

HP Business Technology Study

April 2007



Research Objectives

The objective of this research was to understand how business decision-makers and technology decision-makers partner together – including current perceptions, obstacles, successes; how they view each other’s roles within the company, as well as the role of technology within the business.

The research:

- Determined the **key decision drivers** for business decision makers and technology decision makers who are seeking business outcomes from technology
- Captured the **variability in those decision drivers** and attitudes CEOs and CIOs have about partnering to deliver business outcomes through technology
- Compared respondents’ **perceptions** of business outcomes driven by technology
- Identified how the two target segments **align** their views and how the alignment does or doesn’t affect key aspects of business planning and success –and distilled best practices for alignment from research

Methodology

Penn, Schoen & Berland Associates conducted a total of 150 in-depth interviews among 75 CEOs and 75 CIOs from Enterprise businesses in the United States, Western Europe, Eastern Europe, India, China, Japan, Asia-Pacific and Latin America.

Executive Summary

The Era of IT is over and the Era of Business Technology has begun.

The business world has reached a tipping point, where technology is moving from simply delivering and sharing information to a world where technology delivers measurable business outcomes.

Ninety nine per cent of CEOs and 86% of CIOs believe technology is integral to the success of their companies. And 88% of CEOs and 90% of CIOs now say they share similar visions for how IT can deliver business outcomes at their company. A world without this integration is viewed as almost apocalyptic – companies would lose money, be less efficient and have to charge more for their products leading to the loss of customers and market share.

Less than 10% of both CEOs and CIOs predict that IT spending will decrease over the next five years. Over half of CEOs report their technology investment will actually increase over the next five years.

And yet, fewer than half of CEOs polled (43%) and just over a third of CIOs polled (38%) state that technology decisions are included at the inception of strategic planning at their company. Forty five per cent of CEOs and 51% of CIOs say their company includes technology leadership after strategic goals have been set but before the plan is implemented. And there is clearly significant potential to improve the partnership: only 43% of CEOs and 35% of CIOs think their company is currently “very successful” at aligning technology with business outcomes.

Are we there yet?

CEOs take a broader view of the potential benefits of integration. Nearly three-fourths of CEOs say accelerating growth, lowering costs, and mitigating risk are “very important” reasons to integrate technology. CEOs are 13% more likely than CIOs to think that integrating technology is very important in order to accelerate growth at their company -- and 16% more likely to think that integrating technology is very important in order to mitigate risk at their company.

And yet, many CEOs have yet to operationalize IT to its fullest potential. They either overstate its current role or understate its potential value.

CIOs believe their CEOs and other management are only now realizing that IT can deliver well beyond “back office” value; some CIOs believe CEOs and management do not yet fully understand the value IT can deliver. In addition, only 38% of CEOs say they are very involved in the technology decision making process for their company -- but 20% of both CEOs and CIOs would like to see the other more involved.

Communication will unleash IT's power to deliver business outcomes

In order to achieve better business outcomes, CEOs and CIOs want the same thing from each other - better communication. CIOs want their CEOs and management to better understand technology and the strategic value that technology can bring to the table. CIOs want the CEOs to effectively communication the company's vision, so they can help deliver on that vision.

CEOs most want their CIOs to have technical expertise and better communication skills, specifically being able to communicate advanced technical knowledge in laymen's terms. CIOs *THINK* their CEOs want them to have the ability to better communicate, technical expertise and a better understanding of the overall business strategy.

CIOs want their CEOs to have vision and clear communication. CEOs *THINK* their CIOs want them to have the ability to understand technology, support technology efforts and better communication skills.

For CEOs and CIOs, communication and clear business strategies are the holy grail of technology integration in the business world.

While in theory, CEOs and CIOs state they share a similar vision for how IT can deliver business outcomes at their company, in practice, the potential for technology to deliver business outcomes may be being lost in translation.

Detailed Findings

Responsibility

There is a noticeable discrepancy between CEOs and CIOs perceptions of how technology is aligned to business outcomes and the decision making process. CEOs are more likely to say that the CIO is very or somewhat involved in the technology decisions, than the CIO is to say that the CEO is involved.

How involved is the [CEO or CIO] in the technology decision making process for your company?	CEO	CIO
Very involved	38%	33%
Somewhat involved	49%	38%
Not very involved	10%	24%
Not at all involved	3%	5%

However, the majority of CEOs and CIOs say the current level of involvement is fine. One in five CEOs and CIOs would like to see the other more involved.

Would you like to see the CEO/CIO more or less involved?	CEO	CIO
More	20%	20%
Less	6%	5%
The current level is fine	74%	75%

Role of Technology in Business

Majorities of both CEOs and CIOs agree that the company's strategic business vision is closely aligned with the business technology strategy.

How closely aligned is your company's strategic business vision with your business technology strategy?	CEO	CIO
Very Closely	54%	56%
Somewhat Closely	38%	33%
Not Very Closely	9%	10%
Not at all	0%	1%

What are the key elements of this alignment?

Support Business Strategy

- *"We have internal targets on return on investments so any technology implementation should improve business in such a way so we can hit our*

- performance targets from a sales growth, and profitability, and return on investment point of view.” – Company President, United States*
- *“Every technology decision is measured against how it is going to affect the corporate strategy.” – CIO, United States*
 - *“Governance is the element that ties the two together. At every level of the organization we have integrated our IT strategy with complete alignment with the organizations goals.” – CIO, United States*
 - *“There is a linkage between business strategy alignment and technology objectives. So my objectives are aligned to serving the business strategy...” – CIO, Western Europe*
 - *“The key elements of the alignment are that when we put together our technology plan it is based on interviews with the business owners so it is really their plan. So in that sense it is aligned. The reason I said somewhat is because they don't have a business plan.” – CIO, United States*
 - *“IT isn't a means for strategy, that is to say IT serves strategy, and not the other way round.” – General Manager, Western Europe*
 - *“Strategic planning is done in conjunction with IT department. Whenever we have a goal we decide what we need to have for that goal and then one of the big things we decide is whether technology is going to make that happen.” – CEO/President, United States*
 - *“Technology and business are not separate. Technology is the base for business...” – CIO, China*
 - *“We share the same goal: we want to gain more profits.” – CEO, China*

Communication

- *“Communication between the IT and the operation is the primary element.” – Company President, United States*
- *“If they are not talking to each other across the business units as much as they should be then you potentially have lost opportunities ...” – CEO, United States*

New Technology/Technology

- *“Technology and business strategic vision are very closely aligned because of basic reason that our line of business is to provide our expertise in customized technological solutions to our customers.” – CIO, India*
- *“So I would say it's a direct relation between having good information and being more competitive and more attractive to our customers.” – Chairman, United States*
- *“The technology strategy is essentially the brain of our business. Communication.” – Company President, United States*
- *“The better the technology, the better the business results.” – CEO, Eastern Europe*

Client Satisfaction

- *“If we want to achieve all this, technology has to be very much present right at the front.” – CIO, India*

How would you suggest better alignment?

- *“The use of technology is only a tool and not an end in itself...” – CIO, Western Europe*

The majority of the business and technology executives agree that they have a similar vision for how IT can deliver business outcomes at their company.

Do you and your CEO/CIO share a similar vision for how IT can deliver business outcomes at your company?	CEO	CIO
Yes	88%	90%
No	12%	10%

How is this alignment accomplished?

Communication

- *“By constant communication and adoption of the company's development.” – CIO, Western Europe*
- *“I've messaged to people that CIO is important in how we make business decisions in the future and what tools we are going to need to be successful in the future.” – CIO, Asia/Pacific*

Strategic Business Goals

- *“He does not see IT as a cost center he sees IT as a strategic maneuver ...” – Senior Vice President/CIO, United States*
- *“Whatever strategies he has developed for his department should align themselves with the overall company goals.” – Company President, United States*
- *“Through our business strategy and IT planning process, we really establish the alignment between our business strategy and our IT strategy. That's pretty much the mechanism we use.” – CIO, Western Europe*
- *“Technology plays a vital role in disaster recovery plan, overcoming contingencies, meeting expectation levels and setting the right tone for industry standards comparableness.” – CIO, India*

Committee/Leadership Decision Making

- *“It is accomplished through his support of the IT vision. It is also encompassed through him being a member of the IT steering group. And also by me being part of the senior management that is involved with establishing business strategy.” – CIO, Western Europe*

How would you suggest better alignment?

- *“Well we're just recently bringing the CIO to the executive team table, he hasn't been at the table in the past and so we're elevating that person's role within the executive team and are in constant evaluation of that person's effectiveness.” – President/CEO, United States*

CEOs and CIOs generally agree that technology decisions are included either in the strategic decision making process once the strategic goals have been set or at the inception of the strategic plan.

Where are technology decisions included in the strategic decision making process for your company?	CEO	CIO
At the inception of strategic planning	43%	38%
Once strategic goals have been set	45%	51%
After the plan is implemented	7%	5%
It is not considered	4%	5%

Technology Integration

The majority of CEOs and CIOs think technology is integral to the success of their company’s business outcomes, specifically when it comes to accelerating growth, mitigating risks and lowering costs.

Is technology integral to the success of your company’s business outcomes?	CEO	CIO
Yes	99%	86%
No	1%	14%

Majorities of CEOs and CIOs think it is important to integrate technology in order to accelerate growth at their company. There is a consensus among both CEOs and CIOs that not integrating technology in order to accelerate growth would slow the growth of the company and risk their company’s competitive advantage and market share.

How important do you think it is for your company to integrate technology in order to <i>accelerate growth</i> at your company?	CEO	CIO
Very important	74%	61%
Somewhat important	20%	30%
Not very important	6%	9%
Not at all important	0%	0%

How is your company currently integrating technology in order to accelerate growth?

Business Strategy

- *“Technology strategy is one of the key pillars of our growth plan. We are looking at completion of technology products that will continue to maintain our competitive advantage in the market place. There are also other reasons - we also look on technology as a means for our business process improvement and we are continuing that initiative.” – CIO, United States*

Integration

- *“Very integrated systems and very closely aligned with the business process.” – CIO, United States*

What would be the risks to your company as it relates to accelerating growth if you DIDN'T integrate technology to achieve business outcomes?

Loss of Market Share / Not Competitive

- *“We would lose competitive position in the market place. There is constant pressure to shorten lead time, improve quality, ongoing price pressure. Like a combination of those things, you need to look at technology as a part of how to address how aggressive you are in better improving our position in the marketplace.” – Company President, United States*
- *“We would loose out in the growth terms and it will penalize our future potential market share in our business.” – CEO, India*
- *“...we would get left behind by our competition.” – CIO, United States*

Slow Growth

- *“We would be stuck in the way we've been doing it for the last century. You know ink on paper. ” – CIO, United States*
- *“The companies that aren't current will get consolidated.” – Executive Vice President/CIO, United States*

By large margins, both CEOs and CIOs think integrating technology is important to lowering costs at their company.

How important do you think it is for your company to integrate technology in order to <i>lower costs</i> at your company?	CEO	CIO
Very important	72%	68%
Somewhat important	22%	24%
Not very important	6%	8%
Not at all important	0%	0%

What would be the risks to your company as it relates to lowering costs if you DIDN'T integrate technology to achieve business outcomes?

Not Competitive

- *“We'd have difficulty competing with the Chinese.” – Company President, United States*
- *“The risks would be that we would lose customers to competitors.” – CIO, Asia/Pacific*

CEOs are more inclined than CIOs to think that integrating technology in order to mitigate risk at their company is “very important” – but both segments think this is somewhat important.

How important do you think it is for your company to integrate technology in order to <i>mitigate risk</i> at your company?	CEO	CIO
Very important	75%	59%
Somewhat important	13%	34%
Not very important	12%	5%
Not at all important	0%	1%

How is your company currently integrating technology in order to mitigate risk?

New Technology / Technology

- *“If you can reduce human error through IT you can reduce the number of injuries; the harms that come to patients and those result in increased hospital stays, litigations, dissatisfied patients, and it has a direct bearing on an [health] institution’s success.” – President/CEO, United States*

Technology Goals and Expectations

There is a slight difference in how CEOs and CIOs view the current success of their company in aligning technology with business outcomes. CEOs are marginally more likely than CIOs to think that this alignment is currently very successful, whereas a slightly higher percentage of CIOs consider it only somewhat successful.

How successful do you think your company is in aligning technology with business outcomes at the current time?	CEO	CIO
Very successful	43%	35%
Somewhat successful	49%	57%
Not very successful	7%	8%
Not at all successful	0%	0%

[ASKED OF CIOs]: Have you been tasked to establish technology goals and integrate them into your company? If so, by whom? What are the top three goals for technology that you have been tasked to establish and integrate at your company?

Top 3 goals for technology	CIO
Lower Costs	17%
New/Upgrade Technology	17%
Disaster Recovery	8%

[ASKED OF CEOs]: What are the top three goals for technology at your company that you have tasked your CIO to establish and integrate?

Top 3 goals for technology	CEO
Improve Efficiency	15%
Lower Costs	11%
Integration	11%
Customer Satisfaction	7%

How could the IT department at your company play a more significant role in meeting business outcomes?

CIOs have more ideas for improvement in the IT department than CEOs, who generally think their IT departments are doing just fine as they are.

Increased interaction between CEOs and CIOs could help on this point. In general, CEOs would prefer if CIOs took more interest in understanding the business strategy and outcomes. In return, a number of CIOs stated that they wish they had more of a voice in the business' strategic decisions with regards to IT.

[ASKED OF CIOs]: What are the three skills you would most like your CEO to have?

Vision is the attribute that most CIOs would like their CEO to have, followed by clear communication, and technical knowledge.

Tops skills CIOs most wish their CEO had	CIO
Vision	19%
Communication / Communicate Business Goals	18%
Understands Technology	17%
Supports Technology Efforts	10%
Leadership	9%
Decision Making Skills	8%
Inspirational/Motivational	8%

Understand Technology / Supports Technology Efforts

- *“I think she has the skills I would want in a CEO she basically understands conceptually the technology, she professes the technology and she is very supportive of our implementation and use of technology.” – CIO & VP of Technology, United States*

[ASKED OF CEOs]: What are the three skills you would most like your CIO to have?

Overall, the skills most CEOs would like their CIOs to have is technical expertise and increased communication.

Tops skills CEOs most wish their CIO had	CEO
Technical Expertise	38%
Communication	29%
Training	13%
Leadership	11%
Management Skills	11%
People Skills	11%
Understand Business Goals	9%

[ASKED OF CIOs]: What are the three skills your CEO would most like you to have?

The ability to articulate complex technology in laymen’s terms and technical knowledge are the skills CIOs think that their CEOs wish they had. This is followed closely by understanding overall business strategy, management skills, vision and leadership skills.

Tops skills CIOs think CEOs wish they had	CIO
Communication; articulate complex technology terms	21%
Technical Expertise	21%
Understand Business Strategy	18%
Management Skills	12%
Vision	10%
Leadership	8%

[ASKED OF CEOs]: What are the three skills your CIO would most like you to have?

CEOs are most likely to think that CIOs wish they understood more about technology. This is followed by better supporting technology efforts, increased communication, more patience and providing more budget for technology.

Tops skills CEOs think CIOs wish they had	CEO
Understand Technology	35%
Support Technology Efforts	15%
Communication	11%
Patience	9%
More Budget for Technology	7%

IT Investment

About half of CEOs and CIOs say that 1-10% of total capital expenditure is invested in IT systems.

CEOs have a slightly higher skew of how much is invested in IT systems than CIOs.

What percentage of your organizations total capital expenditure is invested in IT systems today?	CEO	CIO
0%	9%	10%
1-10%	45%	57%
11-25%	17%	15%
26-50%	19%	10%
51-75%	4%	6%
76-100%	1%	0%
Don't Know	4%	1%

Half of CEOs report that in the next 5 years IT investment will increase. CIOs are slightly less optimistic and half think that the IT investment over the next five years will remain the same. Less than 1 in 10 CEOs and CIOs expect it to decrease.

Do you expect this (companies total capital expenditures invested in IT) to increase, decrease, or remain at the current level over the next five years?	CEO	CIO
Increase	52%	42%
Decrease	7%	8%
Remain at the current level	41%	51%

Appendix

How often do you interact with the CIO/CEO of your company:	CEO	CIO
Daily	28%	20%
Weekly	43%	43%
Bi-weekly	7%	16%
Monthly	14%	13%
Quarterly	3%	4%
Annually	0%	4%
Never interact directly with the CIO/CEO	4%	0%

“Is your professional background in Information Technology or is it in a different area of expertise?” (CIO Only)	CIO
Information Technology	84%
Other	16%

CROSSTAB CIO: IT Spend with Level of Interaction with CEO	Very Involved	Somewhat Involved	Not Very Involved	Not at all Involved
0%	19%	3%	11%	0%
1-10%	42%	67%	53%	100%
11-25%	12%	23%	11%	0%
26%-50%	19%	7%	5%	0%
51%-75%	8%	0%	16%	0%
76%-100%	0%	0%	0%	0%
Don't Know	0%	0%	5%	0%

CROSSTAB CEO: IT Spend with Level of Interaction with CIO	Very Involved	Somewhat Involved	Not Very Involved	Not at all Involved
0%	8%	3%	29%	50%
1-10%	54%	41%	43%	0%
11-25%	8%	29%	0%	0%
26%-50%	19%	18%	29%	0%
51%-75%	8%	3%	0%	0%
76%-100%	0%	3%	0%	0%
Don't Know	4%	3%	0%	50%

CROSSTAB CIO: IT Level of Interaction with CEO and who CIO report to.	Board of Directors	CEO	CFO	COO	Other
Very Involved	40%	37%	24%	20%	27%
Somewhat Involved	40%	37%	35%	60%	36%
Not Very Involved	20%	20%	29%	20%	36%
Not At All Involved	0%	6%	12%	0%	0%

CROSSTAB CEO: IT Level of Interaction with CIO and who CEO report to.	Board of Directors	CFO	COO	Other
Very Involved	41%	0%	0%	38%
Somewhat Involved	44%	50%	0%	63%
Not Very Involved	12%	50%	50%	0%
Not At All Involved	3%	0%	50%	0%

Supporting Verbatims

Note: highlighted verbatims also appear above in the Detailed Findings section.

Role of Technology in Business

What are the key elements of this alignment?

Support Business Strategy

- *“Evaluating technology from the standpoint, how can it improve the operational performance of the business, how can we improve the market share and therefore increase sales and positioning in the marketplace where we get return on investments. We have internal targets on return on investments so any technology implementation should improve business in such a way so we can hit our performance targets from a sales growth, and profitability, and return on investment point of view.” – Company President, United States*
- *“Key elements include benchmarking and comparing the accomplishments as against the desired parameters be it sales or client satisfaction or quality.” – CEO, India*
- *“The technology strategy is to put our resources in areas that are best for meeting the company growth strategy. Every technology decision is measured against how it is going to affect the corporate strategy.” – CIO, United States*
- *“The key elements are we prioritize against our strategic goals. The IT strategic goals which were developed and aligned specifically to the academic goals of the university. The number one being enhancing teaching, learning and research on campus. Much of what we do is focused on those goals. There are six elements overall [including]: maintaining a scalable, stable infrastructure [and] enhancing the technology living environment for the students on campus. We do have another one that is a pragmatic security and information protection program. Those are the primaries.” – CIO, United States*
- *“Governance is the element that ties the two together. We've put the business in the driver's seat in terms of which projects we do and when we do them. We not only select the projects, but determine which one we do first. IT is only a player in terms of governance, in helping the business understand what it will take to further the business initiatives.” – CIO, United States*
- *“I think the organization has strategic goals as indicated around patient safety, quality improvements, meeting regulatory requirements, improving efficiency of the workforce, etc., and IT has supportive initiatives at every one of those levels. At every level of the organization we have integrated our IT strategy with complete alignment with the organizations goals.” – CIO, United States*
- *“There is a linkage between business strategy alignment and technology objectives. So my objectives are aligned to serving the business strategy. There is oversight in terms of the technology projects or investments that we are*

making with the business steering committee. There is a strong loop between revenue targets that are established by the organization through to specific products and services that we manufacture and create ourselves, as well as services we provide through usage of technology. So there is a strong linkage between revenue that is derived entirely from our solutions. This governs around that in terms of our strategy for the next year is based on growth of organic business as well as new revenue streams that we are introducing, and a lot of the new revenue streams have to be supported by technology.” – CIO, Western Europe

- *“The key elements of the alignment are that when we put together our technology plan it is based on interviews with the business owners so it is really their plan. So in that sense it is aligned. The reason I said somewhat is because they don't have a business plan.” – CIO, United States*
- *“Basically our IT strategic plan is built from the corporate strategic plan.” – CIO, United States*
- *“They have some clinical goals, clinical revenues, financial goals. We sit with them and once they identify what their key business priorities are, we look at what technologies are in place or missing and we plan those technologies to complement where they want to put the priority focus.” – CIO, United States*
- *“The understanding that we need to have one common system in place to be able to achieve our goals in business.” – IT Project Manager/Head of IT for UK, Western Europe*
- *“IT isn't a means for strategy, that is to say IT serves strategy, and not the other way round.” – General Manager, Western Europe*
- *“Simply when we create a business plan, then technology needs to be created. New services are based on new technology enabling them.” – CIO, Eastern Europe*
- *“Development of business, all business communication via internet and extranet.” – CIO, Eastern Europe*
- *“For everything we do in business from supply chain fulfillment to distribution transportation, it's the whole thing.” – Company President, United States*
- *“Strategic planning is done in conjunction with IT department. Whenever we have a goal we decide what we need to have for that goal and then one of the big things we decide is whether technology is going to make that happen.” – CEO/President, United States*
- *“I think we start with an overall company strategic plan and then the IT strategy supports that and then alignment starts with an overall plan and the communication of that plan.” – CEO, United States*
- *“Technology strategy should follow the users' needs and their business needs. We should find out new requirements constantly. Business strategy is the primary drive of technology strategy. It's the source. It shows the importance of IT existence.” – CIO, China*
- *“Technology and business are not separate. Technology is the base for business. From the CEO's point of view, business has a direct function, and it is the tool for*

him to evaluate the business strategy. But for technology, we have to sell it along with the projects in hand.” – CIO, China

- “The mission of our IT department is to enhance the business capability of our business department. So we have to connect everything we do with our business. For example, we improve our SAP system in order to save costs for other departments. The new lab management system we built brings us competitive edge in the market.” – CIO, China
- **“We share the same goal: we want to gain more profits.”** – CEO, China

Communication

- **“Communication between the IT and the operation is the primary element.”** – Company President, United States
- “We meet regularly with operations, sales and talk about customer needs, customer problems to see what we can do better.” – CIO, United States
- “Quality on strategy, collaboration between IT and the key business leaders, customer research.” – CIO, United States
- “Communication between the operating people and the technology people.” – Company President, United States
- **“If they are not talking to each other across the business units as much as they should be then you potentially have lost opportunities** so it's hard to measure those things. To me my concern relates to a communication gap across business units.” – CEO, United States

Flexibility

- “Efficient development of new business areas, cost efficient systems, allowing a certain kind of flexibility in the system.” – CEO, Western Europe

New Technology/Technology

- “To strengthen and to let the company grow, to be up-to-date with the technology in the whole world, increase the competitiveness.” – CEO, Western Europe
- “I think it should be ideally the smooth functioning of IT and its support for the processes inside the organization. We are generally a chemical company but majority of our products and services do need IT for innovations and life cycle improvements in terms of minimizing it. Key is to keep things under control and help in raising the productivity of the organization.” – CEO, India
- **“Technology and business strategic vision are very closely aligned because of basic reason that our line of business is to provide our expertise in customized technological solutions to our customers.** Instead of just working as a sales vendor of the technological houses, what we do is apply our intelligence on the existing product and provide it to the customer as per his requirement. Our business and technology is interrelated and are complimentary of each other which is working towards increased productivity and efficiency in the organization.” – CIO, India
- “The general direction of our business is directly related to the information we have available to make our decisions... The technology you're talking about will provide that information and so the more information, relevant information we

have the better decision we can make and the more competitive we'll be. So I would say it's a direct relation between having good information and being more competitive and more attractive to our customers." – Chairman, United States

- "Product innovations and process delivery are the two key elements. The first one is based on the CAD/CAM tools that we have for the product innovations, new models, deriving the best capabilities in our automobiles as per international standards. Process delivery works in close relationship with inventory management system and resources allocated to each manufacturing plant accordingly. Needless to say that technology is the key contributing factor for our company." – CIO, India
- "The technology strategy is essentially the brain of our business. Communication." – Company President, United States
- "It comes down to added value to products and new technology." – CEO, Western Europe
- "New innovations, up-gradations in the electronic equipments especially on the VLSI side, and inventory cycle to reduce operating cost are the key elements which strengthens that alignment." – CEO, India
- "The better the technology, the better the business results." – CEO, Eastern Europe
- "Speaking of the strategy, you must have technology first, and then the development. Technology department is a core department. Other business departments are just intermediate links for its value transformation. That's because the main products our company manufacture are electronics." – CEO, China
- "Support for IT area." – CEO, Latin America

Growth / Strategic Expansion

- "Strategic expansion because that is the key driver, which is driving technology as well. When you start getting into a global situation that is where the technology plays the biggest role. Anytime, anywhere, anyplace information." – CIO, United States

Client Satisfaction

- "The key element is office automation for kick starting the operations and processes inside the organization as well as client if we see it from a growth point of view of the company. For us, client is the final commandment and we always deliver which could be part of the utility for him." – CIO, India
- "Key elements include generating the specific and customized information to the respective clients in quickest possible way and help them in transaction facilitations. In general terms the chief and most vital element is providing them with travel experience satisfaction. If we want to achieve all this, technology has to be very much present right at the front." – CIO, India
- "Quality based approach, performance driven capabilities with primary motive of client satisfaction is the unique goal of our company. I think that these three elements have paid the dividends in our business vision." – CIO, India

- *“Mostly it's to gain more market share and have more profits. Also, the improvement of internal technology can promote our efficiency.” – CIO, China*

Miscellaneous

- *“We have a leadership team in place and basically set priorities and demonstrate needs, prioritizing our project so they are in line with that.” – Senior Director of Information Services and Technology, United States*

How would you suggest better alignment?

- *“To put side by side the systems strategic plan and really to develop the IT strategy against the systems operational strategy and to make sure that the system strategies are supported well by the IT strategies and you also have to make priorities in your decisions.” – President/CEO, United States*
- *“The use of technology is only a tool and not an end in itself. The possibility of re-creating new organizational modes, which we could not have thought of in the past, contributes to a strategic alignment. In order to better align those two visions, it would be necessary for our Heads to communicate more on their visions and then select the relevant internal processes for their general implementation. From there, it will be necessary to analyze all those processes so as to reach optimal results and thus put into place an IT solution that would be adapted both to our needs and one that would make the whole system more responsive; i.e. by implementing service-oriented application architectures.” – CIO, Western Europe*
- *“Mainly from becoming more closely related to the business through meetings and attending the board meeting and that sort of thing that just didn't happen before with IT. It was very much seen as just a function locked away in the pit of the business if you like. That's at a group level but we have further complexity because we have a division level as well, so it gets a bit more complicated but it's the same process.” – CIO, Western Europe*
- *“State-of-the-art technology, in the long term more employees, quality management, qualification by ISO standard has to work and must be adhered to.” – CIO, Western Europe*

How is this alignment accomplished?

Communication

- *“Just with cross communication.” – Company President, United States*
- *“I think through incorporation of the CIO in monthly, or the bi-monthly meetings of the executive council of the college, and also in the vital planning process of the college.” – CEO, United States*
- *“It's accomplished through direct intervention and supervision by the COO to the CIO and it's done through meetings, one to one reviews, performance checks, staff meetings and board meetings.” – President/CEO, United States*

- *“Through periodic meetings. Through interaction with the customers of IT and through an organization in house called IT advisory committee.” – CIO, United States*
- *“Periodic meeting, periodic discussion groups, management meetings. I think it's communication, that's the key driver.” – CIO, United States*
- *“Through discussions and conversations. We went through a formal planning process that identified and aligned the current and future IT plans with the overall strategic plan.” – CIO, United States*
- *“We meet face to face weekly. He is always checking to make sure we are speaking the same language. Within IT there are two halves, the technology change and the cultural change. I have the technology change and they have the cultural change.” – CIO, United States*
- *“We go through more collaborative things, we talk more. Introduce some demos to them on ways you can generate more profit with the company. We educate them.” – CIO, Asia/Pacific*
- *“I just think through ongoing discussion and then we align our projects that come out of that technology strategic plan into our annual operating plan which is obviously then our annual operating budget. So our annual budget planning has to be tied back to the strategic planning document or the in our case the technology planning document so we have both capital items that are strategic and then we have our operational plan and everything links back. It's like a big matrix. And basically you don't get money for anything that doesn't align. It's simple.” – CIO, United States*
- *“I have much exposure to my CEO; he's only two offices down to my right. We often discuss my IT strategy to the business plan and how we are going to leverage IT in the future. He does not see IT as a cost center he sees IT as a strategic maneuver and so if you ask me how that happens it's through a series of discussions and conversations and meetings with our executive staff and the like.” – Senior Vice President/CIO, United States*
- *“There are weekly leadership meetings, bi-monthly capital meetings. When you put that all together, there is nothing that happens that I don't know about.” – IS Director, United States*
- *“We sit down and we agree. It's just like IT, our process is changing, we used to have an IT government that was strictly for Eastern, that process is changing, but in a day to day operation we sit down in those meetings every week and we understand. What are those business drivers in offering to the table? What technologies if applicable are either impacted or needed or lacking? We just fill in the gaps.” – Director of IT/CIO, United States*
- *“It is the objective of my weekly meetings with my manager. The boss will have a look and it is he who makes the decisions.” – CIO, Western Europe*
- *“With negotiations, discussions and with ongoing technical modernization– CIO, Western Europe*
- *“By constant communication and adoption of the company's development– CIO, Western Europe*

- *“Communication. I just do faithfully whatever our CEO dictates.” – CIO, Japan*
- *“As each has their own vision, we communicate and discuss what we think.” – CIO, Japan*
- *“We talk to each other.” – Company President, United States*
- *“We communicate and talk about it. What I do is set forth a vision for this business and have ensured that leaders on the team and certainly the CIO react to it from a business perspective but also react to it from functional responsibility.” – CEO, United States*
- *“With discussions, exchange.” – CEO, Western Europe*
- *“We meet relatively often and he's involved in our strategic planning and there's a relatively large amount of dialogue back and forth about where the company is headed and the role of technology so that we're all on the same page.” – Chairman, United States*
- *“We spend a lot of time talking about it. It's communication there, we meet routinely as a group, at every 6 weeks sometimes more depending on the time of year.” – CEO, United States*
- *“We work together on all of this, from the beginning to approval, implementation, training involvement on an ongoing basis on the performance. The information we get out of it. We are just part of a team.” – CEO, United States*
- *“On regular meetings, on our different divisions having their own technology meetings with our technology firms. On day to day consultation, on day to day problem solving. It's a synergistic relationship.” – CEO, United States*
- *“By weekly meetings, ensuring we are on the same page.” – CEO, United States*
- *“I've messaged to people that the CIO is important in how we make business decisions in the future and what tools we are going to need to be successful in the future.” – CIO, Asia/Pacific*
- *“Planning, weekly meetings.” – CIO, Latin America*
- *“Daily contacts.” – CEO, Latin America*
- *“Weekly meetings.” – CEO, Latin America*
- *“We accomplish our alignment through communication, which is very important. When the CIO is making decision about an IT product, he would give me a report about relevant products. His main concern is effect of the product, while mine is the cost, the operation time, the installation and the level of usage.” – CEO, China*

Strategic Business Goals

- *“That alignment is accomplished by. . . we have a set of overall strategic goals for the company and his objectives for what he wants to accomplish in the IT area that he reviews with me aligned with those goals. Those are profitability, on-time delivery, technology implementation that gives us the return on investment; I just mentioned three of the top ones. Whatever strategies he has developed for his department should align themselves with the overall company goals.” – Company President, United States*

- *‘I think communication is the key, that and my being aware of what the organization is trying to do as well as the organization understanding and our getting it done.’ – CIO, United States*
- *“Through our business strategy and IT planning process we really establish the alignment between our business strategy and our IT strategy. That's pretty much the mechanism we use.” – CIO, Western Europe*
- *“Adequate business forecast, planning of work, proper scheduling and prioritizing with good level of awareness to perform with client in mind are few of the agenda for that alignment to be accomplished. Technology plays a vital role in disaster recovery plan, overcoming contingencies, meeting expectation levels and setting the right tone for industry standards comparableness.” – CIO, India*
- *“On a regular basis we have discussion about strategic direction and identification of priorities from a project standpoint. In other words, IT doesn't drive the organization, operation does.” – Senior Vice President for Hospital Services, United States*
- *“We share the following vision: we would like to lower operation cost and promote efficiency. I would have interaction with the CEO through evaluation. I would also ask for the CEO's opinion and implement his ideas. To achieve the alignment, the most important thing is our mutual communication.” – CIO, China*
- *“Definition of goals.” – CEO, Latin America*
- *“We both think that without modern IT technology, a company cannot grow.” – CIO, Eastern Europe*
- *“We would seek common ground while accepting the existing differences. We share the similar vision on the whole, but we also allow small diversities to exist. We have a strategy planning among the board of directors. Technology integration has its priority. And everybody should place the most important element that affects the company's development on top. This is a rule that everybody should comply with.” – CEO, China*

Committee/Leadership Decision Making

- *“I am one of the decision makers of the final procurement in terms of financial support. CIO and other IT staff conveys their experiences in the meeting. If need be we tend to procure the new technology as it's more on the investment end helping us in future. This alignment works with discussions and taking prudent decisions in favor of organization as a whole.” – CEO, India*
- *“We have a governing structure that helps us align and prioritize and commission specific work on campus. I chair a university wide IT committee which prioritizes both academic as well administrative technology initiatives. He doesn't sit on the committee directly, but I sit on his, obviously I report to him and sit on his cabinet with many of the members of his cabinet and my IT committee are the same.” – CIO, United States*
- *“It is accomplished through his support of the IT vision. It is also encompassed through him being a member of the IT steering group. And also by me being part*

of the senior management that is involved with establishing business strategy.” – CIO, Western Europe,

- *“The IT department makes offers to and advises our Board of Directors and Local authorities who then either accept or reject the offers depending on the various costs involved or the feasibility of the projects in question.” – CIO, Western Europe*
- *“We have certain processes laid down on how to accomplish the vision and thought process. We do a complete management team meeting every six months to discuss our technological strategies and its impact on the business outcomes. We always try to analyze our desired results and compare it as per expectations discussed in the last meet. If any of the policies were a success in the past then the same is implemented on a broader scale into the organization.” – CIO, India*

Miscellaneous

- *“Very specific targets, benchmarks and close tracking of performance.” – CIO, United States*
- *“Through better financial results, better competitive positioning on the customer base, deepening relationships with existing customers.” – CIO, United States*
- *“Culture of the business. If the culture of your business is that users determine value, not providers, and that ultimately your going to take the business where you need to go and increase the relationship with your customers to become almost indispensable in the eyes of your customers. Then as you identify those strategic initiatives that continue to fortify and solidify that position in your customers business. From those initiatives you would determine where you need to leverage IT or technology, not the other way around.” – VP, Global Sourcing and Product Management, United States*
- *“Through evaluation of computer needs at the property level for each manager for each hotel and the sales staff.” – Director of IT, United States*
- *“Well basically we would sort of take, as far as the CEO is concerned he's looking to for IT to better support the business and be more responsive while reducing the cost as well.” – CIO, Western Europe*
- *“By investing, modernizing, user trainings.” – CIO, Western Europe*
- *“The director has a technical education and these so he understands these things.” – CIO, Eastern Europe*
- *“We always think from the customer's point of view and fitting ourselves into customer shoes and then see our product and service delivery. If we can satisfy ourselves that ways we can satisfy the client for sure.” – CIO, India*
- *“We deliver whatever is expected from company's point of view and in return company is doing good over the last so many years. So, the alignment is just to put all things in shape and IT support from back end facilitating the operations.” – CEO, India*
- *“To achieve the company's goal through intensified training (skills and work procedures).” – CEO, China*

How would you suggest better alignment?

- *“Well we're just recently bringing the CIO to the executive team table, he hasn't been at the table in the past and so we're elevating that person's role within the executive team and are in constant evaluation of that person's effectiveness.” – President/CEO, United States*
- *“We need better alignment or we need to improve IT services” – CEO, Western Europe*
- *“I think he sees the value, but he is more sales oriented. Sometimes I think he sees it as an operational expense vs. actual alignment with getting things done.” – CIO, United States*
- *“Yes it is a problem insofar as our General Director of Services is not sufficiently aware of what new technologies could bring to an organization like ours. And he seems to have no inkling with regards to this issue, hence our difficulty in obtaining more freedom in exposing to him the advantages inherent in such technologies. The main decision-makers should be more involved and there should be more people involved in the final decision. It would be great to have more motley teams in the implementation of general projects.” – CIO, Western Europe*
- *“President must support the IT area.” – CIO, Latin America*

How is your company currently integrating technology in order to accelerate growth?

Business Strategy

- *“It's part of the strategic plan and what decision particular third party providers we go with but we will integrate their technology with our systems. We're just beginning on that.” – Company President, United States*
- *“Technology strategy is one of the key pillars of our growth plan. We are looking at completion of technology products that will continue to maintain our competitive advantage in the market place. There are also other reasons - we also look on technology as a means for our business process improvement and we are continuing that initiative.” – CIO, United States*
- *“By identifying market opportunities that we want to expand into. Then ensuring that we can take these concepts and ideas and turn them into products and services. It really goes back to business strategy which identifies opportunities for growth and then executing those and making sure the technology plans are aligned with the business strategy.” – CIO, Western Europe*
- *“By being part of the strategic planning at the corporate level.” – CIO, United States*
- *“We're pretty focused on it. How much process are we making it is difficult to measure that. Well we're using technology to develop some new channels to market. We're using technology to optimize the performance of existing channels to market. In other words these are all elements of improving the customer service we provide and therefore helping us to maintain our revenue,*

grow our revenue and reach our ROI goals and protect the profitability of our business model.” – CIO, Western Europe

Integration

- *“By using in our distribution business we're using it to compare buying habits and reorder points with customers so our sales staff can use that information to hopefully generate more sales or to find out why we aren't getting the sales we had previously that's the first thing, the most important thing that comes to mind.” – Company President, United States*
- *“Very integrated systems and very closely aligned with the business process.” – CIO, United States*
- *“It's integrated into our marketing systems, we have customer profiles on every customer, we know the customers profitability, we know what they have purchased or not purchased, we know the target profits, we know the target profitability, we know whether they are an ABC customer in terms of profitability.” – CEO, United States*
- *“We integrate the system and the data. Data integration is the basic. We are not just doing this now but also we will have to do it in the future.” – CIO, China*
- *“So far our integration is based on what projects we have done in the past or what we are currently doing. Our technology integration is still based on our clients' requirements. We find out where the industry needs are extended to, and then develop relevant products. We can gain the profits if it is successfully developed. Our integration is actually all based on the clients' goals and needs. We would promote technology innovation, because we are a company that relies on projects.” – CIO, China*
- *“We integrate technology by bringing in more professionals and enhancing the skills of our current employees. We would provide more training opportunities and absorb new knowledge. We realize that regarding technology integration, we are not as good as some foreign countries. So we will keep improving ourselves.” – CEO, China*

New Technology / Technology

- *“We are looking at new technology all the time. Refining our websites. Offering our customers new options of things they can do online. Implementing technology in our work processes to improve efficiency.” – CEO/President, United States*
- *“Via the modernization of our organization, i.e. the computerization of patient files. We have also implemented a technical watch budget at my level in order not to miss out on opportunity evolutions for our system.” – CIO, Western Europe*
- *“Our main business comes from repeat customers as a satisfied client becomes an asset to the company. As I mentioned earlier technology is an essence to our core business and it has be continuously updated along with the competitors in order to survive in market. I can all that we are putting in our intelligence and making a customized procedure or our clients for their support and facilitation.” – CIO, India*

- *“We have technology platforms that have to be scalable in order to meet the increase transaction volumes of business. I would say the other piece is delivering information back to management.” – CIO, United States*
- *“We have an old legacy system and we are looking to replace that with a single platform. Right now we have a lot of isolated system and we don't get the efficiency we believe we could get with a new ERP system.” – CIO, United States*
- *“New technology through remote deposit, which helps business customers, with added convenience and better ability to control their financial scenario.” – Executive Vice President/CIO, United States*
- *“By looking at long term, five year plan of where we want technology to be and what we want to achieve like one single system that integrated between all our systems.” – IT Project Manager, Head of IT for UK, Western Europe*
- *“We are in constant development and tracking of new technological trends and their implementation for the benefit of new services, or for improvement of the quality of services. It also concerns financial issues.” – CIO, Eastern Europe*
- *“We implemented sales force support tools in order to report and communicate smoothly.” – CIO, Japan*
- *“We use technology to streamline information and make the company more productive.” –, CIO, Asia/Pacific*
- *“Staying on the cutting edge of technological equipment and knowledge advances.” – Chairman, United States*
- *“I have no idea, that would be the IT department. Everything we do is based on computers. I can't do anything without a computer.” – CEO/President, United States*
- *“We just upgraded our system to get us more accurate information and to upgrade our systems to make it easier for our people to use.” – CEO, United States*
- *“We have an information security infrastructure, best software to guarantee the company's growth.” – CIO, Latin America*

Staying Competitive

- *“We are trying to stay ahead of the curve in our industry to provide more technology than most of our competition provides.” – CIO, United States*
- *“Process optimization, thereby securing a competitive advantage.” – CIO, Western Europe*

Lower Costs

- *“Capturing revenue that we are currently not capturing. We are using it to lower our cost in our Hong Kong business by managing staff.” – Managing Director, Asia/Pacific*
- *“How we are delivering on-line helps with growth because we don't have to pay for bricks and mortar.” – CIO, United States*

Miscellaneous

- *“Marketing, information systems, website development and design.” – CEO, United States*

- *“As I have already told that if we need to prioritize these three parameters we will give more significance to mitigating risk. We have the Customized software of Axygen Quotation Software wherein we have got necessary level of checks and constraints at subsequent levels (called as milestones). With each passing milestone we have to evaluate our progress. This keeps us on track and if need be we can put in more to reach at the desired level of benchmark of quality at the next milestone level.” – CEO, India*
- *“Again we're looking at how we manage remote locations. More use of laptops and other sorts of mobile devices. Mostly working on laptops right now, cell phones are in use, considering PDA's.” – CIO, United States*
- *“Nowadays such technologies contribute to a higher growth thanks to the use of e-learning which allows people to train self-sufficiently.” – CIO, Western Europe*
- *“The inventory management we were discussing earlier is one of the key areas where IT has been a proactive participating. IT has enabled our inventory system to collocate with the suppliers and production unit of the company. Ultimately it has made the geographical boundaries too small and hence better coordination and cooperation is delivered in the entire production cycle. This has resulted in facilitating growth of the company in the long run as the time for assembling of single tractor has been reduced considerably.” – CIO, India*
- *“Let me elaborate more on the Progress Tracking System which works keeping into considerations quality control and feedback at the subsequent levels. As soon as we are falling short of a certain parameter, this system generates color code of red and it makes it presumed that there is some major flaw in some parameter. This particular system also dictates the intent of that flaw and gives possible suggestions for the solutions to the same. In generic terms it is closely related to an expert system which thinks logically. Hence it paves the way for suitable outcome and generates the path for accelerating growth for the company.” – CIO, India*
- *“That's an area I've already talked about where we aren't doing as well as we should do but it has it a great deal to do with analysis financial, clinical outcomes, that software needs to be integrated and we need to bring financial and quality data together. And more importantly we need to bring software to the delivery of medicine, digital x-rays robots in surgery etc..” – President/CEO, United States*
- *“There will be some timely feedback about products, which is the base for the development of our company. Also, there will be some supports for the daily maintenance, renewal and upgrade of our network. We may use some new combination of IT products to make sure that works in all parts can be more coordinative.” – CEO, China*

What would be the risks to your company as it relates to accelerating growth if you DIDN'T integrate technology to achieve business outcomes?

Loss of Market Share / Not Competitive

- *“Slow loss of market share.” – Company President, United States*

- *"We would lose competitive position in the market place. There is constant pressure to shorten lead time, improve quality, ongoing price pressure. Like a combination of those things you need to look at technology as a part of how to address how aggressive you are in better improving our position in the marketplace."* – Company President, United States
- *"Lose market share and effective place of impacting the community in a positive way."* – President/CEO, United States
- *"Besides borrowing we wouldn't achieve the profit levels we need to, nor a competitive edge."* – CEO, Western Europe
- *"We would loose out in the growth terms and it will penalize our future potential market share in our business."* – CEO, India
- *"We would not get the appropriate staff; we would be lagging behind our peers. That's the biggest thing, it's competitive advantage, that's what it is."* – CIO, United States
- *"Once again we would follow behind the competition. It would disadvantage us competitively."* – CIO, United States
- *"As I said before we would get left behind by our competition."* – CIO, United States
- *"The market is moving very quickly and we would face increased competition. Over a period of time we would lose market share."* – CIO, Western Europe
- *"We won't be able to survive in the market as our entire business is based on the technological solutions with the latest techniques and approaches and shunning the obsolete ones."* – CIO, India
- *"We would not be able to stay in business long-term."* – CIO, United States
- *"You would be less competitive."* – CIO, United States
- *"I think very much losing out to our competitors if we can't. Most of our manufacturing is in the UK if we can't keep control of our cost and go do the business we'll obviously loose out to our competitors abroad; mainly India, China and so on."* – CIO, Western Europe
- *"There would be a loss in progress and competitiveness."* – CIO, Eastern Europe
- *"Loss of market share, insufficient growth of the company."* – CIO, Eastern Europe
- *"We'd be out of business. Every five years our business has changed 100% and that is technology driven. If we don't change with technology we are out of business."* – CEO/President, United States
- *"The biggest risk is wrong data."* – CEO, United States
- *"There may be risk regarding the client relationship. Our market share may decrease."* – CEO, China
- *"It would be obsolete by the competitiveness."* – CEO, Latin America

Slow Growth

- *"Oh I think we would get the big risk we would not be able to meet the needs of the population out there and we would not be able to grow as much as we need to grow."* – CEO, United States

- *“We wouldn't grow and then I would say the risks are very high. We compete with other companies, they implement new technology and if we don't keep up we fall behind. Customers demand that we make easier for them to do business with us and they see technology as being the thing that helps make us do business with you.” – CEO/President, United States*
- *“It leads to cutbacks of business instead of increase, because the service cannot be offered efficiently and it is not possible to illustrate innovative products anymore.” – CEO, Western Europe*
- *“We would loose out in the growth terms and it will penalize our future potential market share in our business.” – CEO, India*
- *“We would be stuck in the way we've been doing it for the last century. You know, ink on paper. And there's a political risk in that to the extent that there's a gap between what people expect, reasonably expect and the way the government operates there's a problem.” – CIO, United States*
- *“The risk would be that we have increasing demands for services and we simply wouldn't be able to keep up the pace.” – CIO, United States*
- *“The companies that aren't current will get consolidated. There were 14,000 banks ten years ago, today there are 7,000. A lot of the banks we have acquired weren't able to compete on the IT front and hence they sold. When we can't compete on that front we would probably have to look at another partner. It's a prerequisite to compete long term.” – Executive Vice President/CIO, United States*
- *“Slower response to business opportunities.” – CIO, United States*
- *“The risks would be that you couldn't grow. Technology buys you the room to innovate and in healthcare you need to be constantly innovating because the environment is so challenging.” – CIO, United States*
- *“We wouldn't be able to accelerate and expand at the same kind of speed.” – CIO, Western Europe*
- *“Disaster is the word I should mention. We would be nowhere in the years to come if there would be no technology. As of now we so dependent on IT that we cannot think of sustaining without it.” – CIO, India*
- *“We would definitely slow down and lose out to others. Efficiency would not be that high once you lack these kinds of technologies. With technology you can cut out a lot of steps.” – CIO, Asia/Pacific*
- *“It would be severe, the technology is moving very fast in hospitals and you're either keeping up or falling behind and if you're not able to fully integrate technology young physicians/nurses won't want to come here and without more doctors you can't expand capacity. And technology is a way doctors can do more procedures to make more money for themselves since their income per procedure is on the decline.” – President/CEO, United States*
- *“There wouldn't be risks, we wouldn't accelerate growth period, it would be impossible.” – CEO, United States*
- *“There will be risk for our development, and it may become a very big barrier in the future. If there is no new technology or equipment, the business may not be able to develop rapidly.” – CIO, China*

- *“It would result in a decrease of reputation and the company may face the danger of closedown.” – CEO, China*
- *“We would stay where we are now. In other words, we will be left behind.” – CEO, China*
- *“Lowest speed to growth, low competitiveness on the market.” – CEO, Latin America*
- *“Postpones growing process, bad relationship between head office and franchise, does not deliver what was promised.” – CEO, Latin America*

Decrease Turnaround / Timeliness

- *“It will be loss in terms of timelines (in delivering the projects within the specified time) and best quality assurance to clients.” – CEO, India*
- *“I think we wouldn't be as effective, there would be missed opportunities and we might not be able to respond as quickly.” – CEO, United States*
- *“It would be the incomprehension of information. As information is dominating the society, it is very important to get the timely and accurate information.” – CEO, China*

Not Meet Business Strategy/Goals

- *“We would fail in our mission to integrate technology as a business strategy.” – CIO, United States*

Increase Costs / Declining Profits

- *“It makes the operations cost go very high if you don't deploy information technology.” – CIO, Asia/Pacific*
- *“Declining profits.” – CIO, United States*
- *“It makes the operations cost go very high if you don't deploy information technology.” – CIO, Asia/Pacific*
- *“Besides borrowing we wouldn't achieve the profit levels we need to, nor a competitive edge.” – Director of Operations, Western Europe*
- *“Our cost go up and earnings go down.” – Managing Director, Asia/Pacific*
- *“Without integration we might need to purchase the technology from the outside market, which could cost us a lot. The cost is high, and at the same time we would be under other people's control.” – CEO, China*

Customer Dissatisfaction

- *“Patients are treated suboptimal.” – CIO, Western Europe*
- *“It could make the clients dissatisfied and hence no growth and hence no sustainability in the long run.” – CIO, India*
- *“Customer loss. Losing the opportunity of getting new customers.” – CIO, Japan*
- *“It would be high. We could lose clients. We would not be able to deliver the new products and opportunities we are bringing to market. It would be catastrophic.” – CEO, United States*

How is your company currently integrating technology in order to lower costs?

New Technology / Technology

- *“Through research development implementation of new products in the market, products available in the marketplace so rather than build something ourselves buying something off the shelf other software packages and integrating those into our system.” – Company President, United States*
- *“From an engineering side of the business, utilizing analytical tools, specialized test equipment to reduce the overall costs to validate a product as well as shortened lead time which results in less overall engineering and development hours. Probably the other area is to automate some process whether they are on the back side of the business or the management side of the business to reduce the cost. Some of the consolidation of reports, we used to do a lot of various reports and would look at those. Reduce the number of consolidated using the data we have in our system already. We get information in a more timely manner with less people-time to accomplish it. On the operations side, where we put in some automated and process inspection techniques to ensure a higher percentage of first-time quality and less downtime.” – Company President, United States*
- *“We are identifying solutions whether they are commercially available or still need to be developed specifically designed to improve our efficiency.” – Company President, United States*
- *“By introducing new technologies, the standardized costs for illustrations are reduced.” – CEO, Western Europe*
- *“Implementing a new billing system and an ERP which are both designed to push us and move to a consolidated business program.” – CIO, United States*
- *“We are currently in the process to select a new ERP system.” – CIO, United States*
- *“Part of why the decision was made to go to an ERP system and have additional steps and they have seen a huge ROI on that just from reduction in paper.” – CIO, United States*
- *“We do it ourselves. We have integration technology that has been developed by Cliphone and we are using that. We have also used commercial tools in the past to help with defining integration points and integration road maps. We also have to take an external view by asking our customers what they want integrated and we pursue those specific integrations. It reduces data duplication between multiple systems that our clients may be using. It automates the transfer between common information between disparate systems so our customers don't have to do double data entry.” – CIO, Western Europe*
- *“Changing of business processes going from paper to electronic as an example. Having less redundant data entry because we're able to share the registration of a patient.” – CIO, United States*
- *“By the implementation of technology products, products that allow manual processes to be dissolved and stopped.” – IT Project Manager, Head of IT for UK, Western Europe*

- *“We are developing an in-house system. In short, the system can link all the business function and share the data among departments...and help to lower the operational lead time and increase productivity.” – CIO, Asia/Pacific*
- *“In application improvement... in certain applications required by the certain departments, in order to enhance and cut short time and cut short paper and so on so that kind of application we should propose and implement and then at the same time we'd be cutting that. Faster and cheaper.” – CIO, Asia/Pacific*

Return on Investment

- *“It reviews all options of business and decision making, what would it cost, and then decisions are made by the board. There isn't really a process for reviewing all options and improving efficiency, taking the board level out and looking at return of investment and the marketing group. When you view technology, it's not a process you can identify it's a culture.” – CEO, Western Europe*
- *“It helps in terms of lowering effort, time of processing and hence decreases the cost of operations. The more cost we save we can more transfer that in form of lowering price to our customers and hence carry them to level of delight from satisfaction.” – CEO, India*
- *“Cost is very vital and IT encapsulation has done the same for us in the last five years or so. We have been to able to deliver our capabilities inside and outside our organization taking into considerations the price factor and cost reduction. This cost reduction may not be in terms of financial initially but it is must in the form of better understanding and proper functionality in terms of efforts initiated in delivering the services.” – CEO, India*
- *“Again, budget cycles, managing capital expenses appropriately, managing expenses appropriately, so it's a bit of both.” – CIO, United States*
- *“It is part of the business case, when we go for it technology among other things, we try to estimate the impact it will have on the cost of operating the government. It eliminates rework. . . If we weren't using technology we would have to talk about adding people, or a lower level of service. ...We lower the risk and speed up the whole process of land development...the degree to which we can speed that up increases the amount of money flowing into the government at no cost to the city.” – CIO, United States*
- *“We use technology to reduce costs. In fact we use it in daily usage and process to avoid any kind of problems and hindrances in the operations which are taken care by the respective department. If I can give you examples like we have online complaint tracking system or any request which avoids unnecessary delays in progress of the work. We have online performance management tool generating the best comparative results of the expected and achieved levels.” – CIO, India*
- *“Technology helps in maintaining the desired cost structure for operation handling for the respective processes. If there had been no technology then it could have penalizing effect on the effort levels of our employees and hence lower productivity. Since productivity is directly proportional to sales and hence profits are lowered and all at the expense of higher costs.” – CIO, India*
- *“1. Unable to control the cost. 2. Unable to promote efficiency.” – CIO, China*

Audit

- *“We usually audit certain services and from the conclusions we’ve drawn, we then determine the various processes we’d like to put into place. Then we usually add more processes to boost optimization to finally get the information solution of certain processes.” – CIO, Western Europe*
- *“We are able to get the feedback that the particular areas we need to focus on because of ERP's intelligence sub-module. This has enabled to concentrate on only few specific areas rather than widening the horizons. Ultimately it has reduced the effort levels as well as the operational costs of the company.” – CEO, India*
- *“We would have discussion first, and then implement the scheme. If there is some technology that is crucial but requires a lot of cost to obtain, then we would consider the outcomes before we decide whether we should invest in it or not.” – CEO, China*

Automation

- *“We are developing an in-house system. In short, the system can link all the business function and share the data among departments...and help to lower the operational lead time and increase productivity.” – CIO, Asia/Pacific*
- *“We are trying to do things as far as process electronically to eliminate paper. Help schedule our labor.” – Senior Director of Information Services and Technology, United States*
- *“It's hard to gain efficiency without automation. We have been able to lower our support expenses not just labor but other costs through use of technology and it's very important.” – Executive Vice President/CIO, United States*
- *“By automating processes.” – CIO, United States*
- *“Process automation, economization in the non-productive area such as administration for example.” – CIO, Western Europe*
- *“Simply the continuation of automation of new networks and exchanges.” – CIO, Eastern Europe*
- *“It takes fewer people to get the job done. Our IT cost is probably half of the industry standard. We are serving operations. It is through our systems and efficiency that we gain from running our business that the real savings is. The key is having information on a timely basis and that is something that you can't quantify.” – CEO, United States*
- *“Inventory management system, process delivery and product innovations had helped us in delivering the best and reducing the operating cost. More so it has helped in reducing the production cycle.” – CIO, India*

Integration

- *“A number of different ways, we do a lot of warehousing where we integrate information from various systems into one big integrated warehouse database that's one way. Another way is that we try to minimize the number of actual IT partners we have to try to simplify life. We're trying to standardize on our key medical devices like telemetry to simplify life and to promote integration. We have a team of people who do nothing but integration around some of the*

- systems that we have so that's an example.” – Senior Vice President/CIO, United States*
- *“We are putting more applications on the internet to connect to it or get to the information through a corporate portal.” – Director of IT, United States*
 - *“More IT integration. IT has been brought in where we relied on manual skills. For example, we deployed accounting system and HR and payroll system.” – CIO, Japan*
 - *“We are trying to incorporate a universe logistics program. We are an international company and source product from across the world from different locations so we are trying to use some logistic technology to facilitate that and make it more specific.” – CEO, United States*
 - *“We integrate our employees' skills.” – CEO, China*
 - *“We reduce the number of employees. It's because integration can save our time for work, which leads to a significant reduction of human resource.” – CEO, China*

What would be the risks to your company as it relates to lowering costs if you DIDN'T integrate technology to achieve business outcomes?

Not Competitive

- *“We'd have difficulty competing with the Chinese.” – Company President, United States*
- *“It has to be cost effective to do so or we'd fall behind our competitors.” – Chairman, United States*
- *“If we didn't lower costs we'd be bypassed for somebody that could deliver for less money than we could, that could deliver a product or service for less money than we could.” – Company President, United States*
- *“The risks would be that we would loose customers to competitors.” – CIO, Asia/Pacific*
- *“We would have to raise tuition and that would cause people not to come here.” – CIO, United States*
- *“Long-term viability would be affected as a company.” – Executive Vice President/CIO, United States*
- *“I think you would be less competitive.” – CIO, United States*
- *“We would lose competitive advantage.” – CIO, Western Europe*
- *“I think our competitors would be seeking to achieve the same outcome. It's probably speed of response to our customer needs.” – CIO, Western Europe*
- *“Slow down of goods, seizing of the market by the competitors, loss of customers.” – CIO, Eastern Europe*
- *““We might lose business because our cost may be going to high and we can't compete with our competitors. We need this in house system.” – CIO, Asia/Pacific*
- *“We wouldn't stay competitive and would lose customers.” – Chairman, United States*

- *"I don't think we would go out of business but we would be able to compete as well. We wouldn't be as efficient and it wouldn't make our jobs easier." – CEO/Chairman, United States*
- *"Our products may be left behind, and we may be eliminated from the competition with other companies of the same industry." – CEO, China*
- *"Our company will be left behind. We will not be able to follow other companies. I think it's very important for us to keep up with the development of our time." – CEO, China*

Loss of Productivity

- *"We would have a lower level of cost production cost; we wouldn't utilize technology we yield. We would still receive huge cost savings, but not at the level we do." –, Company President, United States*
- *"As previously discussed, its loss of productivity and hence decrease of overall effectiveness, if there is more of cost incurring." – CEO, India*
- *"The risks at stake would have to be: Procedure not being respected by end-users, difficulty in carrying out certain tasks, especially those involving the process of several pieces of information, difficulty in being independent and rapidly piloting processes." – CIO, Western Europe*
- *"Productivity is lowered and efforts are increased and hence what ever we could have done in X hours now will take X+Y hours to complete that. It is like a waste of time which we could have effectively used somewhere else. That's the biggest risk." – CIO, India*
- *"You would slow down; there would be more errors, human errors." – CIO, Singapore*
- *"We would just be slow and non-responsive to our customers; we wouldn't be able to reach deliveries. Being able to respond to customer needs is the key." – CEO, United States*

Timeliness

- *"Losing time. We have to be able to deliver straight away; time is a very important factor." – CEO, Western Europe*
- *"As previously told time factor would be hampered without the backing of technology on day to day operations. We will loose the time, which is a cost in itself." – CIO, India*

Not Meet Business Strategy/Goals

- *"I think you run the risk of not being able to achieve the strategic outcomes if indeed you've got limited budget and you've got some strategic initiatives they are often times beyond the day to day operating issues, the overhead issues, and in order to free up the dollars for that, provide the resources for those strategic initiatives you've got to go after some of that overhead, those support issues, if you don't do so your risk the attainment of strategic direction." – CIO, United States*
- *"We would be stuck in the way we have been doing it in the last century. The political risk is to the extent that there is a gap between what people expect and reasonably expect there is a problem...the risk were distrust for the government*

and distrust of the political process and whole bunch of different possibilities.” – CIO, United States

- *“Risk of falling short of quality standards and not fulfilling the quality parameters. Thus, it is the risk of dissatisfaction of clients therefore more advertisement and marketing to allure them back our business and hence more cost incur scenario is the final result of not integrating technology into business outcomes.” – CIO, India*

Lost Profit

- *“Cost would continue to decline, we would have to add more people.” – CIO, United States*
- *“As I have already told you that if we don't integrate the technology we'll end up with losing lots of finances and of course it may result in dissatisfied clients which we never ever want.” – CIO, India*
- *“I'll say disaster will be there as no IT company can afford to stay without IT implemented inside its operations. Needless to say it will be raise in the cost.” – CIO, India*
- *“We might lose business because our cost may be going to high and we can't compete with our competitors.” – CIO, Asia/Pacific*
- *“When you look at the type of work we do there are potentially large risks from the standpoint of safety we have in the summer we may have six or seven thousand children in our care and if we don't know who they are and where they are supposed to be then we have problems. We just would continue to have to be hiring people to do things in very inefficient ways.” – CIO, United States*
- *“It's more difficult to turn a profit if you don't streamline that. Trying to save management labor and trying to schedule labor properly.” – Senior Director of Information Services and Technology, United States*
- *“Then we would be too expensive.” – CIO, Western Europe*
- *“More labor costs.” – CIO, Japan*
- *“If my facilities are not running, we could lose millions of dollars a day.” – CEO, United States*
- *“I think we would be less profitable.” – CEO, United States*
- *“Loss of revenue and potentially higher costs of production.” – CEO, United States*
- *“I think cost would go up. There would be more chance of errors, we would be slower and all that would cost the company money. We are less competitive because we spend more money.” – CEO, United States*
- *“Lesser productivity and hence more cost” – CEO, India*
- *“A rise in cost due to using agency staff.” – Managing Director, Asia/Pacific*
- *“Increase the costs and reduce profit” – CIO, Latin America*
- *“Won't be efficient to reduce costs” – CEO, Latin America*

How is your company currently integrating technology in order to mitigate risk?

Third Party Technology

- *“It goes back to third party packages that have been tested in the marketplace rather than us building them ourselves is one way. Technology really incorporates more than just software given that in some areas we have a manufacturing environment per se, then we try to apply technology in those areas as well that may be equipment based through technology that is available in the marketplace that allows us to process better, faster cheaper etc...” – CEO, United States*

New Technology / Technology

- *“We introduce new technology, new process that are only possible because of the new technology we have implemented. It is just a constant thing, we don't stop. It isn't like we do one new thing a year. We are constantly upgrading our technology in every phase of our business.” – President/CEO, United States*
- *“Ok just to give you an idea we installed a birthing system that is a knowledge based decision support system that helps the physician in the caring and delivering of a baby, we deliver the most babies in the State of NY so to a physician he has an extra tool in the room that helps him with some of the decision making process and thinking process alright cause most children want to come out nicely.” – CIO, United States*
- *“We currently have a series of strategic improvements business process improvement programs that include technology.” – CIO, United States*
- *“Patient ID helps to mitigate risk. Patient bar-coding. You can barcode the medication, you can check those things that in a manual process today, but if you automate it, you can just do the check much more efficiently.” – Director of IT/CIO, United States*
- *“Purchasing the newest products, newest hardware, further education of staff, controlling processes and monitoring.” – CIO, Western Europe*
- *“If you can reduce human error through IT you can reduce the number of injuries the harms that come to patients and those result in increased hospital stays, litigations dissatisfied patients, and it has a direct bearing on a [health] institution's success.” – President/CEO, United States*
- *“We're upgrading technology wherever we find it to be weak and adding technology to stay competitive and strengthening the backbone of our technology adding security to make it more robust making the technology we have better and looking for ways to add new technology to existing functions.” – Chairman, United States*
- *“By investment in technological advances and equipment and confident personnel.” – Chairman, United States*
- *“Just this weekend, we upgraded our SAP system.” – CEO, United States*
- *“We are building an internal security structure, information security. . .” – CIO, Latin America*
- *“For example, developing new software is actually one way of technology integration. It can mitigate the possible risk for our company's development in the next two years. Normally clients would pay you according to the amount of technology you have brought to their projects. If you don't have relevant*

technology integration, or you cannot fulfill the clients' needs, then you may not get the rewards, which would bring risk to your company, too.” – CIO, China

Auditing

- *“We have several systems in place to assist with regulatory compliance, Sarbanes Oxley, Gremlench Pliley and other regulations we need to compliant with. We have systems to assist with or prevent identity theft, to safe-guard customer data.” – Executive Vice President, United States*
- *“We have auditors in place to audit the systems.” – Company President, United States*
- *“We have an internal risk management program and internal audit program. We are now using business tools and business warning systems to manage and identify risks. We have a program to monitor business risks once we identify them.” – Managing Director, Asia/Pacific*

Disaster Recovery

- *“We are making sure we have got in place disaster recovery infrastructure, network security and we are rolling that platform out worldwide.” – Group Business Systems and IT Director, Western Europe*

Communication

- *“Increasing of informing the management, improving the communication among sectors.” – CIO, Eastern Europe*

Miscellaneous

- *“Track all of our claims, all of our facilities, all of our employees.” – President/CEO, United States*
- *“As previously discussed its altogether the same concept of milestones which keeps us on track which we have planned at the very onset of each and every project. The lower the risk the more will be acceleration of growth and hence the ultimately the result is in form of satisfied clients which is our primary objective.” – CEO, India*
- *‘I think it is very essential for the organization but our company is not very successful in integrating technology for mitigating the risk factor. We always deal with timely service providing to our clients. If there is any problem, we believe in timely rectification of the same.’ – CIO, India*
- *“It's in every facet of the business. We are a law firm so document production, security, processing, deal with clients --going back to the extranet, sharing of information. Technology plays a key driver, in getting new business even.” – CIO, United States*
- *“They do it in terms of firewalls, iron ports, spam filters, virus filters, GPS tracking devices on our vehicles to eliminate theft, door access systems, user authority and forms of process to allow people get access to the system. So access control, password control.” – IT Project Manager, Head of IT for UK, Western Europe*
- *“I think the biggest thing is providing the employees with the tools they need to work in a more streamlined environment.” – Company President, United States*

- *“We should keep people who are crucial to the core team. As for the technology, we should try to absorb the latest information. If we combine our talents with technology, we can eliminate as much risk as possible.” – CEO, China*
- *“We select employees and conduct performance appraisal. Technicians who have no future development will be eliminated.” – CEO, China*

What would be the risks to your company as it relates to mitigating risk if you DIDN'T integrate technology to achieve business outcomes?

Timeliness

- *“We won't survive as we may not be able to come out with desired results in time.” – CEO, India*
- *“High risk will be the loss of timelines as previously discussed earlier. The more the risk, the more it will affect the relationship between us and the client, which we never desire to spoil.” – CEO, India*
- *“The concern would be that it would take longer to provide treatment to the patient. Delayed treatment can be less than, you know, optimal and you basically increase the length of stay you increase the cost of treating the patient those kinds of things.” – CIO, United States*

Additional Costs

- *“There are two. The cost associate with reliability and warranty, we didn't do the right level of analysis with testing as well as being successful with early validation and launching products so we don't have expensive launches of products.” – Company President, United States*
- *“I think we've seen a reduction in some of our malpractice insurance because of some of our systems we've installed you still have the personal intervention but you know the systems have helped with reducing some of the overhead because documentation is available.” – CIO, United States*
- *“Manual process, increase costs.” – CIO, Latin America*
- *“Poor information generates credit deviation” – CEO, Latin America*

Not Competitive

- *“The question would again be lagging behind our peers in dealing with requests for RFP, request for information or proposals. Technology becomes a very big driver in terms of how we are structured internally comparing to other big law firms.” – CIO, United States*
- *“We would have system failures and we would lose market share and we would not be able to attract high profile pharmaceutical customers.” – CIO, Western Europe*
- *“We may get eliminated in the market.” – CIO, Asia/Pacific*
- *“We wouldn't be able to compete. We wouldn't be able to run as efficiently. We wouldn't be able to service our client as well.” – CEO/Chairman, United States*
- *“Well then we'd have a certainly become in danger of becoming a non-entity in the markets we serve, someone else is going to provide the products and services*

that our clients will gravitate towards and we'll be out of business or certainly marginalized in the overall scheme of things.” – CEO, United States

- *“The company will not be able to keep pace with the times or follow the trend.” – CEO, China*

Impossible

- *“We wouldn't be a business. We are too big to operate without the integration.” – CIO, United States*

Lose Client Satisfaction

- *“Our core concern is client satisfaction. If we don't integrate IT into our systems it could result in more processing time and hence we will not be able to deliver the results in stipulated time.” – CIO, India*
- *“We would expose our customers to unnecessary risk resulting in loss of business.” – CEO, United States*

Stagnate Growth

- *“We wouldn't be able to continue to grow especially with the shipping requirements by the government to ship overseas.” – CIO, United States*

Cannot Properly Manage Company

- *“Danger of controlling errors, I mean managing the company the wrong way, impossible to stick to economic plans.” – CIO, Western Europe*
- *“The risk is that you don't know the information, you could be in line for a law suit. It collectively brings all the information together in one easy place for you to understand it.” – CEO, United States*
- *“If we incorrectly pay on a rebate and we are dealing with 50,000 customers. If you overpay five dollars and it's 10,000 people, that's \$50,000, so financially that's a lot of risk.” – CEO, United States*
- *“You wouldn't necessarily have the accuracy and timeliness of your reporting if you did that.” – CEO, United States*
- *“Our issues would be that things would fall through the cracks. Controls would be a good example. We would be slowed down, we would do things manual and that is where would make mistakes. Business controls, financial controls.” – CEO, United States*
- *“The general corporate business risks of managing everything, for example we do a lot of development; a lack of business planning and business forecasting and we can mismanage the cross space of the project, the cashflow of the project. I would describe that as a serious risk.” – Managing Director, Asia/Pacific*

Technology Goals and Expectations

[ASKED OF CIOs]: Have you been tasked to establish technology goals and integrate them into your company? If so, by whom? What are the top three goals for technology that you have been tasked to establish and integrate at your company?

Lower Costs

- *“Yes, the first goal is lower cost, the second is to set up information technology.” – CIO, Asia/Pacific*
- *“The top three goals are cost reducing, effective utilization of time and more productivity as a result of IT integration into process management inside the organization.” – CIO, India*
- *“Well, most of the people don't know how much technology can play a part in driving the best results for lack of investment I'll say that is considered as kind of cost incurring. Lack of appreciation is what I don't believe in what you said. As I said earlier the lowering the cost is automatically there if we develop our capabilities as per the client's requirements and hence raising the efficiency of the company as a whole.” – CIO, India*
- *“That would have to be the Board of Directors. The first objective is upgrading our intranet network as well as our websites and IT tools in general. The second objective is lowering our costs within the IT department. Finally the third objective is the re-alignment and training of our IT teams in terms of skills.” – CIO, Western Europe*
- *“I have been tasked as part of the strategic planning process it comes out of the strategic planning initiative task force which includes the senior management at the University and the academic Management at the University. Some of those things that are most significantly identified for technology are on this campus are to enhance the research capabilities on this campus in most cases that means secure bandwidth some of the others again we go back to the reduction of the overhead and support cost of the university are there things we can do to reduce the mundane, day to day, transactional costs of running the university. The third is associated with attracting students and faculty and making us a more visible, viable alternative for those people seeking out a relationship with higher education.” – CIO, United States*
- *“By the CEO- one is cost reduction, improve overall performance, that's all I have” – CIO, United States*
- *“Yes by the board. Reduce cost. Reduce the support and maintenance burden. Better flow of business information.” – CIO, Western Europe*
- *“1, to have an exercisable system. 2, to have a controllable budget.3, to have innovative technology.” – CIO, China*

New/Upgrade Technology

- *“Yes, with the Board of Directors of our company. The three main objectives are: the computerization of all our patient files, the computerization of our drug processes (i.e. with nominative prescriptions, their distribution to patients) and the security of our IT system (confidentiality of our system, integrity of the information given and its back-up).” – CIO, Western Europe*
- *“The general manager gave me the task. The top three goals for technology that I have been tasked to establish are: 1.to establish an IT system that can connect to the market. 2. to improve the stability of a highly-operated system. 3. to establish a primary CRM system.” – CIO, China*

- *“One of the top goals that we've had over the last 3 years was implementation of the ERP, one was the upgrade of our network to enable the new e-conferencing system for distance education, we had a project to work with the functional staff in the business units to map all the admin processes a student needs to go through from application to graduation and IT was tasked to cut cycle times.” – CIO, United States*
- *“There are two technology goals. One is to focus on projects and complete each project's task. The other is to develop new software so as to suit the needs of the industry. I'm not tasked by anyone. It's my duty to do so. I should provide technical advice and feedback to the seniors through our interaction. My advice will be implemented if they consider it to be feasible.” – CIO, China*

Disaster Recovery

- *“Yes, by myself. We also have a technology partner so it is a combination of myself and the technology partner (top3) Disaster recovery, strategic expansion and project control.” – CIO, United States*
- *“But the one area that I'm directly tasked with is in the area of business continuity and providing and having a plan in place and ready to go in the event that a hurricane hits or something like that and we have to get the infrastructure back up and supporting the govt. from somewhere else not here at City Hall.” – CIO, United States*
- *“We have a steering committee that is a sort of cross functional group that establishes those priorities for us each year. Disaster recovery, training, and better integration of one of our software application into the branches and deployment into the offsite locations.” – CIO, United States*

Reliability

- *“Yes, CEO. (top3) scalability, availability, reliability” – CIO, United States*
- *“Yes, CCO and CEO (top3) complete the electronic medical record, improve the infrastructure for reliability and risk mitigation, and utilize the web to improve recruitment and patient experience.” – CIO, United States*
- *“I am in charge of establishing the technological objectives and integrating them. The finance director gave me this task. The three main technological objectives are firstly the systems reliability, secondly integration and finally, reducing costs using IT.” – CIO, Western Europe*
- *“Fast and Reliable information.” – CIO, Latin America*

Standardization

- *“I am personally interested in that because it is my initiative. I make the orders myself - continuity, standardization, making standards, securing the company.” – CIO, Western Europe*
- *“It is not asked as such by the management, it's demanded as per the need of the hour. The top three goals are database management system of the company, standardization of the methodologies and involvement of client in the key decision areas of technology implementations helps in guiding in a better direction.” – CIO, India*

- *“Global CIO, standard control of technological access, optimize costs, uniform the level of maturity.” – CIO, Latin America*

Miscellaneous

- *“The top 3 would be: 1. Drive efficiency 2. Drive innovation 3. Drive our ability customer relationships while minimizing attrition, customer loss.” – Executive Vice President/CIO, United States*
- *“Yes, directly from the management. Integration of sites, implementation of a management information system, highly available data centre.” – CIO, Western Europe*
- *“For us top three goals are product innovations as per quality, style and technology. Also we would have inventory management and process delivery as other two goals integrated into our system.” – CIO, India*
- *“Enterprise Architecture, Integration and New Products” – CIO, Western Europe*

[ASKED OF CEOs]: What are the top three goals for technology at your company that you have tasked your CIO to establish and integrate?

Improve Efficiency

- *“Improved efficiency, explore internet possibilities, a dashboard” – Company President, United States*
- *“Making sure everyone has computers that are working efficiently--proper software and hardware, managing onsite timekeeping system, managing central server.” – CEO/Chairman, United States*
- *“Get us in line with the amount of equipment we have in the organization, benchmarking in the industry, leverage it to where my employees don't spend time going from building to building when we have technology that can do it and third is a environmental stewardship.” – CEO, United States*
- *“To get us accurate and timely information as efficiently as possible with employees who are running the system.” – CEO, United States*

Lower Costs

- *“Meet client needs, remove our dependence on mainframe technology, and number three lower costs or I guess really lower time to market.” – Company President, United States*
- *“Reduce costs, win acceptance from the rest of the organization.” – Company President, United States*
- *“Support the companies key performance indicators, we want a full and complete integration within our region, drive down cost per user of our technology and we want to support the companies overall goals.” – CEO, United States*
- *“I ask my CIO to provide regular training for each department. My CIO should help each department to adjust their annual budget and try to lower the operation costs. Also, he should evaluate the usage of products in the previous period. Secondly, I ask him to make sure that every employee knows about the*

function of IT products. Thirdly, he should make sure that our products can keep up with the other products in our industry.” – CEO, China

- *“Integration, costs reduction.” – CEO, Latin America*

Customer Service

- *“Customer experience, improving efficiencies, improving employee work experience.” – CEO/President, United States*
- *“Well I think the first one is whatever investments he makes in technology. That we understand the benefits to the organization as part of that investment in technology. Effective utilization of technology so that once we have a plan and we execute it and get the benefits out of it for the organization. The other one is just customer service to the rest of the organization so that whatever technology we implement, the majority of the organizations are really users of technology not developers of it, especially from an IT point of view. Make sure the system is running if there are questions or training issues, they get addressed so we can properly use that technology.” – Company President, United States*
- *“Customer satisfaction” – Chairman, United States*

Increase Competitiveness

- *“I don't know how to answer that, because we don't lay it out that way. To be competitive and be competitive as far as technologies go.” – Chairman, United States*
- *“Where is technology going to be tomorrow and how are we going to get there before someone else. How do we take things we are doing today that can be improved where efficiency can be improved by increased use of technology, how to increase real time information.” – CEO, United States*

Become Paperless

- *“Putting PACS in now (digital X-ray software), becoming paperless in all our patient records” – President/CEO, United States*

New Technology

- *“New ordering systems, introducing these systems without problems” – CEO, Western Europe*
- *“New recording system, integration of our development business in terms of all development programs online so they integrate to report full coverage. Online rostering.” – Managing Director, Asia/Pacific*
- *“1.He should follow the latest trend of technology and the direction of development. 2. As a CTO, he should be more like a generalist rather than a specialist. His specialty is just an indicator for performance appraisal. 3. The technology department should follow the current trend and have close cooperation with business departments and other relevant departments.” – CEO, China*

Miscellaneous

- *“1)Financial reporting 2)Evaluation and feedback with Axygen Quotation software 3)ISO certification compliances makes technology a weapon for process methodology for delivering the best for our clients to make them satisfied with the best possible results.” – CEO, India*

- *“Product innovation, better results with IT support at the back end and finally the usage and utility of sales force automation, blue eye of our organization were a few of the primary goals in the recent past. Hope we keep up the same.” – CEO, India*
- *“Getting the right decisions done at the right time, analysis of the key result areas for business outcomes/processes and performance in terms of stability of ERP are one of the top three goals for our CIO and technical team. We expect the same by our CIO to deliver and integrate into business from company's point of view.” – CEO, India*
- *“Maximize our current planning and allocation system. Speed up the registers and transactions in the stores.” – Company President, United States*
- *“1. New Product, 2. Better control of process, 3. Better control of manufacturing process” – Company President, United States*

How could the IT department at your company play a more significant role in meeting business outcomes?

CIO:

Better Communication

- *“They could have better communications with the business leaders who are thought to be the primary users of the new technology.” – CIO, United States*

Take on More Responsibility for Technology

- *“I think they could quite possibly take on greater responsibility for some of the decentralized technologies and technology support functions on campus.” - CIO, United States*

Better Funding

- *“Short of more money I'm not sure there's anything else we could do. Of course more money would let us buy more resources so...” – CIO, United States*
- *“We would need more resources, money and personnel.” – CIO, Western Europe*

Process Improvement

- *“If the organization had a more robust process improvement capability (which it doesn't have today) and if it was closely tied to IT, that would be an improvement.” – CIO, United States*

Understand Business Issues/Outcomes

- *“Basically more sensitive to business issues-have everybody in the dept be more acute of business issues, business performance” – CIO, United States*
- *“One of the ways we're working on doing that now is to be more involved with business processes.” – CIO, United States*
- *“I would have to be there to say. We are not represented at the table we really don't have that much to say. Based on the success of some of the things we have done in the past, we get leadership stuff like 'do it again and do it in this area', but no direction on how we are actually going to do that.” – Senior Director of Information Services and Technology, United States*

- *“By having a better understanding of the business needs and by trying to find out exactly what they want.” – IT Project Manager, Head of IT for UK, Western Europe*
- *“To improve the relationship and the understanding with the business around the business processes and the business requirements and to be thinking ahead with the business about the new innovations that are going to become required in the coming period. Anticipating the demand from our business units and with regard to the services our customers are asking us for so that that can become a mainstream part of the way we operate when that demand starts to become more significant.” – CIO, Western Europe*
- *“Build bridges with the business. Basically there is a huge void between the business and IT, getting narrower but there's a big void. It's a very traditional IT structure.” – CIO, Western Europe*

Faster Turnaround / Accelerating Growth

- *“More aggressive prioritization of the initiatives we take on and just faster delivery.” – CIO, Western Europe*
- *“The IT department could contribute to that by providing more services to their end-users (i.e. with a transparent management of maintenance services), a more prompt service and the development of new technologies (e.g. new technologies of communication or reprographics etc.)” – CIO, Western Europe*
- *“Primarily by ensuring that its work enough at a better pace to avoid any sort of unnecessary delays which could further lead in increase in costs.” – CIO, India*
- *“I think we are doing good as of now but the ERP implementation could be icing on the cake later in this year. cost reduction and accelerating growth will be more moving towards to the right direction making it possible to sustain in a better way.” – CIO, India*
- *“I think from our functional department head doesn't understand the importance of technology.” – CIO, Asia/Pacific*

CEO:

More Resources

- *“With more resources and being able to apply solutions faster- so it's a speed issue” – Company President, United States*

Open to New Technology

- *“Again I think it's a case of being more open to outside technology number one number two probably an infusion of folks from a different industry as well that have a different perspective” – Company President, United States*
- *“Open their minds to different ways of adding value and keeping up with technology.” – CEO, Western Europe*
- *“I think its doing good as of now. I hope we can keep the same work continuing in the years to come. The point of concern could be new innovations and technologies which needs to be embedded as, and when required, down the line.” – CEO, India*

- *“The IT department should keep improving itself and follow the new technology.” – CEO, China*
- *“Enlarge technology in other areas e.g. Logistics.” – CEO, Latin America*

Understand Business Issues/Outcomes

- *“I think they are very deeply involved in our business outcomes, I don't know if they could be more involved.” – CEO/President, United States*
- *“They need to be better tuned to our business rather than just the programming needs for IT.” – CEO, United States*
- *“I think sometimes being more active on the strategy front and maybe spending more time with business people across all lines of business and finding out what their real needs are. It really comes down to the IT guys explaining what is out there.” – Managing Director, Asia/Pacific*
- *“I think technology has considerably reduced the headache of benchmarking and standardization manually. So on and so far technology is going great guns as far as product innovation is concerned. However, on the benchmarking and comparative analysis side there could still be lot of improvement.” – CEO, India*

Better Technology Tools

- *“Better online access on a daily basis, like a dashboard indicator.” – Company President, United States*

Technical Expertise

- *“I think they do a pretty good job now, but the IT department could probably do better of making sure they have the right level of expertise at each location.” – Company President, United States*
- *“Technical knowledge” – CEO, Latin America*

More Integration/Teamwork with Staff and Management

- *“Work closer with the operating management at all levels, in the utilization of the systems we have.” – CEO, United States*
- *“More involved in the day to day process by partnering with individual departments going out and seeing what is going on, what they can and can't change, looking for streamlined opportunities.” – CEO, United States*
- *“The IT department can only function at its optimum if the corporate leadership have a complete buy in. If they have a complete buy-in then you get the best out of technology. If they do not, you get like you have in any other business, turf units fighting each other for recognition and funding. That would be a big mistake.” – CEO, United States*
- *“By giving top management the proper information so they can make a proper decision.” – CEO, United States*
- *“1. It should have great capacity to learn. 2. It should know how to cooperate. 3. It should be innovative. 4. It should provide constructive ideas or good solutions by combining sources from other departments. 5. It should be integrated with the outside market.” – CEO, China*
- *“System integration” – CEO, Latin America*

Just Fine Right Now

- *“Well I don't know of anything there it's doing pretty good and it meets my expectations. I don't know what else it could do but continue on the path they are going” – Company President, United States*
- *“I think they are very good so I wouldn't see a way that they could improve other than just making sure they continue to cope with the customers of what they do” – CEO, United States*
- *“I don't know, doing a pretty good job right now” – Chairman, United States*
- *“It is all right as it is now.” – CEO, Western Europe*
- *“I think it's more of maintaining what we are already doing with. We need to spend more on IT as such, but want to keep the track of the things as we are doing at the moment.” – CEO, India*

[ASKED OF CIOs]: What are the three skills you would most like your CEO to have?

Vision

- *“Vision - for all facets of the organization, got to have the interpersonal/people skills to lead the various university constituents, then generate opportunity by way of establishing relationships that may turn into partnerships, to bringing monetary sources into the university, etc.” – CIO, United States*
- *“Visionary, Motivational, Inspirational.” – CIO, United States*
- *Vision, support IT as a business partner and not a back office, communication.” – CIO, United States*
- *“He is a great communicator, wonderful visionary, and he's compassionate individual compassionate manager.” – CIO, United States*
- *“He has them all by the way, whatever they are; he has them because he is superb. I like for him to have a vision for what can be accomplished. I'd like for him to do it with passion and I would like for him to excel in providing the resources to accomplish that will.” – CIO, United States*
- *“I think a better understanding of the complexity of some of the dreams that he has, of his vision from a technology standpoint. . . I think again, more communication with everybody. I think those are the two biggies.” – CIO, United States*
- *“Communication, Vision, Follow-through” – Senior Director of Information Services and Technology, United States*
- *“Visionary, people oriented and financially savvy are the top three goals I must consider for an ideal CEO. I am thankful that we have the one having the almost the similar attributes.” – CIO, India*
- *“Flexibility, business vision, strategy vision, market knowledge, keeping informed.” – CIO, Latin America*
- *“Technology vision, business vision, knowledge.” – CIO, Latin America*

Communication / Communicate Business Goals

- *“To speak clearly so that we understand what the long term goals and objectives are. A CEO who understands the role technology plays- and this one we have is a very supportive one. A CEO who understands the role the technologies play in*

- attaining those university goals and objectives and the ability to have patience and understand that the technology doesn't always work.” – CIO, United States
- “Better communication, clearer strategies I have no idea if he is developing- he's getting better but how I have no idea.” – CIO, United States
 - “1. By being more farsighted, that is with someone who would know exactly where we are heading towards 2. With more communication – by being able to communicate one’s ideas clearly and by knowing where one is going 3. With more empathy.” – CIO, Western Europe

Understand Technology / Supports Technology Efforts

- *“I think she has the skills I would want in a CEO she basically understands conceptually the technology, she professes the technology and she is very supportive of our implementation and use of technology.” – CIO & VP of Technology, United States*
- *“I would like him to have an understanding of where IT fits into the overall picture of the organization. I would like him to be open to new initiatives and ideas. And, I would like him to be a thought leader in our community.” – CIO, United States*
- *“A sharper knowledge in management, organization and a certain interest for IT systems. This could be made possible with more training sessions and more talks about IT evolutions in the course of our meetings.” – CIO, Western Europe*
- *“By being more involved in the use of new technologies/ Understanding the need and the importance of a bigger budget for IT technologies/ By developing a higher level of trust with regards to the IT department.” – CIO, Western Europe*
- *“IT knowledge itself, software knowledge, applications knowledge. He's not developing.” – CIO, Asia/Pacific*
- *“Technology awareness, more open and likely to talk with us, more clear technology visions and objectives so we can do some planning.” – CIO, Asia/Pacific*
- *“Understanding of technology, what it can do for the bottom-line, flexibility. Through interaction with the IT requests and manager requests for IT equipment.” – Director of IT, United States*
- *“Technology aware, communicate, I don't know what the third would be.” – CIO, United States*
- *“I think probably enough understanding of information technology to be able to fully participate in the decision making process. Obviously to clearly communicate changes in business direction and strategy, but that would be maybe the main board being able to clearly communicate the business plan over a three to five year period so that information technology can be aligned and be planned. And probably the third one would be to enforce group standards and actually in the same way that decisions are made about standardizing, making our business model more consistent, and standard and supporting the role of IT in that. I think by getting more and more exposure to the IT investment and the choices we've got to make and understanding the linkage between maybe IT strategy and business strategy.” – CIO, Western Europe*

- *“An understanding of the complexities involved in supporting the disparate IT environment we have. More appreciation of what technology can deliver. I think those are the two that come to mind. I would say at the moment, primarily depending on me, he has been invited along to various showcases, etc but so far he hasn't attended.” – CIO, Western Europe*
- *“Understanding of IT. The way to see cost performance. Not only see it in quantitative way but in a qualitative way, such as the speed, the quality and the part that is not associated with money. Lastly, need to consider the time for training.” – CIO, Japan*
- *“At least have the basic knowledge of IT that we need.” – CIO, Asia/Pacific*
- *“1, the skill to learn new technology. 2, the integrating skill. It may be difficult for him to learn more about new technology, because he doesn't have much time. You cannot ask your boss to improve himself. We have to suit his needs.” – CIO, China*

Leadership

- *“1.Listening 2.Decisiveness 3.Ability to balance conflict priorities. He is using executive coaches, executive round tables and executive staff meetings.” – CIO, United States*
- *“Vision, Communication; Leadership; He is doing a great job.” – CIO, United States*
- *“Improved strategic planning (through facilitation), leadership development (through senior management workshops), improved delegation (chairman coaching)” – CIO, Western Europe*
- *Sound strategic judgment, clear communication skills, ability to inspire and motivate the team. He's done well at developing those.” – Executive Vice President/CIO, United States*
- *“Leadership, motivating and encouraging enough are few qualities CEO should have. Don't ask me how he can improve the same.” – CIO, India*
- *“Leadership, fast solutions, cordiality, and experience.” – CIO, Latin America*

Decision Making

- *“Communication, man management and decision making skills. They could all be improved.” – IT Project Manager, Head of IT for UK, Western Europe*
- *“Decision Making, Awareness, Communication skills. They are all good.” – Group Business Systems and IT Director, Western Europe*
- *“Trust which could be developed by regular contact and some autonomy when it comes to those below me. Finally, more competence in decision making and managing.” – CIO, Western Europe*
- *“Decisiveness. Otherwise I'm quite satisfied. I don't know how he could acquire decisiveness. He should simply try.” – CIO, Eastern Europe*
- *“1.Competence, 2.Knowledge, 3.Ability to decide. He has them. He does not disclose how to obtain them. Definitely long years of experience supports manager's education and skills.” – CIO, Eastern Europe*
- *“Dialogue, decision taking, humility” – CIO, Latin America*
- *“Vision, knowledge practice, decision” – CIO, Latin America*

[ASKED OF CEOs]: What are the three skills you would most like your CIO to have?

Technical Expertise

- *“I would say knowledge of our business, being up to speed with current available technology: the first one is strictly on the job training here, the second one, I think we're reliant on third party vendors.” – Company President, United States*
- *“Technical knowledge, people skills, and I'm trying to put it in one word- be able to compare cost against benefits-cost analysis thinking.” – Company President, United States*
- *“Technology skills, human relations skills, training and development skills” – President/CEO, United States*
- *“Planning and planning integration, staffing his IT area with competent people with the appropriate diversified skills, improving communications skills of his leaders, and by communicating better plans results of implementation and follow-up with the user constituency, having better outcomes of vendor management the folks we buy hardware and software from.” – President/CEO, United States*
- *“Clear, technology understanding, strategic vision” – CEO, Western Europe*
- *“Performance-justifying the criterion to have a new technological set up and sticking inside the company for over more time are the major expectations. Since IT is not the prime areas for our company, so CIO and other technical staff tend to stay for shorter durations and then switch over to purely IT based companies. As such all I can say is that we want stability in our structure.” – CEO, India*
- *“Technical knowledge, communication skills, empathy with customer use. Continuing education, management training” – Chairman, United States*
- *“Technical skills, Good manager of his people, Communicate with non-IT people within the company.” – CEO, United States*
- *“Knowledge of the latest tools available, understanding of the companies business needs, having the right staff in place.” – Company President, United States*
- *“Great general manager, resource planning skills, awareness of technology” – CEO, United States*
- *“1.IT skills 2. High executive skills 3.A strong sense of belonging to the company. I would provide professional training and establish a specific goal with him.” – CEO, China*
- *“1, the technical skill. 2, the communication skill. 3, to finish his tasks quickly and nicely. 1, to have more training. 2, to conduct fieldwork. 3, to enhance his personal learning capacity.” – CEO, China*
- *“Technical knowledge, resolution of problems, get use to changes. no training for the employees.” – CEO, Latin America*
- *“Good technical knowledge, communication ability, good negotiator. Workshop, specific courses.” – CEO, Latin America*

Understand Business Objectives

- *“Knowledge of the business we are in, secondly, overall understanding of the technology that is most usable for us. We send him to various leadership developments of campus and on the job.” – CEO, United States*
- *“The ability to talk to Non-IT people and understand what their business needs are. The second skill is the recognition to follow the business as opposed to the reverse.” – Company President, United States*
- *“Broad understanding of the industry, recognize there needs to be a ROI in technology, needs to be able to be a team player” – Chairman, United States*
- *“I think technical expertise in the area, I think management skills and I think vision so that he can relate to the overall strategy of the company and align his business. Seminars, working with the supply base, networking with the other CIO's in the industry. I think it's a combination of training, coaching and experience.” – Company President, United States*
- *“Communication, Project Planning and Business Savvy. Part of it is day to day training and some of it is going back to attend some business classes.” – CEO, United States*
- *“Business Sense, Financial Background is strong too, Technology” – Company President, United States*
- *“Better Accounting skills, People Skills” – Company President, United States*
- *“1. The coordinating skills, namely the managing skill .2. The innovative skills. 3. The communicating skills and integrating skills with different departments. 1. He should have a clear career plan. 2. He should obtain relevant training. 3. He should have a clear goal according to the company's vision and strategy.” – CEO, China*

Leadership

- *“Leadership, technical expertise, people skills. Through research education attending seminars and through third parties”. – Company President, United States*
- *“Leadership, the ability to have a vision for technology and how that vision is how impacts the clients, the markets and productivity, A good head for technology” – CEO, United States*
- *“Good leader - people manager, good communicator, good capacity what is in the marketplace and what we can use in our business. Executive leadership training.” – Managing Director, Asia/Pacific*

Miscellaneous

- *“Ability to analyze, problems, structured problem solving and fast realization.” – CEO, Western Europe*
- *“Proficiency, skill set, knowledge of the competitors, team player. We are regularly imparting training to our employees to enhance their skills irrespective of the designation of the employees.” – CEO, India*
- *“Organization, Timeliness, Professional” – CEO/Chairman, United States*
- *“Bright, Inquisitive, Challenging. Senior level development program.” – CEO, United States*

- *“Communication, ability to influence others, teamwork. We are challenging them to develop them.” – CEO, United States*
- *“Ability to analyze, competitive benchmarking and proper skills are the few things my CIO should have.” – CEO, India*

[ASKED OF CIOs]: What are the three skills your CEO would most like you to have?

Communication

- *“Better communication- sometimes it's techie talk - I think that's the key we work a lot of hours together: I went back to school and got my MBA I do a lot of conferences I think she'd probably like my presentation skill to be better I'm working on that- that's about it.” – CIO & VP of Technology, United States*
- *“The ability to explain complex technology to naive listeners.” – CIO, United States*
- *“Alignment within the division and business processes, Education about the health system and communication, vision and communication.” – CIO, United States*
- *“Probably the same more frequent communication, more clear plans on how we are going to resolve very specific business issues.” – CIO, United States*
- *“(1) Improved Communication, More effective communication, ---by establishing cross-functional teams and trying to publish the IT vision and strategies with senior managers and gain support. (2)Sponsoring communications within IT to the rest of the business. (3) Stronger productivity focus -- to ensure that we can also improve bottom line while pursuing revenue goals. So basically leveraging technology to have some radical changes on productivity.” – CIO, Western Europe*
- *“The only thing is he wants me to be more diplomatic. He thinks that I am too upfront. I am whatever the way I am. I don't want to change it.” – CIO, India*
- *“Probably more tact. It would probably be helpful if I had more technological knowledge. Those things are harder to say just learning to be aware of when I'm not and stopping myself before I open my mouth thinking as to how I say things. Trying to be more in tune talking with people who are in the technological field-peers and mentors.” – CIO, United States*
- *“Communicate with him, continue to implement change without impacting user community, make sure they are happy with the way we are maintaining staff. Management meetings to high level communications so that people are cooperating. I think in the past there have been a lot of silos of things going on and being able to implement an environment will people work together has been a huge success.” – CIO, United States*
- *“Communication Skills, Project or Process management skills, customer facing skills. There is always room for improvement.” – CIO, Western Europe*
- *“Communication skills, the ability to explain in a simple way so he can understand what IT is talking to him about, and maybe the ability to educate the*

CEO on aspects of IT that are relevant to his needs as an individual user but as the leader of our group. Probably delivering reliable infrastructure and support to him as an individual user of technology. At a more tactical level ensuring that he is available to work with his technology wherever and whenever he wants to as a member of the group. Mainly on the job. I'm sort of a reasonably mature guy in an IT function and I've been through numerous awareness training and finding a way of having a good working relationship with my C currency is rather a personal thing and clearly, obviously making opportunities for me to communicate with him.” – CIO, Western Europe

- *“The sense as a corporate manager. Communication skills. Originality.” – CIO, Japan*
- *“He hopes that I can lighten his burden on technology. He also expects me to help him with the management, the integration and coordination of the company. I may be asked to manage the technology area and integrate technology based on the previous projects. I would try to enhance the communication process.” – CIO, China*
- *“Skills like human interaction.” – CIO, Asia/Pacific*

Understand Business Objectives / Vision

- *“He and I have had that discussions about this one is to understand clearly what the university’s goals and objectives are and to be able to express them outside of the technological range in other words in plain English where it is the university is going, what are the goals and objectives the endpoints if you will of the University. Now the second is to be able to understand what technology can bring to the table to attain that here’s a repeat theme the fact that I have enough knowledge or my staff has enough vision to identify appropriate alternatives and bring them to the table so that they can be explained and so they can be shared with the rest of the University and that they are alternatives towards accomplishing a particular goal or direction that the University names. And the third is to deploy appropriately those technologies.” – CIO, United States*
- *“I think he would like me to have a good thorough knowledge of the industry and how it applies to our organization. And he would like me to understand the business of healthcare.” – CIO, United States*
- *“Strong Business knowledge, laser focus on cost containment, availability. Attend Gartner group conference, spend a lot of time at webinars, read 1500 pages per week; fortune, wall street journal, Gartner online to stay abreast with what is happening to other companies.” – CIO, United States*
- *“Complete understand of the business and the business imperatives, excellent partnership and facilitation skills and number 3 would be vision setting.” – CIO, United States*
- *“1. More understanding with regards to the organization’s needs and more rigor in its implementation 2. Ability to manage in the general sense (projects, budgets...etc.) 3. With more empathy” – CIO, Western Europe*
- *“Some technical skills of course, but also a good knowledge of IT systems relative to management and a certain flair for going beyond one’s usual work activities –*

- e.g. by understanding the concerns and operations of the financial or HR departments. I have developed those skills over the years because I work in a specific area where I get a comprehensive overview of all operations. I think one should multiply one's roles within a company by working in other departments."*
- CIO, Western Europe
 - *"Accounting knowledge, Operational knowledge, (developing) attend more training" – CIO, Asia/Pacific*
 - *"That's a good question. I think that he would want me to understand the business so that there is a good relationship between the business and technology so that's a little bit different than a communication skill, it's a planning skill and integration skill. I think that he would want me to be a good leader of people. I think that he would want me to have a good understanding of what the possibilities are. I think he would want me to excel in customer service." – CIO, United States*
 - *"Vision, Patience, Diligence" – Senior Director of Information Services and Technology, United States*
 - *"1. Strong insight on the business requirements 2. Ability to map technology to those requirements. 3. Ability to communicate and collaborate with other business leaders." – Executive Vice President/CIO, United States*
 - *"I think the skill of vision of their business and to understand their business, and because I come from that side of the equation, I do understand operations because I've been there, you know, running departments at the hospital. And they expect me to have visions of technology in the future. I do a lot of reading, a lot of interaction with my peers, leadership training, meetings." – CIO, United States*
 - *"A better responsiveness at the technical and staff level. More trust and reliability. This can be developed by more regular contact" – CIO, Western Europe*
 - *"Business knowledge, technology control, MBA, recycling" – CIO, Latin America*
 - *"Technology analysis, business analysis, deals, analysis of risks, experience." – CIO, Latin America*
 - *"Assertiveness, business vision, alignment, through company plans, suggestion" – CIO, Latin America*
 - *"1.IT skills 2. Business skills 3. Management skills. I would try to improve my business skills through more communication with the business departments and the users. That's the only way to improve it. As for improving IT skills, I will attend more IT technology conferences." – CIO, China*

Leadership

- *"People leadership, vision, execution" – CIO, United States*
- *"He would certainly depend on me for having good technical judgment in terms of technical feasibility, project management and program management skill- kind of combine those two program and project management, first one would be just leadership again." – CIO, United States*
- *"Leadership, ability in solve problems, relationship, experience" – CIO, Latin America*

- *“1, He hopes that I can be more involved in the business section, not just be a leader in IT system improvement or technical renewal. 2, the learning skill. 3, the coordinating skill. I'm trying to be more involved. I would attend more department meetings and participate in their activities to know more about the development of our business. I would have more communication with our competitor and members of our subbranches, too. As for the coordinating skill, I would try to transfer the authority to my subordinates.” – CIO, China*

Team Work

- *“Team work, skills and performance in pressure situations maybe. I had been workaholic in the past few years or so. These all things need not be developed; it comes automatically with the rise of accountability and pressure of responsibilities.” – CIO, India*
- *“Enthusiasm, teamwork, innovation.” – CIO, Eastern Europe*
- *“1.Intelligence, 2.Teamwork, 3.Interest, enthusiasm. I achieve this by training.” – CIO, Eastern Europe*

[ASKED OF CEOs]: What are the three skills your CIO would most like you to have?

More Funding for Technology

- *“Probably like me to have deep pockets for technology, user community to be more involved in the technology applications: the money piece we're not just being successful at the business is what generates that on the second we're using training to do that.”- Company President, United States*
- *“Ability to make a decision and commit to that decision; the resources need to pursue it.” – Company President, United States*
- *“Financial support, moral support and discussion mode for decision making process are the few things that are expected from me. However, I don't know whether it's good or bad, nor I want to have any major changes in me.” – CEO, India*

Leadership

- *“Probably two out of the same three- technical expertise wouldn't be one of them- leadership people skills and an open mind.” – Company President, United States*
- *“Open-minded, integrity and leadership. Reading and attending seminars once a year.” – CEO, United States*
- *“1, the decision making skill. 2, the skill to make a rational judgment. 3, to treat employees with humanity. As a senior decision maker, I would respect every recommendation my employees makes. If there is anything I don't understand, I would ask for their professional opinions. Also, I would be very happy to listen to their experience so that we may avoid repeated mistakes. As for my supervisor, I would try to convince him to provide a larger space for my subordinate. For those excellent employees, I would provide them material compensation, mental encouragement and promotion.” – CEO, China*

Better Communication and Understanding of Technology

- *“Probably have more knowledge of what he is really doing. Have more time to sit down and talk to him about it.” – Company President, United States*
- *“General understanding, what the IT area needs to do to support the business. I primarily rely on the CIO and his group to educate me on that.” – Company President, United States*
- *“Patience, understanding, be willing to compromise” – President/CEO, United States*
- *“Patience, fuller understanding of the challenges he faces.” – President/CEO, United States*
- *“Have an understanding of the value of technology recognize that it is not a magic for everything.” – Chairman, United States*
- *Support/suggestions at regular intervals, Knowledge of the domain, Critical analysis of the situation and giving necessary guidelines as per requirement.” – CEO, India*
- *“Certainly wants me to have an understanding of all the competing challenges on him, be a supporter of the value of technology, leadership. I try to have a very outside in view of what I’m doing, and try to keep a balance and realistic view of what I’m doing. I do a lot of reading and have a mentorship program. I try to be a good listener and audience for my CIO of what the opportunities are and try and be supportive and learn from him. I struggle the most with understanding and I’m not as patient as my CIO I might like, but we also need to deliver so that is probably be the biggest area of frustration for him with me.” – CEO, United States*
- *“Involved in what he is doing, understand what he is doing and agree with what he is doing.” – CEO, United States*
- *“An appreciation of technology, working knowledge of technology, intelligence. Constantly train others to develop them.” – CEO, United States*
- *“Better understanding of the technology - what can and can't be done, more access, and more resources” – Company President, United States*
- *“Understanding how important the IT system is.” – CEO, United States*
- *“More of awareness of the technically development or IT development. He is please with the level independence he gets to work with.” – CEO, United States*
- *“1. Empathetic 2. Brave 3. Value what he does. (I talk to him a lot. I encourage him to speak out.)” – Managing Director, Asia/Pacific*
- *“1. Good organizing skills and coordinating skills. 2. The learning capacity concerning technology. 3. The integrating skills for both business and technology...” – CEO, China*
- *“1, strong communication skill. 2, professionalism. 3, sensibility...” – CEO, China*
- *“Technical and commercial knowledge, Specialized magazines, internet” - CEO, Latin America*
- *“Technical and commercial knowledge and leadership. Training on the job.” - CEO, Latin America*

- *“Technical knowledge, time to wait for return, Training of IT area” – CEO, Latin America*

Flexibility

- *“Flexibility/accuracy is very important, ability to establish on the market.” – CEO, Western Europe*
- *“Open-minded about changes, willing to fork out money, understanding.” – CEO/Chairman, United States*

Patience

- *“Patience” – Company President, United States*
- *“Patience, technically understanding of what he is doing, I don't know what the third is.” – Chairman, United States*
- *“Willingness to listen to his issues, give directions and when required are the skills I think my CIO wants in me. I always listen to others and then give my viewpoint for escalating them.” – CEO, India*