

# Changing Business Needs Will Drive Collaborative Technology

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*If we can judge by the automotive industry's experience, the trend toward collaborative working practices will offer some hefty challenges for businesses during the next couple of years. According to one major supplier in the sector, its engineers are productive for only 30 percent of the time when they work on shared projects — the rest of their time is spent dealing with technical issues and other problems that hinder collaborative working. Or, as Kevin O' Marah, vice-president at industry analyst AMR Research, puts it: "Collaboration today is one-third actual collaboration, two-thirds preparing to collaborate."*

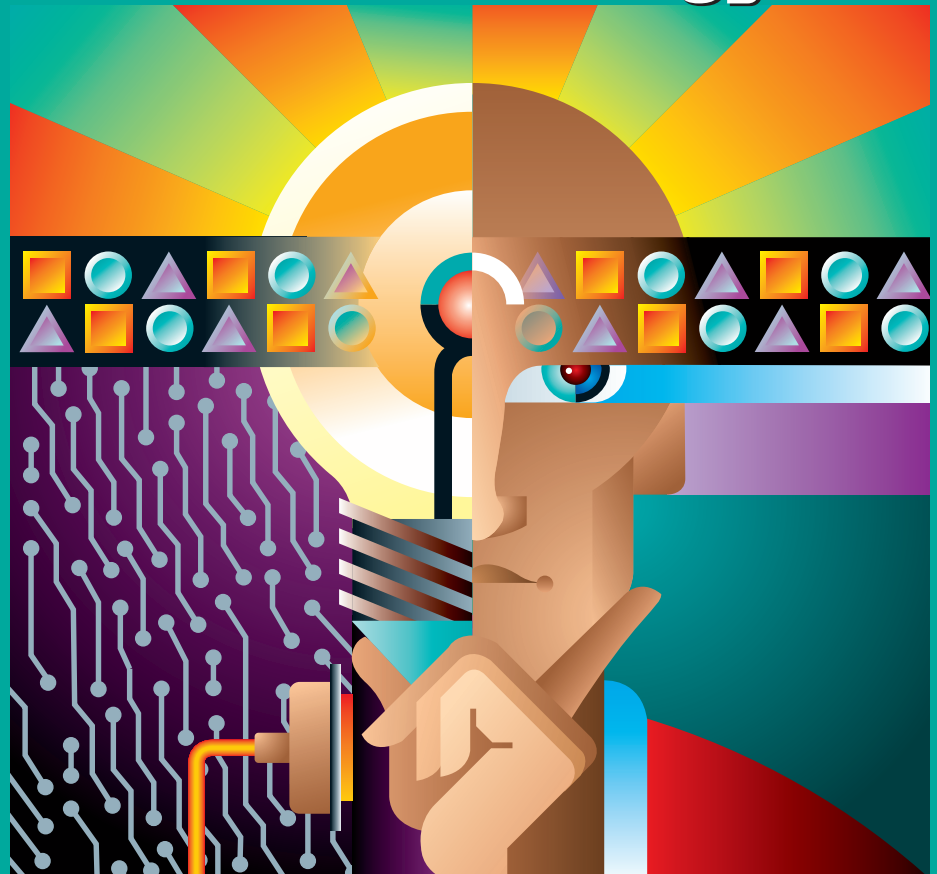
Although collaboration has received much hype as a business philosophy for the early twenty-first century, it is still in its infancy. Some industry sectors are adopting relatively sophisticated working methodologies in areas such as product design, but much of the collaboration that takes place is still rudimentary and many of the promised efficiencies have yet to be realized. At a technical level, the IT industry is still grap-

pling with fundamental integration issues that hamper collaborative projects, particularly between organizations running incompatible systems. From a purchasing perspective, the wide array of collaborative functionality available from different vendors is confusing. And at a cultural level, the challenges to adopting collaborative working methods are daunting. Collaboration is emerging as a powerful busi-

ness methodology—but the practical difficulties shouldn't be ignored.

## **Collaboration in Business**

Although the term is widely used for a range of different activities, collaboration essentially boils down to two interconnected business activities. At one end of the scale, organizations are attempting to improve their internal working practices, using collaborative tools to





increase interdepartmental efficiency with platforms such as Microsoft Exchange or IBM Lotus Domino/Notes. At the other end of the scale, companies are attempting to work more closely with external organizations, including their suppliers, trading partners, and customers in initiatives such as sales forecasting and inventory management. In both cases, the drivers are the same. Organizations see collaboration as a means to cut costs and as a platform for business “agility”—that is, the ability to rapidly create and dismantle working partnerships to meet fast-changing business needs. Shortening the product development cycle to better respond to changing markets is a prime driver for collaboration in early adopting markets, such as the automotive and high-tech industries.

Part of the difficulty organizations face, however, is that collaboration requires a fundamental change of business mindset. Internally, most organizations remain structured in departmental stovepipes, with teams assembled around functional requirements such as sales, marketing, finance, or logistics. True collaboration requires that these different departments work together in new ways; for example, allowing finance to work within the marketing department to analyze the cost and effectiveness of a major direct mail campaign. Collaboration sometimes requires that “virtual teams” be set up on a project-by-project basis, drawing skills from a range of business functions to tackle specific problems over a defined timescale. These new ways of working challenge traditional corporate hierarchies, threatening established power bases and requiring different management techniques. Not surprisingly, as Daniel Rasmus, vice president at industry analyst Giga Information

Group, points out, “culture is probably the number one impediment” to collaboration.

These internal issues are magnified when organizations attempt to collaborate externally. Historically, most trading relationships were built on a master-servant basis — in any given supply chain, one participant will be dominant, exerting influence over its “partners” in fundamental areas such as strategy, product development, or pricing. In some instances, the power is shared more evenly. For example, in the retail environment, major chains exert considerable influence over their suppliers’ delivery and promotional activities. Effective collaboration, however, is built around the notion of mutual gain, where every element of the value chain works together for the common good, acting on the principle that improving efficiency and effectiveness will benefit each participant. Organizations that have aggressively driven down their suppliers’ prices, for example, may find that changes in working practices will deliver better long-term benefits for all parties. In some instances, collaboration requires that organizations work closely with external parties on specific projects, even though other parts of their respective companies are competitors — a challenge for everyone, from boardroom executives to the personnel on the sales floor.

### The Technical Challenges

Against this background of philosophical change, enterprises also face a number of technical challenges as they take the collaborative route. To begin with, the technology landscape has become blurred. In a report entitled “The new collaboration market: more diverse and confusing than ever,” Giga’s Rasmus points out that three years ago, the primary message about collaborative technology came from Lotus, Novell, and Microsoft. Now, however, an additional set of Web-based collaboration tools has emerged. Rather than partnering with established players, many application vendors have started to build collaborative features into their

own products, creating their own methodologies for threaded discussions and workflow. From portals to call centers and learning management systems to supply chain management applications, a broad array of product categories are available that feature collaborative technologies.

As Rasmus points out, these new developments potentially create confusion within organizations as end-users are forced to choose between vertical collaborative offerings, often deployed at a tactical level within the enterprise, and traditional horizontal platforms such as Microsoft Exchange. For example, portals that provide their own collaborative features but also offer interfaces to applications such as Exchange can prove problematic, because employees who use the portal discussion threads as their prime collaborative environment may miss discussions that take place in groupware threads. Rasmus is witnessing “hand-off” issues between vertical and horizontal applications, where the individuals involved in each process are forced to make decisions about which people are included in which thread.

At the same time, much of the technology required to support collaboration is still in its infancy. Although many vendors have set their store by data integration standards such as XML, the reality today is that many different “flavors” of XML exist. Much of the real progress made in this area has been driven by consortia of users and vendors working to create schemas for specific industry sectors, such as the high-tech industry with its adoption of RosettaNet. More significantly for the long-term, however, feature-level integration between different systems remains relatively poor. Even in the computer-aided design (CAD) sector, one of the more advanced adopters of collaborative techniques, much of the technical emphasis in collaboration is still restricted to the higher visualization and make-up layer. At a deeper level, ongoing incompatibilities make file sharing difficult, forcing users of different systems into varying degrees of

remastering work as files are passed between organizations. That has enormous implications for businesses such as the automotive industry that operate in complex design fields. Suppliers serving multiple manufacturers will be forced to run several different systems — and retain different skill sets within their technical teams — as vendors promote their favored collaborative working methods. As AMR's O'Marah points out, feature-level integration remains "the holy grail."

### Cultural Roadblocks

In addition to collaboration in the CAD market, AMR is witnessing extensive interest in collaborative forecasting, although actual adoption is still limited and the spreadsheet and email methodology is still prevalent. AMR's O'Marah points out that while much of the technology exists to support collaborative forecasting, the hold-up again is primarily cultural. True collaborative forecasting requires that every organization within the supply chain work cooperatively to predict realistic product and service requirements: in practice, most organizations are still tempted to overstate demand to ensure that product availability remains constant even when demand spikes.

Although a large number of challenges exist, the IT vendor community is responding in earnest. For internal collaboration, analysts argue that the likes of Microsoft and Lotus will continue to dominate workgroup collaboration, while specialist suppliers such as WebEx Communications compete in areas such as Internet conferencing, a key platform for collaborative product development. At the enterprise application layer, meanwhile, enterprise resource planning (ERP) vendors such as Peoplesoft, SAP, Oracle, and JD Edwards have all adopted the collaborative mantle, along with supply chain leader i2.

At the same time, as Giga's Rasmus points out, some collaborative initiatives will be driven from unexpected quarters. E-learning systems, for example, which have traditionally been

viewed as online training systems, increasingly provide a platform for collaboration, both through instructor-led learning and threaded discussions and chat rooms. In the demand chain, meanwhile, interest is growing in partner relationship management (PRM), a discipline designed to link vendors and their third-party reseller communities. Initially adopted as "push" technologies to disseminate vendor information and automate processes such as lead distribution, PRM applications are increasingly expanding to provide point-to-point and, ultimately, many-to-many collaboration between members of closed communities, often through private marketplaces. In an age where customer management is critical to business success, third-party partners will play an increasingly significant role in the supply and demand equation, from sales forecasting to order fulfillment. As a result, an increasing emphasis will be placed on developing collaborative communities with shared goals, replacing the traditional master/servant relationships that suppliers have typically imposed on their channels. Already, the changing shape of the market — as specialist suppliers (e.g., Allegis) are joined by mainstream customer management suppliers (e.g., Siebel Systems) — reflects the significance of PRM.

### Becoming a Business Objective

Fueled by these kinds of developments, the impetus toward collaboration can only get stronger. In a report predicting business IT investment trends for 2002, industry analyst Gartner argues that "the need for collaboration — meaning, literally, "working together" — will gel in 2002 as businesses seek to increase business agility, hasten recovery, and reduce costs." The report suggests that harnessing collective knowledge — from employees, buyers, customers, and suppliers — will turn collaboration from lip service to a real business objective, fueled by the emergence of "smart" personal devices that promote distributed decision-making. At the same time, as organizations seek to cut costs and meet personal safety concerns,

Gartner argues that business travel will remain low and organizations will invest in collaborative technologies such as Web conferencing, meetingware, and e-learning.

According to Gartner, these drivers will have a significant impact on business investment in IT. The trend toward virtual working — from home, remote, and distributed offices — will gain ground, and combined with the increase in personal smart devices, will require extensive infrastructure work. "IS organizations must start integrating the collaboration infrastructure with business applications and access technologies (e.g., wireless)," says the report. "An integration nightmare awaits them if they do not." IS departments will not, however, find that easy: as the economy begins to recover in 2002, they will find themselves dealing with growing demand for their services, while operating on budgets set in a recessionary climate.

Above all, analysts believe that users moving down the collaborative path need to take a holistic view of what it really entails. In a report issued last year, Giga argues "improvements are not simply a matter of tossing technology at the problem. As with other e-business applications — indeed, even more than with other e-business applications — business process redesign and involvement of the people affected are key factors in success." Like customer relationship management, collaboration is not a technology — it's a business strategy, supported by technology tools. As such, IT professionals will be at the center of collaborative initiatives — but successful execution will require commitment from across the enterprise. ■

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