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2008 ASEAN CIO Leadership Study

The Changing Role of CIO:
From Technology Excellence to Business Impact



July 2008

This report and underlying survey were produced by INSEAD's eLab at the request of IBM-ASEAN.

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Table of contents

Executive Summary	1
Scope and Methodology of the 2008 ASEAN CIO Leadership Survey	5
Scope	
Methodology	
Introducing the INSEAD 3Q Model of CIO Leadership	
Detailed Analysis of the Survey and Interviews Results	13
The overall ASEAN picture	
Performance	
Technical excellence	
Leadership	
The 3-Q model: main results	
Comparisons with the IBM/Center for CIO Leadership global survey	
Strategic Implications	39
Awareness	
Agility	
Skills	
Interim conclusions and pointers for future research	
ANNEXES	44
Survey instrument	
Bibliography	

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EXECUTIVE SUMMARY

In today's economy, the functions of the CIO have become more complex and more multi-faceted. His or her performance is not measured anymore against his/her ability to provide the best IT solutions to his/her company or organization, but also against other dimensions, including financial, strategic, managerial, and – increasingly – environmental. The modern CIO is expected to perform as a member of the organization's management team, to excel in technology-related areas, and to display leadership and strategic capabilities.

To reflect this complex new environment around the CIO, INSEAD has developed an original framework, known as the 'Three-Quotient Model' (or 3-Q Model). Those three quotients respectively measure the quality of 1) overall company performance, 2) technology excellence, and 3) leadership¹.

During the second half of 2007 and the earlier part of 2008, a large survey was carried out in the ASEAN area, to collect the views of CIOs on key aspects of their current functions, as well as on their expected evolutions. Using the INSEAD 3-Q framework, the survey findings were aggregated into three discrete quotients of excellence in CIO leadership.

For ASEAN as a whole, the Technology Quotient came out the highest, primarily because of an impressive degree of ICT (information and communication technology) proliferation across organizational functions. In addition, according to 79.2% of CIOs in the survey, their organizations actively incorporated IT in the design and development of new products and services.

Beyond this broad result, the Study yielded the following key findings:

¹ The 3-Q Model and its underlying methodology are described in detail later in this report.

In ASEAN, excellence in leadership lags behind technology excellence

Excellence in leadership lags behind technology excellence across ASEAN. This finding was strongly echoed through in-depth conversations conducted by INSEAD analysts across the region, and confirmed by organizing data from the online survey into INSEAD's three-quotient model of CIO leadership excellence. Although, in tandem with global trends, 94% of CIOs in ASEAN observed that the CIO role was becoming more important in the business, 76% agreed with the statement that “*most organizations in ASEAN see IT as a cost centre.*”

CIOs view leading employees as a key capability. Critically, talent management has emerged as a key ingredient in achieving leadership. In the survey, however, talent development ranked bottom as both a top management priority and a current source of performance excellence. Only 29.9% of CIOs in the survey felt that their organization's performance in talent management was stronger than their industry's.

When survey findings were aggregated using the INSEAD three-quotient model of excellence in CIO leadership, companies across ASEAN scored the lowest in the Performance Quotient, which measures the overall performance of firms. The Technology Quotient came out the highest of all three INSEAD quotients measuring excellence in CIO leadership. This was rooted in an impressive degree of ICT proliferation across organizational functions. In addition, according to 79.2% of CIOs in the survey, their organizations actively incorporated ICT into the design and development of new products and services.

The CIO community in ASEAN remains heterogeneous

Like ASEAN itself, the CIO community in ASEAN is diverse. IT maturity and adoption levels vary widely from country to country. ASEAN's mix of developed and developing countries presents technology leaders in the region with a dramatically divergent set of growth prospects and IT systems requirements. Furthermore, there are perceptions of persisting differences between the CIO role's dynamics in local vs. multinational companies (and within MNC companies, between Asian, European and US firms), private vs. public sector, and large vs. medium-sized companies.

In line with the region's macroeconomic developments, ASEAN CIOs viewed China and India not only as a competitive challenge (67.1%) but also as a source of management and technology talent (57.6%) and a source of R&D and innovation (also 57.6%).

CIOs are reporting advancement in IT-business collaboration

93.4% of CIOs in the study rated the promoting of collaboration between IT and the rest of the business as important or very important. 76.7% of CIOs acknowledged that prior experience in business operations was becoming an increasingly important consideration when recruiting a CIO. Encouragingly, the IT—business collaboration increasingly trickles down from CIO level across the organization.

On average, ASEAN CIOs spend about 30 per cent of their time on future planning for IT investment and strategic planning. Increasingly, they recognize managing vendor relationships as a crucial component of their responsibility. In the words of one CIO interviewed, *“you have to know what will be important tomorrow & lay the foundations for it today.”*

The strategic components of the CIO role are taking up a growing share of CIOs’ time. On average, ASEAN CIOs reported spending about 30 per cent of their time on future planning for IT investment and strategic planning, which includes managing vendor relationships. In the words of one CIO interviewed, *“you have to know what will be important tomorrow & lay the foundations for it today.”*

Change management, business process, customer satisfaction are becoming increasingly important in CIOs’ activities

Business process was reported as a crucial building block in ASEAN companies’ technology architecture. 79.6% of CIOs reported that their organizations were using IT capabilities to enable process improvement.

The emphasis on business process has also brought to the fore the customer: Improving internal and external user experience and satisfaction was ranked among CIOs’ top priorities. The ASEAN customer is typically receptive to new technologies and interfaces such as personal networking sites. Therefore from the CIO’s perspective the pace of technological change is sometimes overwhelming. Improving internal and external user experience and satisfaction was also ranked among CIOs’ top priorities. The ASEAN customer is typically receptive to new technologies and interfaces such as personal networking sites. Therefore from the CIO’s perspective the pace of technological change is sometimes overwhelming.

Managing change is a key priority for ASEAN CIOs. They are also keenly aware that change in an IT organization must be managed within a proper framework of corporate and IT governance. CIOs across ASEAN also pointed out that change management entailed tackling the entire culture of what they saw as an increasingly regional and global organization. Correspondingly, cross-cultural communication and management skills have risen in strategic importance.

With 22.5% of CIOs in the survey coming from banking, insurance and financial markets, regulatory compliance was ranked as high-performance; yet it was not viewed as one of the top management's top three operational priorities.

The CIO role - and its evolution - remain complex, and require further research

Growing recognition has not lessened the complexity of the CIO's role. 81.2% of respondents to the online survey drew on resourcefulness as one the strengths of their leadership approach. Although most CIOs praised the move of CIO functions towards a higher strategic level, some saw this development as adding to the CIO's 'regular workload'. While becoming more strategic, the CIO's role remains highly complex and multi-faceted: 81.2% of respondents to the online survey mentioned resourcefulness as one the strengths of their leadership approach. Although most CIOs praised the move of CIO functions towards a higher strategic level, some saw this development as adding to the CIO's 'regular workload'.

Anticipating the strategic make-up of CIOs role's five years from today is on the minds of many CIOs in ASEAN. In-depth interviews showed a persistent degree of anxiety over CIOs' prospect once some of the major current IT initiatives in business process and change management have been completed.

The present research also points at avenues for further investigation, including in the areas where ASEAN companies and CIOs have a strong development potential, namely awareness, agility and skills. Enhancing the knowledge of existing strengths and weaknesses at the local (national) level will be the key to turning lessons into action.

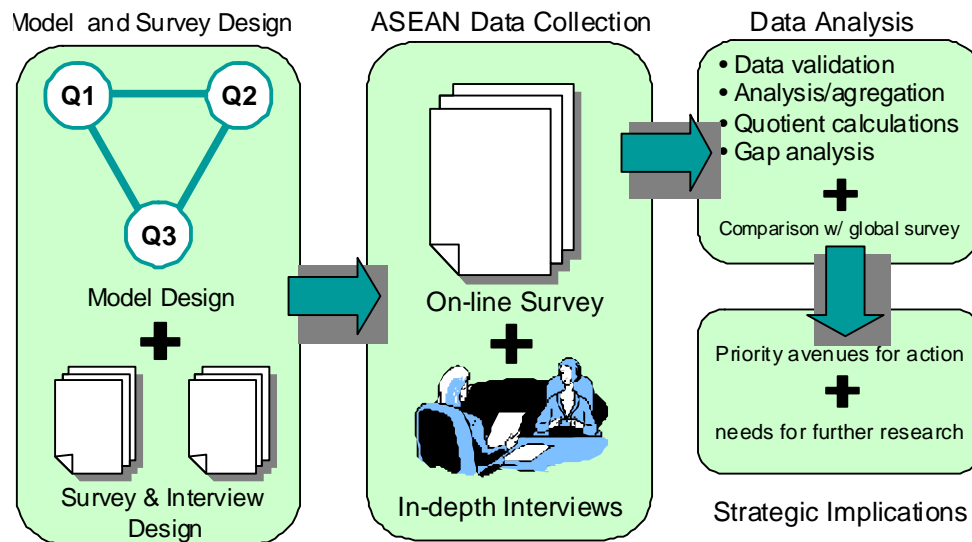
Scope and Methodology of the 2008 ASEAN CIO Leadership Survey

Introducing INSEAD's 3-Q Model of CIO Leadership

To explore the nature and determinants of CIO Leadership in the ASEAN region, INSEAD's approach has been designed as a combination between (1) a region-wide collection of data and information (through an online survey and a series of in-depth interviews), and (2) a strong analytical model, this offering the ability to validate the data collected and infer some possible strategic implications for companies and organizations in the ASEAN region.

Additionally, the results of the ASEAN survey have been compared to those of the global survey initiated by the Center for CIO Leadership in 2007².

Figure 1: Survey methodology



² <http://cioleadershipcenter.com/>

A. Scope of the Survey

The study findings leverage field research targeting CIOs in six of ASEAN’s ten markets. The six countries were selected primarily on the strength of their IT spending within the ASEAN region. In addition, they represent a mix of mature and emerging technology markets, thus allowing researchers to observe and analyze the issues related to CIO leadership in a highly dynamic context.

Figure 2

Geographical scope of the 2008 Survey and Report



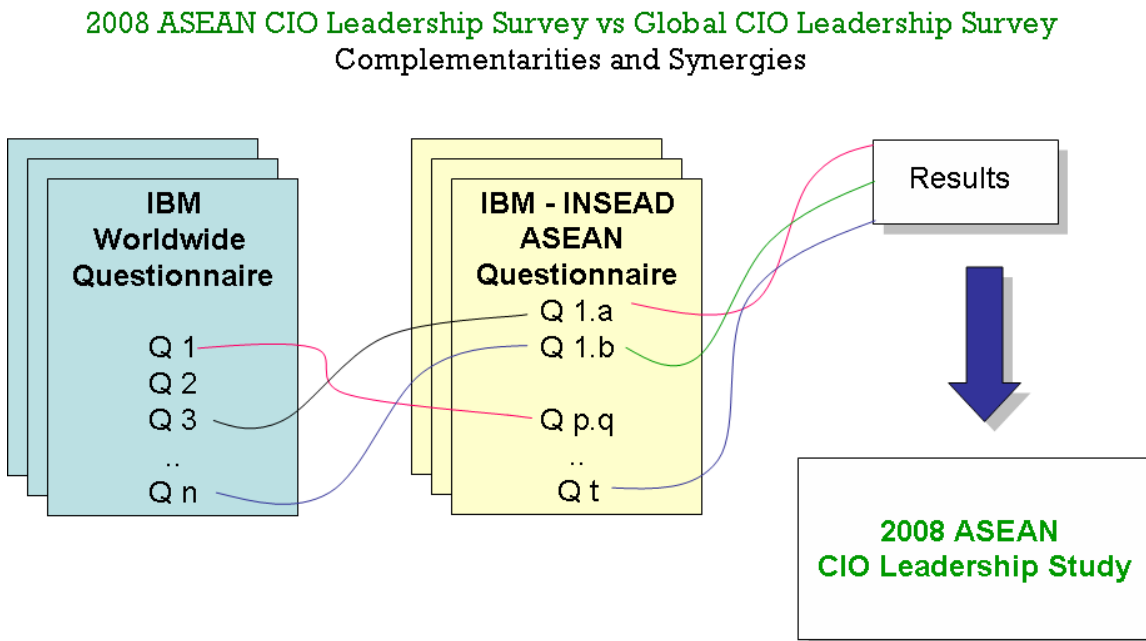
B. Survey Methodology

The online survey was designed with four priorities in mind, namely (1) focus on ASEAN-specific issues and attitudes regarding CIO leadership, (2) maximize alignment (and comparability) with the existing global survey, (3) offer flexibility to explore strategic issues further through complementary in-depth interviews, and (4) provide a readable way to connect CIOs opinions to the underlying 3-Q model of CIO leadership.

B1. ASEAN online survey

Between January and May 2008, INSEAD researchers collected 165 responses to the 2008 ASEAN CIO Leadership Survey. The Survey was administered through an online data collection tool.

Figure 3



B2. Aligning the ASEAN and global surveys

The content of the survey questionnaire leveraged heavily on a 2007 worldwide study, titled 'The CIO profession: Driving innovation and competitive advantage'. The study was produced by the Center for CIO Leadership.

To provide for continuity, and to facilitate direct ASEAN-vs.-worldwide comparisons, about 85% of the questions included in the worldwide study questionnaire were retained in the ASEAN survey

B3. In-depth interviews

In order to complement the online survey's quantitative data points with qualitative trends, insights, and commentary, telephone and face-to-face interviews were conducted with 21 ASEAN CIOs. These represented a sub-set of the 165 respondents to the online survey, and were selected from among CIOs who had expressed interest in discussing their observations and ideas in more depth with an INSEAD research analyst.

B4. Analyzing the findings of the Survey

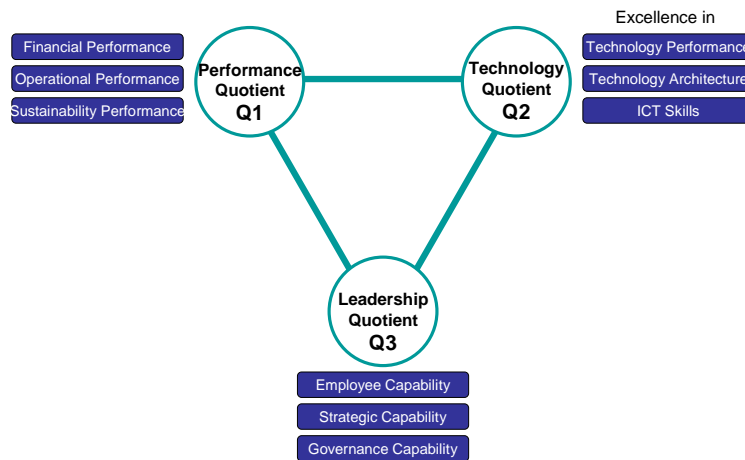
The majority of questions in the quantitative (online) survey were grouped into the three discrete areas of the 3-Q model, namely Performance, Technology, and Leadership. In this manner, data points from completed surveys fed directly into one of the three areas. The purpose of the resulting data engine was to capture and represent the survey findings as a series of measurable, easy-to-use quantitative indicators. These can be applied by CIOs, managers, vendors, and policymakers to measuring the leadership performance and potential of IT organizations, firms, or entire countries.

C. Introducing the INSEAD 3Q Model of CIO Leadership

As described earlier, INSEAD’s approach to measuring CIO Leadership attempts to reflect the new professional environment of the CIO function by using a simple model, organized around three main axes, or ‘quotients’³.

Figure 4

The 3Q Model of CIO Leadership



The 3-Q Model and related questionnaire are organized around:

- The Performance Quotient (PQ), measuring the overall performance at the firm/organization level
- The Technology Quotient (TQ), measuring the excellence of technology management and technology skills
- The Leadership Quotient (LQ), measuring the excellence of people and leadership skills.

³ The term ‘quotient’ intentionally refers to Daniel Goleman’s best-selling book ‘Emotional Intelligence’ and its use of an ‘emotional quotient’, which the author considers at least as important as the more traditional ‘intelligence quotient’.

PQ (the Performance Quotient) can be stated to be a function of financial performance (FP), operational performance (OP) and sustainability performance (SP) - (such as on corporate social sustainability, environment etc) of the firm:

$$PQ = f(FP, OP, SP)$$

PQ reflects organizations' performance in areas such as revenue growth, profitability, operational efficiency, business process, regulatory compliance, talent development, environmental protection, and corporate social responsibility.

TQ (the Technology Quotient) can be stated as a function of technology performance excellence (PE), technology architecture excellence (TE) and ICT Skills Excellence (SE):

$$TQ = f(PE, TE, SE)$$

TQ measures firm-level performance in such technology aspects as IT infrastructure, delivering IT projects, user satisfaction, business process automation, business continuity, innovation, IT usage across the organization, and IT metrics.

Finally, **LQ (the Leadership Quotient)** can be stated as a function of employee capability (EC), strategic capability (SC) and governance capability (GC):

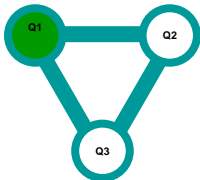
$$LQ = f(EC, SC, GC)$$

LQ measures the excellence of people and leadership skills within the CIO's team, the IT function, and the entire firm.

Box 1

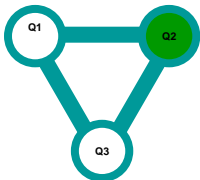
Summary Description of the Three Quotients of CIO Leadership

PERFORMANCE QUOTIENT



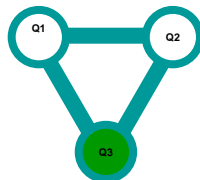
- ❑ Good **Financial Performance** is an essential indicator of the health of the firm from an overall business point of view.
- ❑ **Operational Performance** is an indicator of the effectiveness of global business processes which form the core of firms.
- ❑ **Sustainability Performance** is an indicator of the fit of the firm with the environmental and global citizenship needs on the business.

TECHNOLOGY QUOTIENT



- ❑ **Technology Performance** indicates the effectiveness of the technology operations of the firm.
- ❑ **Technology Architecture** indicates the effectiveness of the firm in managing its global information and service architecture.
- ❑ **ICT Skills** is a measure of the level of technology skills in the technology department and the organization at large.

LEADERSHIP QUOTIENT

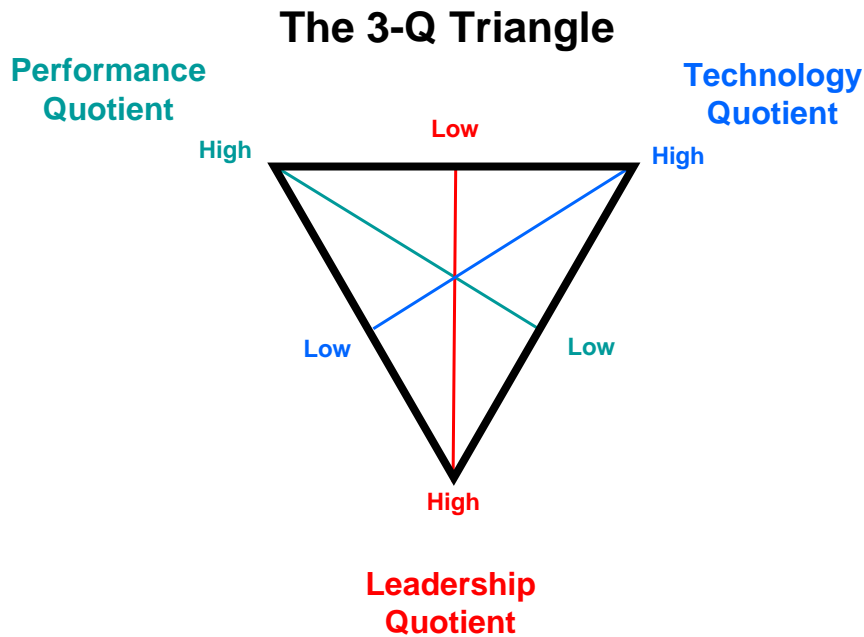


- ❑ **Strategic Capability** is a measure of the clarity of the overall strategy of the firm and the role of technology in supporting and crafting this strategy.
- ❑ **Governance Capability** is a measure of the effectiveness of technology-business partnership in the firm at all levels of the firm.
- ❑ **Employee Capability** is a measure of the ability of the organization and its employees to innovate, work effectively in teams and successfully leverage the potential of technology.

Normalizing and scaling 3-Q results

To report the main findings emerging from the survey, each score is represented graphically within the 3-Q triangle. In that triangle, each summit corresponds to one of the three quotients of the underlying model (performance, technological excellence and leadership). To facilitate the reading and comparison of the results obtained, a simple method of normalization and scaling has been used: for each quotient, the score obtained by a particular country is reported on a ‘normalized axis’ (i.e. on a scale going from the lowest score registered – 3.27 – to the highest – 3.86 -), born by the vertex of the triangle drawn from the relevant summit/quotient. The high the score obtained, the closer the corresponding point will be to the relevant summit of the triangle.

Figure 5



Using this approach, each country is represented by a triangle, representing its ‘map’ in the 3-Q space. An aggregate score can then be obtained for each country, represented by the gravity centre of that triangle.

Detailed Analysis of the Survey and Interview Results

A. The overall ASEAN picture

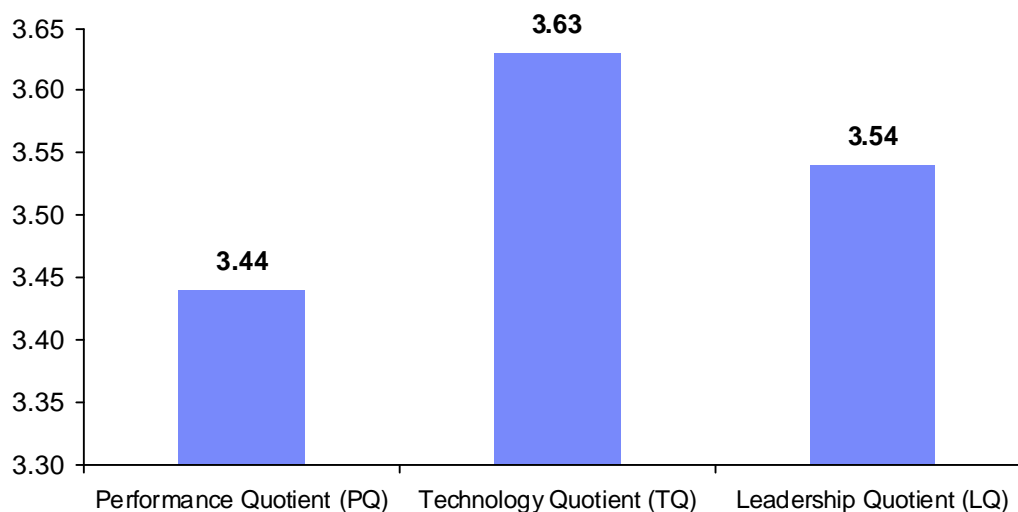
Performance Quotient (PQ) scores reflect lack of excellence in sustainability

Despite ASEAN's consistently high growth rates, of the three quotients in the INSEAD framework (PQ, TQ, LQ), ASEAN organizations in the Survey reported relatively low scores in the Performance Quotient (PQ) – an indicator of financial, business and sustainability performance. Of the three quotients of CIO leadership excellence, ASEAN firms overall scored the lowest in PQ. In the 'Sustainability Performance' pillar of the Performance Quotient (measuring organizations' commitment to excellence in areas such as environmental protection and corporate social responsibility), most respondents rated their companies' performance as average.

Firms across ASEAN share a high Technology Quotient (TQ)

In aggregate, of the three quotients in the INSEAD framework, ASEAN firms in the survey posted the highest scores in the Technology Quotient, which measures excellence in technology management and technology skills. This reflects the consistently high technology adoption and usage which the survey revealed across ASEAN markets and across industry sectors. ASEAN companies have been proficient users of technology, and have progressively introduced it non-IT departments, intra-company communications and processes, and cross-departmental functions.

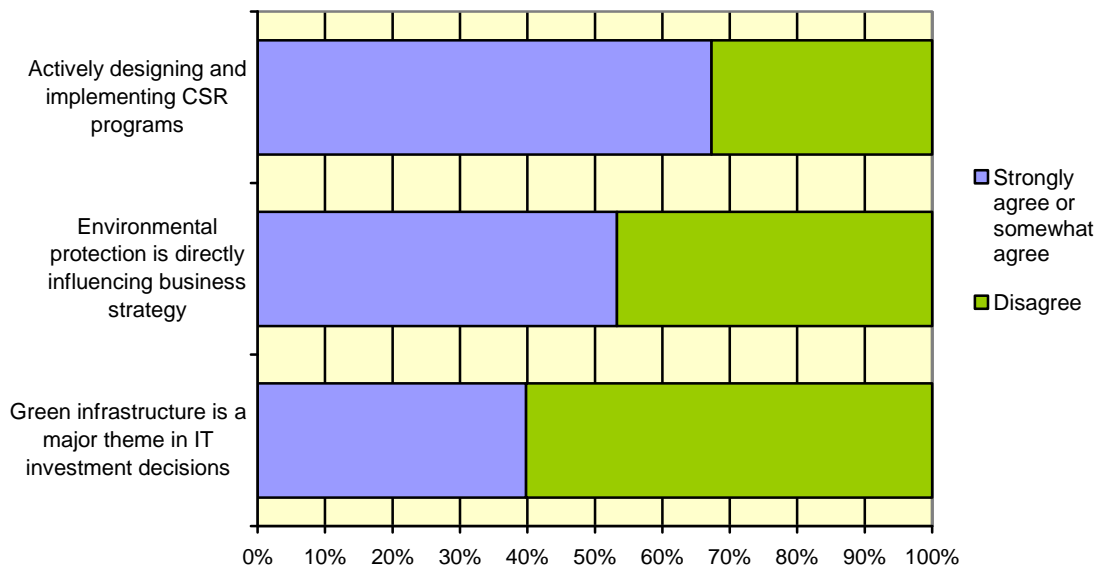
Figure 6: ASEAN-level quotients of CIO leadership excellence



ASEAN shows a competence gap between technology and leadership excellence

The Leadership Quotient (LQ) of companies in ASEAN generally lags behind their Technology Quotient (TQ) scores. This is a capability gap that ASEAN CIOs are well aware of, as documented in analyst interviews. Indeed, narrowing the gap will be a key success indicator in the ongoing evolution of the CIO role in the region.

Figure 7: ASEAN organizations' performance in sustainability



B. Performance

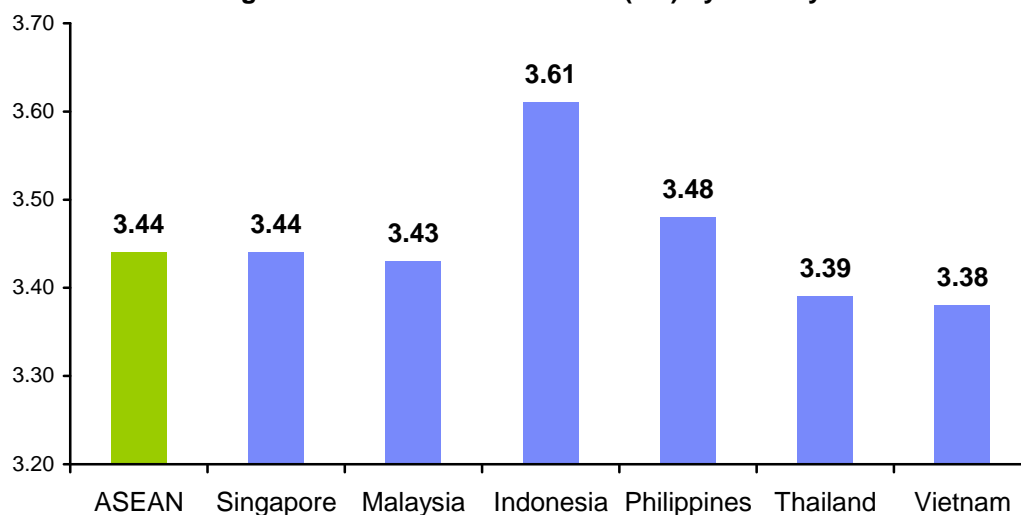
The Performance Quotient of the survey respondents' organizations was calculated by aggregating the respondents' ratings of their organizations' performance in the following areas⁴:

⁴ The responses reflected CIOs' perceptions; they did not incorporate secondary data such as individual companies' financial statements.

- Revenue growth
- Profitability
- Operational efficiency and business process improvement
- Regulatory compliance
- Talent development
- Environmental protection and ‘green infrastructure’
- Corporate social responsibility.

At country level, there was little variation among ASEAN markets. This is partly because the survey targeted high-performing companies, many of them publicly owned, that rank among the region’s biggest IT spenders in their industry.

Figure 8: Performance Quotient (PQ) by country



Understanding business process is good, but not sufficient anymore

Business process was reported as an increasingly crucial building block in ASEAN companies’ technology architecture. 79.6% of CIOs reported that their organizations were using IT capabilities to enable process improvement. A few years ago, understanding a business process was in itself a commendable capability for CIOs in ASEAN; today, they are expected not only to understand the process but to standardize and simplify it.

“Today’s CIO is totally embedded in business process.”

As with overall IT—business alignment, the understanding of business process is percolating down the ranks of IT teams across ASEAN. According to one CIO,

“The question is how to build thinking of IT staff so that it’s not just about building a program and testing it; it’s about ownership of the process.”

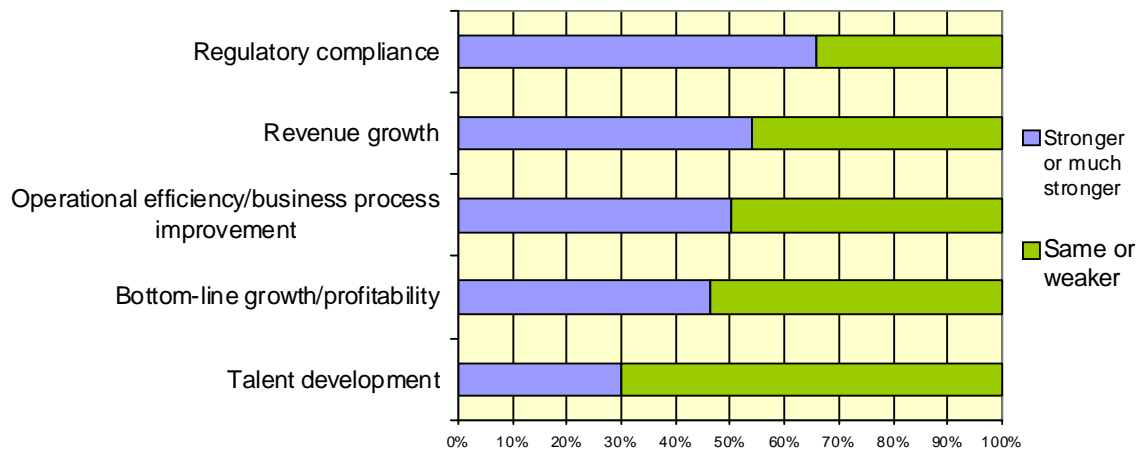
Regulatory compliance is high on CIOs’ agenda ...but not necessarily on top management’s agenda

The survey revealed a mismatch between key priorities of companies’ top management and CIOs’ own assessment of performance relative to industry. With 22.5% of CIOs in the survey coming from banking, insurance and financial markets, regulatory compliance was ranked as high-performance; yet it was not viewed as one of the top management’s top three operational priorities. This is in contrast with the 66% of CIOs in the survey who rated their organizations’ performance in this area as stronger, or much stronger, than that of their industry. Even more importantly, 75.3% agreed that regulatory compliance was an area where IT has been creating business value for their organization.

Talent development

Worryingly, talent development ranked bottom as both a top management priority and a current source of performance excellence.

Figure 9: When compared with other organizations in your industry, how would you rate your own organization’s performance along the following dimensions?



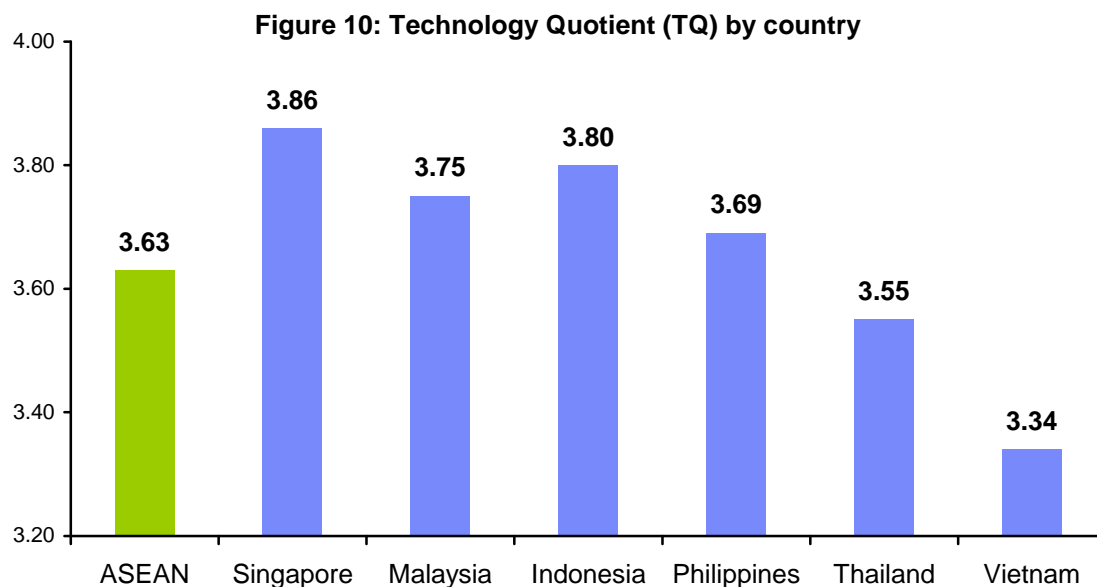
C. Technology excellence

Technology Quotient (TQ) scores among survey participants were determined based on levels of excellence reported in the following areas:

- Reliable, cost-effective and secure IT infrastructure
- High-profile IT projects
- User experience and satisfaction
- Business process automation and enhancement
- Business continuity
- Technology-enabled innovation
- IT supporting other functions in the organization
- IT driving internal communications
- Enhancing e-skills among employees
- Using well-understood metrics to measure IT performance.

Technology performance is ASEAN’s strong point

As shown in Figure 1, the Technology Quotient came out the highest of all three INSEAD quotients measuring excellence in CIO leadership within ASEAN. With the exception of Vietnam, this measure was consistent at country level (see Figure 10 below).



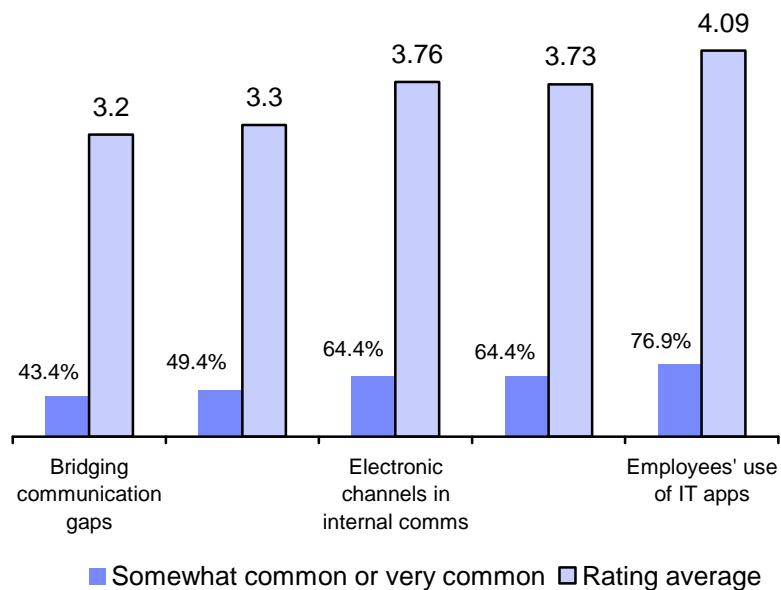
ICT (Information and Communication Technology) usage is high across ASEAN

The high rankings are rooted in strong technology performance, as well as an impressive degree of ICT proliferation across organizational functions. For example, 83.8% of CIOs agreed (51.3% strongly agreed) that the IT infrastructure and services supporting functions such as HR and payroll were centralized and shared by all locations in their organizations' operations.

TABLE 1: Where does IT make the greatest contribution?

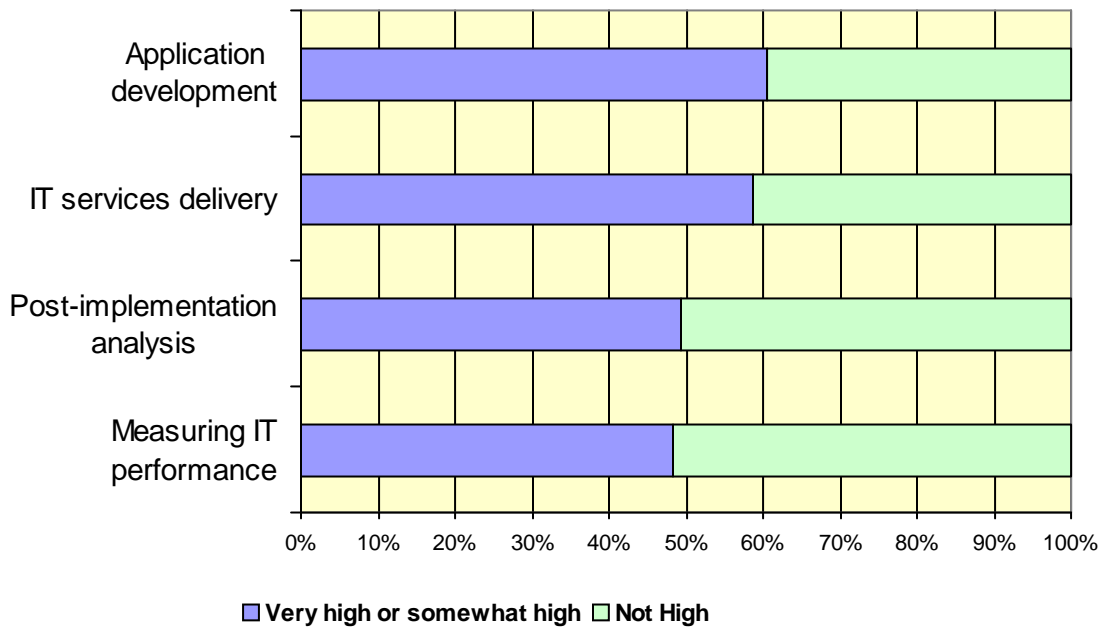
Rank	Response average (1-5; 1 = highest)	Strategic business area	Technology deployed
1.	1.75	Organizational effectiveness	Collaboration, work-flow technology
2.	2.16	Business transformation	Application re-engineering
3.	2.18	Information agenda	Data management, data mining
4.	2.74	Infrastructure efficiency	Data centre revamp, outsourcing
5.	3.47	Risk management	IT security and compliance

Figure 11: Level of IT deployment in ASEAN organizations



60% of CIOs in the survey rated as strong or very strong their organizations' track record in using technology to optimize key processes such as sales force and service force management, employee performance measurement and training, and CRM. At the same time, a virtually equal share of the respondents felt that their applications were still deployed in silos, and more integration of diverse applications was needed.

Figure 12: Level of IT implementation skills



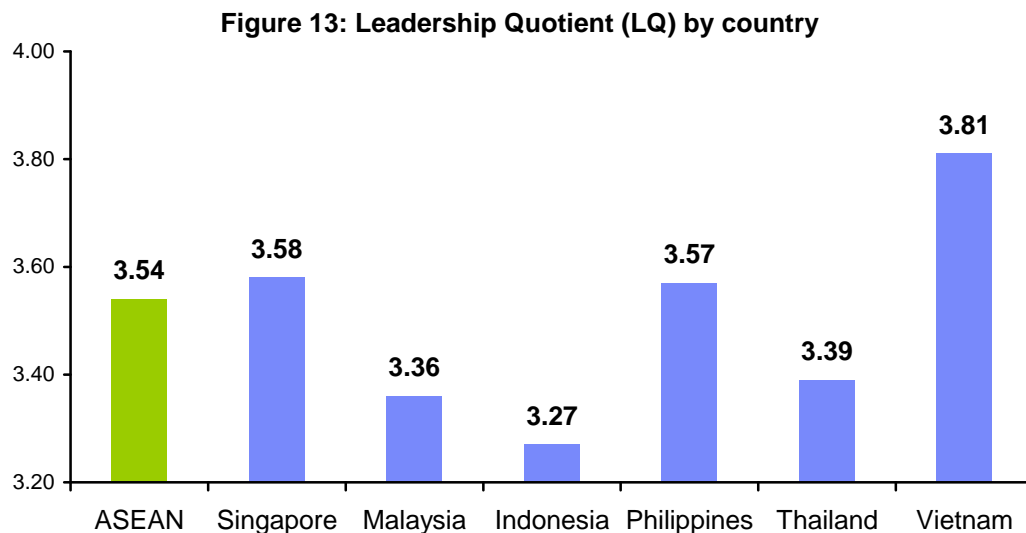
Strong emphasis on the technology user

The emphasis on business process has also brought to the fore the customer: Improving internal and external user experience and satisfaction was ranked among CIOs' top activities, alongside ensuring a reliable and cost-effective IT infrastructure and leading and delivering high-profile IT projects. In addition, according to 79.2% of CIOs in the survey, their organizations actively incorporate ICT into the design and development of new products and services.

D. Leadership

In ASEAN organizations, excellence in leadership trails technology excellence

Across ASEAN organizations, the Leadership Quotient (LQ) of CIO leadership excellence showed consistently lower values than the Technology Quotient (except in Vietnam). Among the three quotients, Malaysia, Indonesia and Thailand showed LQ to be the lowest. This finding was strongly echoed through in-depth conversations conducted by INSEAD analysts across the region.



The findings of the survey show that the importance of collaboration between IT and business is well-understood across ASEAN:

- 93.4% of CIOs rated as important or very important the promoting of collaboration between IT and the rest of the business.
- 82.5% of CIOs felt that their company’s senior management involved IT management in strategic decision-making.
- In the minds of 79.7% of the respondents, their company viewed the IT function as a strong enabler of business performance.

Encouragingly, the IT—business collaboration increasingly trickles down from CIO level across the organization:

- Despite pointing to a general lack of business knowledge within the IT department (59.8%), 75.5% of companies whose CIOs took part in the survey said their organization had effective IT/business relationships at levels below the CIO.
- 62% of reported that their IT and business managers collaborated systematically on IT investments and related strategic opportunities.
- 54.7% believed that their IT employees had the knowledge and skills to communicate effectively in business terms.

“The alignment we talk about is always a dynamic, fluid state, and that has repercussions for skill-sets and talent.”

CIOs view leading employees as a critical capability

Manifesting strength in leading employees by delegating effectively, broadening their opportunities, and acting with fairness was considered a key leadership quality by 81.2% of CIOs. Similarly, 80.4% of CIOs agreed that identifying and developing IT staff is an important part of their performance as CIOs.

ASEAN CIOs have also internalized that beyond managing and retaining IT staff in general, their role comes with identifying and nurturing individual talent. More than 77% felt that their organization did recognize individual talents. Nearly 72% agreed that their organization encouraged continuous creativity and idea generation.

Talent management has emerged as a key gap in achieving leadership

Yet only 29.9% of CIOs in the survey felt that their organization’s performance in talent management was stronger than their industry’s. This finding is of particular concern as CIOs are well aware that talent is a crucial ingredient in building organizations’ strategic capabilities through initiatives such as change management and innovation. Several respondents voiced a conviction that “managing change comes down to managing people.” One CIO went as far as saying he only hired IT managers who sought out change and the opportunity to manage change.

“What distinguishes a high-performing CIO from a mediocre one is how they manage change.”

IT governance guides CIOs to proper execution

Many of the CIOs in the surveys came from regulated industries such as banking and finance. Therefore their responsibility includes compliance management, and putting in place robust planning and review processes. They are keenly aware that change in an IT organization must be managed within a proper framework of corporate and IT governance. Another crucial part of change management in an organization is succession planning. CIOs recognize that CIO talent is becoming more difficult to buy, but also that the organization's ROI is greater when it has developed its own CIO talent.

Cultural diversity is now firmly on the CIO's agenda

CIOs in the surveys were quick to point out that change management entailed tackling the entire culture of the organization. Cross-cultural communication and management skills have also moved up in strategic importance over the past few years, as IT teams in ASEAN companies increasingly adopt regional and global structures; some of the CIOs surveyed reported managing, from their ASEAN base, IT service delivery centers on a global basis. According to 43.4% of respondents, IT was also used as a vehicle in bridging cultural and communication gaps between employees in different parts of the region.

CIOs across the region are sensing that a qualitatively new level of leadership will be required from the industry. Rather than a thorough knowledge of technology, the critical quality of "e-leaders" in the knowledge economy will be a deep understanding of the organizational, social, and cultural impact of information networks.

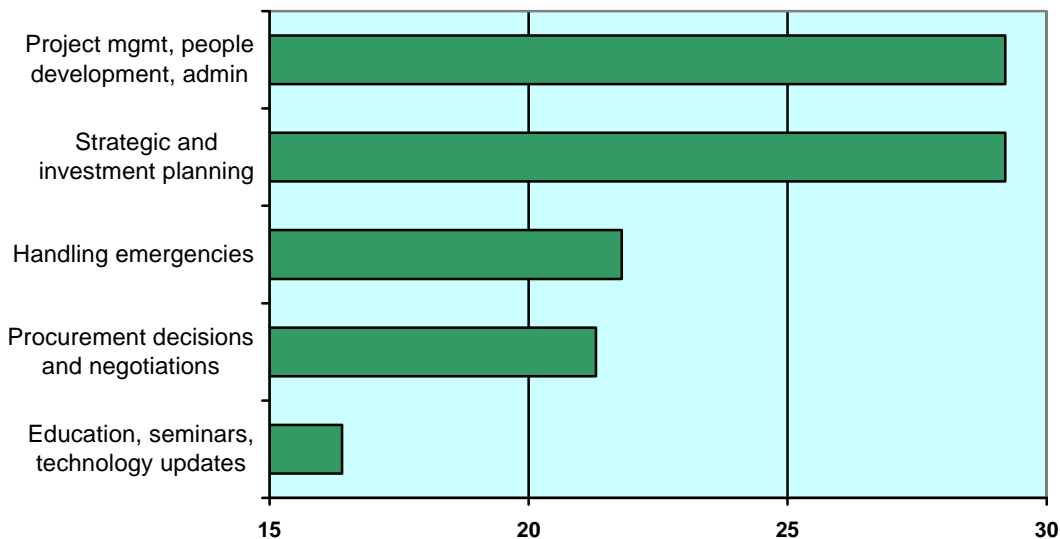
"The real change doesn't necessarily come from the technology itself, but rather from the way people adapt and react to technology."

Growing recognition hasn’t lessened the complexity of the CIO role

Overall, the ASEAN CIO does view himself/herself as a valued member of the company’s senior management team (88.5%). In in-depth conversations, many CIOs voiced their optimism that full integration of the CIO role with other key players on the executive board was inevitable. This is consistent with previous research by INSEAD which had termed this trend ‘the democratization of the C-space’.

“A CIO’s job is to drive the organisation and understand from the executive board what talent gaps may exist, what are the clear and measurable goals to be achieved, and what resources are needed to achieve those goals.”

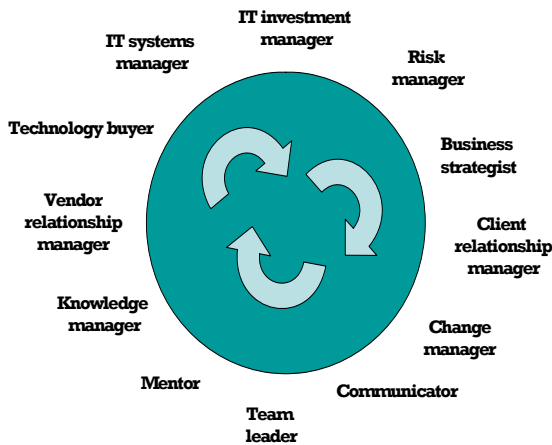
Figure 14: ASEAN CIOs’ average time spending
(in % of total)



Nonetheless, the CIO role continues to be a complex and multi-faceted one. Not surprisingly, 81.2% of respondents to the online survey drew on resourcefulness as one the strengths of their leadership approach. Some CIOs commented that the responsibility they had taken on in understanding and creating IT systems in different company departments has ‘forced’ them to cultivate a multi-disciplinary skill set that combines knowledge of current and future technology trends, operations and services, marketing, security, sales, finance, procurement, HR and strategy. This naturally led them to cross-functional management.

“A CIO’s role is very broad and very narrow at the same time”

Figure 15: Complexity of the CIO role
(conceptual diagram)



Source: eLab@INSEAD

Some CIOs have voiced continued anxiety over the future of their role in the organization. They are wondering about the future of their profession once today's change management processes are successfully implemented, and the company has attracted and trained enough staff who understand technology and its alignment with business.

“What’s next for the CIO? Do you move on to another aspect of business in the same company or another industry? Are you still relevant, especially in industries which require very specific expertise in certain technologies?”

The soft skills required by CIOs (building relationships, generating trust, inspiring respect) have been mentioned in a number of studies. Survey respondents concurred that creating goodwill was directly linked to the larger CIO project of shifting the perception of the IT operation from that of a cost centre to a profit centre.

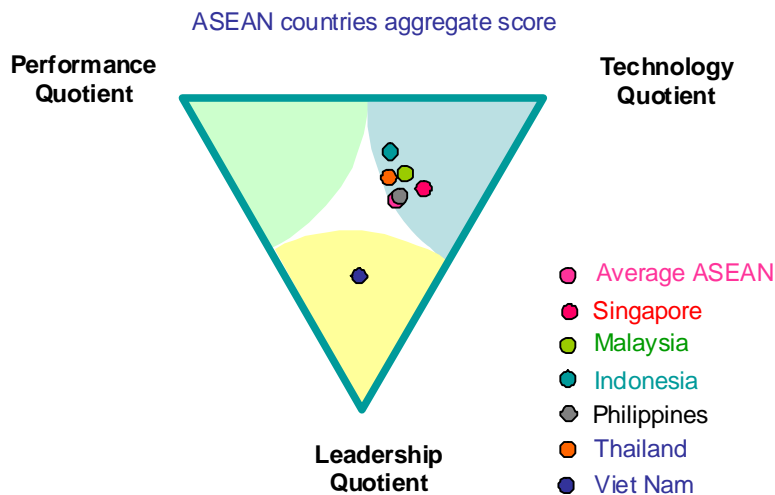
TABLE 2: Important CIO Activities						
Underlying Skills	Ensuring a reliable and cost-effective IT infrastructure	Leading and delivering high-profile IT projects	Responding effectively to business requirements	Improving internal and external user experience & satisfaction	Identifying opportunities for business process automation & enhancement	Identifying and developing high-potential IT staff
Doing whatever it takes	X	X				
Leading employees		X	X			X
Resourcefulness	X	X	X	X	X	
Self-awareness				X		X
Participative management			X		X	X
Influencing, leadership, power		X	X		X	
Strategic planning	X		X		X	X

E. The 3-Q model: main results at country level

The first striking result of the online survey is that ASEAN CIOs (with the notable exception of Vietnam) see themselves very much in the ‘technology excellence’ sector of the 3-Q triangle.

Figure 16

ASEAN Country Results



This may reflect a common perception that, in most of ASEAN, the ‘new (i.e. strategic and business-focused) roles of the CIO’ are seen more as a potential (or challenge) than as a current reality. In other words, whereas it is increasingly expected that the ASEAN CIO should be more of a ‘performer’ in all major strategic areas of the business (including financial, operational and increasingly environmental), and a leader of the organization, most ASEAN CIOs see their main area of relevance and competence (and probably comfort) in the ‘technological excellence’ field.

This is corroborated by many of the interviews carried out for this survey. For example, one CIO of a Singapore-based company mentioned that “a CIO needs to understand the technology, and especially the long-term requirements in network architecture; that way, as new business requirement are put forward, the CIO has something to build upon.” Another CIO stressed that “it’s true that we don’t need to be as hands-on nowadays in looking after the technology as we did a few years ago; but from the outside, market perspective, excellence in technology is still seen as the CIO’s No.1 priority.”

Table 3: Aggregate, country-level 3-Q results, ASEAN

Aggregate quotient value / Country	ASEAN	Singapore	Malaysia	Indonesia	Philippines	Thailand	Vietnam
Performance Quotient (PQ)	3.44	3.44	3.43	3.61	3.48	3.39	3.38
Technology Quotient (TQ)	3.63	3.86	3.75	3.80	3.69	3.55	3.34
Leadership Quotient (LQ)	3.54	3.58	3.36	3.27	3.57	3.39	3.81

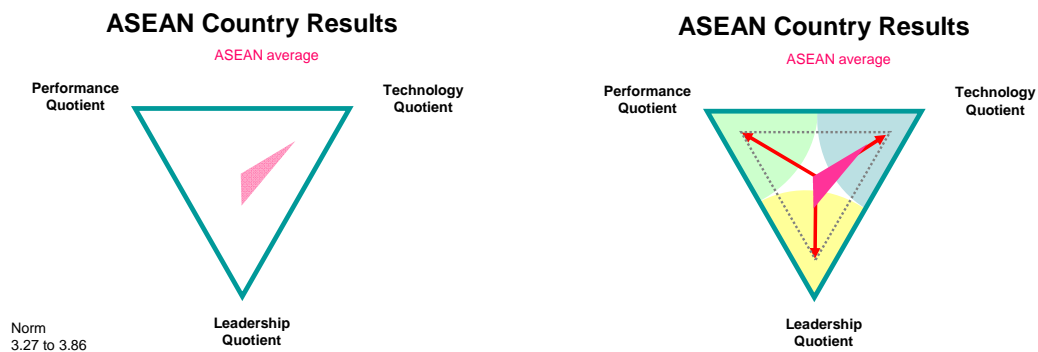
The next stage is to observe whether or not such aggregate results (and **their** possible strategic implications) remain relevant at the country level. The aggregate data had already indicated a significant difference between Vietnam and the rest of the ASEAN countries surveyed. A closer look at country data reveals additional differences behind the relative homogeneity of ASEAN markets.

Such differences appear in particular when one attempts to identify the areas needing the ‘bigger push’ to reach the CIO leadership potential of a particular country. The methodology used is illustrated below for ASEAN countries as a whole. The first diagram (left side) represents the ‘CIO leadership triangle’ of a particular country (subsequently compared with the average of the six countries considered as a whole), whereas the second diagram (right side) describes the ‘pushes’ necessary

to bring the three quotients of the CIO leadership profile up to their desirable level (typically a 3.75 on the scale described previously); this desirable level is represented by the dotted triangle, while an initial indication of the sector (quotient) and intensity of the relevant ‘pushes’ is provided by the right arrows on the same diagram.

ASEAN region

Figure 17



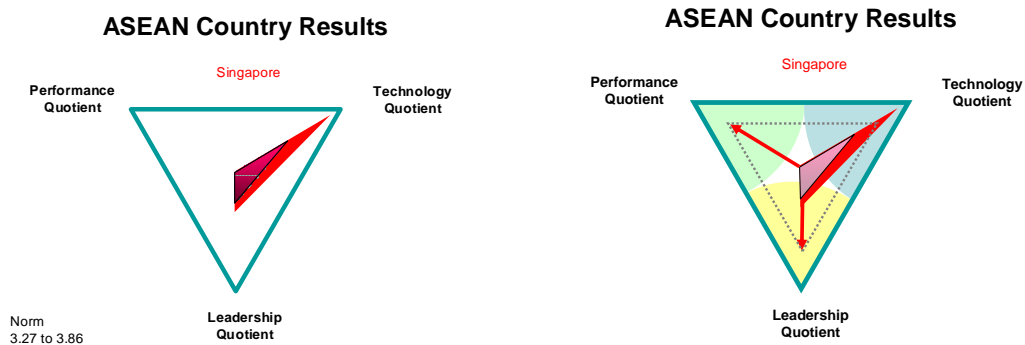
For ASEAN as a whole, the data available indicate that the bigger push is needed in the sector of performance (Q1), with that of leadership (Q2) a close second. Such a push can include different facets (which will be revisited below under the ‘Strategic Implications’ section). For example, it may comprise a ‘skills acquisition’ component, whereby CIOs would be provided with opportunities to acquire the knowledge and abilities they are still lacking in specific areas such as financial management, environment-related issues, or leadership. It may also include a better ‘agility’ from the side of their respective organizations to better take advantage of CIOs’ available talents and interests in such areas, for example by providing them with the relevant resourced, visibility or decision making power.

Singapore

Singapore is the market in which the survey delivered the highest absolute score (3.81); unsurprisingly, this score related to the technological excellence quotient. It confirms that CIOs in Singapore have a remarkably high degree of confidence in their ability to handle the technology-related dimensions of their function. This translates into the high ratings that Singapore CIOs assigned to the quality of their organization’s IT infrastructure, implementation skills and usage. Some defined their own role as “to provide a highly reliable and secure yet cost-effective IT infrastructure that satisfies customers and complies with regulatory requirements.”

The other two quotients (performance and leadership) are very close to the ASEAN average.

Figure 18



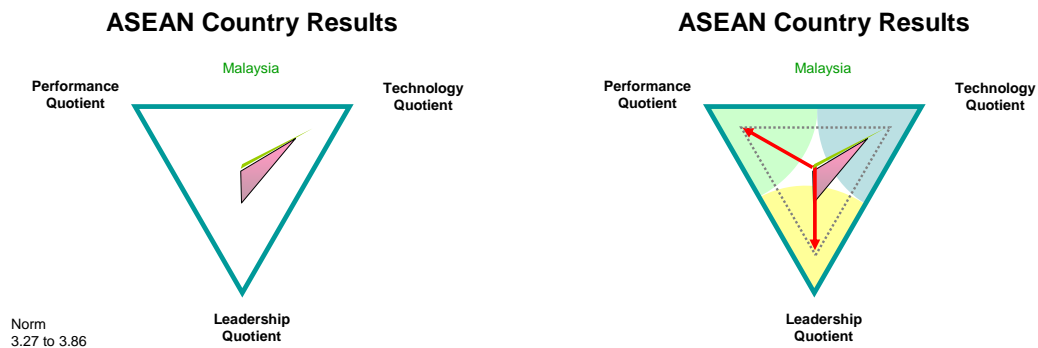
To reach desirable levels of CIO leadership, a push will be needed in the performance area, especially in building excellence in sustainability, as well as in the leadership area. For instance, in analyst interviews, several Singapore CIOs acknowledged that at present, issues such as environmental protection were less of a priority for the IT departments than for other departments in their organization.

Although building competence in leadership is an ongoing project, interviews with Singapore CIOs yielded encouraging signs of the local CIO community embracing the leadership agenda. Without prompting, respondents voiced their aspiration to enhance their skills in emerging aspects of leadership, such as cross-cultural management and nurturing talent, including planning for a CIO succession.

Malaysia

The Malaysia story of CIO leadership closely mirrored trends in Singapore related to performance and technology excellence. The survey thus confirmed Malaysia’s standing alongside Singapore as two of ASEAN’s most mature technology markets. In interviews, Malaysian respondents rated their organizations as successful in attracting IT staff that possess awareness and knowledge of business process and IT-business alignment. This was reflected in the country’s high ICT usage and quality of implementation.

Figure 19



It is in the leadership area that the country’s score is significantly lower than the ASEAN sample’s average. The Malaysian CIOs surveyed were well aware of the gap that remains to be narrowed between their technological competency and their leadership skills. Several of them commented that the very concept of CIO as a top executive was a recent introduction in their industries. They also pointed out that the connotations of the ‘Head of IT Department’ label would take time to give way to a more strategic and managerial perception of the CIO role.

Nonetheless, as one CIO said, “‘CIO’ may be a relatively new job title to have in my country. But it’s really what we do with the title and how well we interact with your peers that can bring respect to the CIO profession.”

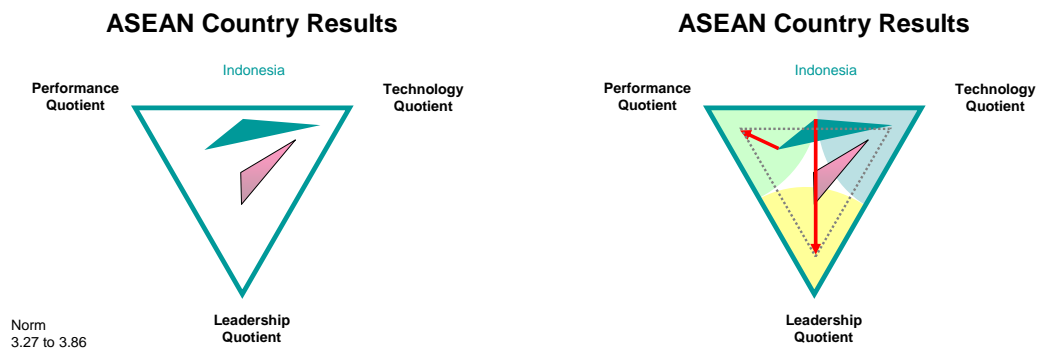
Indonesia

Indonesia performed better than ASEAN sample average with regard to the performance excellence quotient (PQ). Indonesian CIOs’ sentiment in this area was boosted by their companies’ strong growth and expansion rates, and good prospects for revenue growth and profitability.

Similarly, the technology performance quotient (TQ) of Indonesian companies that participated in the survey was on par with that of Singapore and Malaysia, i.e. remarkably high.

Against such background Indonesia’s ‘leadership deficit’, as it emerges from the survey, is all the more striking: with a rating of 3.27, Indonesia’s Leadership Quotient (LQ) is the lowest of all countries for all quotients in the ASEAN sample. This is clearly the area where the most significant improvements should be sought, and where the most spectacular results can be expected in the coming years.

Figure 20

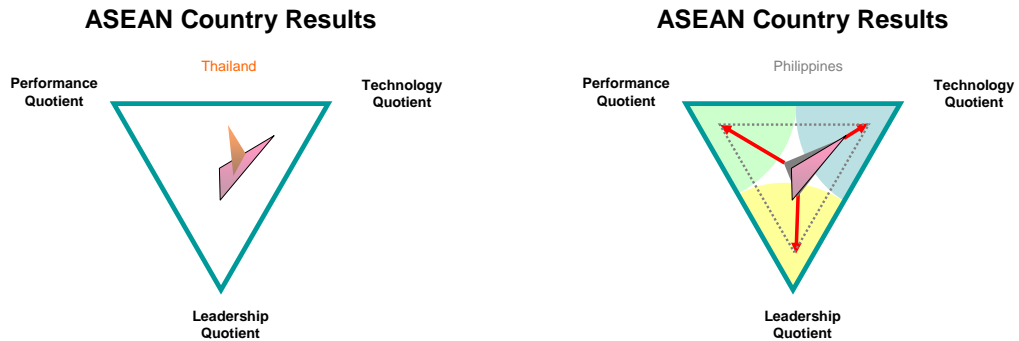


To produce higher levels of CIO leadership, Indonesian companies need to focus on building excellence in leadership. Clearly, for a market that consistently reports high growth, there is a lot of work to be done in this aspect of the CIO profession. Survey respondents agreed that platforms for furthering the CIO role in Indonesia were in an infant stage, and rarely took on a more substantive form than informal networking during vendor-organized marketing seminars.

Philippines

In aggregate, survey participants in the Philippines posted scores that closely correlate to the overall ASEAN sample averages. Some variation is also attributable to cultural factors: Historically, surveys of the Philippine IT community (but also other industries) have shown consistently higher ratings than other ASEAN markets, even where the underlying performance/output (e.g. product performance) was identical.

Figure 21



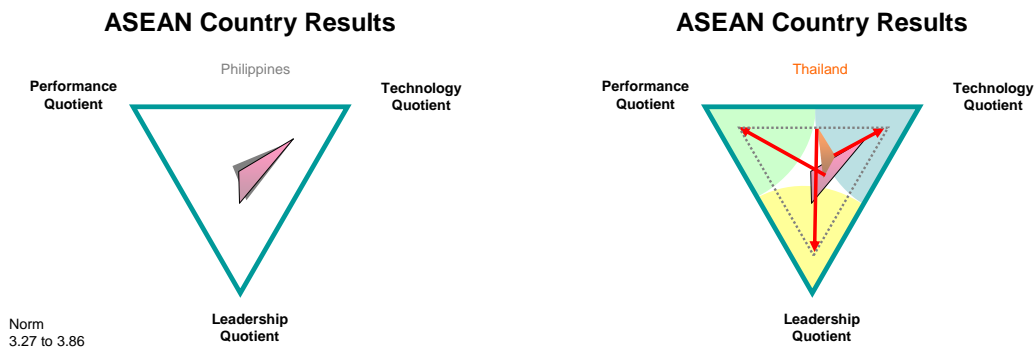
Like the majority of ASEAN respondents, Philippine CIOs in the study reported that their organizations were underperforming in the performance and leadership excellence areas (PQ and LQ) relative to their technology performance (TQ). This is not to say that the country’s CIOs have not been following general trends in business leadership, and thinking about how to best apply the lessons to their own respective organizations. In the words of one Philippine CIO, “it’s important for the CIO to be able to demonstrate moral, ethical and transformational leadership.” The same interviewee went on to suggest that there was a growing understanding (at least theoretical) among the Philippine IT industry that successful CIO leadership meant “an interaction or interrelation of process, people, technology, culture, and ethical principles.”

The survey and interviews results hence suggest that efforts should be pursued in the Philippines to deepen and broaden such understanding across the IT community. If successful, such efforts could yield significant improvements both on the performance (PQ) and leadership (LQ) sides.

Thailand

Thailand underperformed, although not dramatically, the ASEAN sample average in all three areas of CIO excellence. Similarly to Indonesia and Malaysia, the gap was particularly pronounced in the leadership area, suggesting priority action along the LQ axis.

Figure 22



CIOs of Thailand companies responding to the survey reported ‘showing the company the value of IT’ as an ongoing responsibility: “We still need to show people that IT can deliver.” Some mentioned juggling their company’s rapid business expansion with other imperative such as building an IT master plan, managing partners, and building trust-based relationships within the organization. In this context, Thailand CIOs also called for more platforms for networking and sharing ideas with their peers from other industries.

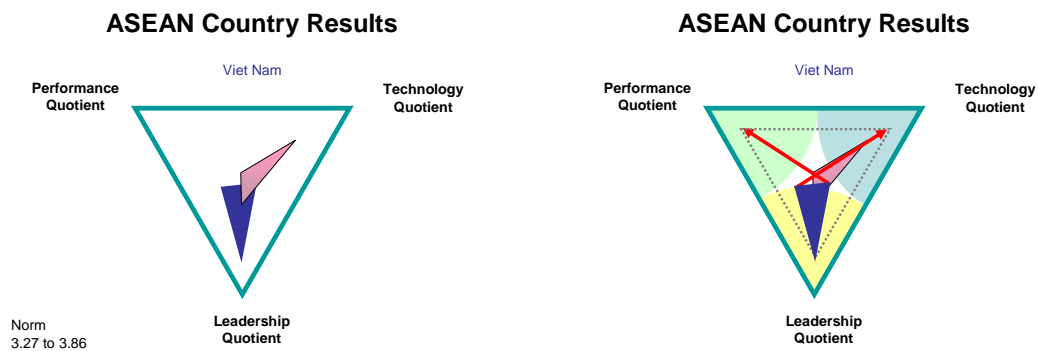
Such concerns and pressure on Thailand’s CIOs could be an indication that, in that country, IT is still perceived as a cost centre (or at best as a tool to reduce costs) rather than as a potential source of competitive advantage and strategic vision. If this hypothesis is correct (only further study at the local level could confirm or infirm it), priority efforts should be made in Thailand to convince general management that IT (and CIOs) can bring a positive and substantial contribution to their organizations’ overall competitiveness and performance.

Vietnam

Vietnam was the only ASEAN market in the survey to report leadership as the highest-rated area of CIO performance. In fact, the Vietnam Leadership Quotient (LQ) score topped the LQ score of all countries in the study.

This remarkable fact may be due to the fact that many of the Vietnam companies covered by the study were state-owned enterprises. They shared a strong perception of (and rated highly) their organizations’ performance in leadership areas such as strategy, governance and employee capability.

Figure 23



Vietnam has been an emerging player in the regional and global IT industry, and a relatively recent entrant into the global technology ecosystems. Therefore, further research should be expected to yield additional insight into the evolution dynamics of the country’s CIOs’ role. It would probably be important, in particular, to include more privately owned companies in the survey and interviews, and test the sensitivity of the Leadership Quotient (LQ) in that respect.

In the current state of knowledge of CIOs profiles in Vietnam, priority action should be concerned with enhancing the Performance Quotient (PQ) of local firms.

F. The 3-Q model: main results at industry level

When viewed by industry, the findings are consistent with the story that emerged from the country analysis. Of the three quotients, the TQ scores as reported by the majority of industry sectors in the survey were either significantly higher than their respective PQ/LQ scores (particularly in Communications, Education and Health Services) or comparable with the industries' LQ rating (Distribution, SMBs).

Table 4: Aggregate, industry-level 3-Q results, ASEAN

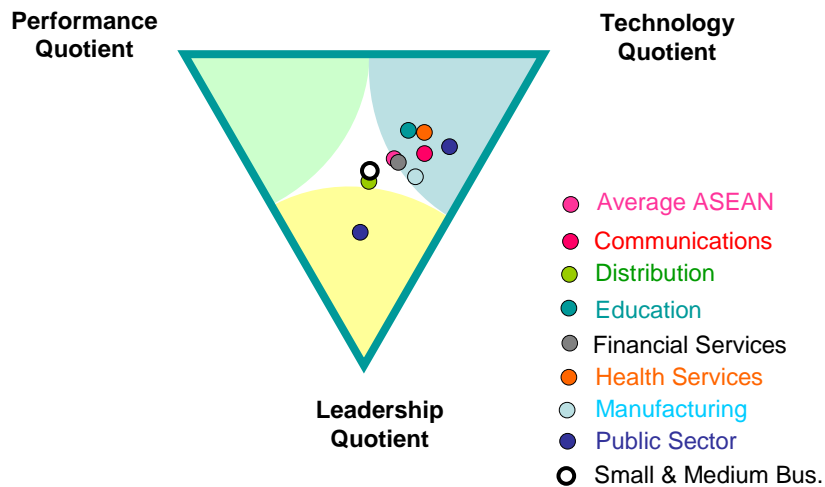
Industry / Aggregate quotient value	Performance Quotient (PQ)	Technology Quotient (TQ)	Leadership Quotient (LQ)
ASEAN Average	3.44	3.63	3.54
Communications	3.19	3.98	3.02
Distribution	3.65	3.81	3.89
Education	3.58	3.85	2.46
Financial Services	3.45	3.55	3.38
Health Services	3.44	4.13	3.75
Manufacturing	3.48	3.55	3.74
Public Sector	2.78	3.72	4.03
SMBs	3.43	3.52	3.56

As shown in Figure 24 below, one notable exception to this trend was the Public Sector, whose CIOs perceived the relative strength of their organizations' performance to be concentrated in the leadership (LQ) space.

To improve upon and balance out their performance as reflected in this year’s 3-Q scores, CIOs in ASEAN will do well to take a cross-sector view and seek inspiration in other industries: According to the survey findings, specific sectors are emerging as performance leaders in discrete areas of CIO leadership, particularly in technology excellence, measured by TQ (Health Services, Communications, Education) and leadership excellence (Public Sector, Distribution).

Figure 24

ASEAN Industry Results

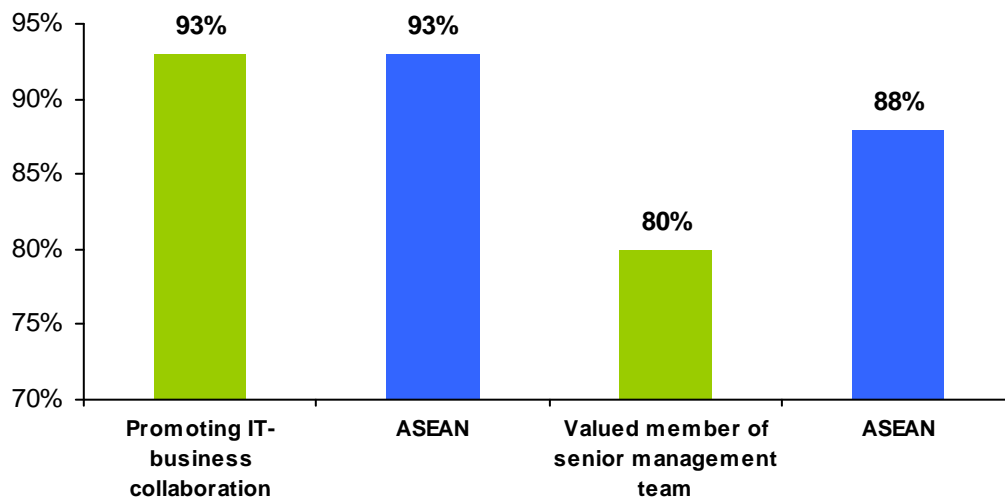


G. Comparisons with IBM/CIO Leadership Center global survey

The overall ASEAN survey results are in line with global trends

ASEAN CIOs are closely following global trends in the way they view the overall project of promoting and enhancing the CIO profession: The proportion of CIOs in ASEAN who attach importance to promoting collaboration between IT and the rest of the business is equally high – 93% - in the region as it is worldwide. A relatively greater number of ASEAN CIOs, compared to CIOs in a 2007 global survey, felt they were a valued member of the senior management team (88% vs. 80%).⁵

Figure 25: High-level comparisons of ASEAN-vs.-global CIO sentiment



⁵ This section references data points that were collected through two surveys: The 2008 ASEAN CIO Leadership Study conducted by INSEAD, and the 2007 worldwide survey on ‘The CIO Profession: Driving Innovation and Competitive Advantage’ produced by the Center for CIO Leadership. The 2007 worldwide survey was a collaborative research effort of the Center for CIO Leadership. It was developed in collaboration with Lynda Applegate and Deborah Soule of Harvard Business School (HBS) and Peter Weill, George Westerman and Stephanie Woerner of MIT Sloan Center for Information Systems Research (CISR). Additional advisors included Hank Chesbrough (UC Berkeley), Neo Boon Siong (National University Singapore), Morten Hansen (INSEAD), and The Center for Creative Leadership (CCL). Significant overlap between the survey instruments that were applied in the two studies has allowed for drawing direct, ASEAN-vs.-worldwide comparisons.

In ranking their priorities and strengths, ASEAN CIOs adopt a more inward outlook

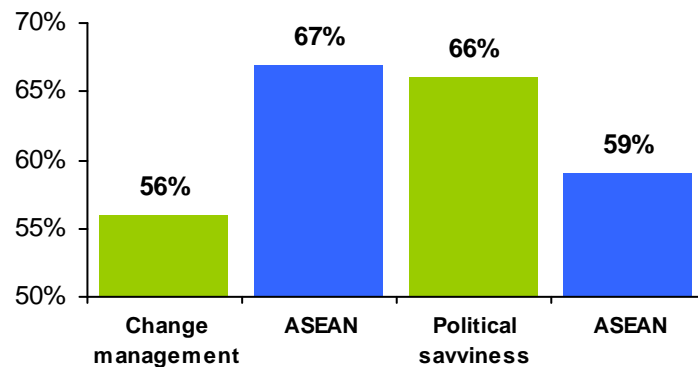
Nonetheless, the surveys' more detailed findings reveal differences in the strategies that ASEAN CIOs and their colleagues worldwide⁶ apply in pursuing this overarching agenda: As shown in Figure 25, CIOs in ASEAN placed higher emphasis on intra-organization and/or delivery-focused activities such as:

- Cultivating self-awareness (defined as 'having an accurate picture of one's strengths and weaknesses, and willingness to improve');
- Managing change ('using effective strategies to facilitate organizational change initiatives and overcoming resistance to change'); and
- Showing resourcefulness ('thinking strategically and making good decisions under pressure; setting up complex work systems and engaging in flexible problem-solving behavior; working effectively with senior management to deal with the complexities of the management job').

By contrast, CIOs in the worldwide study generally emphasized qualities that were outward-focused and influence-oriented, e.g.:

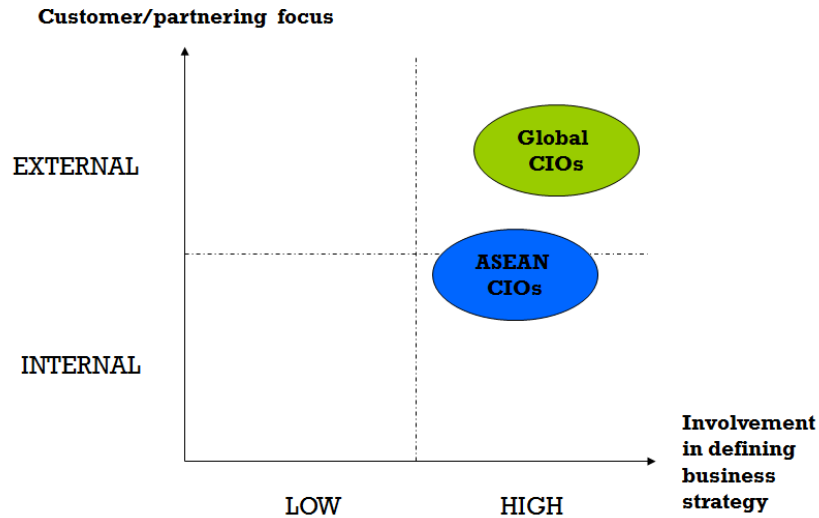
- Political savviness ('can effectively understand others at work and use such knowledge to influence others to act in ways that enhance one's personal and/or organizational objectives');
- Influence, leadership, power ('can inspire and promote a vision; can persuade and motivate others; skilled at influencing superiors; delegating effectively').

Figure 26: Applying CIOs' skills



⁶ 50% of respondents in the worldwide survey were based in North America.

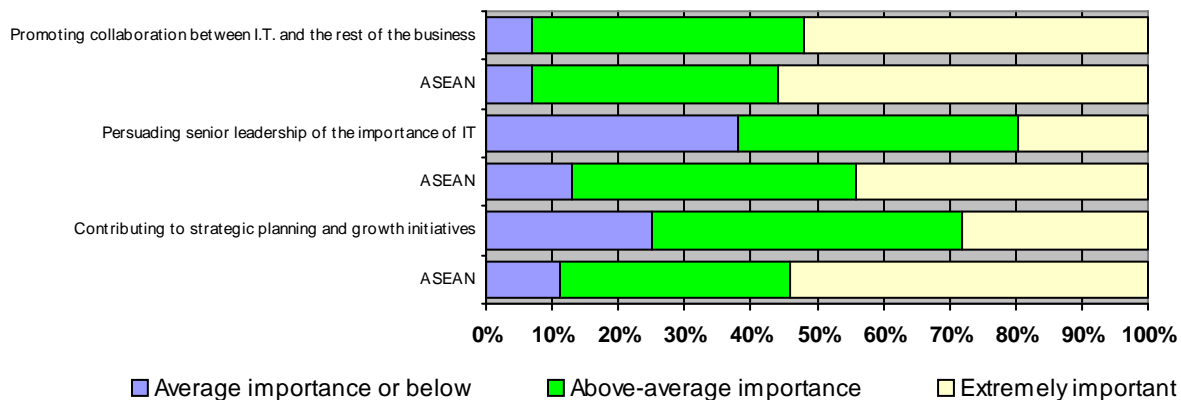
Figure 27: The CIO outlook: ASEAN vs. worldwide



More than their peers worldwide, ASEAN CIOs are highly conscious of the need to ‘prove’ themselves

In broad terms, although the CIO’s strategic objectives are identical in ASEAN and worldwide, the findings of the ASEAN survey show a pronounced need not only to participate in top management discussions but *to be seen* as participating and contributing: Persuading senior leadership of the importance of IT was rated as extremely important by 44% of ASEAN respondents, compared with 19% of CIOs worldwide. Similarly, 53% of CIOs in ASEAN, compared with 28% worldwide, think of contributing to strategic planning and growth initiatives as extremely important.

Figure 28: Where do ASEAN vs. worldwide CIOs seek to contribute?



Strategic implications

Whether they are aggregated through 3-Q Model or analyzed separately, the data and information generated by the 2008 ASEAN survey of CIO Leadership yield important lessons. They definitely enhance our collective knowledge and understanding of the difficulties and exhilaration attached to being a CIO in that part of the world. Such knowledge, once codified, can be applied to a number of strategic areas, and make a difference for the firms/organizations where a particular CIO is employed, as well as for his/her main partner firms/organizations

The strategic implications of the research described earlier in this report was strongly confirmed by further meetings and discussions with ASEAN CIOs, including at *the 2008 ASEAN CIO Leadership Forum* held on INSEAD's Singapore Campus on 23 and 24 July 2008. Such implications can be described under two main headings: business alignment, and talent management.

Business alignment

Better alignment between business objectives and IT strategies is urgently required on all fronts. More management savviness from ASEAN CIOs will enhance their credibility as current or potential members of their companies boards. On the other hand, a better understanding of basic IT principles and constraints will increase company-wide ownership of strategic IT projects. To achieve such 'mutual alignment' in the ASEAN region, priority will need to be put on awareness on one hand, and agility on the other.

Awareness

In ASEAN as a whole, firms and organizations – both in the IT sector and beyond – still see the CIO as the decision maker and leader in the IT field. The rapid growth in most ASEAN market has not allowed local CIOs to move as quickly as desirable from their traditional roles (that of technology excellence, and of key functions such as systems management or procurement) to new functions, including at the managerial, strategic and leadership levels.

ASEAN CIOs are generally well aware of the importance of growing into such new roles, both for themselves and for the companies and organizations they work for. However, their own management, as well as that of their partners and clients seem

often less aware of the potential gains that such a growth could bring to the competitiveness and overall success of their enterprise.

Although this situation is not different in ASEAN from that generally encountered at the global level, it is making itself more acutely felt because of local cultural dimensions and business habits: individuals seem to be less prone than in other parts of the world to 'promote themselves' and to 'run against the flow'. Team spirit and respect for fellow workers and partners in business can sometimes limit CIOs' capabilities to claim new roles and different responsibilities. Very often, in the countries surveyed, attribution of such roles and responsibilities is expected to 'come from the top', and be based on consensus.

The valuable information collected through the survey and interviews carried out for this report suggests that, in the ASEAN region, further efforts to enhance awareness across institutions and sectors of the benefits of transforming the CIO function could yield significant benefits in at least two major areas, namely (1) better aligning IT and business objectives as new concerns tend to reshape competition in IT and in other sectors – e.g. through global competition and the 'greening' of the world economy -, and (2) allowing the ASEAN region to move up the scale of both its Performance and Leadership Quotients.

Agility

At present the world economy is largely characterized by shorter innovation and production cycles, and a constant reshuffling of the hierarchies among producers, vendors and buyers. In such a context, one of the major concerns of the IT industry is related to the progressive 'commoditization' (i.e. the lowering of profit margins for undifferentiated goods or services) of many of its core products, both in hardware and software.

As a result, a typical CIO is confronted daily to a number of crucial choices (buying vs renting, locking his company in technological solutions that may not allow the scaling his/her business may require in the future, etc.). Ten years ago, such choices were seen as essentially technical. Nowadays, they touch the very heart of many companies' strategies or even relevance. Very often, relevant decisions have to be made in a very short time framework, increasing the pressure on CIOs.

The ability to make strategic key decisions rapidly can be summarized in the word agility. Sensing how markets are changing, identifying new opportunities in

technology, markets, business models and company organization are part of the daily concerns of the most successful agile organizations around the world.

History points at the ASEAN region as one in which agility has guided some of the most blazing successes of the last few decades. The whole experience of a country like Singapore, for example, is one of mobilizing entire sectors of a national economy to address – and conquer – a particular market or sector. In each and every country surveyed for this report, examples have emerged of companies and organizations that have proved agile enough to expand and thrive in modern global competition. CIOs have an instrumental role to play in building on such successes, and take the whole region towards higher levels of performance and leadership.

Talent Management

Both in the survey and through direct interviews and discussions, ASEAN CIOs gave particular importance to the gap that they perceive between current business needs and their organizations' ability to attract, develop and keep the corresponding human resources. In this respect, a strong difference is being established by ASEAN CIOs between 'skills' (which correspond by and large to the 'commoditized' part of IT jobs) and 'talents' (which are much more related to cross-cutting abilities to lead and manage in increasingly complex and multi-cultural organizations).

Skills

Across all types of organizations, ASEAN CIOs face increasing difficulties to attract the right kinds of technical people (programmers, analysts e.g.). As needs and competition continue to grow for such skills in the region, wages and packages have to be made more attractive. The heavy presence of global companies in the region is creating additional pressure and difficulties for many local companies in this respect.

Although this issue is not specific to ASEAN, it is particularly acute there because some 'IT skills' powerhouse such as India have had such a strong impact on local markets for such skills. Most ASEAN CIOs however agree that, from a longer term point of view, such skills will serve only the 'commoditized part' of their activities. More strategic dimensions (i.e. those likely to impact their companies' bottom line, and hence be noticed by higher management) will require a broader approach to human resources, based not only on skills but on talents.

Talents

At the end of a region-wide exercise like this one, and once all results are on the table, the fundamental lesson is very much about human beings. The ways in which CIOs behave, perform and lead in an ASEAN environment is determined by a combination of local factors (cultural, geographical, historical i.a.) on one hand, and of their own set of human qualities, strengths and weaknesses (technical, managerial, abilities to learn and lead change, e.g.). As opposed to the former, which take generations to modify (and in many cases such modifications may not be seen as desirable), the latter offers a growing array of possibilities to generate 'better CIOs' by allowing them to acquire new talents.

As the survey and interviews amply show, ASEAN CIOs have already broadened their field of professional skills and interests. Very often, their knowledge of financial and other enterprise management areas has helped them better communicate with the rest of their organizations, with their partners and with their clients and suppliers. The resulting knowledge base now needs to be better rooted (and recognized) within ASEAN-based companies and organizations. Relevant training in leadership, change management and strategic thinking needs to be enhanced and related to career management, promotions and earnings within such companies and organizations.

More and more, high-performance CIOs will need to be able to communicate across functional borders and cultural borders. Experience acquired in multi-cultural and multi-professional environments (in ASEAN and elsewhere) should hence be valued and recognized as at least as important as technological excellence when trying to attract (or generate) such a kind of 'new CIO'.

It is clear that such a task is part of the overall mission of 'talent management' which is becoming so vital for all types of companies and organizations around the world, whatever their respective sizes and sectors of activity. It is hence crucially important that ASEAN companies and organizations recognize the global nature of current and future competition for talents, and prepare accordingly.



Interim conclusions and pointers for future research

In ASEAN as in the rest of the world, the equation facing CIOs in the 'flat world' of global competition is both exhilarating and formidable. On one hand, CIOs are expected to accept new roles and functions, as leaders, strategists and communicators. On the other hand, the pressure of growing markets and intense daily competition in their own traditional markets and niches leaves them less and less time to think strategically, remain aware of shifts affecting their sector of activity, not to mention acquiring new skills.

Clearly, none of the changes necessary to allow CIOs to successfully fulfil their new missions will happen without higher degrees of awareness and support from other lines of command within firms and organizations. The new mindset surrounding IT's roles (from cost centre to competitiveness engine) will be a core component of the required shift. In ASEAN as in other parts of the world, this new mindset will allow IT people (not just CIOs) to be seen as innovators, ideas generators, and 'silo mentality busters'.

To convince local companies and organizations (including at government level) that the relevant investments are worth making, more examples (of both success and failures), data, facts and figures will need to be brought to the attention of decision makers. Research like the one presented here easily lend themselves to specific analysis at the national level for example. Such additional granularity, complemented by further encounters/discussions with local CIOs would yield some of the key facts and figures required for the decisive and rapid actions most needed at the local level. As such research develops, tome series will start to emerge, which will become an irreplaceable resource for policy makers and decision makers in the ASEAN region and beyond.

It would also be important to enrich the current state of knowledge of CIOs' concerns by differentiating some of the current findings per sector, and/or per organization size.

Finally, efforts to encourage cross-regional (and cross-cultural) learning among the CIO community itself should be increased, as they would contribute to the achievement of two complementary goals, namely (1) skills acquisition, and (2) better understanding of commonalities and differences among CIOs roles and expectations in different parts of the world.

Annexes

2008 ASEAN CIO Leadership Survey – survey instrument

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