

**Technology needs to be deeply integrated with business processes to achieve maximum return.** The technology alone isn't going to generate a business benefit or the return on investment that companies want to realize.

**Phil Garland**



# Technology's Impact



# on Business Processes

It is not enough to simply implement technology. **Companies are going to have to change the way they do business.**

Gary Tyson



**Technology is a means not an end;** it is a means to achieving a certain business benefit. If there is a way of efficiently achieving the same business benefit without technology, we almost always recommend that route first.

Bill Stevens



**Technology is an enabling component of the entire business.**

If the people within the business do not have the right information to act on a daily basis then achieving the businesses goals and having their strategy succeed is much more difficult.

John Mackey



**There needs to be a top-down approach to understanding what a company's business goals are** as well as ensuring that all decisions go downstream and also involve the IT lineup.

# Technology

is a powerful enabler for improving efficiencies and performance. But without careful consideration for the impact on processes or clear objectives for what the technology is designed to achieve, those returns will not magically appear. Experts say some managers tend to make decisions about technology without giving enough thought to the impact on processes or the establishment of objectives. The integration of technology with business goals is a strategic change that must be sustained to maximize benefits.

"It is not enough to simply implement technology; this should be considered a business transformation enabled by technology," says Phil Garland, senior VP of global life sciences at BearingPoint Inc. "Technology alone isn't going to generate the business benefit or the return on investment that companies want to realize. Companies are going to have to change the way they do business and enable these changes with technology."

Attitudes are changing, and more people

are recognizing that they need to start with the business objectives and business goals and then select the appropriate technology to enable objective decisions, he says.

According to John Mackey, director, life sciences practice, at Edgewater Technology Inc., technology needs to be an enabler of business change and achieving those goals.

"By creating the right business case and documenting the proper metrics, managers will be able to go beyond focusing on justifying IT investments or trying to keep up with the latest and greatest technology," he says. "The focus must remain on the business objectives."

One of the biggest mistakes companies make with technology implementations is treating them like technology implementations, says Gary Tyson, VP, clinical development practice, at Campbell Alliance.

"Companies have to combine technology and process change implementation," Mr. Tyson says. "Companies need to identify the process to be changed and then design a roll out concurrently with the technology. Then, companies need to start using the technology the right way from the beginning, as specified

by the process change, and stop following old work habits. Managers seem to take for granted that if a new system is put in place, employees will stop doing things the old way. Unfortunately, that is not case. When process change is not enacted it's not the technology implementation that fails, but rather it's the company that fails to generate benefit.

"Technology is typically sold based on how much money or time will be saved, but at least 60% of the time people say they don't see the benefits," he adds. "The reason they aren't realizing a return is because they didn't change the process to drive the benefits for their environment."

## The Personal Component

Often the biggest challenge to implementing a new technology is not the technology itself but all of the things that companies need to do to support that implementation, says Maury DePalo, principal consultant, life sciences, at Edgewater Technology.

"Having people, processes, and technology aligned with the business mission and objec-

**Pat Barrett**



**Companies need to look at their current capabilities, the systems they have on hand,** and what their capabilities are before they purchase new systems.

**Jim Sabogal**



**Unlike other industries, the pharmaceutical industry is closely regulated,** and this has a tendency to inhibit the acceptance of new technology, because once a company validates a process that area, in essence, becomes frozen.

**Rachel Buckley**



**Companies need to understand what information vendors are doing** to simplify and reduce information interfaces and streamline access to important information to all users.

tives is important," he says. "Any new technology is going to impact how people work and the types of processes and procedures that will be needed to exploit that technology."

There is greater impetus upon the pharma industry to turn information into intelligence so as to enable all stakeholders across the organization to make better decisions faster.

But this can be a challenge, says Rachel Buckley, director of product development within the R&D division, pharma and chemistry markets, of Thomson Scientific.

"Many companies are dealing with legacy

products, legacy-based formats, and legacy indexing systems, which create multiple interfaces and more complex data," she says. "This complexity makes it difficult to meet business goals. Pharmaceutical companies depend on having rapid access to information and being able to evaluate and review, for example, published literature and patent information."

Ms. Buckley says addressing the complexity of data is not just a technology issue.

"What it comes down to is understanding what the business requirements are for individual companies," she says. "There are other issues as well, such as training and understanding the needs of individual users and customers."

Tim Dietlin, senior practice executive, clinical development practice, at Campbell Alliance, agrees that technology is a people issue.

"A certain percentage of people will always be uncomfortable with technology because it represents a fundamental change in processes, especially in clinical development," he says. "Any fundamental change impacts people's jobs, roles, and responsibilities, and, in some cases, could mean a potential loss of jobs."

For a technology implementation to be successful, senior managers have to play a leadership role.

"Executives have to communicate the organization's commitment to making changes to

the way work is done to support the technology implementation," Mr. Dietlin says. "They have to commit to an organizational structure and explain people's roles and responsibilities. Within clinical development, for example, there are questions about why some clinical trials use Web-based technology tools and others are conducted using paper with old processes. By experimenting with technology rather than setting and communicating a clear direction, companies can create confusion and anxiety among their workforce."

Mr. Garland agrees, saying because technology impacts both the organizational level and the individual level, there are two areas of transition that companies need to consider: organizational, which includes changes in structure, process, and technology; and individual, which includes changes in the way people do business, often requiring a change in roles.

Cultural issues arise when new technology is implemented or when information is made available, says Bill Stevens, director of life sciences solutions at Cognos Corp.

"Technology changes the way people behave," he says. "Accountability is very direct, which impacts the way people interact. People who may be accustomed to making decisions based upon intuition and gut feeling are now required to be more information savvy and open to scrutiny."

Mr. Mackey says successful companies implement a process-improvement strategy from the top down.

"Organizations that define the key values from a business perspective, and communicate that vision, are off to a good start," he says.

## Goals, Processes, Then Technology

“Companies have to start with clearly defined and achievable business goals,” Mr. Garland says. “They also have to build in some flexibility, because as they dig into the process of applying technology, they may have to change the goals. We recommend that companies prioritize their goals as well, because this will help if they need to make some trade offs later. Another item that often is overlooked is the recognition that integration of technology with business goals is a strategic change.”

Mr. Tyson says in the thick of a technology implementation, managers may lose sight of which capabilities drive the benefit.

“Oftentimes, in a major systems implementation, compromises have to be made along the way,” he says. “That’s to be expected, but it’s important not to compromise on the goals that started the effort in the first place. If managers don’t know what those goals are, it’s easy to compromise those away.”

Pat Barrett, VP of life sciences at Integic Corp., recommends that business leaders within companies first map the processes across the company.

“This is not an easy thing to do,” he says. “It should be simple, but it’s not. Managers have to make sure they go deep enough to get at the subtle changes that may have been made to processes along the way that no one in upper management may even be aware of.”

The best possible approach is to begin with process change in mind, Mr. Tyson says.

“In other words, companies need to define how they wish to operate in the future and what their vision of the process is to be,” he says. “Once they have that vision and the new process in mind, a set of requirements for the system can be developed in support.”

## Looking Across the Enterprise

Industry experts say changes to technology systems should take into consideration a company’s business goals and processes across the enterprise.

“Pharma companies need to use information-driven decision making to build organizational processes and drive data content from a business perspective,” says Stephen Brobst, chief technology officer at Teradata. “This should be done with an enterprise view in mind, rather than getting trapped into point solutions. If there is tunnel vision, business processes get suboptimized. It is very easy to build a business process around a particular functional area with a narrow scope and optimize it for that functional area, but then the

## Sound Bites from the Field

### PHARMAVOICE ASKED EXPERTS FROM DIFFERENT INDUSTRY SECTORS FOR THEIR ASSESSMENT AS TO HOW TECHNOLOGY CAN HELP A COMPANY TO OPTIMIZE BUSINESS PROCESSES.



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“Companies that can successfully harness technology tools will gain competitive advantages through rapidly developing information-based best practices. Achieving this requires companies to build a solid foundation of consistent practices, standards, and common tool kits; provide users with access to information for solving the company’s major business problems; and move from hindsight and foresight reporting to analysis that provides meaningful insight into the business.

The benefits include better and faster decision making in investment management; economy of scale; better decision making and business process control on accurate and reliable data; the ability to identify redundancies and fix processes to capture information once at the source; improved operational efficiency through data standardization; the ability to enable other opportunities, catalysts, which speeds up realization of benefits; improved global and integrative views of enterprise data to support a range of business and technical needs; and improved risk management.”



**CRAIG CUYAR, PH.D.**, is Senior VP, Chief Information Officer, of CommonHealth, Parsippany, N.J., a full-service healthcare advertising agency. For more information, visit [commonhealth.com](http://commonhealth.com).

“Business processes are best optimized by technology when they are designed to maximize shareholder value. This value can come from minimizing costs, affording better service to customers, or positioning a firm for growth. Technology is an enabler of cost minimization strategies. For example, through

effective supply-chain management systems and RFID technologies, pharma organizations can minimize production, transportation, and inventory carrying costs. By understanding the role of different technologies in the business processes and where established or new technologies can aid compliance, companies can also reduce the costs of regulatory compliance.

Greater value in the customer relationship is achieved through technology. Web-based applications can enhance, leverage, and extend business processes and information to customers. CRM applications can facilitate one-to-one relationships between an organization and its consumers. Successful organizations leverage technology to facilitate their growth. For example, technology can be used to expedite the clinical-trials recruitment process, thus fueling organizational growth. Salesforce automation systems can make the sales process more efficient, also facilitating growth of the organization.

By using technology to minimize costs, service customers, and position a company for growth, business processes can be optimized and ultimately can be used to maximize shareholder value.

Pharma companies, like any other firm allocating capital investments, should consider the quantifiable ROI of their technology projects. The capital budgeting techniques of NPV and IRR are critical in assessing both the value of technology projects and their prioritization. These quantifiable returns become critical in aligning technology with business objectives given the relatively short life cycle of many technology projects.

Since culture can also determine the ultimate success of a technology project, an organization should assess its placement on the technology adoption curve. Newer technologies are typically not well accepted within organizations characterized as laggards. Conversely, organizations with an early adopter culture may be less risk averse and may be able to rapidly leverage technology against their defined business goals.

All organizations should consider how to best align technology with business objectives. Some organizations focus on implementing technology for the sake of having the latest applications or infrastructure without a clear understanding of their business objectives.

Alignment and a clear understanding of

business objectives are crucial to their successful integration with technology.”



**TED FRANK** is President of Axentis, Cleveland, Ohio, a provider of enterprise governance, risk, and compliance management software. For more information, visit [axentis.com](http://axentis.com).

“Technology is a vital component of an organization’s process reengineering efforts that opens doors to options not practical or viable when executed manually. When technology is leveraged consistently across a broad enough set of processes, organizations benefit in both cross-process optimization and transparency. The end result is an ability to drive effectiveness, efficiency and enough comparable data to benchmark performance against internal and external “like processes.” The measure of internal process improvement is a nice goal, but raising competitiveness through exceeding a company’s competitive set is what ultimately drives shareholder value.

The challenge many established organizations face is determining which specific business tactics or strategies are their true drivers of competitive advantage. Lack of clarity in this regard often results in high-risk, high-cost customization decisions. By using technology to establish more consistent processes across the enterprise, management can better focus on identifying and supporting those activities that are actually driving business performance.”



**JIM KING** is VP of Business Development, Mindspace, Mahwah, N.J., an interactive brand promotion and physicians learning organization. For more information, visit [mindspaceonline.com](http://mindspaceonline.com).

“When considering technology-supported, interactive communication platforms, pharmaceutical marketers should look for solutions that solve specific needs or supply an alternative solution to an existing program that maintains focus but offers greater efficiency.

Digital communication is here to stay, primarily because digital programs allow for content development and deployment via various methods: print, electronic, magnetic, Web, and so on. Within the communications field, we call this platform-independent content. Thus, content is created once and the development is then repurposed for dissemination across several communication mediums.

Pharmaceutical marketers should seek to engage with communication providers that maintain this flexibility and have demonstrated efficiencies under this model rather than providers that simply reproduce existing graphics or “brochure-ware” for Web deployment.”

**BIJOY SAGAR** is Director, IT Commercial, at Millennium Pharmaceuticals Inc., Cambridge, Mass., which develops breakthrough treatments for important diseases. For more information, visit [mlnm.com](http://mlnm.com).

“Technology works both as an enabler and as a catalyst to process changes. For example, most companies embark on specific process reengineering exercises when they think of implementing a large project. In my experience, sometimes the immediate benefits from the process reengineering are more tangible and value-added even before the new technology solution is implemented. IT has driven significant process efficiencies in many areas in this manner, supply-chain management being one of the most effective. On the other hand, companies grappling with the implementation of business processes around expedient projects, such as the launch of a new product or a salesforce, turn to technology for operationalization of a new salesforce or launching a product website. In both these cases, however, the driver should be the business need and the efficiencies in the process, not the technology itself.

Our philosophy revolves around developing technology roadmaps for all the customer areas we support. This allows us to align ourselves with the company goals, as well as with the goals of our immediate customers. This approach helped us to quickly launch a CRM system to meet the needs of the early launch date of our oncology drug. By also having a three-year roadmap tied to the strategy of the business, we are able to prepare better for the technology requirements of new requirements that lie ahead.”

process is often suboptimized for the organization as a whole.”

Taking an enterprisewide approach requires that managers have an understanding of all of the business processes.

“I have found that within individual silos, people have a fair understanding of their processes,” Mr. Barrett says. “But often when those processes are changed to some degree, the top level may not realize the process has been changed.”

Mr. Tyson says where companies may struggle is turning goals into changes in process.

“Oftentimes processes are informally defined,” he says. “Companies usually don’t have very good metrics. Most processes evolved over time; they weren’t built by design. They begin with a core operation, usually a very logical one, and then someone has a special request and there is a new layer added to the process.”

He says organizations periodically have to do a process analysis to understand the logic of their current work flow and question the value of each task to achieving the overall goal.

“Companies can eliminate work simply by questioning the logic of their existing process and determining whether it adds value or if it is repetitive,” Mr. Tyson says. “This is a relatively inexpensive exercise compared with the cost of new technology. New technology should only be implemented once other process change management procedures have been put into place. Otherwise, companies can invest a lot of money in technology to support a process that doesn’t add all that much value to the organization.”

Additionally, Mr. Barrett says employees may not understand the processes of other departments.

“Companies have to make sure that each department understands its own processes and that those processes have been explained across the organization so everyone knows and understands the impact these have on others,” Mr. Barrett says.

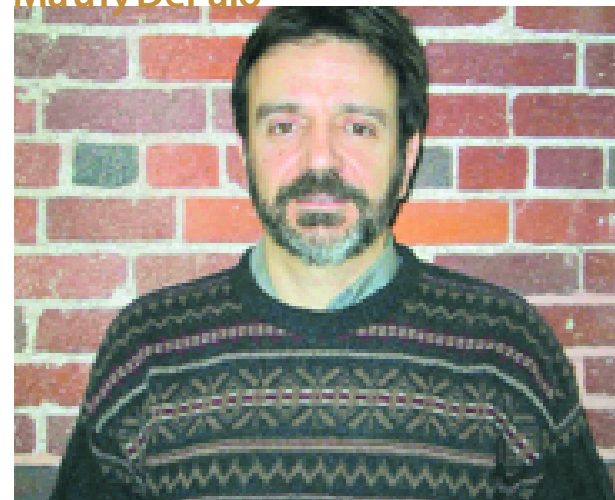
Mr. Stevens says the companies that are most successful at implementing a new technology take a more iterative approach; they attempt to solve a particular business issue and then move on to the next process rather than attacking performance management as a giant global initiative to be done all at once.

## Understanding the Market

Because the technology landscape is fragmented, with many different vendors offering many types of solutions, companies need to understand the different offerings, experts advise.

For the most part, unlike other industries, the pharmaceutical sector is now realizing that

## Maury DePalo



**Often the biggest challenge in trying to implement a new technology** is not the technology itself but all of the things that companies need to do to support that implementation.

it has to pay attention to its IT business needs, says Jim Sabogal, director for life sciences and pharmaceuticals at SAP.

“Other industries pay close attention to the cost of running IT and the types of business processes they want,” he says. “For example, I’m working with a customer that is the result of two companies that have merged. The customer’s goal is to buy another company at the end of the year. By paying attention to their IT needs, the managers know they have to have technology in place to integrate the very basics of finance, materials, and inventory of these companies, and there is pressure on IT to integrate all of these processes.”

The key for success is to align the business goals with IT, Mr. Sabogal continues.

“Pharmaceutical companies have to evaluate how they are going to grow the business, how they are going to bring new products to market, what their current infrastructure is, and how they plan to move forward with new technology and new solutions for the future,” he says.

There are two things that are vital to a company’s ability to drive productivity and innovate, according to Nicola Hill, director of strategic marketing for pharma and chemical markets at Thomson Scientific.

“First, they need to determine their users’ requirements and partner with vendors that can best meet those requirements,” she says. “Second, they need to assess their internal technical capabilities to determine what resources and technology exist internally. As much as a company may wish to develop its

## Nicola Hill



### It takes a tremendous amount of investment and time to implement a new technology;

so companies need to be sure they are in a position to be able to maintain that going forward.

“Pharmaceutical companies should be able to make decisions based on data instead of relying on qualitative gut feel,” he says. “When decisions are made without a quantitative basis, the result is inconsistent and usually less than optimal. People can make better decisions and more consistent decisions with concrete information.”

Mr. Tyson says most pharmaceutical com-

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panies have a strong technological base at this point; the issue is whether the technology can be better used for more effective operations. “Ultimately, technology decisions really should be driven by business needs and business benefits,” he says. “Technology from our point of view is a means not an end; it is a means to achieving a certain business benefit. In fact, if there is a way for companies to achieve the same business benefit without technology, we almost always recommend the nontechnology route first because technology takes a long time to implement, is relatively costly, and requires a lot of effort.” ♦

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PharmaVOICE welcomes comments about this article. E-mail us at [feedback@pharmavoice.com](mailto:feedback@pharmavoice.com).

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