

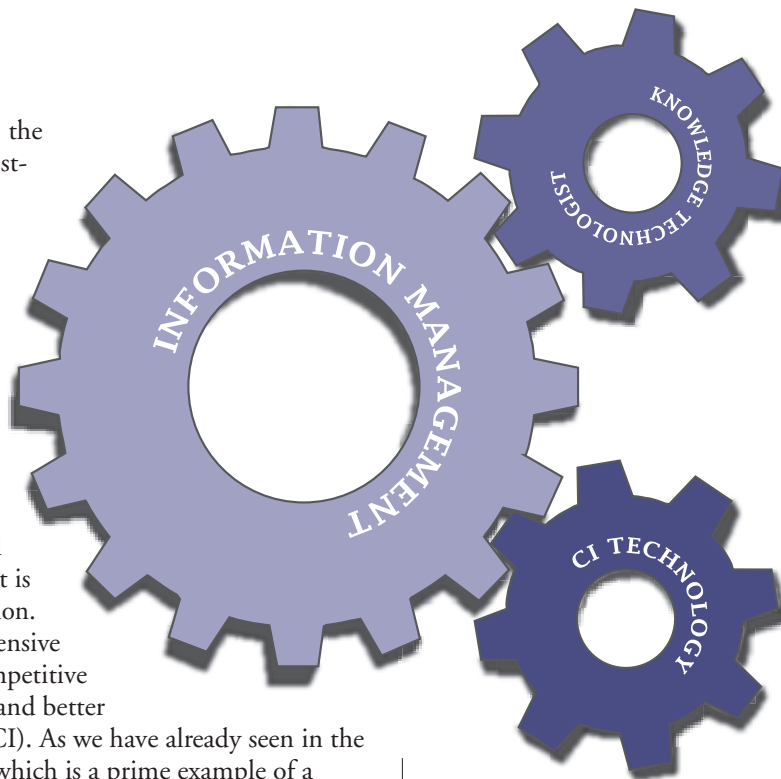
# The Future of Competitive Intelligence: driven by knowledge-based competition

*By Jan Herring, Herring & Associates*

The Information Age, the Knowledge Society, the Post-Industrial Economy — whatever the future business environment will be called — has already begun. All around the world, from Singapore to Stockholm and Silicon Valley to Stuttgart, companies are competing on the basis of what they know, how fast they learn it, and how well they use what they learn. It is knowledge-based competition.

In this knowledge-intensive environment, creating competitive advantage demands more and better competitive intelligence (CI). As we have already seen in the pharmaceutical industry (which is a prime example of a knowledge-intensive business), the most successful firms have well developed CI programs. Unfortunately, not all knowledge-intensive industries have superior CI organizations, but as global competition increases over the next decade, CI will more fully develop in industries such as modern communications, health, and financial services.

As these knowledge-intensive businesses become established worldwide, their CI needs will grow dramatically. CI organizations will have to develop an equivalent global reach, requiring greater language skills and an analytical understanding of differing competitive cultures. These future attributes speak to CI competences. They will be driven by the future needs of business leaders and managers and the new and emerging intelligence needs of the business world.



## ENTER THE KNOWLEDGE TECHNOLOGIST

Peter Drucker has described this new business world as the Knowledge Society, where knowledge is the key resource and knowledge workers are the dominant group in the work-force [Drucker 2001]. Knowledge workers now include those with considerable professional knowledge, such as doctors, lawyers, accountants, and scientists.

However, Drucker believes the most striking professional growth will occur in a new group he calls knowledge technologists. These knowledge technologists combine their work-related knowledge with computer skills, and include computer scientists, software designers, lab technicians, paralegals, and various information providers. They work as much with their hands as their minds, but even their manual work is based on considerable theoretical knowledge.

## STRATEGY-CONTROLLED ORGANIZATIONS

Drucker has also described the corporation of the future as one that will “likely be held together and controlled by

strategy.” This contrasts with current multinationals, which are organized globally along product or service lines and are held together and controlled by ownership. Drucker’s strategy-based governance will create a very different type of corporation.

There will still be some degree of ownership, but alliances, joint ventures, minority stakes, and know-how agreements will increasingly be the building blocks of future business confederations. Such strategy-controlled organizations need a totally new kind of management. And such strategy-based management will require comparable CI programs to keep them continually up-to-date and relevant.

### **A CI/TECHNOLOGY PARTNERSHIP**

With future strategies and competition depending more on management being knowledgeable about the global marketplace, CI will become a more critical part of knowledge-intensive businesses. And new information technology (IT) will become a more important part of CI’s future. Consequently, CI professionals will need the assistance of Peter Drucker’s knowledge technologists to provide the business and competitive intelligence necessary to achieve future business success.

From advanced internet search tools to more proficient use of global information resources (such as satellite photography that monitors competitors’ worldwide activities), CI professionals must make greater use of IT tools and methodologies. They will be necessary to acquire and produce the real-time intelligence-information needed for companies to be successful in the future.

Furthermore, management will increasingly demand and use interactive, graphic display systems to stay abreast of global competitors and to see and use the results of their competitive analysis and forecasts. Both the CI professional and business leaders will have to embrace new information technology to achieve greater business success.

### **MORE SOPHISTICATED MANAGEMENT DEMANDS**

The world of CI will also be defined by the changing needs and demands of future intelligence users. Who will they be? And what new requirements will they have?

Today’s first-line managers are the future corporate executives and leaders, and thus are the future users of business and competitive intelligence. These individuals have had greater exposure to CI, both in their jobs and throughout their education. They are well-educated and well-read in strategy. Most are quite familiar with Michael Porter’s Five Forces analysis and competitive strategies. Many know of Liam Fahey’s competitor analysis and scenario planning exercises, and Richard D’Aveni’s concept of hypercompetition, to name just a few important strategic innovators.

During their day-to-day business activities these managers have developed a *felt need* for more and better intelligence-information about their competitors and the competitive marketplaces in which they operate. Many want to do their own business and competitive analysis. But as Professor D’Aveni has opined, they are neither inclined nor willing to spend the time and effort it takes to acquire and institutionalize the CI information necessary to do the analysis. These managers expect someone else to produce that *pre-analyzed* intelligence so they can conduct whatever additional analysis they need to plan and make their business decisions.

[*Pre-analyzed* intelligence is a term I use to describe intelligence products such as traditional competitor profiles and industry assessments, which require considerable time and resources to produce but, in-and-of themselves, are not usually actionable. However, once they are produced, particularly in electronic format, the same intelligence product can be used for a variety of business purposes such as strategies, marketing plans, and wargames.]

Educators such as D’Aveni and Drucker are creating the new business concepts that include real-time strategies and the graphic presentation of future competitive scenarios and alternative outcomes. These processes require not only greater amounts of intelligence-information but also more sophisticated CI analysis tools and the IT systems to perform them. Few companies and CI vendors are capable of this today.

### **FUTURE CI USERS AND USES**

As for those future CI users, I asked my former boss and Motorola CEO, Bob Galvin, what he thought they might expect from CI that CI is not presently providing. He complimented both today’s CI practitioners and SCIP on the job they have done in creating proficient business intelligence organizations and operations, saying, “the fundamentals are probably being practiced more than adequately.” For users such as himself, the primary future challenge for CI would be to portray intelligence outputs in ways that would allow the users to experience totally new insights about the subjects, thus producing *uncommon* actions and business initiatives.

For leaders such as Bob Galvin this is not an unexpected challenge. During my days at Motorola he did not simply expect the business intelligence we produced to help him compete more effectively in our current businesses — he expected it to help him and his management team create the future business for the company.

As for future uses, CI applications will mostly be the same as today: supporting decision-making and strategic planning, and developing and implementing competitive strategies. Some of today’s applications, however, will have a new twist. For example, users will require on-going CI to support continuous strategic plans as opposed to the current yearly planning exercises. And many will depend on

electronic competitor profiles, which are automatically kept up-to-date and available globally, 24/7.

There will be some totally new CI applications, as well as new emphasis placed on old responsibilities that CI is currently not performing so well. For example, CI will support the implementation of Peter Drucker's new global corporate management strategies, facilitate the development of totally new cyber-economy businesses, and enable D'Aveni's new counter hypercompetitive strategies.

Furthermore, CI will be called upon to do a much better job at counterintelligence, protecting the company's critical resources (its intellectual property and trade secrets) from competitors' CI operations. And, in all likelihood, CI will be called upon to work closer with the security department to protect the company's real property from terrorists. [See Underwood 2002.]

Future CI users' needs and the new ways they apply competitive intelligence will raise the required level of CI professionalism significantly. At the same time they will broaden the areas in which CI will be needed. Such future user needs will have a dramatic impact on CI, but they will not be the only forces shaping that future.

## MAJOR FORCES OF CHANGE

I chose the year 2012 for the future horizon of this forecast. Most of us can easily remember 1992, and a few of us were quite active in CI and SCIP at that time. Looking back, I tried to identify those factors and forces that have had the greatest impact on shaping CI today. There were quite a few, ranging from SCIP itself to the rather widespread ignorance about intelligence and management's role in its production and use.

After some thought, discussions with a number of new and old CI professionals, and correspondence with several business leaders (including Peter Drucker and Bob Galvin), I identified ten major forces that I believe will play a major role in shaping the future world of CI. [See Sidebar 1: Major forces-of-change shaping CI's future.]

As in any futures work, I had several qualifying assumptions. I did not explicitly factor in the rather pessimistic forecasts of European demographic growth that would highlight an older and possibly more conservative management in most countries and their future businesses. Nor did I consider the dynamic population growth throughout Asia and its cultural impact on future knowledge-intensive industries.

On the other hand, I have assumed that the business world we will be working in will continue to evolve, with leading-edge firms becoming more knowledge-intensive as well as global. The pace of competition will become much faster. And this future marketplace will be largely shaped by market forces, not by wars or terrorism – though both are sure to be present.

## SIDEBAR 1: MAJOR FORCES-OF-CHANGE SHAPING CI'S FUTURE

1. Increasing global competition in knowledge-intensive businesses creates growing demand for competitive intelligence.
2. More sophisticated users demand more insightful CI, in real-time, on a global basis.
3. Future competitive success requires the proficient processing of the growing *flood* of information from diverse sources worldwide.
4. CI effectiveness requires more advanced IT and knowledge technologists to support its use by both CI producers and users.
5. Future IT advancements enhances both business success and CI effectiveness, with much CI technology coming from government vendors.
6. The *privatization* of intelligence continues as government and business interests and intelligence activities blend together.
7. Government influences and differing national value systems will also affect CI's legal and ethical standards.
8. Corporate security intelligence needs grow to protect both the company's intellectual property from competitors and real property from terrorism.
9. CI education is not advancing at the same rate as new CI user demands, but the growing field of knowledge technology has the potential to become a key CI influence.
10. As the CI user's needs grow, CI professionals become more important: some join the management team, others facilitate CI's collection, analysis, and use throughout their company.

### User demand

The first two forces-of-change (increasing global competition and more sophisticated users and uses) will create *market demand* for more and better CI. The growing volume and sophistication of user needs will be further exacerbated by the decreasing time available for decision-makers to think and act. Whether CI will be able to meet those future demands or not remains to be seen.



# A Day in the Life of a CI Director: January 2012

By David Francis

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It was early, too early, on this January morning in 2012, thought Michelle Fong as she rolled over, turned off the alarm, and sat up. Even technology couldn't erase the number of time zones between her Singapore base and corporate headquarters in Chicago. And of course, as vice president of CI, she'd been located here to better keep an eye on their global competitors and the new developments emerging from Asia's fertile R&D labs.

That conference call with her boss, the CEO, had taken all of yesterday evening. It was good, though, to have the CEO treat her as a colleague and confidante, a member of the top management team. She reflected on the comprehensive new set of intelligence requirements she'd gotten. The changes to the corporate KITs had been challenging enough, of course, but the boss was also insisting that KIT assessments had to be updated more-or-less continuously to support the company's day and night effort to refine and implement its strategy.

After all, strategy was about the only glue that held the company's far-flung business units together. It certainly wasn't common geography or products. And after the stock market scandals early in the century, the securities analysts had stopped obsessing over each quarter's results and taken the long view. Now, strategy had become the foundation of every company's competitive activities, as it should have been all along. The CEO had made it perfectly clear how much she depended on Michelle's team for the actionable intelligence that was the basis of the company's strategic and tactical management decisions.

Between them, they had agreed that the competitive data banks for the Viktor system would be updated at least daily from here on. Viktor had evolved from the virtual collaborative workspace (or VCW) tools that had been developed for intelligence analyst communities at the end of the last century. Viktor, however, added simulation capabilities, and vastly more sophisticated graphics, drawing heavily on video games as well as once super-secret government war-gaming systems. It wasn't clear how the name Viktor had been assigned; maybe it was because the name meant *winner*, or because the name might belong to a Russian chess master. No one remembered, but it didn't

matter. Today's Viktor was used on-line by all key managers in all business units, worldwide.

Viktor allowed managers to collaborate while testing new plans and ideas. They could immediately visualize competitors' responses and then understand the outcome of the contest. Viktor was complex enough to include multiple competitors as well as major customers, suppliers, and markets. Using Viktor was almost like playing a full-color, three-dimensional game of chess with the competition. Viktor was so uncannily realistic that *his* simulations often proved to be nearly 100% accurate when the actual plans were executed in the marketplace. Viktor exercises also provided a sort of global competitive lingua franca for the company's far-flung management team, who were only rarely able to get together in person, or even via videoconference.

Now dressed and ready for the day, Michelle thought about her next steps. First, she'd have to update Jorge Garcia, her chief *quant*. As CI director for technology, Jorge was responsible for "Hobart," the server farm that prowled the web 24x7 looking for electronic intelligence. Jorge's consultants would need to adjust the servers' search filters to the new requirements. Since the early years of the century, powerful computing complexes like Hobart had revolutionized private sector CI. Based on technology originally developed for the US National Security Agency, they made it possible for a lightly staffed CI shop like Michelle's to sift through terabytes of web data to find *golden nuggets*, combine them with other seemingly irrelevant findings, then graphically display fact-patterns that gave her analysts invaluable insights into competitor intentions and plans. Jorge and his staff were located in Bombay, where the programming was outsourced.

As she poured her first cup of coffee, Michelle turned on the plasma display and began her review of the overnight grab of competitive TV and web advertisements. It wasn't very interesting, and she found her mind wandering to the modifications she would have to make to her field collection protocols. Here, the company relied largely on outside contractors, but because of the sensitivity of the work, Michelle — a lawyer by

education and background — handled all the interfaces personally. She would have to start working her network immediately. Because they were spread across so many time zones, it would take some time to reach them all on the scrambler phone. There would be some impact on her counterintelligence activities, too, she thought. Competitive advantage depended even more heavily on the company's exclusive intellectual assets, so those must be protected at all costs.

The image on the display shifted to the latest pictures from the observation satellite. This would take her full attention. Although the images of competitors' headquarters and lab sites were studied in detail by the analysts with their computer tools, Michelle always preferred to review them visually herself every morning. As the last image faded, she reflected on her other direct report, Amil Prakash, the CI director for analysis, located in Sydney. They would have to spend significant time in videoconference to ensure that Amil's team was on board with the new requirements. Not that there were very many of them on the analysis team: just two, plus Amil, that brought Michelle's full-time direct resources to a total of five, including herself. Of course, she could, and often did, bring in virtual resources as tasks and mission required.

Michelle shook her head, as she thought about the technology available to Amil. Powerful artificial intelligence tools made sure that nothing relevant was overlooked, no matter how counter-intuitive. They also made it far easier to test hypotheses — even large numbers of alternative hypotheses — at little cost in resources or time, and to see the results immediately. It was the graphic interfaces, of course, that made it practical for mere humans to relate to such enormous volumes of data. Much better than when Michelle learned the CI craft. Still, there was no substitute for good analysts like Amil and his team.

And despite the formal CI education and certification programs, there was still no better way to acquire the skills other than from CI mentors and experience.

Yes, the next few days would be busy, but soon she and her people would incorporate the new requirements into the group's smooth-running routine. And because she was a member of the executive team and knew all about the plans that were behind the new requirements, Michelle was sure her group could make a crucial difference. The competitive contests had been close lately, a little too close, but with good intelligence the company could tilt the playing field back. With good intelligence, the company could win the zero-sum arm wrestling for market share, pull off the surprise product launches, and protect the all-important trade secrets. Michelle had no doubts that her team could produce the intelligence that top management was counting on, intelligence that would make the crucial competitive difference in the company's long-term operating results, intelligence that would, in the final analysis, increase the company's share price in global securities markets.

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### Managing the flood of information

The future business world, with its knowledge-intensive businesses, will face a growing flood of information. Those that succeed in managing and using that information will win the marketplace competition and prosper. This will require a much greater application of IT to CI.

While the new generation of CI practitioners will be more IT savvy than the current one, it is not clear that corporate management is prepared to spend the money and time required to install and exploit it for CI purposes. The next generation of managers and business leaders, who are more comfortable with IT solutions, may overcome such inhibitions and do what is needed.

### Government influence

For both good and bad, government influence will probably increase. Governments cannot help but be interested in the welfare of their country's businesses in the future global economy. And, in some cases, they will use their national intelligence services to see that these companies are given a *fair shake* in foreign markets they believe are unruly or unfair.

This aside, former government intelligence officers as well as government sponsored intelligence IT will continue to enter the private sector, for the most part enhancing the overall performance of business intelligence operations. However, this will not be done without raising the ire of

## SIDEBAR 2: FORCES IMPACT – WHAT WE DO AND HOW WE DO IT

### Information services and providers:

- access global databases, using language-translators
- become IT savvy and include some knowledge technologists
- produce *pre-analyzed* intelligence, with real-time updates

### Collection and reporting:

- become all-source, real-time, and global
- include CI vendors as key part of real-time collection networks
- enable users to directly task CI collection operations
- use both technical and human sources, enabling real-time monitoring on a global basis

### Information technology:

- provides real-time access to global information sources
- facilitates access to and fusion of all-source intelligence
- creates interactive, graphic, and multi-media delivery of CI products
- enables greater use of human sources by both CI producers and users
- provides virtual CI systems that serve both individual users and senior management, ensuring that CI is shared throughout the company

### Analysis and production:

- uses virtual teams to produce multi-disciplinary CI
- develops *pre-analyzed* intelligence as standard CI product
- delivers actionable CI in interactive, graphic form

- provides CI that actively supports strategic decision-making and planning, R&D, sales, and operations
- creates early warning intelligence for both business opportunity and future threats

### CI dissemination and applications:

- communicate intelligence face-to-face as the most effective means
- requires inter-active, shared displays for virtual management teams
- delivers *pre-analyzed* CI for various uses and by different types of users
- demands by CI user for *uncommon* insights using multi-media, graphic delivery systems

### CI management and direction:

- expands director CI role as a member of company's management team
- oversees virtual, worldwide CI system
- manages all-source collection, organizes, and leads analysis
- facilitates management team's direction and use of CI system

### Future CI organization:

- becomes network of user-directed CI operations
- incorporates all-source *fusion* center
- produces real-time and pre-analyzed CI
- disseminates CI through multi-media, interactive IT system, with users being able to *configure* their own reports and displays

some CI professionals whose sense of ethics and inclination to preserve the status quo are at odds with these future trends. These forces, which have been called the *privatization* of intelligence, will continue to grow. How we deal with them will affect the character of our future profession and its value system.

### Intellectual property

Existing companies and future knowledge-intensive businesses have a growing interest in protecting their intellectual property. In the future, when knowledge truly becomes our most important resource, we will need to do much better than we are now.

### CI education

There are two sides to this issue: educating the users and the CI professional. The sophistication of CI users will continue to advance, fueled by the new ideas and business

concepts coming from the world's leading business schools and consultants. Their needs will continue to grow, in both volume and complexity.

As for CI professional education, I am not very optimistic. Universities and professional educators have not been strong CI supporters, nor have their institutions done much to prepare CI practitioners for our future work. There has been some progress in this area, both in Europe and North America, but there is no broad-based movement in higher education that would provide the types of professional and technological education that will be needed to prepare CI professionals for the year 2012.

I am much more optimistic about Drucker's knowledge workers. He told me that they were being educated at increasing rates and, as he had forecast, they should be taking their place in those business areas where the need is the greatest. I believe CI is one of those areas, but we will have to make a concerted effort to both attract and train such new talent.

## CI profession

Changes in the CI profession itself will continue, demanding greater intelligence skills and business competences for those who practice it. CI will become more important in the knowledge-intensive businesses of the future. Those who manage the CI function will become key players in the company's decision-making process, due largely to the compressed time frame for making critical decisions.

Much CI collection and even analysis is likely to be done by others, including the users themselves. CI collection, particularly real-time collection, will be conducted more by outside vendors and others throughout the company as a part of their regular duties. Consequently other professions and new players, such as knowledge technologists, are likely to play a greater role in the field we now call competitive intelligence.

## MAJOR FORCES IMPACT ON CI

The impact of the 10 major forces-of-change on CI can best be envisioned by describing how they will affect the traditional intelligence cycle. These forces will directly impact what we do, how we will be doing it, and even who is likely to be doing it. This means major changes in every facet of CI, from the manager to the researcher, up to and including the users. [See Sidebar 2.]

## Information services

The greatest changes will probably come in the way we access and manipulate the vast amounts of available global information. This is where I see the new knowledge technologists playing a critical role. Information technology can do a lot of this work, if we are skilled enough to let it.

## Intelligence collection

Primary source intelligence collection — both technical and human — will depend more heavily on IT, much of it currently available from government vendors. The increasing demand for real-time intelligence, both monitoring and analysis, will require better use of IT and greater skills needed to use it. The acquisition of all-source intelligence-information will in turn lead to the creation of advanced information centers capable of *fusing* such intelligence-information into a single, often graphical CI product for multiple use.

## Analysis

With more of the CI fusion and synthesis taking place behind the scenes, analysis will become more sophisticated but less obvious. Many future CI users will be capable of and want to do their own analysis. But this will require a certain amount of pre-processing or analysis of the raw all-source intelligence-information before users can apply their own

forms of analysis. The future need for real-time CI analysis and more complicated types of business analysis, such as that necessary for D'Aveni's hypercompetition strategies, will also require more advanced IT tools and the skilled professionals who support it.

## Dissemination

Dissemination is probably the most misunderstood part of the intelligence cycle. It is not merely the delivery of some intelligence report: it is the communication of that intelligence in a manner that truly facilitates the users' understanding and insight. Much work still needs to be done to disseminate both the *uncommon* insights of our analysis and the interactive graphic results of our real-time collection operations.

## CI management and organization

Looking at the CI organization itself and those selected to manage it, we begin to see some rather dramatic changes. The future director of CI (D/CI) will likely become a member of the corporation's or business unit's management team. The limited time available to consider and make future business decisions will make this a necessity.

These future D/CI's will be true CI professionals, in the sense that they can both manage and direct CI operations and create the business context necessary to use the intelligence. They will have to be as respected for their business acumen as their CI skills or the CI that they deliver will not be fully accepted.

These future D/CI's will manage and direct a *virtual* company-wide CI system. This system will be made up of small, local CI networks and individual CI practitioners supporting various business activities, ranging from sales to purchasing to human resources. Such virtual CI systems will be easily accessed and re-configured by all the CI managers and units that participate in the virtual system.

In the final analysis, the intelligence process will not change, but the way we organize and use it will. It will become more flexible but professionally and technologically more challenging. We will have to change.

## CI'S NEW FUTURE

Trying to imagine or envision how the major forces-of-change are likely to shape our future is the hard part. Different people, considering the same set of forces, may come to an entirely different conclusion. As I began considering the impact of the forces on CI in 2012, it became apparent that there are at least two possible futures.

The first (and most preferable) one is where CI professionals seize the opportunities that are being presented by the future knowledge economy and growing user demands for intelligence about the global marketplace. These future needs

set the upper bounds of our aspirations and include some very exciting opportunities. However, to realize these future goals, CI will have to overcome several major challenges:

- manage and proficiently process the ever-increasing volumes of information needed to succeed in tomorrow's global marketplace, and developing the IT systems and skills to support it
- make intelligence collection real-time and global, and an integral part of the future user-directed CI system
- create the types of interactive analysis processes that will permit the users to not only *see* the results of their competitive thinking but also produce those *uncommon insights* that Bob Galvin believes we should
- develop CI systems that serve both the individual user and senior management teams, while ensuring that the results are shared throughout the company wherever they are needed

Meeting these needs and challenges presents a very interesting and exciting future for CI. But we also must factor in additional forces. When I do, I begin to see a very different future being created by:

- the cost that corporations will have to pay for the new IT and purchases of external global information services
- the unresponsive and slow pace of the current educational systems
- the lack of leadership and cohesion among CI professionals

When I factor these forces in, I see a second future, one that is not much different than we have today: a few pockets of advanced CI practices, with their empowered users and successful companies. This is not the future I want for CI.

## CREATING THE CI FUTURE WE WANT

Which of these two futures CI realizes is largely up to us, the current CI professionals. If we reach out and strive to meet those future needs — driven by global competition and a new generation of more sophisticated users — we will have to overcome all of these challenges and some I have not even imagined. As practitioners, old and new, we will have to plan and work and learn together. We will have to embrace new IT concepts and tools, something that we have been all too slow to do in the past.

It is not clear that we as a profession are up to the challenge. I believe we are capable of meeting it. But as a

global community we have yet to recognize these future needs and begin to create the skills and capabilities that will achieve this exciting new future for competitive intelligence.

*[Editor's note: this article was based on the keynote presentation at the 7th European SCIP conference in Brussels, Belgium, October 17, 2002.]*

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