



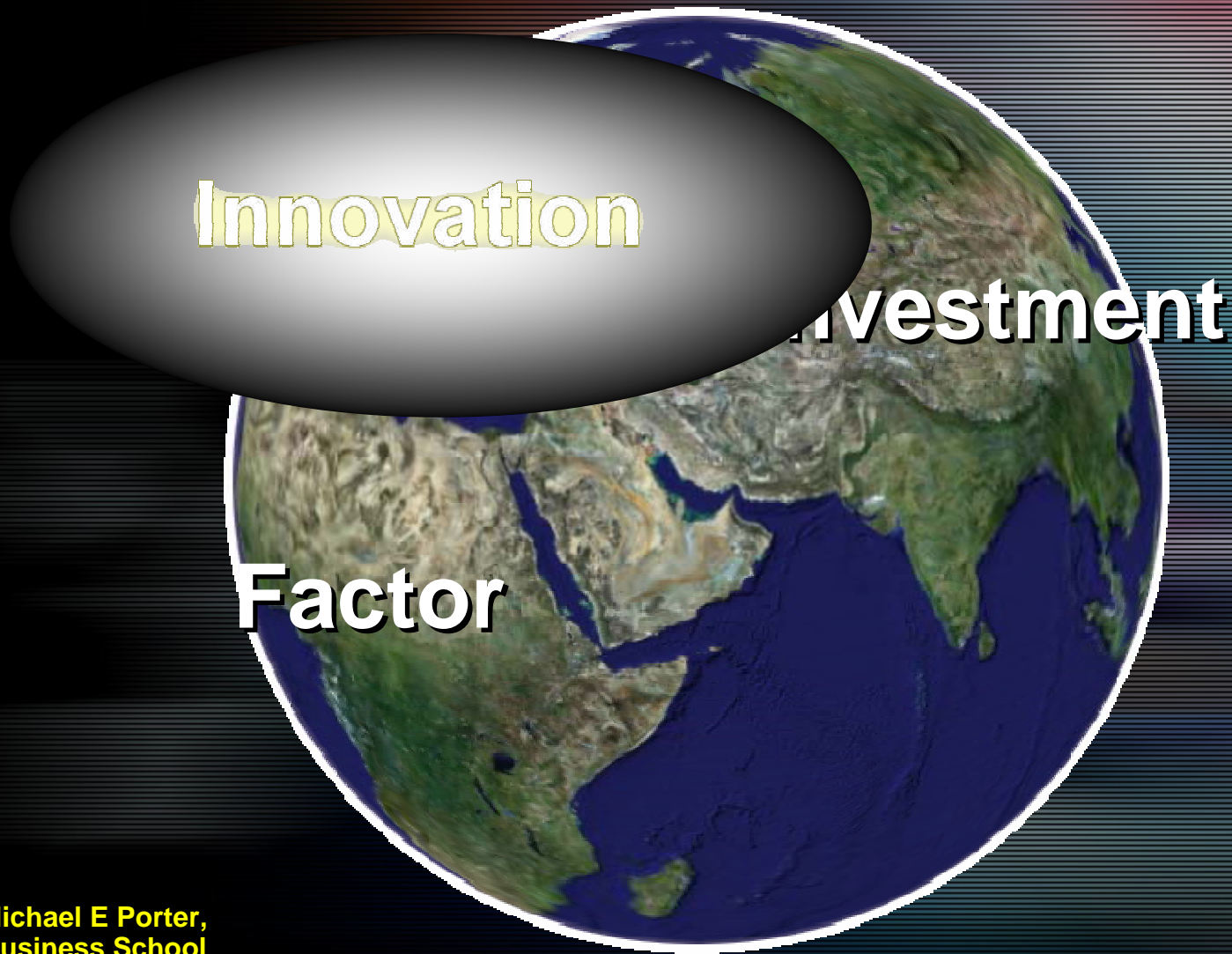
Intelligent Information Network

.. Platform for Productivity & Innovation

Andy Lockhart
Vice President, Northern Europe
Cisco Systems

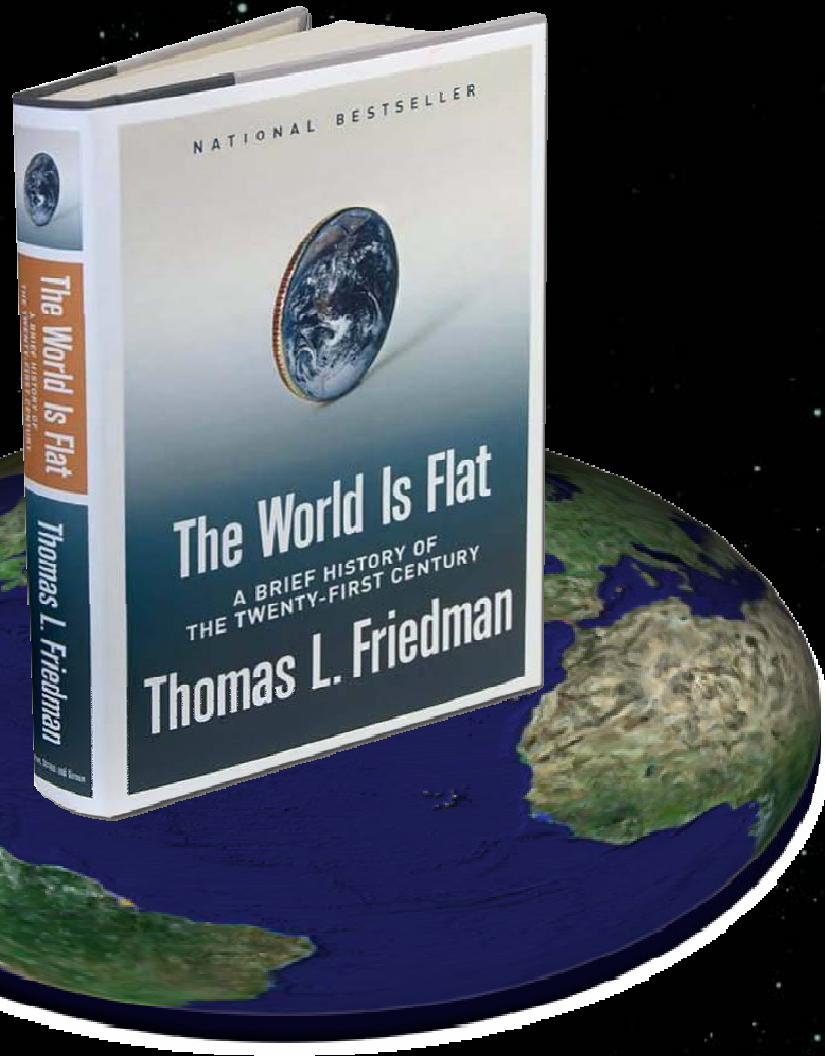
Mar 22, 2006

The Three Different Types of Economy



A Real-Time World

Cisco.com

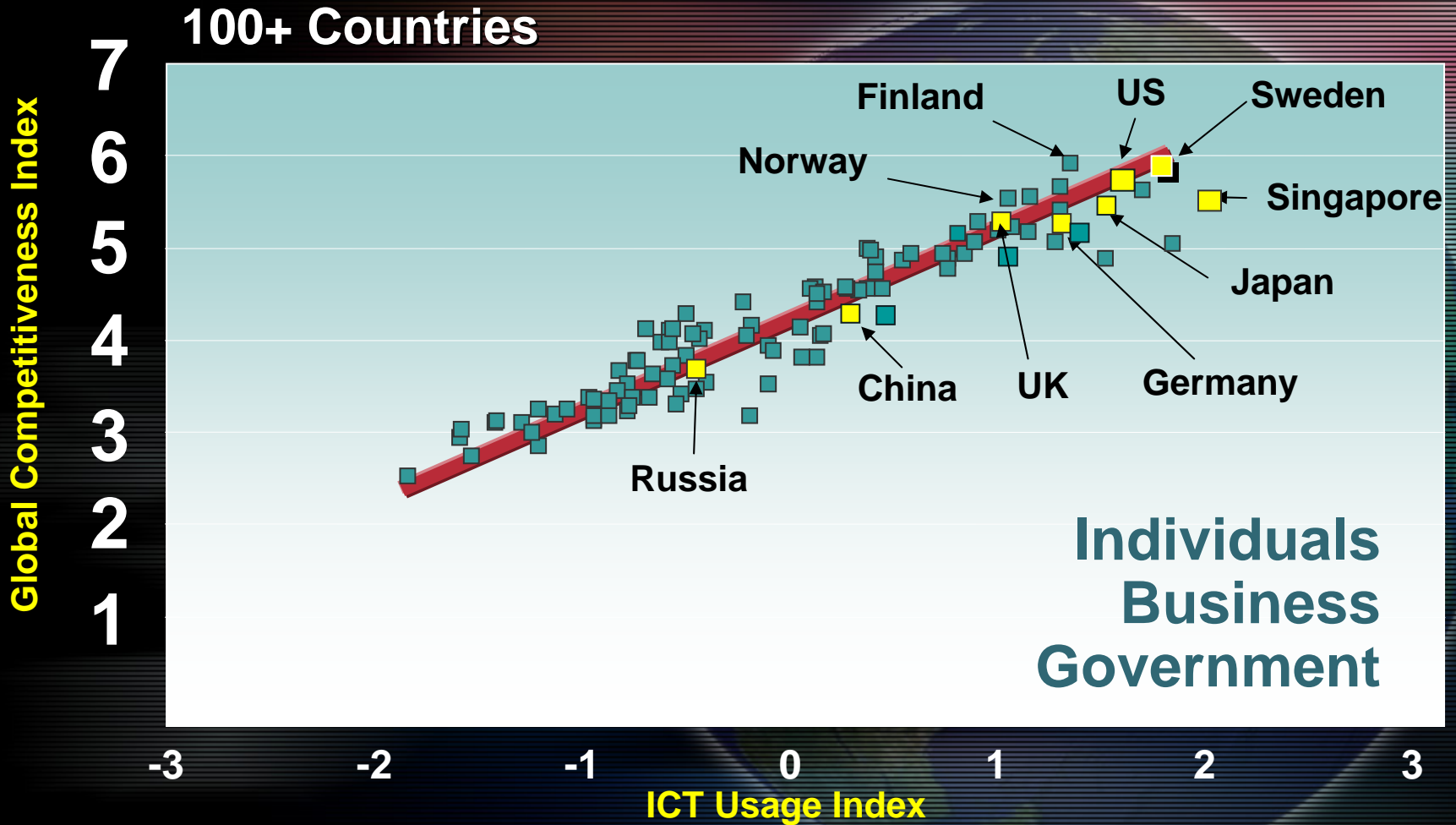


“The explosion of advanced technologies now means that **suddenly knowledge pools and resources have connected all over the planet, levelling the playing field as never before**, so that each of us is potentially an equal – and competitor – of the other.”

Thomas Friedman

ICT Usage and Global Competitiveness: 89% Correlation

Cisco.com



CIO Strategic Priorities Reflect the Importance of Contributing to Growth and Efficiency

Cisco.com

To what extent is each of the following a CIO actions a priority for you in 2005?

	Rank 2005	Rank 2004	Rank 2003
Delivering projects that enable business growth	1 ↑	18	*
Linking business and IT strategies and plans	2 ↑	4	6
Demonstrating the business value of IS/IT	3 ↓	2	2

↑ ↓ Selected change in ranking compared with 2004

* New question for 2004

Gartner®

Transactions to Interactions: The Real-Time Business Imperative

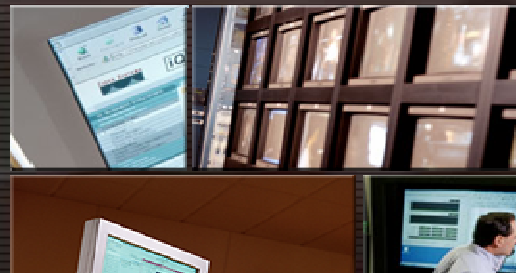
Cisco.com

Customer Interactions
Value Chain Interactions
Employee Interactions

INTERACTIONS



TRANSACTIONS



PRODUCTION



1980

Fast

1990

Faster

2000-2010

Real-Time

Industry Examples: Retail Banking

Cisco.com

Production



Neighbourhood
branches
Different experts @
different branches

Transactions



Online account
management
ATM
No single view of
customer

Interactions



Multi-channel banking
Revitalising the
branch
Single view of
customer

Fast

Faster

Real-Time

Interactions: Major European Bank

Cisco.com

Business Need:

- Call centre still routes **4M+** customer queries to branch each year
- **80%** request specialist advice
- Branch staff hunt for specialist who may cover region... customer may wait days for reply

Solution:

- IP telephony, Extension Mobility and Unity

Impact:

- Calls routed directly to specialist instantly, wherever they are
- Call centre agents hand off calls in seconds, not minutes
- Branch staff freed to serve and sell to customers
- Customer satisfaction increases



Cisco's Blueprint for the Future

Cisco.com

3–5 Year Goals

Cisco Strategy

FY '06 Initiatives

Business Architecture



**Intelligent
Information Network**



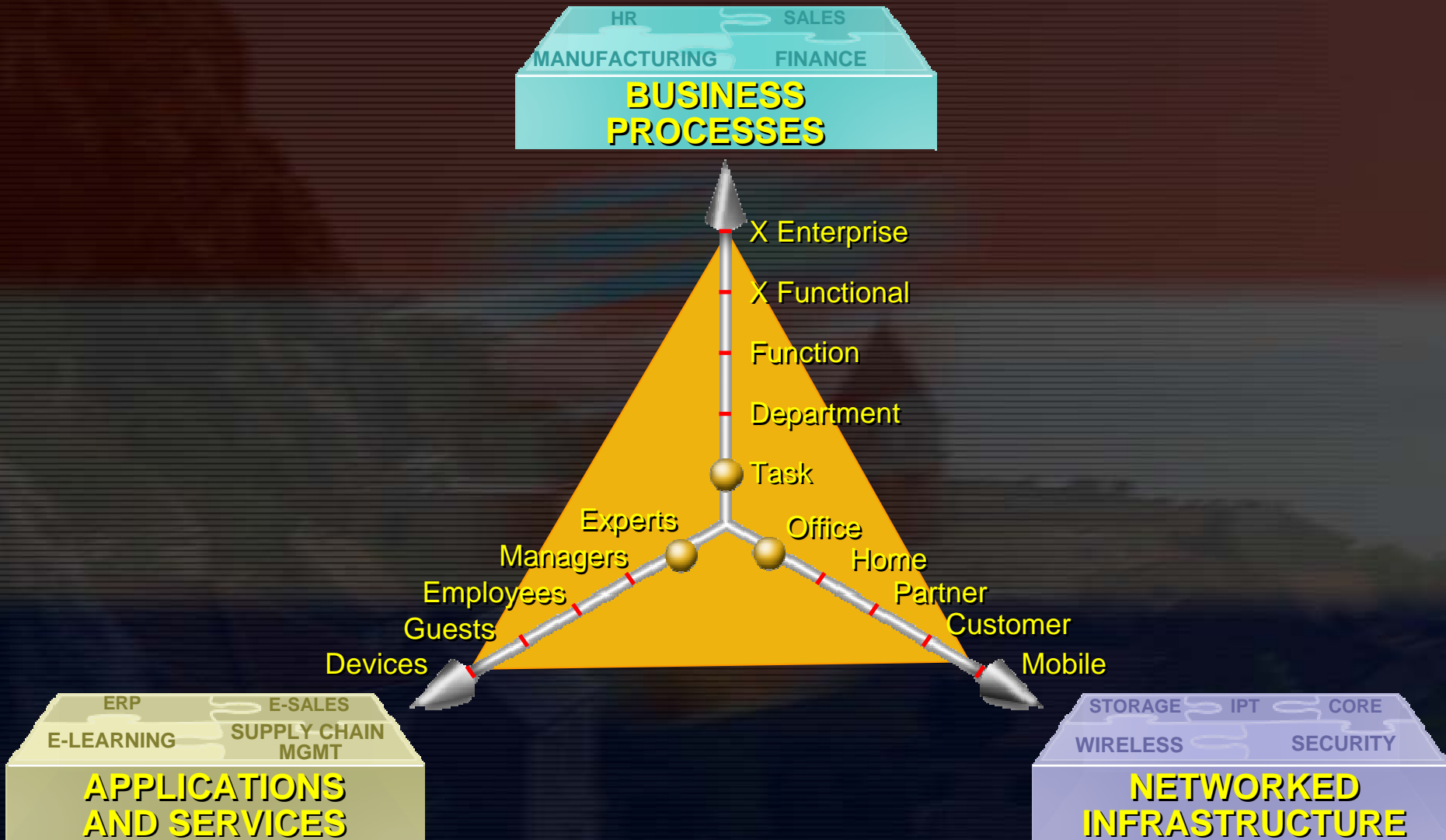
Technology Architecture

GOALS

INITIATIVES

Innovation Needs Flexible and Agile Business Architectures

Cisco.com



The Intelligent Network is the Enabler...

CISCO STRATEGY

Technology Architecture

Secure

Adaptable

Converged D/V/V

Application-driven

Virtualisation

**INTELLIGENT
INFORMATION NETWORK**

Business Architecture

Growth

Productivity

Business
Transformation
Enablers

Flexibility

Agility

Intelligence migrating to the Network

Cisco.com

APPLICATIONS

Firewall

SBC

Caching

Email

ERP

Voice Mail

File IDS Mngmt

Anti-Encryption SPAM

Patch Backup Updates

Replication

Mobile Multicast Email

DNS

Wireless AV Mgmt

OS AND MIDDLEWARE

Disks Management

Load Balancing



IP NETWORK

Call Control

OTHER NETWORK APPS

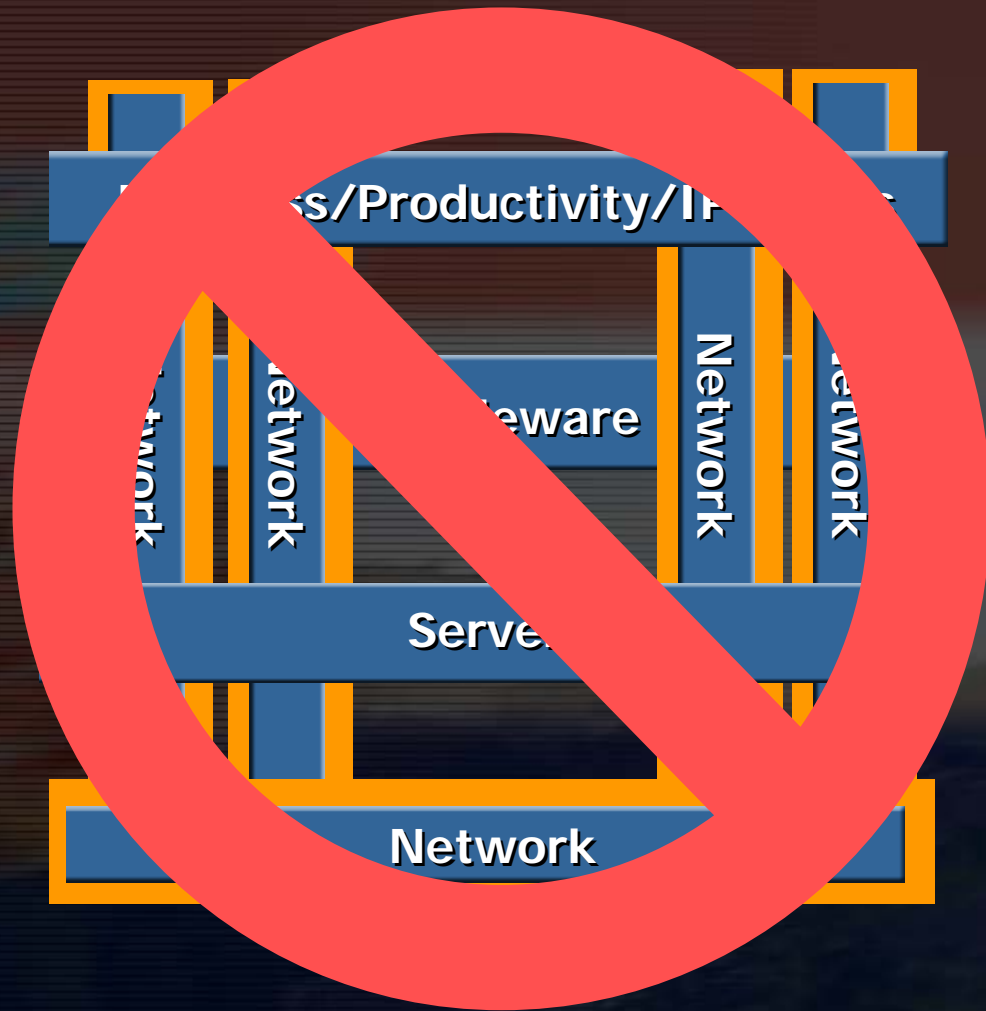
QoS

OTHER NETWORKS

The Network Is Fundamental to the Solution

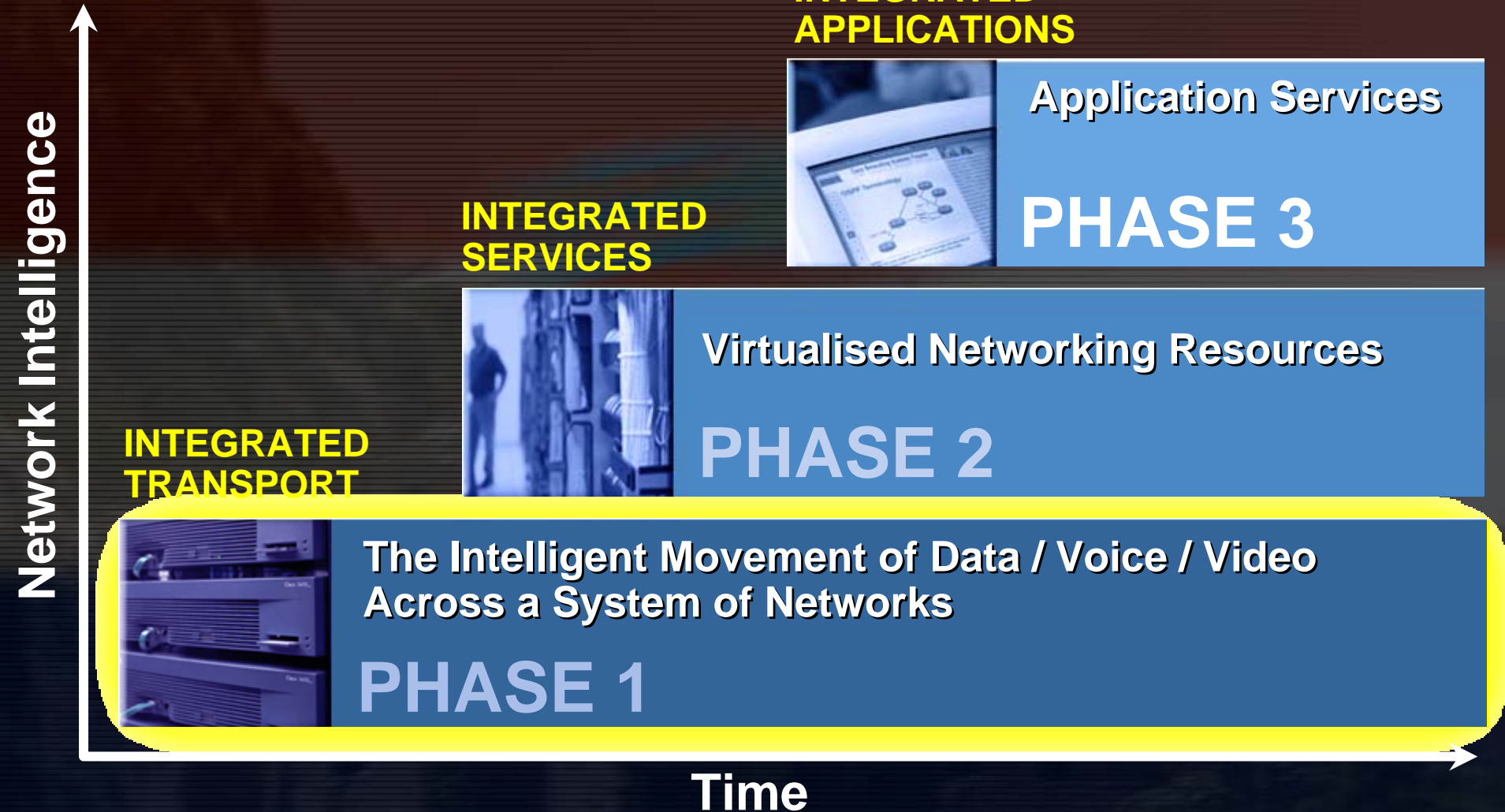
Cisco.com

- The network ties all the elements of the infrastructure together
- Thus, the network is the first, and more effective, place to start



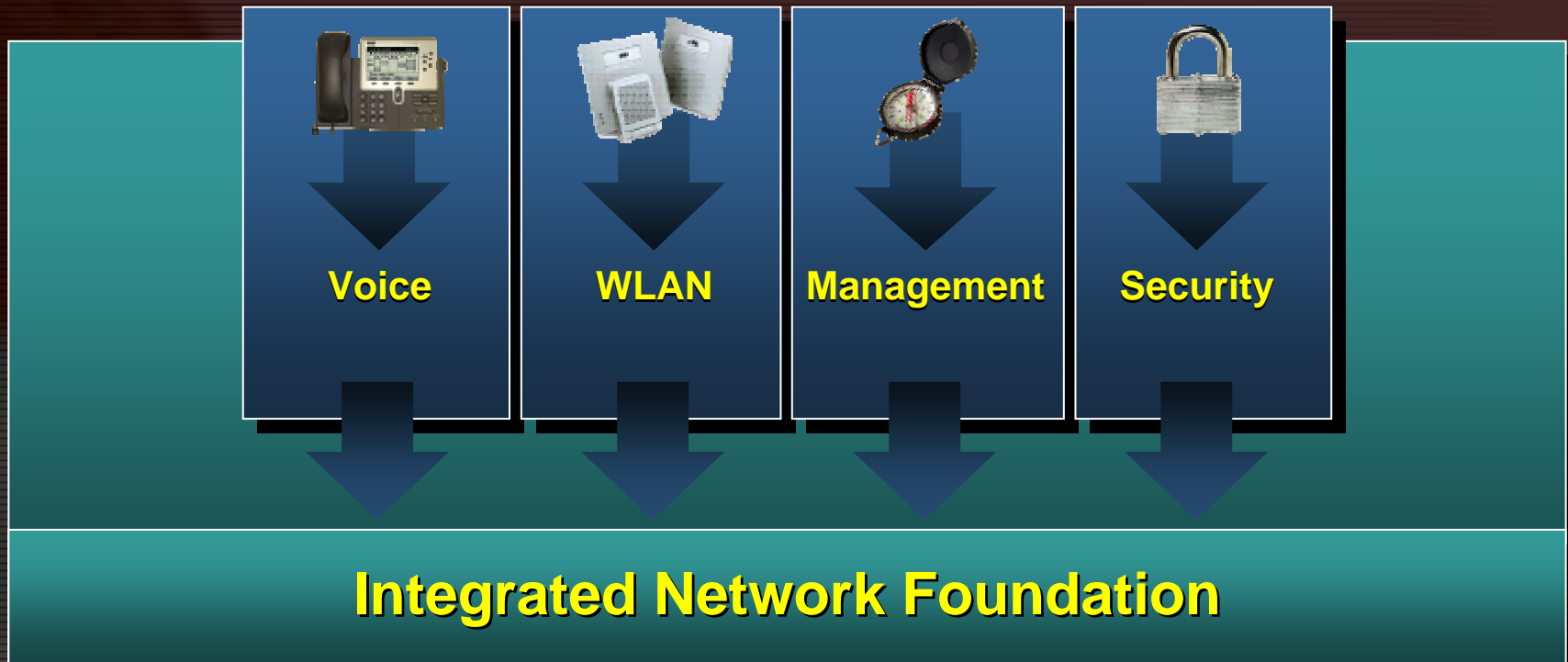
Cisco's 3-5 Year Technology Vision: The Intelligent Information Network

Cisco.com



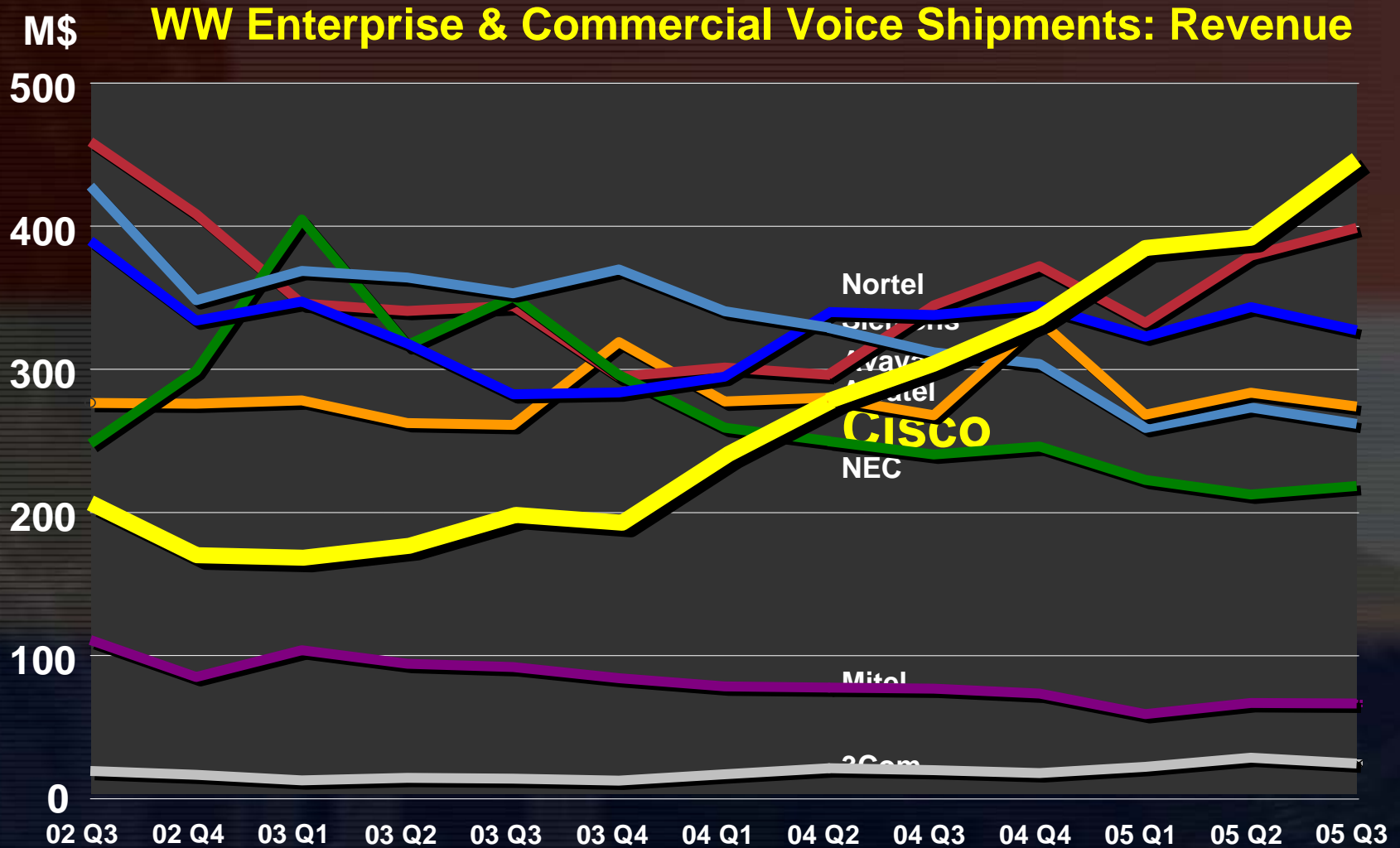
Building Technologies “In” vs. Bolting them “On”

Cisco.com



From #6 to #1 in Overall Enterprise Voice!

Cisco.com



Source: Synergy Research Group, 2005

Customer Example: Malmö Stad

Cisco.com

Business Need

- Upgrade telephone infrastructure to deliver new and better services to 270,000 citizens

Solution

- 11,000 IP extensions (1,000 IP phones in 1st phase)
- Cisco IP Contact Center
- TeliaSonera Sweden integration, services & support

Impact

- Call waiting times reduced to > 30 seconds
- 24-hour access to local government services
- Return on investment expected within four years



Customer Example: St. Olavs Hospital, Norway

Project

- Provide better quality of care, new treatment methods and reduce cost
- Integrate university employees into the network
- Re-build hospital due to rising cost and inefficient operations
- Highly available, highly secure requirements

Solution

- IPC foundation for all communications within hospital
- MPLS/VPN network with 99.999% uptime
- WLAN coverage for entire campus

Results

- Secure information available to the right person at the right time
- Improved quality of care and patient experience
- Increased staff productivity, the “paperless” hospital

Cisco.com



CISCO MEDICAL - GRADE NETWORK

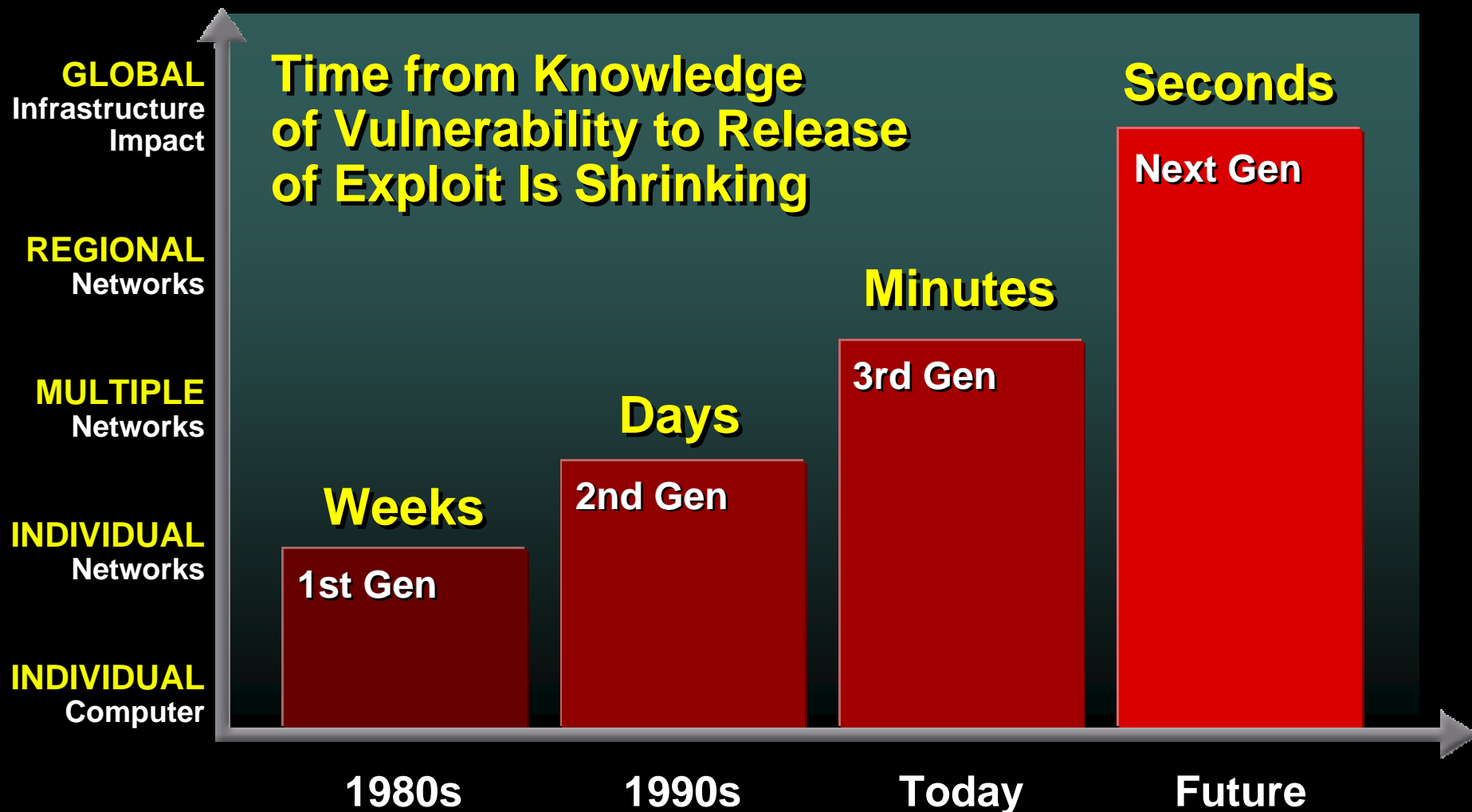


ST. OLAVS HOSPITAL
UNIVERSITETSSYKEHUSET I TRONDHEIM

Evolution of Security Challenges

Cisco.com

Target and Scope
of Damage



The Power of the Network. Now.

Cisco.com



SELF-DEFENDING NETWORK

Cisco Strategy to Dramatically Improve the Network's Ability to Identify, Prevent, and Adapt to Threats

INTEGRATED SECURITY

- Secure Connectivity
- Threat Defense
- Trust and Identity

Innovate

SECURITY TECHNOLOGY INNOVATION

- Okena (CSA)
- Protega (ATD)
- Riverhead (CDG)
- Twingo (SSL)
- Perfigo (CCA)

Acquire

SYSTEM-LEVEL SOLUTIONS

- Endpoints + Networks + Policies
- Services
- Partnerships

Collaborate

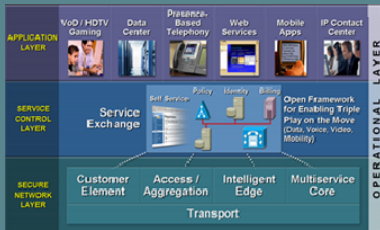
Implementing IIN.... Architectures per Segment

Cisco.com

INTELLIGENT INFORMATION NETWORK

SERVICE PROVIDER

IP NGN



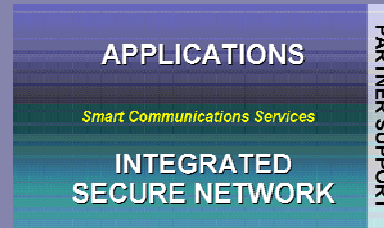
CONSUMER

The Connected Home



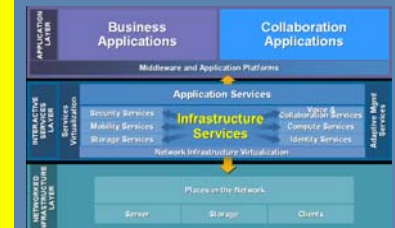
COMMERCIAL

Smart Business Communications Architecture



ENTERPRISE

Service-Oriented Network Architecture



Implementing IIN...Enterprise

Cisco Service-Oriented Network Architecture

Cisco.com

SOA

Interactive
Services
Layer

Infrastructure Services

Adaptive Manag
Services

Infrastructure Management

Networked
Infrastructure
Layer

Places in the Network

Server

Storage

Clients

Business Benefits: SONA

Cisco.com



**Resource
Optimization**

**Quickly Roll-out
New Business
Services**

**Improve Application
Performance &
Agility**

Cisco's 3-5 Year Technology Vision: The Intelligent Information Network

Cisco.com

Network Intelligence

**INTEGRATED
TRANSPORT**



The Intelligent Movement of Data / Voice / Video
Across a System of Networks

PHASE 1

**INTEGRATED
SERVICES**



Virtualised Networking Resources

PHASE 2

**INTEGRATED
APPLICATIONS**



Application Services

PHASE 3

Time

Virtualisation

..Simplicity and Agility in Managing Resources

Cisco.com

What is Virtualisation?

A **logical** rather than **physical** view of data, storage, network, and other resources presented independently of location, packaging, or capacity

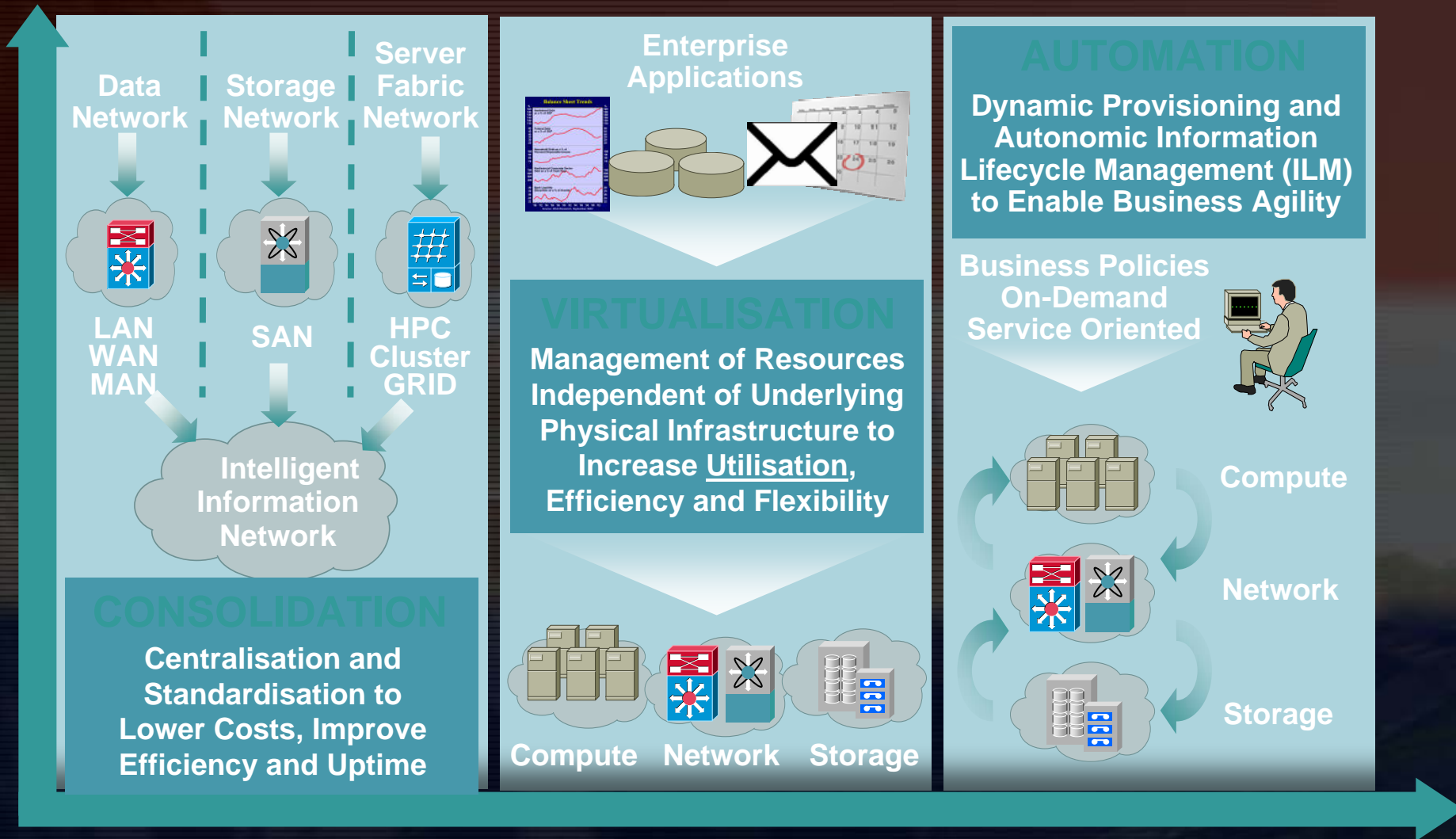
Benefit?

Flexible configuration and management of all infrastructure resources to reduce costs and increase agility

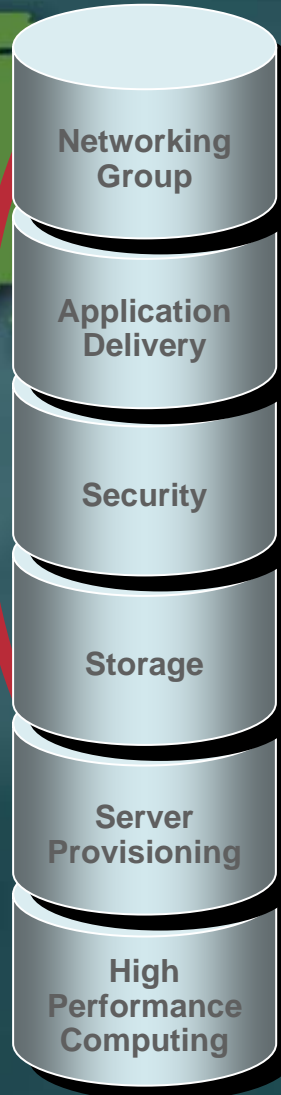


Evolution of the Data Centre

Cisco.com



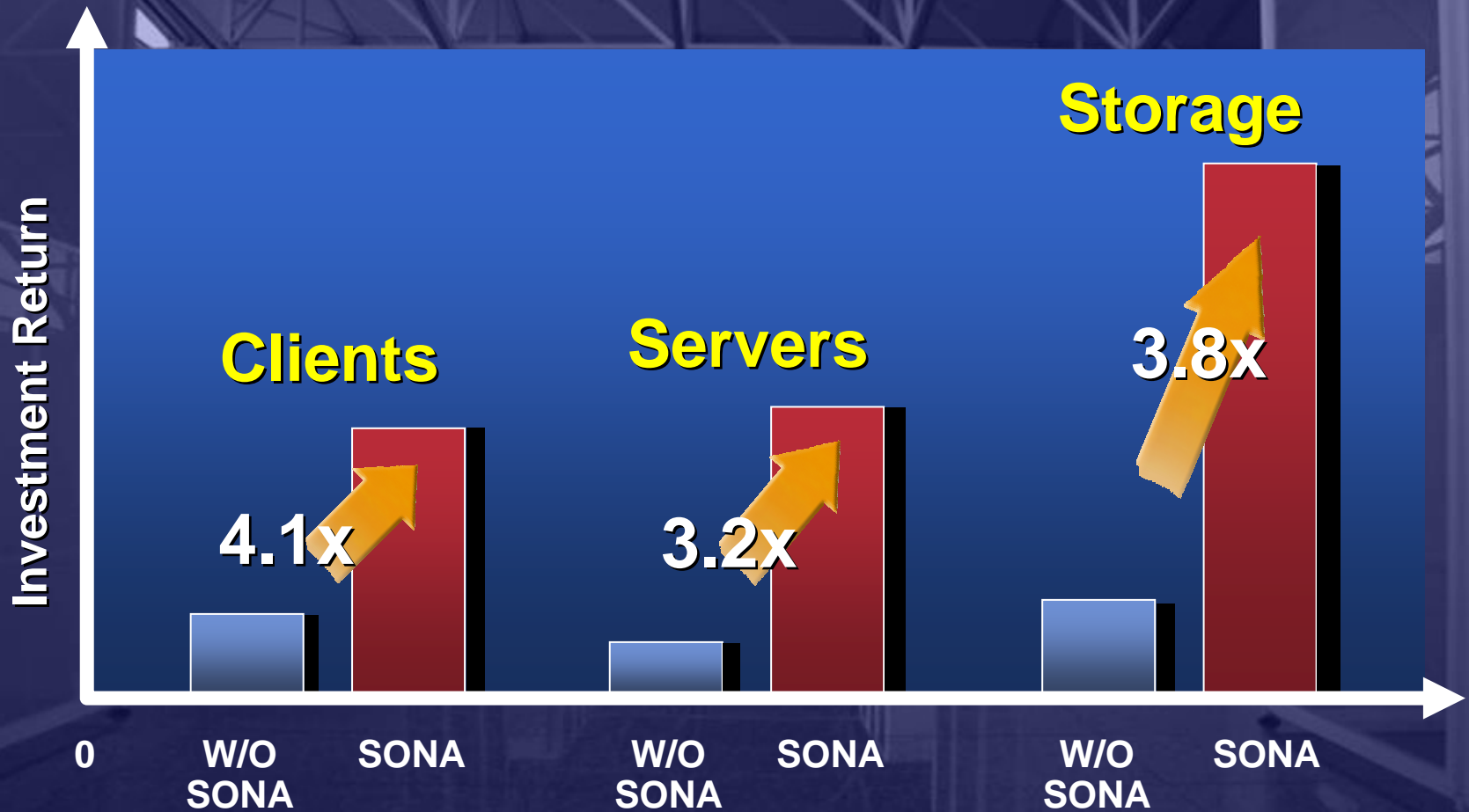
Cisco's Investment in the Data Centre



Tripling Utilization

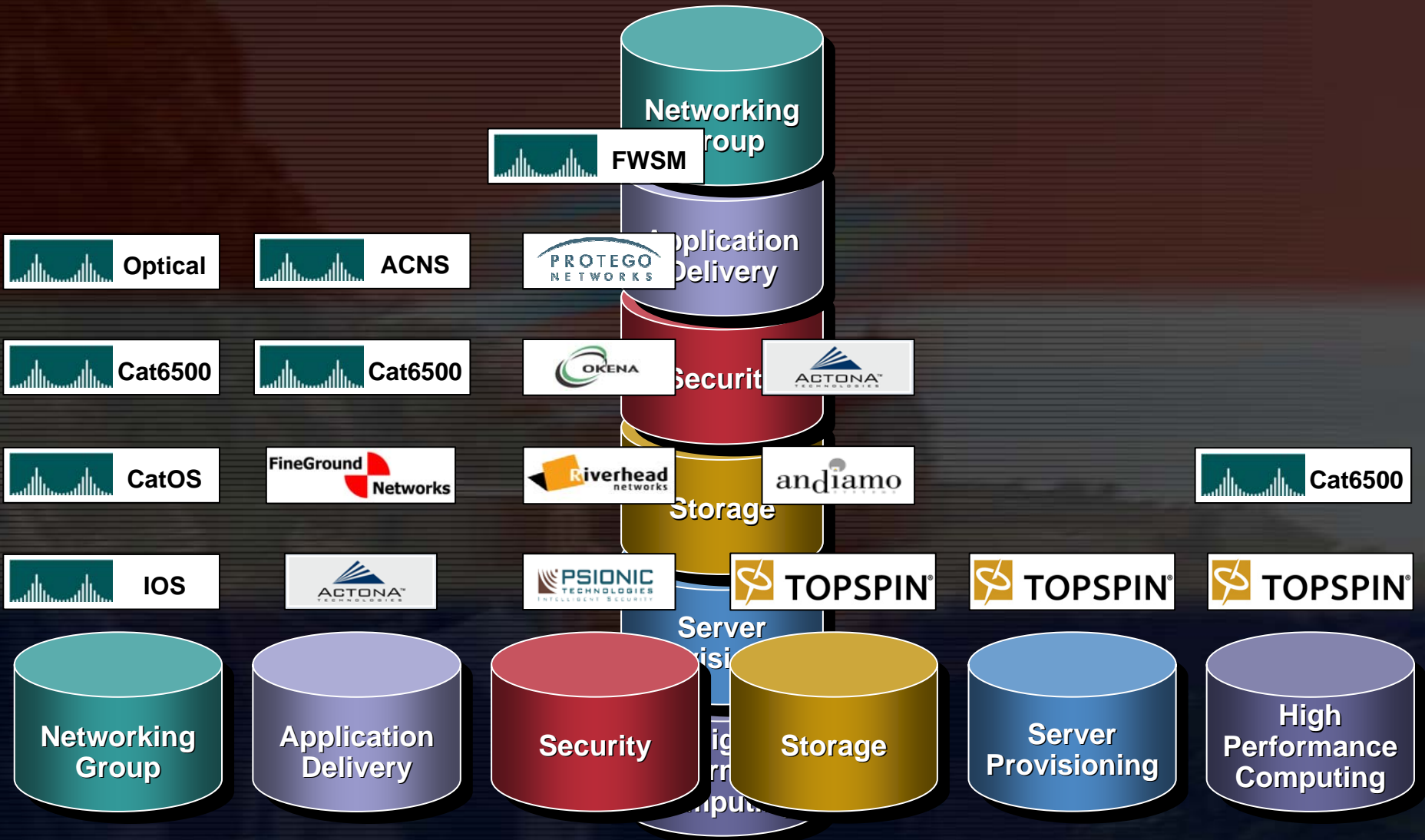
Cisco IT Virtualization Case Study

Cisco.com



Cisco's Investment in the Data Centre

Cisco.com



Cisco's Investment in the Data Centre

Cisco.com

Automation



Virtualization



Consolidation

Cisco's 3-5 Year Technology Vision: The Intelligent Information Network

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Network Intelligence

**INTEGRATED
APPLICATIONS**



Application Services

PHASE 3

**INTEGRATED
SERVICES**



Virtualised Networking Resources

PHASE 2

**INTEGRATED
TRANSPORT**



The Intelligent Movement of Data / Voice / Video
Across a System of Networks

PHASE 1

Time

Application Oriented Networking: Network Speaking the Language of Applications

Cisco.com

APPLICATIONS

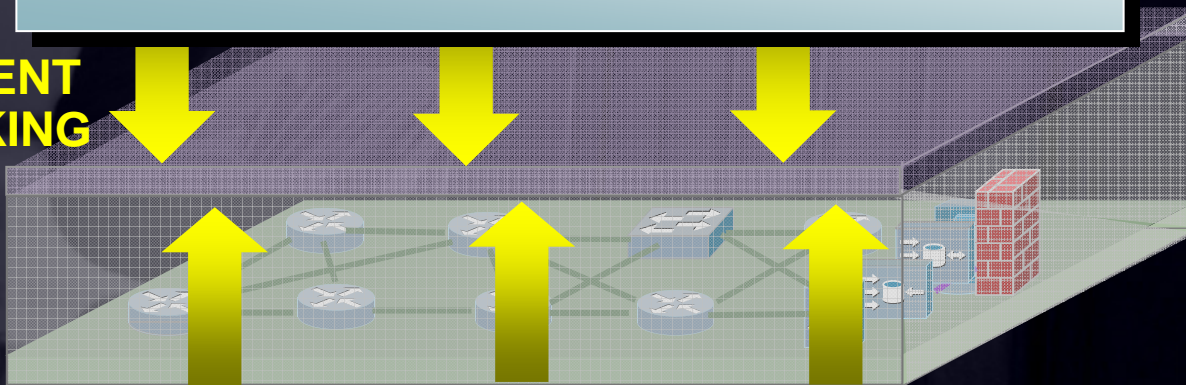


Business Applications

Application Infrastructure

APPLICATION-ORIENTED NETWORK

INTELLIGENT NETWORKING



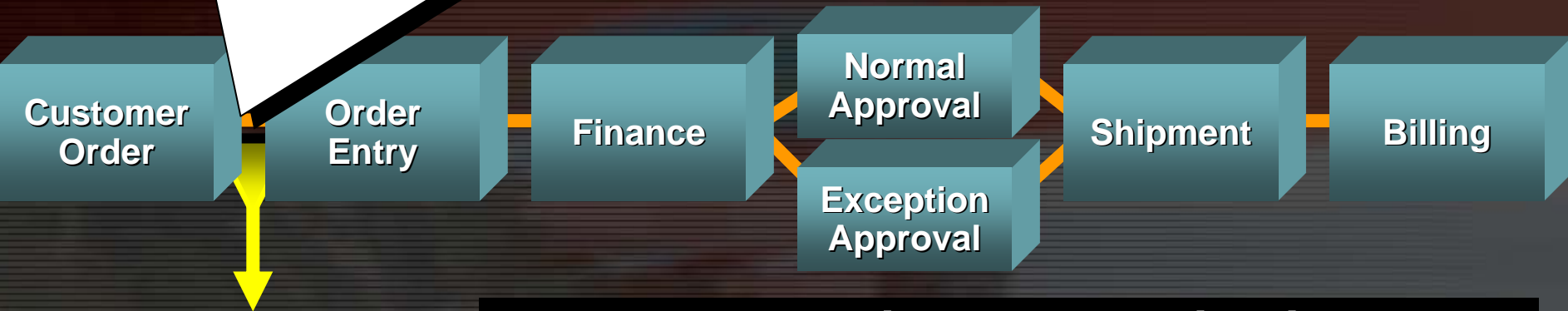
Packet Network

PACKET NETWORKING

Application Oriented Networking

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APPLICATION ORIENTED NETWORKING
Application messaging read by the network



PURCHASE ORDER

ABC Co
\$25,000
Urgent 2 days

Network operations on application messages:

- Log
- Route
- Transform
- Validate
- Notify

POLICY-BASED

Service Level Assurance Global Logistics Company

Cisco.com

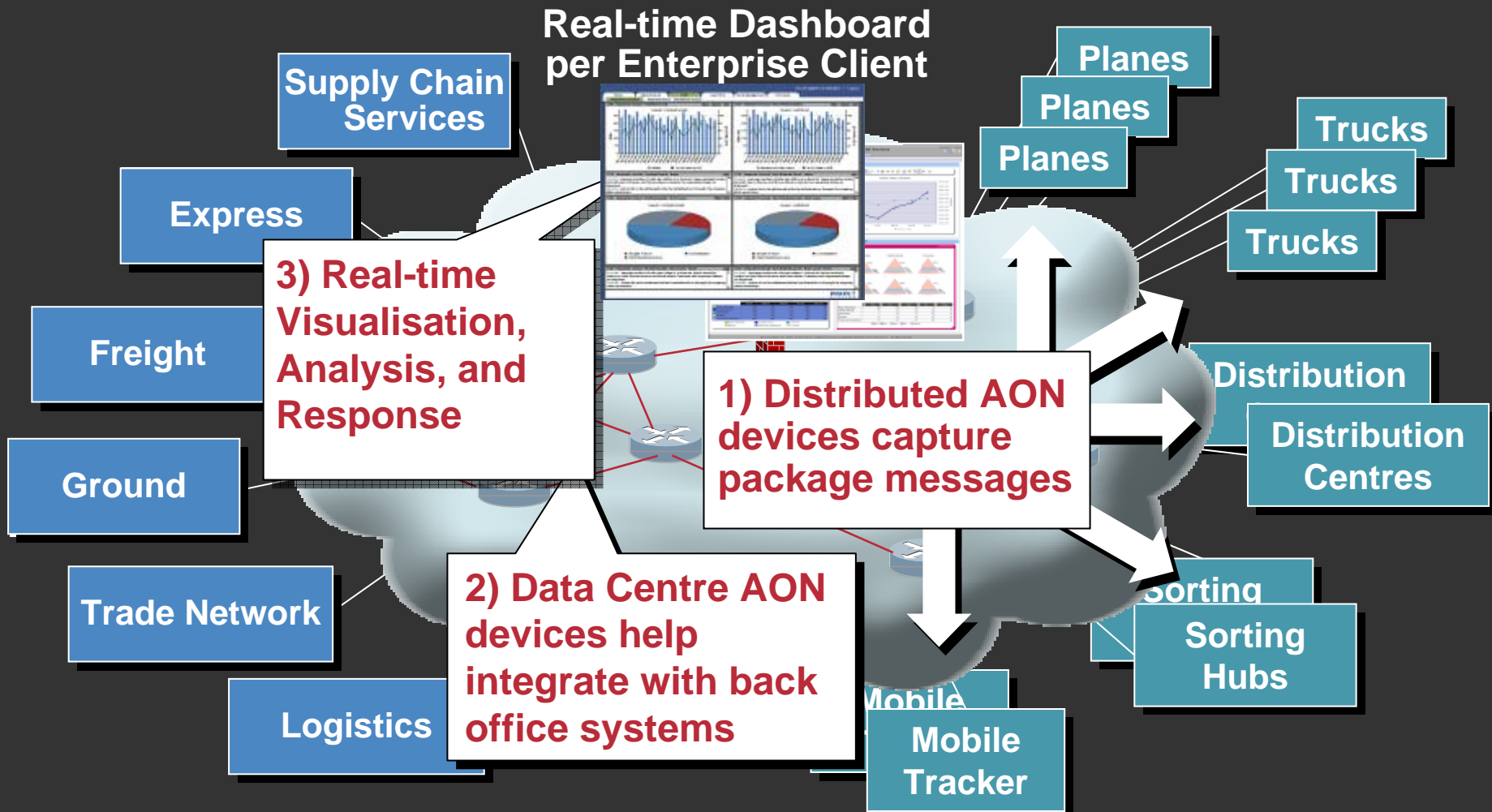


CHALLENGE

- Provide real-time tracking of packages and shipping data worldwide
- Customers demanding real-time information to take advantage of favourable rates and ensure satisfaction with service-level

Real-time Business Visibility Global Logistics Company

Cisco.com



The Network As A Platform

Cisco.com

Scalability

Bandwidth
Reach
Media

Services

Data, Voice, Video
Security
Mobility
App. Networking



Customer Value

Flexibility

Standards
Protocols
Partners
Management

Leverage

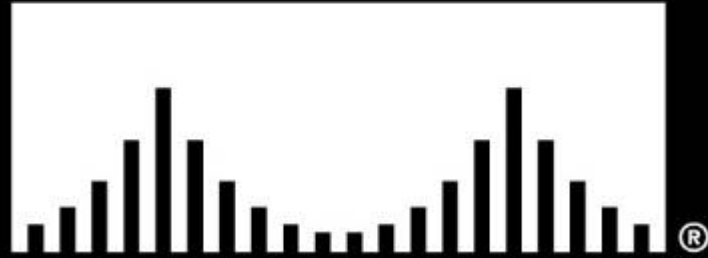
Clients, Devices
Storage, Servers
Programming
Applications

In Summary...

Cisco.com

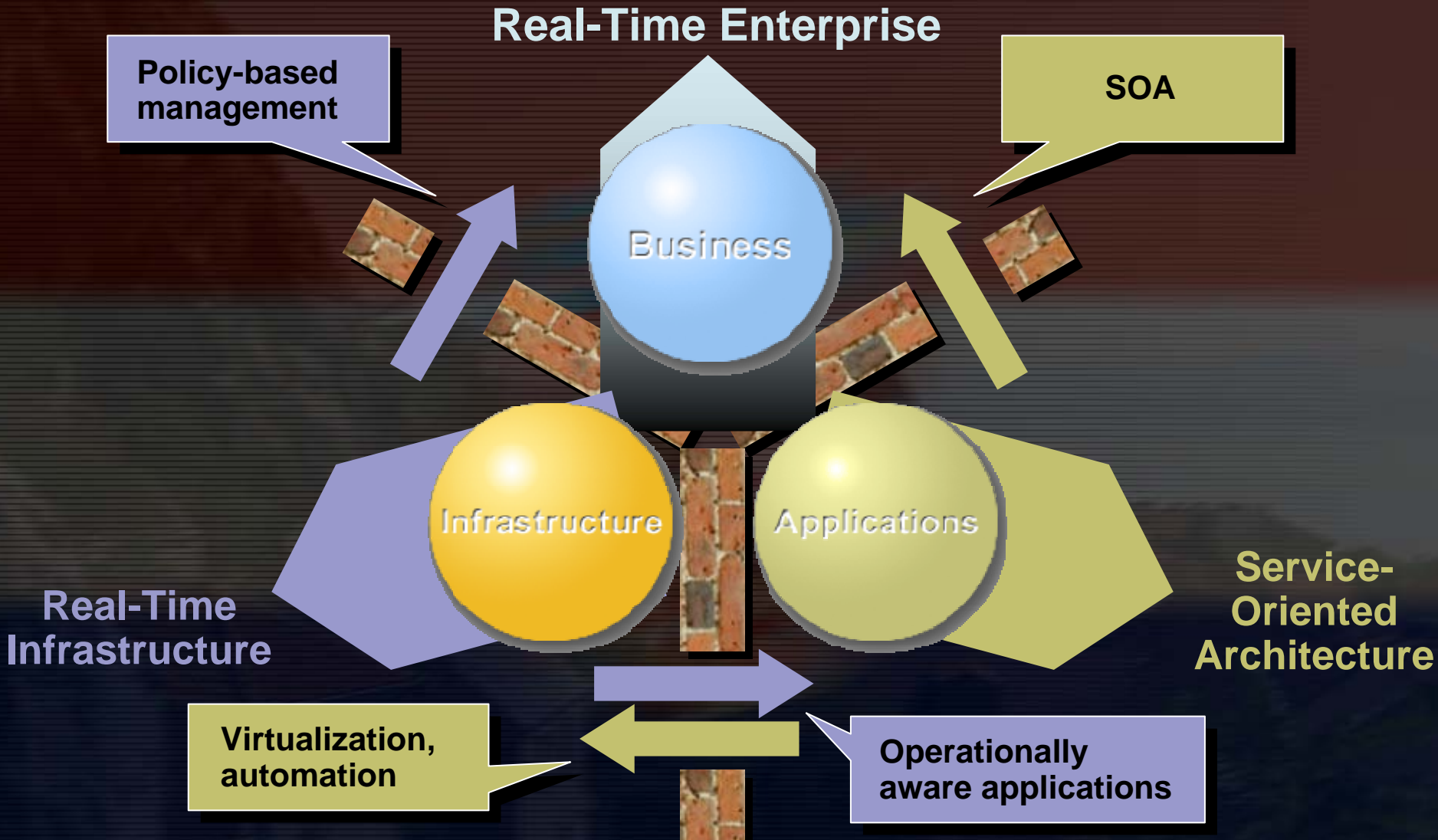
- **Innovation** drives economic competitiveness...
The **Network and IT** are the key enablers
 - Business needs:
 - .. **Agility** and **Flexibility**
 - .. **Transactions** to **Interactions**
 - **Intelligent Information Network (IIN)..**
 - = **Cisco's Roadmap, A Platform**
 - = **Architectures per Segment**
 - = **Key Enabler** of **Innovation** and **Productivity**
 - Growth**
- 

CISCO SYSTEMS



Walls Are Coming Down

Cisco.com



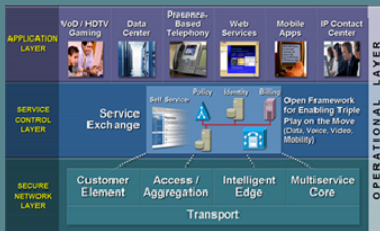
Implementing IIN...Service Provider IP NGN

Cisco.com

INTELLIGENT INFORMATION NETWORK

SERVICE PROVIDER

IP NGN



CONSUMER

The Connected Home



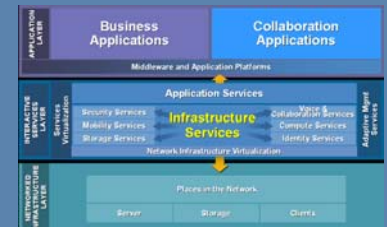
COMMERCIAL

Smart Business Communications Architecture



ENTERPRISE

Service-Oriented Network Architecture



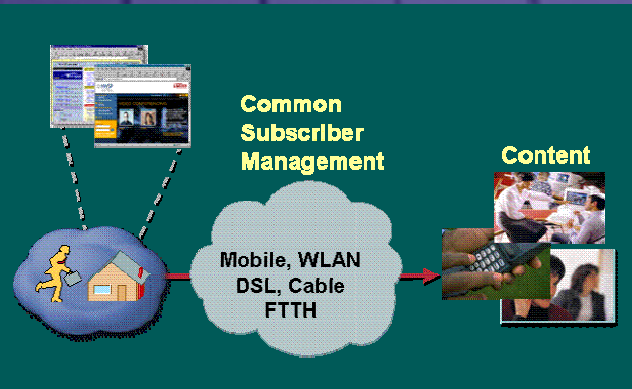
Service Provider Next Generation Network

Cisco.com



**APPLICATION
CONVERGENCE**

**Integration of
New Innovative
IP D/V/V Services
over Broadband
Increase Revenue**



**SERVICE
CONVERGENCE**

**Service
Continuity and
Creation
Customer Loyalty**



**NETWORK
CONVERGENCE**

**Eliminate Layers
in the Network
Reduce
OPEX / CAPEX**

Service Provider: New Service Opportunities...

Example: Residential Broadband Services

Cisco.com



Integrated Networks, Content and Entertainment Systems

Swisscom's IP Next-Generation Network Powered by CRS-1

Cisco.com

“The Cisco **CRS-1** will give us the lead in reliability, performance and capacity to deliver media-rich communications and entertainment services to every home and business in Switzerland.”

Patrice Haldemann, Head of Swisscom Fixnet Wholesale



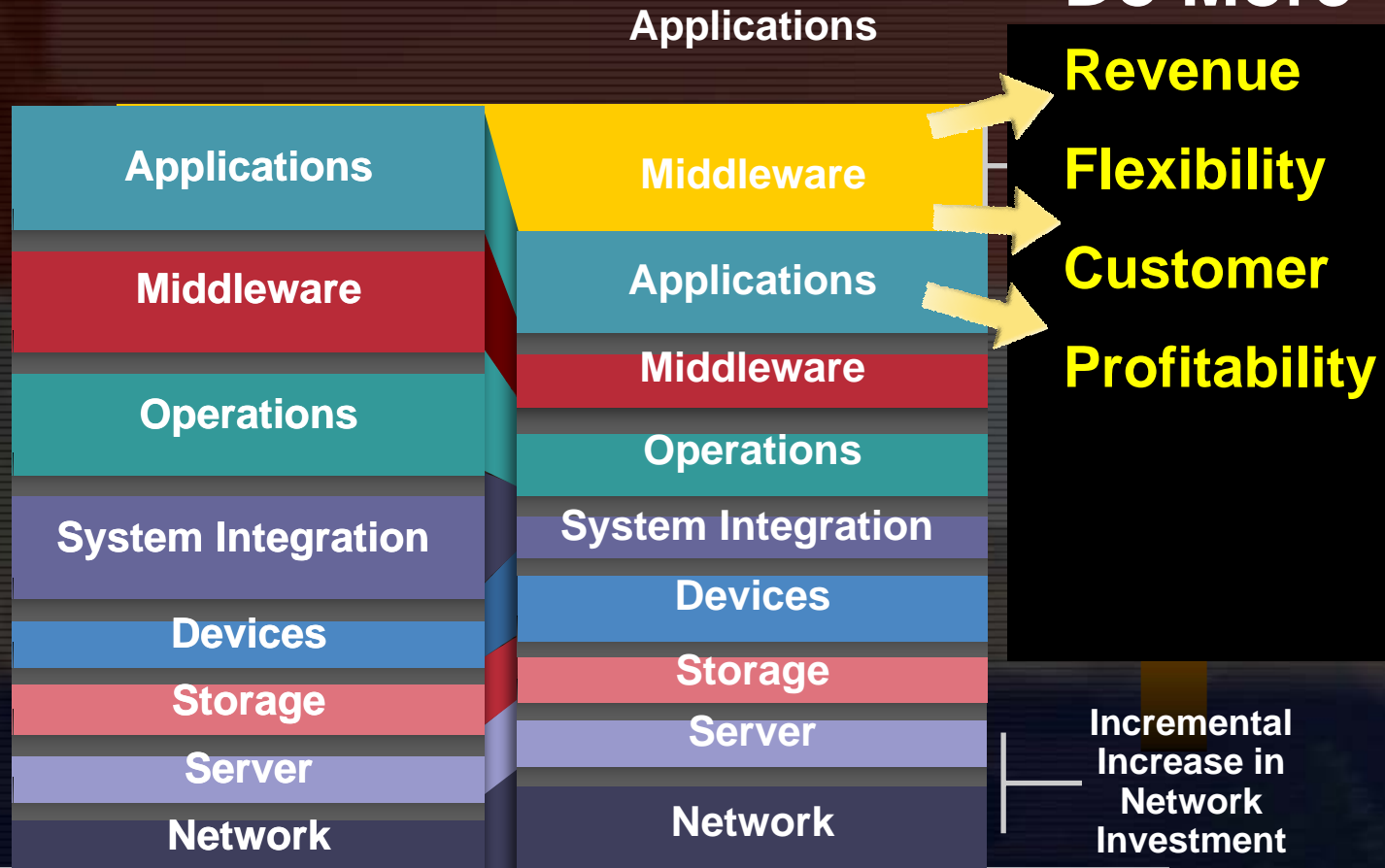
Network Architecture Approach Creates New Investment Flexibility

Cisco.com

Use More

Do More

EXPENDITURE \$



Today

Central Approach

Phase One: Building Technologies “In” vs. Bolting them “On”

Cisco.com



IP Comm

Enhanced
Collaboration



WLAN

Workforce
Mobility



Management

Business
Resilience



Security

Self-Defending

Automatic Phone
Configuration

Secure
Fast Roaming

One Network
View

Network
Admission
Control

Routing

Optical

Switching

Integrated Network Foundation

Across All Business Locations



Supplier



Partner



Headquarters



Branch

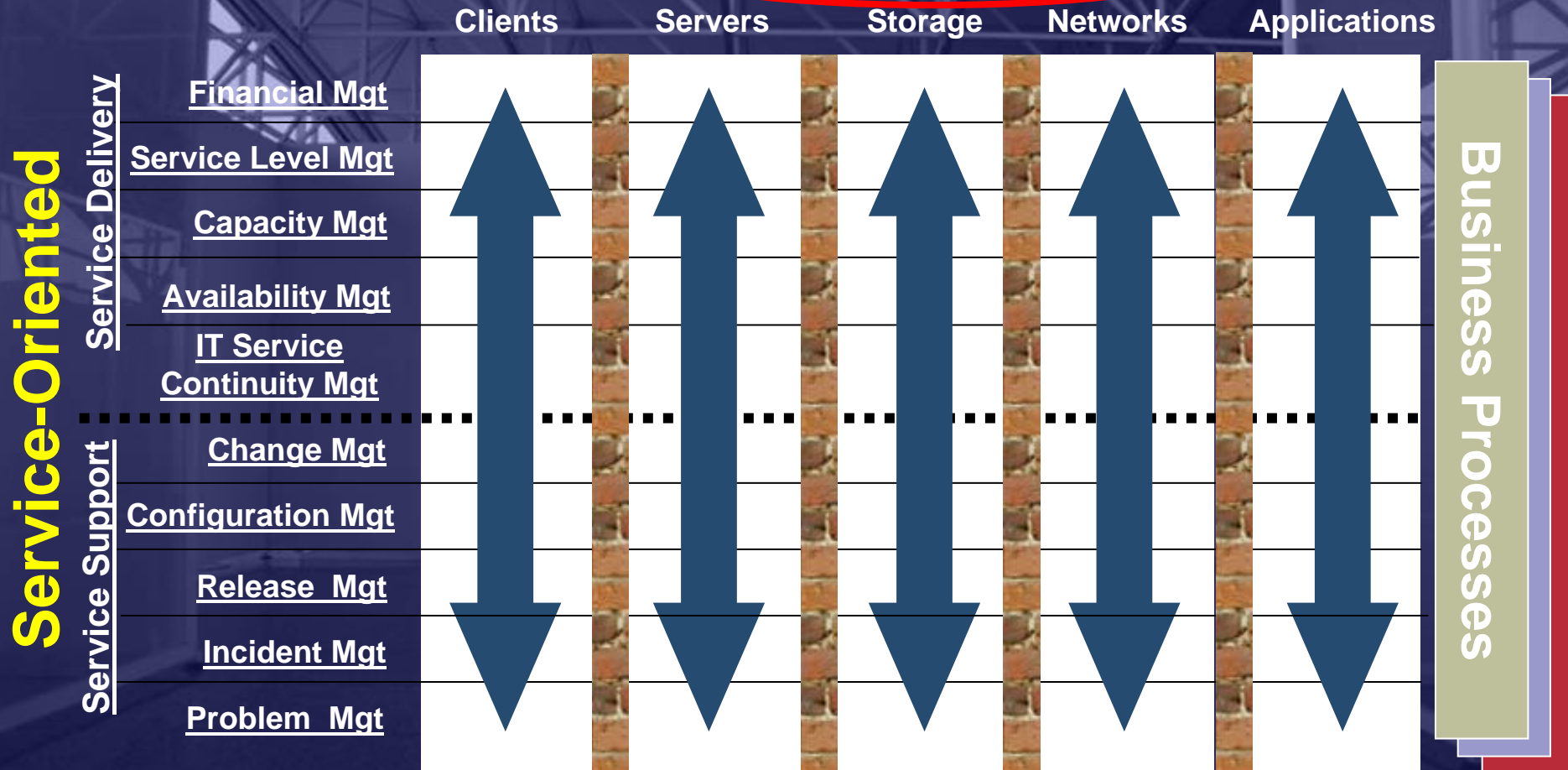


Home Worker

Today: Siloed, Asset Driven Management

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Asset-Oriented

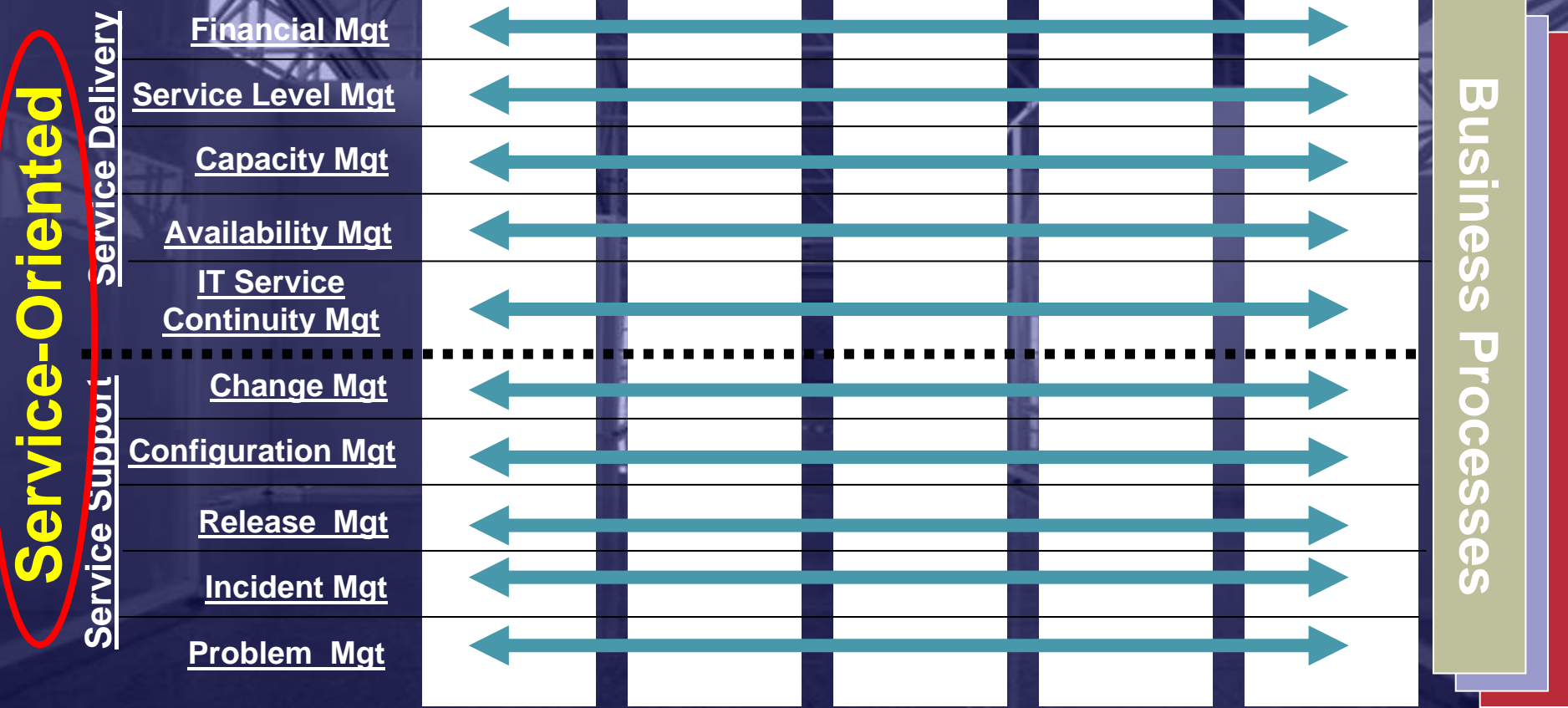


Source: IDC eXchange (<http://blogs.idc.com/ie>), based on the IT Infrastructure Library (ITIL) from the Office of Government Commerce (OGC), UK

Tomorrow: Service-Oriented Management

Cisco.com

Asset-Oriented

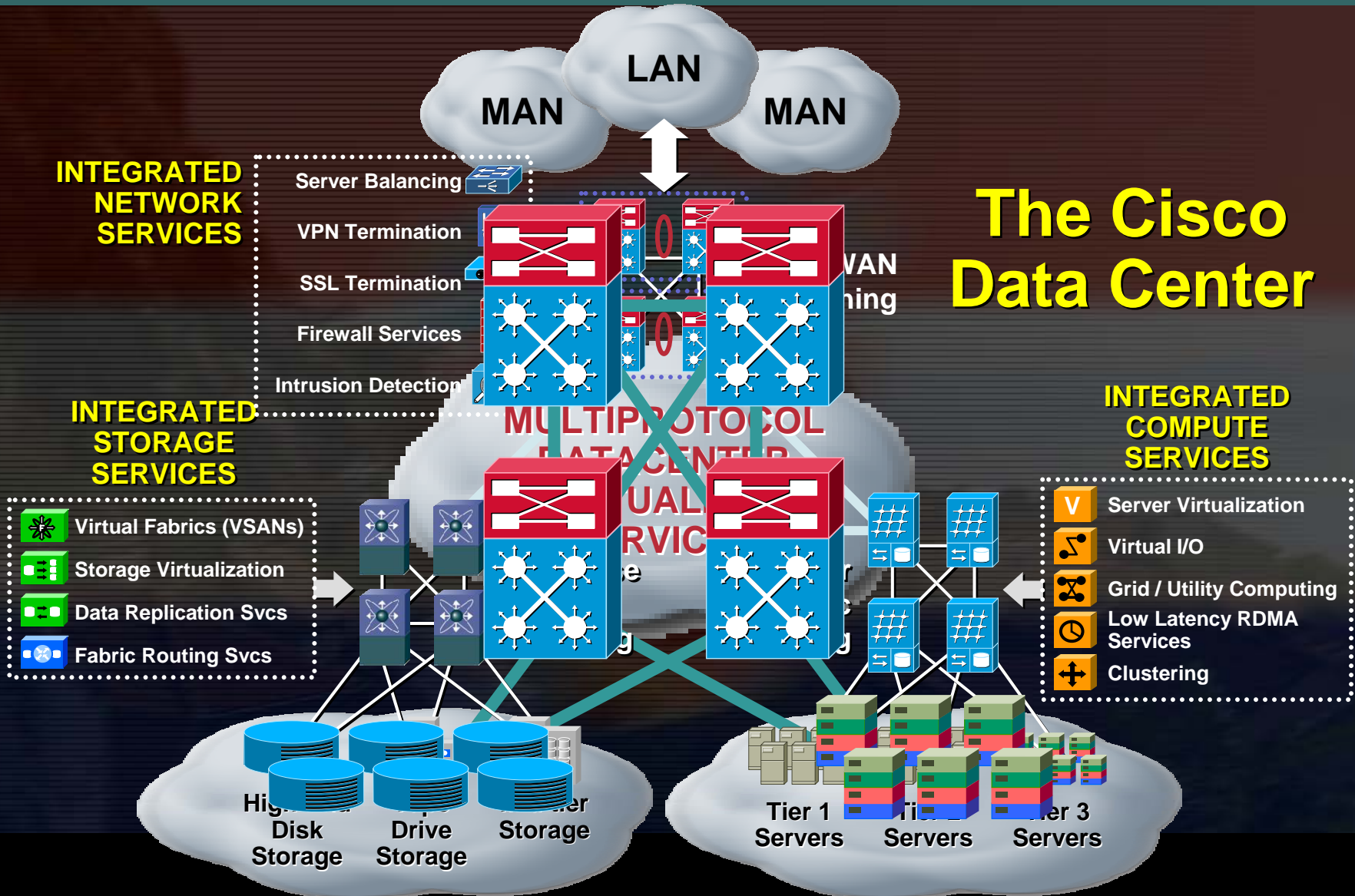


Source: IDC eXchange (<http://blogs.idc.com/ie>), based on the IT Infrastructure Library (ITIL) from the Office of Government Commerce (OGC), UK

Simplifying the Data Center

Cisco.com

The Cisco Data Center



Core Beliefs That Frame Our Future

Cisco.com

**The Network
As The
Enabler**

The end-to-end capabilities of the Network will be the biggest enabler of Business Transformation in the next decade.

**Cisco's IIN
Roadmap**

Cisco's Intelligent Information Network roadmap uniquely positions us to deliver on the technical capabilities required for Business Transformation.

**Partnership,
Resources,
Experience**

Cisco has the partnerships, resources and experience to help customers make critical business transitions needed for success.

Intelligent Networking Increases Application and Service Effectiveness

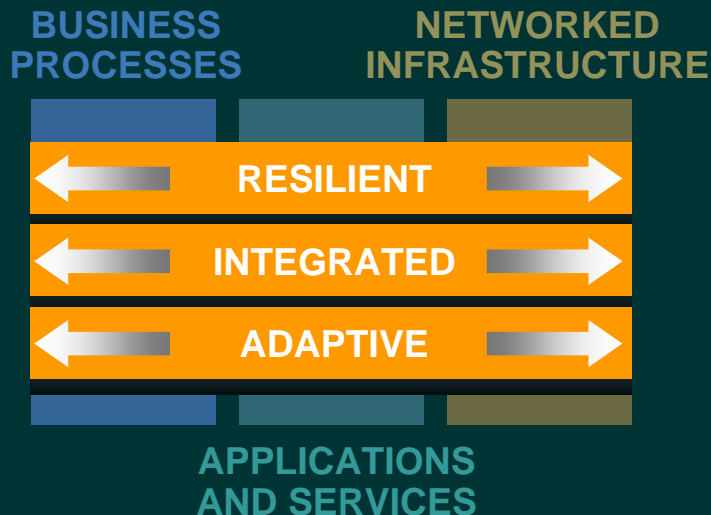
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CISCO NETWORK STRATEGY

➤ BUSINESS PROCESS TRANSFORMATION REQUIRES AN INTELLIGENT NETWORK

CONNECTIVITY

INTELLIGENT NETWORKING

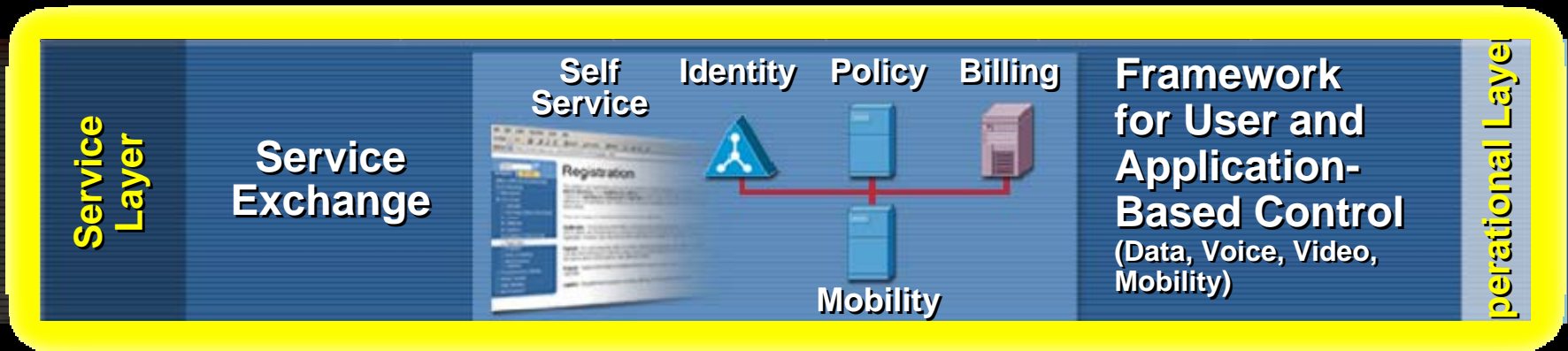


- **ACTIVE PARTICIPATION** in application and service delivery
- **A SYSTEMS APPROACH** integrates technology layers to reduce complexity
- Flexible **POLICY CONTROLS** adapt this intelligent system to your business through business rules

Cisco IP NGN Architecture

Achieving a Whole Greater Than the Sum of the Parts

Cisco.com



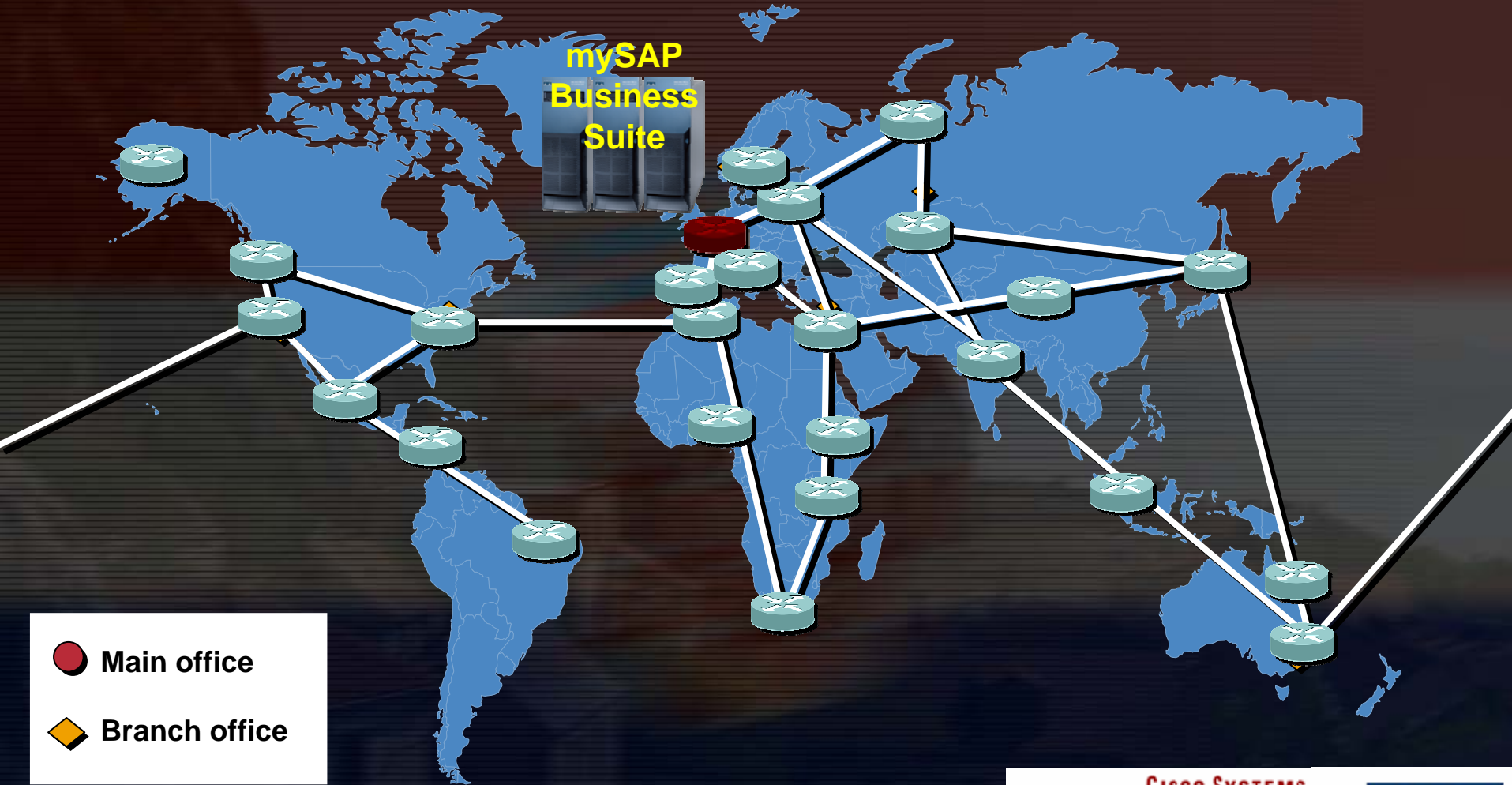
Making It Real: SAP & Cisco

CISCO SYSTEMS



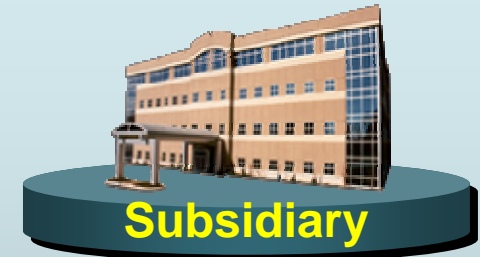
The Challenge...

Cisco.com



Remote Management

Cisco.com



mySAP



Start-up/Shut down
Checking status
Master data update
Intercompany process



Network



AON Management Console



Traditional PC

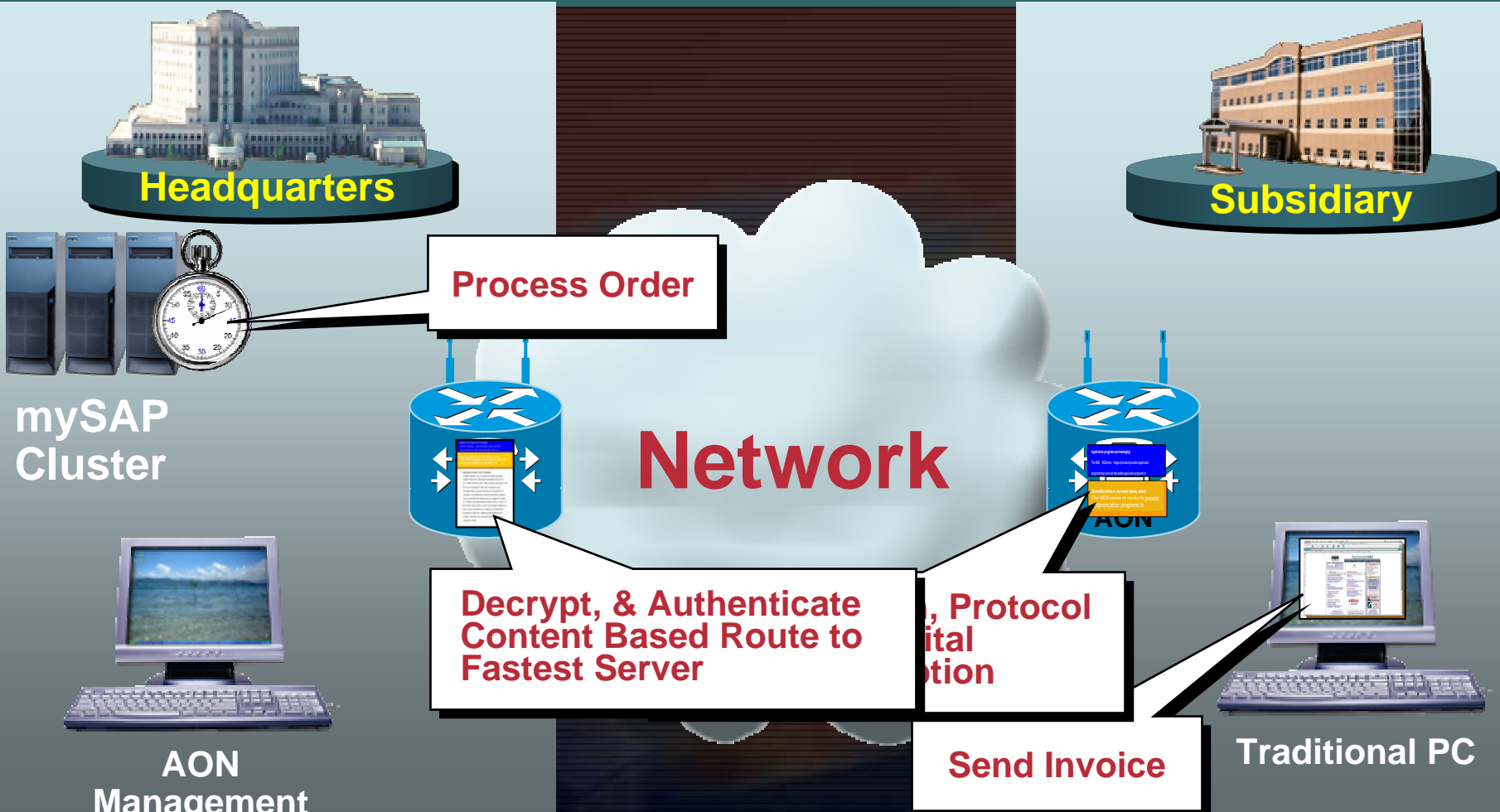


THE BEST-RUN BUSINESSES RUN SAP



Remote Management of Subsidiaries/Branches

Cisco.com



THE BEST-RUN BUSINESSES RUN SAP



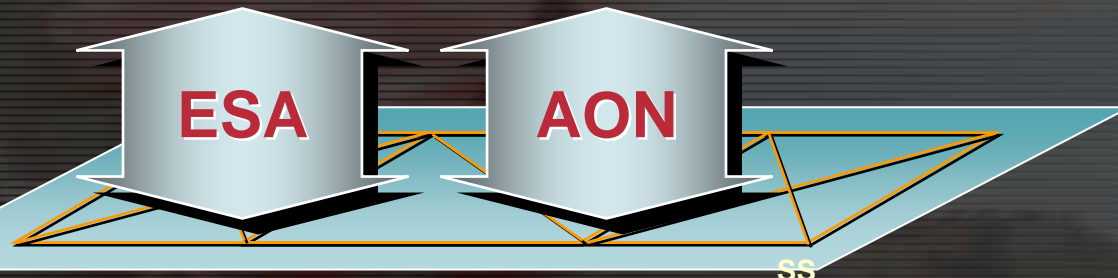
Cisco and SAP Join Forces

Cisco.com

Business Processes Accessible Through Enterprise Services



Enterprise Services Architecture



Application Oriented Network

Intelligent Packet Network

