The Changing Role of the Chief Information Officer

In Conjunction with the Financial Times

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Executive Summary

In many corporations, the chief information officer (CIO) or IT director is the newest addition to the senior management team. But while it may be the latest ingredient in the alphabet soup of corporate management, the CIO's role is growing fast in both numbers and importance, and it is evolving as it grows.

The Changing Role

The number of corporate CIOs has increased dramatically over the past two decades as information management moves from the wings of company operations to centre stage. The CIO's role is shifting from the technical business of data processing to the more broadly conceived job of “knowledge management.” So important has managing knowledge become to the success of a company that harnessing knowledge may be a corporation's most pressing challenge—and at the very heart of the CIO's evolving role.

Though a relative newcomer to the executive wing, the CIO has become in many ways the most challenging and dynamic leadership role in the business world. Throughout the '80s and '90s, corporations have faced dramatic challenges brought about by changes in markets and corporate organisations. In many industries, both production and markets have globalised. Companies have experienced major shifts both upward and downward in their scale of operations through significant downsizing and major mergers and acquisitions. In responding to these dramatic changes, companies have invested vast resources to reengineer their operations. It has been estimated that companies worldwide are spending $52 billion a year on reengineering, of which $40 billion goes annually into information technology. In other words, the CIO is at the centre of many of the most volatile and costly changes in the life of a corporation.

Companies trying to keep ahead of the curve of these rapidly moving business trends clearly need to understand the new challenges facing the CIO. In the face of the increasing importance and cost of the IT function and its changing profile, Korn/Ferry International teamed up with the Financial Times to conduct a survey of CIOs in three major European markets and the United States. The goal was to bring into sharp focus the CIO's role as it is evolving today on both sides of the Atlantic.

The Survey

A total of 340 CIOs in the United States, the United Kingdom, Germany and France participated in the telephone survey. Respondents were drawn from a list compiled by the Financial Times, including the “Times 1000” companies. Considerable care was taken to verify that those surveyed were actually the chief
information officers in their organisations. The country breakdown of respondents is as follows:

- United States: 150
- United Kingdom: 70
- Germany: 70
- France: 50.

The study is designed to produce an accurate and detailed picture of the changing role of the CIO and the IT function in each of the four countries. The survey looks at both the general trends in IT management common to all four countries and the significant national differences in the CIO function. What follows is a detailed summary of our findings and a discussion of their significant implications for recruiting and training the next generation of CIOs.

**Key Trends**

Here are some of the key trends we uncovered in the evolution of the CIO role:

- **The role of the CIO is moving from technical planning and implementation to strategic planning.** The current role of the CIO appears to be more tactical than broadly strategic. CIOs tend to focus on the planning and implementation of specific information technologies, rather than on long-term company strategy. In fact, over half of our respondents report being diverted from a focus on long-range planning by persistent local “fire-fighting” activities that dominate their time and attention. The relatively limited vision of the IT function will need to be expanded, as knowledge management is recognised by the CEO and board as a central component of strategic planning. This change in orientation will have an important impact on the future training and recruitment of CIOs.

- **The CIO will increasingly become an important voice in strategic planning.** Currently, the CIO is not active in top levels of corporate planning and decision making. Despite the fact that IT has been heralded as a key to future business success and growing market share, it is striking that the CIO is often isolated from the company’s top decision makers. Given this limited access, how can the CIO’s skills be adequately leveraged by a company to help manage business growth and development?

- **Leading the transformation of the CIO role is an important human resource challenge for companies.** This will mean rethinking the skill set associated with the CIO function, including the way companies use the CIO, the CIO’s relation to the senior officers, the performance expectations and evaluation process, and performance incentives and remuneration.

- **The ideal qualifications for the CIO are changing as the IT function becomes more central to business planning.** The ideal resume of the CIO will come to include both technical/engineering qualifications, plus a background in finance, marketing and strategic planning. There is currently some uncertainty about the best mix of qualifications for the CIO—and variations in background and experience emerge among the countries surveyed. For example, CIOs with a background in finance, engineering and IT—found especially in Europe—tend to stress the need for more general business experience.
The CIO will become increasingly involved with external as well as internal customer support. The perceived success of the IT role is currently associated more with internal communications and networking than with external customer-based technology support. This role is likely to change as knowledge management expands to include external as well as in-house support functions.

CIOs tend to be more strongly motivated by new and stimulating job challenges than by financial incentives. This trend is especially strong in the United States, where CIOs already have the highest remuneration.

The Ambivalence About the Changing CIO Role

If there is a single theme emerging from our research, it is that—behind all the numbers—there is ambivalence among today's CIOs about the changing nature of their jobs. Many were trained in engineering and computer science—and identify themselves as high-level technical experts rather than as integral to the business itself. Yet many clearly see that the increasing significance of the IT function to a company's success calls for a new skill set in the next generation of CIOs.

In the role of business strategist, the CIOs of the future will have to forge new kinds of relations with top corporate decision makers. They will effectively move into the circle of corporate planners at the highest level. Although there are significant national differences in how current CIOs view these coming changes, our study overall suggests a tension between current CIOs' appreciation of the role they now play in the company and the wider influence they may have in the future.

This tension shows up in some of the more puzzling contradictions in our survey data. American CIOs overwhelmingly see their successors as needing a new skill set, while their European counterparts do not. Or consider the implications of the following three trends we uncovered:

CIOs across the board recognise the importance of getting their message through to their company's senior decision makers...

...But even though many CIOs do not have frequent contact with their CEOs or a seat on their executive boards...

...CIOs are by and large satisfied with their current relationships with senior decision makers.

Given the increasing importance of IT to corporate success, it is hard to understand why current CIOs should be as satisfied as they seem to be with the current decision-making arrangements in their companies. This apparent disconnect between future needs and current realities of the CIO role is evident in several places in our study. It suggests that the evolutionary path of the CIO role is not necessarily a smooth one and that moving the IT function front and centre in the corporate planning process will require some fundamental changes in the background, the skill set and the self-perception of the next generation of CIOs.
Significant Variations

Although overall trends do emerge, the survey highlights the many significant differences in the way the CIO role is evolving in each of the four countries surveyed. Here are some of the most notable national trends suggested by our survey results:

- **CIOs across the board report significant changes in their roles within their companies.** But CIOs from different countries often interpret the question about change in their roles in quite different ways. European CIOs tend to see their successors as having the same skills as themselves, while their American counterparts see the next generation of CIOs as having a different skill set. The French CIOs are experiencing more change in their roles than other CIOs surveyed. French CIOs are significantly more likely than their counterparts in the United States or UK to view their changing role in terms of increasing influence and authority within their companies.

- **French CIOs are the most bullish among those surveyed about their chances for promotion to CEO.** The French CIOs are more than twice as likely as their American counterparts to see themselves as one day leading their companies.

- **Ironically, French companies appear to offer their CIOs the fewest explicit incentives to stay with the company.** Companies in the United States and the UK are trying the hardest to provide specific incentives to retain their CIOs.

- **The earning capacity of CIOs in the United States is significantly greater than that of their counterparts in the European countries surveyed.** This is probably linked to the fact that American CIOs tend to be responsible for information technology in companies with a greater global reach than their European counterparts. This is in especially dramatic contrast to the German CIOs, a high proportion of who have IT responsibilities that tend to be exclusively domestic.

- **There is a surprising contrast between the lack of interest in Java-based software in the UK and the great enthusiasm expressed for Java by German CIOs.** German interest in Java technology was even higher than in the United States.

- **U.S. CIOs tend to be more concerned about the Year 2000 (Y2K) problem than their European counterparts.** This is probably due to the higher installed base of mainframes in the United States running the legacy system.

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**Top Recommendations for Harnessing the Role of the CIO**

- Initiate closer involvement of the CIO with other senior officers and include the CIO's perspective before strategic objectives are finalised by the board.

- Address impediments to success, such as lack of planning, skills shortages and cultural resistance, and review progress regularly.

- Look beyond return on investment and focus on three separate areas: running costs, extraordinary costs (for example, Y2K and the Euro) and technology's contribution to business growth.

- Re-examine remuneration incentives, particularly with reference to the need for a broader skill set, including business and financial experience.

- Make sure the CIO's role is challenging and stimulating and the CIO's contribution is acknowledged by senior executives. An understanding of the issues the CIO faces and the achievements accomplished over the year will ensure top performance.
Profiling the CIO

What sort of individuals are currently managing information technology in our leading companies? In this section, we sketch a portrait of the typical CIO in our sample, and highlight some significant national differences.

Male vs. Female

Women account for just under 10 percent of the CIOs in the United States, France and the U.K. In Germany, women CIOs seem to be virtually non-existent, accounting for only one percent of CIOs in our sample.

Nationality

Overall, more than 90 percent of the CIOs surveyed are country nationals. The United States hires the greatest number of CIOs from outside its own borders, but even in this case only nine percent are not Americans. That figure is only four percent for German companies surveyed, and drops to a mere one percent in the U.K. Finally, there is not a single foreign-born CIO of a French company among those surveyed. The tendency of companies to hire host-country nationals as CIOs does not seem to be due to the reluctance of CIOs to serve overseas. Across the board, between 60 percent and 70 percent of the CIOs surveyed indicate a willingness to serve in another country.

Globalisation

There is considerable variation in the geographic range of the companies the respondents work for. The IT function will naturally be quite different in companies with a largely domestic operation from those with a global reach. Our study suggests some significant national differences in geographic reach.

U.S. companies surveyed have predominantly global operations, while German companies typically run domestic operations. The French and UK companies are roughly equally divided between global and domestic operations.

Figure 1 Geographic Scope of IT Delivery by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Global</th>
<th>Global, but more than 1 country</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>53%</td>
<td>11%</td>
<td>36%</td>
</tr>
<tr>
<td>UK</td>
<td>37%</td>
<td>16%</td>
<td>47%</td>
</tr>
<tr>
<td>Germany</td>
<td>20%</td>
<td>20%</td>
<td>60%</td>
</tr>
<tr>
<td>France</td>
<td>50%</td>
<td>4%</td>
<td>46%</td>
</tr>
</tbody>
</table>
The global reach of many American companies probably accounts in some part for the higher level of CIO remuneration in the United States. On the other hand, globalisation is also linked to U.S. CIOs’ anxieties about the structural instabilities in their companies in the face of downsizing, mergers and acquisitions.

Background and Training

Most of the CIOs surveyed have come to their jobs with a background in IT. For the United States, the UK and Germany, between 64 percent and 74 percent of the CIOs have some kind of significant prior experience in information technology. The notable exception in our sample is France, where only 46 percent of the CIOs have a prior IT background. Of UK and U.S. CIOs without prior experience in IT, the most common background is in finance. For the French, 42 percent of the CIOs had been trained as engineers.

Figure 2  What is your professional background?
Figure 3  What is your professional background if not IT?

American CIOs seem to feel the least stable in their jobs, with only 35 percent projecting that their tenure as CIO will exceed five years. This is probably related to American CIOs’ concern about the degree of structural change their companies are undergoing.

European CIOs are relatively confident about the stability of their positions. In Europe, the percentage of those expecting to be in their jobs longer than five years is higher than the U.S figure of 34 percent, ranging from 48 percent in the UK to a surprising 56 percent in Germany.
While American CIOs seem to be concerned about the instability and uncertainty wrought by the recent wave of corporate takeovers, French CIOs tend to have a far more sanguine view of their future with their current employers. More often than the other CIOs, the French see themselves positioned to one day take over as heads of their companies.

Desirable Skill Set for the CIO of Today

What do CIOs see as the ideal set of skills needed for their roles? German and French CIOs are far more concerned than their counterparts in the UK and the United States that heads of IT have an in-depth understanding of information technology.
The French concern that CIOs have significant IT knowledge is remarkable in light of the finding that French CIOs are significantly less likely to have an IT background than their counterparts in the other countries surveyed. This probably reflects the fact that more of the French CIOs have had to acquire their IT skills and knowledge on the job and are thus less likely to take this knowledge for granted.

Broad business experience is generally viewed as an important asset for IT leadership.
These figures become more intriguing when juxtaposed with the responses to our question about the importance of academic training in business.

Except in France, business experience and business education do not seem to be viewed as equivalent ways to acquire business expertise. For example, German and French CIOs are more likely than others to rate business experience as necessary for success in heading up IT, although only nine percent of the German sample believe that an academic business background or an MBA is “critically important” in preparing individuals to take on the CIO function, compared with 24 percent in France. American respondents are more likely to stress the importance of academic training in business for CIOs than Germans and are more in agreement with the British sample in terms of the need for CIOs to have practical business experience.
Interestingly, there does not yet seem to be a consensus among CIOs about the role of IT in strategic business planning. Across the board, only about half of the CIOs interviewed acknowledge the importance of applying IT strategically as part of a company’s long-term business planning.

American (57 percent) and German (54 percent) CIOs stress strategic planning skills somewhat more frequently than their colleagues in the UK (43 percent) and France (46 percent). What is striking here, however, is that between 43 percent (U.S.) and 57 percent (UK) of the CIOs interviewed do not see strategic planning as a crucial CIO skill, despite the increasing evidence of the centrality of knowledge management to long-term business objectives.

Over half of all our respondents report that the need to handle immediate “fire-fighting” issues tends to divert them from focusing more on long-term IT strategy. For U.S, French and UK CIOs, this claim was made at least “to some extent” by between 50 percent and 60 percent. This number
goes up for Germans to 73 percent of the respondents, who agree at least “to some extent” with this claim. This again reflects the more prevalent German concern with the lack of focused long-term planning.

The Skill Set for the CIO of Tomorrow

Overall, an average of 70 percent of the European CIOs in our survey see their successors as having the same basic skills as themselves, whereas 65 percent of their American counterparts envisage their successors as having a skill set different from their own.

It appears that when 84 percent of our French CIOs claim that their role is changing, they are not talking about changes in specific skills as much as an increase in the general influence and prestige of the CIO function. On the other hand, the issue of change is interpreted differently by the Americans. Note that the 65 percent of American CIOs who claim their role is changing is identical to the percentage who view their successors as needing a new skill set. When Americans talk about the changing role of the CIO, they mean changes in skills and functions; but when French CIOs talk about changes in their role, they are referring to matters of status and influence.

Figure 8  Will your successor have a different skill set from yours?
The Evolving Role

The majority of all CIOs surveyed feel that their role within their company is changing. But some clear national trends also emerge.

Figure 9  Is your role changing at the moment?

Changes in the CIO role are felt far more often in France than in our other survey sites. The contrast between France and the UK is especially noteworthy. While only 53 percent of UK CIOs believe that their roles are changing, that number rises to 84 percent for the French.

The figures suggest some key differences in the current status of IT in France and the UK. While French CIOs are experiencing change in their roles more than their counterparts, it also appears that the nature of this change is different country to country.

There appears to be a qualitative difference between the way the French view their changing roles and the views of the other CIOs. French CIOs are more optimistic than their counterparts in the United States, the UK and Germany about their future roles. They tend to see their situations changing for the better, whereas the other CIOs often interpret change in terms of instability and uncertainty in the marketplace.

When asked to project how their role will change in five years, both French and German CIOs see the role as gradually increasing in both power and influence within their companies, while those in the UK and United States tend to stress the role as becoming more business focused.
Occupying the Executive Suite

In none of the countries surveyed do a majority of respondents believe that CIOs will regularly be promoted to CEO by 2003. But there are clear differences country to country. U.S. CIOs are the least optimistic of all about their promotion chances: Only 29 percent of the American CIOs foresee the day when they would become CEO, compared with 34 percent in the UK, 41 percent in Germany and 46 percent in France.

The relative optimism of the French CIOs about their prospects for becoming CEO are consistent with their generally upbeat assessment of their future prospects. It may also have something to do with national differences in how CIOs are evaluated. French CIOs are far more likely to have their performance evaluated directly by their CEOs. The fact that a CEO has direct knowledge of a CIO’s performance may predispose the CIO to anticipate moving into the CEO role.

The French CIOs also cite personality factors and the ability to deal with people as more important than specific work background as considerations for succession to CEO. In their emphasis on personality factors and general social skills rather than business experience, French CIOs appear to reflect a business culture very different from that of their American counterparts, for whom business experience is understood as the crucial asset for an aspiring CEO. In contrast to both French and German CIOs, American CIOs attribute their failure to be considered for the CEO’s job as due to their lack of specific business experience rather than to issues of leadership ability.

Figure 10 Why do you believe you won’t be promoted to CEO?
Changing Jobs

Another way to assess the evolution of the CIO role is to look at what motivates CIOs to choose to remain in their current jobs and what would make them leave. For American and German CIOs, the future seems to be tinged with anxiety about the instability of their companies and the fragility of the marketplace. Both German and (especially) American CIOs point to the fear of hostile mergers, takeovers and the consequent changes in reporting structures as negative factors in their desire to remain in their current positions. This view reflects the dynamic business environment that is changing the corporate landscape, particularly in the United States and Germany. A quarter of all U.S. CIOs surveyed see these structural instabilities as "critically important" negatives in their jobs. These kinds of changes appear to be less of an immediate concern to CIOs in the UK and France.

Figure 11 Would a hostile takeover that caused new (undesirable) reporting structures make you change companies?

Both U.S. and German CIOs express some concern about the potential for their companies to lose their competitive edge. Fifty-six percent of the German CIOs rate the loss of competitive edge as an “important” or a “critically important” factor affecting their willingness to remain with their companies, compared with 45 percent of their U.S counterparts. Competitive pressures seem to be of less concern to the French CIOs in our sample: A mere 22 percent see the loss of competitive edge as an “important” or a “critically important” consideration in their willingness to stay with their current employers.
Better remuneration packages are cited by all respondents as an important reason for leaving a company, but are less of an issue for American CIOs than for their European counterparts. Remuneration is already higher for American CIOs, more of whom are responsible for a global IT infrastructure.

Figure 12  Would an improved financial package available elsewhere encourage you to change companies?

Improved remuneration is an especially attractive reason for jumping ship for German CIOs, 49 percent of whom see an improved financial package as an “important” or a “critically important” factor in a decision to change jobs. The same ratings are given by only 35 percent of U.S. CIOs, reflecting the fact that they are generally better remunerated than their European counterparts. On the other hand, CIOs across the board indicate that a more challenging work environment would be an attractive incentive for switching companies.
Impediments to Success

Not only are U.S. CIOs more anxious about how changing business conditions will affect the IT function, but they are far more likely than their European counterparts to have thought through the matter of succession. While 67 percent of U.S. CIOs report having a succession plan in place, this number drops to 47 percent in the UK and 32 percent in France. German CIOs are by far the least likely to have planned for their successors: Only 17 percent of our German sample report that they have a succession plan in place.
While this may seem surprising, it is consistent with the German CIOs’ sense that lack of focused planning is their biggest impediment to success. This is in clear contrast to the U.S trends, where CIOs see the lack of specific skills as their biggest obstacle. Surprisingly, budgets do not seem to be much of an issue—only 20 percent of the U.S, 13 percent of the UK, five percent of the German and 18 percent of the French say budget constraints hold them back.

**Figure 14** What is your biggest impediment to success?

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<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>UK</th>
<th>Germany</th>
<th>France</th>
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<tbody>
<tr>
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<td>0%</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>“Skills shortage”</td>
<td>36%</td>
<td>28%</td>
<td>23%</td>
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<td>“Budget”</td>
<td>20%</td>
<td>13%</td>
<td>5%</td>
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<td>“Cultural resistance”</td>
<td>17%</td>
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<td>“None”</td>
<td>3%</td>
<td>3%</td>
<td>5%</td>
<td>8%</td>
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</table>
Deploying Information Technology Within the Organisation

As every CIO knows all too well, no area of business practice changes faster than information technology. Keeping up with ever-evolving software and hardware and effectively managing the company’s networking capabilities are among the CIO’s primary responsibilities. And when corporations merge, CIOs must deal with the tricky job of integrating sometimes quite different IT environments. We wanted to know the views of today’s CIOs on current and future deployment of information technology for their companies. What we found is that the present and future accomplishments of IT appear to be predominantly internal to business operations, and thus are better characterised as tactical, rather than more broadly strategic, uses of IT.

Geographic Scope of IT Delivery

Companies use information technology to help manage operations both domestically and globally. Our respondents emphasise some significant distinctions in the geographic scope of IT deployment, based on the kind of business enterprise of which they are part.

![Figure 15 Geographic Scope of IT Delivery by Industry Sector](image)
IT delivery in manufacturing companies (both discrete and process manufacturing) tends to be global rather than domestic in scope. In particular, discrete manufacturing involves the global deployment of information technology. By contrast, IT delivery in financial businesses is more limited to domestic communication systems.

Outsourcing

In general, the recent trend has been away from outsourcing complex IT functions and keeping them in-house. For the UK, Germany and the United States, between 50 percent and 60 percent of CIOs have reservations about outsourcing, preferring to make decisions on a case-by-case basis. The French, however, do not concur to the same degree: Only 32 percent agree with the move away from outsourcing.

There is somewhat greater consensus among our sample that outsourcing at the levels used to date has not been as cost-effective as had been anticipated. U.S. CIOs are the leading sceptics here, with 67 percent saying that, to some extent, outsourcing has not been cost-effective, as compared with about 50 percent of the CIOs in the other three countries.

Another controversial policy issue has been the effectiveness of shared-risk agreements with suppliers. There is no clear trend here in the response patterns. About 50 percent of CIOs from France, the United States and the UK think shared-risk agreements are advantageous for their companies. German CIOs, however, do not seem to find this practice as advantageous: Only 29 percent feel that it is desirable.

Centralised vs. Distributed Computing

Over the last two decades, corporate information processing has shifted from heavy reliance on centralised mainframe technology to more “distributed computing” based on networked PCs and client/server architecture. The proliferation of the PC in the 1980s fostered a kind of one-worker-one-machine philosophy of business computing. Then followed the dramatic development of networking. Internal connectivity through Ethernet-type local area networks came first, followed by the rapid proliferation of external and worldwide networking. Some IT experts see an imminent trend toward the recentralisation of business computing away from distributed information processing.

In fact, about half of U.S. (51 percent) and German (46 percent) CIOs predict the movement of business computing toward a more centralised model. These figures compare with only about 30 percent of the French and UK CIOs, who see recentralised computing as an emerging trend.

The Internet

The Internet is, quite literally, everywhere these days and is having an extraordinary impact on the way retail business, for example, is being conducted. The virtual “community” of Internet browsers has been called the fastest growing community in history. But just how crucial is the Internet to the future of today’s companies?

Surprisingly, less than half of our respondents across the board believe that Internet technology will be “critically important” to their companies’ business. Still, our study reveals some striking national differences in how much attention the Internet is getting from CIOs.
CIOs in the United States (47 percent) and France (46 percent) are far more likely to see Internet technologies as “critically important” to future business in their companies than those in Germany (29 percent) and the UK (21 percent).

**Networked Computers**

Not surprisingly, networked computing and the use of client/server architecture are seen as somewhat important by all CIOs. Those in the United States, France and the UK indicate that network development and integration represent the most important contributions of IT to their companies. But German CIOs do not rate network development as a top priority at all, emphasising instead the development of new applications. The French, while interested in network development, do not share the enthusiasm for application development as an IT priority suggested by the rest of the sample. British CIOs express far greater enthusiasm for the positive role of e-mail in business development than do their counterparts.
Just how important networking is to a company’s future success is evaluated quite differently by our national CIO samples.

In looking to the future, French CIOs in particular stress the importance of networking and client/server computing to their businesses, half of them judging networking as “critically important” to their companies’ future. For both German and American CIOs, this figure drops to 39 percent, while only 24 percent of those in the UK see client/server-based networking as critical to the future of their companies.
Software Applications

There are also some revealing country differences in how respondents view the relative importance of various applications. Integrated application software packages (such as Microsoft Windows) are uniformly rated as important to the future computing needs of companies in all the countries surveyed.

But our study indicates that developers of high-end UNIX-based systems have some cause for concern. Many of our respondents see Microsoft NT as an important component of their future computing environments, while there is considerably less enthusiasm shown for the future of UNIX in business computing.

The business future of Java-based applications is rated as significant by CIOs in Germany, France and the United States, while a lot less interest is shown for Java applications by British CIOs.
Of German CIOs, 68 percent rate the use of enterprise applications as either “important” or “critically important” to their business, and 58 percent of the American sample agree in cases where legacy systems call for these kinds of applications. But French and UK CIOs have little interest in making use of these kinds of applications.

**Figure 19** In the future, how important will enterprise applications be to your business?

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of no relevance</td>
<td>7%</td>
<td>26%</td>
</tr>
<tr>
<td>Unimportant</td>
<td>9%</td>
<td>13%</td>
</tr>
<tr>
<td>Somewhat unimportant</td>
<td>7%</td>
<td>20%</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>19%</td>
<td>14%</td>
</tr>
<tr>
<td>Important</td>
<td>29%</td>
<td>16%</td>
</tr>
<tr>
<td>Critically important</td>
<td>29%</td>
<td>11%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Germany</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of no relevance</td>
<td>3%</td>
<td>12%</td>
</tr>
<tr>
<td>Unimportant</td>
<td>3%</td>
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<tr>
<td>Somewhat important</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td>Important</td>
<td>27%</td>
<td>10%</td>
</tr>
<tr>
<td>Critically important</td>
<td>41%</td>
<td>6%</td>
</tr>
</tbody>
</table>

**Y2K Problem**

Finally, only CIOs in the United States and the UK see finding solutions to the widely publicised Y2K problem as a significant IT function. Concern with Y2K compliance is more pronounced for U.S. CIOs, perhaps because of the higher number of American companies running legacy systems. Far more of the American CIOs (39 percent) complain that the focus on the Y2K problem is draining resources away from other important projects. This feeling is not widely shared by the other countries (UK II percent, Germany six percent, France 10 percent). In fact, solving the Y2K problem is not given high priority by CIOs in Germany or France. On the contrary, about half the CIOs overall see the year 2000 problem as a blessing in disguise for their functions, drawing attention to the importance of IT in their companies’ everyday operations.
The Integration of the CIO Into Corporate Decision Making

Given the growing importance of IT to corporate success and survival, the information technology function will clearly have to transform itself from its subsidiary status as a technical service provider to a central planning role at the heart of corporate strategy—a change in the IT function from “information processing” to “knowledge management.” But if this metamorphosis is to take place, the CIO will need to be integrated into company decision making and strategic planning at the highest levels.

Access to Top Decision Makers

In fact, the study indicates that the ability of the CIO to get messages to the CEO and the executive committee is a priority for most of the CIOs surveyed. But there are some fascinating regional differences in how crucial this access is thought to be. Having direct access to the boardroom and the CEO is especially important for the U.S. CIOs interviewed. This kind of access to top decision makers is rated as “critically important” by 64 percent of the Americans surveyed, 46 percent of the French, 31 percent of the British and only 29 percent of the Germans.

How do these priorities match up with the actual degree of access our CIOs have with their companies’ CEOs?

Figure 20  How regularly do you interact with the CEO?
While only 29 percent of the German CIOs rate access to top decision makers as “critically important” for their jobs, these CIOs also tend to interact with their CEOs more frequently than the other CIOs surveyed. Almost 60 percent of the German CIOs report interacting with their CEOs at least once a week, while weekly contact is reported by 40 percent of the French and Americans and only 26 percent of the British. CIOs in the UK do not rate access to top decision makers as a particularly high priority; they also report the least contact with their CEOs.

This apparent contradiction—German CIOs having the most access to their CEOs but valuing this access the least—raises some intriguing questions. Perhaps German CIOs simply take for granted their access to their CEOs, and so it is not seen as a high priority. On the other hand, it may be that they do not find this access especially helpful in their jobs.

On the whole, CIOs tend to interact more frequently with the chief operating officer and the chief financial officer than with the CEO of their companies.

**Figure 21** How regularly do you interact with the chief operating officer?

<table>
<thead>
<tr>
<th>U.S.</th>
<th>UK</th>
<th>Germany</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>No interaction</td>
<td>5%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Less than one year</td>
<td>11%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Less than once a month</td>
<td>13%</td>
<td>7%</td>
<td>17%</td>
</tr>
<tr>
<td>More than once a month</td>
<td>25%</td>
<td>18%</td>
<td>17%</td>
</tr>
<tr>
<td>More than once a week</td>
<td>29%</td>
<td>36%</td>
<td>27%</td>
</tr>
<tr>
<td>At least daily</td>
<td>17%</td>
<td>26%</td>
<td>13%</td>
</tr>
</tbody>
</table>

---

30
French CIOs are somewhat more likely to meet regularly with their companies’ chief operating officer, while German CIOs report more frequent meetings with the chief financial officer. Almost half of the American, French and German CIOs report meeting at least weekly with their companies’ head of sales. By contrast, only 28 percent of the UK CIOs meet with the head of sales that frequently. German and French CIOs meet more regularly with their firm’s marketing director. Fifty-two percent of the French report meeting at least weekly with their head of marketing, while only 28 percent of the UK CIOs and 21 percent of their American counterparts report weekly contact with their marketing directors. The general trend is that German and French CIOs appear to meet with senior company executives more frequently than their U.S. and British counterparts.

Figure 22  How regularly do you interact with the chief financial officer?
Despite national differences in access to senior company officials, CIOs across the board express a high level of satisfaction with their degree of interaction with senior executives in their organisations. A high level of satisfaction is recorded for between 74 percent (Germany) and 84 percent (France) of those surveyed. Surprisingly, differences in the level of satisfaction with these relationships between CIOs and other high-level decision makers in a company do not seem to correlate with the variations in degrees of actual access.

Membership on the Executive Committee

In all of the countries surveyed, less than half of the CIOs surveyed reported being included on their company's internal board.

American CIOs (49 percent) are the most likely to be included on their companies' boards or executive committees, while their German counterparts are the least likely. While UK CIOs report the least frequent contact with their chief executive officers, they do report rates of membership on their internal boards similar to those of France (36 percent).

A minority of our respondents blame their lack of a seat on the internal board with impairing their effectiveness. However, a third of the Americans surveyed make this point, compared with only 16 percent to 18 percent of the other CIOs.

**Figure 23** Do you sit on your company's internal board?
Evaluation

Our survey suggests that U.S. companies are the most likely by far to have specific performance criteria by which CIOs are evaluated. While 85 percent of our U.S. CIOs report that their companies had formulated specific measurement criteria for them, those numbers fall to 60 percent in the UK and France and only 47 percent in Germany. This last figure is consistent with German CIOs’ expressed concerns about a lack of planning foresight in their companies.

Figure 24 What criteria are used to measure your performance?*

*Percentages add up to more than 100 because respondents chose more than one option.

The evaluation criteria are similar for U.S. and UK CIOs. In both places, “management by objectives” is by far the most common basis for evaluation, and is mentioned by 81 percent of the British CIOs and by 74 percent of their American counterparts. The French system of performance evaluation seems to be quite different. Only 37 percent of the French CIOs are evaluated by management objectives, while 60 percent say their evaluations are based on customer satisfaction ratings. This distinctive French style of evaluation is reminiscent of the dominant French view that succession to the office of CEO hinges on an ability to work well with people rather than specific business qualifications. Interestingly, French CIOs are the only group not subscribing to the relatively recent trend to use IT metrics in performance evaluations. German evaluation criteria are based on a mix of specific management objectives, customer satisfaction ratings and IT metrics.
Our data suggest that in all cases the CEO is the most frequently mentioned evaluator. The striking finding here is that French CIOs are about twice as likely to be assessed by their CEOs as are their counterparts from the other countries.

**Figure 25** Who performs the appraisal of your work?

*Adds up to more than 100 percent because respondents chose more than one option.*
Remuneration

There are some significant country differences in how CIOs are remunerated.

Deferred remuneration and bonuses are quite commonly part of the CIO’s total package in the United States and in the UK. Sixty-five percent of all U.S. CIOs and half of the British sample report receiving some kind of deferred remuneration.

Not only is deferred remuneration more common among American CIOs, but they also receive the highest proportion of their pay as bonuses and deferred remuneration. By contrast, only 44 percent of the German respondents regularly receive bonuses or other deferred remuneration, and the practice is even less common in France, where it applies to only 36 percent of the CIOs surveyed. The most commonly mentioned basis for determining bonuses in the United States, the UK and Germany is corporate financial performance. Oddly enough, most French CIOs claim that their bonuses are determined through management by objectives. This response is hard to interpret, since French CIOs also report that their performance evaluations are far more likely to be based on customer satisfaction ratings than management by objectives.

Figure 26  Is any of your remuneration made up of a deferred compensation or bonus payment?
The base salary figures reported by the respondents are probably low because the best paid European executives are often reluctant to divulge their salaries. A quarter of the U.S. CIOs report earning between $101,000 and $150,000 base salary, and 30 percent earn between $151,000 and $200,000. In the UK, 70 percent of the CIOs report earning between £51,000 and £75,000 (US$85,500 and US$121,900), while 70 percent of German CIOs earn DM151,000 to DM225,000 (US$88,700 to US$132,000). The figures indicate that U.S. CIOs are generally higher paid than their European counterparts. This trend may reflect the fact that CIOs in the United States are more likely to be in charge of global rather than exclusively domestic IT operations.

Figure 27  Average Salary Apportionment Across Respondents by Country
Significant Trends by Country

The United States

U.S. CIOs:
- Have a high degree of job mobility/insecurity.
- Possess the greatest degree of global IT responsibility.
- Tend not to value multi-company experience.
- Do not associate job mobility with the desirability of working in many companies.
- Are anxious about hostile takeovers and changing reporting structures.
- Value direct communication with their CEOs.
- Believe that in the future IT functions will be more business oriented.
- Are the most likely to have a succession plan in place.
- Are the most likely to believe that their successors will have a different skill set.
- Suspect that investments in IT have not been cost-effective.
- Tend to blame failures on skills shortage.
- Are quite concerned about the Y2K problem.
- Are most likely to see Y2K problem as draining resources from other projects.
- Foresee movement away from distributed computing towards recentralisation.
- Are somewhat more likely to see outsourcing as not producing expected savings.
- Are the most likely to be evaluated by performance criteria.
- Along with the UK, are the most likely to be evaluated based on management objectives or IT metrics.
- Tend to be paid higher salaries than their European counterparts.
- Receive the highest percentage of their salary from bonuses.
- Have the widest range of guaranteed salaries.

The United Kingdom

UK CIOs:
- Believe that in the future the IT function will be more business focused.
- Have far less interaction with the CEO than in other countries.
- Are less likely to perceive networking and client/server architecture as important.
- View Windows NT as more important than the Internet.
- Have a low regard for Java-based applications.
- Along with U.S counterparts, are measured by management objectives more extensively than France and Germany.

Germany

German CIOs:
- Express the greatest loyalty to their employers.
- Do not perceive themselves as changing companies very often.
- Have predominantly domestic IT responsibilities.
- Are less likely than UK or U.S counterparts to possess a financial background.
- Often possess engineering or sales backgrounds.
- Are the most likely to see lack of access to the CEO as a reason for leaving a company.
- Desire multi-company experience.
- Express concern that budget limits would make them leave their company.
- Fear a high-pressure work environment.
- Fear hostile takeovers.
- Are the most concerned about the uncertainty of the CIO role.
- Feel that fire-fighting issues drain their time and energies from long-term strategy.
-Attribute failures to a lack of planning and focus.
- Value enterprise applications over basic packaged software.
- See Java as becoming increasingly important.
- Do not like shared-risk model with suppliers.
- Are the least likely to articulate performance criteria.
- Receive the smallest part of their salary from deferred remuneration.

France
French CIOs:
- Often come from a non-IT background.
- Often possess an engineering background.
- Are frequently charged with global responsibilities.
- Are less concerned about budget limitations.
- Are the least concerned about their company losing its competitive edge.
- See knowledge of IT as crucially important for CIO success even though the French have the smallest percentage of CIOs with an IT background.
- Often see the CIO role as changing.
- Tend to feel that change is for the better and means more power and influence.
- See themselves as having more power/influence in future.
- Feel more confident that IT investments have generated a good rate of return.
- Are more likely to measure CIO performance by customer satisfaction rather than by management by objectives.
- Are the most likely to be evaluated by their CEO.
Conclusion

No dimension of business practice is more dynamic than information technology. New innovations in information technology tend to create the basis for further innovations. For example, rapid expansion in computer memory capacity and increased computational power produce a demand for new applications, which in turn create a demand for still more powerful hardware. Computers are used to design a new generation of computers. Software applications are used to create and compile yet more complex software programs. The proliferation of desktop PCs encourages ever more sophisticated networking technologies that, in turn, change the way people and markets work and the way information is created and distributed.

Information technology is inherently dynamic. In light of this, it is not surprising that the role of the chief information officer has grown significantly in importance and has assumed new responsibilities that go far beyond the technical service role that once defined the position. Our study of the CIO illuminates a complex figure in flux, an individual trying not only to keep up with the rapid changes in hardware and software, but also to adjust to a world in which knowledge management has become, in many ways, the main business of business.

These changes in the scale and scope of the CIO role are only now beginning to be felt in the world’s major corporations. Many CIOs find themselves in a kind of professional limbo, caught between a past where they were seen as technically oriented computer specialists, focused mainly on tooling up their shops with the latest hardware and applications, and a rapidly approaching future where they will become increasingly involved in strategic business planning at the highest levels of their corporations. Companies that can successfully manage the transition of the CIO from an information processing function to a knowledge management role will have an enormous competitive advantage over those that do not understand and adapt to the demands of this changing business world.

Our study has revealed many significant national differences in how the CIO role is evolving and, despite the globalisation of the world economy and the rapid unification of European economies, we don’t expect these differences to go away. Still, our study also suggests that no matter where they are located, modern businesses will have to address a common set of issues involving the role of the CIO. Major challenges include:

- Transforming the IT function from tactical operations to more global strategic planning,
- Redefining the appropriate training and background of the CIO to include more business and financial experience in addition to a technical background,
- Redefining the ideal skill set for the CIO,
- Improving the communication between the CIO and senior policy makers in the organisation,
- Making sure that the value of the IT function is more fully understood by senior management,
Understanding why the current CIO role remains largely out of synch with the increasing importance of IT to a company's success,

Successfully managing the evolution of the CIO role “on the fly,”

Finding ways to deal with some of the most significant national differences in the IT function in Europe as Europe’s economies become increasingly coordinated and

Learning how to harness the changing IT function to maximise corporate competitiveness and growth.

To meet these challenges, companies will have to identify and overcome the key barriers to this critical transformation of the IT function:

- The CIO’s lack of access to decision makers,
- Persistent corporate instability due to takeovers, mergers and acquisitions,
- The outdated view of the CIO as only a high-class technician,
- Poorly articulated or non-existent evaluation system for CIOs (in Europe),
- Poor incentives in the CIO’s remuneration package (particularly in Europe) including the lack of deferred remuneration and inadequate salaries and
- The CIOs’ own ambivalence about their new role and their reluctance to change the status quo.

This last point is especially important, for it is the human factors that are sometimes overlooked in the rush to examine the structural impediments to corporate change. It is not just organisations that will have to change to adapt to the brave new world of knowledge management. To negotiate successfully the sea change corporate IT functions are experiencing, CIOs will have to take a hard look at their own beliefs and attitudes, convictions often formed at a time when their jobs called for skills very different from those demanded today. The coming of age of corporate IT will mean that CIOs must radically rethink their jobs, incorporating into the old technology-guru role new business skills, new relationships with corporate leadership and new responsibilities for strategic thinking. Our study has shown that while many CIOs acknowledge these changes, there is also considerable reluctance to move beyond the older, more limited vision of the CIO role.

Clearly, managing the evolution of the CIO role will not be easy. But successfully implementing this complex transition in the CIO role is surely one of the most important challenges that corporate leaders face today. The function they had once understood as an exchange network of goods and services has become something more like a vast and rapidly evolving marketplace of knowledge.
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