



# Welcome & Intro

**Vincent Lim (林继安)**  
**Business Solutions Manager - Healthcare**  
**Cisco Asia Pacific**

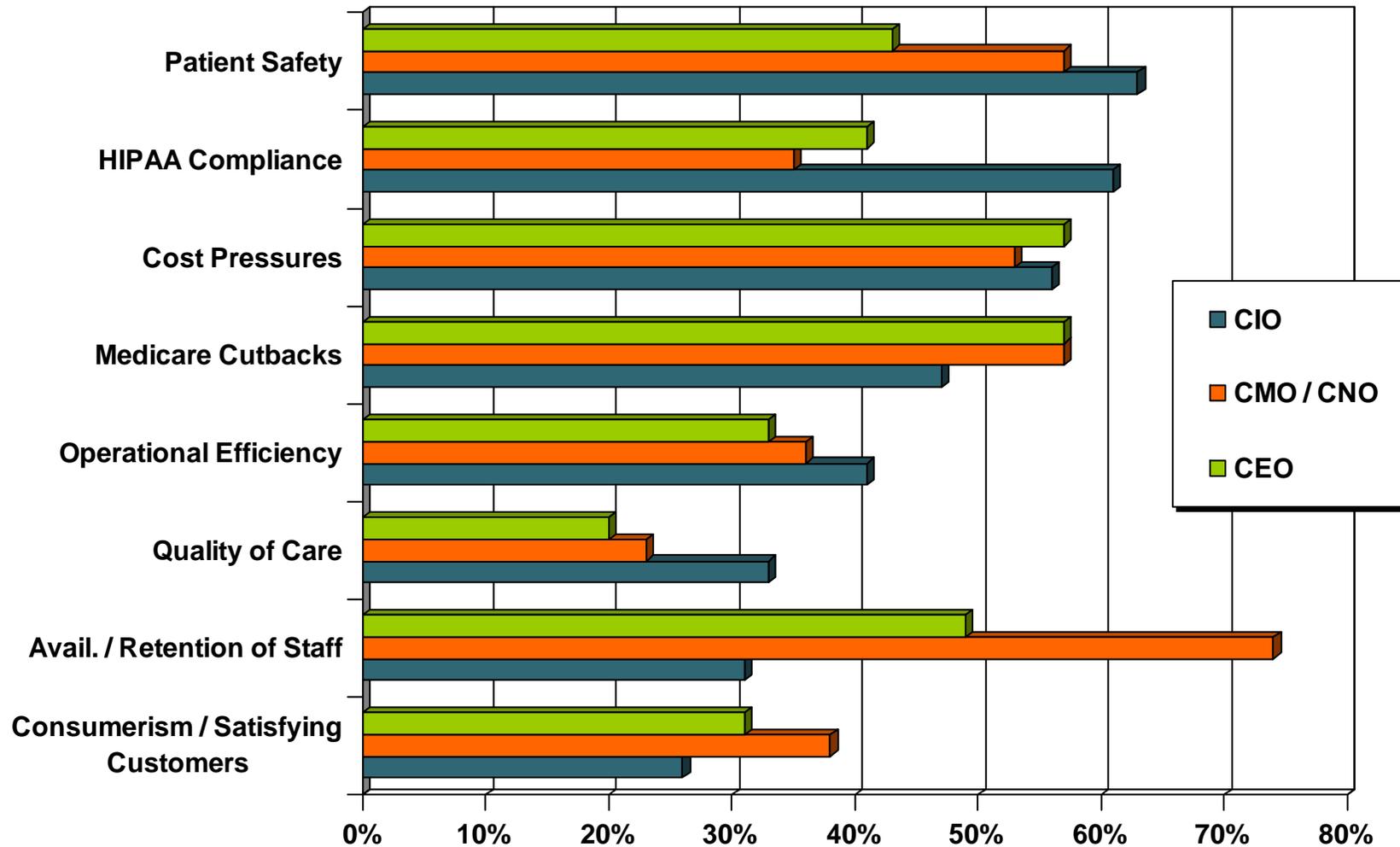
# Agenda

- **Healthcare Concerns**
- **Customer Case Study**
- **Cisco's Vision for Healthcare**
- **The Solutions on Offer**
  - **Taking Stock: Medical Grade Network Assessment**
  - **Clinical Connection Suite**
- **Summary**

# Healthcare Concerns



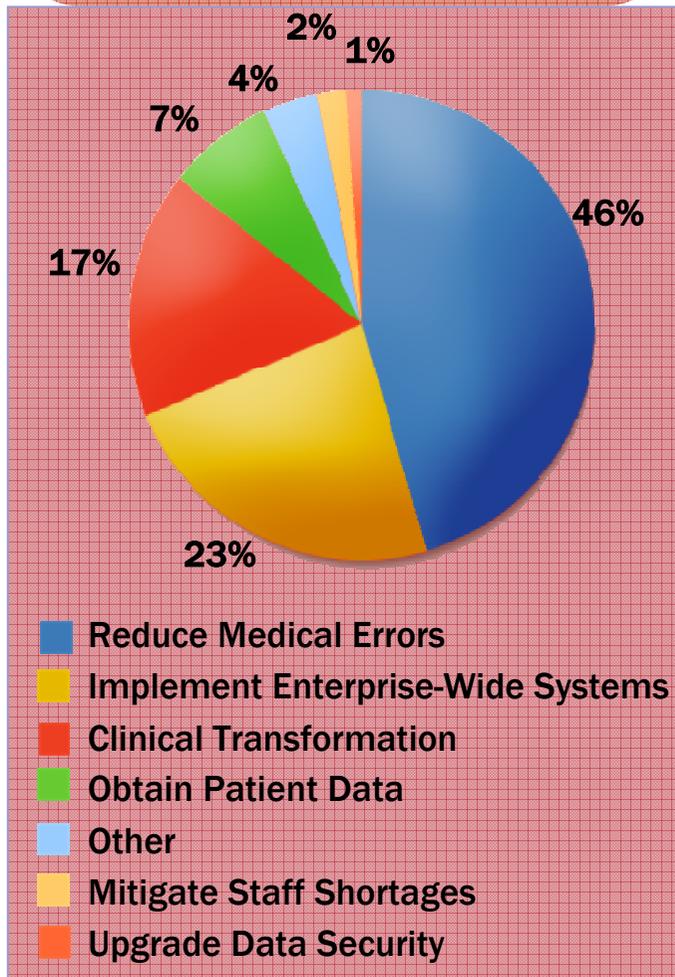
# Themes in 2005: Quality, Access, Safety, Cost



Source: 2003 HIMSS Leadership Survey

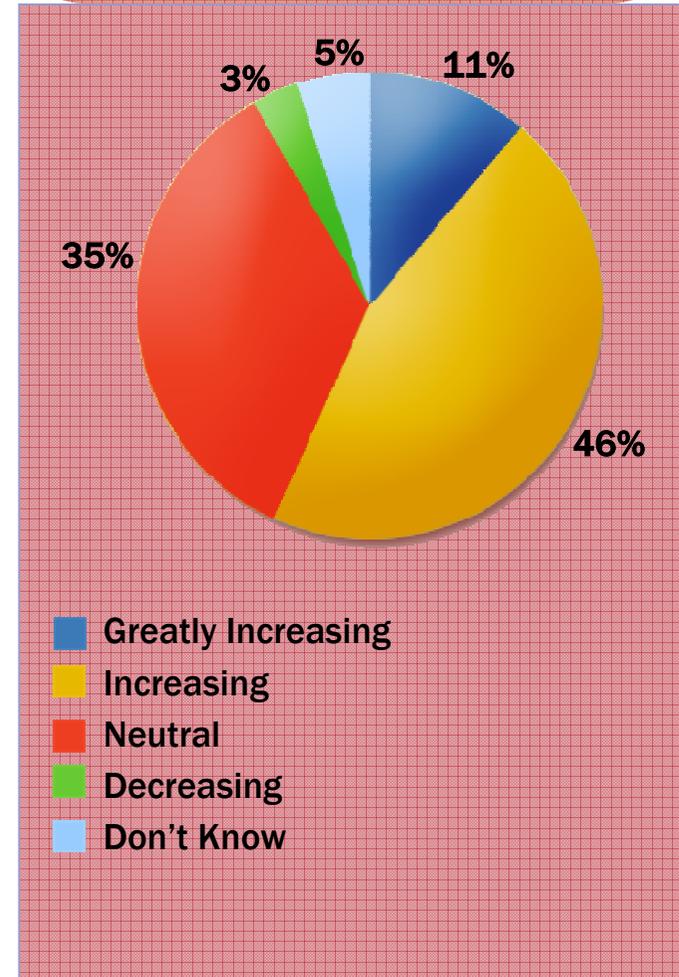
# HCO Leadership Feels Technology Plays An Important Role In Improving Overall Patient Care

“Which IT Areas Can Have The Most Impact On Patient Care?”



Source: HIMSS Leadership Survey, 2001

“To What Degree Is IT Improving The Level Of Patient Care?”



Source: 14th Annual HIMSS Leadership Survey sponsored by Superior Consultant Company, Healthcare CMO Final Report, Feb 2003

# Traditional Views of IT Healthcare

- **The use of IT for Administrative Savings**

**Traditional**

**Measuring ROI better, but virtually impossible to do properly**

**Administrators cynical of outcomes**

**Clinician largely ignored**



**The use of IT for Clinical Outcomes**  
**Patient-centric care leads to the Electronic Health Record**

# The Clinician

- Usually ignored
- Projects in health often fail - they do not take into account the clinician
- Must remember

**Need to demonstrate value to clinician and better health outcomes**

**Clinicians not interested in technology**

**Clinicians are sceptical**

**BUT Clinicians will evangelise**



# Clinical Process



# Customer Case Study



# Royal Prince Alfred Hospital



## Sponsor

**Dr Diana Horvath, CEO of the  
Sydney South West Area Health  
Service**

## Dr Horvath appointed new administrator

**O**ur CEO Dr Diana Horvath, has been appointed administrator of a new South Western Sydney Area Health Service combining Central and South Western Sydney.

Dr Horvath is one of eight new area administrators appointed by NSW Health Minister Morris Lemma, following the reorganisation of area health service boundaries announced on July 27.

The new area health service will come into effect on January 1 2005 with the two health services operating as separate legal entities until then.

The merger adds hospitals, including Liverpool, Camden and Campbelltown, Bankstown/Lidcombe, Fairfield and Bowral, to Dr Horvath's existing portfolio of hospitals across CSAHS.

Dr Horvath said although the new head office will be based in Liverpool she would

retain an administrative office in Camperdown for ease of access for staff. No individual staff would be forced to relocate and there would be no forced redundancies.

The combined population of the two areas is 1.3 million and comprises 20 per cent of the NSW population.

Dr Horvath has begun the process of community and staff consultation to ensure that the merger of the two area health services brings maximum benefit to the two communities.

In the meantime, Dr Horvath said it would be "business as usual" for services delivering health care and she was confident that the merger would add value to the delivery of health services in the two areas.

"The amalgamation will also allow us to streamline some of the non-clinical

*continued on page 3*

# The Process



Outcome	Outcome	Outcome	Outcome	Outcome
<ul style="list-style-type: none"><li>• Observed and documented a typical day of 6 clinicians</li></ul>	<ul style="list-style-type: none"><li>• Identified &amp; documented bottlenecks, frustrations &amp; inefficient work processes</li></ul>	<ul style="list-style-type: none"><li>• Presented bottlenecks to Cisco &amp; Intel</li><li>• Developed high level solutions for bottlenecks to increase efficiency in information access &amp; communication.</li></ul>	<ul style="list-style-type: none"><li>• Follow up with clinicians to ensure<ul style="list-style-type: none"><li>– Report factual</li><li>– Solutions realistic &amp; practical</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Overall findings discussed as a group, further exploring the practicality of solutions</li></ul>

# Problems experienced by all Clinicians

## Communication

Paging

Locating numbers

Sourcing correct individual info

Access to phone

### Who:

ICU	VMO
Admin Officer	Resident
ED	Registrar

## Connectivity

No integration of info. or systems

Unable to view and source all patient info. at one point

Info. on paper, different electronic systems

Lost medical histories & part thereof

Continually logging on/off to check results

Decision making

Viewing of images

Copying notes

Completion of discharge summaries

### Who:

ICU	VMO
Admin Officer	Resident
ED	Registrar

## Access to the right information, at the right time, at the right place (mobility)

Waiting to access

Speed of connection

Continually logging on & off

Positioning

Number of computers available

### Who:

ICU	Registrar
Resident	
ED	

## Excessive paperwork

Manual process

No support from computer system

Two separate lists

No availability of real time list

### Who:

ICU	VMO
Admin Officer	Resident
ED	Registrar

# Cisco's Vision for Healthcare

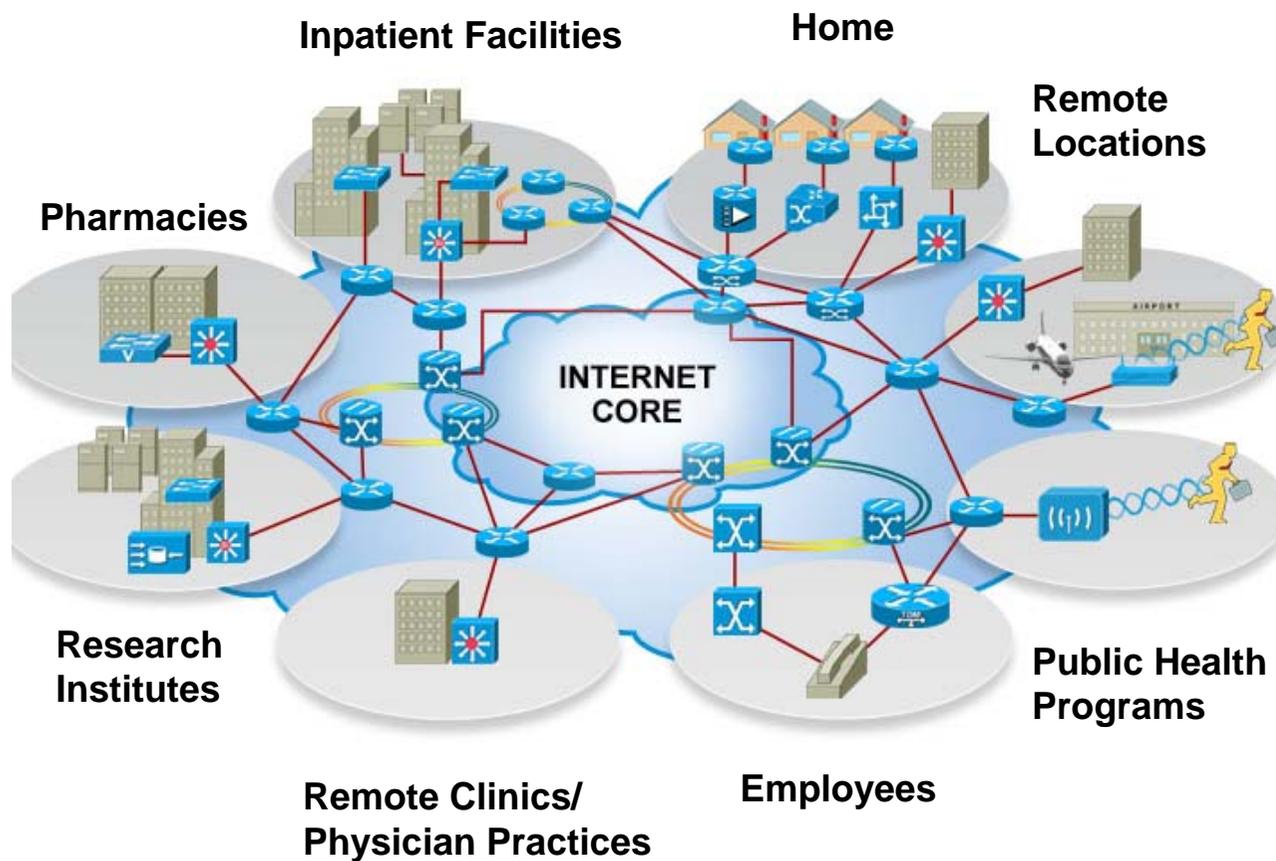


**“Cisco will catalyze the deployment and adoption of IP technologies to improve patient outcomes, safety, access, productivity, affordability and the overall quality of healthcare**

**Cisco will serve as a transforming and unifying agent for  
Connected Health throughout the world ”**

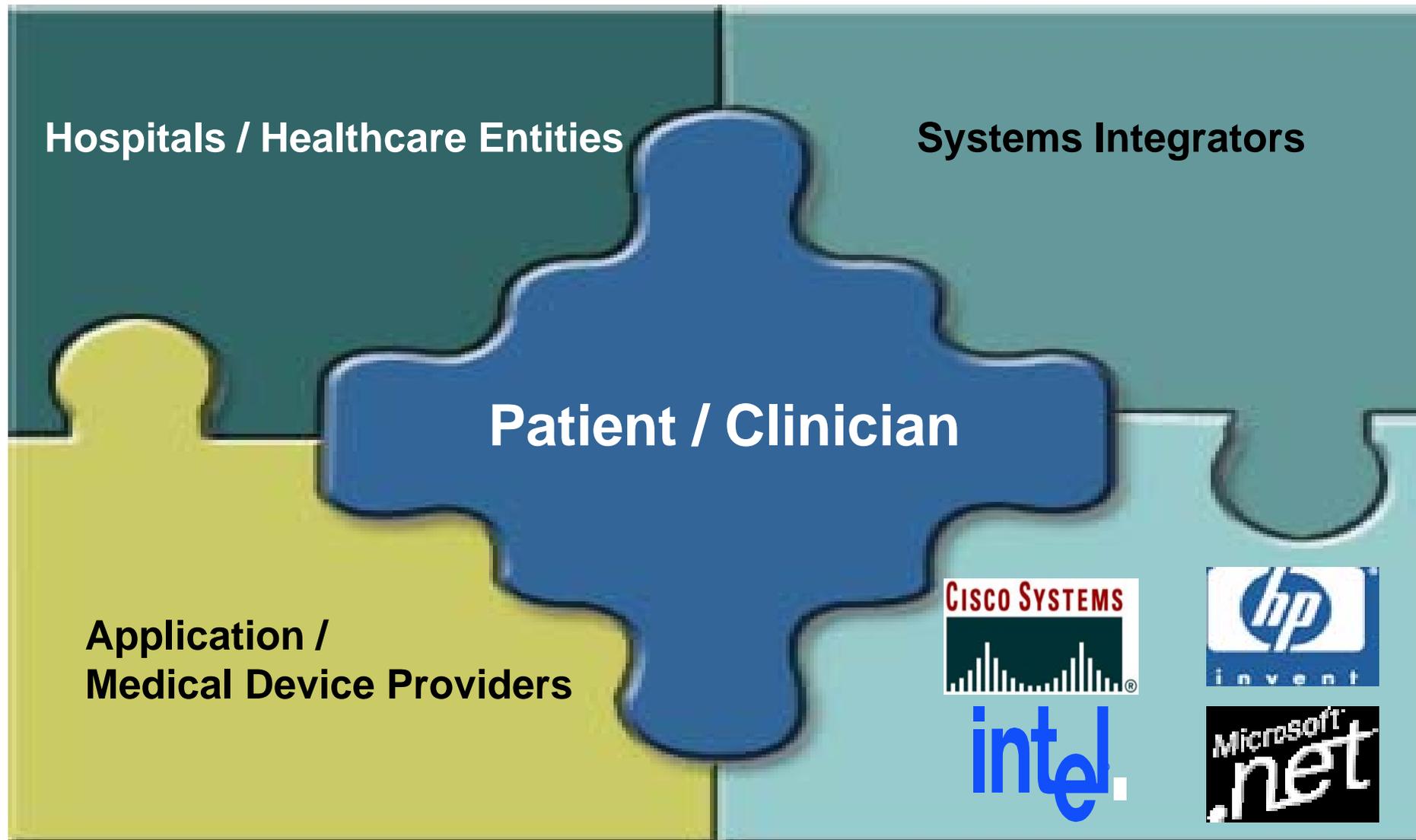
**John Chambers  
Chairman & CEO  
Cisco Systems**

# Our Vision for the Integrated Healthcare Environment – Connected Health

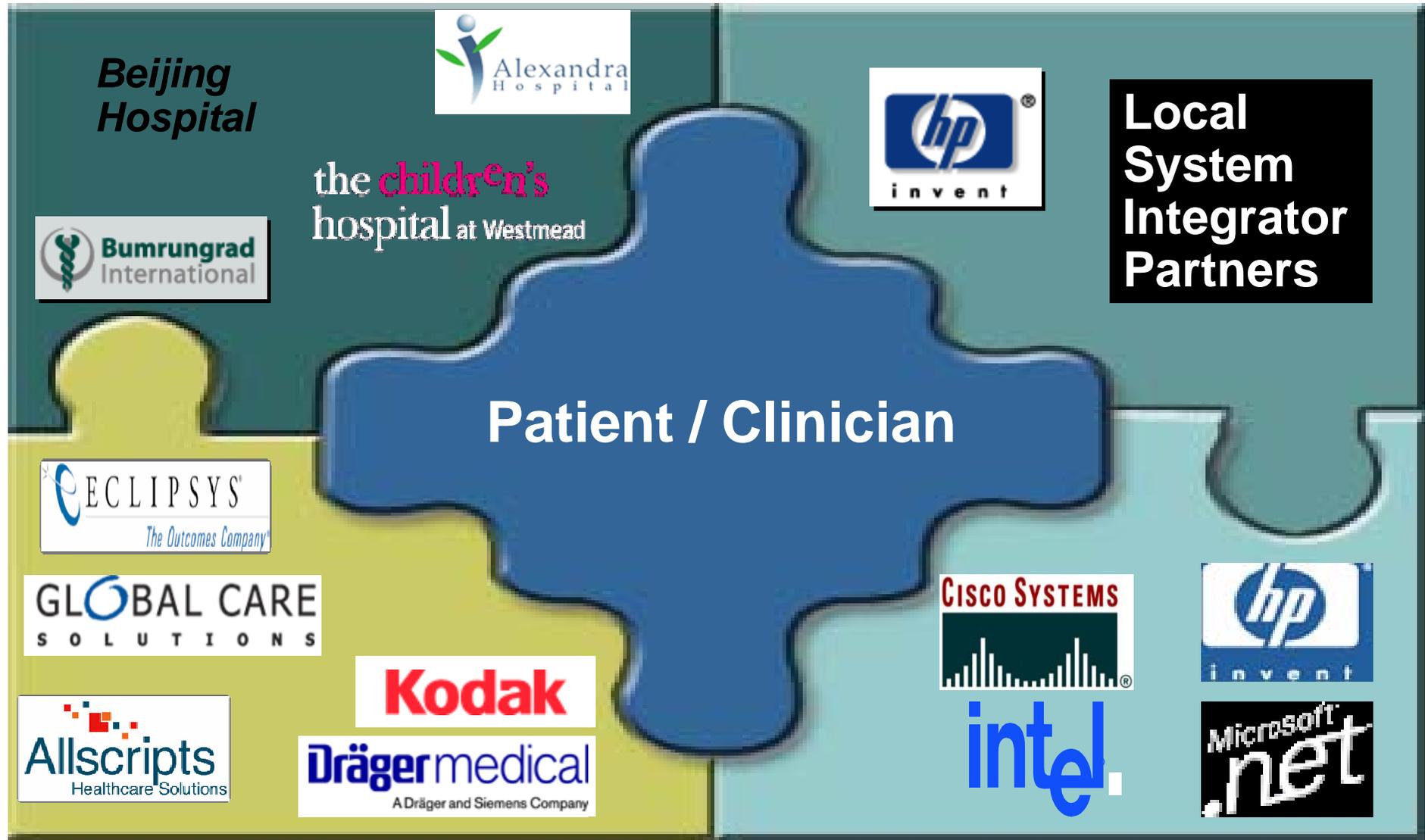


- **Patient Centered**
- **Real time information sharing**
- **Virtual consultations**
- **Remote patient monitoring**
- **Data collection in the community**
- **Collaborative research, treatment**

# Healthcare Transformation



# Healthcare Transformation – Industry Collaboration



# The Medical-Grade Network: Blueprint and Assessment Tool

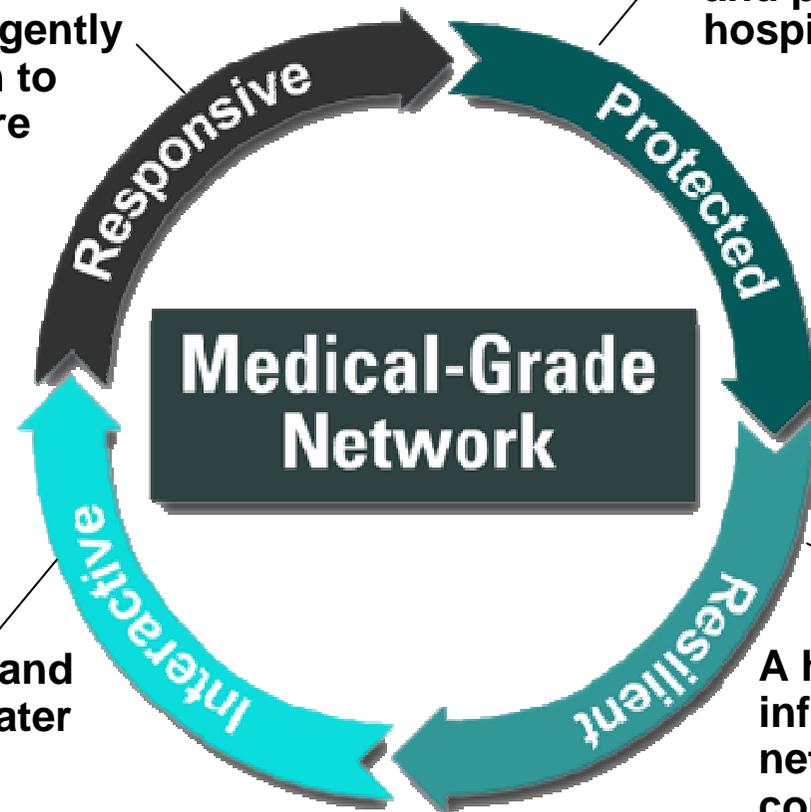


# A Responsive, Protected, Resilient, Interactive Solution

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Maximizing the effectiveness of application and device performance to intelligently distribute information to improve quality of care

Protecting the information and physical assets of the hospital environment



Connecting technology and caregivers to create greater collaboration and knowledge

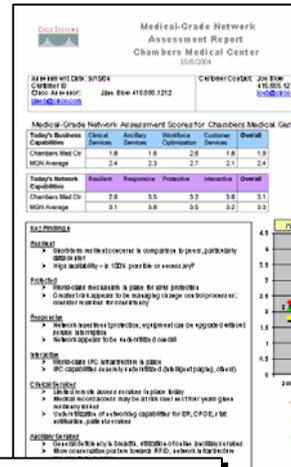
A highly reliable infrastructure that meets the network challenges and continually changing business requirements of healthcare

# What Is the Medical-Grade Network Solution?

A set of tools and resources to help healthcare organizations:

- Understand technology's role in improving care; and
- Map network investment to business capabilities

## Assessment Tool



## White Papers



## Blueprints



## Case Studies



## Customer Videos

# Healthcare IT Investment Issues

**Will today's network investment support my PACS implementation in two years?**

**How can I better utilize my current network investment?**

**Are there major network capability gaps?**

**Overall, how do our network services rate?**

**Are others leveraging RFID today? In two years?**

**Is our four-year IT roadmap aggressive compared to our peers?**



# Introducing Cisco Systems' Medical-Grade Network Assessment

## Business Capabilities

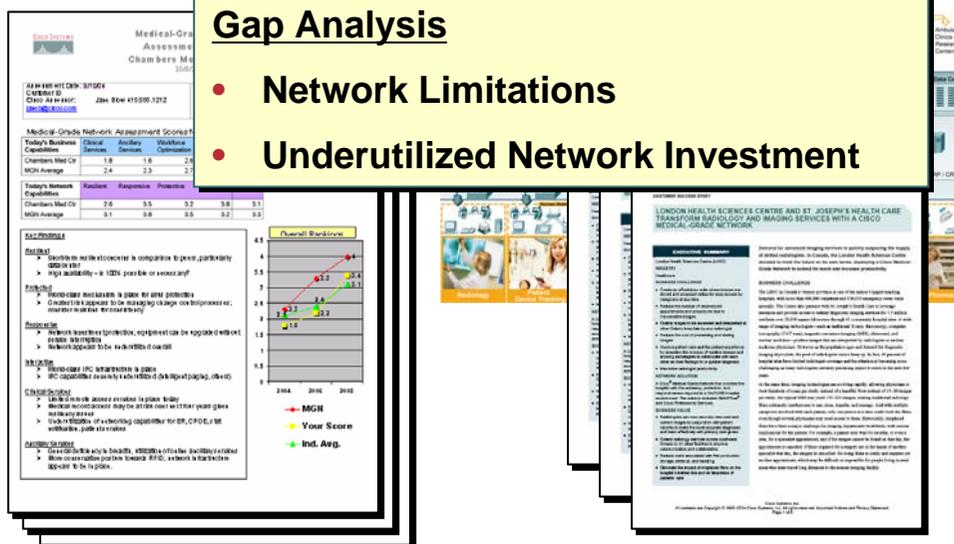
- Clinical Services
- Ancillary Services
- Workforce Optimization
- Customer Service

## Network Capabilities

- Resilient
- Responsive
- Protected
- Interactive

## Gap Analysis

- Network Limitations
- Underutilized Network Investment



- High-level review of business, network capabilities
- Review of three time periods: current, two-year and four-year
- Benchmark against other assessment participants
- Presentation, detail reports of gaps and potential action items

# The Medical-Grade Network Assessment

## Summary of Findings

### Business Capabilities

- Current business capabilities meet or exceed average survey responses
- Future business capabilities meet or exceed those projected for Medical-Grade Network organizations
- Business opportunities to better leverage current network investment include:
  - IP video surveillance (2006 or beyond)
  - Clinical notification (2008 or beyond)

### Network Capabilities

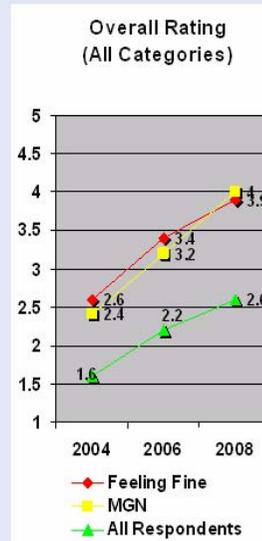
- Current network capabilities meet or exceed average survey responses
- Critical network capabilities to address include:
  - Security (2004 remote physician access)
  - Wireless (2006 ER capabilities)
  - IP Communications (2006 EMR requirements)

Today's Business Capabilities	Clinical Services	Ancillary Services	Workforce Optimization	Customer Services	Subtotal
Feeling Fine	2.3	2.3	2.1	2.4	2.3
MGN Average	2.4	2.3	2.7	2.1	2.4

Today's Network Capabilities	Resilient	Responsive	Protective	Interactive	Subtotal
Feeling Fine	3.6	3.5	4.5	4.0	3.6
MGN Average	3.1	3.8	3.8	3.5	3.3

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- Maps business capabilities to network offerings
- Help customer align network investment
- Demonstrates Network Relevance
- Assists customer with business planning
- Data aggregated, monitored for systems and applications planning

At it will req. Con

End users (including teleworkers) collaborate and transfer case information in real-time throughout the system

3. Consistent delivery of critical data is provided:

2005 2007 2009

Mo. CoS capability

Cis

# How to Get Started

- **CIO reviews question set and invites appropriate participants**
  - Senior leadership strongly advised to attend
- **Conduct assessment meetings**
  - Two two-hour meetings: One for business unit leads, the other for network team.
  - CIO, network representative should attend both meetings
- **Review findings (approximately one – two weeks later)**
  - Present findings and implications
  - Determine appropriate action items (if necessary)

**CISCO SYSTEMS Medical-Grade Network Assessment Business Capabilities ABC Healthcare**

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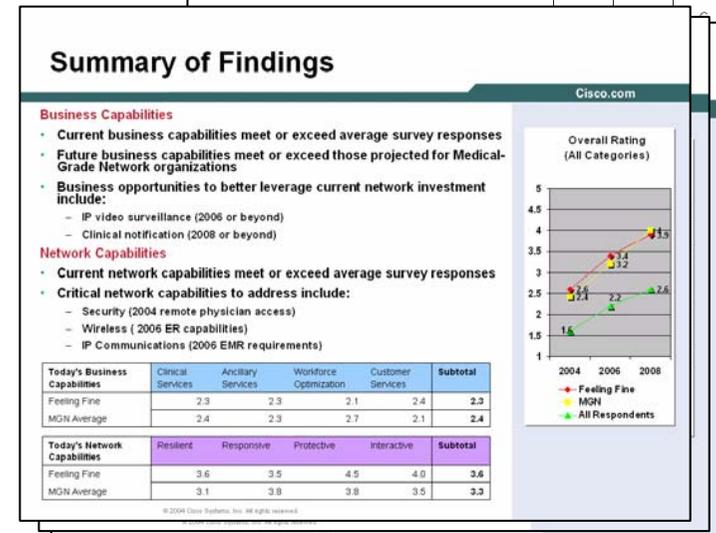
Choose the best possible answer for each year: 2005, 2007, and 2009. If an application does not apply or is unknown, answer at the lowest level. After you have answered all questions, choose **Continue** at the top of the page. If you wish to start over, you may choose **Restore Default**.

**1. Electronic Medical Record that is used by more than 50% of clinicians:**

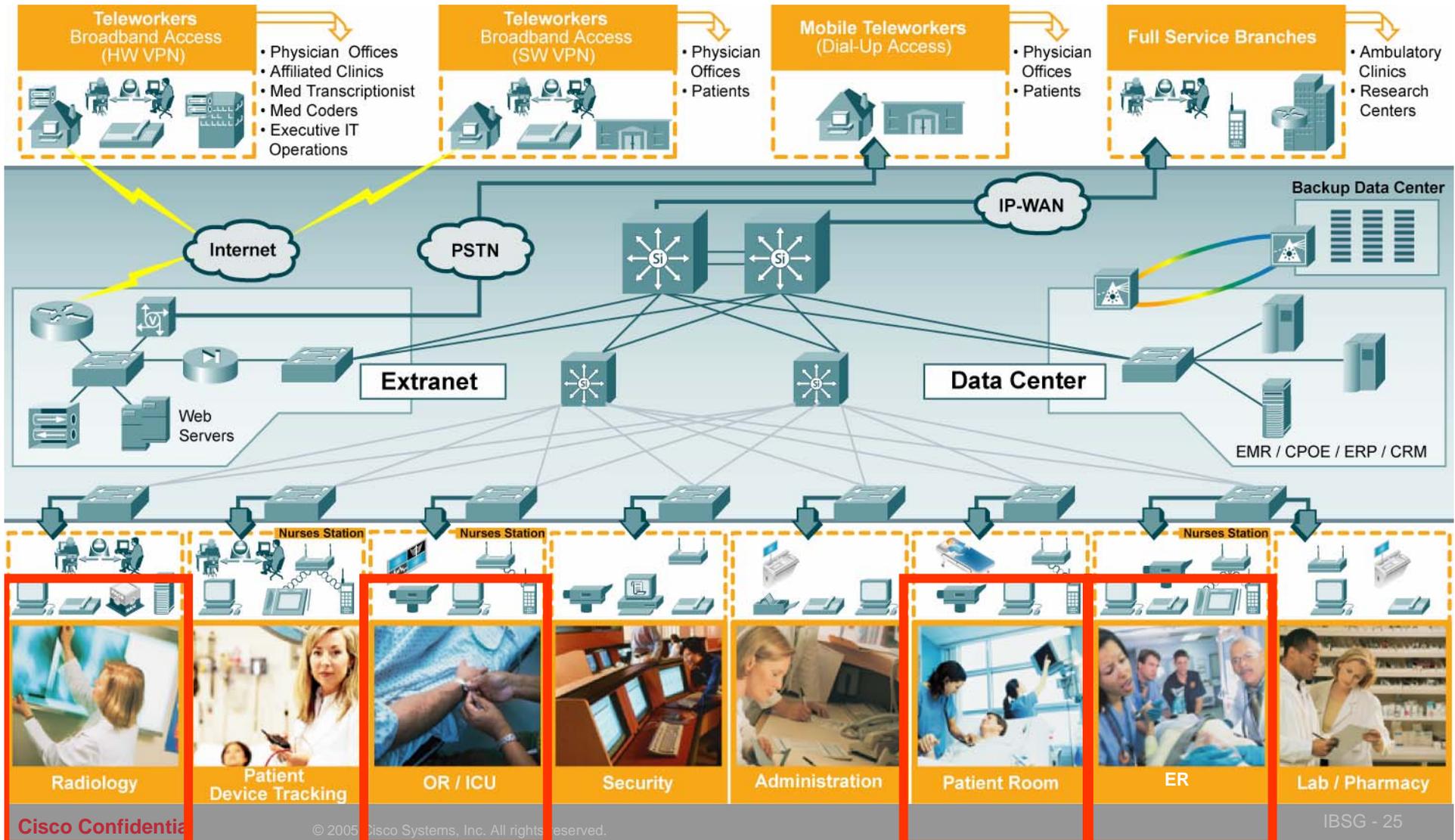
	2005	2007	2009
None	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Throughout the hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Throughout all associated hospitals within the health care system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Throughout all hospitals and integrated with the physician office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Throughout all hospitals, integrated with physician offices, and other external hospitals/health organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**2. Physician orders are placed:**

	2005	2007	2009
On paper and given to a nurse or clerk to be entered into the system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online by the physician placing the order at dedicated terminals located in a central area on the floor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



# The Medical-Grade Network Blueprint



# Sample of Medical-Grade Network Development Partners

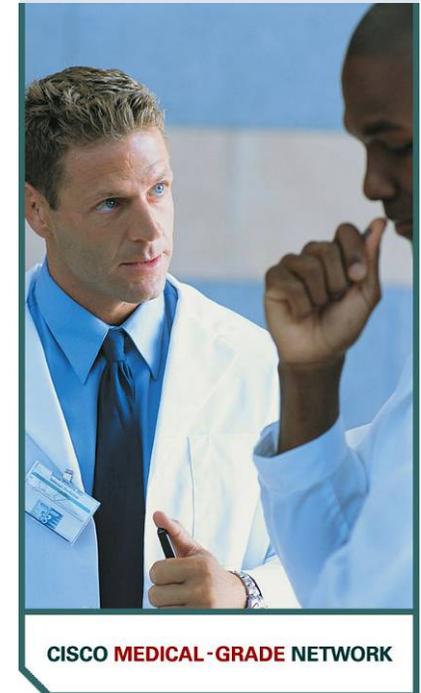
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- Believe the Medical-Grade Network is the Right Direction for the Industry
- Participated in the Assessment Tool Development and Pilot
- Found it beneficial in their planning and funding process
- References for the value of the Medical-Grade Network

# Summary of MGN Findings to Date

- RFID explosion within current survey set: Majority of respondents have said medical devices will be largely tracked via RFID within two years
- All are upgrading technical capabilities of surgical suites (including robotic surgery, video conferencing)
- Clinical paging technologies and processes are generally underutilized
- Particular IP communication barriers at academic medical centers
- Strong demand to provide VPN branch / tele-worker services for PACS / Lab / Pharmacy / Home Health; Internet security concerns hampering remote access
- No major push for dramatic online education adoption (<50% today)
- Interest in campus Internet “Hot Spots,” patient services



CISCO MEDICAL-GRADE NETWORK

# University of Heidelberg Hospital



# University of Heidelberg Hospital

## The Hospital Environment

- Ranked 10 of 50 largest teaching hospitals worldwide
- Only such hospital in Germany

## The Problem

- Required state-of-the-art monitoring equipment and wireless networking in a new facility
- Mandated converged network support



**Drägermedical**  
A Dräger and Siemens Company



# University of Heidelberg Hospital

## The Solution

- **Draeger Infinity Omega Solution**
  - Brings all patient data to the bedside as well as the acute point of care
- **Cisco Infrastructure**
  - Cisco 1200 series 802.11g access points over a VLAN-based shared infrastructure that allows wired and wireless monitoring over a single network



**Drägermedical**  
A Dräger and Siemens Company



# University of Heidelberg Hospital

## The Benefits

- **Standardization – a single monitor for every department and patient acuity level**
- **Mobility – allows patients to move around freely, which positively affects the therapy and recovery of patients.**
- **Shared infrastructure – allows the hospital to run both wired and wireless patient monitoring over the existing hospital network**

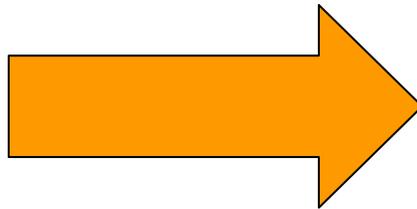


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# The IT-Empowered Clinician

## Clinical Connection Suite



- Better Patient Care Delivery,
- More Productive Workforce
- Lower Costs
- Better Management



# Summary



# Cisco's Strengths in Healthcare

- **Connected Health Vision**
- **Executive Commitment to Healthcare**
- **Focused Healthcare Team**
- **Promotion of the Medical Grade Network**
- **Strong Partner Relationship and Collaboration**



CISCO SYSTEMS

PROTECT AND SECURE

# CISCO SYSTEMS

