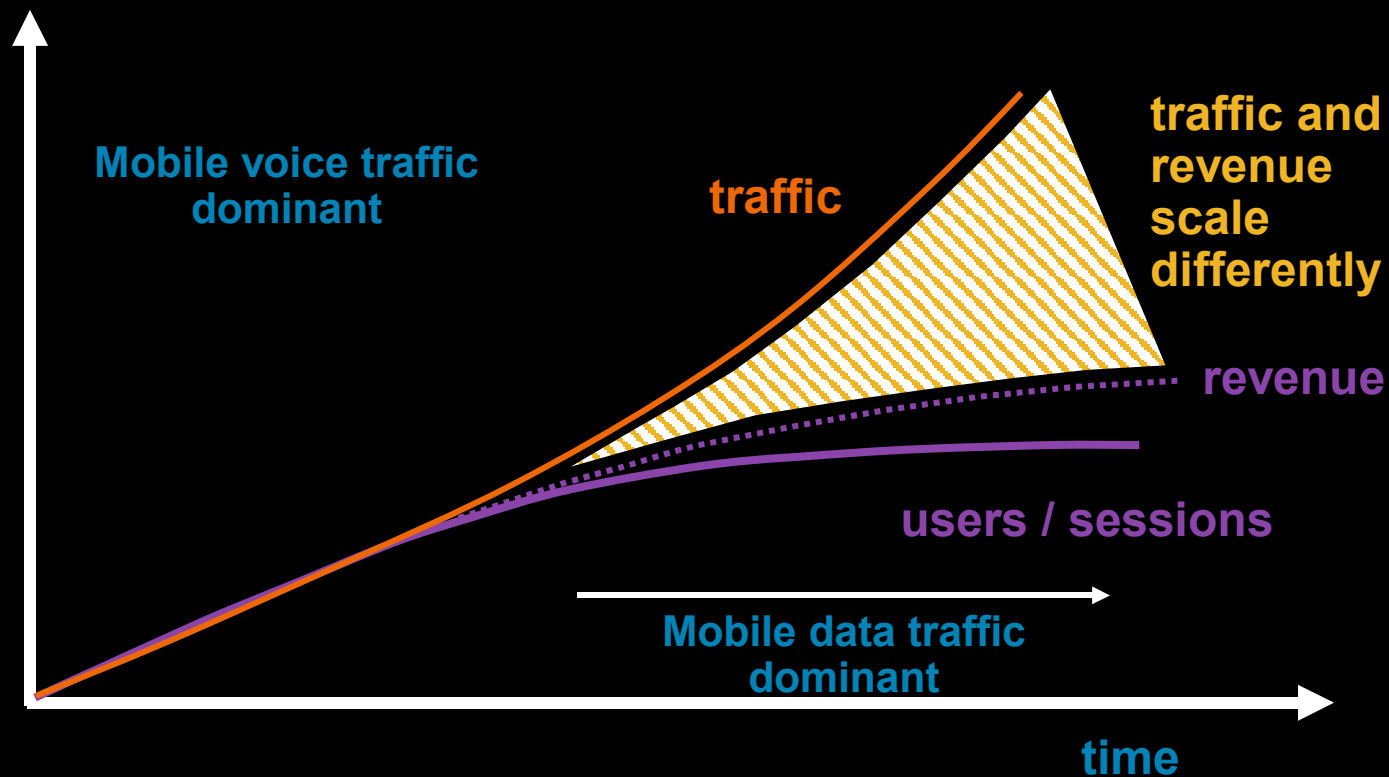
- Mostly connectionless
- IP/MPLS aware end-to-end
- Reduced provision replication
- Highly scalable
- More Capex and OPEX efficient

Bandwidth Traffic and Service Mix Varied Extends Beyond SIP, Coexistence Needed



Mobile Broadband Evolution

Convergence of Tariffing Models



Over-the-Top Model Progress

Voice

- Skype: 150M+ users
- 2 Years



Video

- YouTube: 120M streams/day
- 9 months



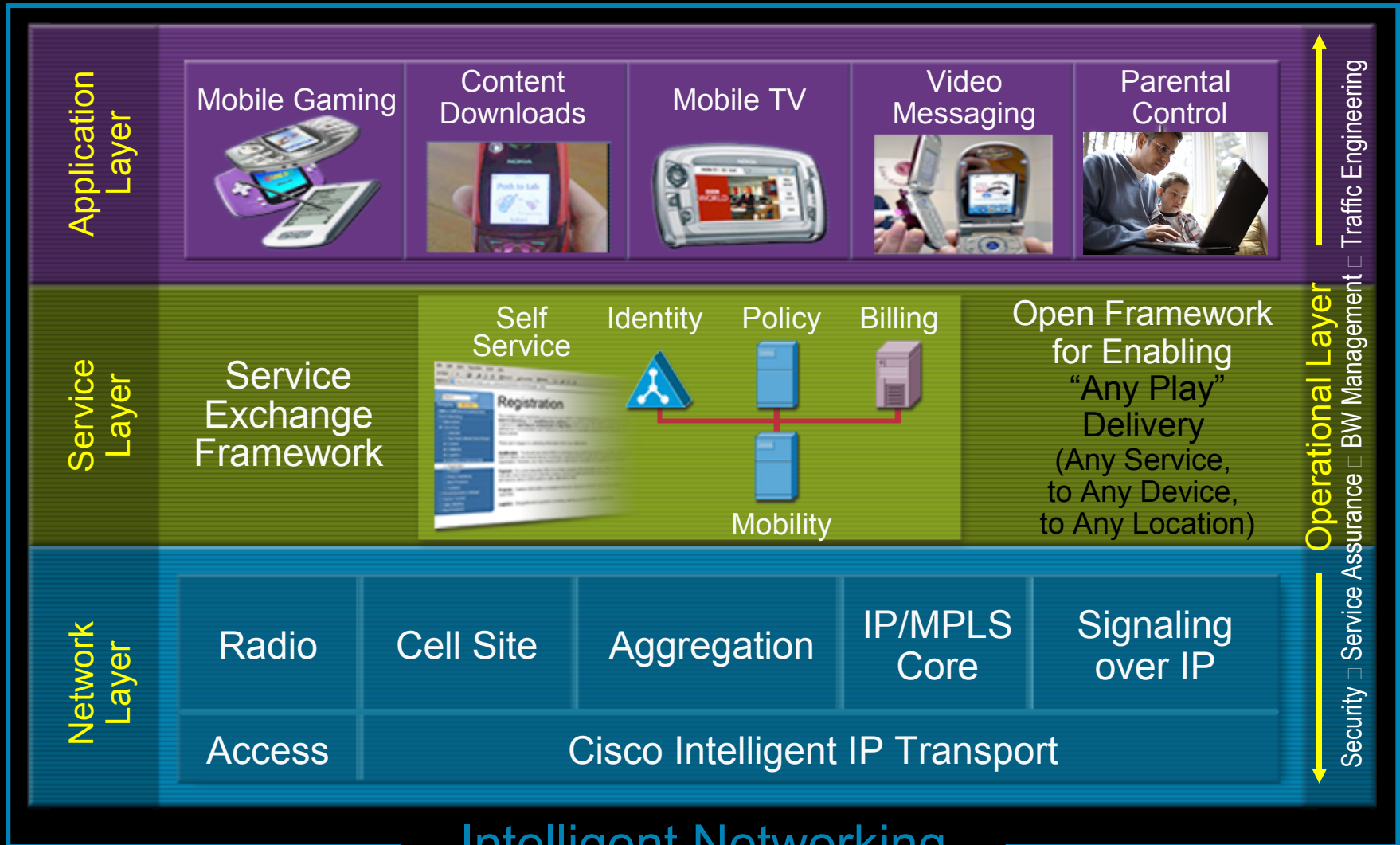
Community

- 50M+ visitors per month
- 3 years



Cisco IP NGN Mobile Architecture

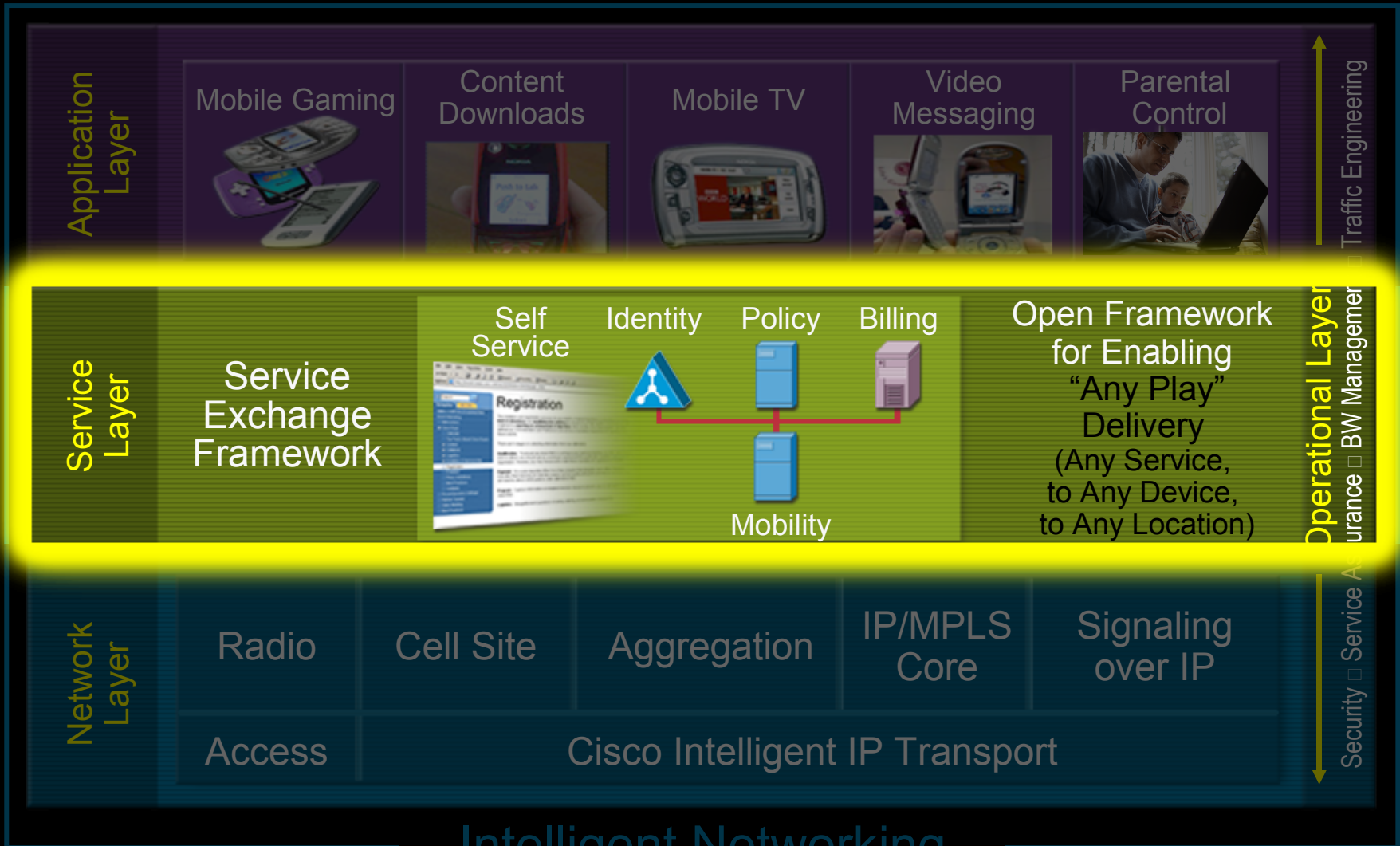
Achieving a Whole Greater Than the Sum of the Parts



Intelligent Networking

Cisco IP NGN Mobile Architecture

Defined by Multiple Layers of Convergence



Service Exchange Framework

Open Framework for “Any Play”

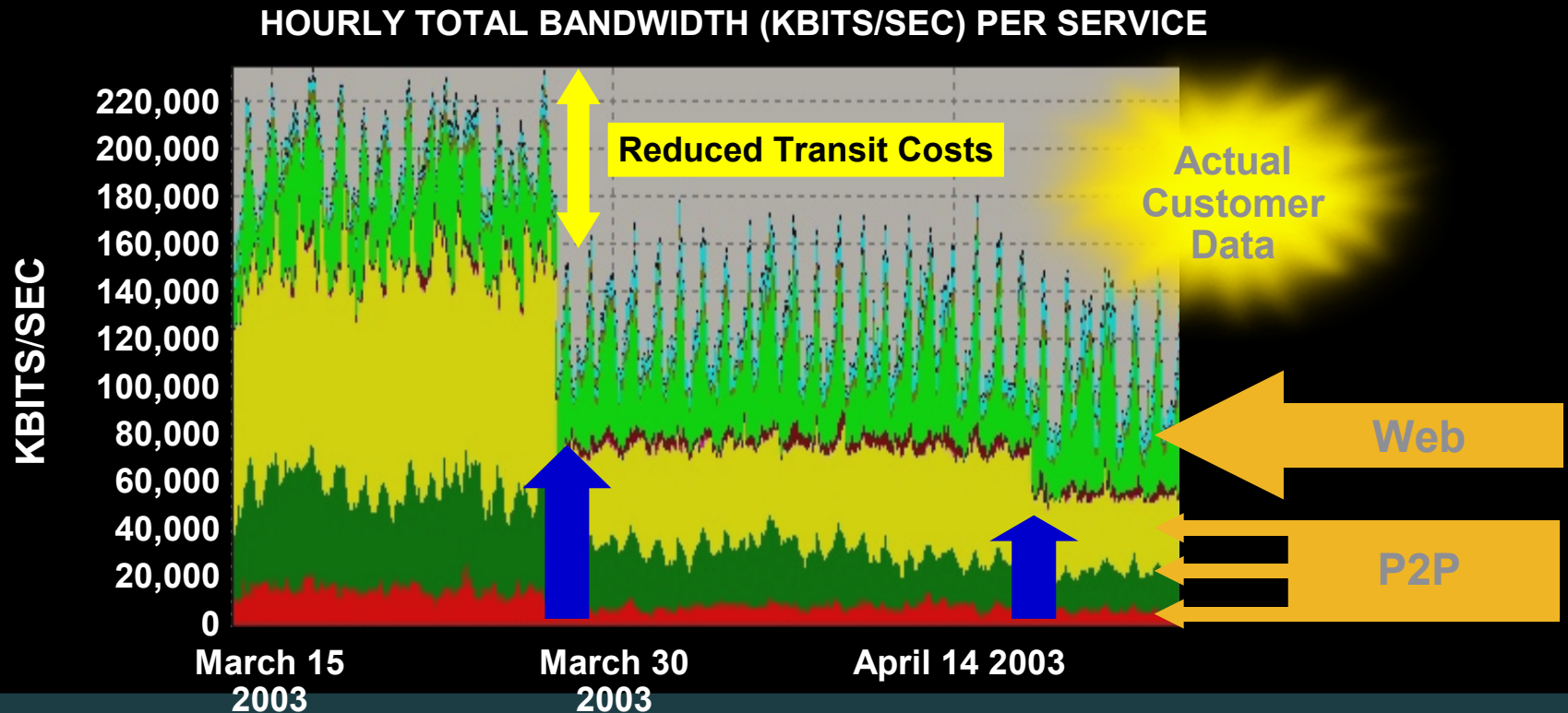


- Protecting branded service
- Access independent service control
- Speed to service
- Open interfaces/standards support

Service
Exchange
Framework

Efficiencies: Reduced OPEX & CAPEX

Example: Application Traffic Optimization

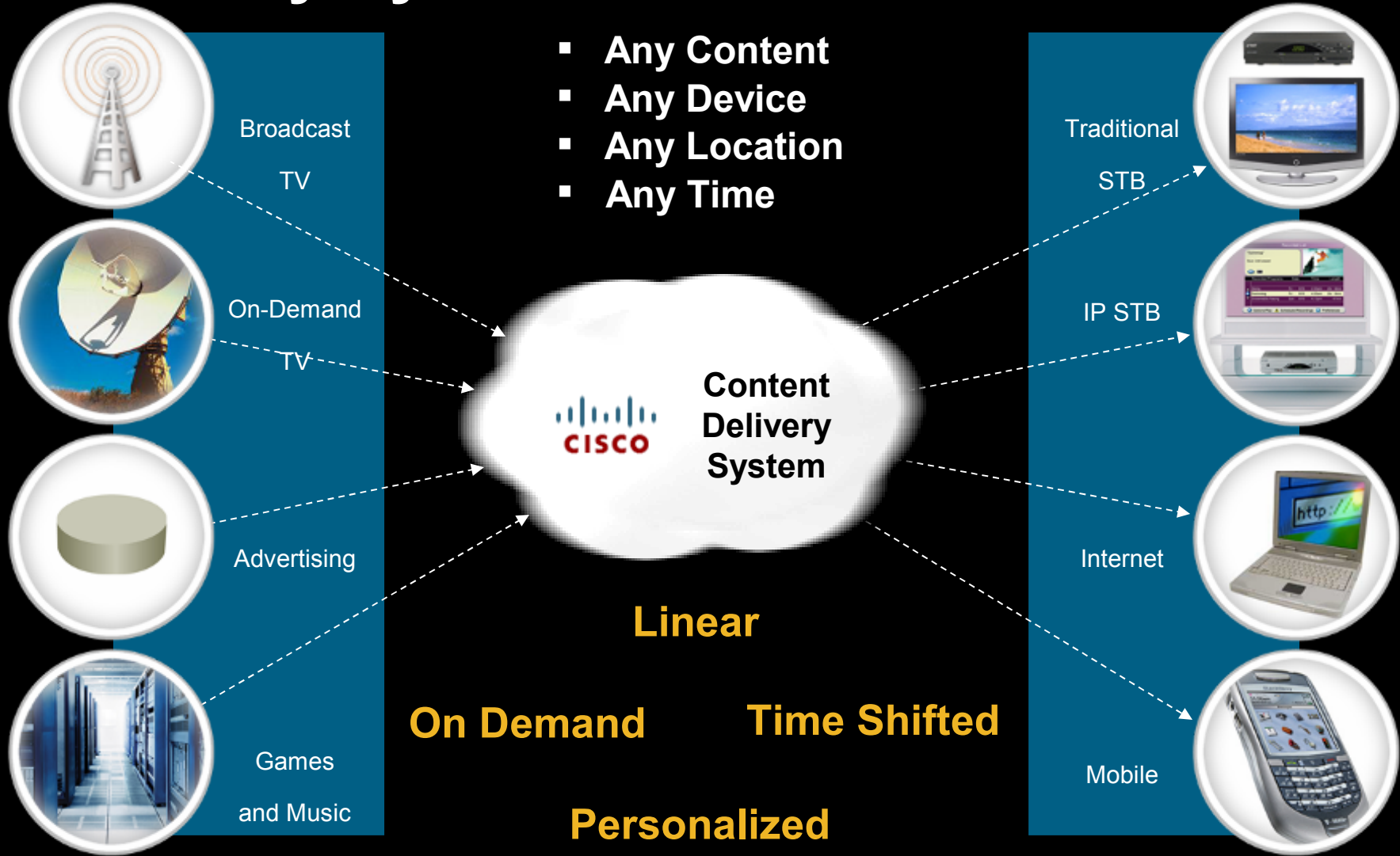


Reduction of peer-to-peer traffic, delivers:

- Improved performance and more bandwidth for interactive, billable apps
- Reduction of number of support calls with level of service complaints

Introducing Cisco CDS - Content Delivery System

- Any Content
- Any Device
- Any Location
- Any Time



Introducing the Cisco Visual Quality Experience (VQE) Technology

Preserve

Protecting IPTV Quality of Experience

- **Real-time video error repair**
 - Eliminates effects of uncorrelated bit errors on individual DSL lines
 - Local re-transmission of dropped IP packets to STB in Sub-100ms
- **Scalable, standard-based rapid channel change**
 - Maintains consistent user experience
 - Sub-100ms channel change time
- **Diagnoses problem areas**
 - Monitoring and reporting of faults per DSL line above threshold



Phase 1: Network Appliance
Phase 2: Integrated into Cisco 7600
Edge Router

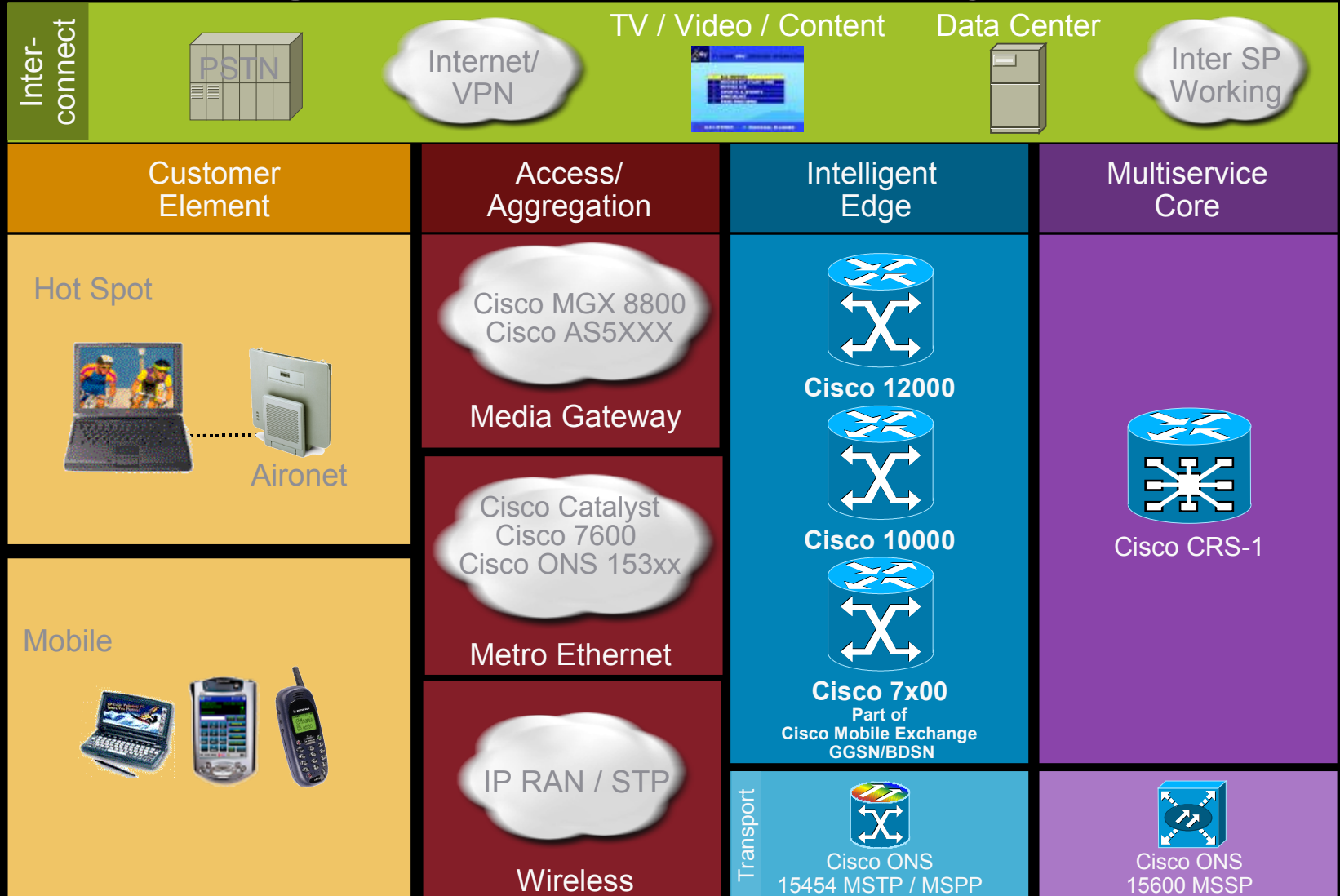
VQE does for Video
what Dolby did
for Stereo

Cisco IP NGN Mobile Architecture

Defined by Multiple Layers of Convergence



Cisco IP NGN Technology—Mobile Spanning Secure Network Layer



Cisco CRS-1

Power Behind the Screen

- **Unprecedented service flexibility**

Intelligent video distribution

Secure virtualization for Entertainment and Business Grade Services

IPoDWDM Integration for scale and performance

- **Continuous system operation**

True Telco grade OS—IOS-XR

Hitless in-service hardware and software upgrades

- **Unparalleled system longevity**

Multi-chassis fabric scales to 92Tbps

40G Spanning 4, 8 and 16-slots Configurations

100G Ready



Over 80 Global Customers
- Telia and 1 confidential in Sweden

Experiences on the Human Network

Delivered by Experience Providers, Enabled by Cisco

**Connected
Life**



**At
Home**



**At
Work**



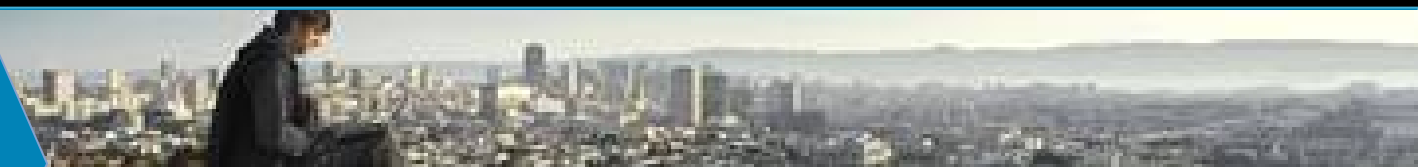
**On
the Move**

Personalized experiences for individual preferences

**Experience
Providers**



Delivers unique, integrated experiences



Provides the enabling IP NGN foundation

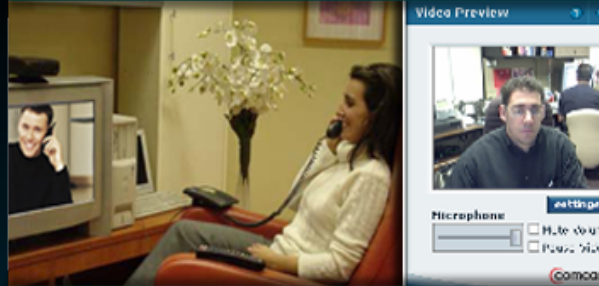
Tiotusenkronorsfrågan

- Hur blir fördelningen mellan operatörsdrivna tjänster och Over the top tjänster
- Cisco har lösningarna för båda

Video is Key for Experience Delivery



High Definition



Video Phone



Video Streaming



Video-TV On Demand /
DVR/ Mobile TV



Tele Presence



Video to Other Devices

**Managed
Video
Applications**

**Video
Communications
Services**

**“Over the Top”
Video**

