



# Healthcare...Connecting in the Age of Social Media

Ash Shehata, Senior Executive Director  
Healthcare Business Transformation, The Americas

# Overview

Industry Trends

Insights and Themes from the Field

Models for Success

Case Studies



# Cisco's Commitment to Healthcare Continues to be Strong



DAVID MCNEW / GETTY

“Our goal is for Cisco to lead the transformation in the healthcare industry's complex transition.”

John Chambers, Cisco CEO,

October, 2011

# Healthcare Virtual Team

...includes highly-credentialed staff members who provide thought leadership and industry guidance.



# Healthcare as Industry in Transition

## Rising Care Costs

- Staffing shortages
- Healthcare payment reform
- Ecosystem interoperability
- Medicare reimbursement



## Regulatory Compliance

- Mandates for quality & safety
- Secure access & patient privacy
- Healthcare reform
- Capture HIT stimulus



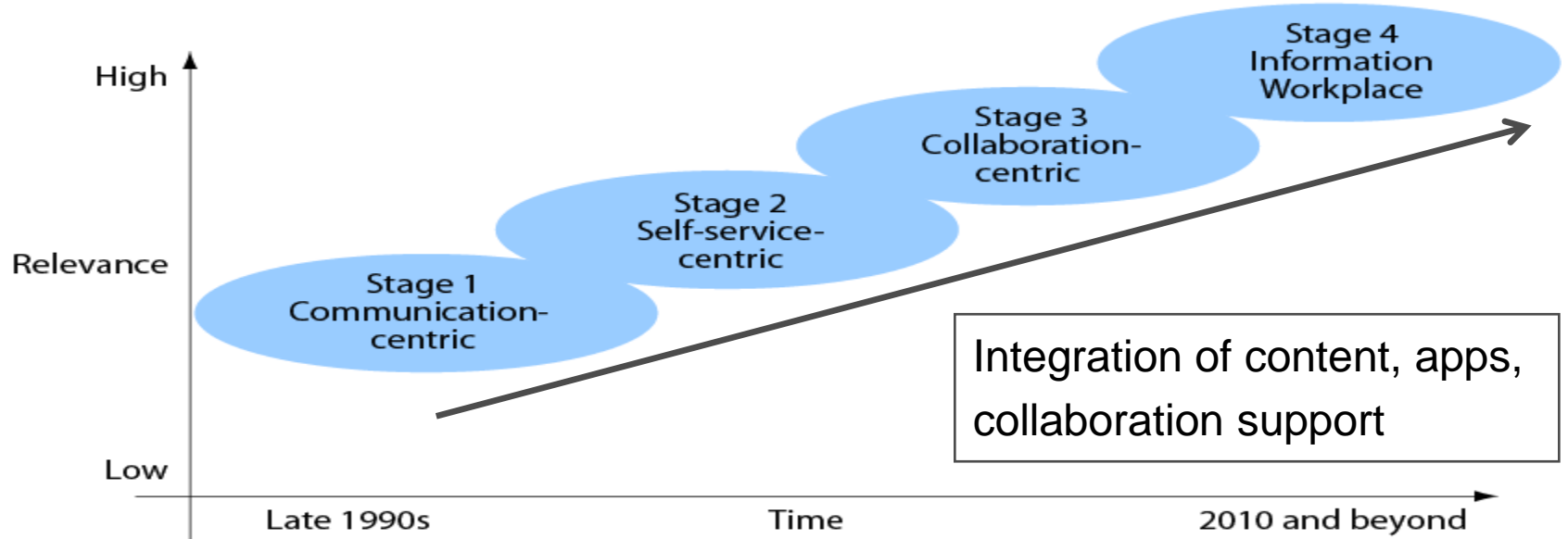
## Quality and Care Delivery

- Patient expect higher quality
- Aging population & care delivery at home
- Growing patient consumerism



# Intranet Evolution and Maturity Phases

## How intranets have evolved

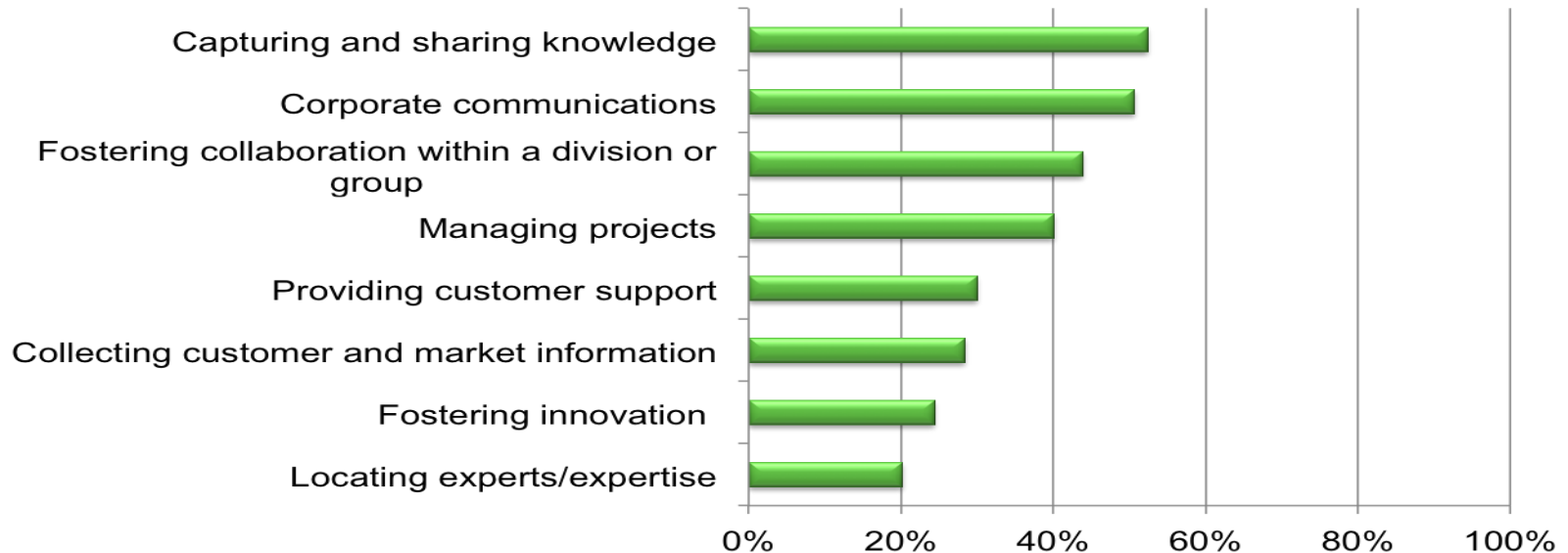


Adapted from Razorfish

Source: December 16, 2009, "State Of Play: The Information Workplace" Forrester report

# Knowledge Capture and Collaboration are the Big Drivers of Social Technology Investments

**“For which of the following activities is your firm currently using Web 2.0 tools and technologies?”**



Base: 603 North American and European enterprise and SMB IT decision-makers who are deploying at least one Web 2.0 tool

Source: Enterprise And SMB Software Survey, North America And Europe, Q4 2009

# Complications that Impact Your Organization

## Your Employees Have Changed

Influenced by the consumer world, your employees have changed the way they work



## Your Customers Have Changed

Customers expect timely, personalized responses, interactions with communities, and the ability to self-serve



## Your Business Is Distributed

Global economics have caused your workforce to become more distributed and outsourced



Source: Cisco IBSG, 2009



Yesterday's solutions aren't enough. Customers want to be taken care of...  
any time, in any location, and on any device





**Our users  
...are diverse**

# Mobility Changes Everything!

- By 2015 there will be **7.4 billion** 802.11n devices in the market.\*
- **1.2 billion** smartphones will enter the market over the next five years, about **40%** of all handset shipments.\*
- Smartphone adoption growing **50%+ annually**.\*\*
- Currently **16%** of mobile data is diverted to Wi-Fi, by 2015 this will number will increase to **48%**.\*
- By 2012, more than **50%** of mobile devices will ship without wired ports.\*\*\*



Source: \*ABI Research, \*\*IDC, \*\*\* Morgan Stanley Market Trends 2010

TIME

# Borderless World *User* Expectations



## Tailored

Unique Experience & Performance Profiles, and Enforcement for each User, Device, Location & Application



## Secure

Connected: Wired, Wireless  
Protected from Internet & Apps



## Apps Delivered- Always

Rich Media (Voice, Video) Experience, HA, Seamless Mobility  
VDI- Any scale, Any time  
Location Enhanced



## Device Confidence & Choice

1000's of devices certified to interop

# Cisco Connected Health

## Shaping a World of Health Without Boundaries

### END USERS



Physicians



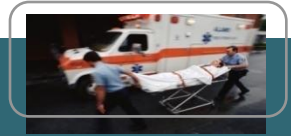
Nurses



Technicians



Patients / Family



First Responders

### ENDPOINTS



Cisco IP Phone



Wireless IP Phones



IP Video Phone



Cell Phones / PDAs



CIUS

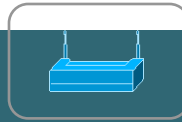
### INFRASTRUCTURE/ CALL CONTROL



Routing



Switching



Wireless



Call  
Manager



QoS



Security



Management

### APPLICATIONS



Imaging  
Systems



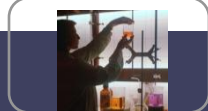
EMR/EHR



Bio-Medical



Nurse Call



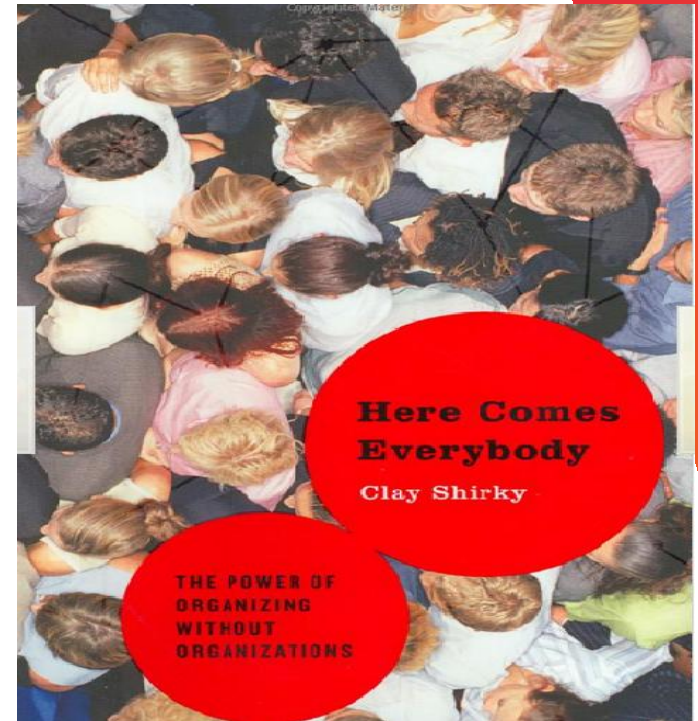
Lab Systems



Pharmacy Rx

# Social Networks in Healthcare

The screenshot shows the PatientsLikeMe website. At the top, there is a navigation bar with 'patientslikeme' logo, a search bar, and a list of categories: Patients, Treatments, Symptoms, Research. Below the navigation bar, there is a main heading 'Find Patients Just Like You' with a sub-heading 'Do you have a life-changing condition? Learn from the real-world experiences of other patients like you.' and a 'Join Now! (It's free!)' button. To the right of the heading is a grid of small profile pictures of users. Below the heading, there is a section titled 'CURRENT DISEASE COMMUNITIES' with a list of conditions: ALS/AMD, Epilepsy, Fibromyalgia, Chronic Fatigue Syndrome/ME, HIV/AIDS, Mood Conditions, Anxiety, Bipolar, Depression, OCD (Obsessive-Compulsive Disorder), PTSD (Post-Traumatic Stress Disorder), MS (Multiple Sclerosis), Parkinson's Disease, Organ Transplants, Rare Diseases, CBD (Corticobasal Degeneration), and NMD (Neuronal/Mitochondrial Optics). To the right of the list, there is a section titled 'See how PatientsLikeMe can help you take control of your health:' with three sub-sections: 'Share your health profile', 'Find patients like you', and 'Learn from others'. Each sub-section has a brief description and a 'Learn more' link. At the bottom, there are two sections: 'Want to know more about PatientsLikeMe?' and 'Work in the healthcare industry for a pharmaceutical, insurance or other company?'. The 'Want to know more about PatientsLikeMe?' section has a sub-heading 'Learn all about us, how to do anything, why do we embrace openness, and what about your privacy? How do we make money and who are our partners? Take a moment to read this and find out.' and a 'Learn more' link. The 'Work in the healthcare industry for a pharmaceutical, insurance or other company?' section has a sub-heading 'Looking for more innovative ways to learn from real-world patient experiences? You can find out more about our products and services on our partners site.' and a 'Learn more' link.



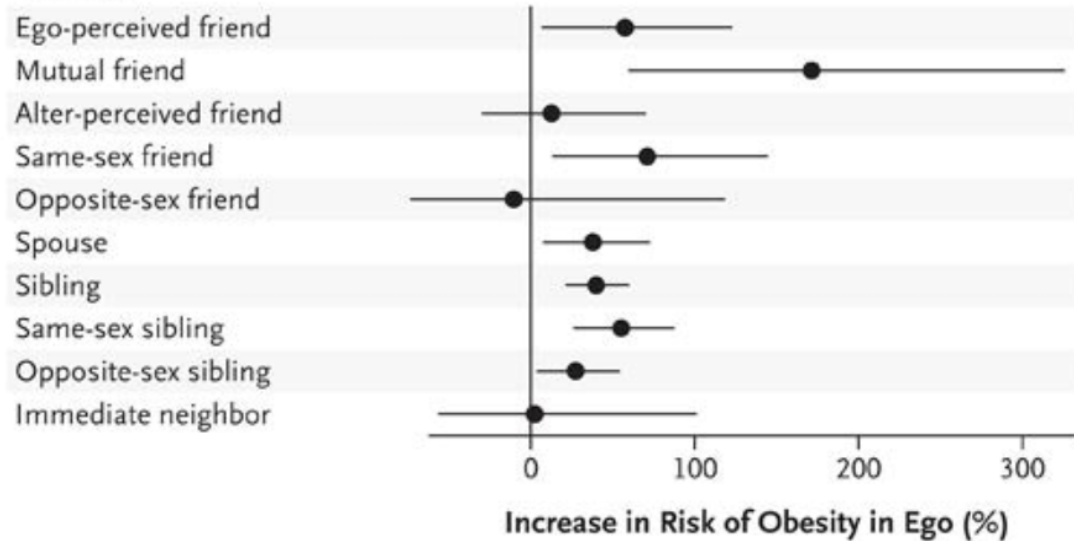
- Business-class social networks
- Organizing without organization
- Crowdsourcing

Source: Cisco IBSG 2011, [patientslikeme.org](http://patientslikeme.org), Clay Shirky, *Here Comes Everybody*, Penguin Press 2008

# You Are What Your Friends Eat

Probability of becoming obese based on social network relationships

## Alter Type



Social distance from obese friend matters greatly – geographic distance does not matter

Source: Christakis NA, Fowler JH. New England J Med. July 2007

# Five Inevitable Realities

1

Healthcare is becoming borderless

2

Patient experience will matter

3

Payment will be linked to value

4

Social care will blend with healthcare

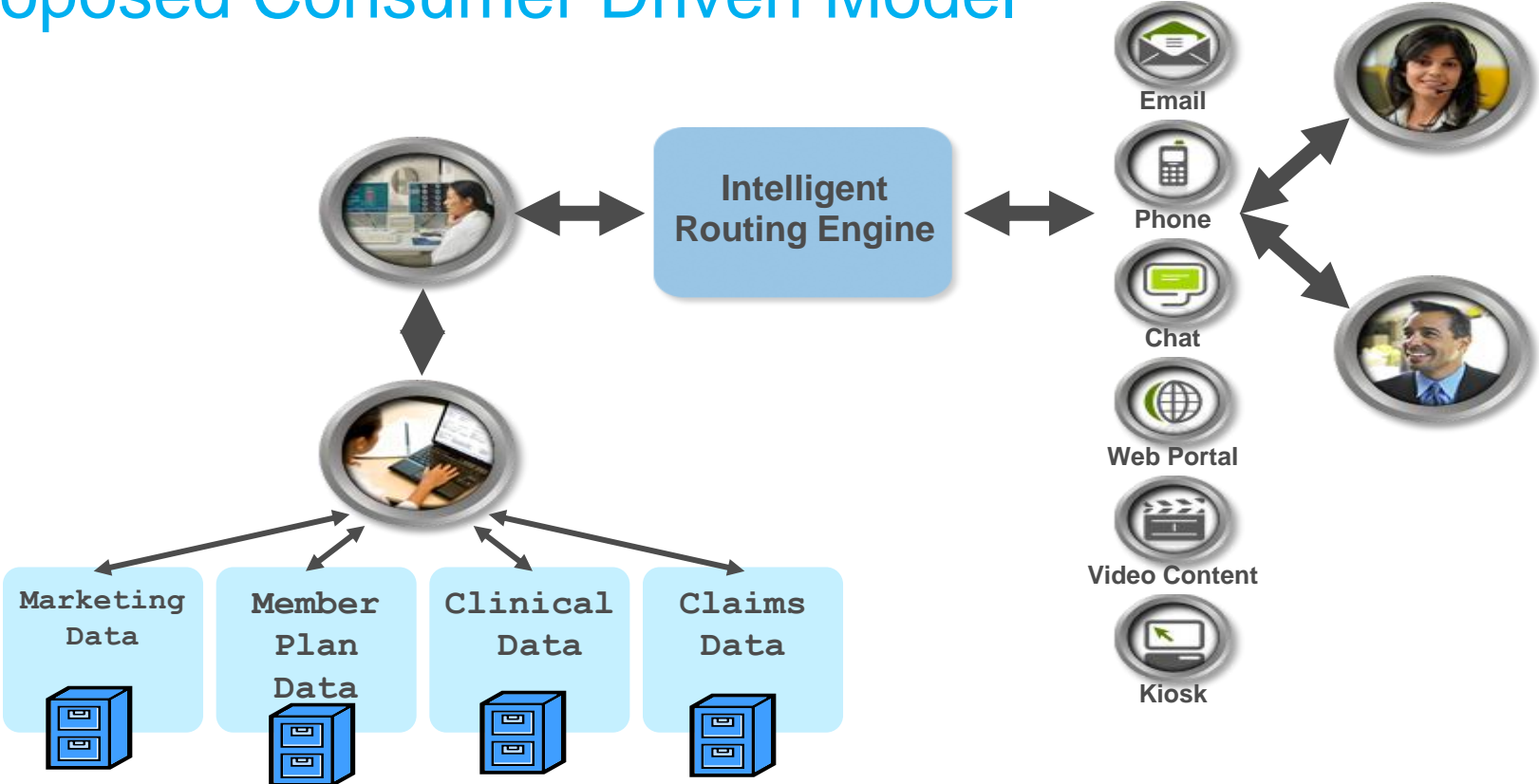
5

Enterprises will need to focus on sustainability

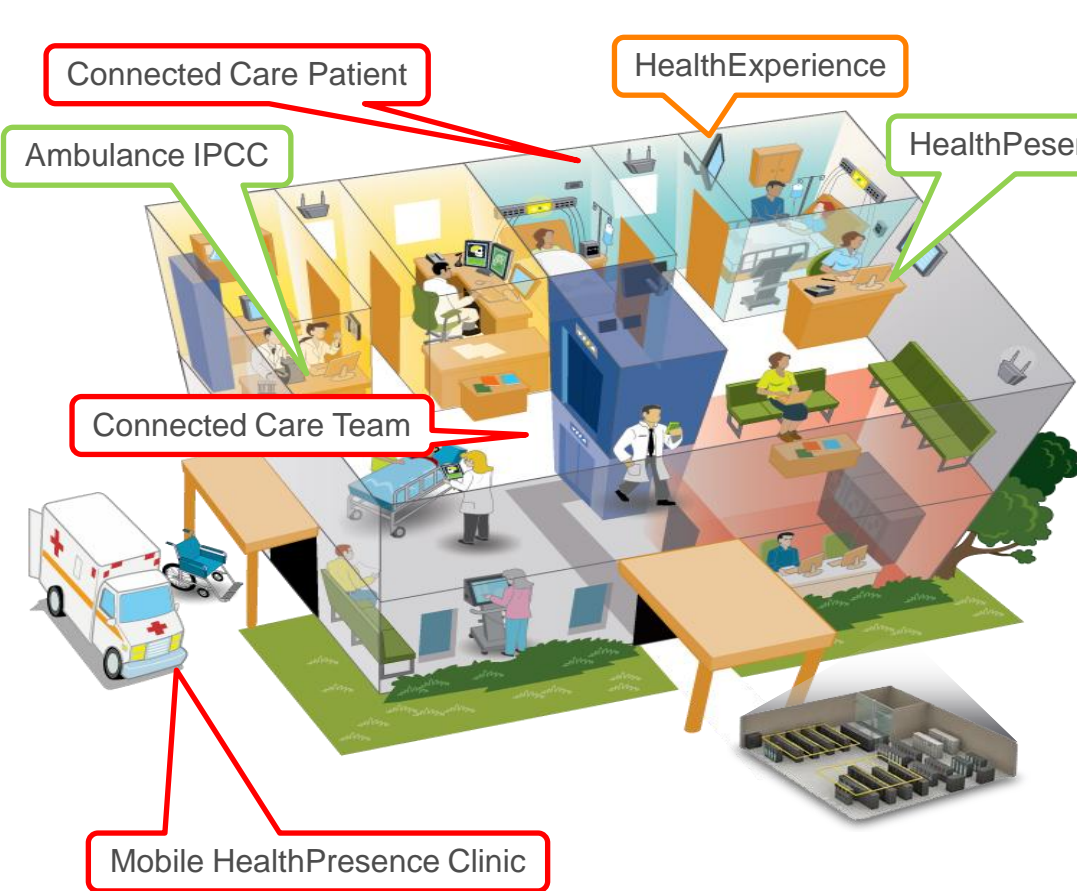




# Multi channel communications is the future of the Proposed Consumer Driven Model



# Cisco's Healthcare Information Exchange



HealthPresence Patient side

HealthPresence Doctor side

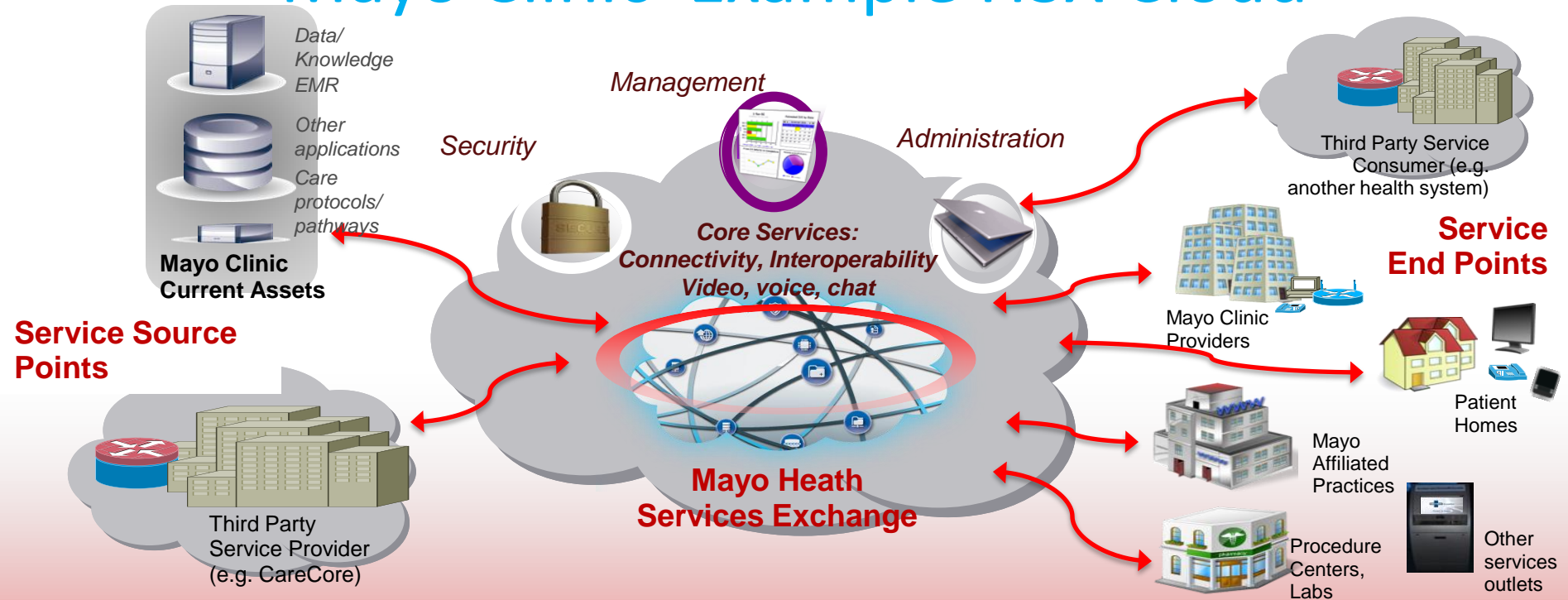
Cisco MDES

EMR/HL7 Networks

Cisco Healthcare Services Exchange

HealthPresence xR

# Mayo Clinic Example HSX Cloud



- Rapid deployment of secure connectivity and service network
- Dynamic provisioning of “anything as a services”, utilizing Mayo’s existing assets, new applications, or other third party applications
- Multiple devices support with single sign-on, using Mayo or local user interface



User ID

Password

Log In

New User

Join Mayo Clinic

Affiliated Practice Network

Access services, use applications, and build your professional network

## Connect with others in the Mayo Clinic Community

### For Medical Professionals

Refer a patient. Access medical professional services. Connect to research and education.

### Research

Discover how research advances patient care. See clinical trials and publications. Support research.

### Education

Explore medical and scientific education and training opportunities and resources.



User ID  
Password

Log In

Join Mayo Clinic

Affiliated Practice Network

New User

Register

Access services, use applications, and build your

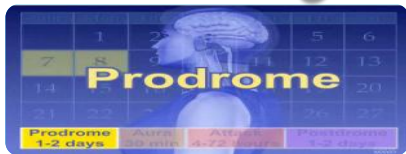
Connect with others in the Mayo Clinic Community

# The Mayo Portfolio



## Knowledge & Analytics

- ▶ Chronic Disease
- ▶ Cancer
- ▶ Genetic Disorders
- ▶ ...



## Care Pathways (Mayo Model of Care)

- ▶ Obstructive Sleep Apnea
- ▶ Congestive Heart Failure
- ▶ Secondary Stroke Prevention
- ▶ ...



## Business & Administrative Services

- ▶ Claims
- ▶ Revenue Cycle
- ▶ Referrals
- ▶ ...



## Patient Engagement Tools & Apps

- ▶ Chronic Conditions
- ▶ Living with Cancer
- ▶ Healthy Living
- ▶ ...

### MY account



Dr. Kenneth Wong

[My Profile](#)

### My Network

My Groups **3**

My Connections **36**

Messages **2**

Manage groups

View all groups

Create a group



Browser address: https://ccpstg.optumhealth.com/sas/CollaborativeCareClient.html#sponsor=TestOrg1

Tuesday, April 19, 2011 02:33 PM

TestOrg1 Johnson, Don (421demo) Log Out My Settings

Technical Support 888-844-1111 Help

Welcome UnScheduled Examination

Patient Queue **bauer, jack; Admitted 11:10 AM, AttendentSite**

**Appointment Details**

**Patient Info**  
 Name: bauer, jack  
 Age: 18 month(s)  
 DOB: 10/04/2009  
 Gender: M

**Symptom Onset**  
 Date: 03/31/2011  
 Time: 11:00 PM

**ER Admittance**  
 Location: AttendentSite  
 Visit Type: Stroke Visit  
 Date: 04/06/2011  
 Time: 11:10 AM

Vitals

End Exam

**Remote Camera Control**

Attendant: patel, Harshil  
 Provider: Johnson, Don  
 Reconnect Video

Mouse: Use the Arrow buttons to position the camera.

Zoom: 0% 100%

Keyboard:  
 Zoom: '+' and '-'  
 Move: Arrow Keys  
 Keyboard Control Off

Step 2: Patient Examination

Copyright 2011 Trusted sites

# Cisco Quad

## Release 2.0 - A Comprehensive Collaboration Platform

Personal  
Dashboard

Social Tagging

Click to:  
Call, IM, Meet

People, Communities,  
Information, Search

Content  
Management

Policy and  
Security

The screenshot displays the Cisco Quad user interface for a user named Darin Simmons. The interface includes a top navigation bar with options like 'New Post', 'My View', 'My Profile', 'People', 'Communities', and 'My Library'. Below this, there are tabs for 'My View', 'My Outlook', 'My Voice Mail', 'iGoogle', 'Facebook', 'CEC', and 'Management Central'. The main content area is divided into several sections: 'Watch List' with a list of posts (e.g., 'Alpha / EFT meeting Minutes', 'TME Responsibilities', 'Pricing models', 'ECP Policy'), 'Contacts' (a pop-up window listing contacts like Leon Baranovsky, Farshad Tari, Nithya Vijayakumar, Lauren Hasenhutti, Vishnukant Varma, and Suresh Subramanian), 'My Calendar' (showing events for Wednesday, January 13, such as 'Weekly ECP Architecture Review'), and a profile section for 'Joseph Khouri'. A 'Notifications' pop-up window is also visible, showing a message about 'ECP Alpha Oracle Migration' and a friend request from 'Joseph Test'. The interface is clean and professional, with a blue and white color scheme.

Directory  
Profile

Blogs, Wikis,  
Forums

Community  
Team Space

Video

UC-Enabled  
Browser

Micro-Blogging

# Virtual Assistant

## When a Person Is Not Practical or Good Enough

- Self service
- Connected to internal information
- Connected to external information
- Virtual person user interface





# Virtual Characters Are Becoming Life-like

## Conversational Interfaces



- Automatic emotions, gestures and responses
- Speech recognition
- Text to speech
- Knowledge of previous encounters (memory)

Source: Cisco IBSG, 2006-2008

© 2010 Cisco and/or its affiliates. All rights reserved.

Cisco Confidential

26

# Cisco Mobile Concierge: Prescription Ready Notification with Personalized Promotions

## In-Store Concierge



## Mobile Concierge Applets

Find item



Customer Service  
(VoWLAN)



Come Help Me!  
(location-based  
– Phase 3)



Shopping  
List



Price/Inventory  
Check



Pharmacy



Recipes  
(video clips)



My Promos  
(coupons)



Shopping  
Buddies (IM)



POS and  
Home delivery





# Tap & Go Customer Service - Banking Example

No dial-in number required

The application already knows everything about you...

- Who you are
- Where you are
- Why you are calling
- Who can best help you



Choose your service

Guarantee to call back in a defined time frame

Display expected wait Time for a chat or call to connect

One tap to ask a rep to chat or call you back

# Measure Your Collaborative Effectiveness / Readiness

## Focus on Four Critical Areas

Do you have the right **leadership** to drive collaboration for your organization?

**Leadership**

**Governance**

What is your **governance** model? Does it encourage / sustain optimal collaboration?

Do your employees have the **competency** to collaborate?

**Competency**

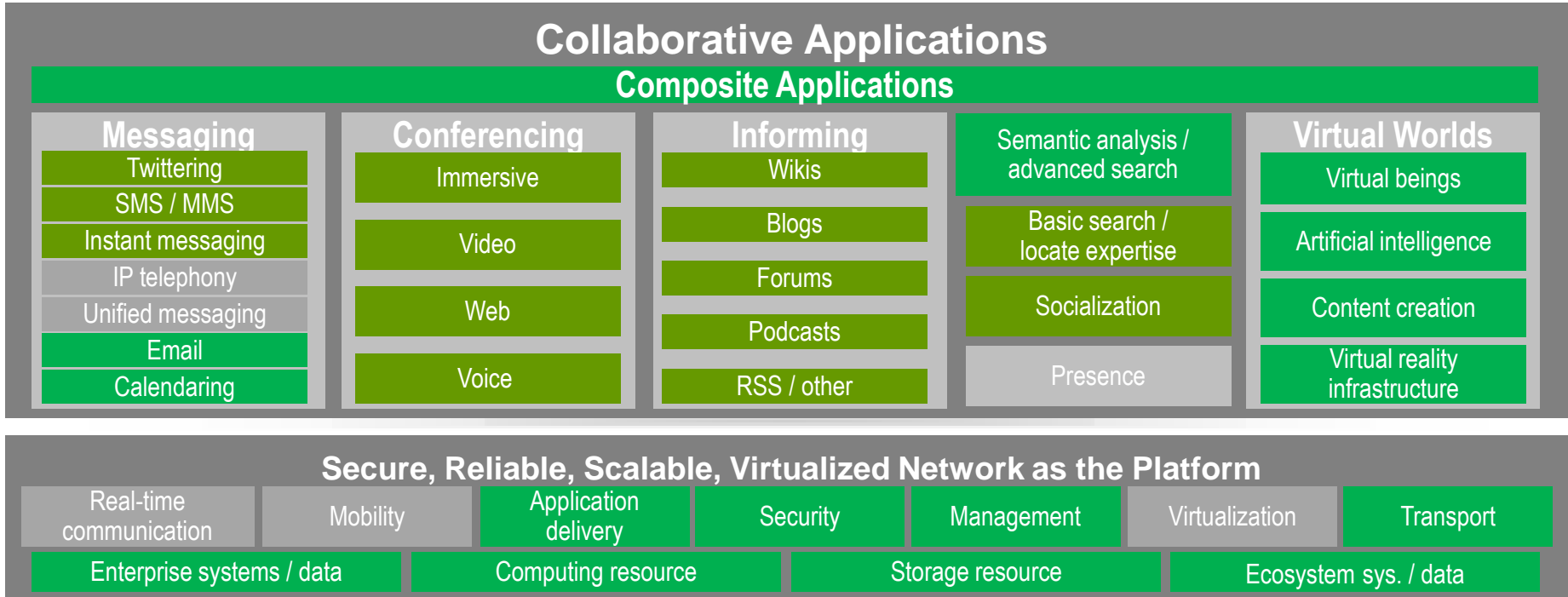
**Technology**

Which collaborative **technologies** do you have? How do employees use them?

**Collaboration**

Source: Cisco IBSG, 2009

# Develop a Collaboration Core Architecture in Phases



**Typical Existing**



**Strategic Foundation**



**Low-hanging Fruit**



**Advanced Capabilities**

Source: Cisco IBSG, 2009

# Knowledge Sharing: Virtual Expertise Enables Scaling of Scarce Resources

## New Technologies Enable “Face-to-face” Experiences

Convenient and timely access to experts

Alternate means to deliver services to new audiences

Extends expertise through rich media and knowledge-sharing tools

Enhanced by access to data

Source: Cisco IBSG, 2009

## Cisco HealthPresence™



Replicates the in-person experience for both patients and providers

# Nottingham University Hospitals

Communication and Collaboration at the heart of hospital transformation

Nottingham University Hospitals   
NHS Trust

## Productivity

## ROI



### CHALLENGE:

- Improve patient care and increase capacity to meet 5% per year growth in demand in the Emergency Dept (ED)
- Staff spending 19% of time looking for equipment and personnel
- Achieve UK Government healthcare targets, treat patient within 4 hours of presenting to ED
- Outdated and standalone equipment resulting in inefficient workflows

### SOLUTION:

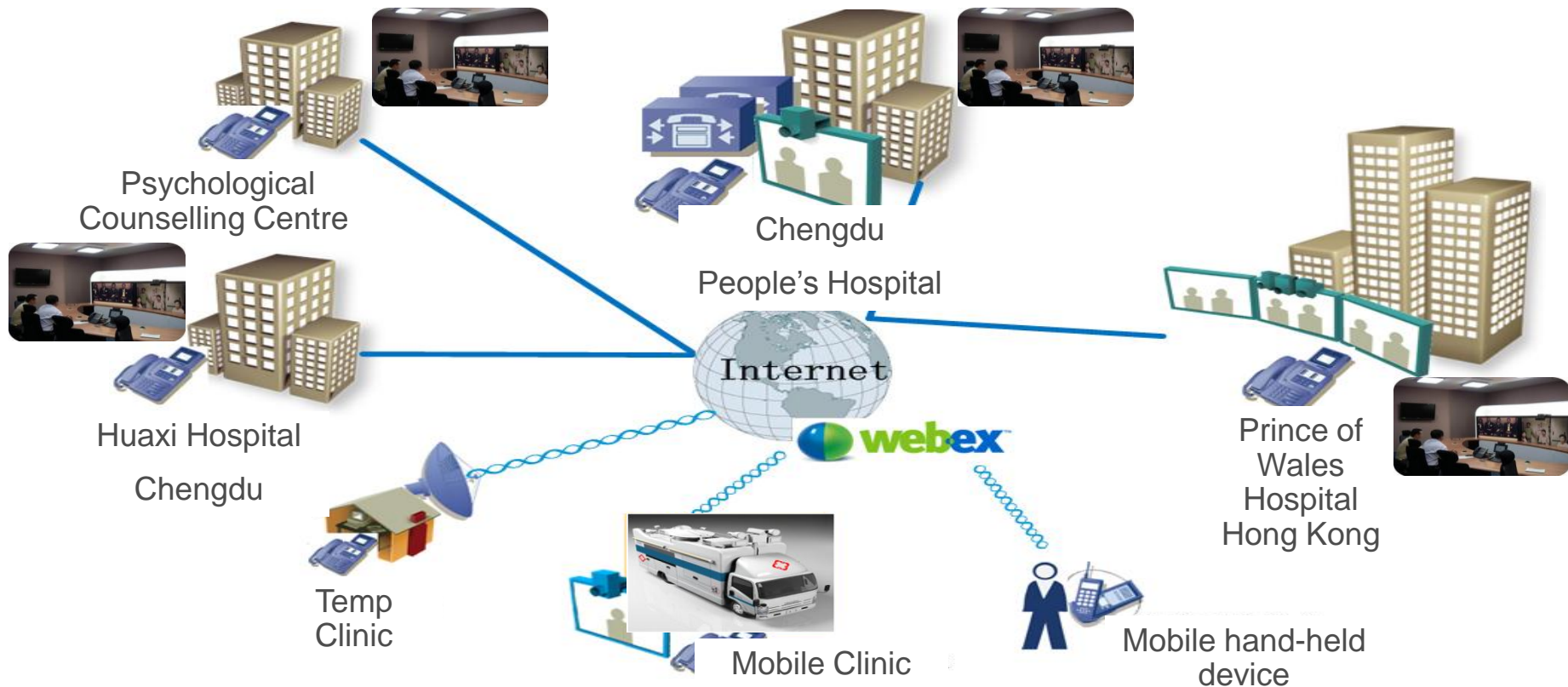
- Cisco UC fixed and wireless phones
  - Push to talk
  - Phone directory
  - Group messaging with full ED coverage
- Cisco Unified Communications and Presence show real-time staff availability
- Messaging & notification solution to notify staff (e.g. test results, patient ready)
- RFID based equipment and “staff locator”

### Business Value:

- Patient journey time reduced: Adults 23%; Children 33%
- Patient waiting time reduced: Adults: 28%; Children 40%
- Patient satisfaction increased: 11%
- Physician productivity in the ED increased by 12%
- ROI in 14 months
- Assistant response time increased to 100% in 8 seconds

# HK-Sichuan Rehabilitation Centre:

HK-SC HealthPresence Centre – Opened April 2009





# Care at a Distance Case Study

## Ascension Health System



### CHALLENGE

- To provide high quality, specialty healthcare services to remote patients
- To reduce travel time for specialists providing outreach services
- To reach efficiently extend the catchment area of St. Thomas Health

### SOLUTION

- Converged communication and collaboration framework
- Wide array of collaboration endpoints
- Advanced telemedicine services

### RESULTS

- Increased patient access to quality care closer to home, reducing travel time, costs and stress
- Provided a patient experience similar to an office visit but with better specialist availability, increasing patient satisfaction and convenience
- Delivered enhanced acoustics and magnified exam images directly to the specialist
- Improved access to specialists and providers throughout the area while reducing “windshield time” for the specialist and patient alike

# Patient Centered Medical Home Thrives On Corporate Campus

**LifeConnections Health Center & Pharmacy**  
An onsite medical facility for Cisco employees and their families



## CHALLENGE

- Reduce the health benefits cost for a large, young, corporate employee population
- Engage employees and dependents in the management of their health
- Use technology to enhance the patient experience and reduce non-clinical time in care process

## SOLUTION

- On-site clinic and pharmacy built on Patient Centered Medical Home model with broad continuum of integrative health services
- Technology solutions - from automated check-in and check-out to telehealth – to increase productivity and engagement in health as tenet of corporate culture

## RESULTS

- Reduction in ER visits and outpatient diagnostic services: 10 % fewer than community
- Generic Dispense Rate: 73% vs. 62% community
- Medical Cost Avoidance: \$ 4.7 M
- Drug Savings: \$ 1.3 M per year
- Productivity Savings: \$ 7.4 M per year
- Patient Satisfaction: 95% would use again in future; Patient wait time less than 3 minutes

# Virtualization / Cloud Optum Health (United Health Group)



## CHALLENGE

- Information about a patient is highly fragmented and exists across many different healthcare organizations such as hospitals, clinics and claims systems
- Holistic management of this information is currently lacking in the industry
- Coordination of care across the continuum is impacted due to the inability to share information

## SOLUTION

- Consolidated patient information moved into the cloud that would let the physicians access all of the information through a single portal
- Leverage this same cloud platform to deliver hundreds of other technology based healthcare products
  - Revenue Cycle Services
  - Tools for Wellness Programs
  - Pharmacy Benefits Management

## RESULTS

- Physician Practices can get out of the business of acquiring, implementing and maintaining electronic healthcare record applications
- Simplify the use of information by making the technology less visible
- Enables care coordination across corporate boundaries and different levels of care
- Leveraging a collective repository of clinical information assets accelerates research for new treatments



Ash Shehata  
[asshehat@cisco.com](mailto:asshehat@cisco.com)  
513-410-1442

# Q&A



We value your feedback.

Please be sure to complete the Evaluation Form for this session.



Access today's presentations at [cisco.com/ca/plus](https://cisco.com/ca/plus)



Follow [@CiscoCanada](https://twitter.com/CiscoCanada) and join the [#CiscoPlusCA](https://twitter.com/CiscoCanada) conversation