



Redes IP de Nueva Generacion (IP NGN)

Habilitando la transicion hacia los Nuevos servicios personalizados y de Valor anadido



Junio 2007

Walter Sanchez

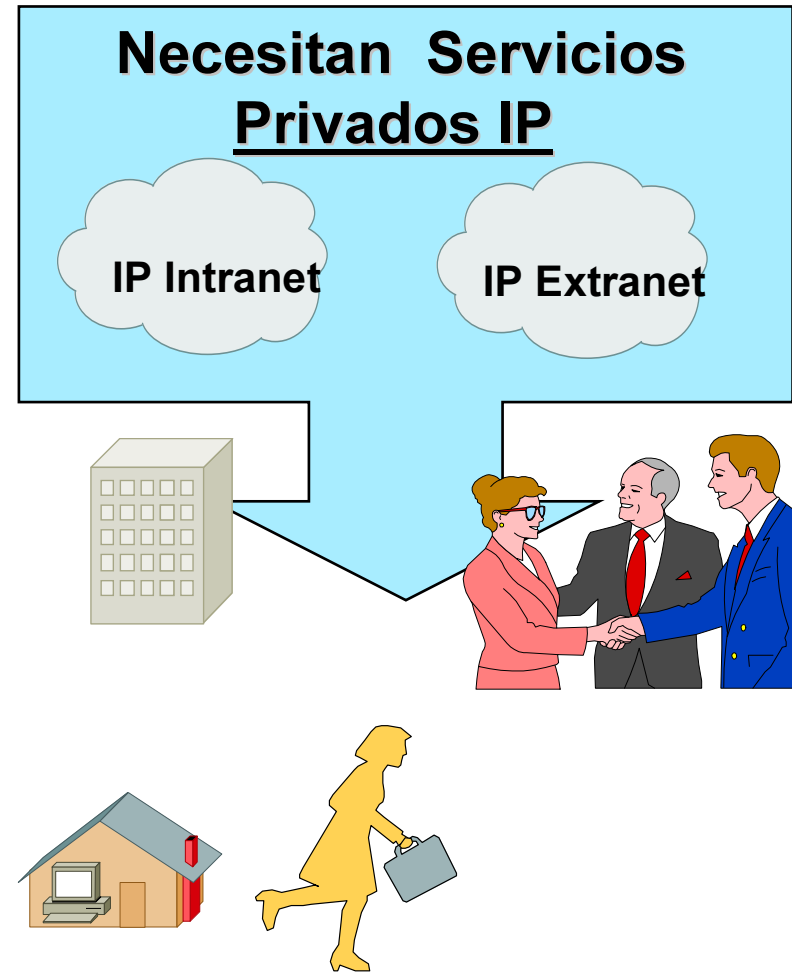
Cisco Systems Peru

Requerimiento de los Clientes

Aplicaciones sobre IP

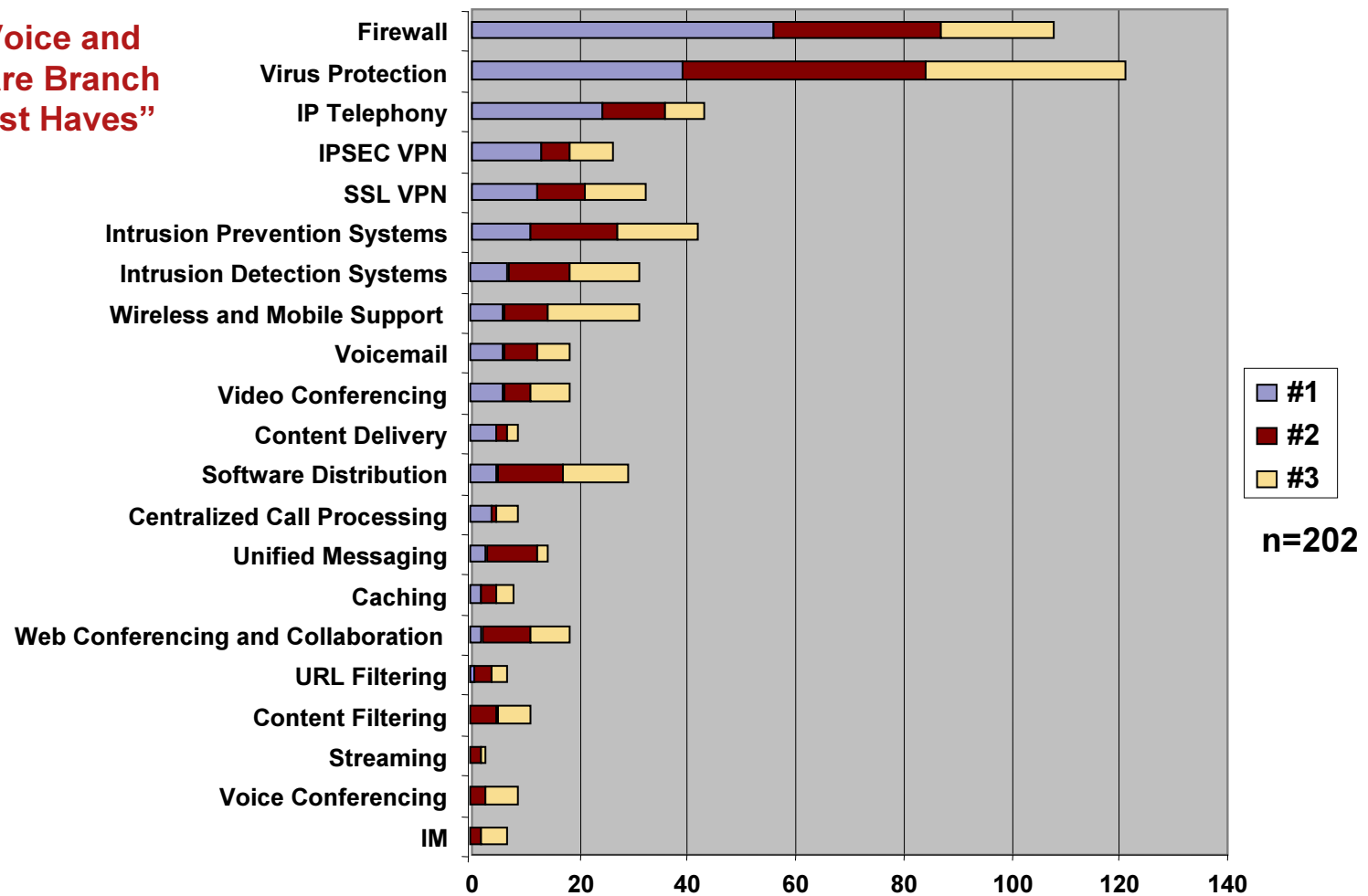
Service Cost Comparison

Service Provider	MeetingPlace	MCI Durcom	AT&T
Cost Per Minute	\$0.10	\$0.24	\$0.50
Cost for an 8 person, 1 hr meeting		\$115.20	\$240.00



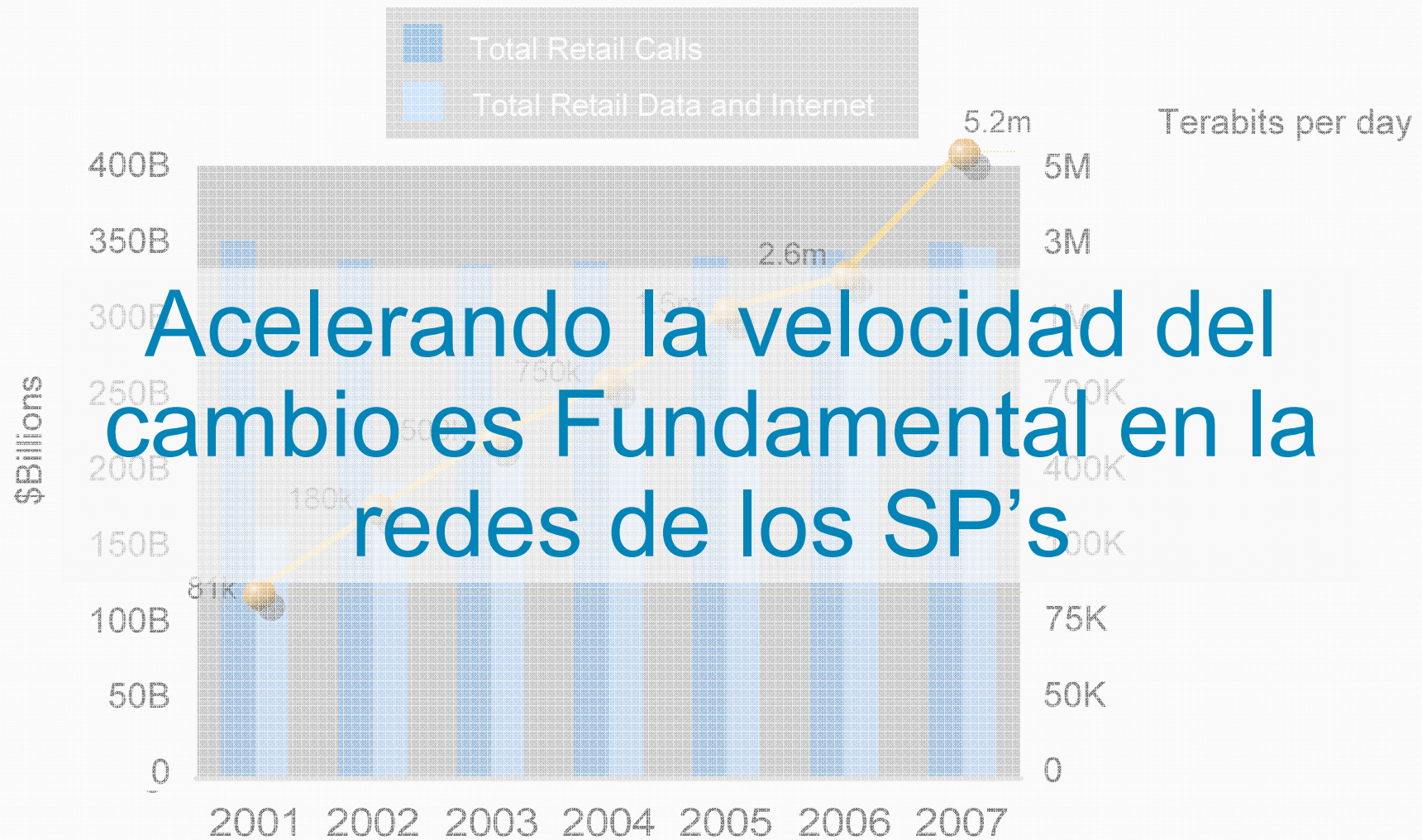
Las 3 mas altas prioridades para el Gastos en Oficinas remotas

Security, Voice and Wireless Are Branch Office “Must Haves”



Source: Yankee Survey Jan 2006

Dilema en el Modelo de Negocios de los SP's



Acelerando la velocidad del cambio es Fundamental en la redes de los SP's

Represents a compound annual growth rate (CAGR) of 95.6% from 2002-2007

Que estan buscando los SP's



Vision de Cisco para SP

Conectar a los clientes con los servicios,
Los servicios con las redes,
y las Redes con otras Redes

Residencial



Empresas
Pymes/Mediana



Corporacion



Mayoristas
SP



IP Next-Generation Network



VPNs



Content



Transport



Mobility



Internet



Voice and Video

Red IP NGN

Requiere multiples Niveles de Convergencia



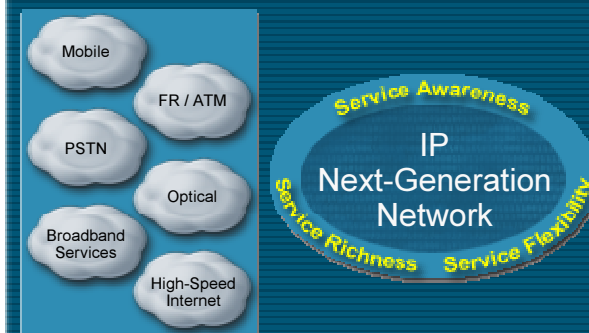
Convergencia de las Aplicaciones

Integracion de nuevos servicios innovadores IP de V/D/V sobre redes de Banda Ancha para **Incrementar los ingresos**



Convergencia de los Servicios

Continuidad de los Servicios a través del acceso para tener **Lealtad de los clientes e nuevos usuarios**



Convergencia de las Redes

Elimina niveles en la red para **Incrementar la eficiencia del OpEx/ CapEx**

Transformacion del Sistema Vial

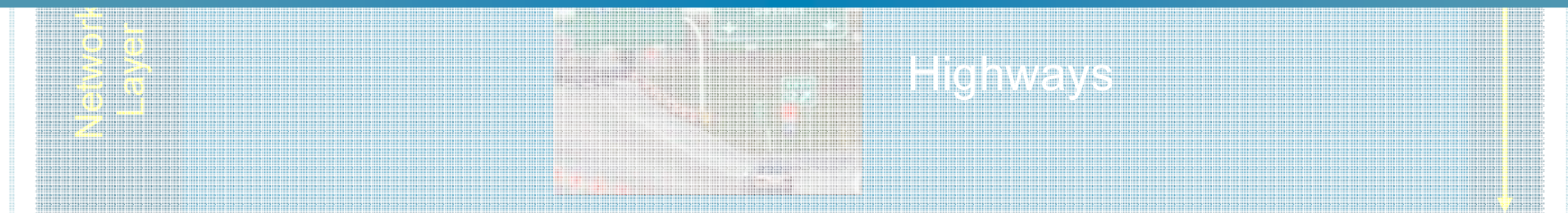
Analogia con la arquitectura de IP NGN



Para los usuarios finales
Convirtiendo su transporte en **Experiencia**

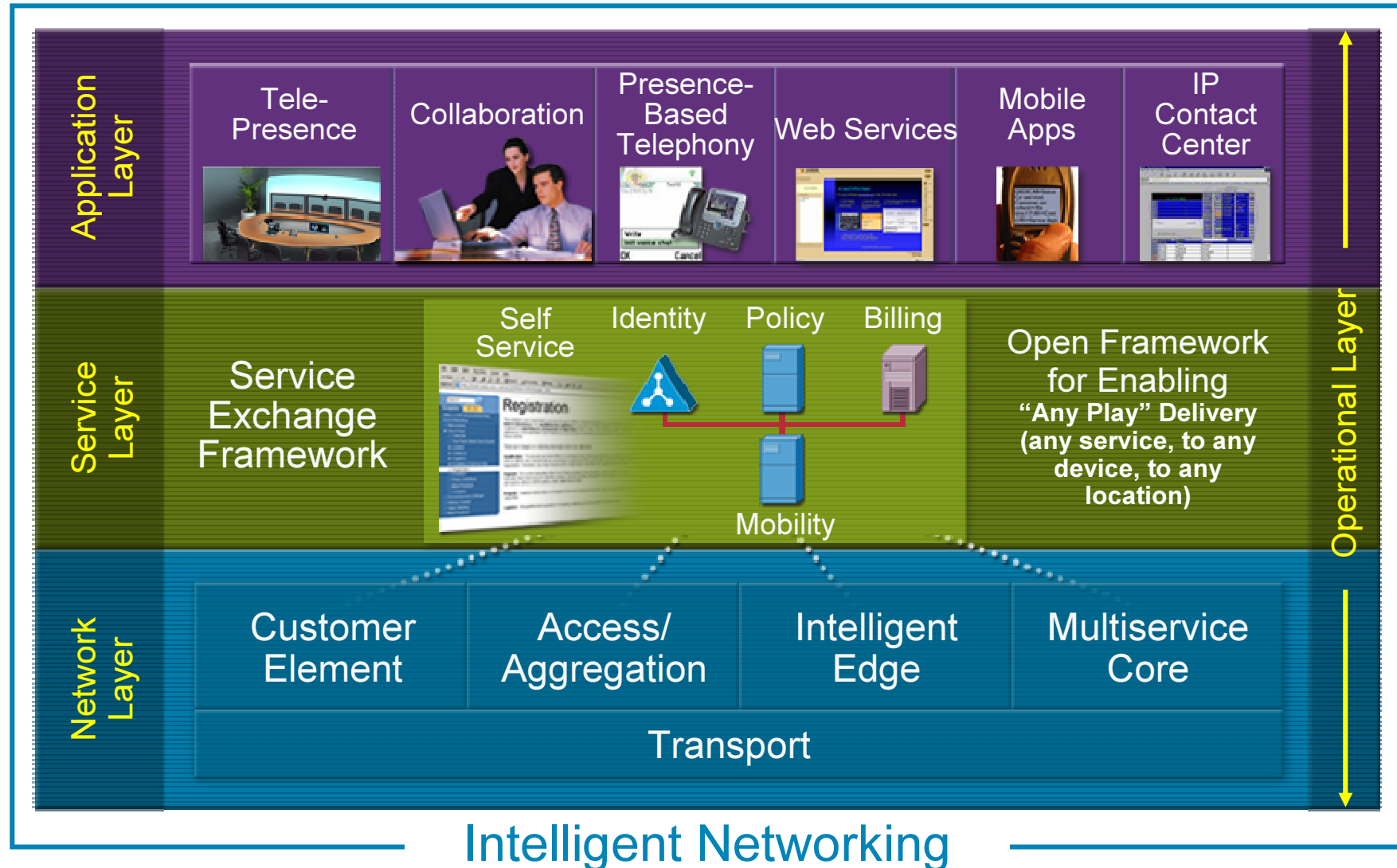


Para los SP
Convirtiendo sus costos en **Ingresos**



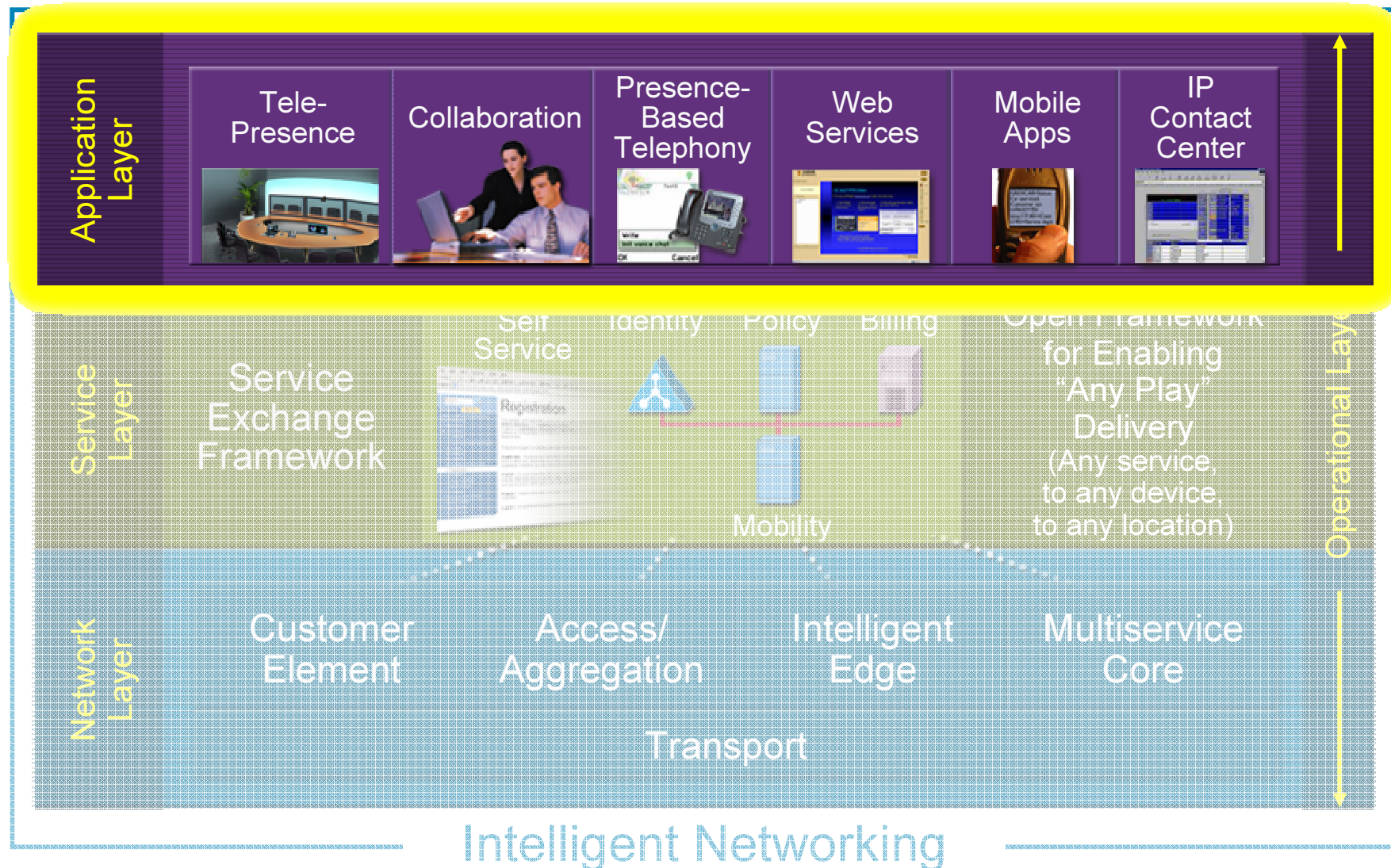
Intelligent Networking

Arquitectura IP NGN



Arquitectura IP NGN

Convergencia de las Aplicaciones



Nuevos Servicios – The Connected Life

“Muchos servicios para Muchas pantallas”

VoIP	Custom Ring Tones / MP3 Player	High-Speed Internet /VPN	Text / Instant Messaging
Push-to-Talk / Intercom	Video Conferencing	Digital TV / VOD	PDA / Email



Data

Voice

Video



En el trabajo, la casa, en cualquier otro lugar

Creando Nuevos Servicios

Portafolio para la Banda Ancha residencial

Integrando servicios de red, contenido y entretenimiento



**Residential
Broadband Access**
~\$30/Mo



Gaming
~\$7/Mo



Wireless Security
~\$30/Mo



**Local and
Long Distance Voice**
~\$40/Mo



Home Net
~\$10/Mo



**Teleworker/
Home Business**
~\$70/Mo



Digital Music
~\$10/Mo



Video and xVoD
~\$50/Mo



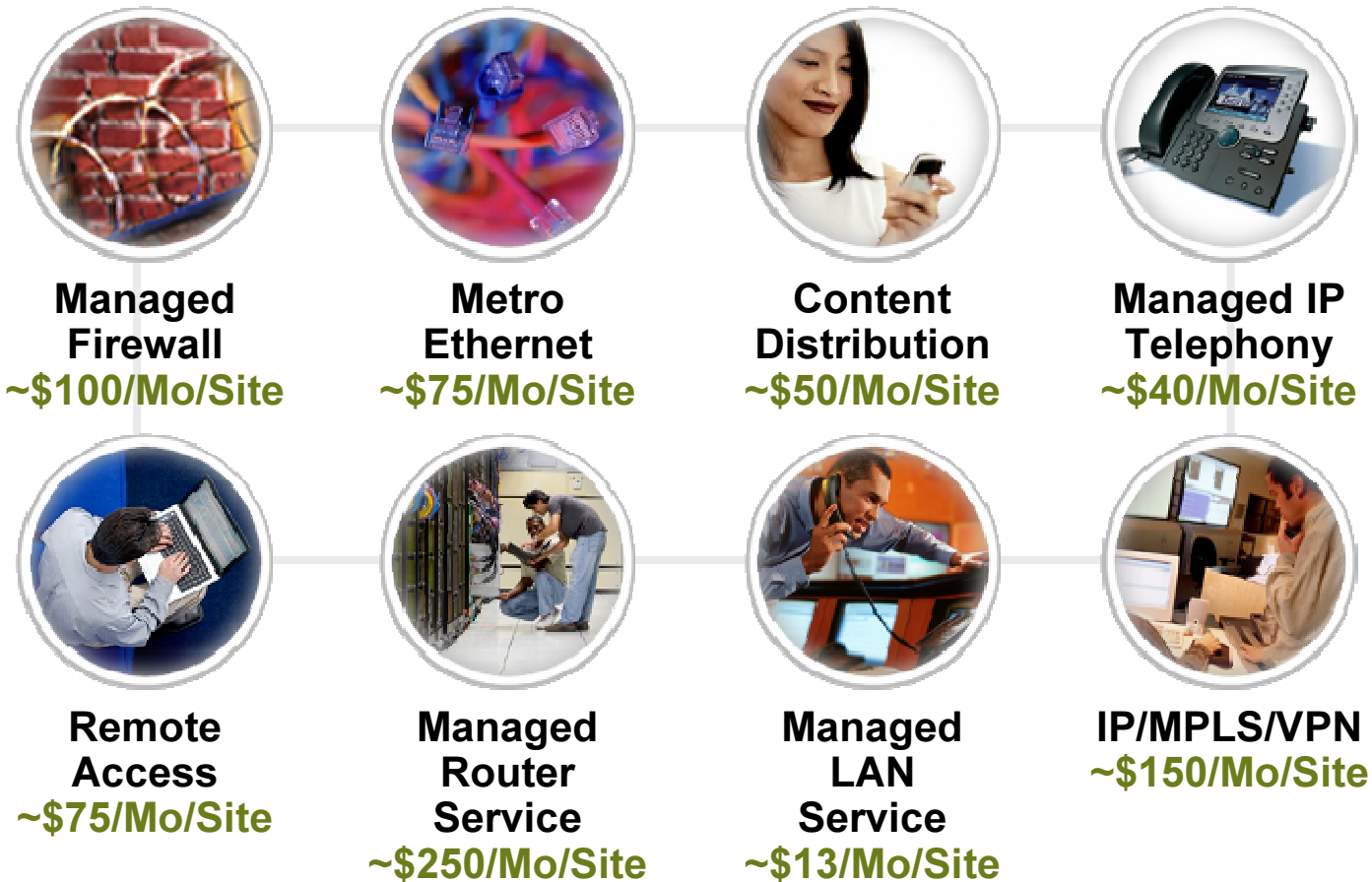
NetPVR
~\$10/Mo

Habilitado por una red Cisco IP NGN

Creando nuevos Servicios basados en IP

Portafolio Empresarial

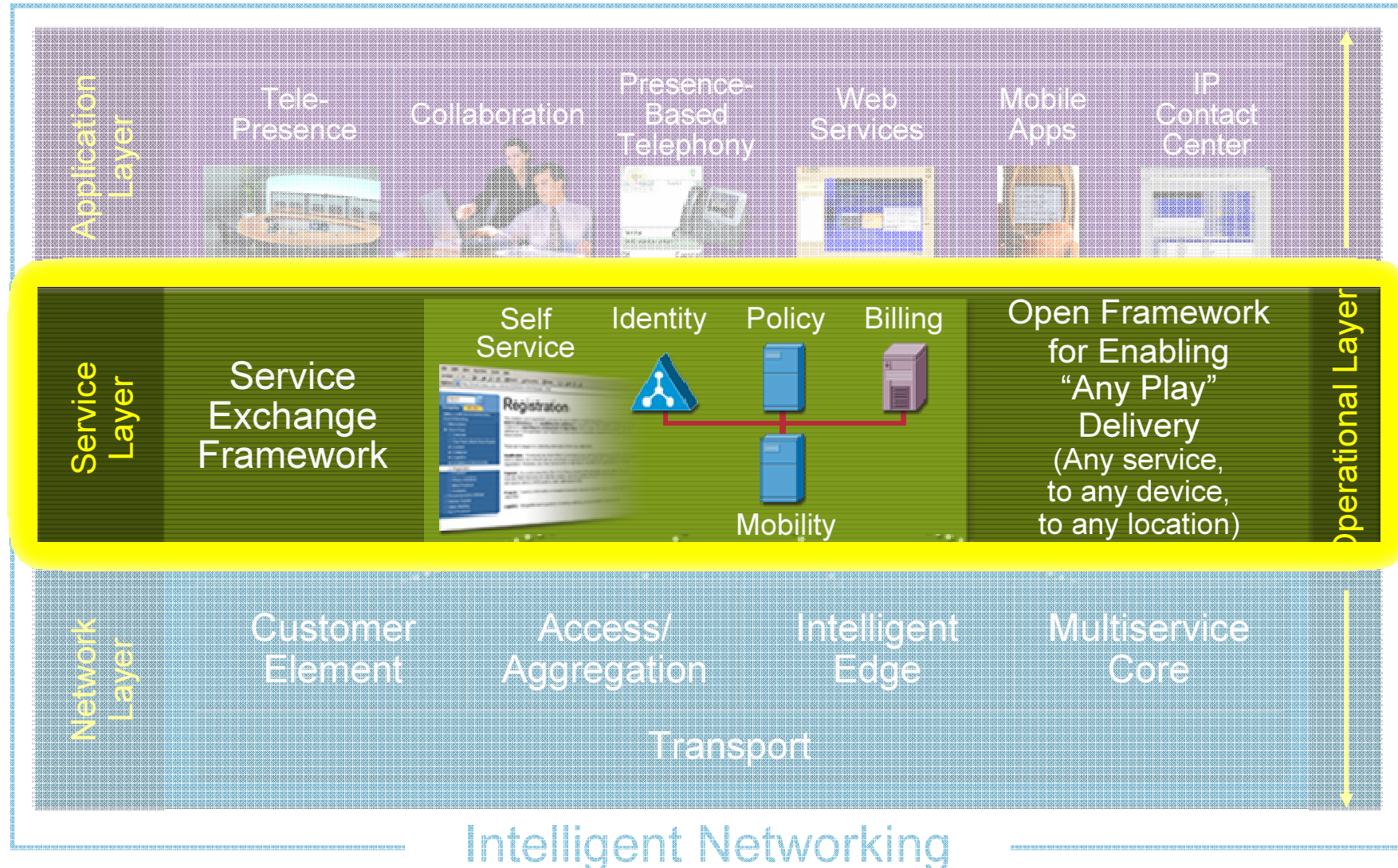
Hacia una cadena de valor



Habilitado por una red Cisco IP NGN

Arquitectura IP NGN

Convergencia de los Servicios



Experiencia personalizada en cualquier lugar

Continuidad del Servicio, satisfaccion del cliente



Service Exchange Framework (SEF)

Haciendo real “Any Play”

Identity and Mobility Management

- User / Device ID
- Subscriber Awareness
- Location / Presence
- Service Registration
- Audit / Logging
- Assured Authentication
- Device Roaming
- Service Mobility
- User Mobility

Cisco Service Exchange Framework

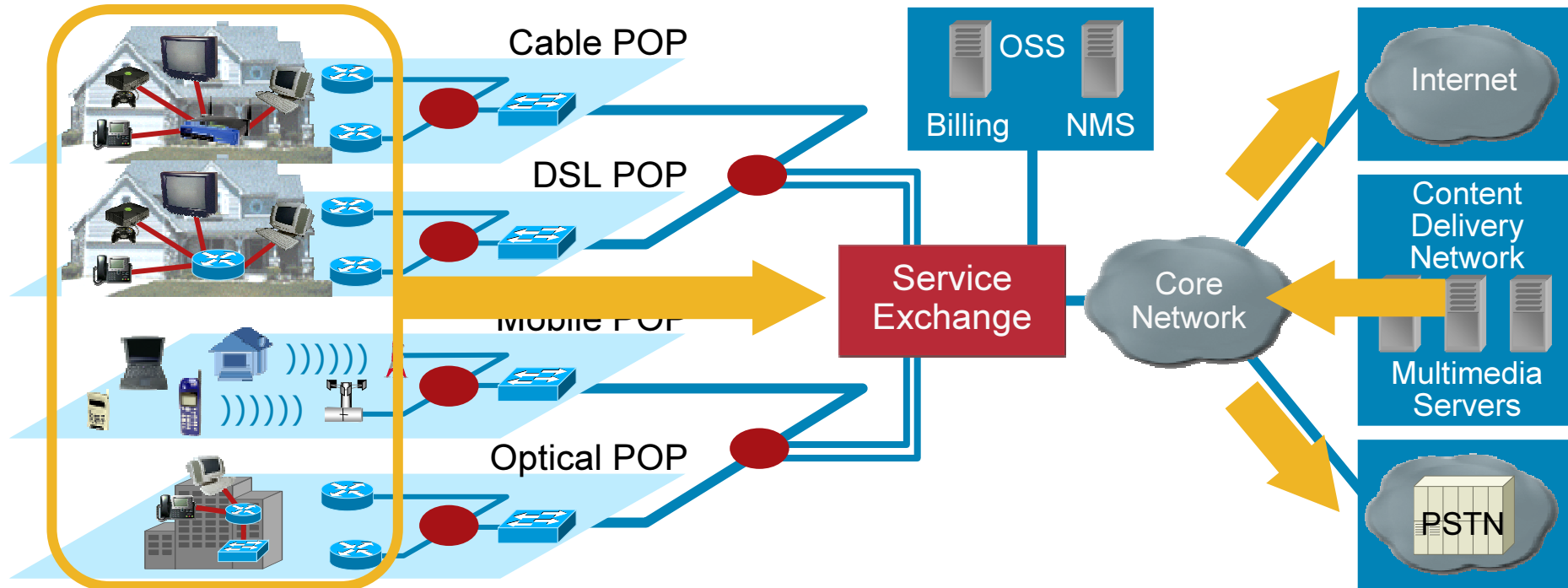
Service Policy and Resource Management

- Subscriber Policy
- Application / Chaining
- Per-Subscriber Service
- Service Invocation

Session and Media Management

- Call Control
- Session Border Control
- Rich-Media Control
- Diff Bandwidth & QoS per Session
- Accounting / Billing

Control: Cambiando la red no-controlada... ... Hacia una red Controlada



Barriers to Harnessing More Profit and Subscriber Loyalty:

- Insufficient information yields an uncertain revenue model
- Network congestion and contention for scarce bandwidth degrades subscriber experience, leading to increased churn

Servicios: Transición hacia una vía controlada

Oportunidad de Servicios de tarifa plana hacia un modelo de ingresos de valor añadido

Virtual WAN Manager	Bandwidth on Demand	Tiered Services	P2P Control	Access Control
VoIP	Content Aware Prepaid	Content Aware Postpaid	Parental Control	DDoS Protection
Intrusion Detection	SPAM Control	VoD	Digital Rights Management	Lawful Inspection



Service Exchange Framework



Service-Aware IP Infrastructure

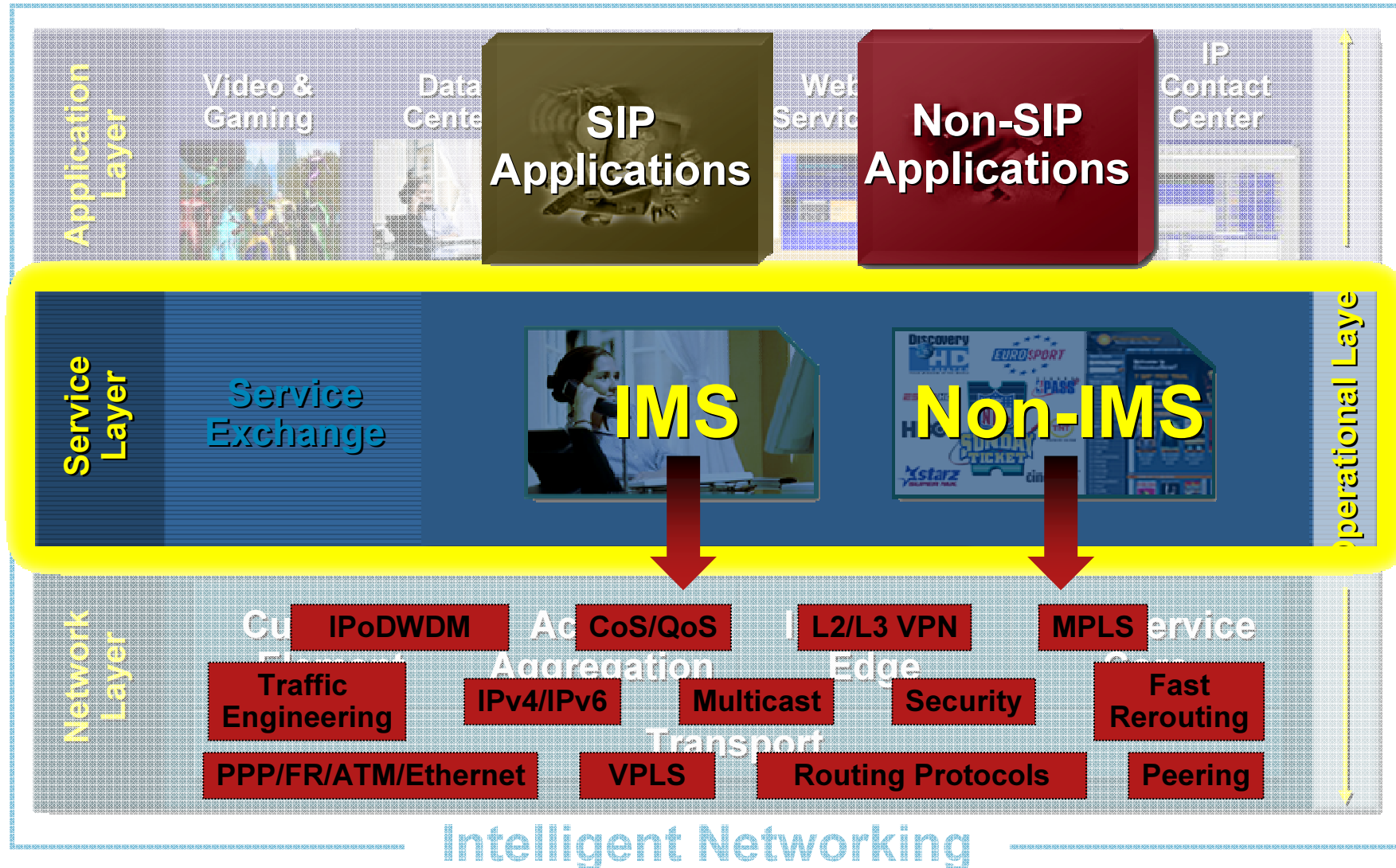
Service Exchange Framework

Estructura abierta para 'Any Play' en movimiento

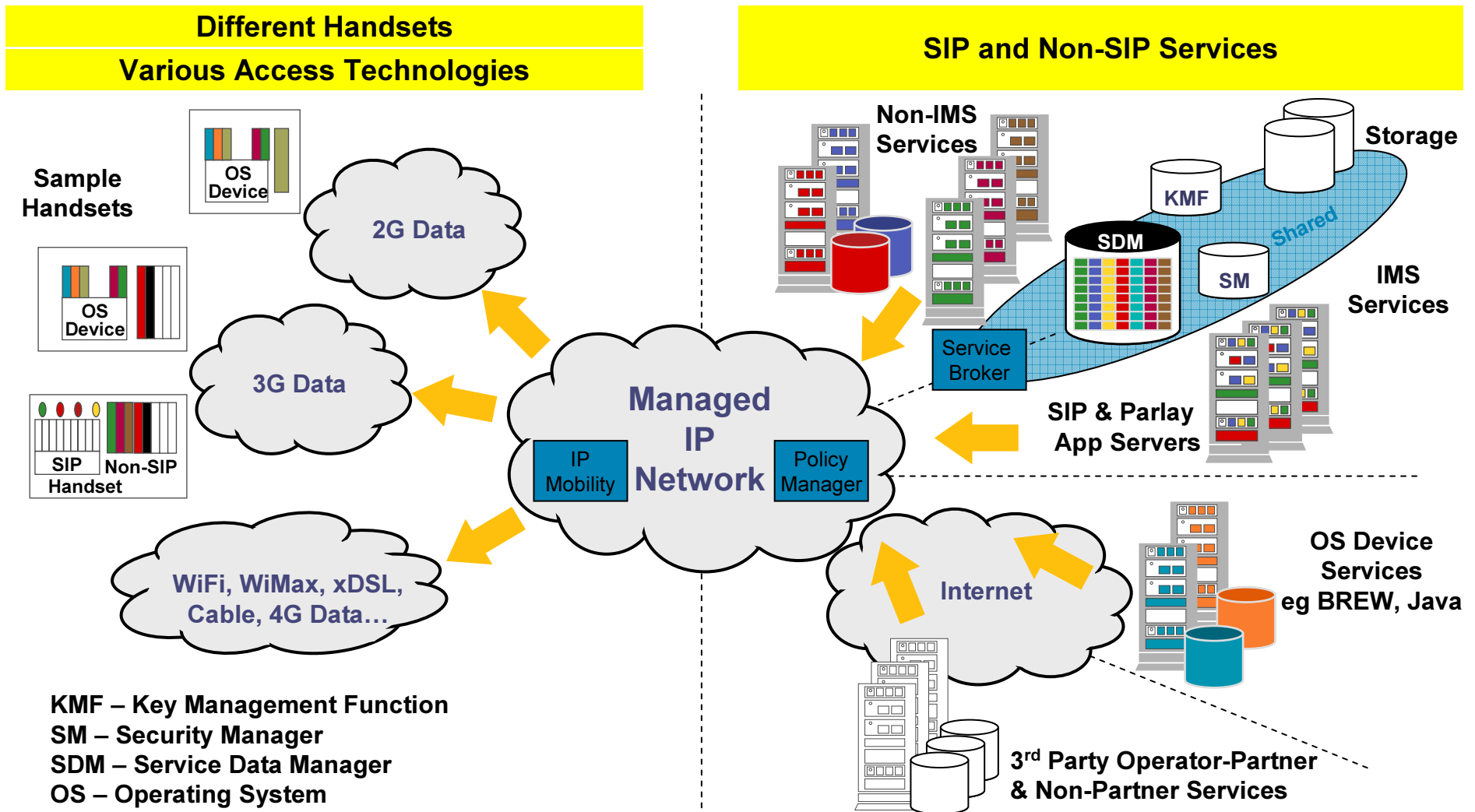


Service Exchange Framework

Soporte completo para IMS y No-IMS



Verizon Wireless: A-IMS Target Services Architecture



Cisco Service Exchange Framework Case Studies

More Services

Personalization via Self Selection



- Simplifies the end user experience
- Personalize per user including self subscription and account refresh—e.g., new consumer service activation

Content Filtering

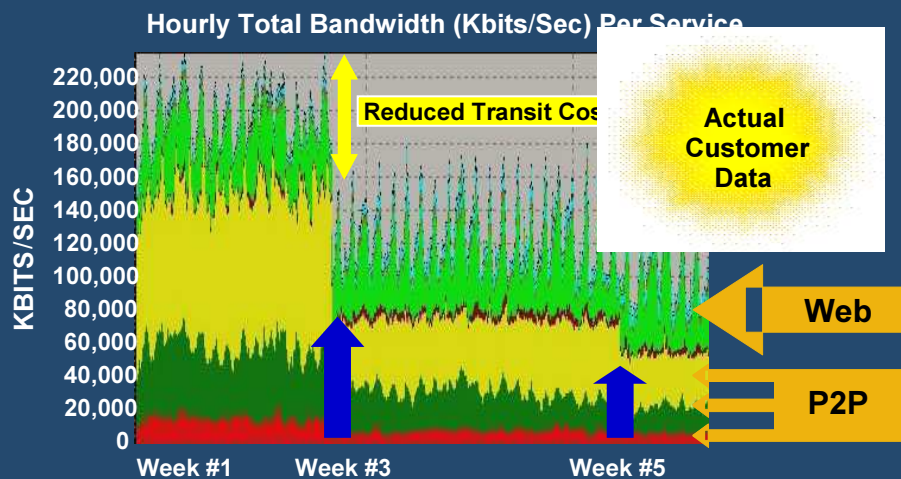


- Subscriber-managed parental control
- Basic web site blacklisting provided free of charge
- Comprehensive filtering and security for a small monthly subscription

Cisco Service Exchange Framework Case Studies

Greater Efficiencies

Service Prioritization via Deep Packet Inspection



Managing P2P Applications

- Enable new business models between content and service providers

Detect and manage affiliated applications and align QoS

Co-branding and fee sharing

Efficient Management of Video Oversubscription



Video Call Admission Control

- Preserves quality of experience
- Provides network-based graceful busy signal when demand exceeds capacity
- In trials at major MSO, critical for IPTV

Cisco Service Exchange Framework Case Studies

Better Control

Implement Fair Use Policy

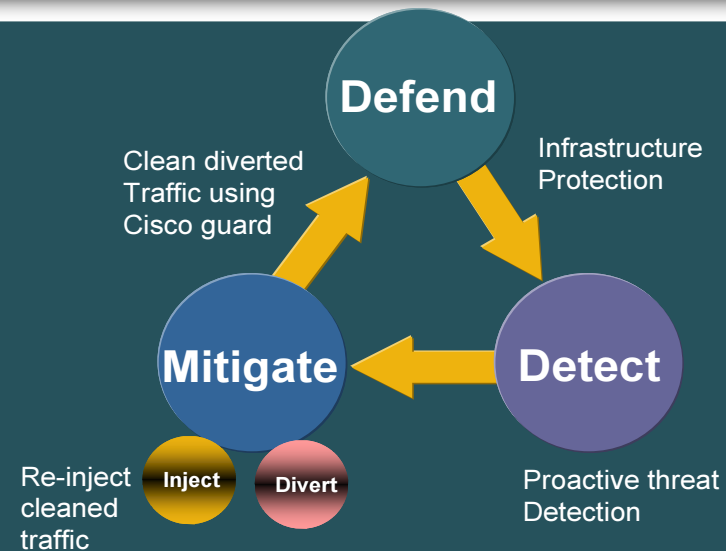


- Eliminates bandwidth bottlenecks
- Enhanced user experience

Usage	Less than 2.8 GB	Less than 4.2 GB	Less than 5.6 GB	Over 5.6 GB
e-mail + WWW	No Limit	No Limit	256 kbps	256 kbps
Audio / video streaming	No Limit	128 kbps	65 kbps	48 kbps
P2P	48 kbps	28 kbps	28 kbps	16 kbps

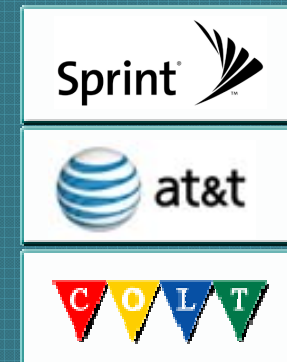
User quota based on 7-day timeframe

Enhanced Security- DDoS Protection

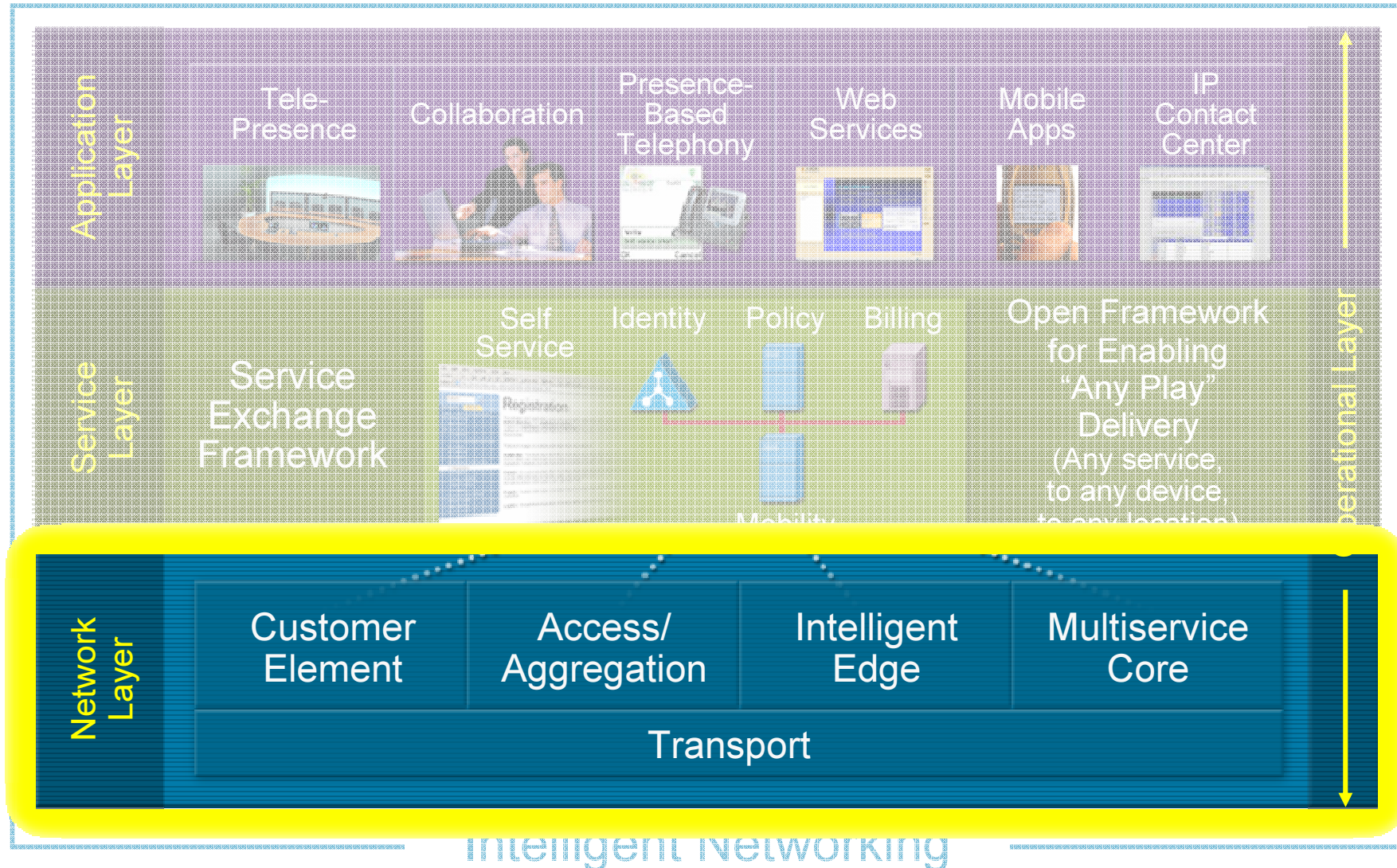


Enhanced Security Services

- DDoS service provider infrastructure protection
- Peering edge DDoS protection
- Managed service models



Arquitectura IP NGN Network Convergence

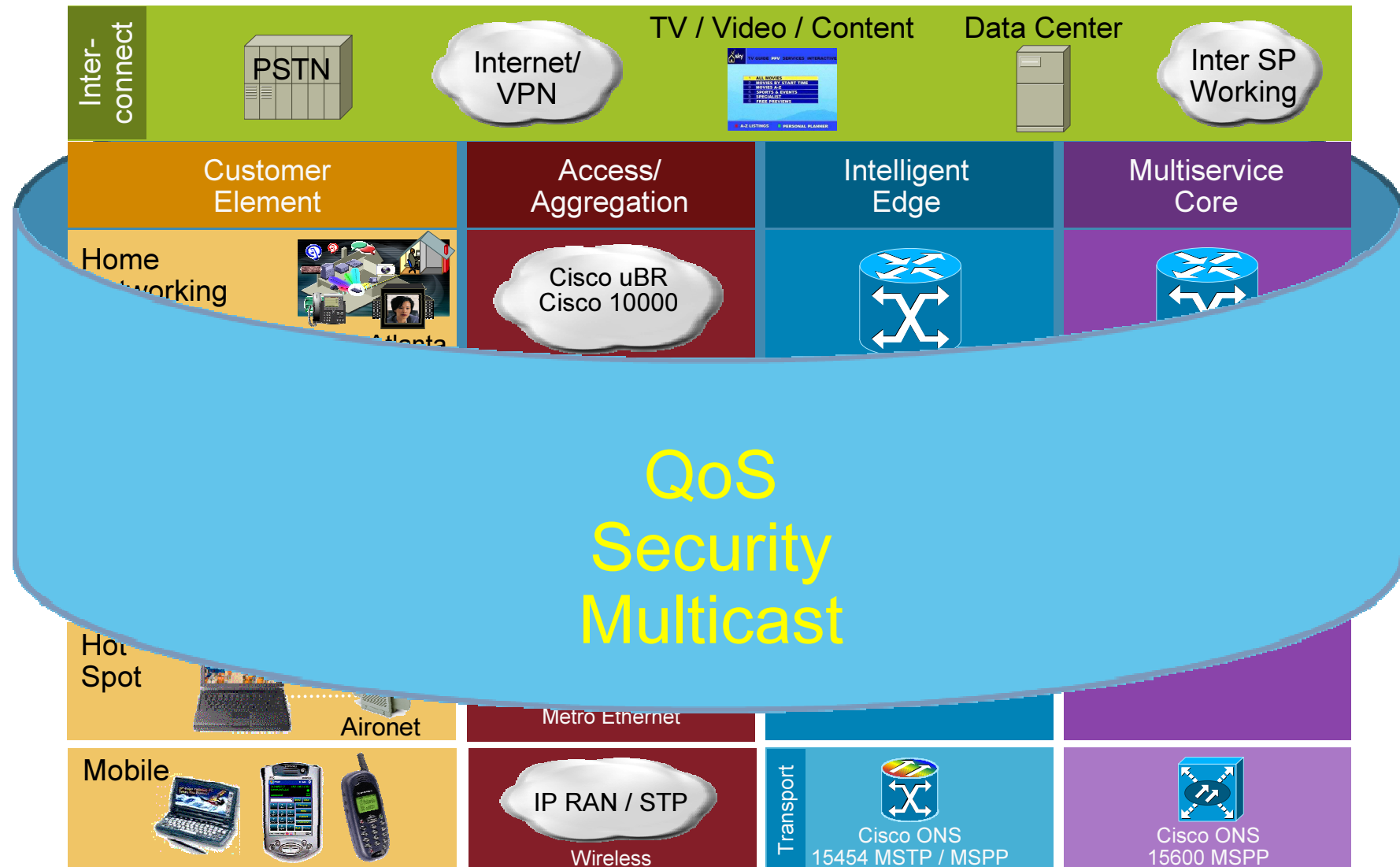


Network Convergence

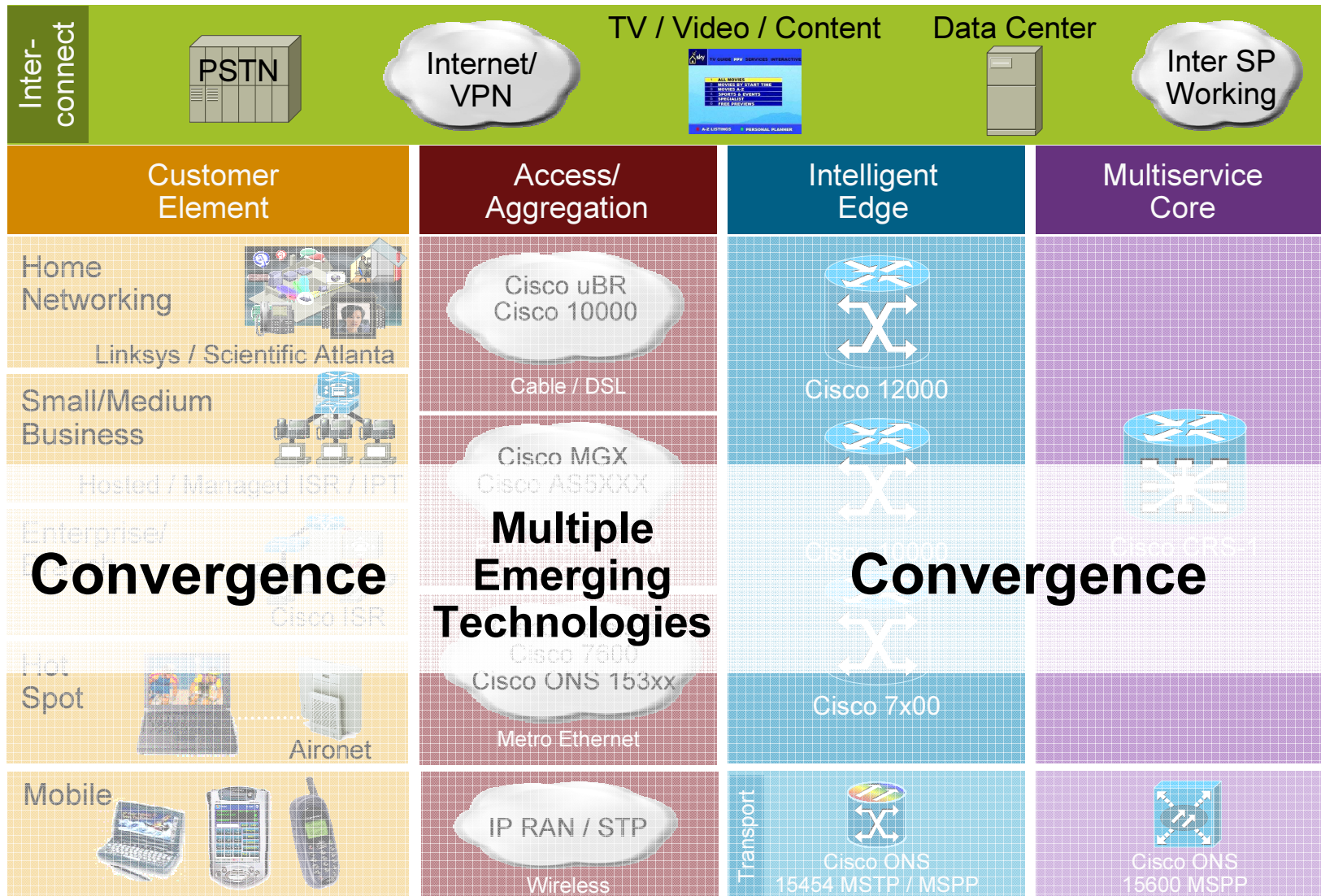
Estrategia Tecnologica



Tecnologia Cisco IP NGN



Convergencia de Acceso Agnostico



Customer Element (Equipo del Cliente)

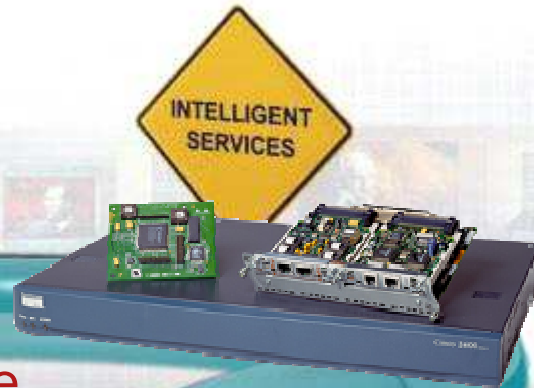
Evolution of Business CPE → ISR

1995

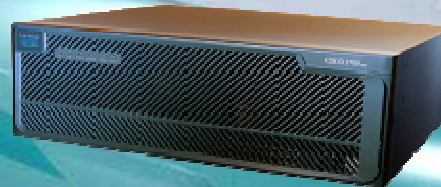
Pure Data
Delivery



Early Service
Convergence
Security,
Firewall, VPN



Integrated
Data, Security,
IP Telephony, and
Intelligent Application
Services

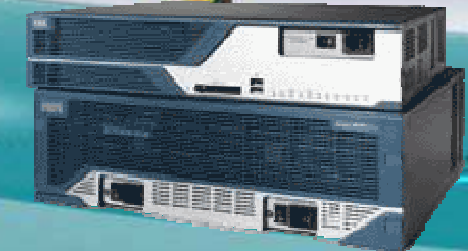


2004

Integrated Services Routers



Secure, Concurrent
Services at Wire Speed

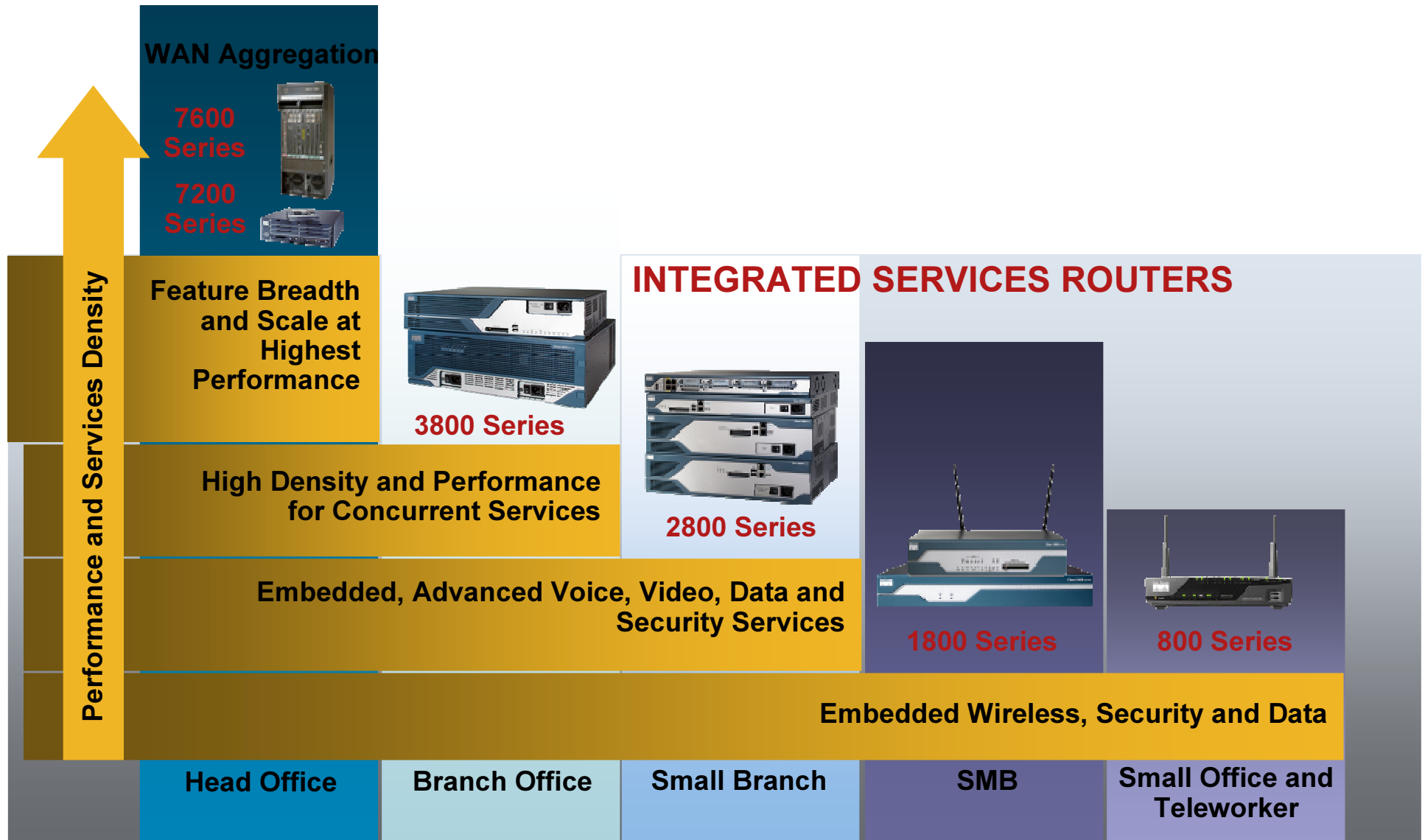


Equipo del cliente

Evolucion de la red de casa: Varios hacia convergente

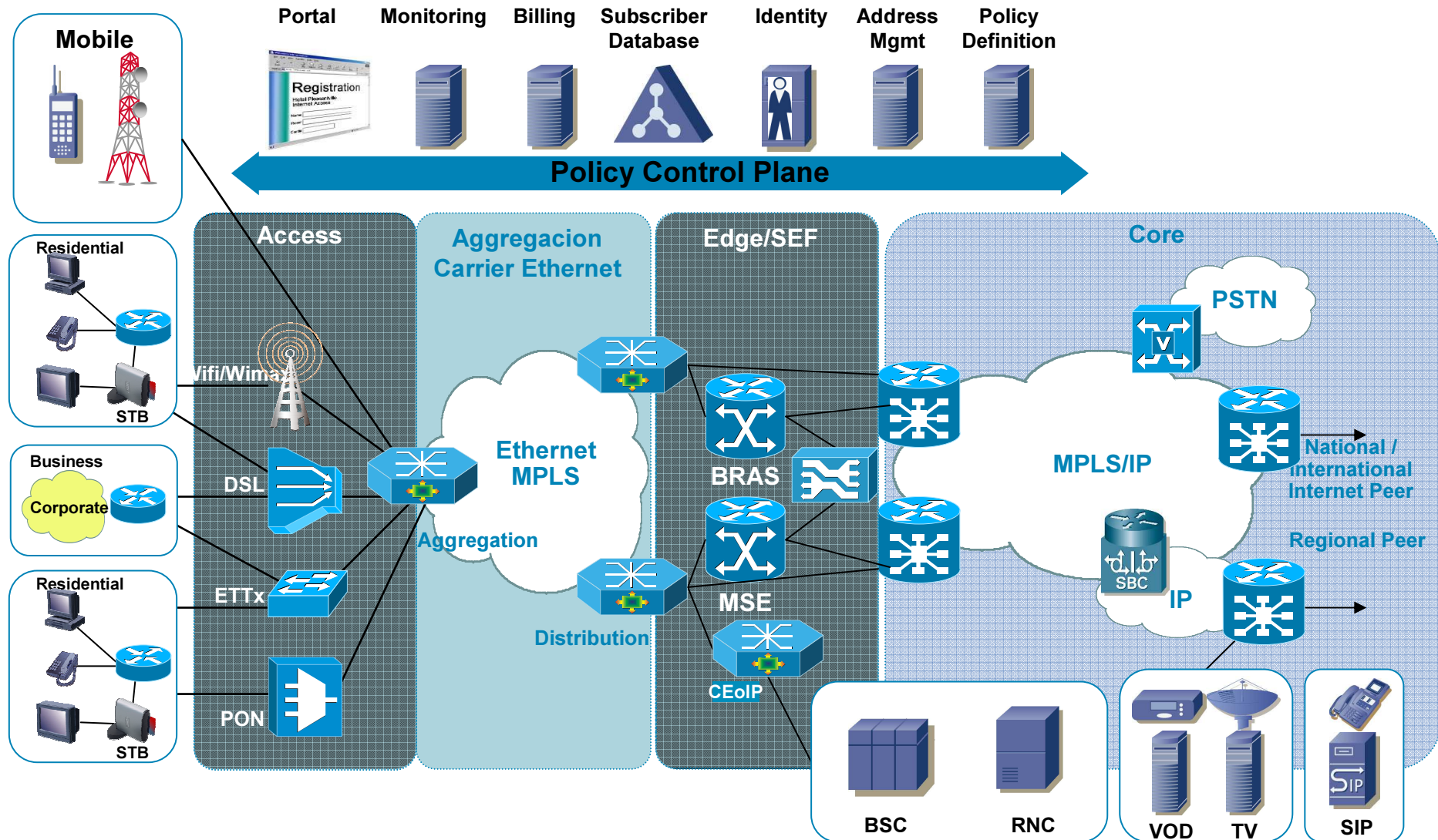


Integrated Services Router Portfolio



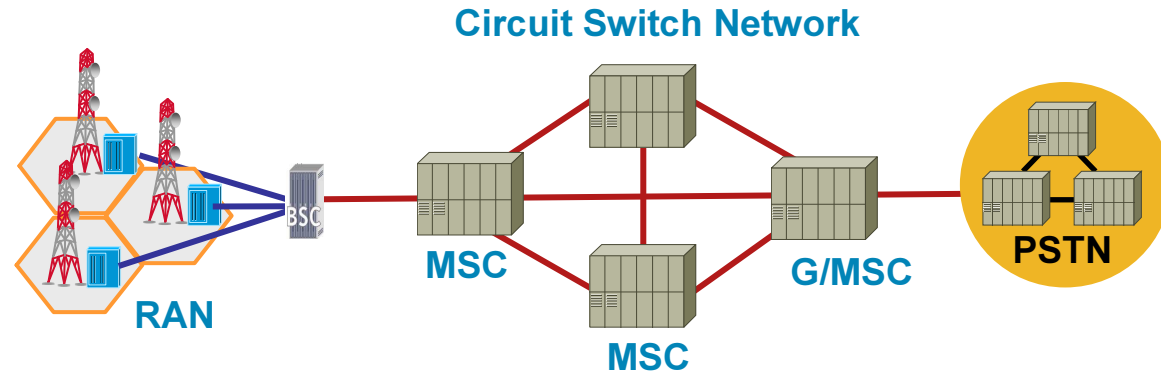
Arquitectura de Red Convergente IP NGN

Plataforma & Aplicaciones



3GPP R4

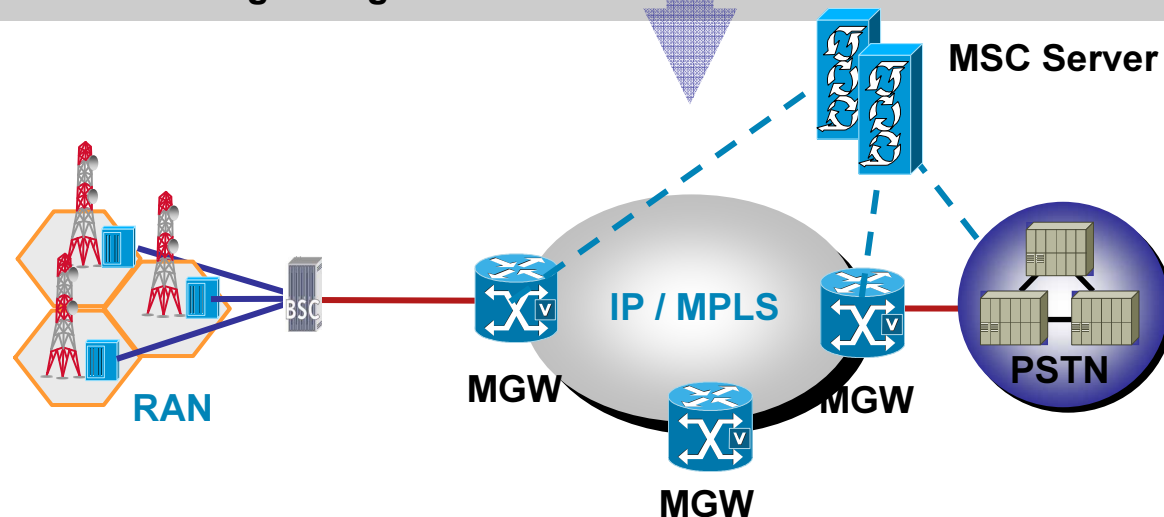
Mobile Transport Evolution



- Earlier mobile architectures are based on a centralized call model
- R4 introduces 2 major architectural changes to the Circuit Switch (CS) domain

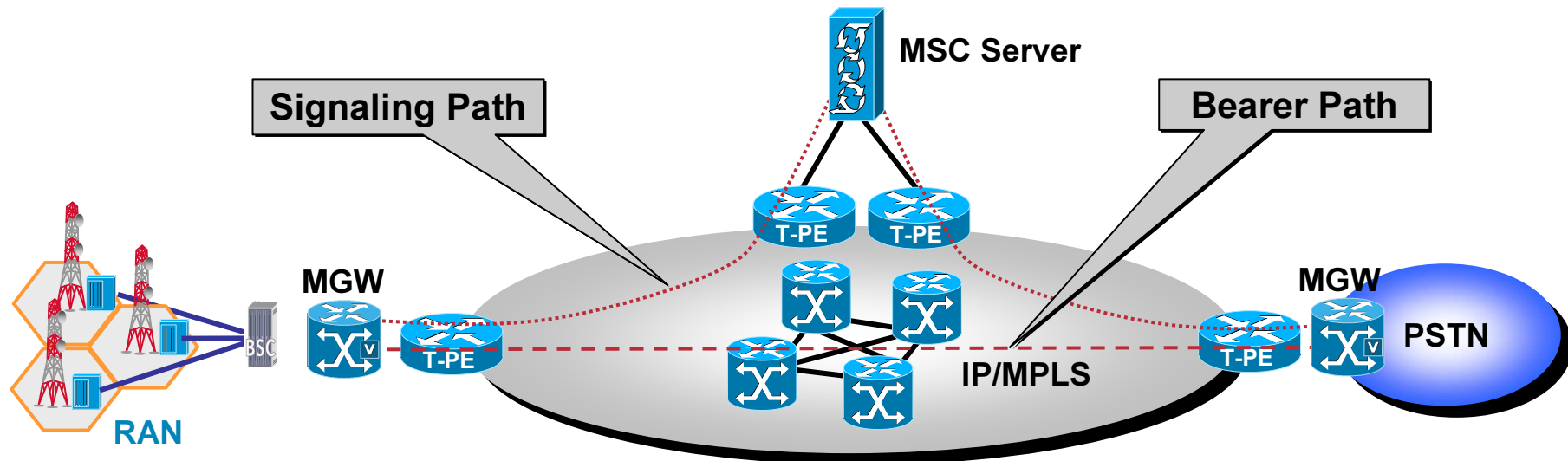
Split Architecture (MSC server and MGW)

IP / MPLS Transport for Media and Signalling



Service Requirements

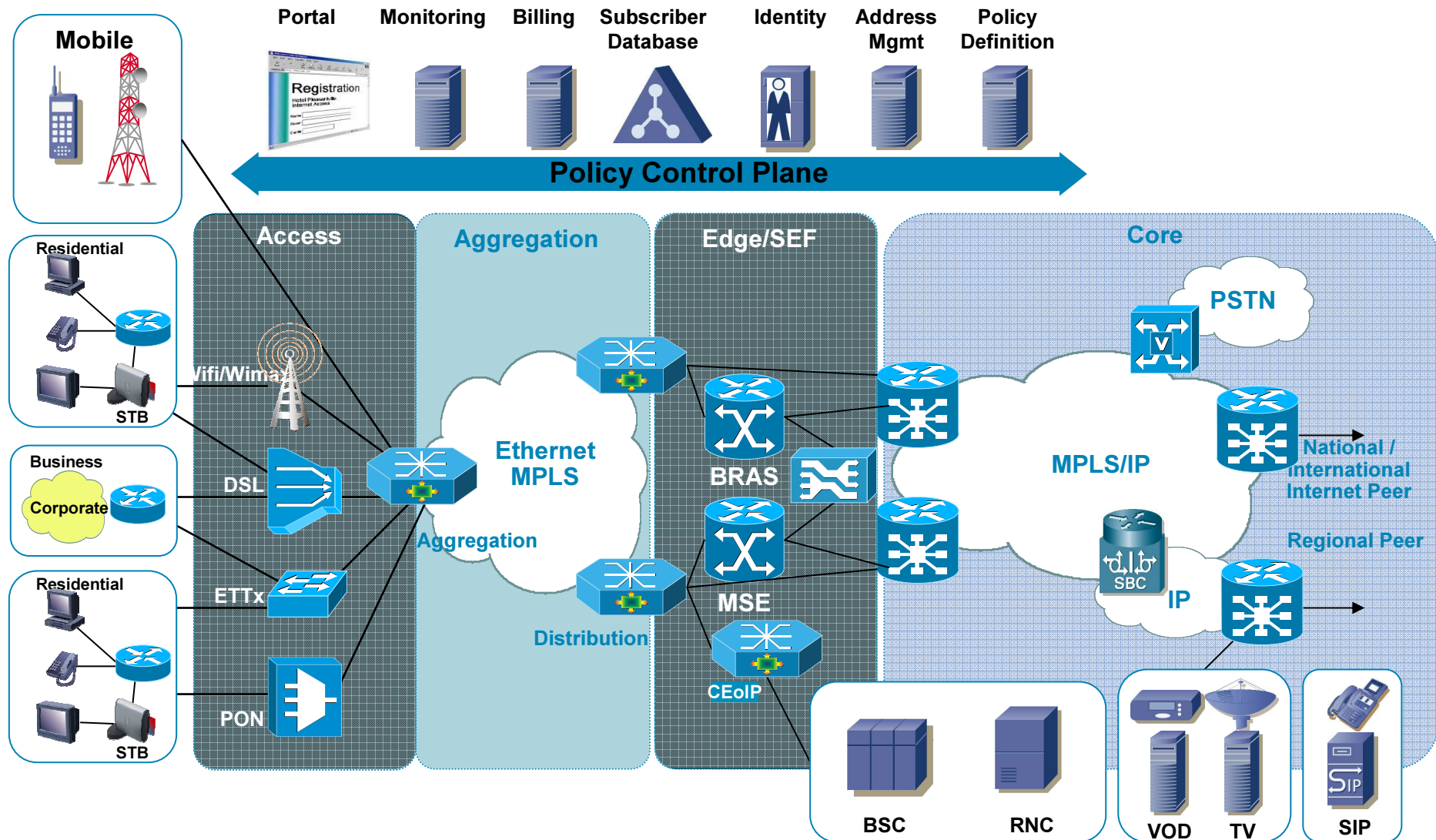
R4 Carrier Class Mobile Telephony



- The stringent requirements imposed when migrating a Mobile Telephony network to IP/MPLS are mainly dependent on two equally important parts:
 - Bearer – User Plane = Speech or other service payload**
 - Signaling - Telephony Control Plane = Call Setup/Teardown**
- In order to guarantee performance the Service requirements are translated into SLA parameters to be applied to the IP / MPLS domain

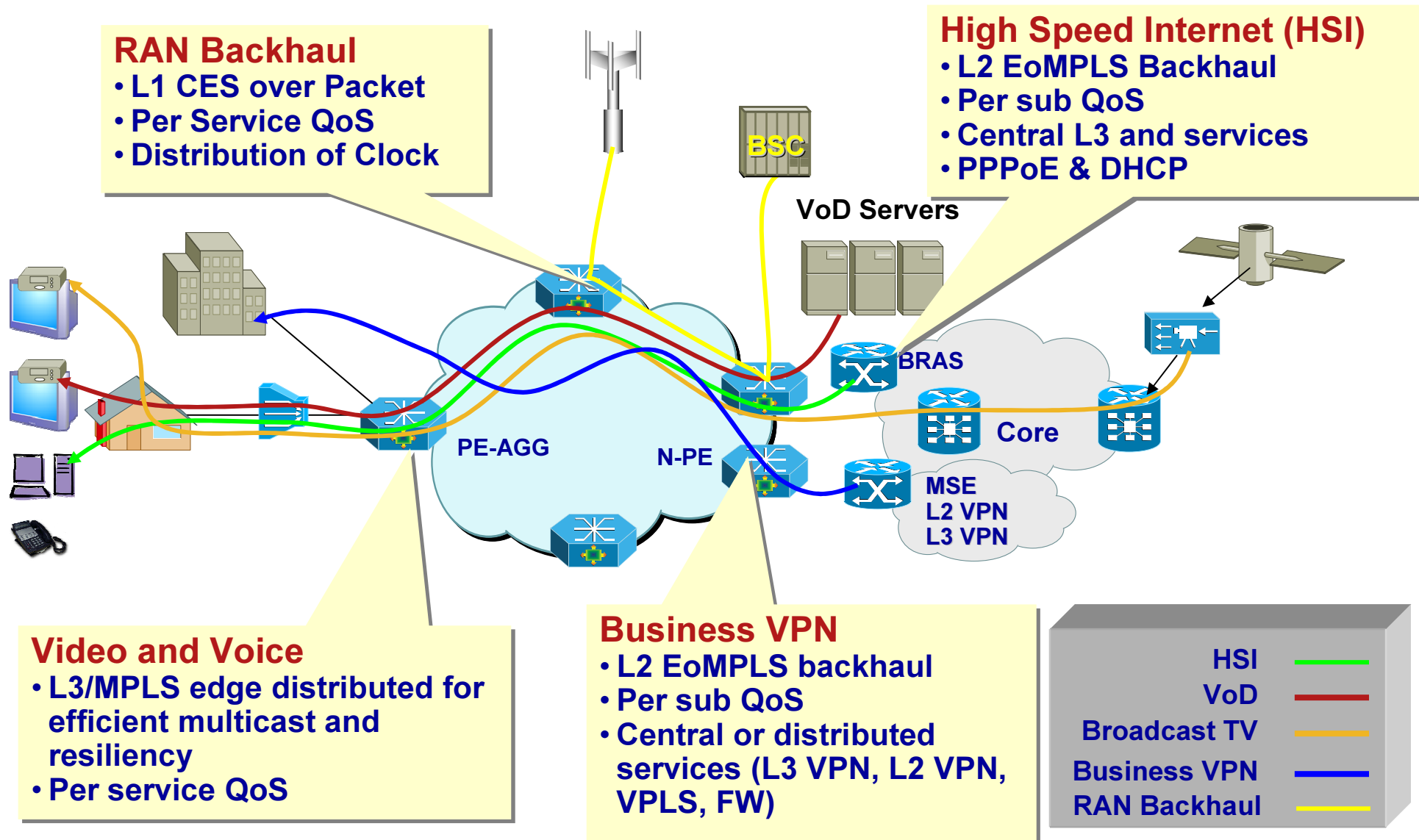
Arquitectura de Red Convergente IP NGN

Plataforma & Aplicaciones



Implementacion Red IP NGN

Diseno Carrier Ethernet



Cisco en IP NGN



Participacion de Cisco

Para el exito de los SP's

Desarrollar Servicios

Mejorando los actuales y creando nuevos mejoraremos sus ingresos y utilidades, el time-to market es clave



Construir Redes

de paquetes Inteligentes, extensibles y eficientes, con baja inversion



Acelerar la demanda

Acelerando la demanda para conectar usuarios residenciales, SMB y empresas corporativas

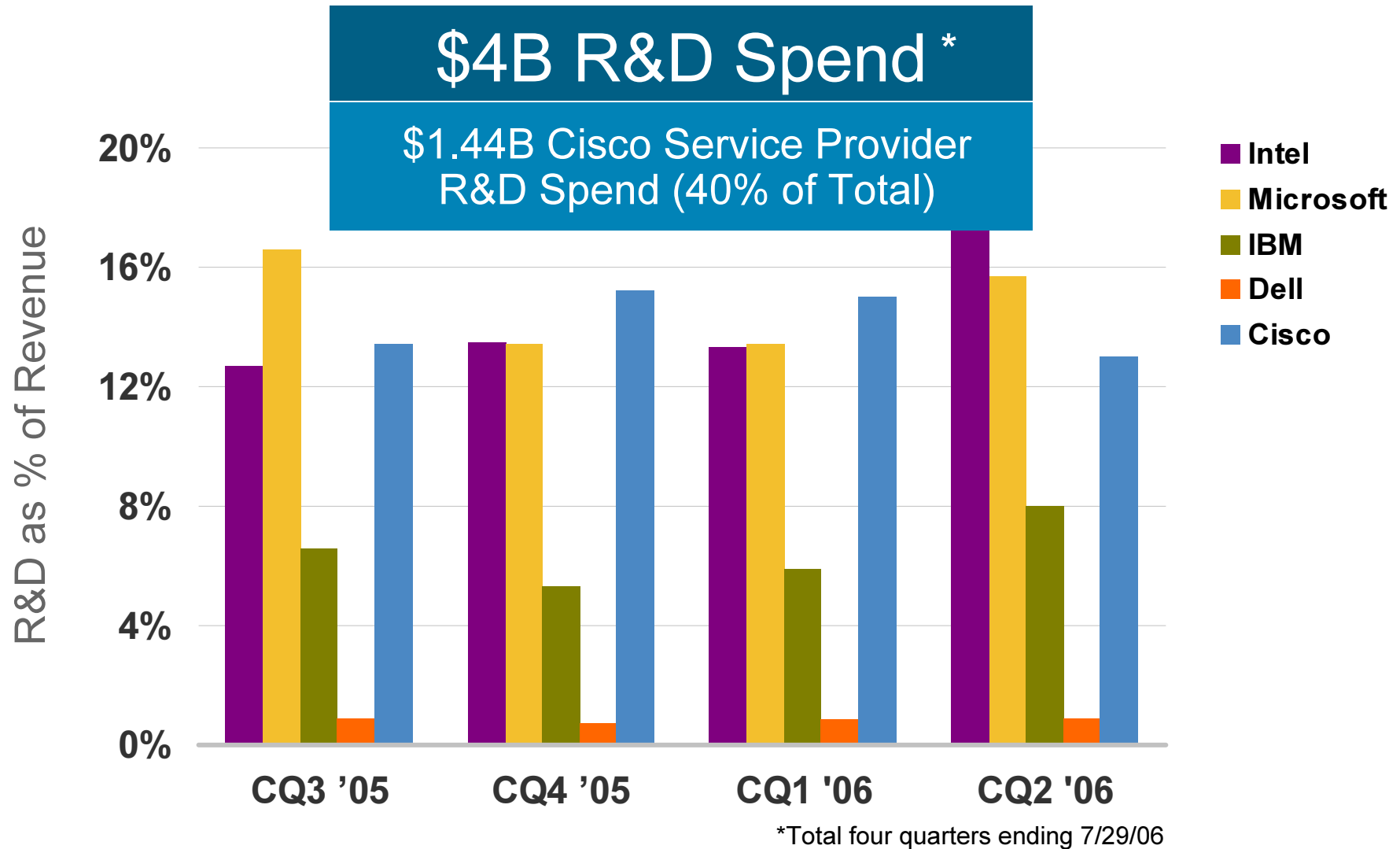


Optimizar el Negocio

Proveer expertise para soportar el negocio, la transicion de la red y mejorar la eficiencia operacional



Compromiso de Cisco en R&D



Source: Yahoo Finance, Company Financial Statements

Cisco IP NGN

A traves de diferentes segmentos y territorios

- Over 250 MPLS VPN networks in production
- Over four million IP phones installed—Replacing 6000 TDM phones every day
- Over 14 million VoIP gateway ports
- Over ten million cable VoD subscribers supported in U.S. alone



Core for IP NGN



The all digital NGN for cable



Enabling 3G services



PSTN Migration to IP NGN



Broadband for triple play



Largest MPLS/MetroE deployment



Biggest broadband MetroE for triple play



MS Edge + core for IP NGN

And more...

En resumen...

La Vision IP NGN es hoy una realidad.

Resources

Comprehensive
IP NGN Portfolio

IP DNA

Unmatched
IP Expertise
and Experience

Commitment

Over \$1.6B
for SPs

Build

CRS-1, IOS-XR,
ISR, XR-12000

Partner

Ericsson, Italtel,
Fujitsu

Acquire

Scientific-Atlanta,
KiSS

Cisco Service Provider Vision

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



IP Next-Generation Network





Services

Efficiencies

Control

The central graphic features a bar chart with seven vertical bars of varying heights. The bars are white with a blue gradient. The word "CISCO" is written in large, bold, white capital letters across the bottom of the chart. Below "CISCO" are the words "Intelligence", "Flexibility", and "Adaptability" in a smaller, blue font. The background is a solid blue color.

Services
Differentiation
Loyalty
Revenue

Efficiencies
OPEX
CAPEX
Profit

Control
Service
Network
Business

CISCO
Intelligence
Flexibility
Adaptability

