
*Key growth imperatives
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and insight across the silos.*

Teaming Up to Crack Innovation and Enterprise Integration

by James I. Cash, Jr., Michael J. Earl, and
Robert Morison

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Teaming Up to Crack Innovation and Enterprise Integration

The Idea in Brief

Your company is continuously creating new generations of products, services, and business processes. These innovations require seamless collaboration across your firm's different parts. But in most large corporations, innovation and integration are unnatural acts. Resistance stifles new ideas, and silos block cross-functional cooperation. Yet as Cash, Earl, and Morison explain, some companies are overcoming these boundaries by establishing two new types of cross-organizational teams.

- **Distributed innovation groups (DIGs)** foster innovation throughout the company. For example, they deploy intranet-based forums and wikis to scout for promising ideas.
- **Enterprise integration groups (EIGs)** establish the architecture and management practices essential for business integration. For instance, they identify integration opportunities, channel resources to them, and reconfigure ERP systems to support ever-tighter cross-business collaboration.

To establish each of these groups, select a small number of talented people who combine broad business knowledge, technology expertise, and the social skills needed to build relationships both within and outside your company.

The Idea in Practice

HOW DISTRIBUTED INNOVATION GROUPS WORK

DIGs foster innovation by:

- **Scouting for high-potential ideas.** Group members take part in brainstorming and problem-solving sessions, identify customer needs that could lead to new offerings or business models, and consider how to use existing technologies in new ways.
- **Scanning the environment for emerging technologies and their applications.** DIGs research technology trends and monitor early adopters' experiences for insights into new applications.
- **Facilitating online idea marketplaces.** They use information dissemination and collaboration technologies, including groupware, social-networking systems, and Web 2.0 tools such as wikis and blogs.
- **Advising business units.** They counsel unit leaders on how to manage innovation initiative portfolios and how to conduct rapid prototyping.
- **Publicizing promising innovations and their progress throughout the enterprise.** This sparks creativity by example.
- **Serving as a home for developing pilot projects and prototypes.** If a business unit comes up with a promising idea but lacks the resources and skills to develop it, the DIG can provide the extra push needed for the idea to gain early traction.
 - ▶ Example: Royal Dutch/Shell's "GameChanger" teams provide seed funding for radical or long-term innovations that would otherwise be orphaned. GameChanger coaches organize idea-generation workshops and help idea originators prove the concept (in a lab or in the field). Resulting innovations have included a new biofuel and a process for extracting hard-to-access gas reserves.

HOW ENTERPRISE INTEGRATION GROUPS WORK

EIGs foster business integration by:

- **Providing expertise in process management and improvement.** Groups oversee activities such as Six Sigma and disseminate best practices across the enterprise.
- **Providing staff to major business-integration initiatives.** EIGs provide whatever skills may be lacking in terms of process thinking and design, organizational change, job retraining, and new performance metrics.
- **Managing enterprise architecture.** They configure and manage the evolution of the company's business processes, information, and technology.
- **Anticipating a more integrated future.** EIGs help managers envision and prepare for the ramifications of horizontal integration.
 - ▶ Example: General Electric's "Corporate Initiatives Group" is responsible for horizontal integration within and across GE's six major business units. Benefits include reduced cycle time for key business processes. One GE company that provided private-label financing for retailers used to take 63 days from contract signing until a customer was allowed to finance a purchase. With the Group's help, that time was reduced to one day, speeding revenues to the company. The Group also shares best practices across the corporation, especially those involving accelerating growth, reducing waste, and improving customer-facing processes.

Key growth imperatives succeed best when specialized teams share skills, experience, and insight across the silos.

Teaming Up to Crack Innovation and Enterprise Integration

by James I. Cash, Jr., Michael J. Earl, and Robert Morison

In the continuing quest for business growth, many CEOs are turning to their CIOs and IT organizations because technology is essential to two compelling sources of growth: innovation and integration. *Innovation*, of course, is doing new things that customers ultimately appreciate and value—not only developing new generations of products, services, channels, and customer experience but also conceiving new business processes and models. *Integration* is making the multiple units, functions, and sites of large organizations work together to increase capacity, improve performance, lower cost structure, and discover opportunities for improvement that don't appear until you look across functions.

Together, innovation and integration allow an enterprise to engage more customers and bring more goods and services to market. Successful innovation often depends on the ability to coordinate efforts across organizational boundaries because innovations reach sufficient scale and impact only when integrated into the larger operations of the corporation.

Neither pursuit is optional, in good economic times or bad, because stagnation on either front can doom a business, and success in both is the best guarantee of thriving.

Companies rely on IT as a catalyst, enabler, and component of the new products, services, channels, processes, and business models, as well as the way to encourage innovators to collaborate. And with its extensive experience working at the heart of major business-change initiatives of all kinds—implementing common infrastructures, shared databases, and cross-functional and enterprise systems—IT is often the corporation's de facto center of expertise in business integration.

Our research confirms this. We had noticed several years ago that some CIOs were being asked to wear more than one executive hat. So, in 2006, with the aid of Nicholas Vitalari of nGenera, Keri Pearlson of KP Partners, and Espen Andersen of the Norwegian School of Management and other colleagues, we began investigating the roles of the contemporary IT organization in 24 major, often global, U.S.

and European corporations. We talked with many of these CIOs directly, examining the additional roles they and their IT organizations were being asked to play, and discussed the business strategies and drivers behind these roles. We found that 12 of the 24 were charged with improving horizontal integration of the business, and a third were focused on their corporations' innovation and growth initiatives. A few were focused on both innovation and integration.

CEOs today are asking their CIOs and IT organizations to play bigger roles in the growth agenda by providing the tools for collaborative innovation; by participating in innovation initiatives of all kinds; by building an integrated platform of business processes, information, systems, and technology; and by sharing their experience and expertise in how to improve the "horizontal discipline" of the corporation. So even as much of the traditional work of IT has been automated, commoditized, and readily outsourced, today's innovation and integration challenges are drawing IT deeper than ever into the central nervous system of the corporation.

But the work involves sometimes daunting challenges because business innovation and integration have something else in common—both are still "unnatural acts" in most large corporations. Businesses are better at stifling innovation than at capitalizing on it, better at optimizing local operations than at integrating them for the good of the enterprise and its customers. The larger and more complex the organization, the stronger the status quo can be in repelling both innovation and integration.

Thus, large corporations need active, technology-enabled agencies to promote innovation and integration—to overcome obstacles, focus effort, and let the unnatural acts become more natural. Without such agencies, innovation and integration won't spread far enough or fast enough throughout a large company to keep pace with smaller, younger, more technology-based competitors to whom innovation and integration come much more naturally. Specifically, we recommend the formation of two agencies:

- A *distributed innovation group* (DIG), which doesn't "do" innovation but rather fosters and channels it. Innovation is an inherently distributed activity, encompassing innovators

across and outside the corporation. The DIG serves as the center of expertise for innovation techniques, scouts for new developments outside the company, and provides experts for internal innovation initiatives. And it deploys technologies and methods that facilitate collaboration and innovation.

- An *enterprise integration group* (EIG), dedicated to the horizontal integration of the corporation. It picks from among competing integration projects and provides resources that enable them to succeed. It develops the architecture and management practices that make business integration easier over time. It may also manage a portfolio of integration activities and initiatives; serve as the corporation's center of expertise in process improvement, large-project management, and program and portfolio management; and provide staff and possibly leaders for major business integration initiatives.

Sometimes these groups report to the CIO; sometimes they do not. Either way, they are home to some of the corporation's most capable and experienced IT professionals, as well as many traditional IT activities that are key to each group's respective mission. Information technology has long been a catalyst of business innovation and an essential part of the glue that enables large organizations to function coherently. However, few large corporations have systematically leveraged technology and technologists for these two purposes. In the quest for growth, they must.

Challenges of Innovation

Innovation doesn't come easily to large corporations. Many set ambitious goals to earn a significant percentage of revenue from recently introduced products, services, and channels only to find their R&D productivity actually decline. The common recipe for increasing innovation predominantly focuses on generating and vetting new ideas. But that's not the problem: Large corporations generate plenty of ideas. Too many, in fact. They well up everywhere—in interactions with customers, working with business partners, fixing operational glitches. The problem is harvesting them, allocating the company's vast resources to them, and managing their development in a coordinated and efficient way.

Nobody has a monopoly on innovation in large companies anymore. No organizational

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unit can be *the* innovator. What's more, too many innovations are stalled by business-as-usual resistance, and corporations cannot rely entirely on a free market of emerging ideas to overcome that resistance. They need an agency that will recognize and promote innovation, one that will convert corporate scale into an asset rather than a hindrance to innovation initiatives. That's the purpose of a distributed innovation group.

Why Form Another Innovation Group?

The DIG deploys entrepreneurial analysts to promote innovation in a variety of ways:

- Scouting for ideas with potential for the company. This involves networking, participating in brainstorming and problem-solving sessions, and working with customers to identify their needs. It also involves being on the lookout for technologies that have already been acquired for one (often quite narrow) purpose that might be applied for other purposes. Scouting is as much about uncovering the untapped potential of latent ideas as discovering new ones.

- Constantly scanning the external environment for emerging technologies and their applications. This means researching technology trends, working with leading-edge vendors, monitoring the experiences of early adopters, and recognizing the potential of small-scale, experimental IT applications.

- Facilitating participation in "ideagoras"—the online marketplaces for problem solving. For example, InnoCentive's extensive network of professional and hobbyist scientists tackles and solves business problems for such companies as Eli Lilly (InnoCentive's original funder), DuPont, Boeing, and Procter & Gamble.

- Acting as a center of innovation expertise that advises business units on managing portfolios of innovation initiatives; on conducting business experiments, rapid prototyping, and iterative development; and on the use of business analytics to discover new patterns in customer behavior and potential business-performance improvements.

- Publicizing promising innovations and their progress toward implementation throughout the enterprise, sparking creativity by example. At Procter & Gamble, nascent innovations are posted in a catalog so managers can screen them for potential. Johnson & Johnson

and financial services firm Skandia have long held senior management conferences to communicate innovations from one business unit to the others.

- Serving as a temporary home for developing pilots or prototypes of promising innovations that need an extra push to get the early traction they deserve. This approach can provide resources and skills not available in the business unit that came up with the idea. It also can effectively overcome typical organizational barriers, such as insufficient seed funding, reluctance to be diverted from everyday business, and lack of faith in a new idea.

It makes sense to combine this range of activities under the purview of a dedicated agency because the catalytic skills required to cultivate innovation are too scarce and expensive to duplicate throughout the enterprise.

Some of these activities may already be performed well here and there within the corporation. R&D may house a center of expertise in innovation techniques, for instance, or a business unit may routinely watch for emerging information technologies to incorporate into its particular products and services. The DIG does not replace or subsume these organizations; rather, it works with them, complementing their resources to help maximize their performance.

The DIG should be staffed with business-IT hybrids—people with sufficient depth in specific business processes to sharply focus innovation in those areas. Even though we refer to the DIG as a "group," it is decidedly not a centralized staff function. Its members should be widely dispersed across the enterprise. But they must be full-time agents of innovation, with no other day job. And they must be networked together. Perhaps more than any other part of the business, the DIG must be adaptable, keeping its most skilled analysts deployed where the innovation action is.

To whom should the DIG report? If innovation is high enough on the corporate agenda, it should answer to the CEO. Otherwise, it might report to the R&D executive or perhaps to a business-unit or process executive committed to driving innovation across the enterprise. If there is no prior claim, the DIG can report to the CIO—an effective solution given the role IT plays in product, service, and process innovation and how important the

What a Distributed Innovation Group Does

- Scouts for new ideas and untapped potential in current technologies
- Scans the external environment for emerging technologies
- Facilitates participation in idea forums
- Acts as a center of innovation expertise
- Publicizes promising innovations
- Funds and serves as an incubator for promising innovations

new generation of collaboration technologies is to enabling distributed innovation.

The Innovation Group in Action

One of the most successful efforts to distribute innovation across a major corporation was detailed by Larry Huston and Nabil Sakkab in “Connect and Develop: Inside Procter & Gamble’s New Model for Innovation” (HBR, March 2006). Among major corporations, P&G was quick to recognize the necessity and potential of distributed innovation, and the results have exceeded the company’s ambitious goals.

Connect and Develop is a program P&G initiated when, in 2000, the CEO and chief technology officer challenged R&D and the corporation at large to find new ways to innovate, with the goal of acquiring 50% of new product ideas from outside the company by 2010. Among other things, Connect and Develop involves deploying 70 “technology entrepreneurs” worldwide to scout for ideas and participate in a variety of external networks for generating innovations and solving problems. It also incubates promising candidates until they are embraced by the business units best able to commercialize them.

Connect and Develop does not replace internal R&D; it leverages R&D by expanding the reach of P&G’s innovation process and product development pipeline. Using this approach, P&G was able to raise the rate of new product ideas originating outside the company from about 15% in 2000 to 50% in 2007 (three years ahead of schedule). At the same time, R&D productivity doubled, the innovation success rate more than tripled, and the company’s innovation portfolio grew more than fourfold.

P&G is hardly alone in creating a distributed innovation strategy. We see many variations on the DIG theme. Nokia, for example, has moved from a closed, proprietary innovation approach to an open, collaborative process, incorporating not only customers, suppliers, academics, inventors, and innovation labs but also technology start-ups, the open source community, and competitors. Nokia now shares much of its product architecture with development partners, and its website serves as the coordination point for a wide range of collaborative projects and innovation challenges.

At Royal Dutch Shell, corporate and business unit “GameChanger” teams use seed funding to sponsor innovations—often radi-

cal, ambitious, or long-term—that would otherwise be orphaned. The program began as a course correction. In the mid-1990s, Shell was reducing layers of management and focusing R&D on only the immediate priorities of the operating companies. But in 2000, the corporation was prescient enough to charter a small group, funded with 10% of the corporate R&D/technology budget, to promote and support longer-term innovation. The approach was prompted in part by Gary Hamel’s “Bringing Silicon Valley Inside” (HBR, September–October 1999). Anyone could come to the group with a research or innovation proposal to seek funds for a proof of concept. Each proven idea moved to R&D or to an operating company for second-stage financing.

Today there are GameChanger groups in Shell’s Exploration & Production, Chemicals, Oil Products, IT, and Corporate units. At first they focused only on receiving, vetting, and initially funding innovative ideas. But their roles have expanded to incorporate innovation scouting, facilitating the development of ideas, and knowledge transfer.

For any proposed innovation, the GameChanger group provides a coach who helps develop the value proposition, works with the originator to design and follow a process to prove the concept (in a lab or in the field), and contracts with suppliers or universities for additional assistance when needed. Beyond individual projects, innovation scouting includes organizing idea-generation workshops to further strategic initiatives. As a result of one such workshop, Shell moved early on to develop a biofuel that would not rely on foodstuffs as source material. A current initiative is working on ways to get at “stranded gas” (gas that’s been discovered but cannot be extracted owing to its location and the economics of getting it to market). Thus, GameChanger today is proactive and interactive, not just reactive to innovation proposals. The 10% of the R&D budget that goes to GameChanger initiatives incubates as many as 30% of Shell’s R&D projects.

GameChanger groups are small; E&P’s is the largest, with 12 members. Each group reports to its unit’s chief technology officer, and the corporate group, under the leadership of Leo Roodhart, coordinates the others. Half the people who staff these groups are very experienced senior executives who have led big

What a Distributed Innovation Group Is Not

- An R&D group dedicated to product and technological discovery
- A monopoly innovation function charged with enacting all stages of the innovation process
- A systems-development or corporate-venturing unit
- An office-bound centralized staff unit that sets policy and monitors performance

departments, have traveled around Shell, know who is who, and are now looking for intrapreneurial excitement. The others are bright youngsters who rotate through GameChanger groups for about two years and then move back into the business. GameChanger, business strategy, and business scenario staffs collaborate with one another through an online innovation network.

GameChanger had an initial no-interference charter for six years. It showed results long before the charter expired and today enjoys a secure budget, senior staff support, and the reputation for driving value through innovation.

IT's Role in Fostering Innovation

Three types of IT capabilities are especially important to distributed innovation:

- Up-to-date understanding of emerging technologies and insight into trends, especially how technologies are converging to create radically new possibilities (for instance, the ability to finely target marketing efforts using a combination of customer analytics and cell phones or PDAs with GPS capability). To stay current, group members constantly conduct research, maintain collaborative relationships with vendors and industry watchers, and observe how applications are being adopted in other businesses and industries.
- Mastery of iterative and experimental application development methods, including the creation of robust business simulations. The DIG must work with business partners to rapidly build prototypes for both proof of concept and perfecting through testing.
- Facility with information dissemination and collaboration technologies, including groupware, social-networking systems, intranet-based forums, knowledge exchanges, and Web 2.0 tools such as wikis and blogs.

In the meantime, the rest of the IT organization is not sitting idly on the sidelines. It has three key innovation duties:

- Providing technology tools and infrastructure to support innovation initiatives. Primary among these are connection and collaboration software, databases and knowledge management systems, and analytical tools. Especially valuable are information directories and repositories of application modules, which IT constructs and disseminates to innovators, who can then recombine them for new uses.

- Providing skilled technical people for all substantial innovation initiatives (if not right from the start, then as soon as projects show promise) to help optimize product design and anticipate scaling issues.

- Rapidly incorporating the new innovation's information, systems, technology, and business logic into the corporate infrastructure. This not only enables the innovation to be operationalized and achieve production scale but also makes the new business components quickly available for future innovations.

Challenges of Enterprise Integration

Customers today expect responsive product development, order fulfillment, service, and administrative backup. That requires a company's operations to be coordinated and internally transparent. Businesses know this but frequently are deterred from accomplishing it by entrenched silo mentalities, a lack of executive courage, and the difficulty and expense of large-scale integration projects.

In response to the integration pressure, many corporations have begun to "federalize" their organizational structures and operating models. Even (and sometimes especially) where business units have traditionally been highly autonomous, corporations are finding that they need to institute horizontal processes and shared services to improve operational efficiency, maximize talent and expertise, and raise the level of customer service, particularly where markets overlap. By definition, this can be neither led nor facilitated from any one silo. It requires a corporate mechanism that can overcome traditional silo resistance through its mandate and capabilities. That's the work of an enterprise integration group.

How an Enterprise Integration Group Works

An EIG is charged with seeking and facilitating necessary or breakthrough business integration projects designed to radically improve the company's performance in the eyes of current and potential customers. Without such assistance, the different silos of an enterprise typically lack the will, know-how, and incentives to pursue enterprise integration initiatives. An effective EIG:

- Manages the corporate portfolio of integration activities and initiatives. This starts

What an Enterprise Integration Group Does

- Manages the corporate portfolio of integration initiatives
- Serves as the corporation's center of expertise in process management and improvement
- Provides staff to major business-integration initiatives
- Is responsible for enterprise architecture
- Anticipates how operations might work in a more integrated fashion in the future

with cultivating relationships throughout the corporation, as well as with customers, suppliers, and business partners, to identify business integration needs and opportunities and direct appropriate resources to them. Most often, these opportunities involve addressing difficulties customers are experiencing, fixing problems that cripple operational efficiency, or identifying breakthrough propositions to improve competitive position.

- Serves as the corporation's center of expertise in process management and improvement, large-project management, and program and portfolio management. As such, it oversees process improvement activities like Six Sigma and lean manufacturing. And it disseminates experience and best practices across the enterprise.

- Contributes staff to major business integration initiatives—sometimes leaders, always coaches. These individuals bring a comprehensive, end-to-end perspective to process development and program management. They provide whatever skills may be lacking in terms of process thinking and design, organizational change requirements, job and skills retraining, new performance metrics, and necessary information systems and technology infrastructure. (To determine which skills your organization might lack, see the exhibit “What Integration Capabilities Do You Need?”)

- Is responsible for enterprise architecture—the overall configuration and managed evolution of the company's business processes, information, and technology. Enterprise architecture is a foundation for business integration, and yet it's often managed separately by each function. The EIG is a natural home for the development, maintenance, and proactive management of a comprehensive architecture.

- Anticipates how operations might work in a more integrated fashion in the future and what management changes that might require. Failure of anticipation is the Achilles' heel of business integration initiatives: All too often, new enterprise systems or other capabilities are installed, and *then* people begin ever so slowly to learn how to manage differently. The EIG must be in the education business, helping managers envision and prepare for the ramifications of horizontal integration.

One of the biggest challenges in forming an EIG may be gathering the right staff. You

need people with a broad understanding of every piece of the business who can look at the enterprise systemically. You also need people with experience in areas like enterprise-system implementation and information architecture. You need people with pragmatic coaching skills, who can guide business partners through the design, implementation, and deployment of newly integrated processes. Finally, you need people with very strong relationship-building skills, because business integration demands more than just a consensus about how things should work; it demands a commitment to operate differently so that the horizontal entity can become more than the sum of its parts.

If horizontal integration is a sufficiently urgent strategic imperative, the EIG should report to the CEO. More commonly, it reports to the COO (or equivalent executive). Alternatively, in companies with IT organizations that have extensive experience in successfully implementing enterprise and cross-functional systems, the EIG might well report to the CIO. In fact, we've found in our research that in companies where the CIO is asked to assume an additional business role, it's often to lead a major integration initiative, a horizontal organization such as shared services, or a management process such as business reengineering or program management.

Enterprise Integration at General Electric

Many large corporations have put components of an EIG in place, often starting with a center of expertise in process management. Merck, for instance, has a global services organization that integrates process, technology, and program management. Lean manufacturing, Six Sigma, change management, and other business improvement services are part of its responsibilities. At SunTrust, the CIO's purview includes enterprisewide program and project management, process reengineering, Six Sigma, and horizontal integration. The “customer-enabled British Airways” (ceBA) unit was charged with process simplification, e-commerce initiatives, and channel integration at the airline. As a result of its work, these have become fully integrated into BA's regular business operations, and online selling and servicing are now mainstream channels for the carrier.

What an Enterprise Integration Group Is Not

- The implementation unit for enterprisewide processes
- A unit available for any process-redesign project
- Solely a systems development unit

One of the most comprehensive approaches we've found is the Corporate Initiatives Group at General Electric, which demonstrates the difference an EIG can make even for a highly diversified corporation.

GE is well known for its 20-year history of success with an evolving set of process improvement methods, including its workout and Six Sigma programs. Less well known are GE's 20 years of success driving cross-business income-growth initiatives. In the 1980s, the Corporate Initiatives Group (CIG) focused on mergers and acquisitions. In the 1990s, its targets were sourcing, Six Sigma, and e-commerce. Now it's centered on the customer.

The group reports to Gary Reiner, GE's corporate CIO, and is responsible for horizontal integration within and across all of GE's major business units. All 20 members of the CIG have both operating and consulting experience; some have been hired from top consulting firms. Individuals typically stay with the CIG for one or two years and then move into an operations capacity. Current CIG members might work on such customer initiatives as net promoter scores (a measure GE uses to ensure it's meeting customer needs), lean workouts (two-week exercises aimed at reducing cycle times

of various types), and sourcing and supply chain initiatives.

Here's one example of the benefits the CIG group has generated by conducting a well-focused and coordinated lean workout exercise. A GE company was providing private-label financing for retailers. It took 63 days from the time the contract was signed until the retailer was able to let a customer finance a purchase. This delay was expensive. After the CIG conducted a series of six lean workouts, the company was able to reduce that time to one day. The company then launched a marketing campaign touting its newly acquired quick-turnaround ability, which it successfully used to drive new business.

The CIG has also used lean workouts to improve internal processes. As an example, GE reduced the cycle time of the hiring process—from identifying a candidate to putting him or her to work—by 70%, from 102 days to 30.

The CIG also shares best practices throughout the corporation, especially those that involve accelerating growth, reducing waste, or improving cross-functional, customer-facing, and innovation processes. And it is a driving force behind the consolidation of various business units' suppliers. The CIG works closely with business-unit IT organizations and with the other two corporate units—shared applications and shared infrastructure—that report to Reiner. At GE, IT does more than provide technology and services; it helps drive corporate initiatives through the talent of the CIG staff and the allocation of IT resources. Its policy is to apply technology only *after* other improvements have been made.

IT's Role in Integration

IT organizations almost invariably have much more experience with enterprise integration than with distributed innovation. Implementing common infrastructure, shared databases, and cross-functional and enterprise systems requires IT organizations to work across the corporation on a regular basis in a way that other groups rarely do. IT people have intimate knowledge of the workings of the company, including the idiosyncrasies and hidden interdependencies between processes and data. Their work requires them to take a systemic view of business-information and process flows. As one CIO told us, "The executive team knows how business integration is

What Integration Capabilities Do You Need?

As you charter an enterprise integration group, define its work, and anticipate how it should interact with other units that operate horizontally in your company, start with this list. Ask yourself to what extent your organization has already mastered the capabilities—from governance to change leadership—that successful horizontal integration requires. Then configure your EIG to fill in the gaps.

Governance

Instituting formal structures, principles, and decision rights that enable agreement and alignment with strategy

Relationship Management

Building organizational connections and resolving the tension between local performance requirements and the need for corporate coordination

Program Management

Ensuring that complex initiatives and changes dovetail with one another through the coordination of objectives, resources, and interdependencies

Architecture

Making sure that technology infrastructure and information flows are always ready for the next stage of integration

Process Skills

Having superior talent in the disciplines of process measurement, process management, and change management

Change Leadership

Having leaders available at the team, integration project, business unit, and corporate levels

supposed to work, but IT sees the detail level and can leverage that understanding.”

Many of the most capable and experienced business-technology hybrids in IT are probably already working on process and information integration initiatives. Some of them will migrate to, and perhaps form the kernel of, the EIG. Six sets of skills are central to the work of an EIG. The first five are often found in IT organizations. The sixth is rarer—and needs to be cherished and nurtured.

- Familiarity with the concepts and methods of business process design and improvement. Process and systems thinking are essential here, including recognizing all the diverse and sometimes conflicting interests that enterprise integration has to overcome.

- Experience with cross-functional systems implementation, including the associated education, training, piloting, and other activities necessary for ambitious business-change projects to succeed.

- Competence in analyzing architecture—in particular, recognizing how current IT infrastructures may have to change to facilitate enterprise integration. This includes understanding the potential and limitations of ERP systems already in use and what it takes to keep the company’s technology architecture one step ahead of the business’s needs for further integration.

- Expertise in information management—because very often the first step in coordi-

nating business activities is rationalizing their data. When managers in different units realize that they can benefit from a larger pool of common, consistent information, they’re motivated to provide good data from the start.

- Experience with program management—the planning, coordination, and measurement of the many projects and activities involved in a multidimensional change initiative. Crucial to success are cross-organizational program governance mechanisms that contain built-in conflict resolution processes.

- A talent for relationship management—the combination of business knowledge, technological insight, and interpersonal and influence skills needed to open people’s eyes to the possibilities and benefits of horizontal integration and to enlist their commitment to making integration happen.

The IT organizations in most large businesses, including both corporate and business unit IT groups, are probably already deeply involved in executing business integration projects and developing and maintaining the shared information, applications, and technology infrastructure upon which these initiatives depend. Often the most challenging work IT organizations do—with enterprise, supplier-integration, and customer-facing systems—is in support of horizontal integration across the business and, increasingly, beyond its boundaries. But they can and should

Three Technology Management Imperatives

The success of distributed innovation groups and enterprise integration groups depends on more than technological skills. It demands a comprehensive IT management strategy and infrastructure consisting of three elements.

Business Platform

IT must develop, organize, and manage information and technology assets as a platform of modular, reusable components rather than as a limited-purpose information system. Such components can be modified, combined in novel ways, and put to creative uses, thus allowing business innovation to flower. Because the modules are inherently interoperable, they naturally facilitate horizontal

integration. This approach is, of course, not new. Information systems and infrastructures have been migrating in this direction for years, and it’s the basic architectural principle of the internet. But slow migration is no longer viable for a business that strives to excel at innovation and integration.

Outside Services

To focus key IT staff on business integration and innovation—as well as to compensate for shortages of skilled staff—corporations must increasingly rely on external IT services. The global market for technology outsourcing has matured in capacity, quality, and flexibility. Outside providers have better access to talent, lower costs, and more incentive to remain

technologically current in their areas of expertise. Thus it becomes hard to justify keeping commodity activities in-house.

Web 2.0

The corporation must embrace the latest generation of tools for flexible communication and collaboration. These tools enable people to collect, share, and productively use more sources and kinds of information—conversations, opinions, and know-how expressed in audio and video, for instance, not just text and data records. They can spur creativity and help coordinate both formal and ad hoc interactions, and hence should form much of the tool kits of both the innovation and integration groups.

do more. (See the sidebar “Three Technology Management Imperatives.”)

Innovation Meets Integration

Distributed innovation and enterprise integration groups are similar in important ways. In their multifaceted roles, each is a collection of catalysts. Neither group offers direct solutions, but each provides leadership through successful relationships, effective communication, and targeted expertise. Networking is an essential activity for both: In equal measure, DIG and EIG need to connect and build relationships with internal change agents and with external partners and stakeholders (especially customers). And, ultimately, both groups need to focus on adding customer value—the fundamental test of success or failure in all of their initiatives.

Most members of both groups must be trilingual—fluent in the language of business, able to understand and translate the language of IT, and at ease with the natural language of sociability, which is indispensable to relationship management. They also need to know the organization—how it works, who the movers and shakers are, and whom to ask for help in finding solutions. These are rare beings, and competition for their services will be high. Hence, neither the DIG nor the EIG can be very large—nor do they need to be, even in a corporation the size of General Electric. Ideally, the members of these two groups will be drawn from the business and after a few years will return to operational roles, having bene-

fited from the extraordinary developmental experience of DIG or EIG work in between.

In both cases, guaranteed funding makes a difference. The DIG will require some level of seed funding to nurture the candidate innovations. The EIG may need a “financier of last resort” (such as the CEO) to invest in integration initiatives to which the business silos are not fully committed. Both groups, of course, will be established and flourish only if the corporate climate is conducive. Funding demonstrates commitment. So does a CEO who believes in and advocates both innovation and integration and supports the groups in drawing the talent they need.

Despite their commonalities, the two units operate in different spheres. The DIG enables the corporation to devise new ways to operate; the EIG enables the corporation to coordinate its operations to improve performance. The DIG creates new business variations; the EIG takes yesterday’s new variations and folds them into the operating model of the enterprise. The DIG injects novelty and variety; the EIG battles against fragmentation. Thus, the DIG and EIG have different missions, and the personalities of their staffs and leaders will reflect their respective orientations. But together they enable the corporation to evolve. And the company pursuing growth must excel at both.

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Teaming Up to Crack Innovation and Enterprise Integration

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ARTICLES

[Building Breakthrough Businesses Within Established Organizations](#)

by Vijay Govindarajan and Chris Trimble
Harvard Business Review
May 2005
Product no. R0505C

Many companies assume that once they've launched a major innovation, growth will soon follow. It's not that simple. High-potential new businesses within established companies face three specific challenges—forgetting, borrowing, and learning—that a new enterprise must meet to survive and grow. It must first *forget* some of what made the core company successful. The new enterprise must also *borrow* some of the core company's assets—usually in one or two key areas that will give the new enterprise a crucial competitive advantage. Finally, the new enterprise must be prepared to *learn* some things from scratch. Because strategic experiments are highly uncertain endeavors, the new enterprise will face several critical unknowns. The more rapidly it can resolve those unknowns, the sooner it will zero in on a winning business model or exit a hopeless situation.

[Darwin and the Demon: Innovating Within Established Enterprises](#)

by Geoffrey A. Moore
Harvard Business Review
July 2004
Product no. R0407F

There are many types of innovation, from the ballyhooed disruptive innovation to more mundane forms such as process and experiential, which might involve, respectively, doing such things as streamlining the supply chain and delighting customers with small product modifications. The best way to choose the right type for your company is to consider the phases of a market's life span. In the earliest phase, a new technology attracts enthusiasts and visionaries. Eventually, the market reaches the Main Street phase, when growth slows, flattens, and finally subsides.

Different types of innovation produce more

bang for the buck at different points in the life cycle. Disruptive innovation, for example, is rewarded most during the earliest phase. Once the life cycle advances to Main Street, however, the marketplace is no longer willing to yield the revenue or margin gains necessary to fund that type of innovation, so other forms, including process and experiential, yield better returns. But attempts to change the company's direction are often thwarted by the inertia that success creates. To overcome inertia, managers must introduce new types of innovation while aggressively extracting resources from legacy processes and organizations.

[The Ambidextrous Organization](#)

by Michael L. Tushman and Charles A. O'Reilly III
Harvard Business Review
April 2004
Product no. R0404D

Corporate executives must constantly look backward, attending to the products and processes of the past, while also preparing for the innovations that will define the future. This mental balancing act is one of the toughest managerial challenges and only a few companies succeed. What's their secret? These organizations separate their new, exploratory units from their traditional, exploitative ones, allowing them to have different processes, structures, and cultures; at the same time, they maintain tight links across units at the senior executive level. Such "ambidextrous organizations" allow executives to pioneer radical or disruptive innovations while also pursuing incremental gains. Of utmost importance to the ambidextrous organization are ambidextrous managers—executives with the ability to understand and be sensitive to the needs of very different kinds of businesses. They possess the attributes of rigorous cost cutters and free-thinking entrepreneurs while also maintaining the objectivity required to make difficult trade-offs.

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