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# 19th Annual

## 2008 HIMSS Leadership Survey

FEBRUARY 25, 2008  
CIO Results Final Report



# **19<sup>th</sup> Annual HIMSS Leadership Survey**

## **Sponsored by Cisco**

### **Final Report: Healthcare CIO**

The 19th Annual HIMSS Leadership Survey reports the opinions of information technology (IT) professionals from healthcare provider organizations across the U.S. regarding the use of IT in their organizations. The study was designed to collect information about IT priorities, technology adoption, application usage, security and other crucial factors in the use of IT to enhance healthcare.

Data collected from other senior level executives at provider organizations will be released in the summer of 2008.

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## 1. Executive Summary

When asked to identify their organization's top IT priorities at this time, replacing/upgrading/implementing clinical information systems, implementing technology to reduce medical errors and implementing an electronic medical record (EMR) were most frequently identified, according to the 307 healthcare IT professionals who participated in the 19th Annual HIMSS Leadership Survey, sponsored by Cisco. Clinical applications were also identified as a priority of the future, as implementing an EMR, replacing/upgrading/implementing clinical information systems, and delivery of clinical knowledge to users were identified as the most important IT priorities at their organizations over the next two years. Hand-in-hand with an emphasis on implementing clinical systems should be a focus on the security of this data. This is proving to be the case. Not only do respondents use multiple security technologies to protect data at this time, but they also identified identity management and security technologies as two of the top three technologies that they believed would be implemented in their organization over the course of the next two years.

Other key survey results include:

**Business issues:** Improving quality of care, Medicare cutbacks/managed care fee reductions and patient (customer) satisfaction are the key business drivers respondents indicate will have the most impact on healthcare in the next two years.

**Financial support:** Financial support for IT continues to be a barrier for healthcare IT professionals. Twenty-six (26) percent of respondents cited lack of adequate financial support/lack of budget as the most significant barrier to successfully implementing IT at their organization.

**IT budgets:** More than three quarters of respondents indicated that their 2008 IT spending will increase. Respondents were most likely to attribute a potential increase in IT spending to an overall growth in number of systems and technologies. Among those projecting a budget decrease, deteriorating financial conditions due to Medicare/Medicaid cutbacks is the most likely reason for a cut in IT funding.

**IT staffing:** Approximately two-thirds of respondents predicted that the number of FTEs in the IT departments at their organizations will increase in the next 12 months. These changes will be modest; only eight percent predicted a staffing increase of more than 20 percent. The most pressing staffing needs are in the areas of clinical application support, network/architecture support and systems integration.

**Security concerns:** Healthcare IT professionals identified an internal breach of security as their primary concern regarding the security of data at their organization. One-quarter of respondents indicated that their organization has experienced a security breach in the past year.

**Technology adoption:** High-speed networks, Intranets and wireless technologies are the most widely adopted technologies at this time. Identity management, RFID technology and security technologies are the top technologies that survey respondents intend to implement in the next two years.

**IT governance:** There appears to be a strong level of integration between IT strategies and overall organizational strategies. Two-thirds of senior IT executives reported that they sit on their organization's executive team.

**Regional Health Information Organizations (RHIOs):** Approximately one-quarter of respondents reported that their organization participates in a RHIO or Health Information Exchange (HIE), while 52 percent said their organization has not yet begun to participate in a RHIO or HIE. Four percent participated in a RHIO that has ceased to operate.

**Vendor satisfaction:** Nearly three-quarters of respondents were satisfied with the overall IT products/services they receive from suppliers, application vendors and consulting firms. However, respondents also name vendor inability to effectively deliver products/services to the expected level as one of the top three barriers to effective IT implementation.

## 2. Methodology

A total of 307 useable responses were received for this year's web-based survey. Data was collected between November 20, 2007 and January 20, 2008. The survey respondents represent 261 unique healthcare organizations and more than 700 hospitals throughout the United States. The average bed size of the hospitals in this survey is 431; the median bed size is 302.

## 3. Profile of Survey Respondents

Two-thirds of respondents indicated that they are a senior IT executive at their organization. Specifically, 52 percent of respondents were corporate (system level) CIOs; another 24 percent were facility-level CIOs. Another 13 percent of respondents were a department head and nine percent are a manager-level professional. The remaining two percent of respondents are either senior staff or "other".

Nearly 90 percent of respondents (88 percent) reported that they work for either a stand alone hospital (38 percent); a healthcare system (37 percent), or a hospital that is part of a multi-hospital system (13 percent). Other types of facilities represented in this report include outpatient locations, mental health/behavioral health and other types of healthcare organizations. This is comparable to the sample represented in the survey in the 2007 survey.

Among those respondents who worked for a hospital-based organization were asked to identify the type of hospital they work for. Just over half of respondents (58 percent) indicated that their hospital environment can be characterized as a community hospital. Another 19 percent indicated that they worked for an academic medical center. The remaining respondents characterized their hospital environment as "other" (eight percent), general medical/surgical (eight percent), or critical access hospital (seven percent). The "other" category includes respondents who characterized their environment as pediatric, rehabilitation, psychiatric or long-term care.

Annual gross operating revenues for the provider organizations represented in this year's survey were:

- \$50 million or less—15 percent;
- \$51 million to \$200 million—21 percent;
- \$201 million to \$350 million—11 percent;
- \$351 million to \$500 million—11 percent;
- \$501 million to \$1 billion—12 percent;
- More than \$1 billion—18 percent; and
- Don't Know/Not Applicable—12 percent.

The majority of individuals responding to this year's survey represented the East North Central<sup>1</sup> region (20 percent). This is followed by the South Atlantic<sup>2</sup> and Middle Atlantic<sup>3</sup> regions, at 17 and 14 percent respectively. The fewest respondents (six percent) were located in the Mountain<sup>4</sup> region.

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<sup>1</sup> Illinois, Indiana, Michigan, Ohio, Wisconsin

<sup>2</sup> Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia and Washington, D.C.

<sup>3</sup> Pennsylvania, New Jersey, New York

<sup>4</sup> Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming

## Figures:

- Figure 1. Participant Profile—Titles
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- Figure 4. Participant Profile—Facility Revenue
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## 4. IT Priorities

**Quality of care, Medicare/Medicaid fee reductions and patient satisfaction will continue to drive healthcare over the course of the next two years. Because of the impact of these issues, respondents will continue to focus on implementing clinical technology at their organization to improve patient care. Implementing clinical information systems and EMRs were both identified as a top priority for today and in the next two years.**

Respondents were asked to identify their organization's top five IT priorities today. Identified by the most respondents (40 percent) was replacing/upgrading/implementing clinical information systems. This is followed by implementing technology to reduce medical errors/promoting patient safety (39 percent) and implementing an electronic medical record (EMR) or its components (38 percent).

While these items were also the most frequently identified items in the 2007 survey, they appeared in a different order, with implementing technology to reduce medical errors/promote patient safety being most frequently identified.

Rounding out the top five IT priorities that were most frequently selected in this year's survey are connecting hospital IT with remote environments such as a physician's office or private home (30 percent) and business continuity and disaster recovery (27 percent).

Least likely to be selected as a current top IT priority were the following areas, each of which were selected by less than five percent of respondents.

- Upgrade Systems to Participate in a RHIO (four percent);
- Outsource IT Functions (three percent);
- Creating Integrated Competency Centers (two percent).

Survey respondents were also asked to identify what their facility's top five IT priorities would be over the next two years. Respondents were most likely to select implementing an EMR or components of an EMR (26 percent). This item was also most frequently selected in last year's survey (32 percent). Rounding out the top three are replacing/upgrading/implementing clinical information systems and delivery of clinical knowledge to users, each of which were identified by 23 percent of respondents.

Also selected by at least one in five respondents over the next two years was connecting IT at the hospital with remote environments and implementing technology to reduce medical errors/promote patient safety. Each of these items was identified by 22 percent of respondents. Implementing/upgrading data warehousing/data mining capabilities was identified by 20 percent of respondents.

Several areas show a large difference over the percent of individuals selecting these issues as a priority today and a priority over the next two years. First is implementing

unified communications technologies—nine percent of respondents identified this as an IT priority at their organization today; 19 percent of respondents identified it as an IT priority during the next two years.

Showing a similar increase in priority are upgrading systems to participate in a RHIO (four percent today; 13 percent in two years) and implementing/upgrading data warehousing/data mining capabilities (11 percent today; 20 percent in two years).

Respondents were asked to select five business issues that will have the most impact on healthcare in the next two years. As in 2007, improving quality of care was most frequently selected (56 percent compared to 69 percent in 2008). Medicare cutbacks/managed care fee reductions was selected by 43 respondents, while patient (customer) satisfaction was selected by 36 percent of respondents. In reverse order, these two items also rounded out the top three items in the 2007 survey (selected by 55 and 52 percent of respondents respectively).

Two items that were added to the survey this year received enough responses to be identified as one of the top ten most frequently selected business issues expected to impact healthcare in the next two years. These were creating new revenue sources for the hospital, including new programs and/or services (28 percent) and demand for health services information by patients and/or customers, such as cost and/or quality information (23 percent).

Showing the greatest year-over-year increase from 2007 was government regulation/compliance issues. In 2007, 20 percent of respondents identified this as a business issue that would impact healthcare in the next two years. In 2008, nearly one-third of respondents (30 percent) identified this as an issue that could impact healthcare in the next two years.

Least likely to be selected as a business issue that will impact healthcare in the next two years were the following issues, each of which were selected by less than five percent of respondents.

- Demand for Home Care (four percent);
- Integration of Health and Social Care Sectors (three percent);
- Privacy Breaches (three percent);
- Globalization of Healthcare (two percent);
- External Threats (one percent).

#### Figures:

Figure 6. Current IT Priorities (Within Next 12 Months)

Figure 7. Projected IT Priorities

Figure 8. Top Business Issues Facing Healthcare

## 5. IT Barriers

### **Lack of financial support/lack of budget continues to be reported as the most significant barrier to IT implementation.**

Lack of adequate financial resources/lack of budget continues to be identified most frequently as the most significant barrier to a successful implementation of IT; it was selected by 26 percent of respondents. This is the eighth consecutive year that this issue has been selected as the top barrier.

Rounding out the top three issues identified as a barrier to implementing IT were lack of staffing resources (13 percent) and vendors' inability to effectively deliver products/services to the expected level (12 percent). These two items also rounded out the top three issues in the 2007 survey.

None of the other options included in the survey were identified by more than 10 percent of respondents. Least frequently identified as a barrier were constraints at higher regional/policy/government level and concerns about the ability to secure data. Each of these options was selected by one percent of respondents.

#### Figures:

Figure 9. Most Significant Barriers to Implementing IT

## 6. IT Applications

**Organizations will focus on clinical applications during the next two years. Nine of the top ten applications that respondents indicated as important to their organization in the next two years were clinical applications, led by clinical information systems, CPOE and EMRs.**

Respondents were asked to identify the healthcare application areas they considered most important over the course of the next two years. Most frequently selected was clinical information systems, which was identified by 45 percent of respondents. Rounding out the top three were CPOE (computerized practitioner order entry) and the electronic medical record (EMR). These were identified by 42 and 31 percent of respondents respectively. These are the same areas that were identified as the top applications areas in the 2007 survey.

Also selected by nearly one third of respondents were enterprise clinical information sharing and closed loop medication management that uses either bar coding or RFID technology to facilitate the process<sup>5</sup>. Each of these items was selected by 30 percent of respondents.

A number of applications were identified by five percent or fewer respondents. These applications are:

- Cardiology PACS (five percent);
- Cardiology Systems (five percent);
- Telemedicine Systems (five percent);
- Personal Health Record (four percent);
- Networked Biomedical Solutions (three percent);
- RFID-based Supply Chain Management (three percent);
- Appointment Management (two percent);
- Intelligent Patient Care Devices (two percent);
- Remote Monitoring (two percent);
- Patient Self Service Kiosks (two percent);
- Customer Relationship Management/Call Center (two percent).

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<sup>5</sup> Closed loop medication management that uses either bar coding or RFID technology to facilitate the process replaces last year's option of bar coding technology. In 2007, bar coding technology was selected by 43 percent of respondents.

In 2008, 19 percent of respondents indicated that they have a fully operational EMR in place at all facilities in their organization. Another 25 percent of respondents reported having a fully operational EMR in place in at least one facility within their organization. Another quarter (27 percent) reported that their facility has begun to install EMR hardware and software in at least one facility within their organization. For the purposes of this survey, an EMR has been defined as electronically originated and maintained clinical health information, derived from multiple clinical application sources, about an individual's episode of healthcare at a care delivery organization. An EMR is supported by clinical decision support systems and replaces the paper medical record as the primary source of patient information.

The remaining respondents have either signed a contract to install an EMR, but have not yet begun the installation process (four percent), or have developed a plan to implement an EMR system (14 percent). Fewer than ten percent of respondents indicated that they have not yet begun to plan to use an EMR within their organization. This is very similar to the number of 2007 respondents who indicated that their organization has not yet begun to plan for the use of an EMR (eight percent).

#### **Figures:**

Figure 10. Most Important Applications (Next Two Years)

Figure 11. Status of Electronic Medical Record Implementation

## **7. IT Security**

**Healthcare IT professionals identified an internal breach of security as their primary concern regarding data security and one-quarter reported that their organization has experienced a security breach in the past year.**

Nearly all respondents also reported that their organization actively assess and/or manage security risk; this was selected by 86 percent of respondents. Despite this, one-quarter of respondents (24 percent) reported that they had a security breach at their organization in the past 12 months. Sixteen percent reported that they had a security breach at their organization in the last six months.

Thus, it is not surprising that nearly all survey respondents (97 percent) indicated concerns about the security of the data at the organizations in which they work; this is similar to what respondents have reported in the past.

For the past several years, respondents have indicated that an internal breach of security was their primary concern with regard to data security at their organization. This has not changed and half of respondents (51 percent) indicated that an internal breach of security is of concern at their organization. Rounding out the top three are inadequate funding/support for the security process and compliance with HIPAA security regulations. These were selected by 20 percent and 18 percent of respondents respectively.

Respondents were least likely to indicate that having adequate security systems in place is a security concern at their organization. This response was selected only by eight percent of respondents.

All respondents indicated that security technologies have been installed at their organization. Firewalls (98 percent), user access controls (83 percent) and audit logs of

each access to patient health records (81 percent) were most frequently identified as the security technologies currently in place at respondents' organizations.

Least frequently identified as security technologies currently in place at healthcare organizations at this time are public key infrastructure (PKI) and biometric technologies. These were identified by 27 and 22 percent of respondents, respectively.

Respondents were also asked to identify the security technologies that they would use or implement at their organization in the next two years. Respondents were most likely (49 percent) to identify single sign-on technology. This was followed by biometric technologies (42 percent) and e-mail encryption (34 percent).

Finally, single sign on technology shows the most projected potential use in the next two years. About one-third of respondents (36 percent) presently report that this technology is in place at their organizations; nearly half predict that it will be in use in the next two years.

This research tracked 13 different technological security tools that respondents could identify as in place at their organization. On average, respondents said they have 8.39 of these solutions implemented at their organization. Only four respondents indicated they have only one or two technologies identified in this report in place at their organization at this time.

#### **Figures:**

Figure 12. Security Breach

Figure 13. Active Management of Security Risk

Figure 14. Top Concerns—Security of Computerized Medical Information

Figure 15. Security Technologies (Next Two Years)

## **8. Technology Adoption**

**Identity management, RFID technology and security technologies are the top technologies that survey respondents intend to implement in the next two years.**

Respondents were asked to identify the top technologies in place at their organization at this time. Most frequently identified was high-speed networks, which 92 percent of respondents reported is in place at their organization. Also widely used are Intranets (89 percent) and wireless information systems (87 percent).

Respondents were also asked to identify the areas in which they anticipated their organizations would use technology in the next two years. The top three areas identified were identity management (45 percent), RFID technology (43 percent) and security technologies (42 percent).

Increases of ten percent or more (current use compared to use in two years) can be seen in several areas, which are outlined below.

- RFID Technology (current use 15 percent, future use 43 percent);
- USB for PHRs (current use two percent, future use 20 percent);
- Security Technologies (current use 24 percent, future use 42 percent);
- Natural Language Processing (current use 10 percent, future use 23 percent);

- Identity Management Technologies (current use 34 percent, future use 45 percent);
- Web-enabled Business Transactions with Consumers (current use 28 percent, future use 38 percent).

**Figures:**

Figure 16. Technology Adoption (Next Two Years)

## 9. Regional Health Information Organizations (RHIOs)

**Although nearly all respondents were aware of the basic concept of a RHIO, only one-quarter of respondents report that their organization participates in a RHIO. A handful noted that they participated in a RHIO that has failed.**

For the purposes of this survey, a RHIO is being defined as a group of organizations with a business stake in improving the quality, safety and efficiency of healthcare delivery. The purpose of a RHIO is to electronically exchange health information in a secure format so the receiver can use the information. The terms RHIO and Health Information Exchange or (HIE) are often used interchangeably.

Compared to the results from the 2007 survey, there is little difference in the awareness of, and participation in, a RHIO. Only one percent of respondents said they are unaware of what a RHIO/HIE is (compared to two percent in 2007). Also comparable to last year, 52 percent of respondents indicated that their organization has not yet begun to participate in a RHIO/HIE.

The number of respondents that reported that their organization participates in a RHIO also has not increased substantially (26 percent in 2008, 23 percent in 2007). Thirteen percent of respondents indicated there is a RHIO in their area that they participate in and four percent noted that they participated in a RHIO in the past, but the RHIO failed.

**Figures:**

Figure 17. RHIO Adoption

## 10. IT Governance

**There appears to be a strong level of integration between IT strategies and overall organizational strategies. Two-thirds of senior IT executives reported that they sit on their organization's executive team.**

Respondents were asked to identify the level of integration that exists between their organization's strategic plan and their operating, clinical and capital plans. Nearly all respondents (87 percent) indicated that there is a strong level of integration between IT strategies and overall organizational strategy. Specifically, 37 percent of respondents indicated that their IT strategic plan is a component of the organization's strategic plan. Another 50 percent of respondents indicated that the plans are integrated, but remain as separate plans. As a combined percentage, this represents a slightly greater level of integration than was reported in the 2007 survey.

The remaining respondents indicated that their organization either does not have an IT strategic plan (eight percent) or that their IT strategic plan is not at all integrated with the broader organizational plan (five percent). Again, this is comparable to the data reported in the 2007 survey.

Among those respondents who indicated that their title was either corporate CIO or facility CIO, 64 percent reported that they sit on the executive committee of their organization. In this survey, an executive committee is defined as the senior leadership team that drives the overall strategy and direction for the organization.

Individuals identifying themselves a senior IT executive were also asked to identify which responsibilities they assume on a regular basis as part of their job. Not surprisingly, respondents were most likely to identify managing the IS department (92 percent). Rounding out the top three are supporting business and clinical process owners (90 percent) and driving value from IT investments (88 percent). Although appearing in a different order, these were also the top three responsibilities addressed in the 2007 survey.

The only response that was selected by fewer than 80 percent of respondents was enabling the CEO to improve management through IT. This option was selected by 78 percent of respondents.

Finally, respondents were asked to identify the role that clinicians play in IT at their organization. Five percent of respondents indicated that clinicians play no role in IT at their organization. The remaining respondents were most likely to suggest that clinicians played a role in participating in systems evaluations (88 percent). Over three-quarters of respondents (81 percent) also indicated that clinicians acted as project champions and participated in educating and leading other clinicians. Two-thirds of respondents (67 percent) indicated that clinicians are involved in the process of developing and implementing clinical training programs.

Respondents were least likely to indicate that there was a CMIO (Chief Medical Information Officer) at their organization who orchestrates the clinical aspects of the organization's IT strategy.

**Figures:**

Figure 18. Member of Organization's Executive Committee

Figure 19. Alignment of Organizational & IT Strategic Plan

Figure 20. CIO Responsibilities

## 11. IT Budget and Staff

### **Healthcare IT professionals predict that both IT staff and budgets will increase in the next year.**

According to the HIMSS Analytics™ Database<sup>6</sup>, in 2007 IT departments in hospitals in the United States had an average of 25 IT FTEs (median seven IT FTEs). Approximately two-thirds of respondents (68 percent) predicted that the number of FTEs in the IT departments at their organizations will increase in the next twelve months. However, the majority of respondents indicated that the increase would be minimal. Thirty-eight (38) percent of respondents indicated that their IT staff would increase by less than 10 percent. Another quarter (23 percent) indicated that the change would be between 10 and 20 percent. Only eight percent indicated that the change in staffing was predicted to be more than 20 percent.

Approximately one quarter of respondents (24 percent) did not project a change in the number of IT FTEs at their organization in the next 12 months. Only seven percent of respondents reported that the number of IT FTEs at their organization would decrease in the next year. However, changes should be minimal; five percent of respondents predicted that their staff would decrease by less than 10 percent.

Over one-third of respondents indicated that they will have staffing needs in the area of clinical application support. Other areas for which respondents projected future staffing needs were network/architecture support and systems integration. These items were identified by 26 and 25 percent of respondents respectively. Also selected by approximately one-quarter of respondents was process/workflow design, which was identified by 23 percent of respondents.

Respondents were least likely to report that they will have staffing needs in the following areas:

- Programming (nine percent);
- IT Management (seven percent);
- Financial Application Support (six percent);
- IT Planning (six percent);
- Data Security (five percent);
- Internet/Intranet (five percent);
- Regulatory (two percent).

Ten percent of respondents reported that they will have no staffing needs at their organization.

Senior IT executives were also asked to identify which areas outside of the IT department they were responsible for. Three-quarters of respondents indicated they were (are) responsible for the management of a department other than IT. Primary responsibility outside of IT lies in the area of telecommunications, for which nearly three quarters of respondents identified responsibility. Less frequently identified were medical informatics (24 percent) health information management (17 percent) and biomedical engineering (16 percent). On average, senior IT executives reported managing 1.61 areas outside of the IT department.

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<sup>6</sup> Derived from the Dorenfest IHDS+ Database™

According to the HIMSS Analytics™ Database, in 2007, US healthcare care organizations spent an average of 2.24 percent of their total budget on IT. More than three quarters of respondents (78 percent) indicated that when compared to their spending level in 2007, their 2008 IT spending will increase. This number is consistent with past projections that were identified in this survey; approximately three-quarters of respondents have consistently reported IT spending will increase since the 2004 survey. In more detail, 54 percent of respondents expect a definite increase in IT budget at their organization, while 25 percent project a probable increase.

Twelve percent of respondents indicated their budget would remain unchanged in 2008; this is comparable to the 11 percent who predicted that their 2008 budget would remain unchanged from 2007 levels. Approximately 10 percent of respondents indicated that their IT spending would decrease compared to 2007. This is comparable to the levels reported in the 2007 survey.

Among those respondents who indicated that their budget would increase in 2008, respondents were most likely (74 percent) to attribute a potential increase in IT spending to an overall growth in number of systems and technologies as the reason for the increase. Respondents were also likely to attribute projected IT budget increases to overall budget increases (45 percent); need to upgrade IT infrastructure (40 percent) and long-term IT or organizational strategic plans (38 percent). These are very comparable to the reasons identified for an increase in 2007.

Respondents were least likely to identify a recent merger/partnership and an unfunded government mandate as a reason why the IT budget at their organization was increasing. Each of these items was identified by eight percent of respondents.

Among the respondents who projected a budget decrease, deteriorating financial conditions related to cutbacks in Medicare/Medicaid was most likely to be identified as the reason for a decrease in IT budget. This option was selected by 36 percent of respondents. Also selected by one-third of respondents was an overall budget decrease.

#### **Figures:**

Figure 21. Expected Change in IT Staff in Next 12 Months

Figure 22. 2008 IT Staffing Needs

Figure 23. Additional Functions Managed by CIO

Figure 24. Projected Change in 2008 IT Operating Budget

Figure 25. Reason for Increase in 2008 Budget

Figure 26. Reason for Decrease in 2008 Budget

## **12. About HIMSS**

The Healthcare Information and Management Systems Society (HIMSS) is the healthcare industry's membership organization exclusively focused on providing global leadership for the optimal use of healthcare information technology (IT) and management systems for the betterment of healthcare. Founded in 1961 with offices in Chicago, Washington D.C., Brussels, and other locations across the United States and Europe, HIMSS represents more than 20,000 individual members and over 300 corporate members that collectively represent organizations employing millions of people. HIMSS frames and leads healthcare public policy and industry practices through its advocacy, educational and professional development initiatives designed to promote information and management systems' contributions to ensuring quality patient care.

## 13. About Cisco

Cisco (NASDAQ: CSCO) enables people to make powerful connections-whether in business, education, philanthropy, or creativity. Cisco hardware, software, and service offerings are used to create the Internet solutions that make networks possible; providing easy access to information anywhere, at any time. Cisco was founded in 1984 by a small group of computer scientists from Stanford University. Since the company's inception, Cisco engineers have been leaders in the development of Internet Protocol (IP)-based networking technologies. Today, with more than 63,050 employees worldwide, this tradition of innovation continues with industry-leading products and solutions in the company's core development areas of routing and switching, as well as in advanced technologies such as mobility, security, storage networking, TelePresence, unified communications and video.

## 14. How to Cite This Study

Individuals are encouraged to cite this report and any accompanying graphics in printed matter, publications, or any other medium, as long as the information is attributed to the 19<sup>th</sup> Annual HIMSS Leadership Survey, sponsored by Cisco.

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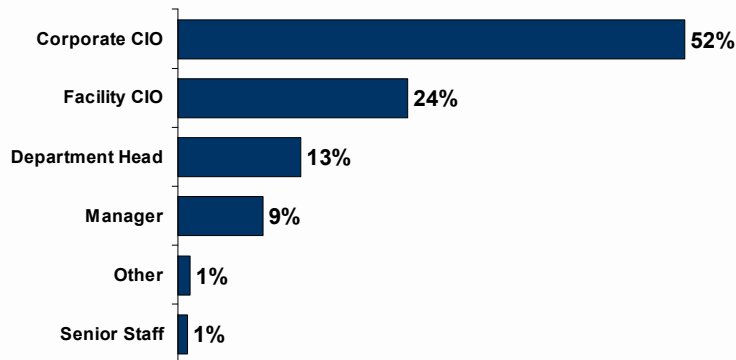
# Demographic Information



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## Participant Profile—Titles

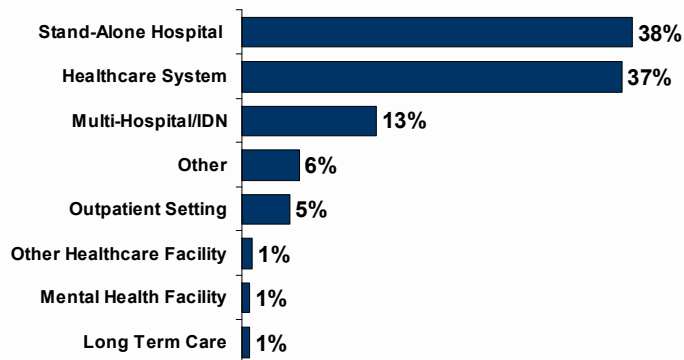
Figure 1



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## Participant Profile—Facility Type

Figure 2



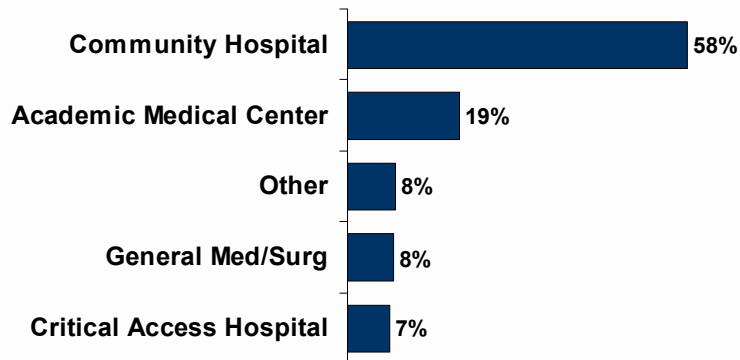
# Demographic Information (continued)



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## Participant Profile—Type of Hospital

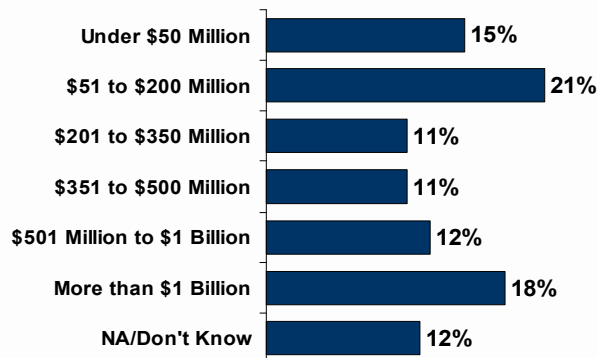
Figure 3



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## Participant Profile—Facility Revenue

Figure 4



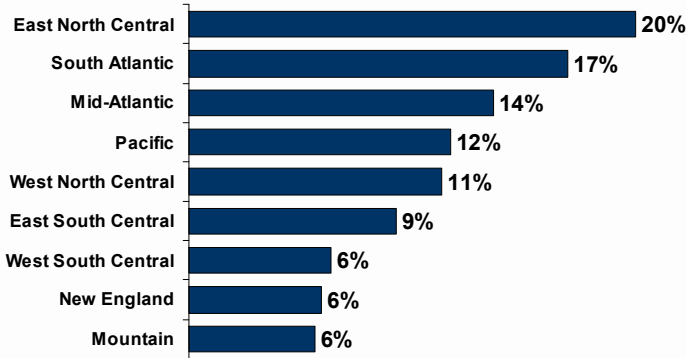
# Demographic Information (continued)



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## Participant Profile—Region

Figure 5



## IT Priorities

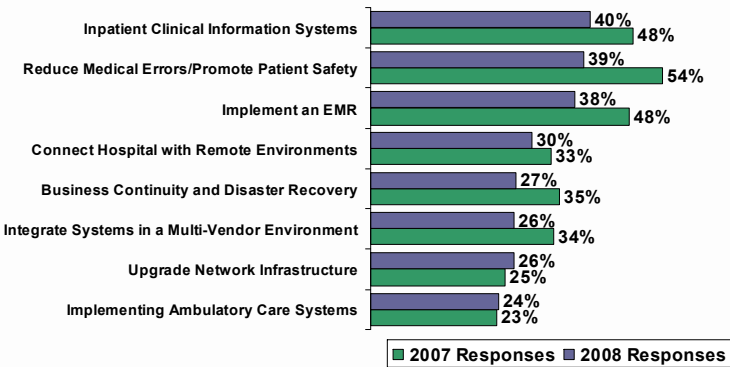


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## Current IT Priorities (Within Next 12 Months)

(2008 vs. 2007 Results)

Figure 6



# IT Priorities (continued)

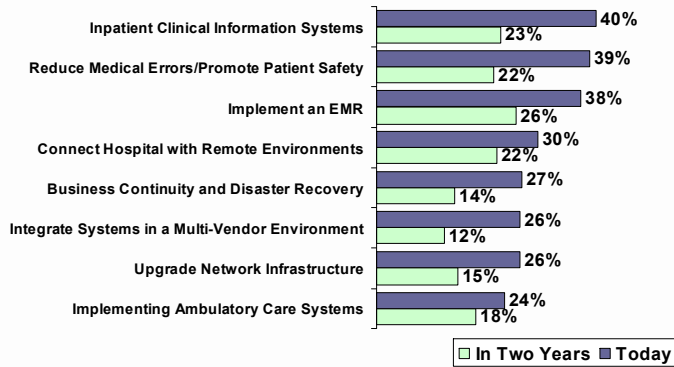


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## Projected IT Priorities

(Today vs. Next Two Years)

Figure 7

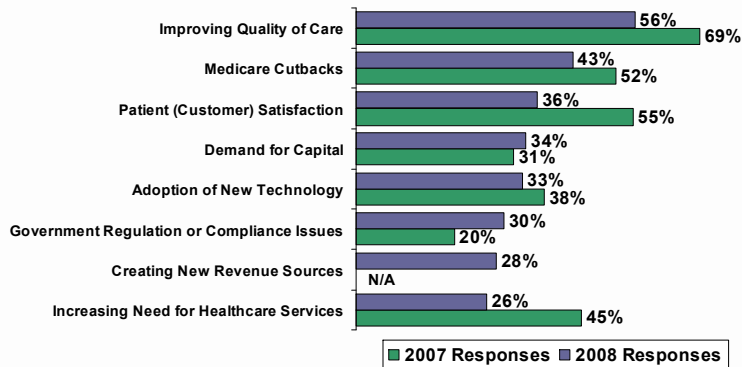


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## Top Business Issues Facing Healthcare

(2008 vs. 2007 Results)

Figure 8



# IT Barriers



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## Most Significant Barriers to Implementing IT

(2008 vs. 2007 Results)

Figure 9



# IT Applications

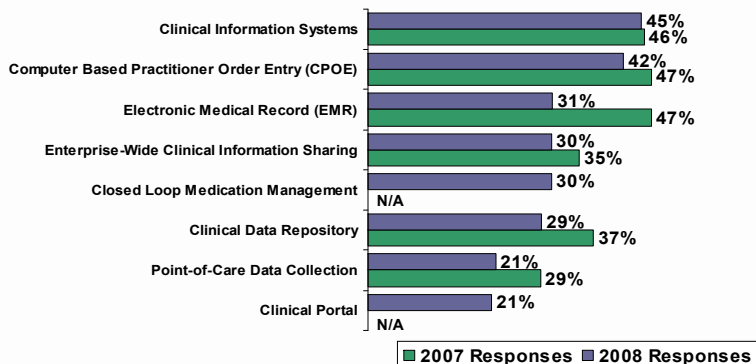


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## Most Important Applications (Next Two Years)

(2008 vs. 2007 Results)

Figure 10



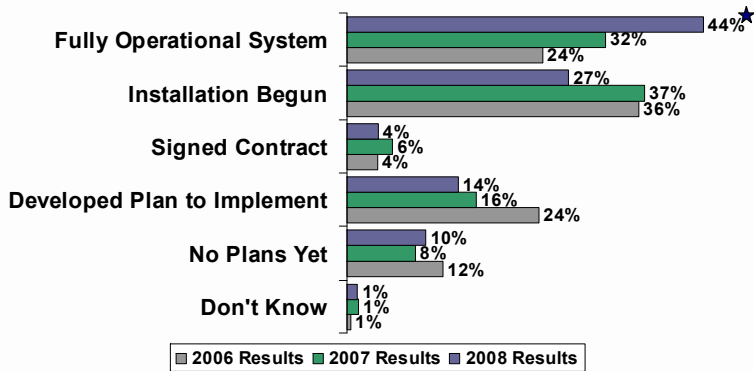
# IT Applications (continued)



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## Status of Electronic Medical Record Implementation

(Comparison of 2008, 2007, and 2006 Results) Figure 11



\* Includes organizations that have installed a fully operational EMR at one facility at their organization, as well as those who have a fully operational EMR at all aspects of their facility

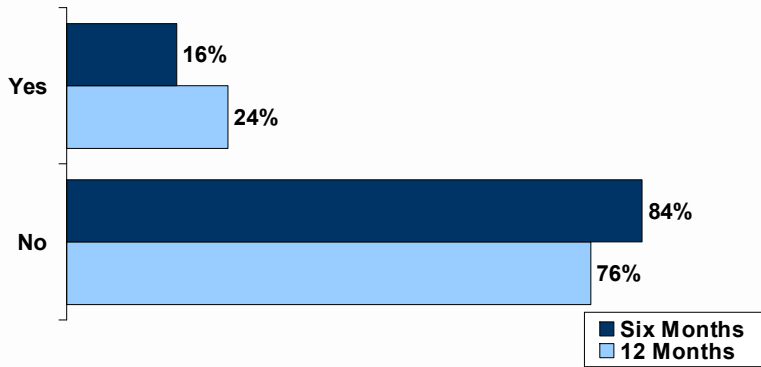
# IT Security



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## Security Breach

Figure 12



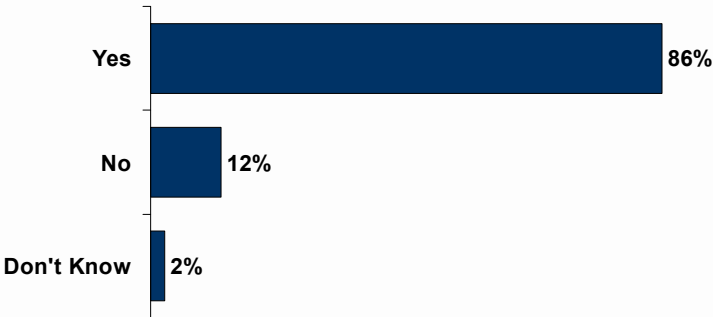
# IT Security (continued)



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## Active Management of Security Risk

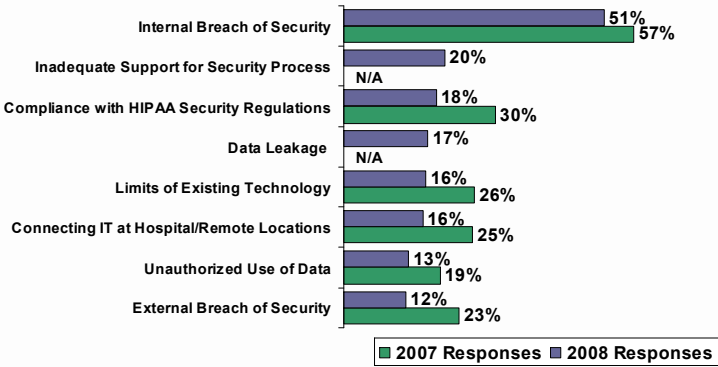
Figure 13



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## Top Concerns—Security of Computerized Medical Information (2008 vs. 2007 Results)

Figure 14



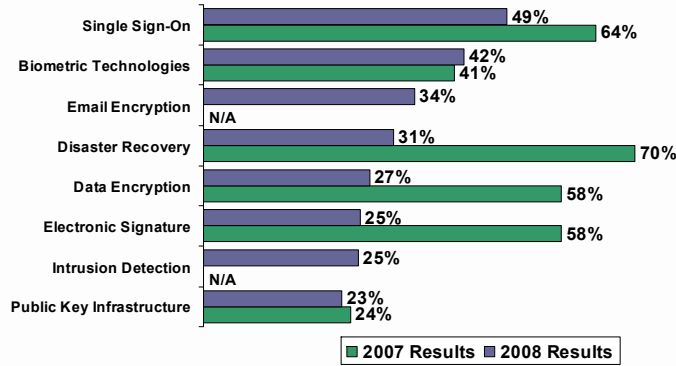
# IT Security (continued)



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## Security Technologies (2008 vs. 2007 Results)

Figure 15



# Technology Adoption

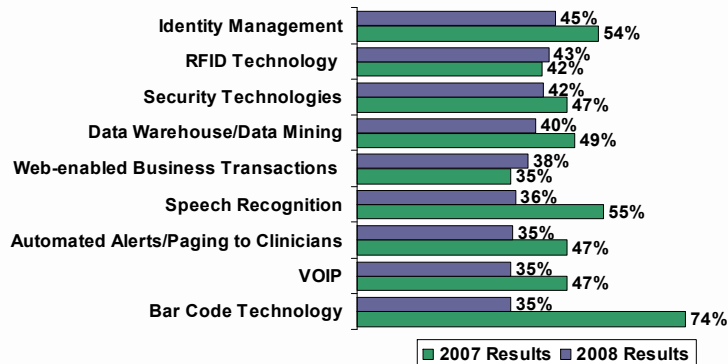


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## Technology Adoption (Next Two Years)

(2008 vs. 2007 Results)

Figure 16



# RHIOs

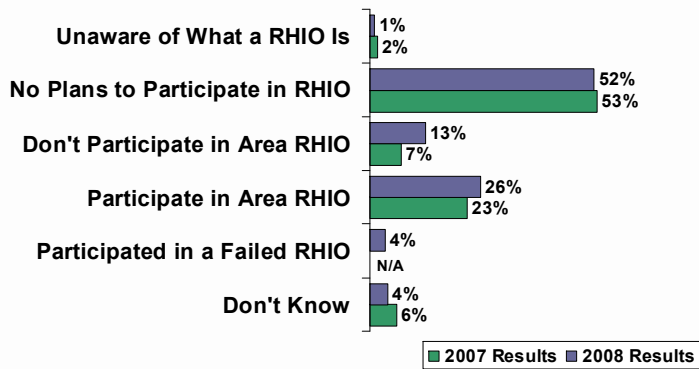


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## RHIO Adoption

(2008 vs. 2007 Results)

Figure 17



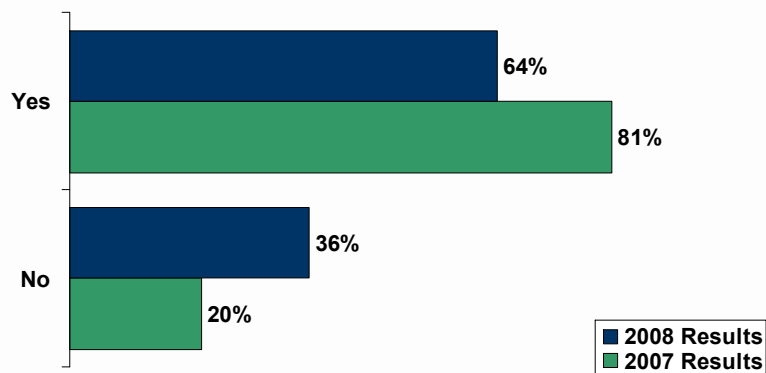
# IT Governance



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## Member of Organization's Executive Committee

Figure 18



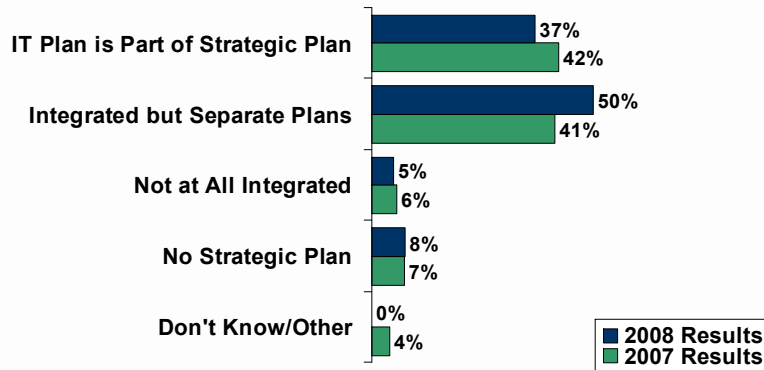
# IT Governance (continued)



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## Alignment of Organizational & IT Strategic Plan

Figure 19



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## CIO Responsibilities

Figure 20



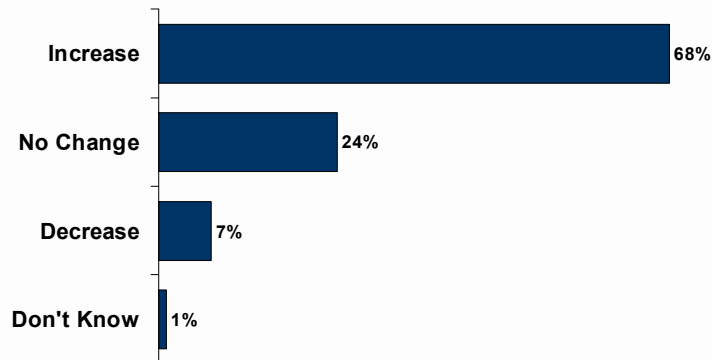
# IT Budget and Staff



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## Expected Change in IT Staff in Next 12 Months

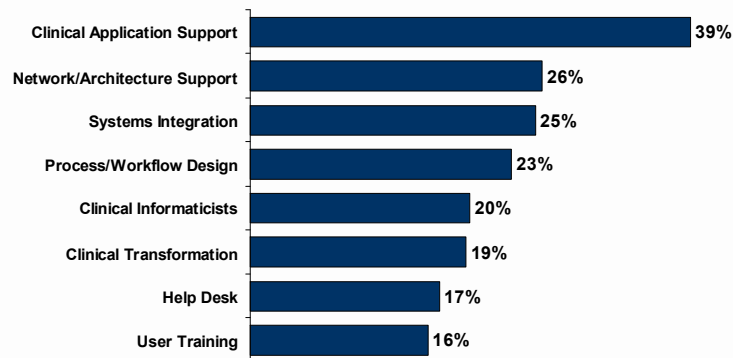
Figure 21



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## 2008 IT Staffing Needs

Figure 22



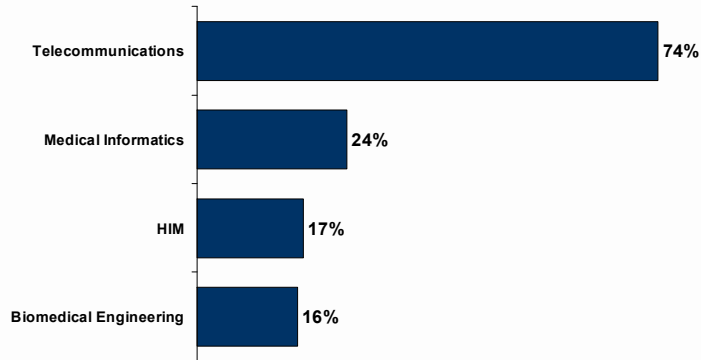
# IT Budget and Staff (continued)



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## Additional Functions Managed by CIO

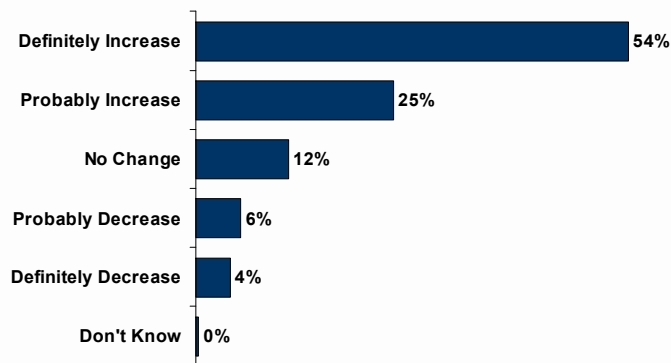
Figure 23



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## Projected Change in 2008 IT Operating Budget

Figure 24



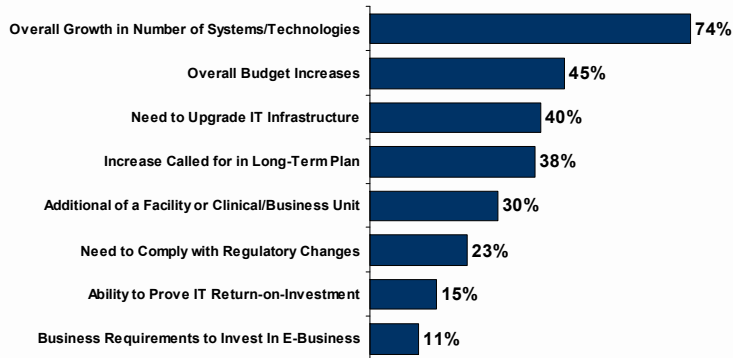
# IT Budget and Staff (continued)



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## Reason for Increase in 2008 Budget

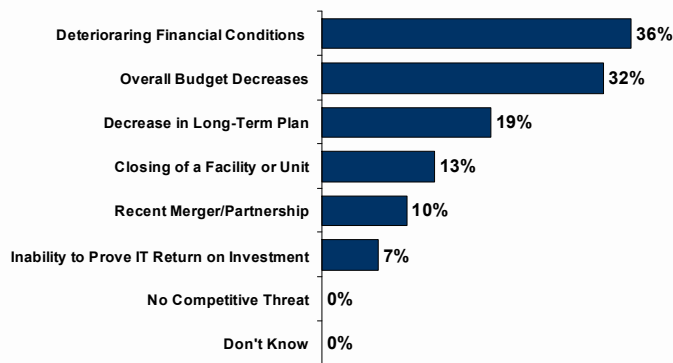
Figure 25



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## Reason for Decrease in 2008 Budget

Figure 26



# Satisfaction with Vendor Performance



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## Satisfaction with Vendor Performance

(2008 vs. 2007 Results)

Figure 27

