



Directions in the Public Sector

Technology Solutions 2008

Government
Administration



Educational
Institutions



Culture



Transportation



Service
Providers



Healthcare



Public Safety



Small and Large
Businesses



Ken Boal

National Manager - Public Sector

keboal@cisco.com

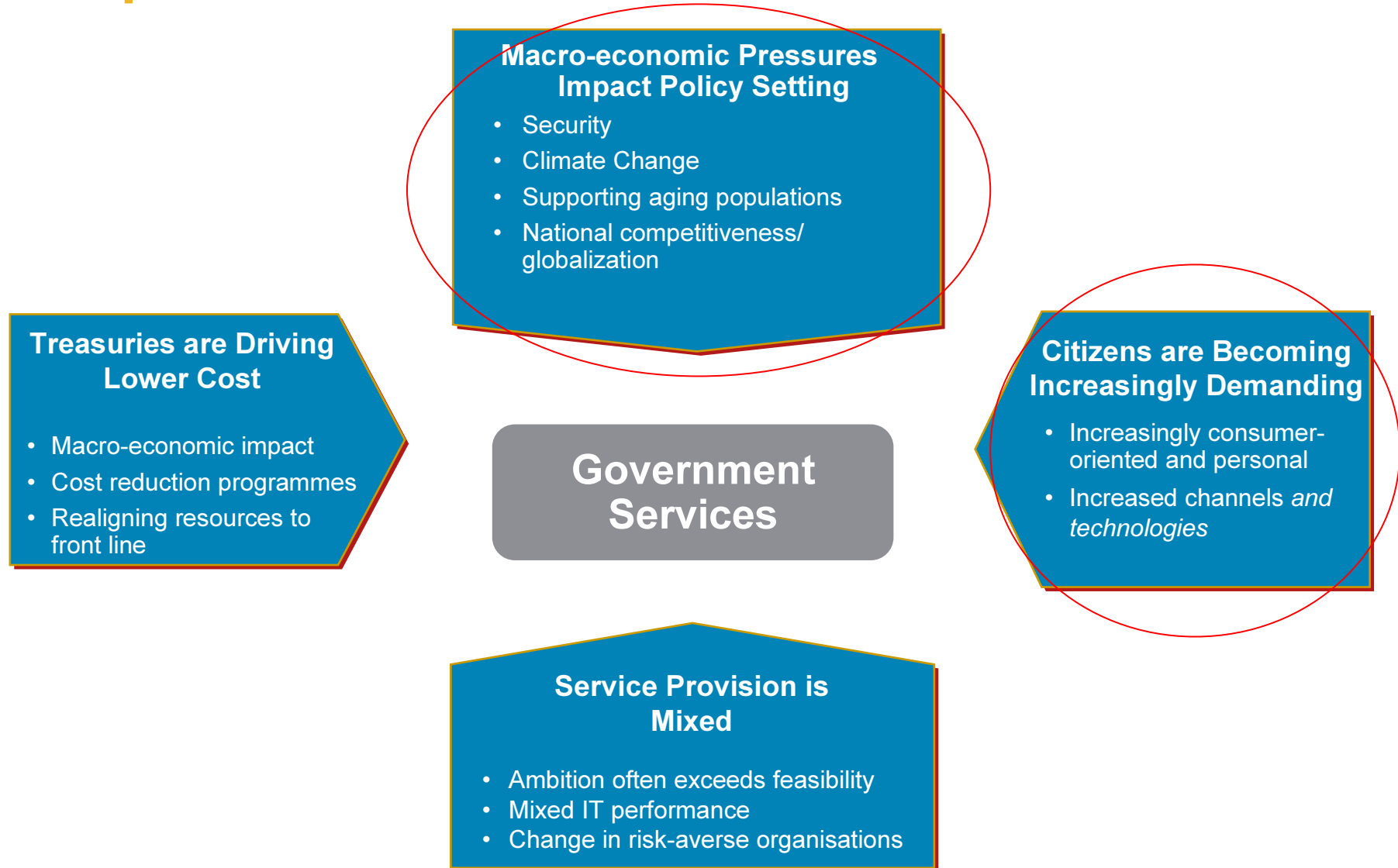
Agenda

- > Market Climate, Drivers and Challenges
- > The Human Network For Government
- > Government Solutions
 - > Education
 - > Health
- > Public Safety & Transportation
- > Administrative Government / Shared Services

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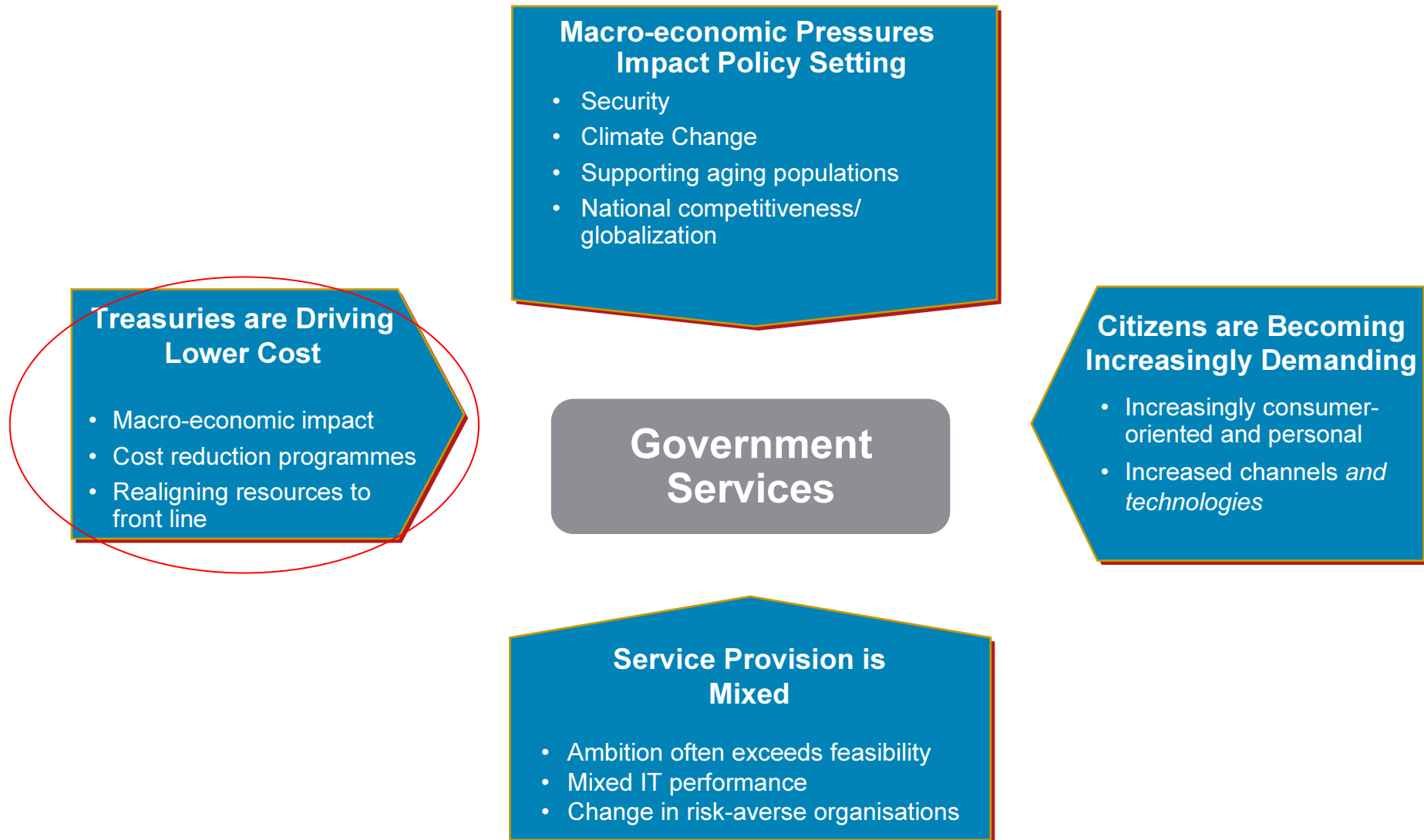
Key challenges: The pressures have evolved and increased



Government Bureau (1956) - Tooker



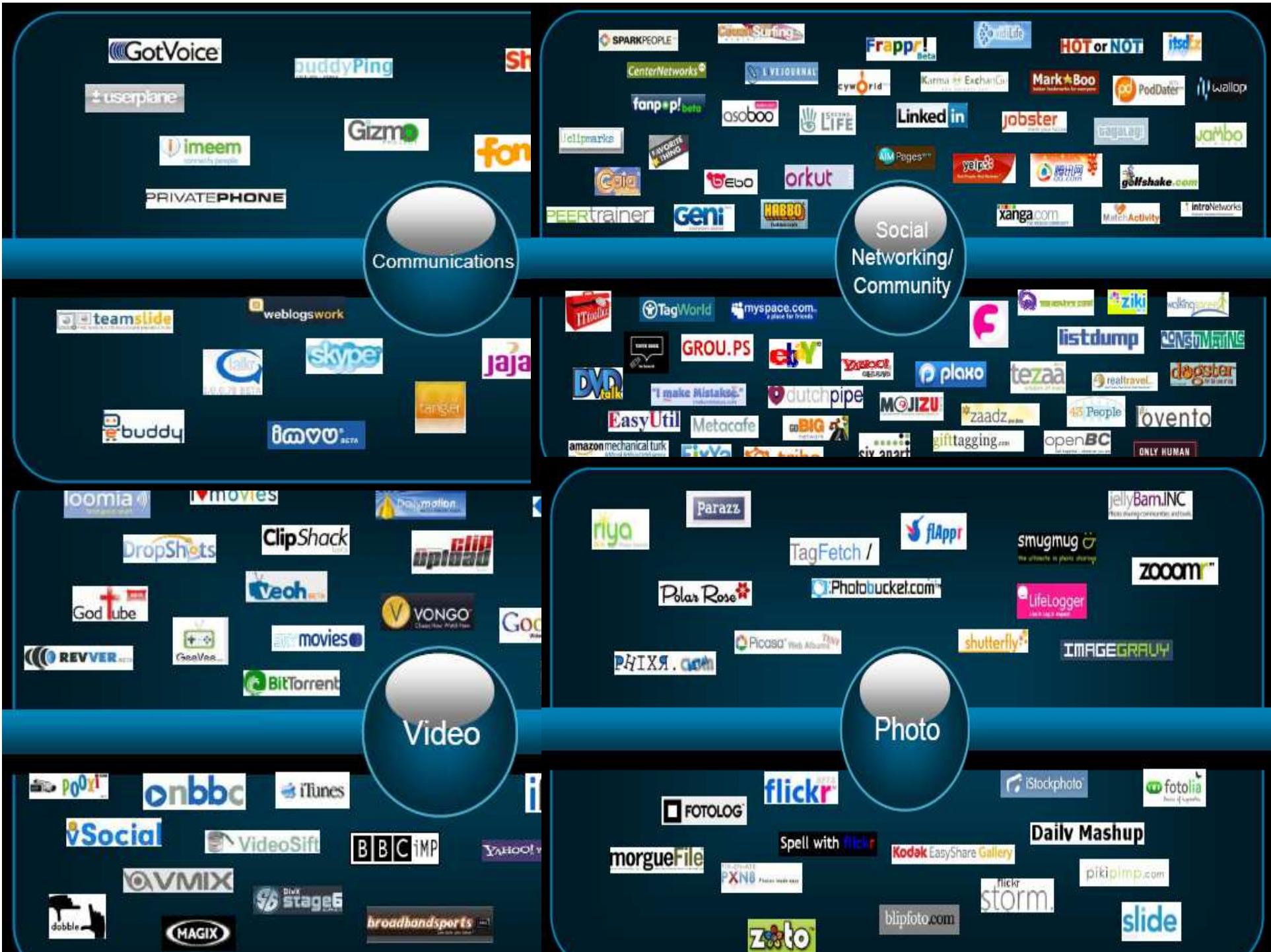
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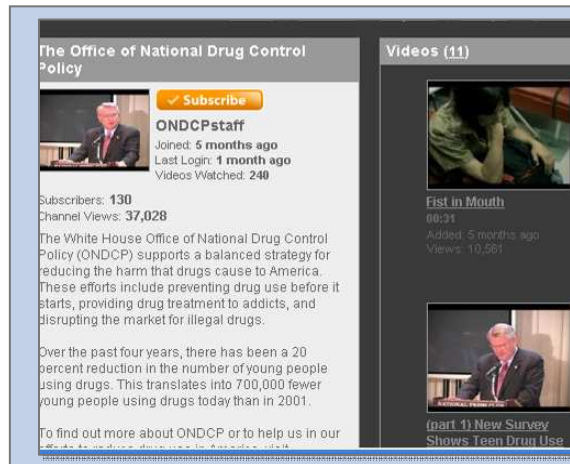
Australia's Opportunity

- Co-operative Federalism
- Technology Investments
 - Education Revolution
 - NBN
 - Citizen access
 - e-Health
 - Minister Tanner comments





Next-Generation Internet Gives New Mediums to Inform the Public



U.S. Office of National Drug Control Policy uses YouTube to educate on the dangers of drugs



U.K. Government proposes promotional video on government transformation

Leaders Are Attempting to Connect With the Public

George Bush profile on MySpace



Australian Political leaders have embraced online media

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Cisco's Vision: The Human Network for Government



Networking businesses, citizens, agencies, and governments to provide more efficient interaction, information sharing and collaboration to increase overall government effectiveness

**Improving
Service
Effectiveness**



**Empowering
Employees and
Constituents**



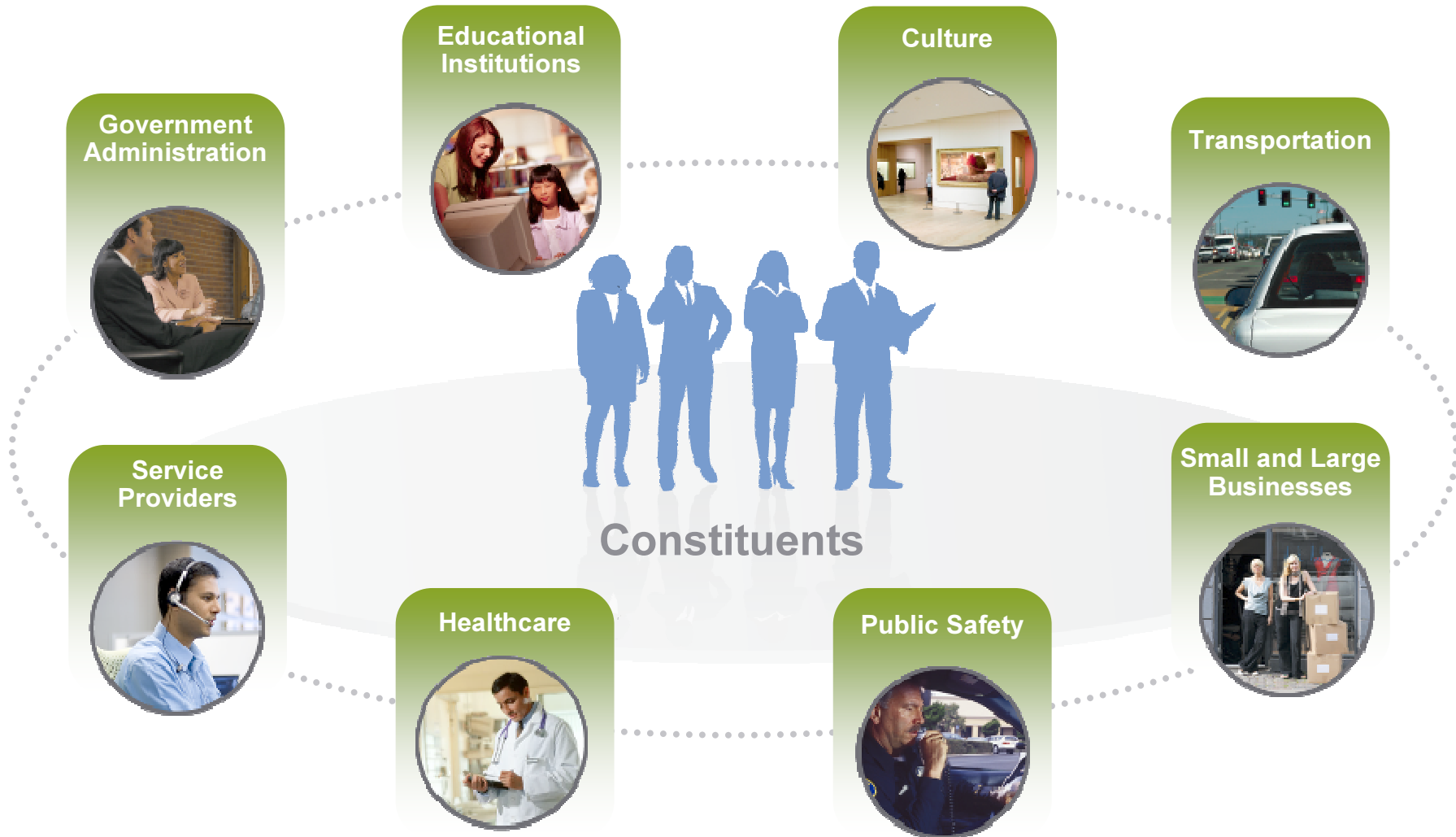
**Increasing
Public Safety
and Security**



**Fostering
Cost
Efficiencies**



The Human Network for Government Places Constituents at the Centre

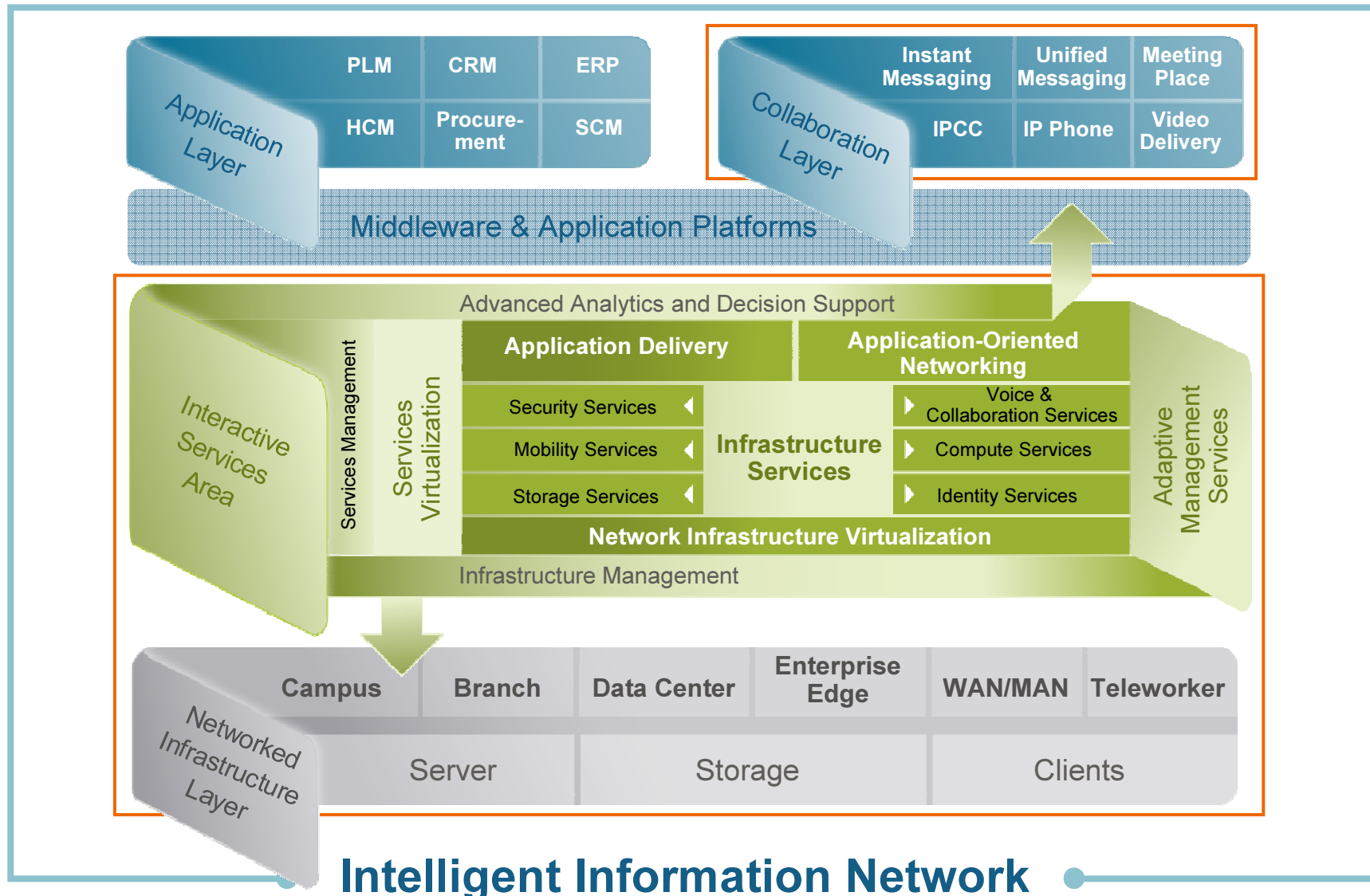


**Means More Interactive Communication and Collaboration
Between All Government Constituents**

The Connected Government Roadmap Is the Path Toward the Human Network for Government



Cisco's Architecture for Connected Government



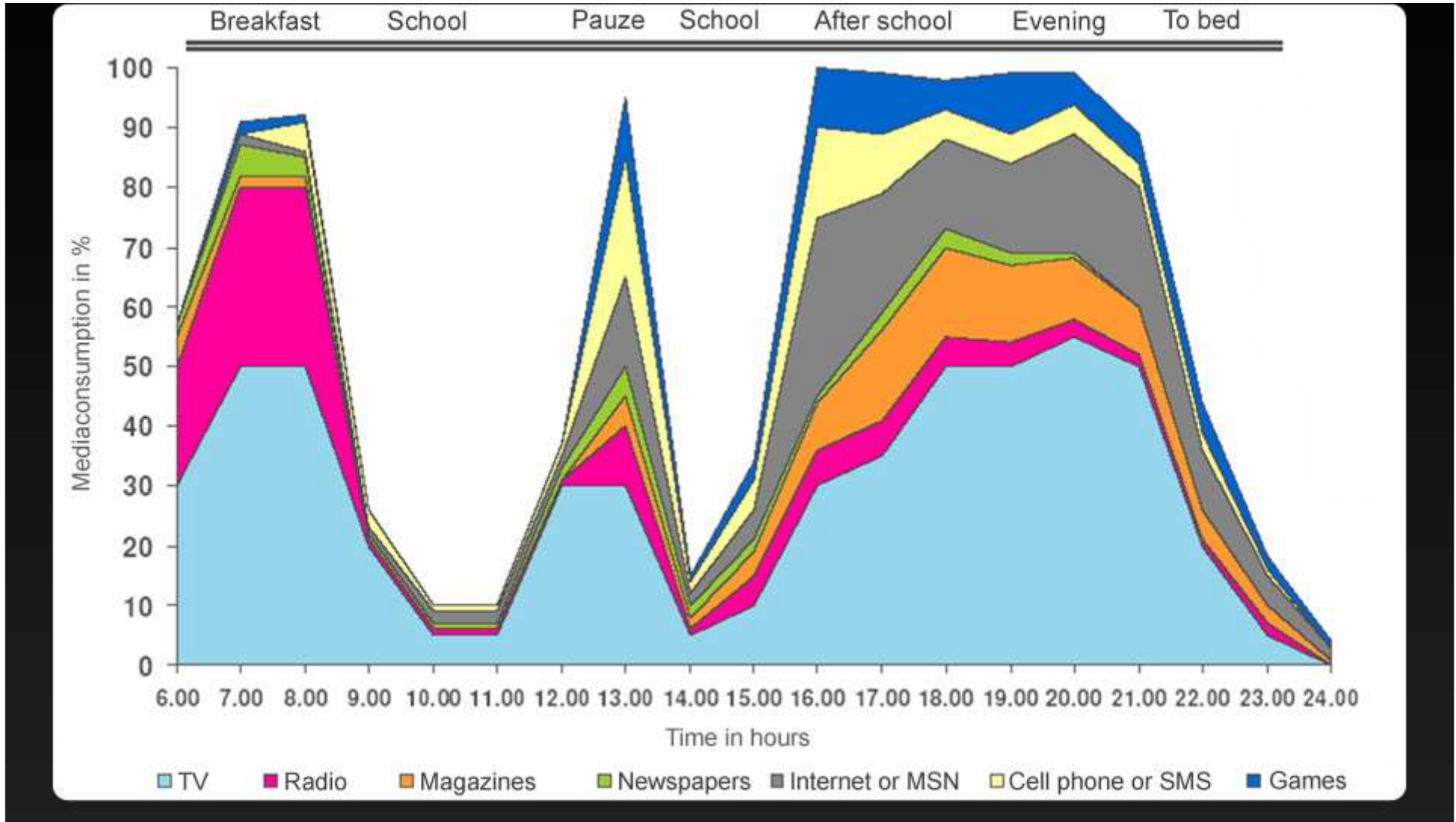
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Daily Media Uses – the Netherlands



Trends in Education



Integrate technology into the teaching and learning environment

Collaboration, Communication and Interactive Media

Meet student expectations

21st Century Skills and Learning

Extending Research capabilities

Transforming learning experiences

Embedding technology into learning and teaching spaces is likely to be an evolutionary process rather than a revolutionary one.

Considering technological requirements at the early stages of planning will ensure that maximum benefit can be obtained from the investment.

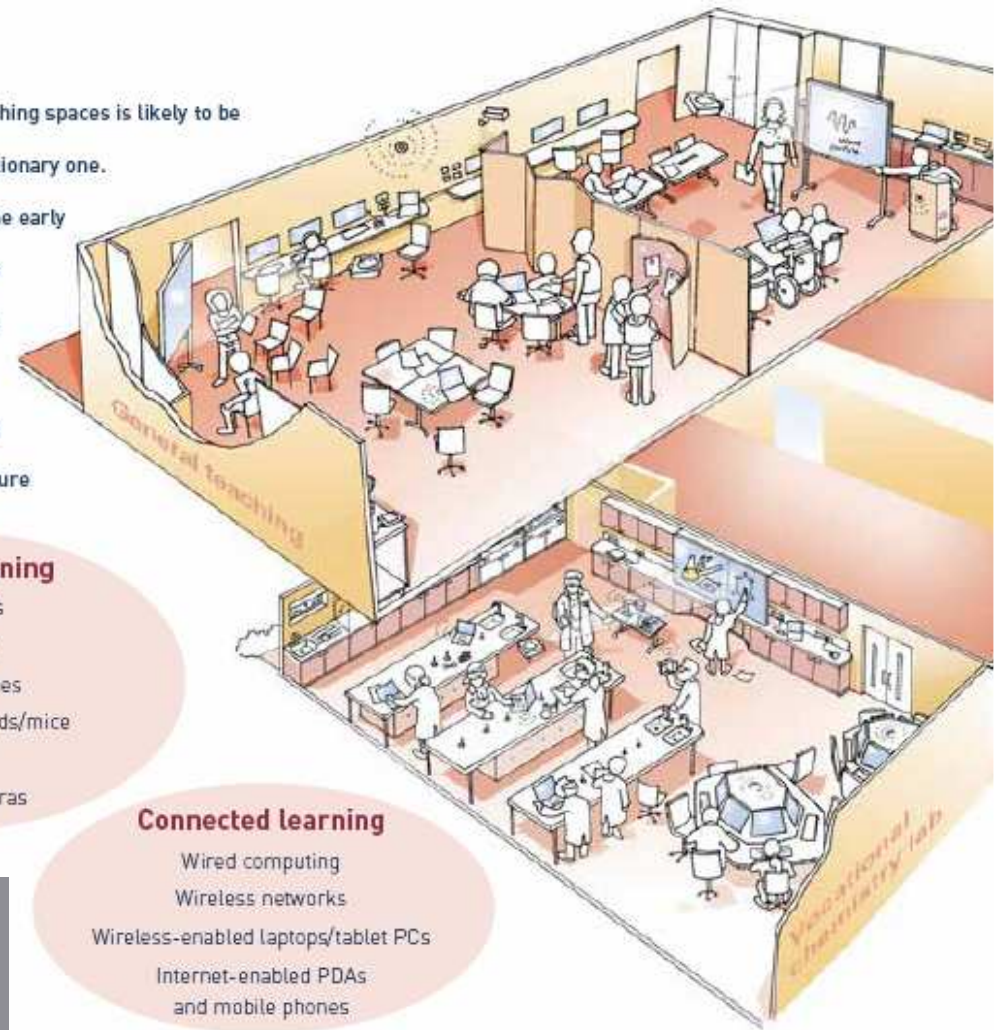
Start by establishing your pedagogic aims, then review the design and the technological infrastructure in the whole institution, to ensure that your aims can be achieved.

Mobile learning

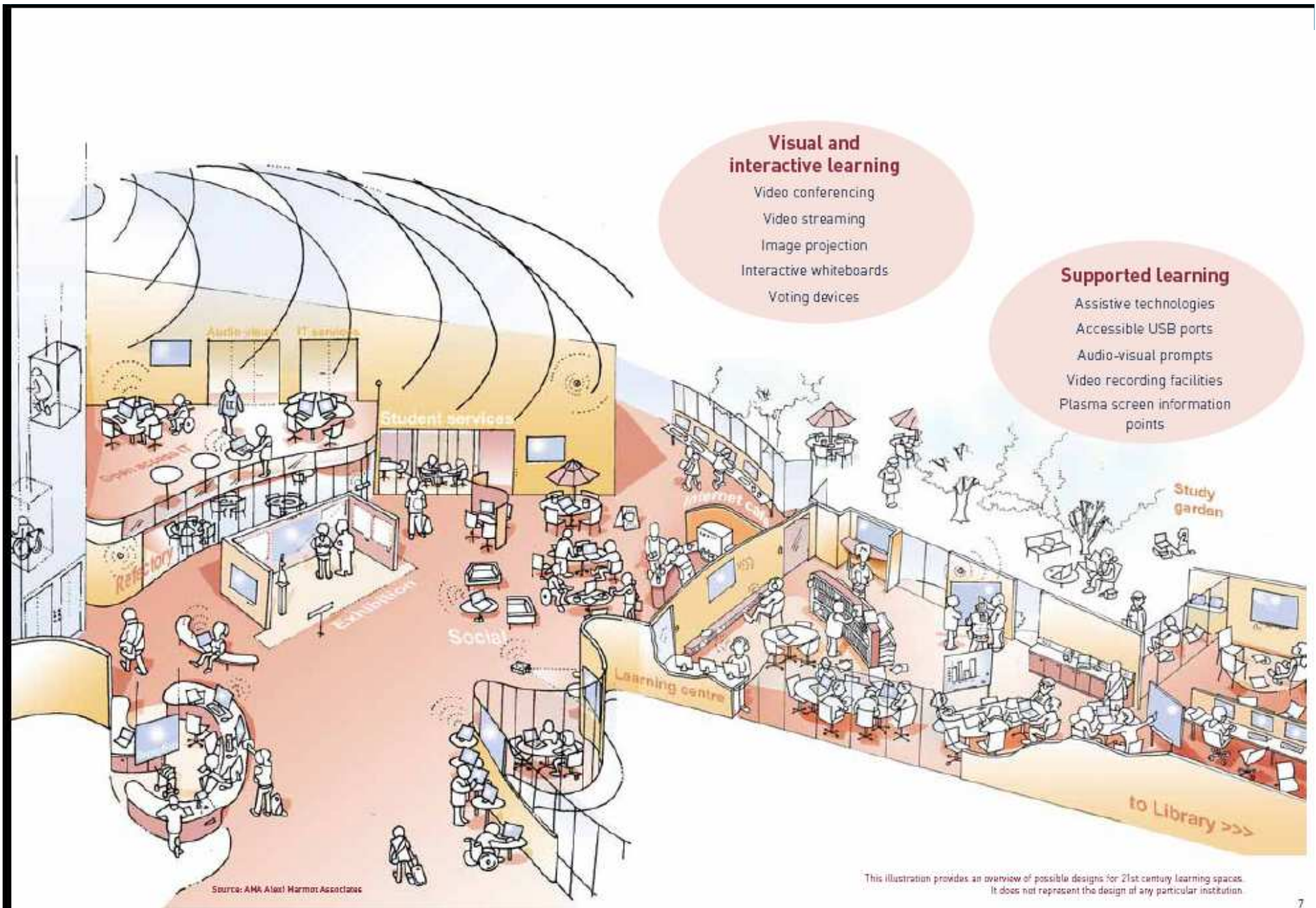
- Tablet PCs
- Laptops
- Mobile phones
- Wireless keyboards/mice
- PDA's
- Digital cameras

Connected learning

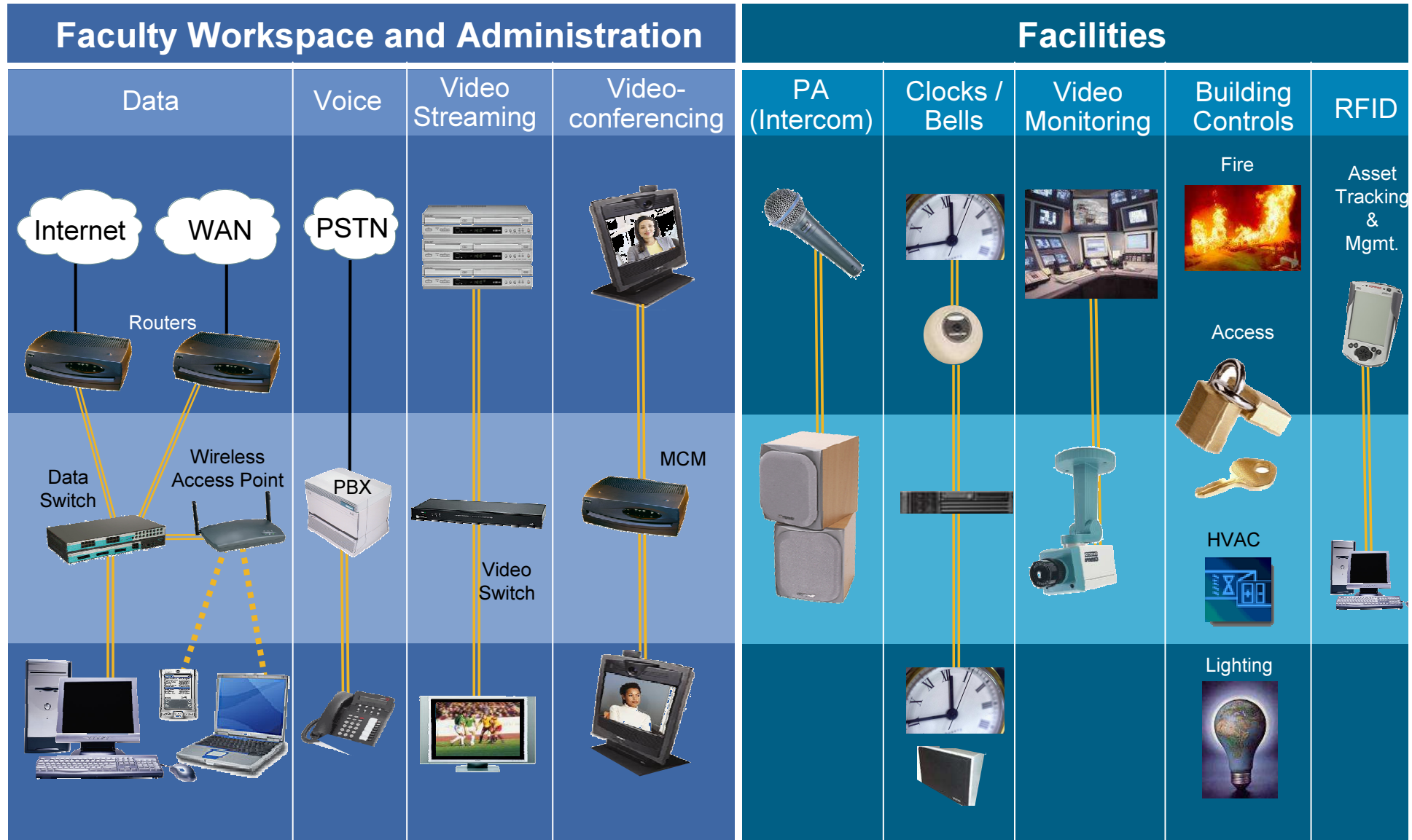
- Wired computing
- Wireless networks
- Wireless-enabled laptops/tablet PCs
- Internet-enabled PDA's and mobile phones



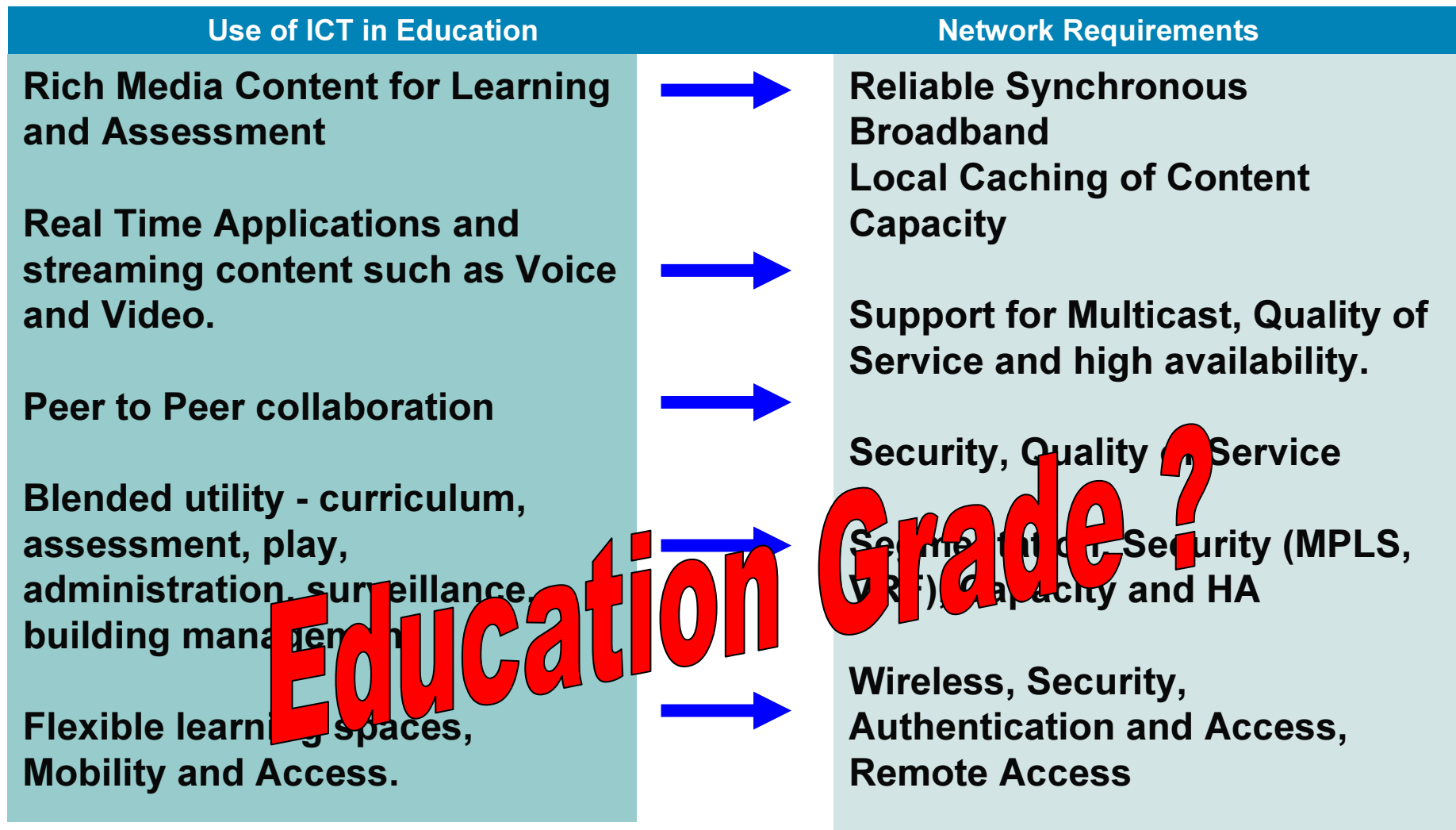
Designing Spaces for Effective Learning
Joint Information Systems Committee (JISC) – UK
ICT Usage to Support Teaching, Learning and Research



Multiple Systems



Evolving Network Requirements



Education Grade?

Understanding the Requirements

Synchronous

Asynchronous

Virtual Labs
Mentors and Experts
Virtual Learning Communities
Streaming Media
Customized Content



Virtual Office Hours
E-Books
Simulation
Personalized Paths
Learning Objects
Assessment

Supplemental

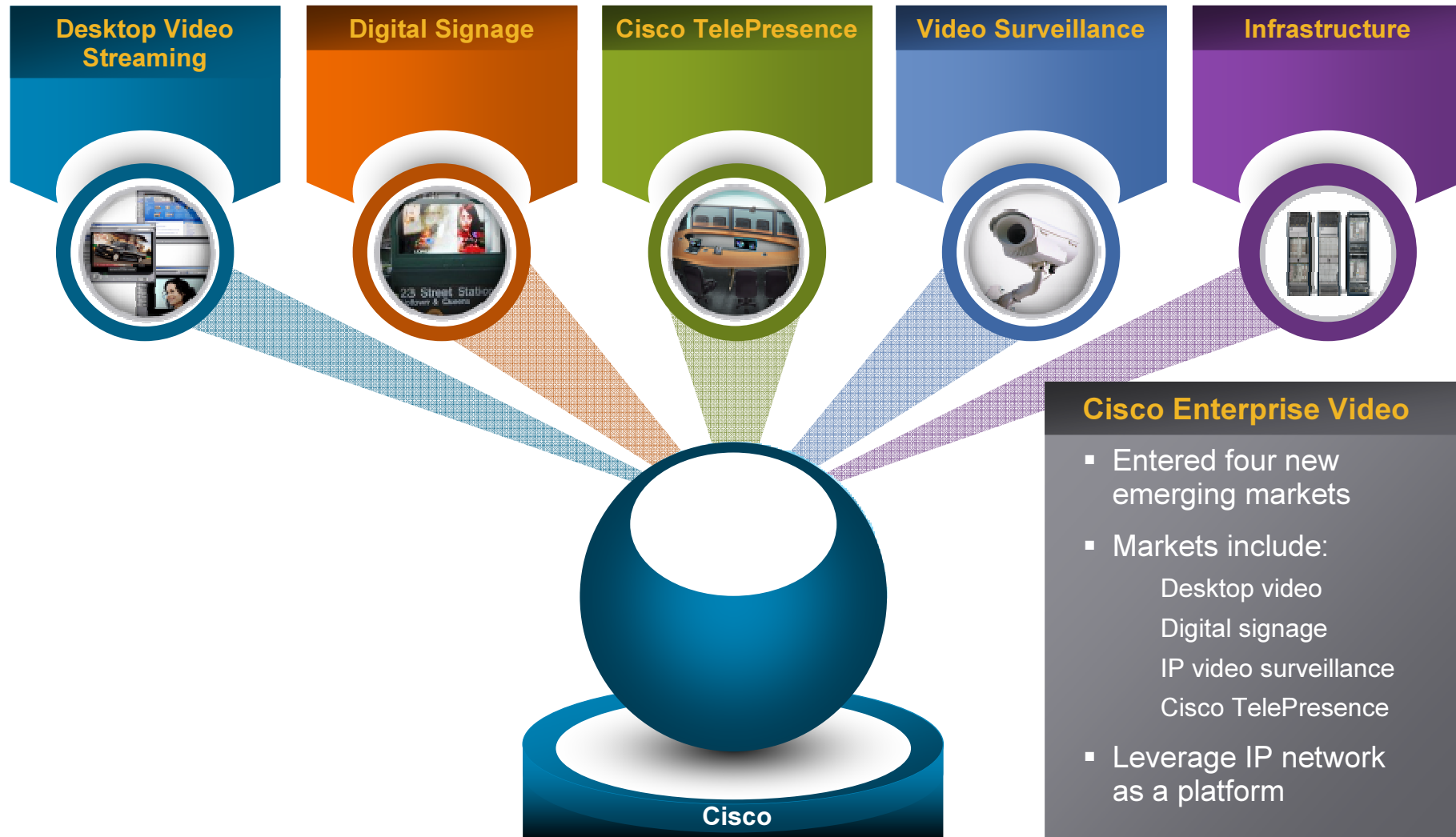
Hybrid

Video Applications in TAFE Institutes

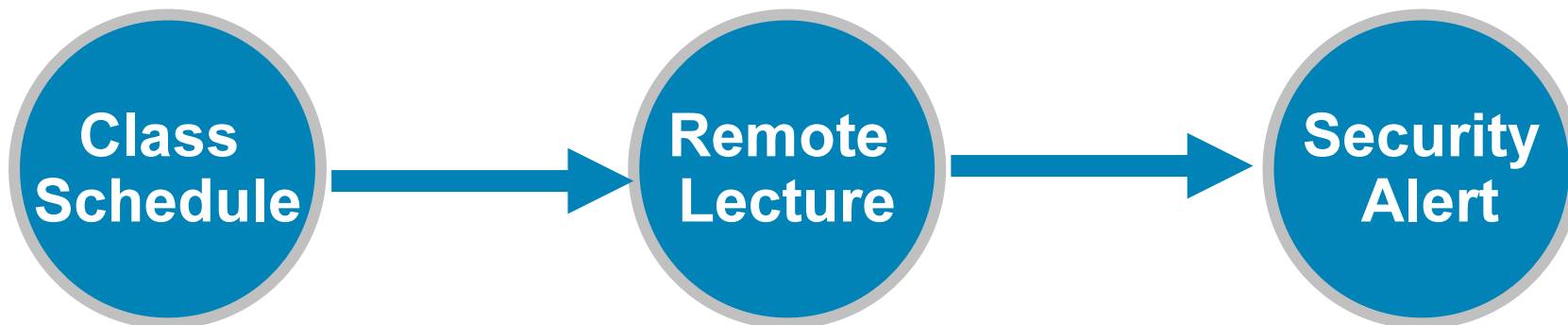
	TelePresence	Video Conferencing	Video Streaming On-Demand	Video Streaming Live
Curriculum Enhancement	<ul style="list-style-type: none"> More Courses Assessment & Interviews Industry Experts 	<ul style="list-style-type: none"> Distance Learning Classroom collaboration 	<ul style="list-style-type: none"> Video clips/features Share/review classes Online courses 	<ul style="list-style-type: none"> Guest speakers Distance Learning Learning in industry
Staff Development	<ul style="list-style-type: none"> Counseling Teacher meetings Staff Performance Management 	<ul style="list-style-type: none"> Collaboration Best practice sharing Role play 	<ul style="list-style-type: none"> Online courses Class/Skill "playback" Best practice sharing 	<ul style="list-style-type: none"> Live courses Role play Seminars
Marketing and Administration	<ul style="list-style-type: none"> Industry consultation TAFE to TAFE collaboration Community Use to improve links to Govt 	<ul style="list-style-type: none"> Regional Staff meetings Crisis Management Govt/TAFE & TAFE-to-TAFE collaboration Marketing to schools & industry 	<ul style="list-style-type: none"> Communicating Policy & HR information How to enrol Alumni and lifelong communications Video Course Catalogue for students 	<ul style="list-style-type: none"> TAFE announcements Emergency Procedure HR information TAFE Events Guest speakers

Cisco Education Video Solutions

Delivering an Intelligent, Converged Environment for Video



Networked Screens on Campus



Video Platform – Cisco Digital Media System

Media Creation



Digital Media Encoder 1000



Digital Media Encoder 2000



Scientific-Atlanta D9032 Encoder

Media Management

Digital Media Manager



Video Portal Module



Digital Signage Module

Media Access



Cisco Video Portal



Cisco Digital Media Player

TelePresence in Education

- Address shortages in key disciplines
- Extend reach of Education expertise
- Multi-purpose facility – use to create content in studio like environment

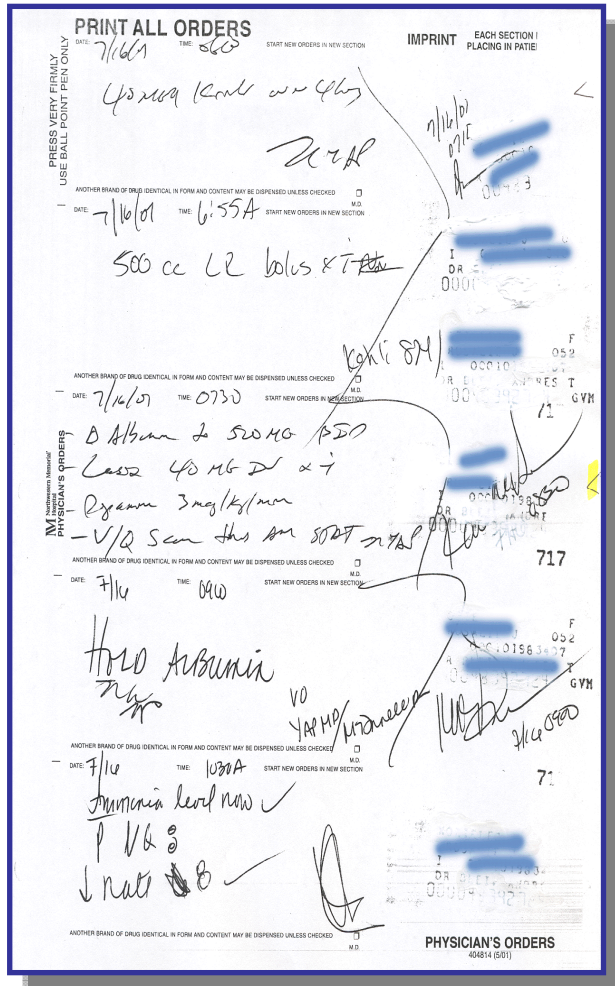


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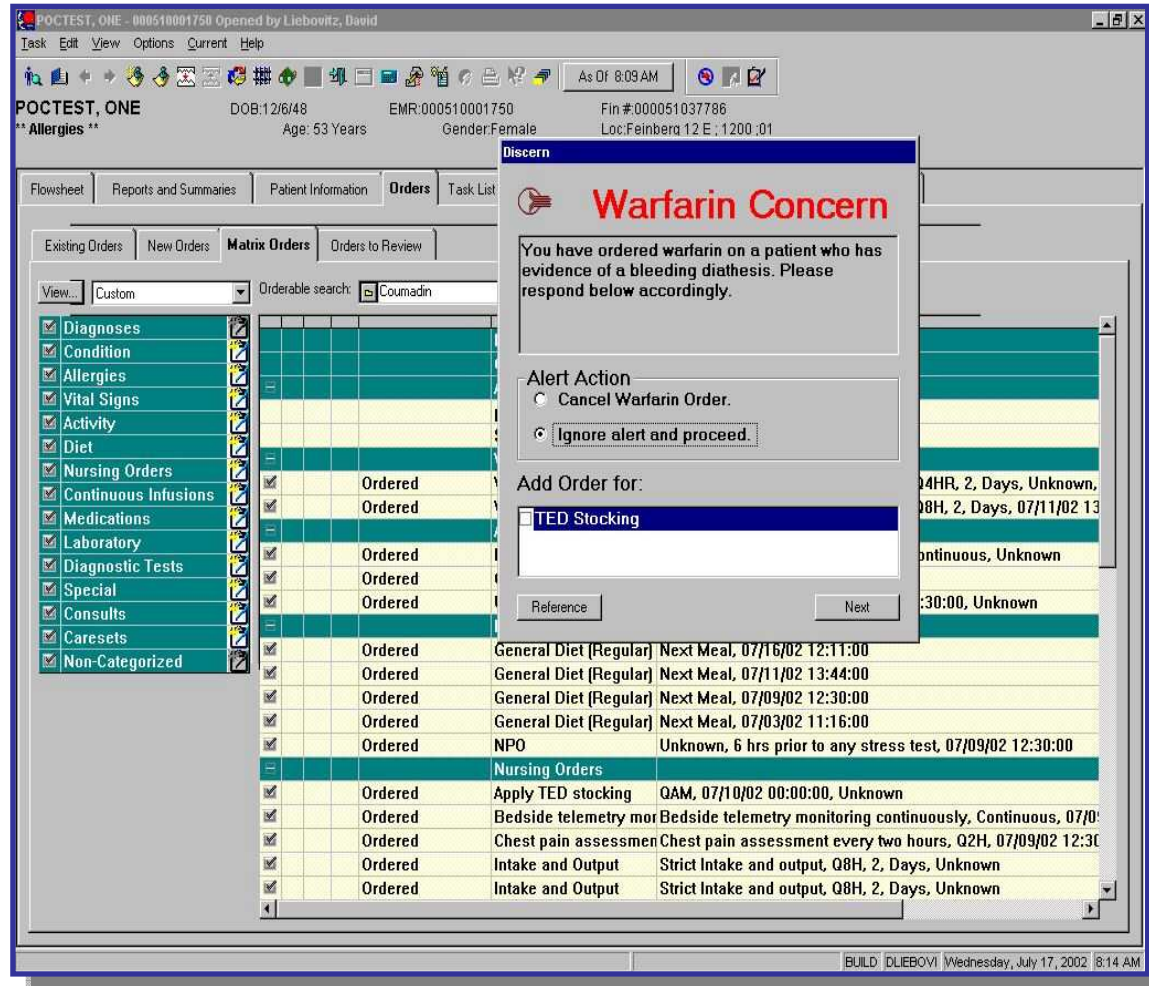
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What We Are Trying to Fix

Handwritten Orders



Digital



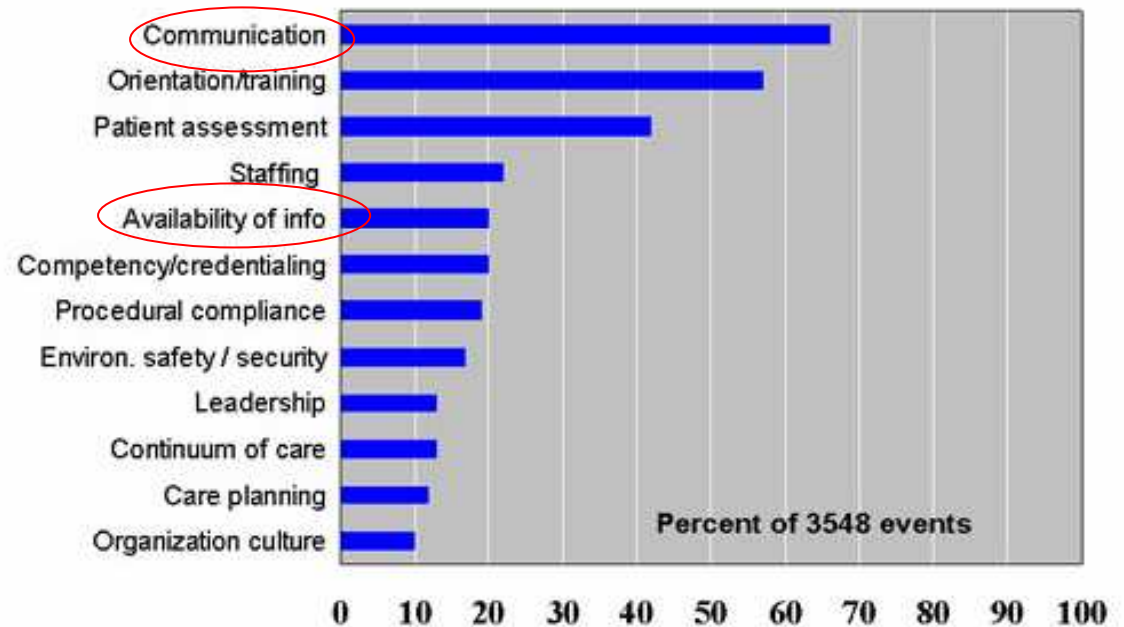
With permission from Timothy Zoph, VP and CIO, Northwestern Memorial Hospital, 2004

Sentinel Event Statistics

Sentinel Event

- Unexpected occurrence involving death, or serious physical / psychological injury

Root Causes
(All categories; 1995-2005)



Remember Cloud 9 Research @ RPA

Paper based records and fragmented IT systems

Lack of information access anytime, anywhere

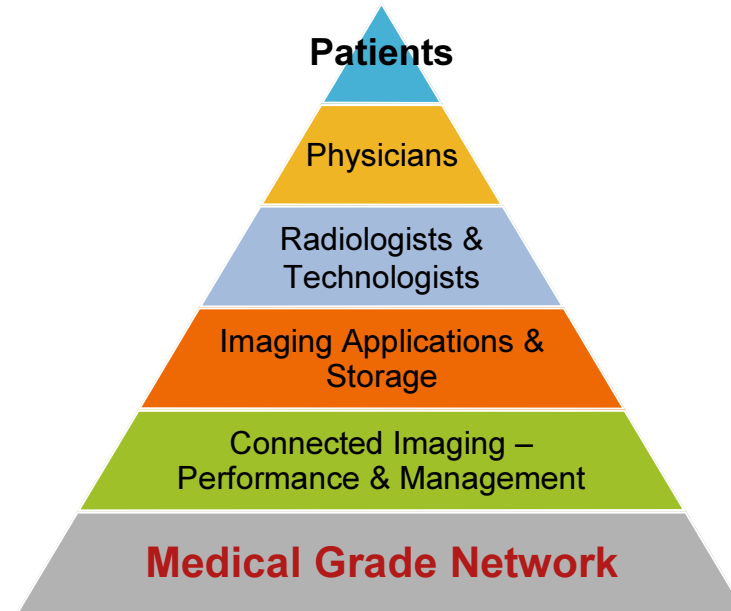
Significant productivity loss and impact on clinical outcomes

Communicating with colleagues frustrating – cannot contact the right person at the right time

Lack of robust, reliable and secure connectivity

Cisco Medical-Grade Network

- The Cisco Medical-Grade Network lays the foundation for highly reliable services
- Improves patient outcomes through proper application of technology to improve workflow



Cisco Medical-Grade Network Characteristics			
RESILIENT (available)	PROTECTED (secure)	RESPONSIVE (reactive)	INTERACTIVE (collaborative)

Connected Health Framework

Patient Safety, Quality of Care, Patient Satisfaction, Cost Challenges, Staff Satisfaction, Regulatory Compliance

Business Drivers

Business Solutions

Network Technologies

Mobility for Healthcare

Connected Imaging

UC for Healthcare

Medical-Grade Network Architecture & Assessment

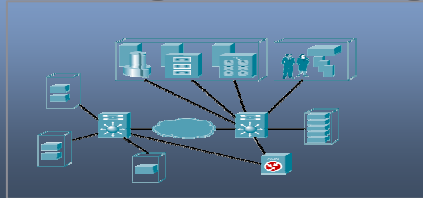
Mobility



Security



Routing & Switching



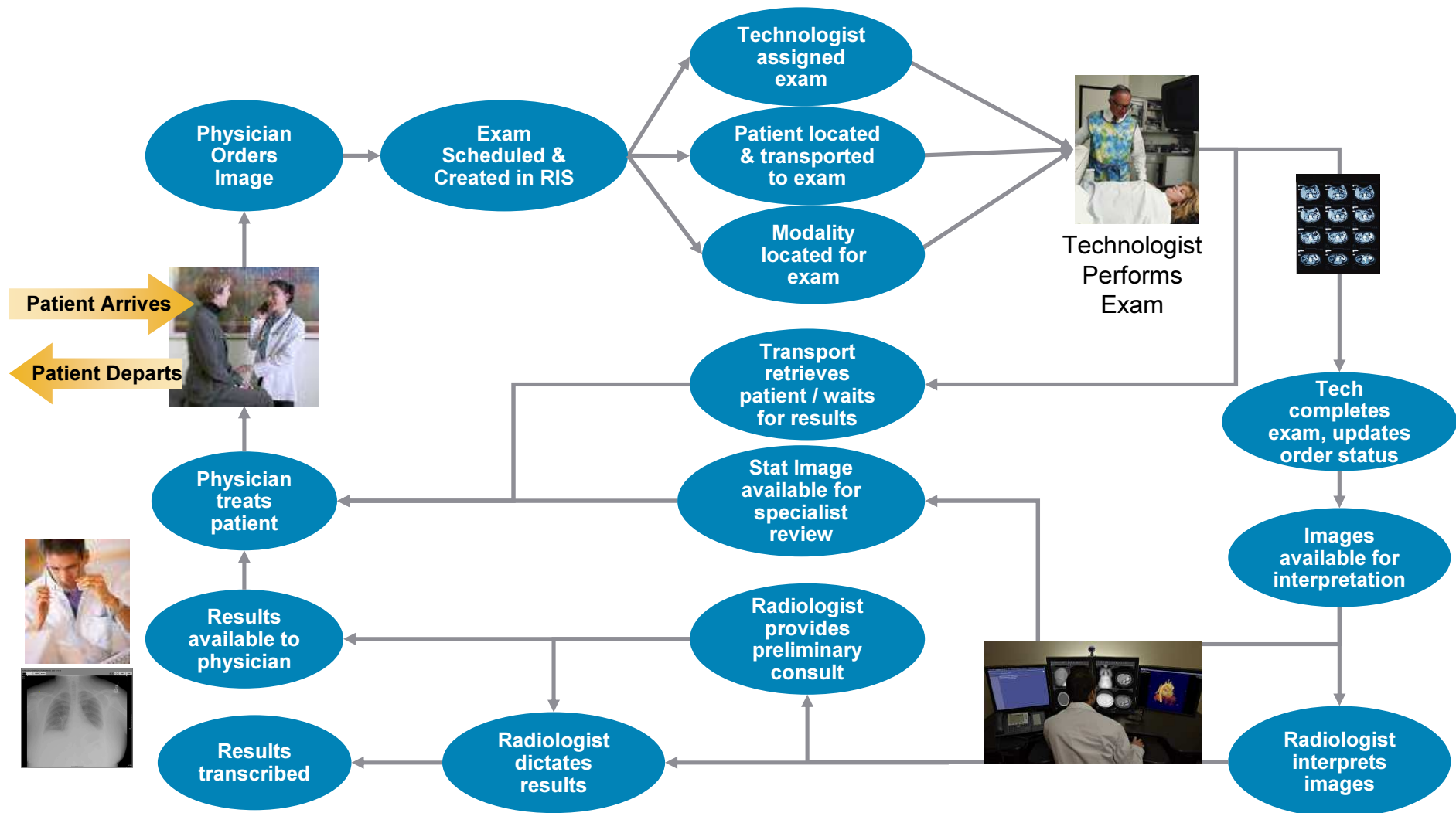
Storage Networking



Unified Com



Workflow Execution: Large File Transfers and Multiple Communications



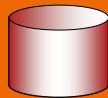
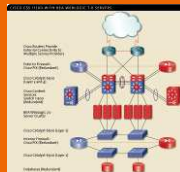
Performance & Management: Medical Imaging Infrastructure & Archive

Connected Imaging Stakeholders

CEO's, COO's, Radiologists, Directors of Radiology, and CIO's

Performance & Management

Supports scalable image transport, routing, and storage



Collaboration & Reporting

Promotes multi-specialty and multi-radiologist collaboration & results reporting for effective image consultations

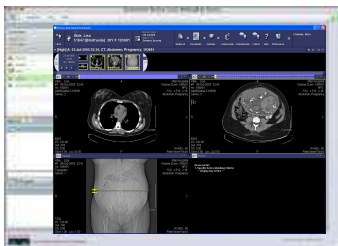


Medical-Grade Network

Imaging Consult Integrated Workflow Collaboration

- Radiologist selects study
- Reviews image
- Desires collaboration
- Opens UC
- Selects physician & collaborates
- Shares image if required

The screenshot displays a medical imaging workstation interface. The main window shows a CT scan of the abdomen, with a topogram and a cross-sectional slice. The patient information is: Able, Lisa, 516473[Northside], 30Y F 193691. The study is: [High] A: 23-Jul-2005 22:34, CT, Abdomen, Pregnancy, 193691. The workstation is titled "Horizon Rad Station Distributed". A red box highlights the "Communicator" icon in the top right corner. A collaboration window titled "Matt Ward - 4048" is open, showing a list of contacts for the study: Alan Chu, Marc Crowder, John Chambers, Guy Thomas, Tanya Gallinger, Jeff Atkins, and John Chambers. The window also shows a "Recent" list with 3 items and a search bar.



Connected Health Framework

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Medical-Grade Network Architecture & Assessment

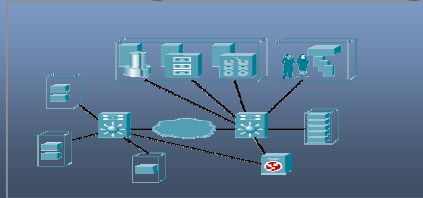
Mobility



Security



Routing & Switching



Storage Networking



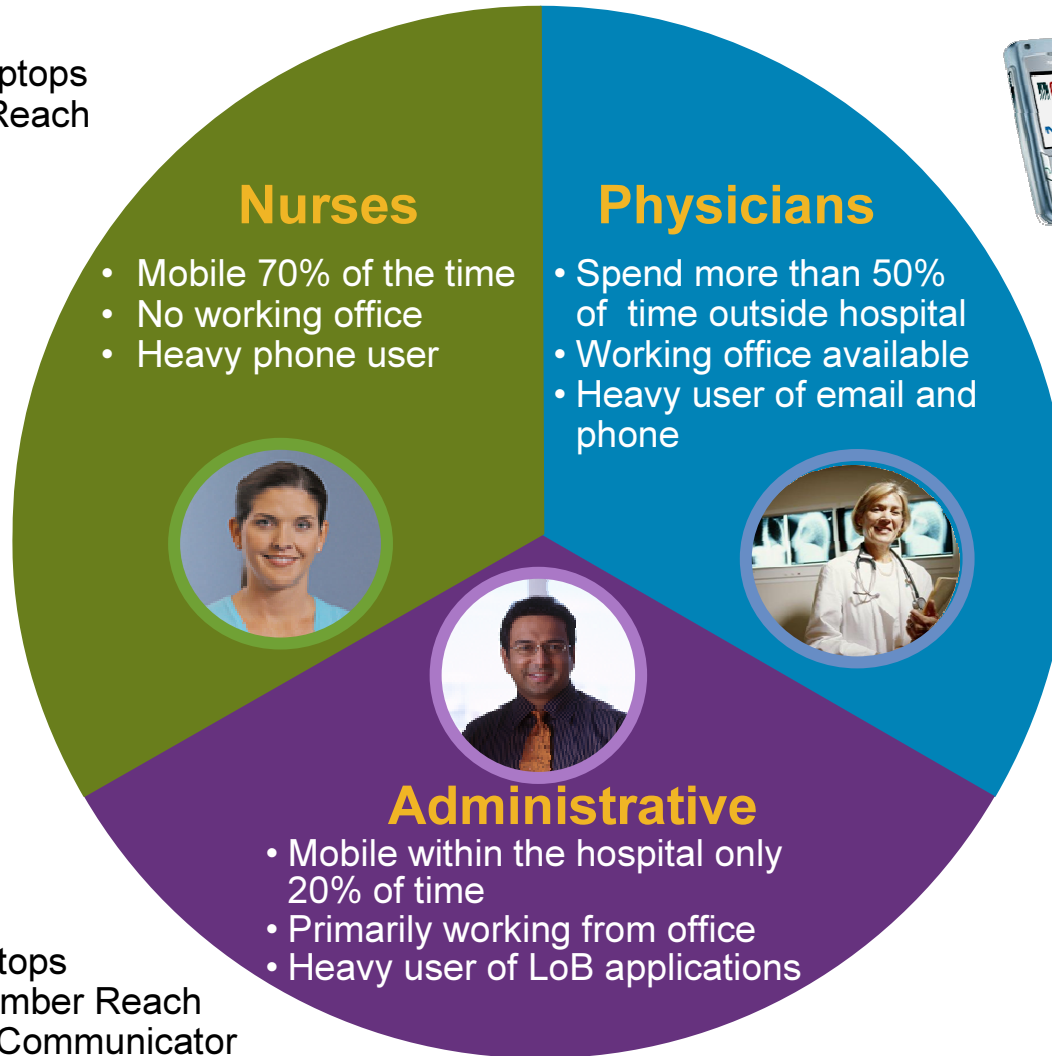
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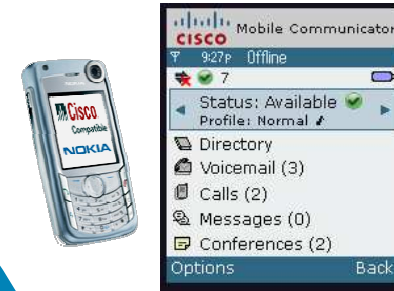
Mobile Care

Seamless Mobile Collaboration Features

- Wi-Fi phones/Laptops
- Single Number Reach
- Push-To-Talk



- Wi-Fi Laptops
- Single Number Reach
- Personal Communicator



- Dual mode devices
- Single Number Reach
- Mobile Communicator



Quantitative Benefits of Wireless at Children's Hospital Westmead

- 20 hours per day extra to spend with patients
- Applied across the Hospital mobility provides 122,000 hours of saving – over \$7m per annum
- Significant \$\$ gain and patient value



Slide 43

JT1

people
Jeffrey Tobias, 4/09/2006

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Meeting the Challenge

Public Safety & Transit agencies seek to...

Enable new applications and extend existing applications to the field

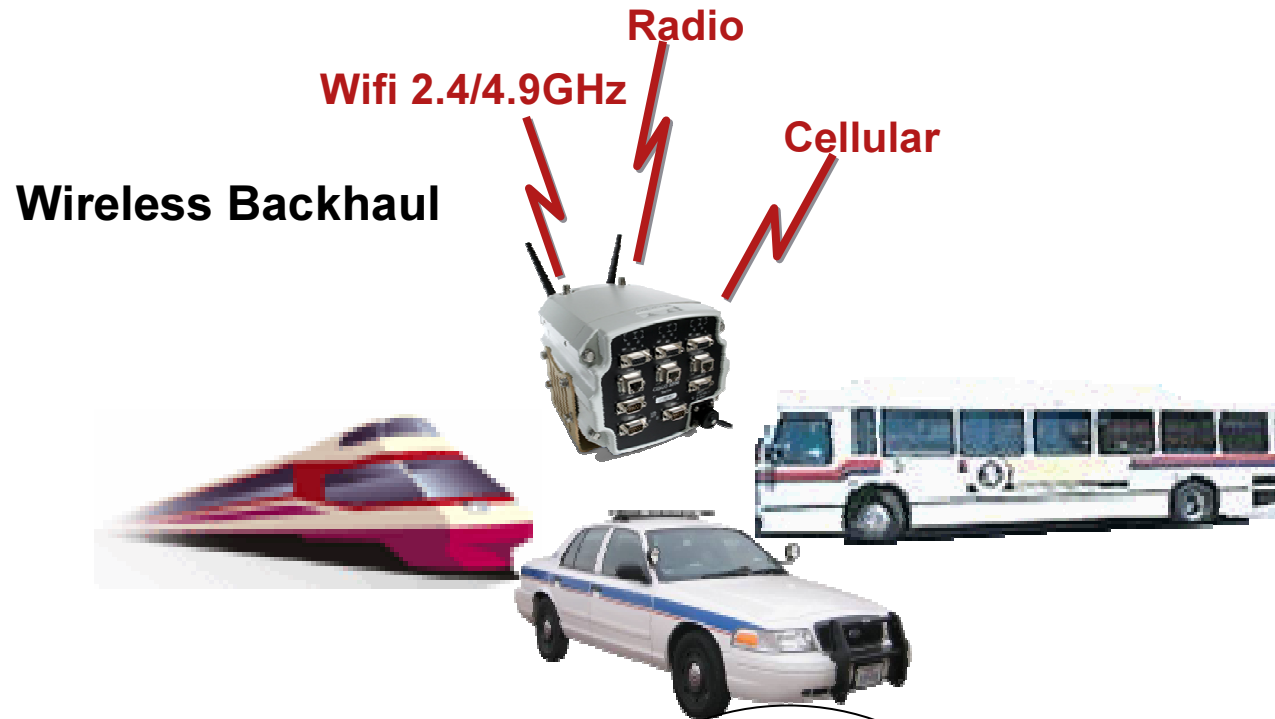


Improve interagency communication

Connected Government: Public Safety Reference Service Architecture



Cisco Mobile Networks: Delivering Real-Time Communications to the First Responder Vehicle



Wireless Backhaul

Networks in Motion

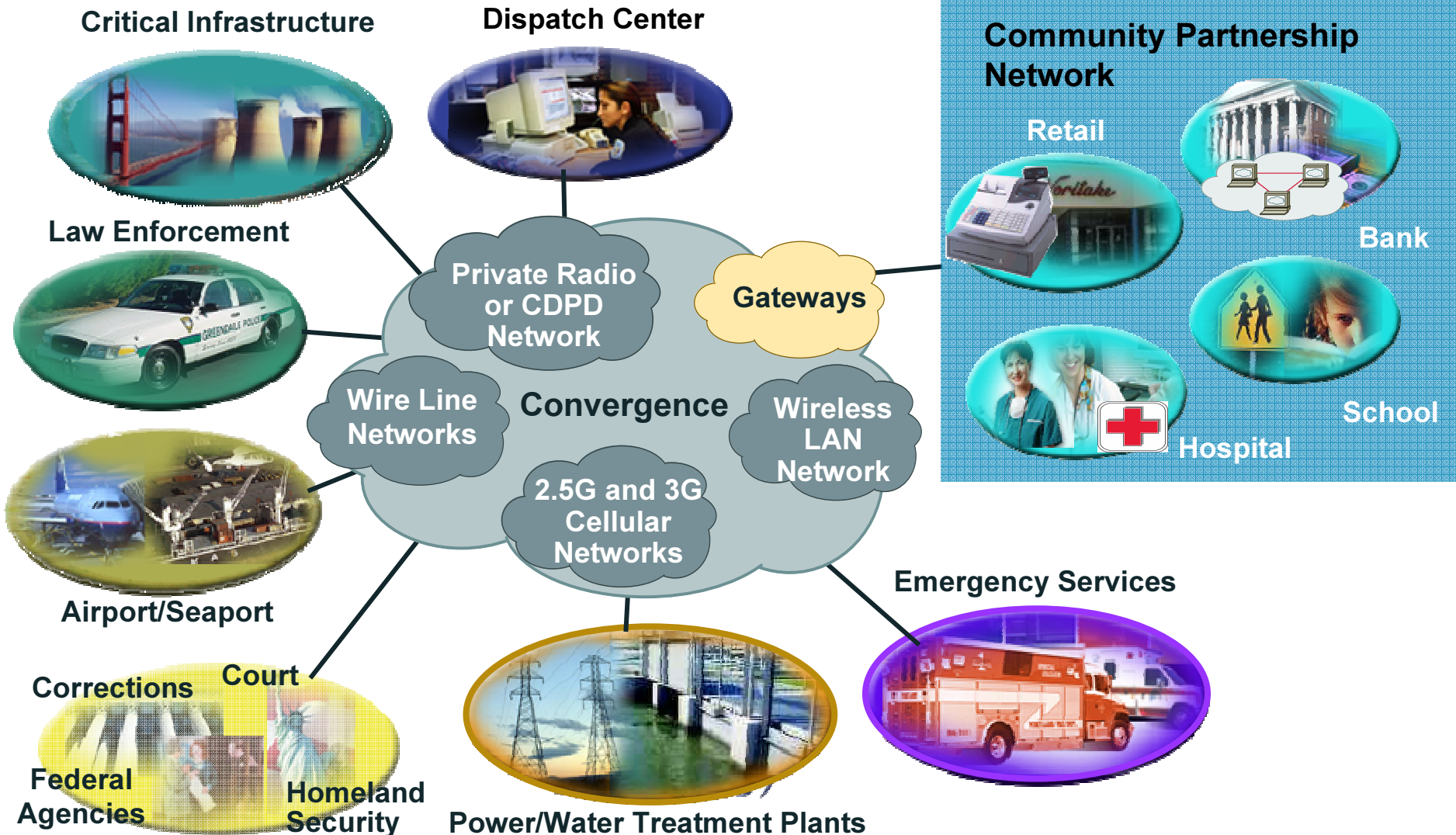
- DVR
- Video
- Mug Scanner
- PDA/Laptop
- Printer
- License Plate recognition
- Consumer internet access



Implemented:

- City of Zurich Police
- Swiss Rail
- Chicago Bus System
- Japan Railway
- Houston Metro
- Cook County Sheriff

Integrated Networks Critical for Effective Operations and Emergency Management



Cisco IPICS Solution

Dissolving Communications Silos

Devices/Networks



Locations

Organizations



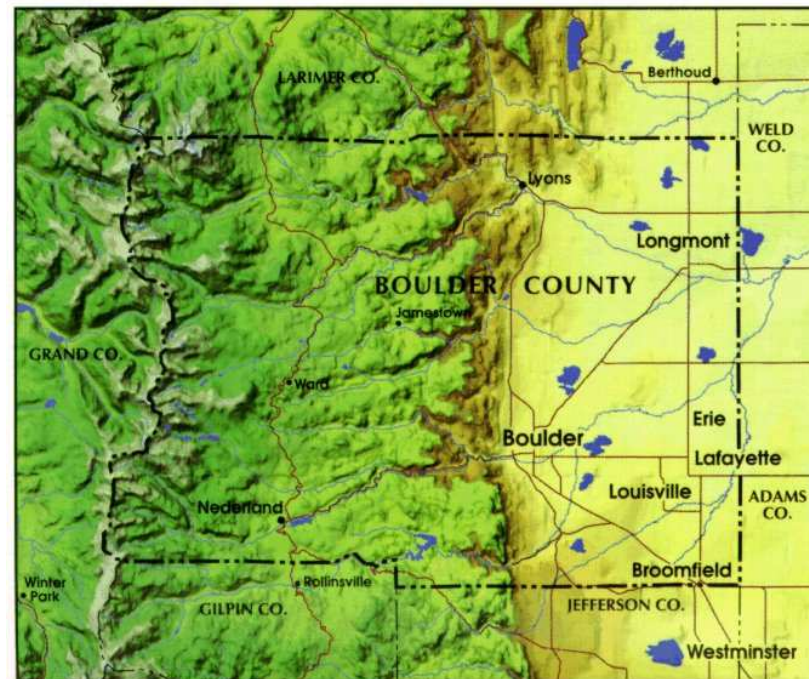
Cisco IPICS
Intelligent Platform—
Controls Media and
Information

Applications



Boulder County, Colorado

- 294,000 residents
- 741 square miles
- Varied mountain, flat terrains
- Challenges
 - Public safety communications
 - Fire and disaster (flood) response
 - Search and rescue
- Benefits
 - Improved response
 - Improved reach and flexibility
 - Cost effective



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Challenges

- 1) How can agencies share information in a secure and cost effective manner that allows effective Inter-Agency collaboration?
- 2) How can we drive efficiencies across our Agency or Department?

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Introducing SISA

Secure Information Sharing Architecture

- **Secure, comprehensive, end-to-end information sharing architecture to protect & share sensitive Government information**
- **Protect critical business content and audit usage while enabling collaboration**
- www.sisaalliance.com



Moving to a shared network is insecure?

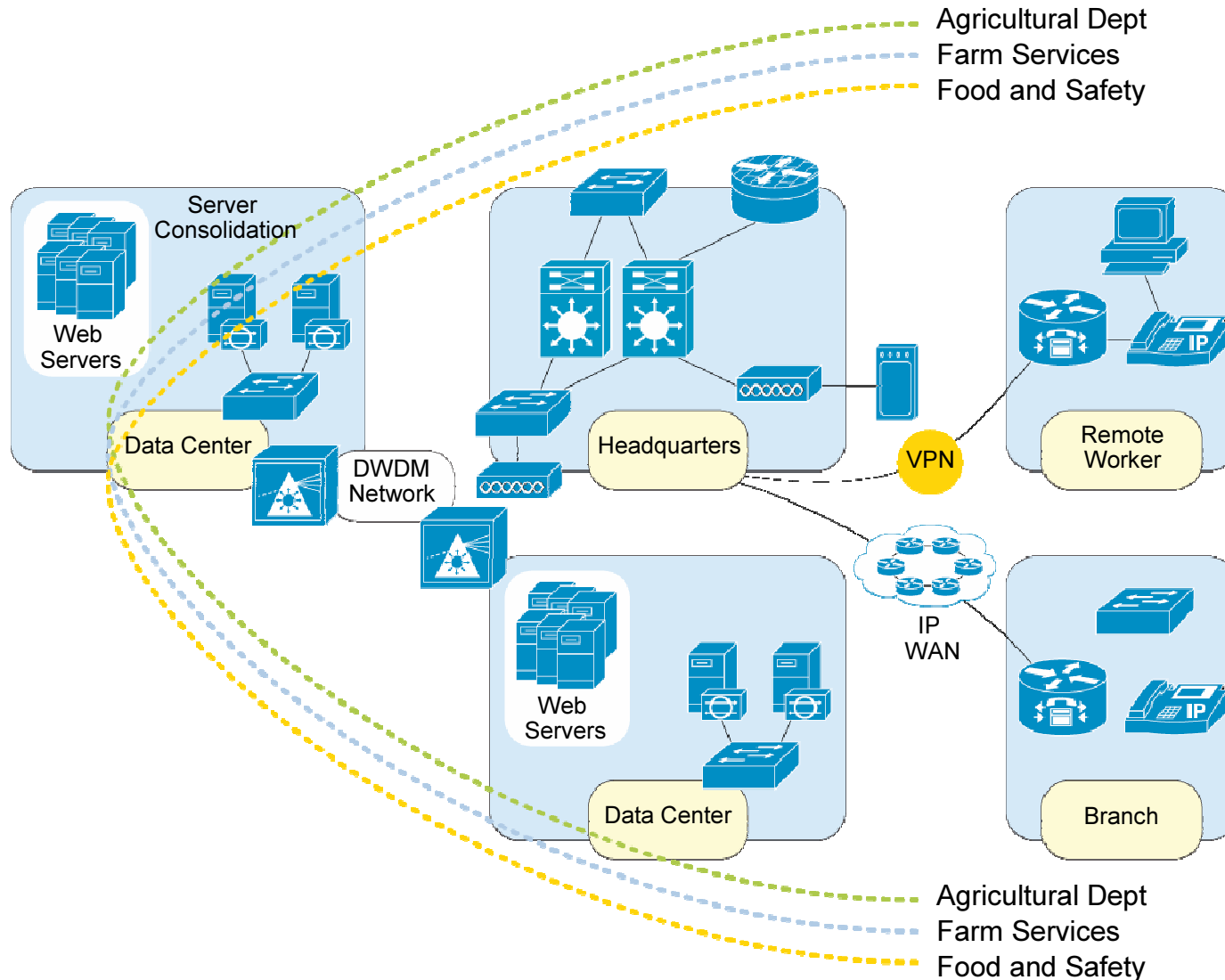
Security does not have to be compromised or minimized to offer a shared infrastructure environment.

Each network tenant can adopt his/her own specific security requirements.

Control does not have to be relinquished to maintain security policies and requirements.

Once traffic is segmented, the network is secured.
Traffic is being transported virtually, separate from other network traffic.

What Does Shared Infrastructure in Government Look Like?





Australian Government
Department of Defence
Intelligence, Security and International Policy



DEFENCE SIGNALS DIRECTORATE
AUSTRALIAN GOVERNMENT
INFORMATION AND COMMUNICATIONS
TECHNOLOGY SECURITY MANUAL

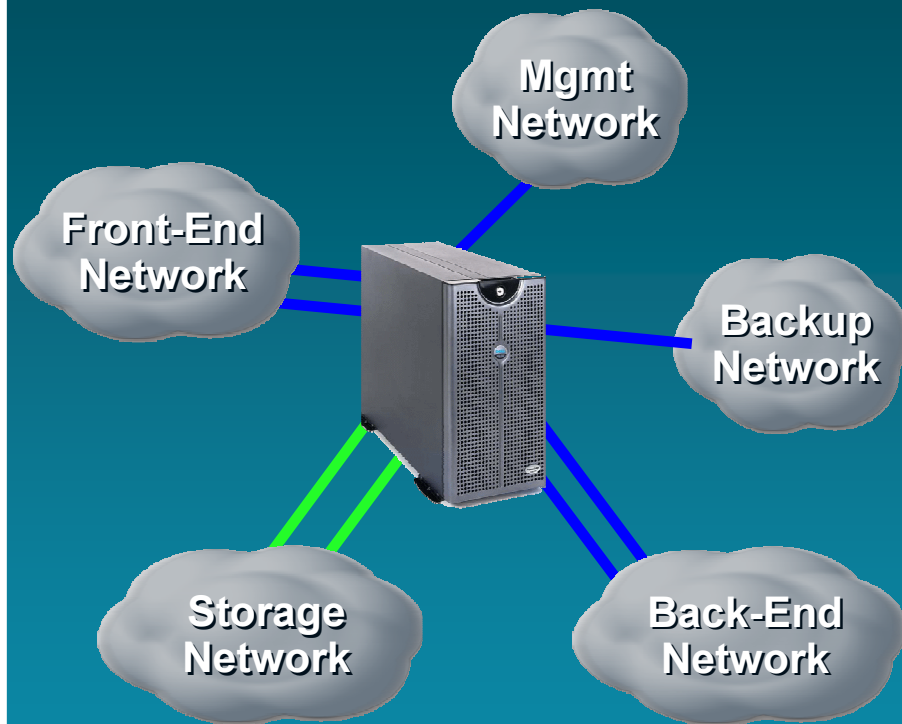
ACSI33 SEPTEMBER 2007

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Efficient Government Data Centre Consolidation

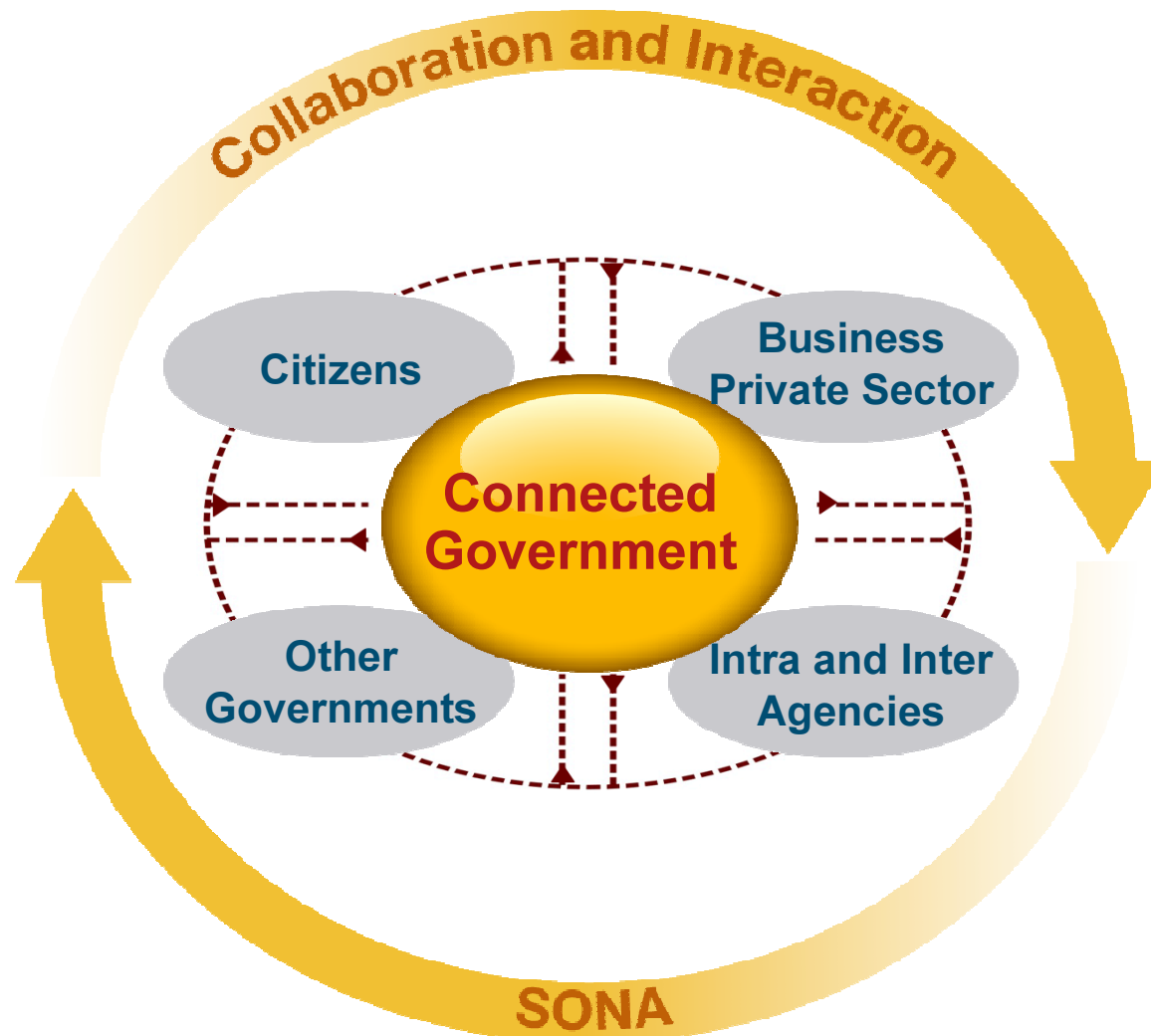
Increased Efficiency, Simpler Operations



Unified Fabric and I/O



Cisco Connected Government Framework Supports Government Shared Services Initiatives



▪ Connecting People

Empowering citizens to interact and collaborate on their terms with government

▪ Connecting Businesses

Enabling information and resource sharing between private sector and government

▪ Connecting Governments

Connecting the central government to local and municipal governments

Enabling information and resource sharing across different governments

▪ Connecting Ministries/Agencies

Providing agencies the capability to share information and resources to achieve operational efficiencies and cost savings

The Network is the Platform

- Enabling a more efficient and agile Government
- Delivering better services to the public



