enterprise case study
Cedric Lockhart – VP Network Competency Center
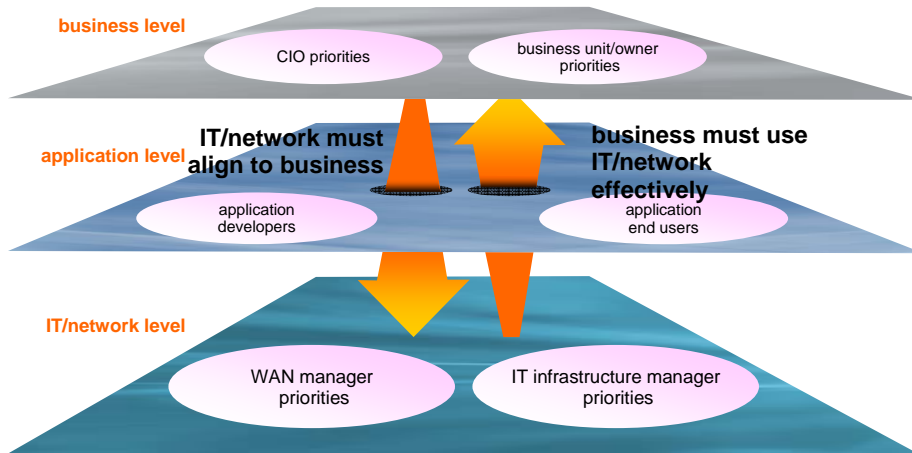Arnaud Messager – Director of Business Development

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agenda – enterprise case study

- the issue
- the solution
- real-world
- conclusion

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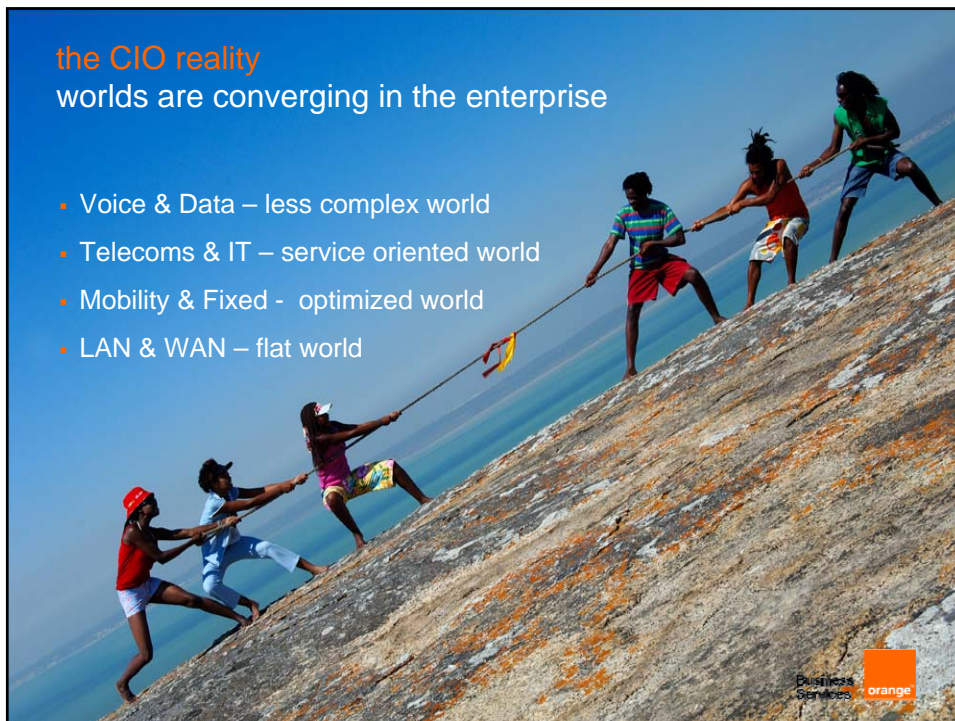## the CIO objective
align IT to business demands

business level

CIO priorities

business unit/owner
priorities

**IT/network must
align to business**

**business must use
IT/network
effectively**

application level

application
developers

application
end users

IT/network level

WAN manager
priorities

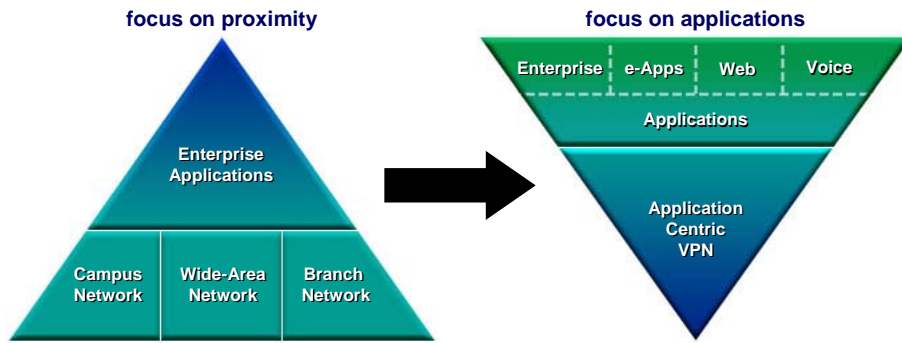IT infrastructure manager
priorities

3

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the CIO reality
worlds are converging in the enterprise

- Voice & Data – less complex world
- Telecoms & IT – service oriented world
- Mobility & Fixed - optimized world
- LAN & WAN – flat world
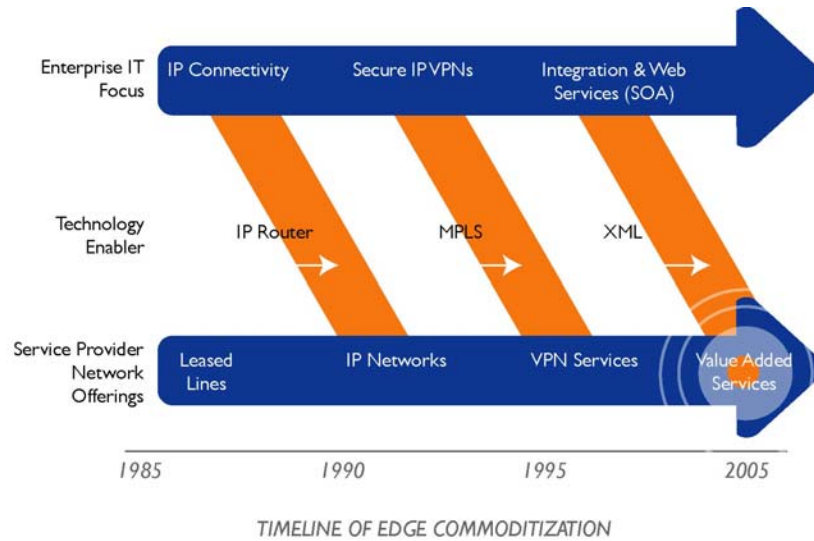
Focus on Applications

focus on proximity

focus on applications

| Enterprise | e-Apps | Web | Voice |

Applications

Enterprise Applications

Campus Network | **Wide-Area Network** | **Branch Network**

Application Centric VPN

- Shift from managing networks to managing application performance
- Shift from managing connectivity to managing business productivity

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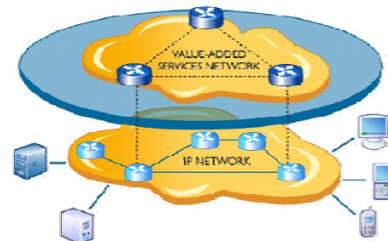business acceleration

functional growth of IP networks

Enterprise IT Focus	IP Connectivity	Secure IP VPNs	Integration & Web Services (SOA)
Technology Enabler	IP Router	MPLS	XML
Service Provider Network Offerings	Leased Lines	IP Networks	VPN Services	Value Added Services

1985   1990   1995   2005
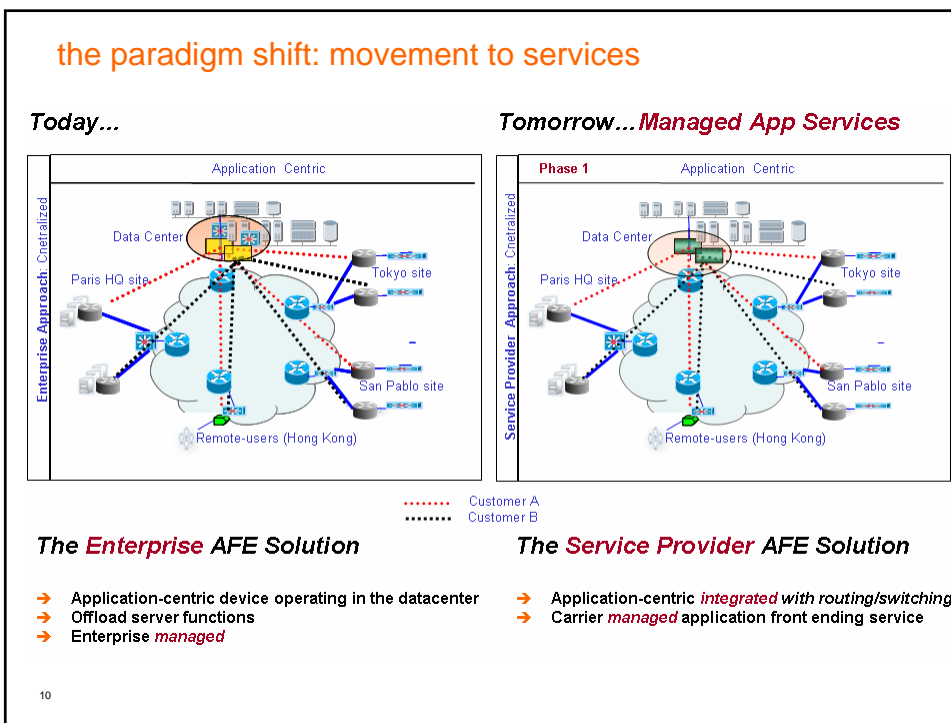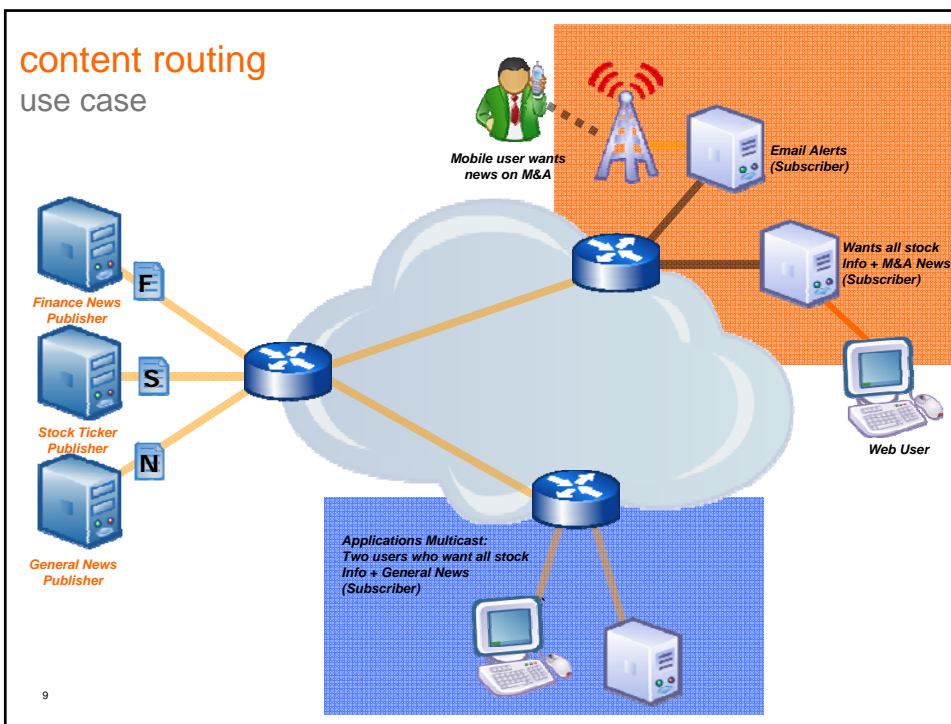
TIMELINE OF EDGE COMMODITIZATION

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application centric networks
content aware networks

- power to the People
    - publish/subscribe model
    - subscriber controls content flow

- power to the Network
    - off-load processing requirements from server farms
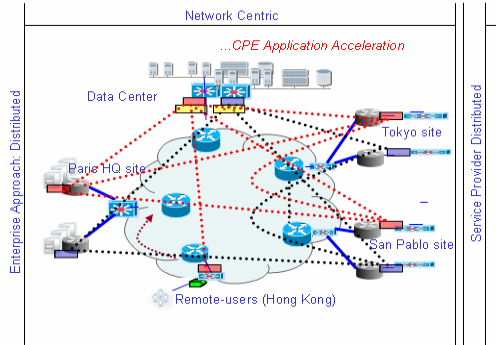   - extend middleware apps to the network

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content routing
use case

Mobile user wants news on M&A

Email Alerts (Subscriber)

Wants all stock Info + M&A News (Subscriber)

Web User

Finance News Publisher

Stock Ticker Publisher

General News Publisher

Applications Multicast: Two users who want all stock Info + General News (Subscriber)

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the paradigm shift: movement to services

Today...

Tomorrow... Managed App Services

The Enterprise AFE Solution

➜ Application-centric device operating in the datacenter
➜ Offload server functions
➜ Enterprise *managed*

The Service Provider AFE Solution

➜ Application-centric *integrated* with routing/switching
➜ Carrier *managed* application front ending service

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the paradigm shift: movement to services

Today...

...CPE Application Acceleration

Tomorrow... *Managed App Acceleration Services*

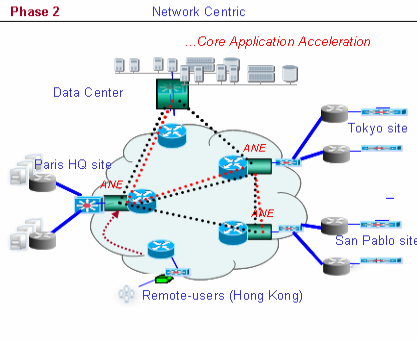*...Core Application Acceleration*

···· Customer A
···· Customer B

The *Enterprise* Acceleration Solution

➜ Symmetric (binodal) boxes on both ends of a connection
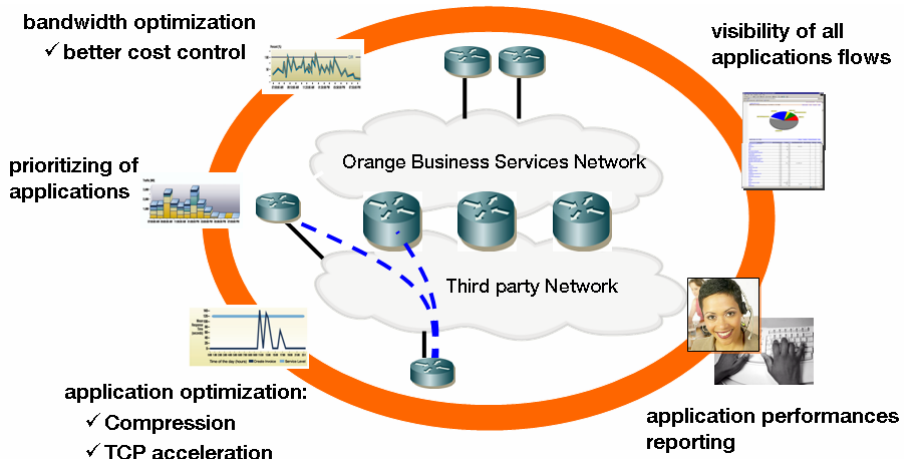➜ Meshed, point to multipoint configuration (N"x tunnels) *enterprise managed*
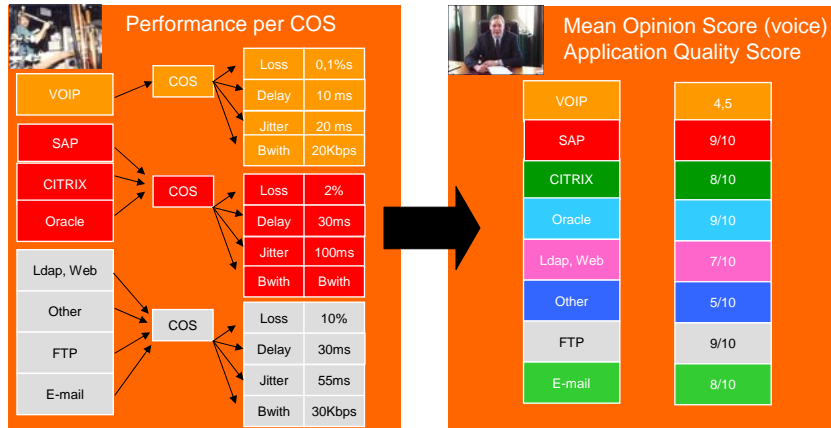
The *Service Provider* Acceleration Solution

➜ WAN/LAN optimized distributed solution, w/ global app management throughout the WAN.
➜ Path optimization in concert with NSP's traffic engineered paths and VPNs

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hosted application management, optimization and reporting

bandwidth optimization
  ✓ **better cost control**

visibility of all applications flows

prioritizing of applications

Orange Business Services Network

Third party Network

application optimization:
  ✓ **Compression**
  ✓ **TCP acceleration**

application performances reporting

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application SLA

Performance per COS

	Loss	0,1%s
VOIP → COS	Delay	10 ms
	Jitter	20 ms
	Bwith	20Kbps
SAP	Loss	2%
CITRIX → COS	Delay	30ms
Oracle	Jitter	100ms
	Bwith	Bwith
Ldap, Web	Loss	10%
Other → COS	Delay	30ms
FTP	Jitter	55ms
E-mail	Bwith	30Kbps

Mean Opinion Score (voice)
Application Quality Score

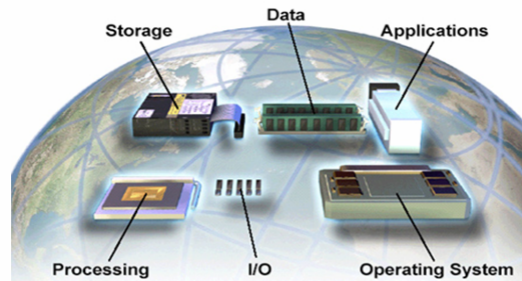|	
VOIP	4,5
SAP	9/10
CITRIX	8/10
Oracle	9/10
Ldap, Web	7/10
Other	5/10
FTP	9/10
E-mail	8/10

- from technical metrics to user quality reporting
- from static WAN optimization with to dynamic optimization
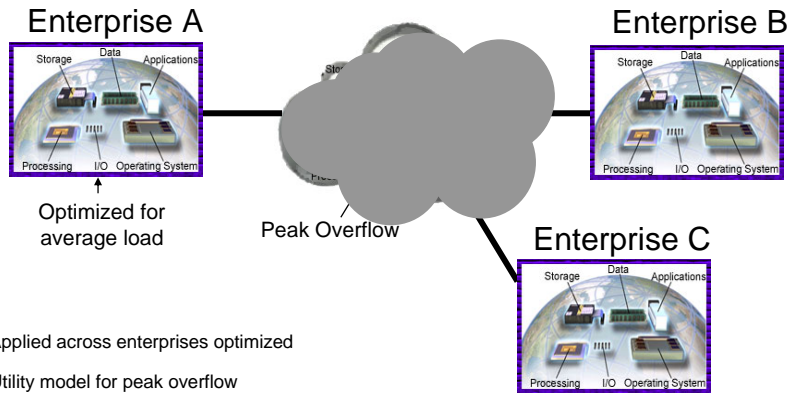- CoS and application QoS are consistent and complementary

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grid computing
application and resource optimization

- networks enables resource optimization
  - aggregation of computing processing, storage and application resources
  - enabling virtual and collaborative organizations, sharing applications in a flat world
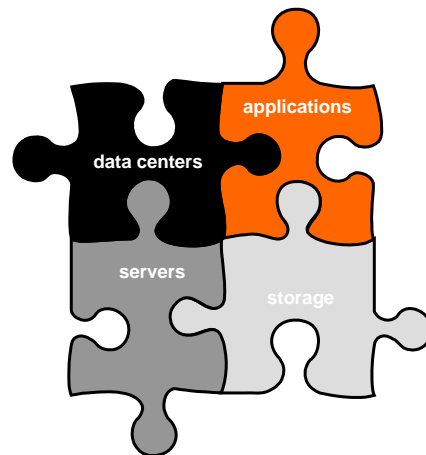
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The Vision

Enterprise A

Storage · Data · Applications · Processing · I/O · Operating System

↑
Optimized for
average load

Peak Overflow

Enterprise B

Storage · Data · Applications · Processing · I/O · Operating System

Enterprise C

Storage · Data · Applications · Processing · I/O · Operating System

- Applied across enterprises optimized
- Utility model for peak overflow

Transforms IT from a cost center to an on-demand Services center

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simplified infrastructure

- simplify architecture through
    - data center, server and storage optimization
    - application aware infrastructure
    - hosted solutions
    - virtualization
    - **application** harmonization

applications

data centers

servers

storage

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thank you !