CISCO SYSTEMS

Building Collaborative Workspace:

Changing the way real estate is built, managed and used

u-Forum

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Building Collaborative Workspace:
Changing the way real estate is built, managed and used

- **Changes in Workplace Needs**

- **Proof of Concept: Cisco B14 in SJ Campus**

- **Why NETbuilding: Converged Real Estate Operation**

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1. Changes in Workplace Needs

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Business Careabouts

3 Major IT Interests of Line of Biz Executives*

Have applications better fit our business processes — 36.2%

Improve access to relevant information/ data — 35.2%

Better system for communication/ collaboration — 31.6%

Lower costs develop/deploy applications — 26.1%

Improve security of information, information system — 23.4%

Lower costs of underlying IT infrastructure — 23.3%

Faster development/ deployment of applications — 20.1%

* IDC, Line-of-Business Executive Survey, June 2004

Business Challenges

- **Misalignment between biz processes and systems**

- **Lack of proper data/information on time**

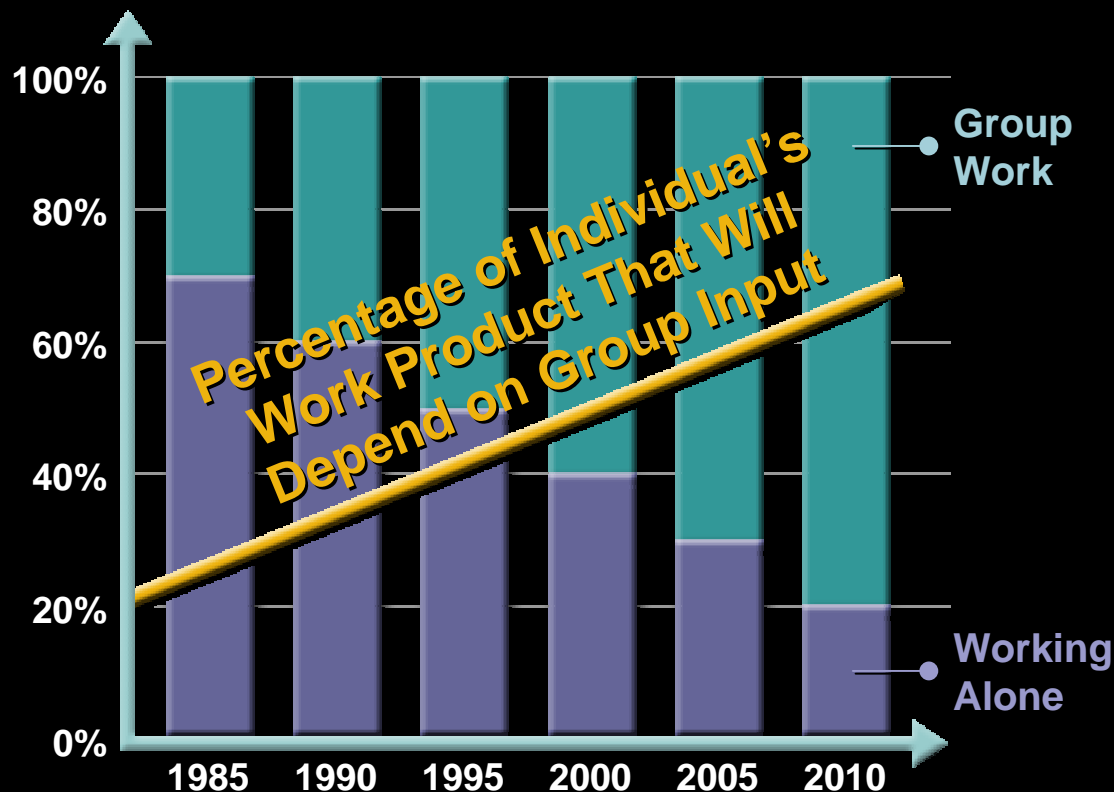- **Conflicts and Redundancy in Communication Channels and Devices**

Two Major Changes Are Driving Workplace Design

THE WAY PEOPLE WORK IS CHANGING
Work Done in the Office Is Increasingly Collaborative

Percentage of Individual's Work Product That Will Depend on Group Input

Group Work

Working Alone

100% | 80% | 60% | 40% | 20% | 0%

1985 | 1990 | 1995 | 2000 | 2005 | 2010

Source: Gartner Dataquest, 2002

INFRASTRUCTURE IS MORE MOBILE
You No Longer Need to Be in One Place to Be Productive

- **Lap-tops and other mobile devices**
- **Web-based applications**
- **Wireless Network**
- **Internet Based Telephony and Video**
- **Collaboration Software**
- **VPN and Network Security**

There is an Opportunity to Save Money and Improve Collaboration
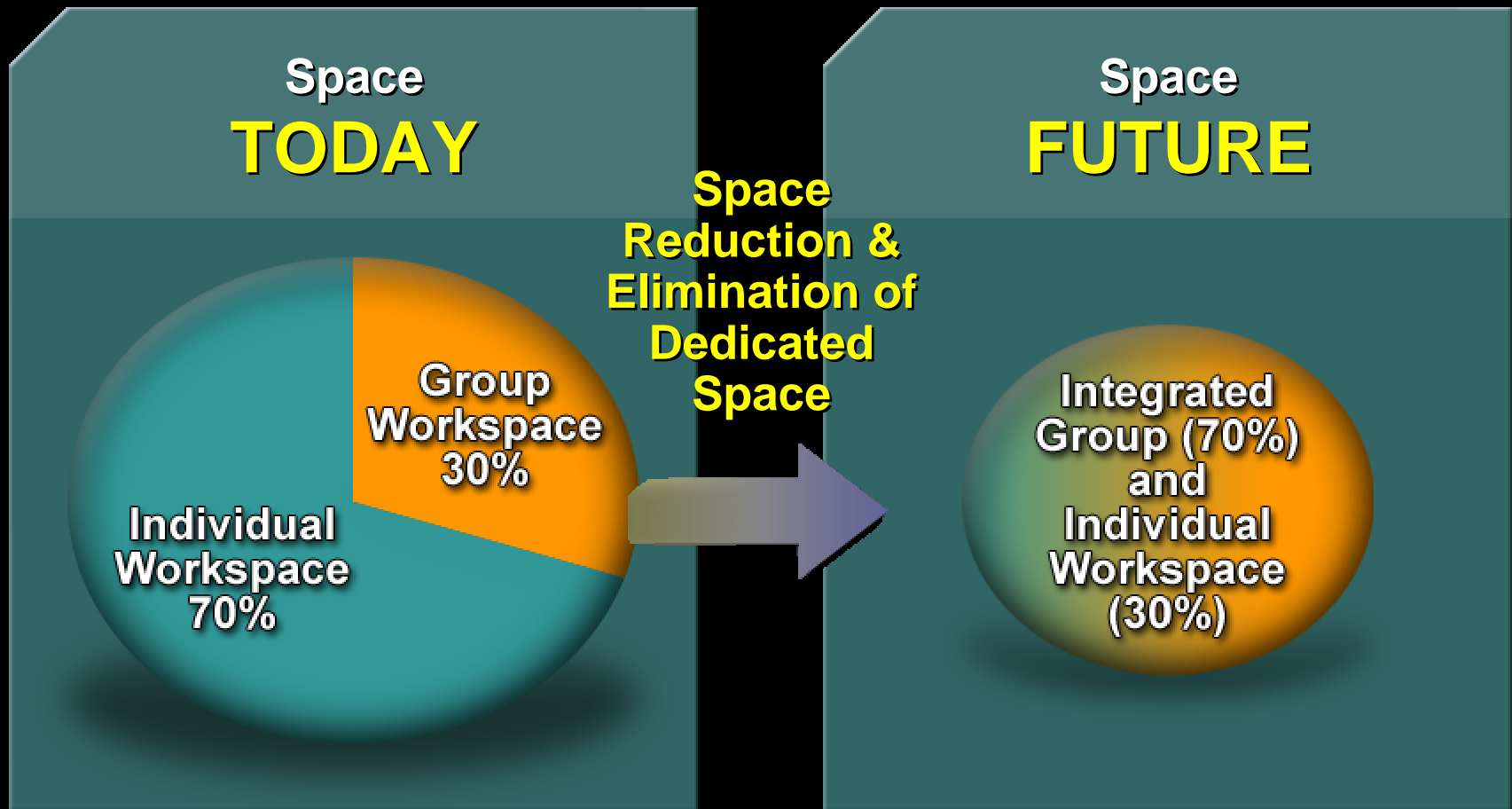
Why Do You Come into Work?

True Utilization is Poor

Utilization

- 100%
- 80%
- 60% — Wasted Assets
- 40%
- 20%
- 0%

8:00   10:00   12:00   2:00   4:00   6:00

Time of Day

Issues with Current Space

- **Even at full occupancy, companies waste more than 60% of their space. This is enormously costly.**

- **Work environment design (office / cube) actively drives isolation**

- **Insufficient collaborative space is impeding work**

- **Offices lack "buzz"**

- **People don't have options regarding their environment**

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Companies Can Save Money & Drive Collaboration by Rethinking the Work Environment

Space **TODAY**

Space Reduction & Elimination of Dedicated Space

Group Workspace 30%

Individual Workspace 70%

Space **FUTURE**

Integrated Group (70%) and Individual Workspace (30%)

Opportunity: Next Wave of Employee Productivity

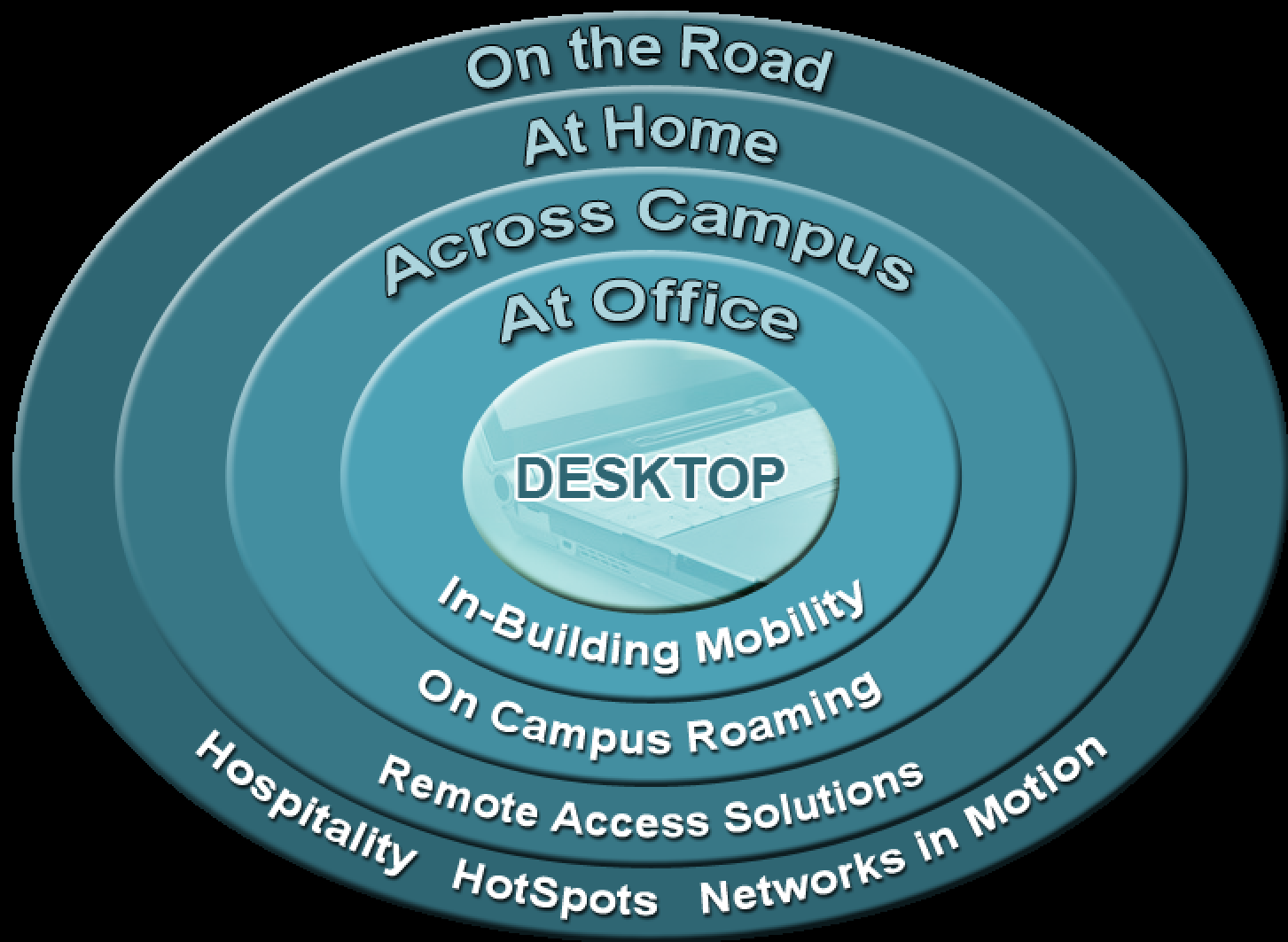**Significant workplace trends (with implications) converging today:**

- **Inefficient use of office space**
  - **Cubicles and offices often vacant while meeting rooms in short supply**
  - **Work done in the office is increasingly collaborative**
  - **Individual and group workspaces are being integrated (and shrinking in the process)**

- **Increasing numbers of mobile workers**
  - **Traditional, cubicle office environments slowly changing to meet the needs of its more mobile, collaborative working groups/teams**
  - **Network will be the enterprise**

- **Advances and adoption in networking technology**
  - **Wireless, IP communications, networked storage, security, networked home**

What is the next wave to enhance and capture productivity after e-enablement?

Expanding The Productivity Zone
Optimizing Space Use, Mobility & Collaboration

On the Road

At Home

Across Campus

At Office

DESKTOP

In-Building Mobility

On Campus Roaming

Hospitality   Remote Access Solutions

HotSpots   Networks in Motion

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Proof of Concept: Cisco Building14

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Cisco's Real Estate Portfolio
A Laboratory for Innovative Technology Solutions

Portfolio: 16M SF

Persons Housed: 41,000

Countries: 90

Buildings: 400

Leased: 80%

> **NETWORK INFRASTRUCTURE PRODUCTS & SERVICES ARE CISCO'S CORE BUSINESS**
>
> **95% OF OUR REAL ESTATE IS OFFICE AND R&D USE**

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Workplace Effectiveness

The Goal of Workplace Effectiveness Is to Design Innovative Workplace Environments That:

- **Lower cost**

- **Increase worker productivity**

- **Increase employee satisfaction**

WPE's Solutions Must:

- **Demonstrate the importance of Cisco technology in creating its solutions**

- **Foster teamwork by emphasizing collaboration & social interaction**

Proof of Concept: Building 14 San Jose

WHO (Participants):
WPR, IT Infrastructure, WPR-IT, WPR-Finance, HR Creative Learning Studio and IBSG Innovations (seats 140 people compared to 88 people in the old cubicle environment)

WHAT:
Connected workplace proof of concept (POC) for G&A employees that incorporates a variety of work settings for both individual/team work and advanced technologies to improve employee productivity/satisfaction, encourage collaboration and innovation and reduce real estate/IT costs

WHEN: Launched July 2004

WHERE: Building 14, 1st floor, Cisco Headquarters San Jose

WHAT FOR (to date): CUT $$$
- Real Estate rent by 37%
- Construction costs by 42%
- Furniture costs by 50%
- IT capital spend (switches and switch ports) by 40%
- Early survey results indicate increases in satisfaction and collaboration

WHAT'S NEXT:
- Sales POC (Charlotte, NC 10/04), Engineering (San Jose), Call Center (non-US)

What's Different about Our Effort?

- **Focuses on team rather than individual**

    Default to collaborative environments

    Focus on "home" not shared office / cube

- **Makes the office more important, not less**

- **Emphasizes technology**

    Constantly look at new technologies to understand how they can change the workplace

- **Avoidance of reservation systems**

    Rely on the "invisible hand"

- **Balance between the three major objectives**

Traditional Space Is Poorly Utilized
Why Do You Still Come to the Office?

- **Work is more complex, collaborative, distributed and global in nature**

- **Technologies are untethering the worker and the framework for where, when and how work is accomplished**
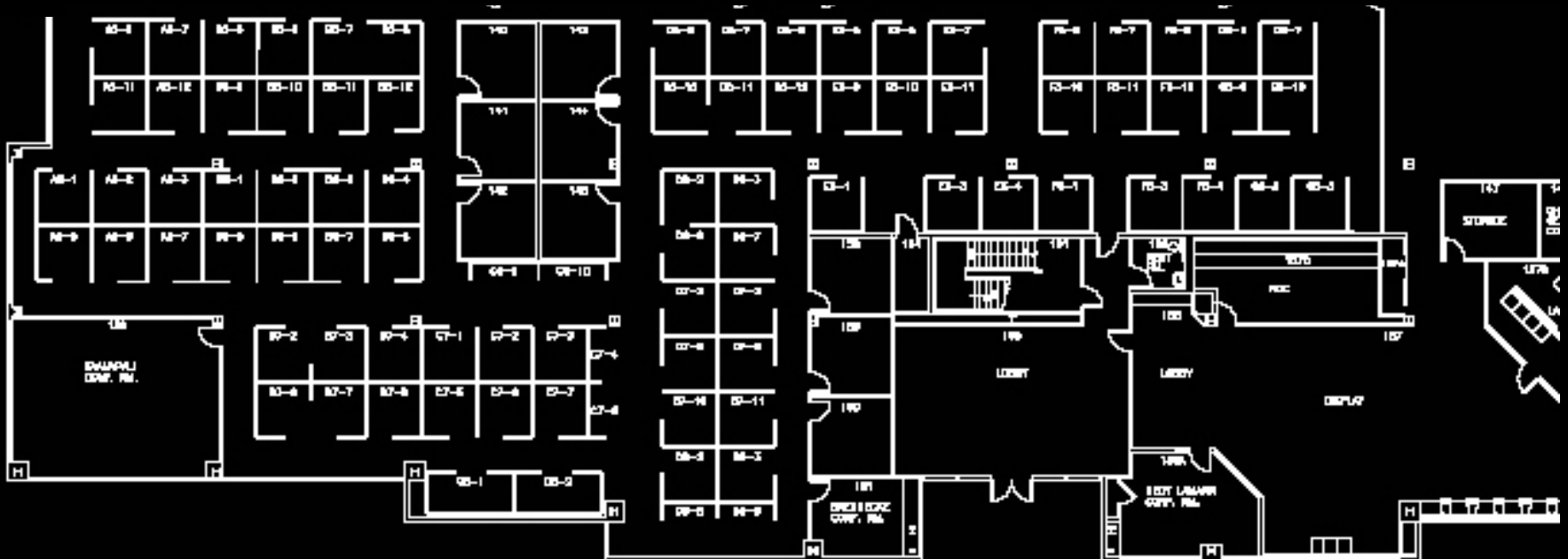
More Than a Workplace
Today's Collaborative & Mobile Environment

- Creative space solutions favor collaboration and teamwork - and increase asset utilization significantly

- Innovative technology solutions improve business performance

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Network-Enabled Technologies
Supporting Mobility in the Workplace Environment

- **Wireless Network**

- **Mobile Computing**

- **Internet Based Telephony**

- **Internet Based Video**

- **Content Delivery & Storage**

- **Virtual Private Network & Network Security**

- **Collaboration Software**

Cisco Connected Workplace
Improved Asset Utilization Is Lowering Costs

Cable Infrastructure	**- 50%**
IT Infrastructure	**- 55%**
Furniture	**- 45%**
Space Demand	**- 50%**

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Cisco Connected Buildings
We Reduced Our Operational Costs Significantly

Annual Operational Cost Savings   **30%**

Safety & Security (Globally)   **- $10M**

Building Management (San Jose)   **- $ 7M**

Capital and Labor Cost Savings   **50%**

Converged Infrastructure for Greenfield Opportunity

Workplace Effectiveness Roll-Out

FOUR MAJOR SOLUTION TYPES

1. Engineering
2. Sales
3. Engineering
4. Sales

POC 1 – 2 → **Limited Deployment 4 – 6** → **Standard Deployment**

POC 1 – 2
- G&A – SJ B14, Complete
- Sales – Charlotte, Complete
- Engineering – TBD FY'06
- Call Center – RTP, FY'06

Limited Deployment 4 – 6
- G&A – FY'06
- Sales – FY'06 w/FSO
- Engineering – TBD
- Call Center – TBD

Standard Deployment
- Begins FY'07 – FY'08

Overall Evaluation of Cisco Connected Workplace POC

% who "agree" or "strongly agree" (n=69):

Compared to my previous work environment, it is easier to find a place to meet in the B14 POC.	80%
Given a choice, I would prefer to work in B14 or "B-14-like" environments than my previous work environment.	77%
My experience in B14 was better than I expected.	70%
Compared to my previous work environment, it is easier to find a quiet place to work in B14.	62%
Communication with my work unit colleagues has improved in B14.	62%
I enjoy coming to work more since moving to B14.	62%
Communication with my manager has improved in B14.	47%

% indicating "more" or "much more productive" (n=99):

Individual productivity over the last six months has improved.	51%
Work unit productivity over the last six months has improved.	46%

% indicating "greatly" or "significantly enhanced" (n=99):

Impact on the quality of interaction/networking with other Cisco organizations by the end of the 6 month period.	49%

% "satisfied" or "extremely satisfied" (n=99):

Overall effectiveness of technologies	67%
Overall effectiveness of the workplaces	74%

Reduce Real Estate and Technology Costs

Cost Category	Savings*
Real estate rent Accommodating more people in the same amount of space	37%
Construction Building a smaller space than typically required for 140 employees	42%
Workplace services Reducing utilities and maintenance costs, and nearly eliminating the costs of moves, adds, and changes for workspaces through the use of flexible furniture settings	37%
Furniture Purchasing less (and less expensive) furniture than typically used in cubicles	50%
IT capital spend Spending less on switches and switch ports	40%
Cabling Reducing the number of wired IP cables required per workspace	60%
Equipment room space Racking fewer switches because of wireless infrastructure	50%

* Data from Cisco WPR, based on B14 POC results

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Newsweek

Home Page • Cover Story • Archives • Feedback • Index

Next Frontiers

Facing the Future

Ethan Hill for Newsweek

Collaborators: Cisco's Work Place Effectiveness team

Office Space: Designing Your Next Office

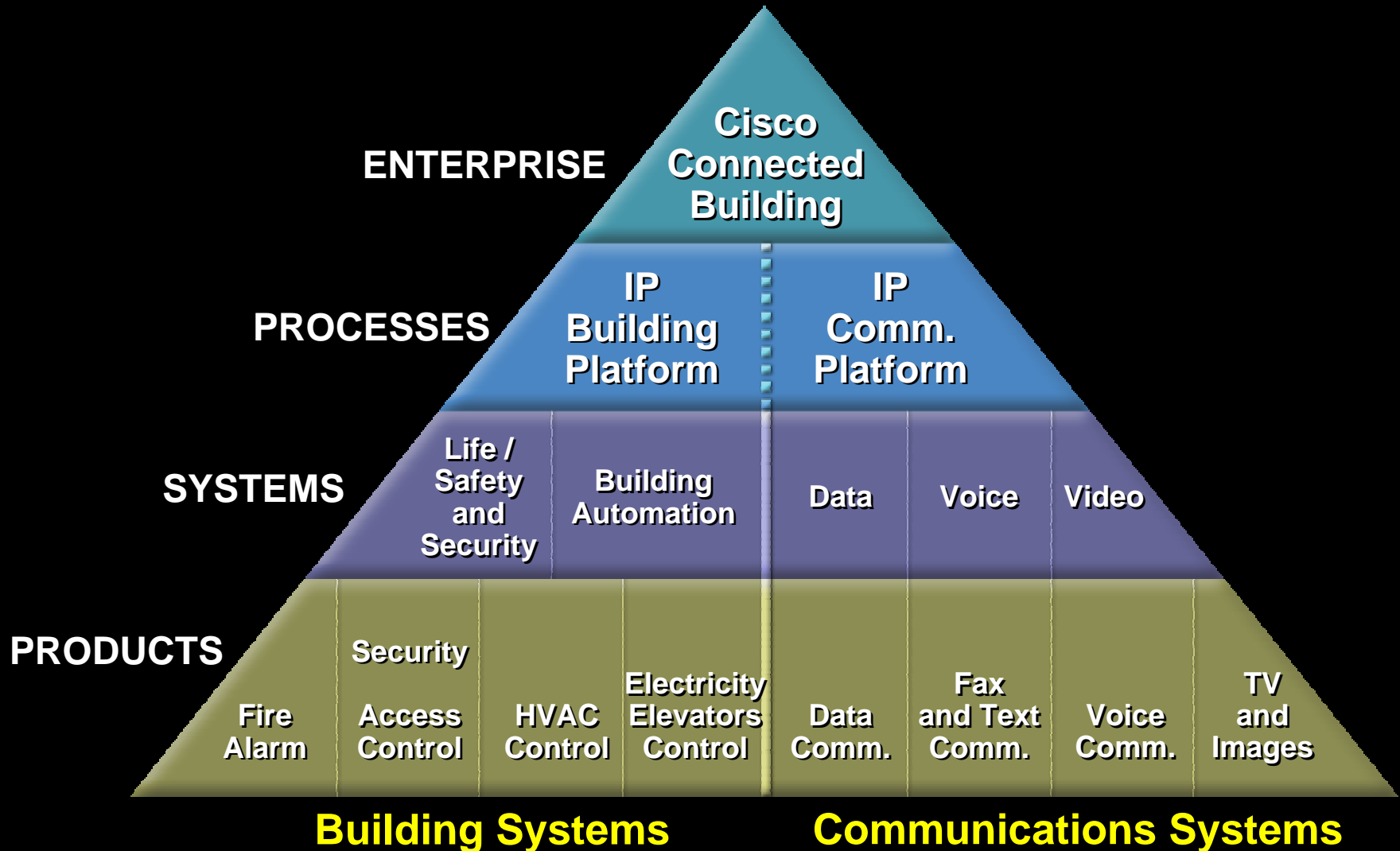A workplace that will know who you are, where you are and what you're doing

Newsweek, April 2003

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Why NETbuilding?

Convergence Real Estate Operation

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Cisco Connected Real Estate
Connecting People & Buildings

Pyramid diagram — Cisco Connected Real Estate

Left-side level labels (top to bottom): ENTERPRISE, PROCESSES, SYSTEMS, PRODUCTS

- **ENTERPRISE:** Cisco Connected Building
- **PROCESSES:** IP Building Platform | IP Comm. Platform
- **SYSTEMS:** Life / Safety and Security | Building Automation | Data | Voice | Video
- **PRODUCTS:** Fire Alarm | Security — Access Control | HVAC Control | Electricity Elevators Control | Data Comm. | Fax and Text Comm. | Voice Comm. | TV and Images

Building Systems | **Communications Systems**

The Network Enables Operational Innovation

- **Centralized system monitoring and control**

- **Workforce optimization**

- **Improved services level**

- **Simplified network installation**

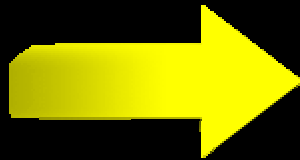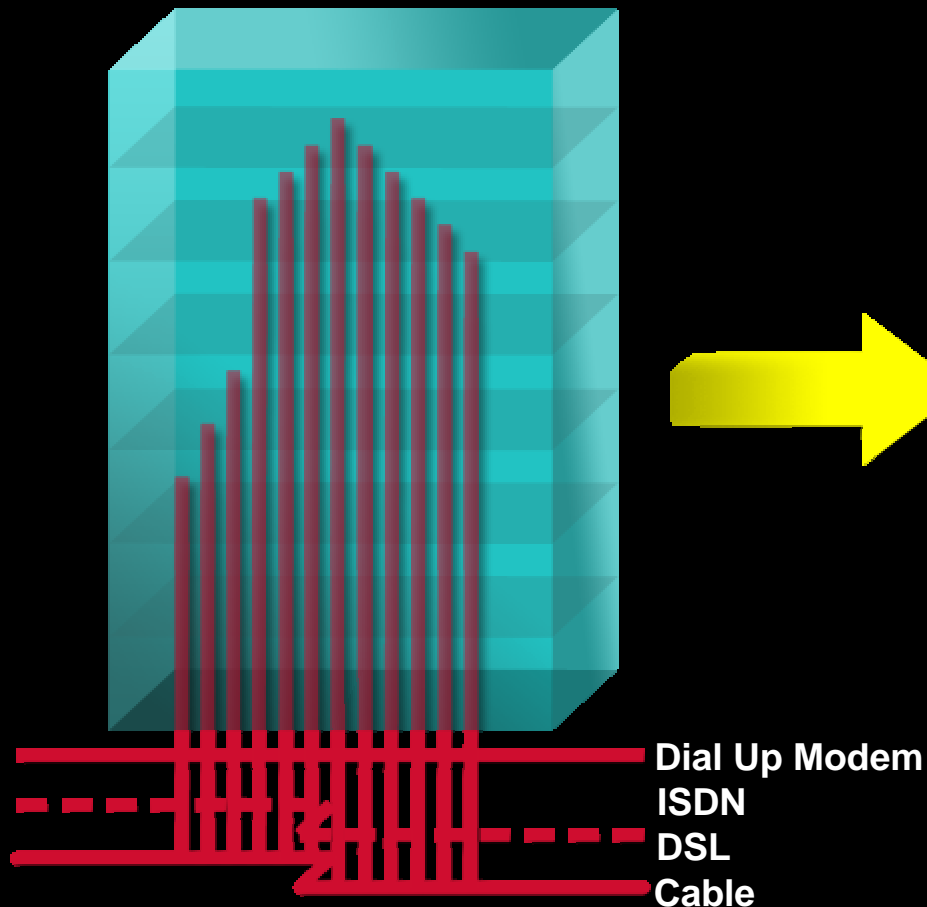- **Simplified network architecture**

Cisco Connected Real Estate
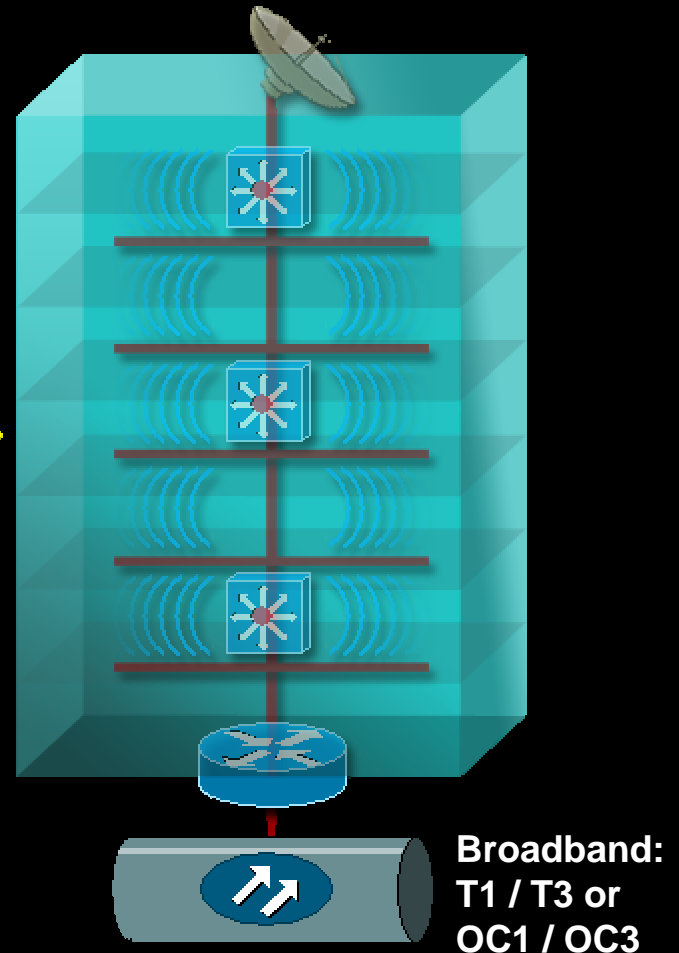## The Network Becomes the "4th Utility"...

LEGACY
User Provided

TODAY
Owner Provided

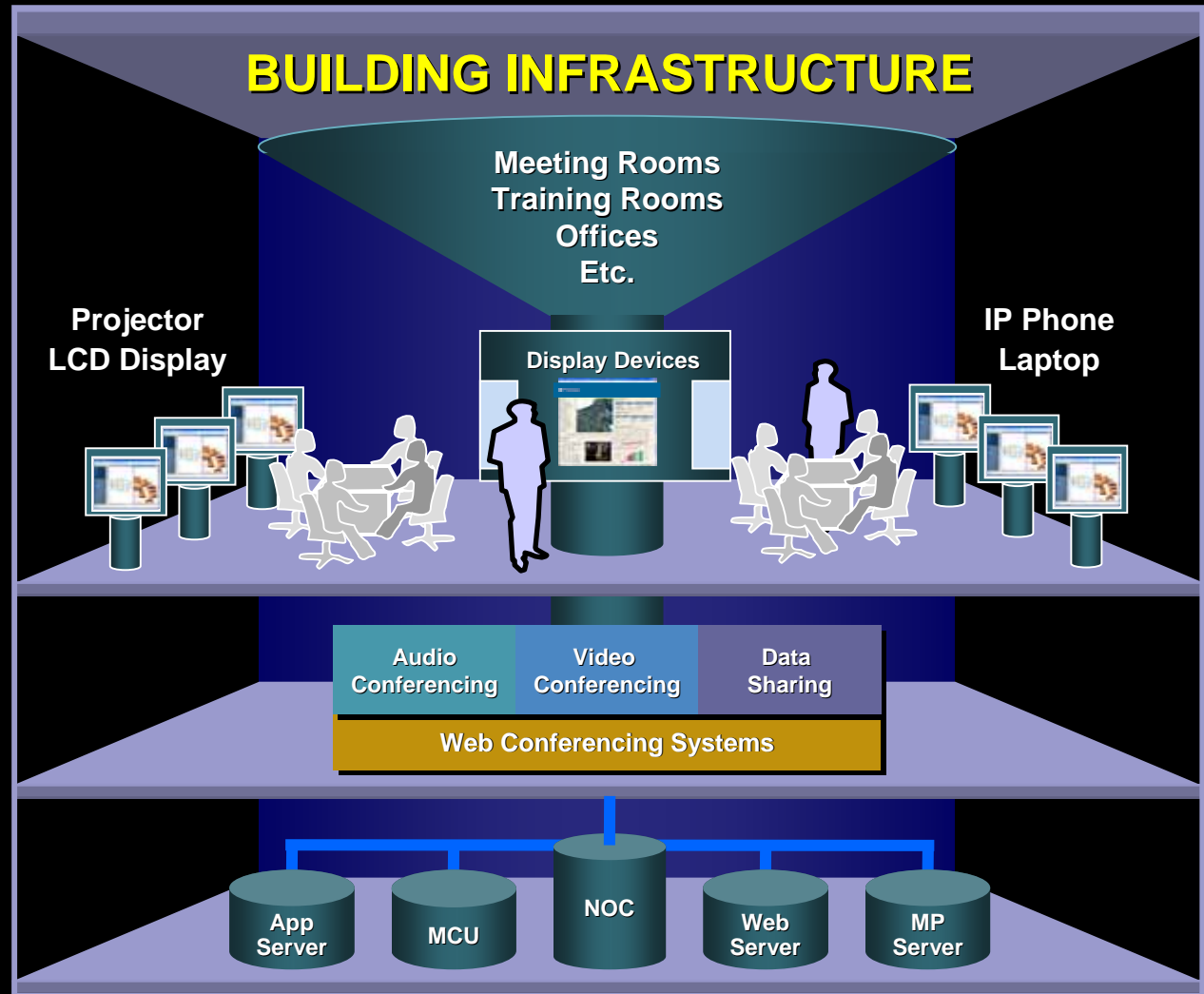Dial Up Modem
ISDN
DSL
Cable

Broadband:
T1 / T3 or
OC1 / OC3

Cisco Connected Real Estate
Is Delivering Communication Services to Users…
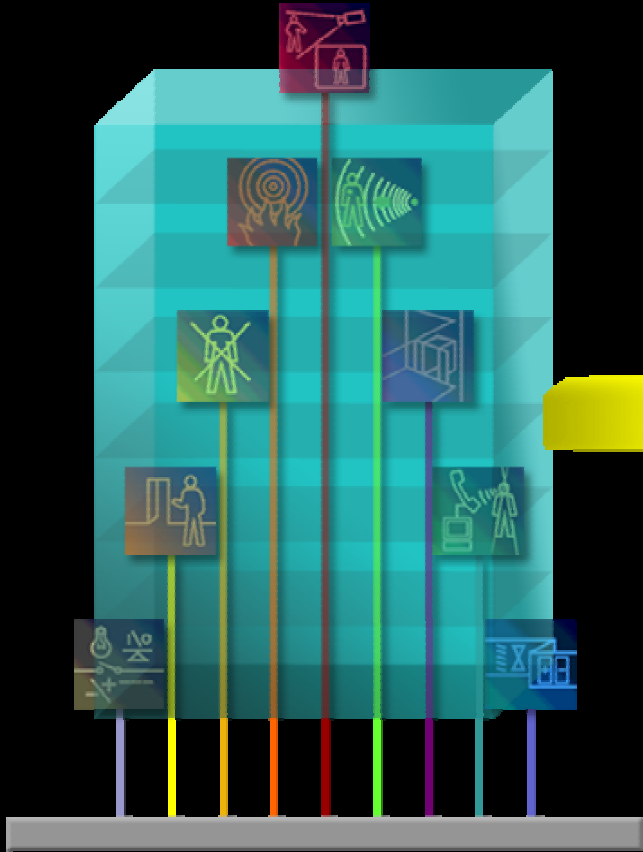
Human Interface

Building Component

Application

Network

BUILDING INFRASTRUCTURE

Meeting Rooms
Training Rooms
Offices
Etc.

Projector
LCD Display

Display Devices

IP Phone
Laptop

Audio Conferencing | Video Conferencing | Data Sharing

Web Conferencing Systems

App Server | MCU | NOC | Web Server | MP Server

Cisco Connected Real Estate
Is Streamlining Operations

LEGACY

Disparate Building Networks

TODAY

Open Standards Building Network
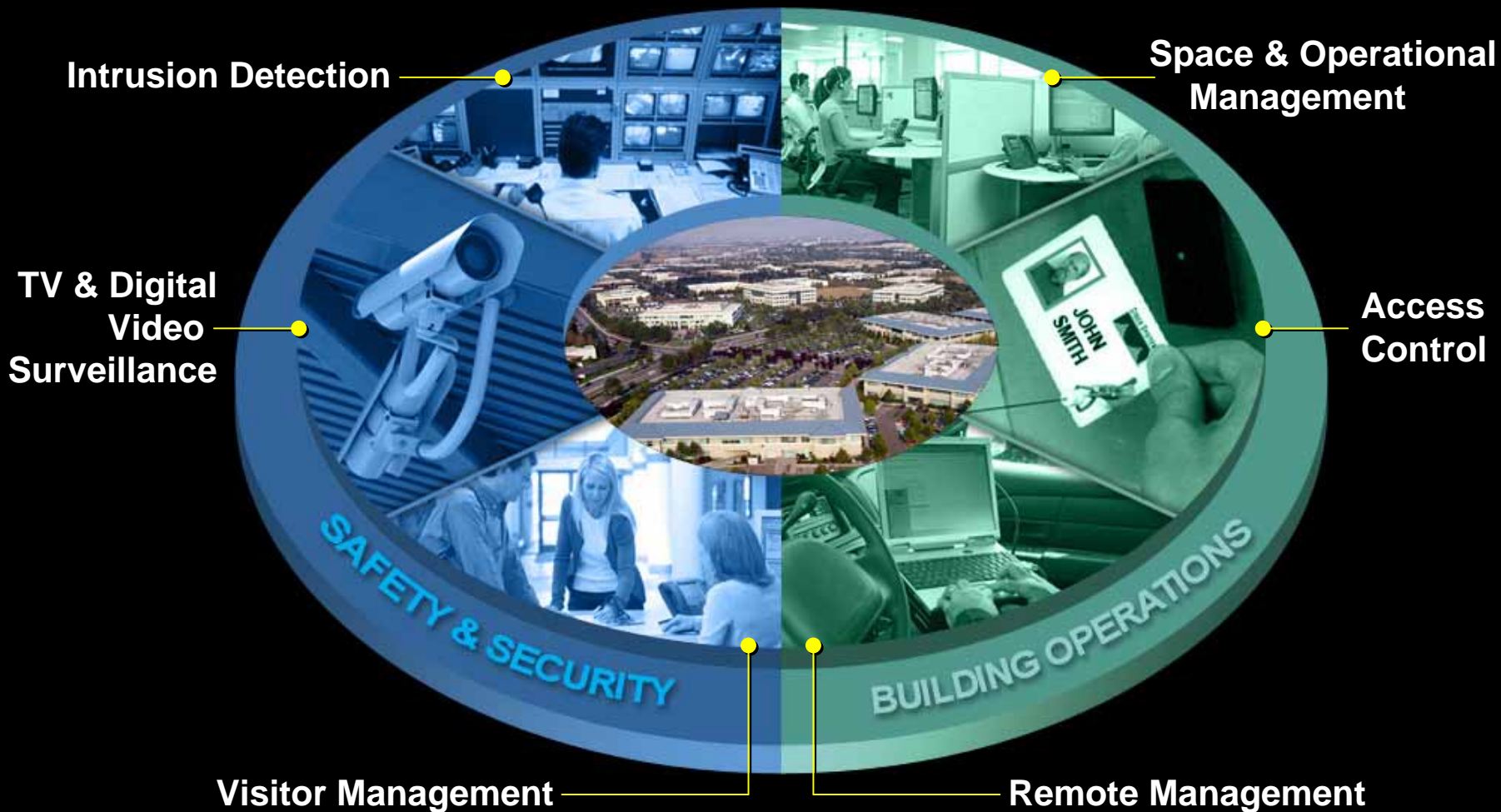
IP Communications

Fire

Physical Security

Visitor Access

Energy

Lighting

Elevator

24 / 7 Monitor

HVAC

WAN
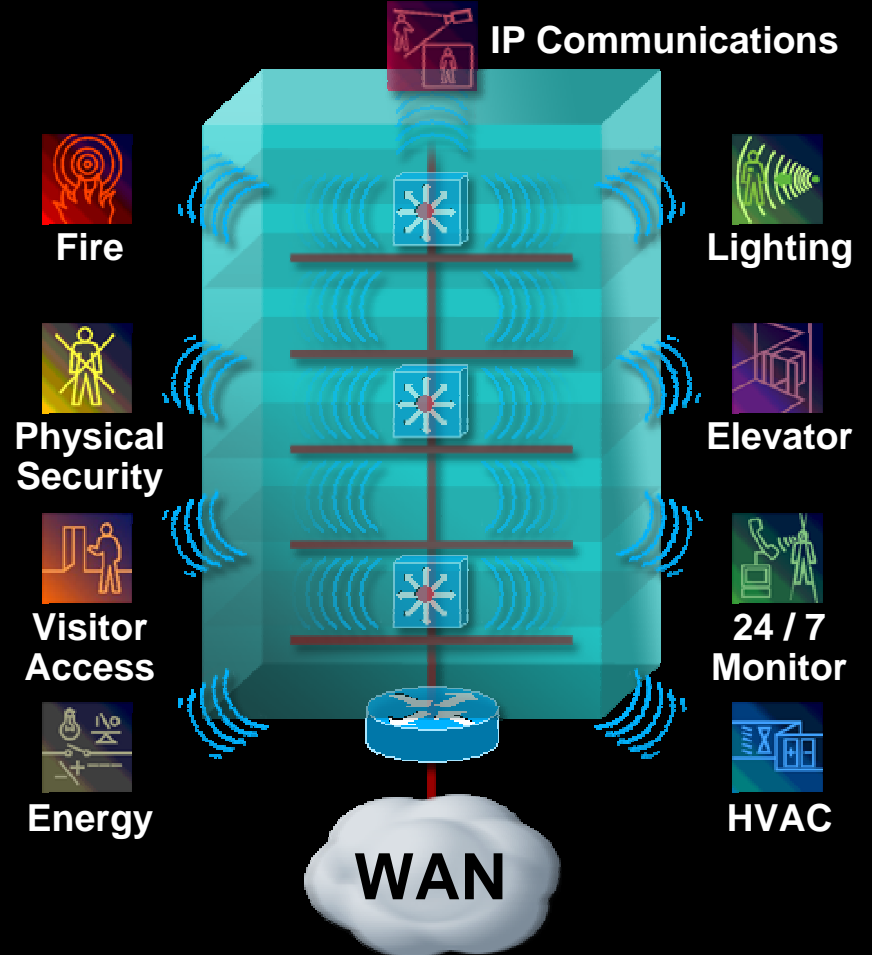
Centralized Operations & Remote Services
Across the Entire Real Estate Portfolio

Centralized Operations Management
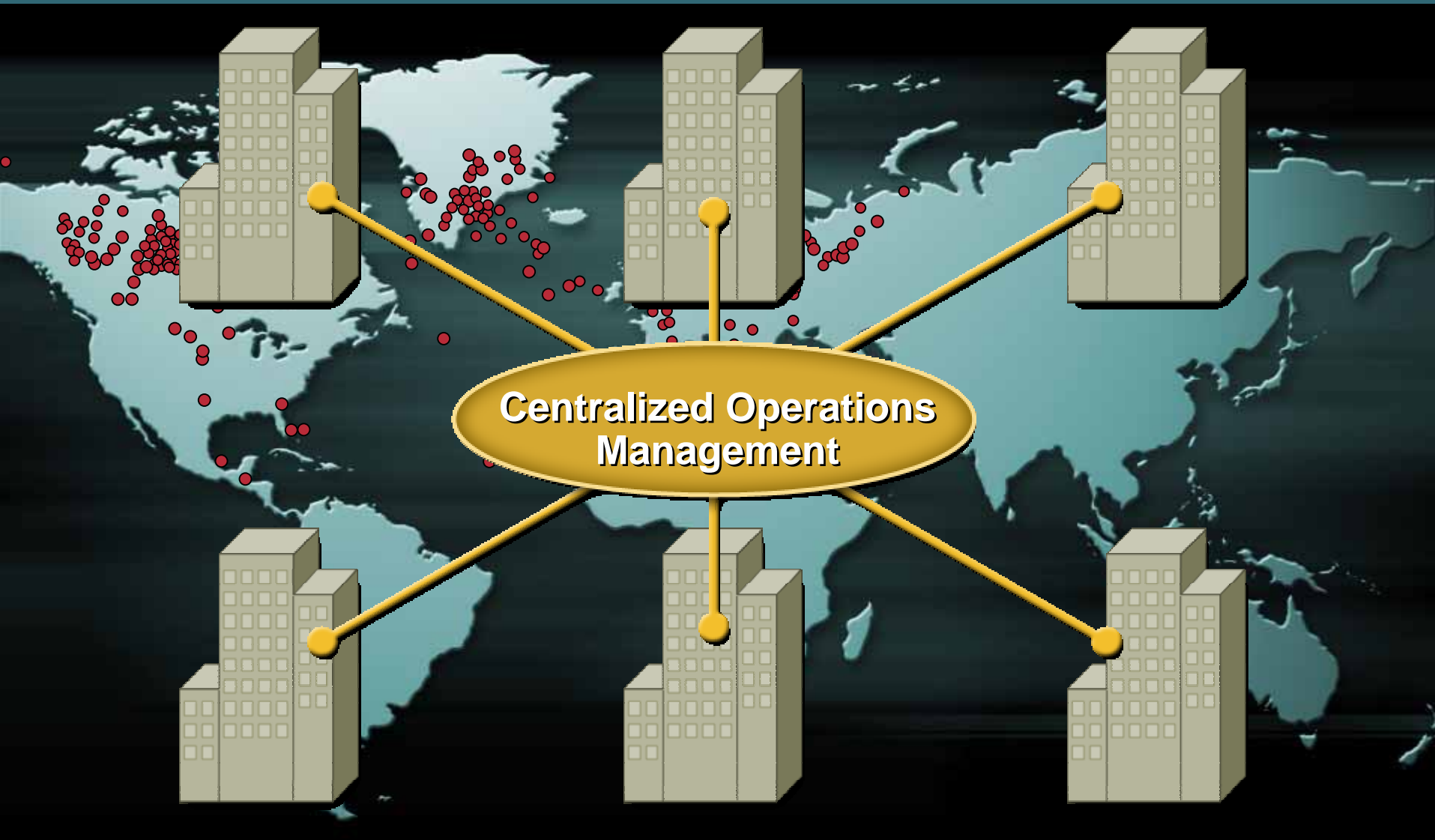
Safety, Security and IT Converged
Across Our Entire Real Estate Portfolio

Intrusion Detection

Space & Operational Management

TV & Digital Video Surveillance

Access Control

SAFETY & SECURITY

BUILDING OPERATIONS

JOHN SMITH

Visitor Management

Remote Management

Increasing Real Estate Values
By Integrating Real Estate & Networking Solutions

We Are Entering Here

And are Adding Value at Each Stage of the Real Estate Lifecycle

Strategy → **Design** → **Construction** → **Operation**

Too Late!

Current State

Workplace & Building Solutions Designed Here

IT Networks Designed Post–Construction

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