

IBM Global Business Services



IBM Institute for Business Value

The power of many

ABCs of collaborative
innovation throughout
the extended enterprise

Strategy
and Change



IBM Institute for Business Value

IBM Global Business Services, through the IBM Institute for Business Value, develops fact-based strategic insights for senior business executives around critical industry-specific and cross-industry issues. This executive brief is based on an in-depth study by the Institute's research team. It is part of an ongoing commitment by IBM Global Business Services to provide analysis and viewpoints that help companies realize business value. You may contact the authors or send an e-mail to iibv@us.ibm.com for more information.



The power of many

ABCs of collaborative innovation throughout the extended enterprise

By Lawrence Owen, Charles Goldwasser, Kristi Choate and Amy Blitz

CEOs today recognize that they must be innovative if they are to keep up with an ever more complex, global and dynamic environment. The IBM Global CEO Study 2006 found that, to drive innovation, many top CEOs are collaborating beyond their organizations – with their extended networks of suppliers, customers, business partners and others. Such collaboration, however, is easier said than done. In fact, 50 percent of strategic alliances fail.¹ Based on our research, experience and two examples of best practice cases, we present here a framework – the ABCs of collaborative innovation – that can improve the chances of success in this increasingly important area.

The case for greater collaboration

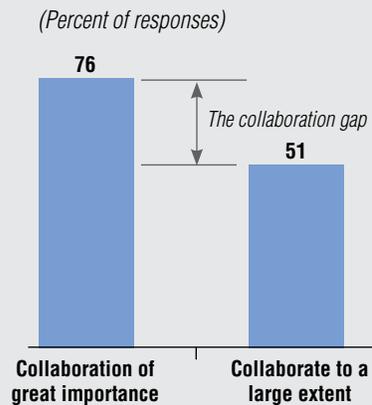
From interviews with 765 CEOs worldwide, the IBM Global CEO Study 2006 found that CEOs place a high priority on innovation in response to massive shifts in the global competitive marketplace. While companies were pursuing the three main types of innovation – in products, services and markets; in operations; and in business models – the study found that financial outperformers were putting twice as much emphasis on business model innovation as underperformers. Further, in describing business model innovation, CEOs focused on organizational issues, notably changes in organizational structure and more extensive external strategic partnerships.

This emphasis indicates that CEOs are increasingly looking beyond their internal R&D teams for ideas and innovation. In fact, study results showed that only 17 percent of the CEOs were relying on R&D for innovative ideas. The most common sources were employees (41 percent), followed by business partners (38 percent) and customers (37 percent). Clearly, as innovation expands throughout the organization and beyond, the need to enable collaboration for innovation becomes increasingly important. Indeed, the strongest financial performers in our study were also the strongest collaborators.

There is a gap however between the ideal and the reality. While 76 percent of CEOs cited the importance of enabling collaborative innovation, only 51 percent reported that they were actually doing this to a large extent (see Figure 1). One big challenge is that, as organizations become more global, they face more complex issues related to culture, regulation, technology

and other areas. Further, with the growing trend toward extended enterprise models, involving more external partnerships, collaborative innovation is even harder to do well. Research shows that failure rates for strategic alliances hover near 50 percent.² We believe collaboration problems across organizations are key factors contributing to the demise of strategic partnerships.

FIGURE 1.
While CEOs understand that collaboration is key to innovation, many have difficulty actually enabling it.



Source: IBM Global CEO Study 2006.

CEOs say:

“Without collaboration, innovation would be impossible.”

“It would be counterproductive to do everything yourself. Innovative business models need to create ways to leverage the capabilities of the different players in an ecosystem.”

“Partnering is the only way to extract maximum value and avoid re-inventing the wheel.”

The power of many

ABCs of collaborative innovation throughout the extended enterprise

A is for alignment:
setting strategic
innovation objectives
and positioning
the organization to
achieve them.

Know your ABCs: A framework for collaborative innovation

To avoid the pitfalls of collaborative innovation, our research and experience show the best building blocks are: alignment, boundaries and commitment. *Alignment* entails synchronizing the strategic vision and innovation goals with the implementation of these throughout the organization, focusing on collaboration both vertically and horizontally. Managing *boundaries* enables collaboration across organizations, establishing structures and processes regarding governance, operations and technology. Finally, an ongoing *commitment* is required to orchestrate and systematize collaboration for innovation throughout the organization and its extended enterprise over time. These ABCs can be done separately or in combination, depending on the capabilities, strategic goals and innovation objectives of the organization. Note that by calling these the “ABCs” we do not mean

to imply that this is in any way easy, but rather that there is a way of simplifying the complexities of collaborative innovation (see Figure 2).

A = Alignment

Alignment is a key step in ensuring that the business strategy is communicated and enabled throughout the organization both vertically and horizontally. Alignment requires looking at the organization from the perspective of innovation objectives, and then using the insights gained to position the organization to meet those objectives.

Vertical alignment translates the business strategy’s innovation objectives into an organizational strategy and an implementation plan. Once translated, the business strategy provides a strategic roadmap for change.

Horizontal alignment typically requires the creation of a new organizational unit or the redefinition of existing ones. Key here is the

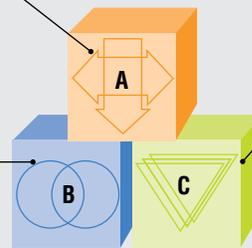
FIGURE 2.
The ABCs of successful collaboration.

Alignment

The strategy and organization must be aligned vertically and horizontally to support the collaboration for innovation agenda.

Boundaries

Strategic relationships with the extended enterprise must be defined and managed for optimal collaboration.



Commitment

The organization must make an ongoing commitment to a collaborative climate enabled by leadership, performance and incentives, and learning.

Source: IBM Institute for Business Value.

elimination of structures and processes that may have been effective in the past but are no longer conducive to collaborative innovation. In the process, horizontal alignment reduces barriers to collaboration across functional groups, divisions, geographies and other silos. To make collaboration for innovation systemic, there also needs to be a focus on how people will actually get work done, driving toward the broader innovation goals. Often, job functions, responsibilities and performance measurements will need to be altered to include collaboration for innovation. Changes in HR approaches (such as recruitment, selection, compensation and training) further ingrain collaboration for innovation into the culture.

By translating the business strategy into operational goals, and by creating structures and processes to enable collaboration across all segments of the organization, innovation leaders can motivate and enable new behavior (see Figure 3).

B = Boundaries

As noted previously, the majority of strategic partnerships fail, and they typically do so because they are very hard to manage well. They require building trust, navigating different approaches to decision making, agreeing to legal terms about ownership and other often contentious issues, collaborating across cultures, managing communications and operations, and so on.

To avoid these problems, identifying the best partner is the first critical step. Potential partners may include customers, suppliers, government groups or others. Establishing the right structure for the partnership, such as a joint venture, strategic alliance or consortium, is essential and must extend from the company's innovation agenda and business strategy. Here, it is important to understand the history and culture of each group as well as the goals and terms of the relationship. Will

FIGURE 3.

Working together, horizontal and vertical alignment enable successful collaboration.

The strategy and organization must be aligned vertically to support the business strategy...



...the organization must also be aligned horizontally to enable collaboration for innovation across functional groups



Source: IBM Institute for Business Value.

**B is for boundaries:
defining and managing
strategic relationships
to allow stronger
collaboration.**

the relationship be temporary or permanent, physical or virtual, rigid or flexible? Are any legal agreements needed to protect specific interests? As these and other questions are explored, governance needs to be established, covering potential areas of conflict such as ownership of intellectual property (IP) and decision-making processes. The financial and contractual agreements that result from these discussions are crucial to the success of the relationship.

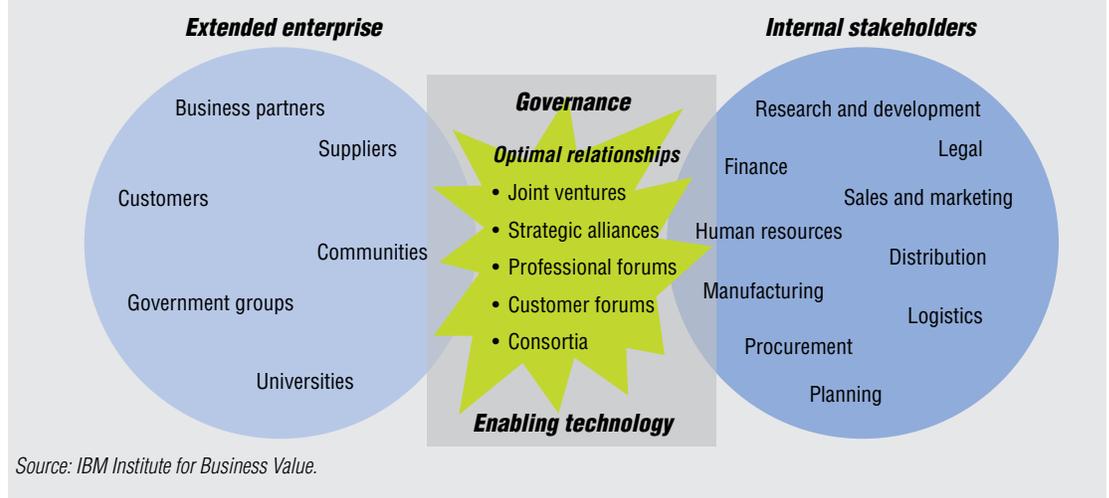
Technological integration and data visibility across organizations are also critical to the relationship's success, enabling partners to communicate and share information.

Strong collaborative tools are increasingly important. At IBM, for example, we use what we call "Innovation Jams," which are Web-

based applications that allow multiple users from inside the company and from several other participating organizations to have threaded discussions on diverse topics. In establishing the technological foundations, various requirements and protocols must be evaluated, understood and established. For example, will interactions be physical or virtual, or both? Addressed early and fully, technology can greatly advance collaborative innovation.

In all cases, defining the partnership, establishing governance terms and then building a technological and operational infrastructure for ongoing collaboration across organizations can significantly improve the chances of success. As illustrated in Figure 4, when the boundaries are managed well, collaborative innovation can occur among external partners and internal stakeholders.

FIGURE 4.
Optimal relationships depend on well-defined boundaries throughout the extended enterprise.



Source: IBM Institute for Business Value.

**C is for commitment:
acting on collaborative
intent through leadership,
performance management
and learning.**

C = Commitment

Organizations that are serious about collaboration for innovation make an ongoing commitment to transformation and change. Creating a collaborative culture happens over time through leadership communication and reinforcement, the development and ongoing tracking of key measures, and institutionalized learning and knowledge management to continually develop the capabilities needed for collaborative innovation (see Figure 5).

Of the collaboration ABCs, aligning the organization and establishing boundaries with partners often have identifiable start and end points. The third component, however, represents ongoing work to infuse the organizational culture and to drive leadership's commitment to the broad goal of enabling and rewarding collaborative innovation.

Three points comprise the commitment component of the framework: *leadership*, *performance management*, and *learning and improving*.

- Leadership is needed to develop and communicate the strategic direction of collaborative innovation throughout the organization. Leaders define and work toward attaining the cultural attributes that are needed for better collaboration (such as *open* versus *closed* and *risk-taking* versus *risk-averse*). They commit to establishing an organizational climate that fosters internal and external collaboration. They also must eliminate organizational elements that act as barriers to collaboration.
- Performance management adds structure to the leadership vision. By outlining a standard approach to assess, select, contract, operate, evaluate and end collaborative partnerships, the handling of collaborative relationships becomes more consistent. To be able to motivate and reward collaboration, it is vital to establish performance measurements and benefits realization approaches, so that team and individual performance can be measured against them.

FIGURE 5.
Commitment involves ongoing efforts to mature the organizations' abilities to collaborate for innovation.



- Continuous learning and improvement are also critical. This includes defining and building capabilities for idea generation, relationship management and collaboration. For optimal results, knowledge gained through collaboration should be captured, shared and reused. The goal here is to improve collaborative innovation over time by establishing processes to learn and change.

Putting the ABCs into play

Eli Lilly and Company launches “research without walls”

Eli Lilly and Company is a strong example of a company that helped set the standards in its industry for collaborative innovation. In fact, the pharmaceutical industry faces continual pressures to launch more innovative products as quickly and cost-effectively as possible. To address these needs, pharmaceutical companies rely increasingly on external sources of innovation as a way to accelerate, strengthen and deepen their innovation pipelines. Early to adopt this strategy was Eli Lilly and Company.

In the mid-1990s, Lilly’s senior management recognized a growing need to strengthen its innovation pipeline and better position itself to discover, develop and ultimately launch new medicines at the start of the next decade. To meet this need, Lilly developed a creative solution. Using what it called a “research without walls” approach, Lilly began to cultivate an extensive network of external partners in biotech, academia and other innovation centers as a major component of its overall innovation strategy.

“Successful alliances are more critical than ever to our strategy. We are working hard to be recognized as the pharmaceutical industry’s premier partner by consistently creating value for our partners and for Lilly.”³

– Sidney Taurel, Chairman of the Board and Chief Executive Officer, Eli Lilly and Company

The company’s early adoption of the “research without walls” approach would prove valuable as Lilly entered the new millennium. In 2001, Lilly faced a number of business challenges that made it even more critical for the company to identify new strategies for strengthening its innovation pipeline. The company’s largest-selling product, the blockbuster anti-depressant Prozac, lost patent protection earlier than expected, resulting in a sizable loss of revenue. At the same time, the company was experiencing delays in U.S. Food and Drug Administration (FDA) approval to launch several new drugs in its pipeline, and a recently launched sepsis drug was not as successful as anticipated.

To jumpstart and better focus its external collaboration efforts, Lilly made the decision in 2001 to bring its R&D prospecting group, its corporate business development group and a newly created Office of Alliance Management together under one organization dedicated to “Sourcing Innovation.” By bringing these areas together, Lilly helped break down barriers

among groups that might otherwise have competed. In the process, Lilly also facilitated a broader commitment to collaboration. Moreover, by creating an Office of Alliance Management, Lilly ensured a systematic, ongoing approach to its growing network of external partners.

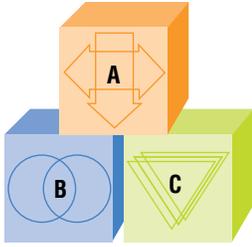
Today the Office of Alliance Management handles over 100 R&D partnerships focused on new technology, products and services, while others in manufacturing work with an additional 160 partnerships. Using ongoing surveys of partners, the office regularly tests the health of each relationship and identifies areas for improvement. The group also creates roadmaps for designing, negotiating and managing alliances to ensure sustainability and value to all parties. Moreover, the office continually studies and implements findings from its numerous alliances in order to avoid the myriad organizational, governance, technological and other issues that can derail even the most promising partnerships.

In addition to these efforts, Lilly created a novel business model for collaborative innovation when it started InnoCentive. This company, which Lilly has subsequently spun off but still retains some ownership of, leverages the global reach of the Internet to bring together “seeker” companies with “solver” scientists

in order to identify innovative solutions to diverse problems. To date, InnoCentive has registered over 110,000 “solvers” in more than 175 countries.⁴

The results of Lilly’s “research without walls” efforts have been impressive. The company has launched numerous new products, invigorated its innovation pipeline and achieved revenue growth as well as solid branding as a partner of choice. A sampling of partnerships – and the revenues they have generated for 2006 alone – demonstrates the link from collaboration to innovation to financial performance. For example, Byetta, developed by Amylin Pharmaceuticals and now manufactured and comarketed by Lilly, was launched in June 2005 and generated revenue for 2006 of US\$430 million. Other successes for 2006 include Cialis, which generated US\$971 million in revenue, and Actos, which generated US\$448 million. Currently, Lilly is working with another partner, Daiichi Sankyo, toward FDA submission of prasugrel, a promising anti-clotting compound.

Lilly has been benchmarked as best-in-class for managing alliances, an increasingly critical success factor in the pharmaceutical industry.



Snapshot view: The ABCs at Eli Lilly and Company

A – Alignment:

A “research without walls” strategy driven by leadership was designed to revitalize the new product development pipeline. Alignment across all functions of the organization enabled greater collaboration among R&D, business development, sales and marketing, legal and other functions. The Sourcing Innovation group, in particular, brought R&D prospecting, corporate business development and a newly created Office of Alliance Management together under one structure, helping ensure these groups were aligned.

B – Boundaries:

Through the Office of Alliance Management, boundaries with external partners, including biotechnology firms and academic institutions, are carefully negotiated and managed to address governance, ownership, risk, IP and other issues. Regular surveys of partners are also administered and studied to test the health of the relationships.

C – Commitment:

Lilly’s Office of Alliance Management and the broader Sourcing Innovation group have been particularly effective in optimizing the company’s ongoing relationships with external partners. In addition, new organizations, such as InnoCentive, have been established to enable collaborative innovation in areas related to drug discovery.

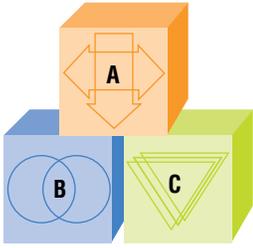
Airbus collaborates with suppliers to accelerate innovation on A380 wings

In the tightly competitive aerospace industry, Airbus has found a way to accelerate innovation: by working closely with its extensive network of suppliers and other partners to develop innovative solutions collaboratively.⁵

An aerospace industry leader in developing new technologies, Airbus has faced serious pressures in getting its innovative new A380, the world’s largest passenger plane, to market. Amid many challenges, an area of success has been in the wing assembly, one of the most complex parts of the aircraft. Based in the United Kingdom, the wing assembly group collaborated closely with an extended network of suppliers to identify innovative solutions to complex issues, and in the process to cut production time and meet schedule commitments.

The first step was a shift from being a development organization to one that manages large-scale serial production. As part of this shift, the Airbus UK wing division now had to coordinate the efforts of its extended network of suppliers, sub-contractors and others. An experienced team of human resource and organizational specialists was brought in to help, delivering specialized training programs for several hundred people across Airbus UK and its many subcontractors in new tools, processes and collaborative approaches.

These and other initiatives greatly accelerated wing production, with overall lead time on wing production reduced by 41 weeks, or 36 percent. In addition, Airbus achieved significant cost improvements in design and manufacturing. Overall, collaboration with suppliers, subcontractors and others helped identify innovation solutions throughout wing development for the A380. And though the company continues to struggle with timelines for getting the A380 to market, in this area, they soared.



Snapshot view: The ABCs at Airbus UK Wing Assembly

A – Alignment:

The company's business goals for A380 production were vertically aligned throughout the organization. Management layers were removed to enable UK country team leaders to make key decisions, greatly accelerating the pace of collaboration with suppliers.

B – Boundaries:

Through careful negotiations with many suppliers involved in the wing production, Airbus resolved challenging issues related to ownership, risk-sharing, governance and IP. Extensive training initiatives then enabled standardization throughout the diverse group of supplier organizations.

C – Commitment:

Airbus established internal teams to manage key supplier relationships and establish clear, consistent collaboration for innovation across organizations.

Pinpointing your collaboration strengths and shortfalls

To begin an analysis of your own company's collaboration capabilities, ask yourself the following questions based on the ABC framework. Your answers can help identify the areas where your organization is already doing well and those that need improvement.

Alignment

Alignment helps ensure that the business strategy and related innovation objectives are communicated and enabled throughout the organization both vertically and horizontally.

- To what extent is your overall business strategy supported by a strategy for collaborative innovation?
- How well do people at all levels of the organization understand the overall strategic direction and associated innovation goals? How strongly do they identify with these? And do they know how their actions contribute?
- Are the right processes in place to drive or support innovation at all levels of the organization, in operations, in business models and in the development of new offerings? For example, in manufacturing, sales, corporate development?

- How well connected are the component parts of your organization to support innovation, including R&D and sales, for example?

Boundaries

Managing boundaries well involves establishing the partnership, governance and operational infrastructure for ongoing collaboration across organizations.

- How well does your current business model, operations and product portfolio support collaboration with partners outside your company?
- How visible are these partnerships throughout your organization? How structured are the processes for collaborating with external partners? Are roles and responsibilities for managing collaboration internally and externally understood?
- In what ways are your processes, governance and operating guidelines designed specifically to facilitate sharing information with other companies? Do you have structures for resolving or avoiding conflicts over IP, ownership and other core issues?

- How does your technological infrastructure support collaborative processes across the extended enterprise, from basic communications to shared access to information to realtime collaboration?
- What kind of process do you have in place for monitoring and understanding potential changes in strategy or direction by any of your current and potential partners?

Commitment

An ongoing commitment to transformation and change requires leadership, performance management, and learning and improving.

- How strongly does your company culture value spending time, energy and resources on commercializing ideas obtained from outside?
- To what extent do leaders provide support for the strategic innovation agenda? How consistent is this over time?
- In what ways do your HR processes (hiring, training, performance management, incentives), reporting relationships, and other organizational structures support collaborative innovation?
- Does your collaboration strategy enable the agility necessary to accommodate dynamic partnering relationships?
- Does your organization capture lessons learned and apply these to future collaborations and, if so, to what degree?

Based on your responses to these questions, are you comfortable that you are positioned to collaborate for innovation? If not, which areas do you plan to improve? Finally, do you have a balance between short-term interventions and long-term strategies for improving collaboration across your organization and extended enterprise?

Conclusion

As a vital part of an overall business strategy, top CEOs recognize the need to make organizational changes to support collaborative innovation and derive profit from valuable ideas, no matter where they originate. The ABCs – alignment, boundaries and commitment – provide a framework for unlocking the power of many, enabling collaborative innovation throughout the extended enterprise and improving performance.

To learn more about this IBM Institute for Business Value study, please contact us at iibv@us.ibm.com. For a full catalog of our research, visit:

ibm.com/iibv

About the authors

Lawrence Owen is the Global Leader of the Organization and Change Strategy practice within IBM Global Business Services. This practice develops and implements organizational and change strategies for clients, focusing on the delivery of benefits from significant transformation projects and integrating the people-related aspects of change with transformations of process and technology. Lawrence has worked with clients from around the world in the travel and transportation, consumer products, retail, banking, and government industries. In addition, Lawrence is responsible for the design and implementation of IBM's own ongoing transformation, focusing on growth strategies, collaboration and innovation across the whole enterprise. He can be contacted at owenl@us.ibm.com.

Charles Goldwasser is the Americas Leader of the Organization and Change Strategy practice for IBM. His expertise is in planning and implementing large scale transformational change in association with technology integration, outsourcing of business processes, business restructurings, shifts in strategy and other complex changes. Charles' work spans diverse industries including automotive, life sciences, electronics, consumer products, metals, chemicals, entertainment, energy and utilities. He frequently speaks and writes on issues of leadership and organizational change and is the author of the book *Action Management – Practical Strategies for Making Your Corporate Transformation a Success*. He can be reached at charlie.goldwasser@us.ibm.com.

Kristi Choate is a Senior Managing Consultant in the IBM Organization and Change Strategy practice. She has extensive consulting experience leading business transformations to achieve desired results and benefits. Her project involvement includes team collaboration, process reengineering, executive facilitation, change management, organizational design, and implementation strategy development particularly on large system implementations. Kristi can be contacted at kristi.choate@us.ibm.com.

Amy Blitz is the Strategy and Change Leader for the IBM Institute for Business Value. She was a core team member of the IBM 2006 CEO Study on Innovation, based on interviews with 765 CEOs worldwide. She is currently producing a series of papers on related innovation topics, including the collaborative innovation themes addressed here. Amy has led major research initiatives on issues related to entrepreneurship, innovation and strategy. Her work has been featured in *Harvard Business Review*, *The New York Times*, *The Wall Street Journal*, MSNBC and PBS. Amy can be contacted at ablitz@us.ibm.com.

Contributors

This paper would not have been possible without the insights and contributions of an extended IBM team, including Saul Berman, Susan Blum, Trevor Davis, Kathryn Everest, Ian Foraker, Andrew Gear, Chris Kirk, May Lawrence, Salima Manji Lin, Mike Martin, Philip Myburg, John Riley, Suzanne Simon, Andrew Statton and Andy Strowbridge.

About IBM Global Business Services

With business experts in more than 160 countries, IBM Global Business Services provides clients with deep business process and industry expertise across 17 industries, using innovation to identify, create and deliver value faster. We draw on the full breadth of IBM capabilities, standing behind our advice to help clients innovate and implement solutions designed to deliver business outcomes with far-reaching impact and sustainable results.

References

- ¹ Ernst, David and James Bamford. "Your Alliances Are Too Stable." *Harvard Business Review*. June 2005.
- ² Ibid.
- ³ "Achieving value through partnership." Eli Lilly and Company. <http://www.lilly.com/about/partnering/alliances/index.html>
- ⁴ "The Rockefeller Foundation to Extend InnoCentive's Online, Global Scientific Platform For Technology Solutions to Global Development Problems." InnoCentive press release. December 18, 2006.
- ⁵ "Airbus achieves A380 first flight on schedule with help from IBM." IBM Corporation. January 2007. <http://www-306.ibm.com/software/success/cssdb.nsf/cs/jsts-6wj2bz>



© Copyright IBM Corporation 2007

IBM Global Services
Route 100
Somers, NY 10589
U.S.A.

Produced in the United States of America
04-07
All Rights Reserved

IBM and the IBM logo are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both.

Other company, product and service names may be trademarks or service marks of others.

References in this publication to IBM products and services do not imply that IBM intends to make them available in all countries in which IBM operates.