

IT QUALITY ENHANCEMENT AND PROCESS IMPROVEMENT

Dividing IT functions into its many operational components and deciphering where the components fit in is fundamental to the ultimate goal of business-to-technology alignment. Such alignment can lead to significant business improvements.

Rupert A. Hayles Jr.



Planning and Executing IT Strategy

Planning leads to effective execution of any activity, whether it's IT or any business function. You can gain significant benefits by analyzing what it is you wish to accomplish before moving forward with an effective strategy. Too often, though, management cuts technology costs (often without analysis) first because it's a service function within a corporation.

Planning ensures that technology efforts are business driven, aligned with business strategies, and coordinated across the company as opposed to being done in silos (each business unit acting in a compartmentalized manner). Planning can save money by taking advantage of corporate policies and standards across the enterprise. It can also eliminate the duplication of efforts by using shared services, implementing architectural principles, and using single research groups within a firm. Further benefits of planning include directing investments in technology and people toward improving the bottom line, serving customers better, and outperforming the competition. Planning and executing IT programs requires understanding how IT

functions. According to the Gartner Group an alarming number of today's business professionals lack a basic knowledge of how IT operates in a business because of two major obstacles:

- a lack of understanding IT's value and
- failure to align IT within the business.

The way to overcome these obstacles is to focus on the planning activities needed for successfully executing and implementing technology. In this article I'll show

- how leaders can align IT within the business environment,
- how easy it is to understand technology operations within a business environment, and
- how to capitalize on the use of technology through effective planning.

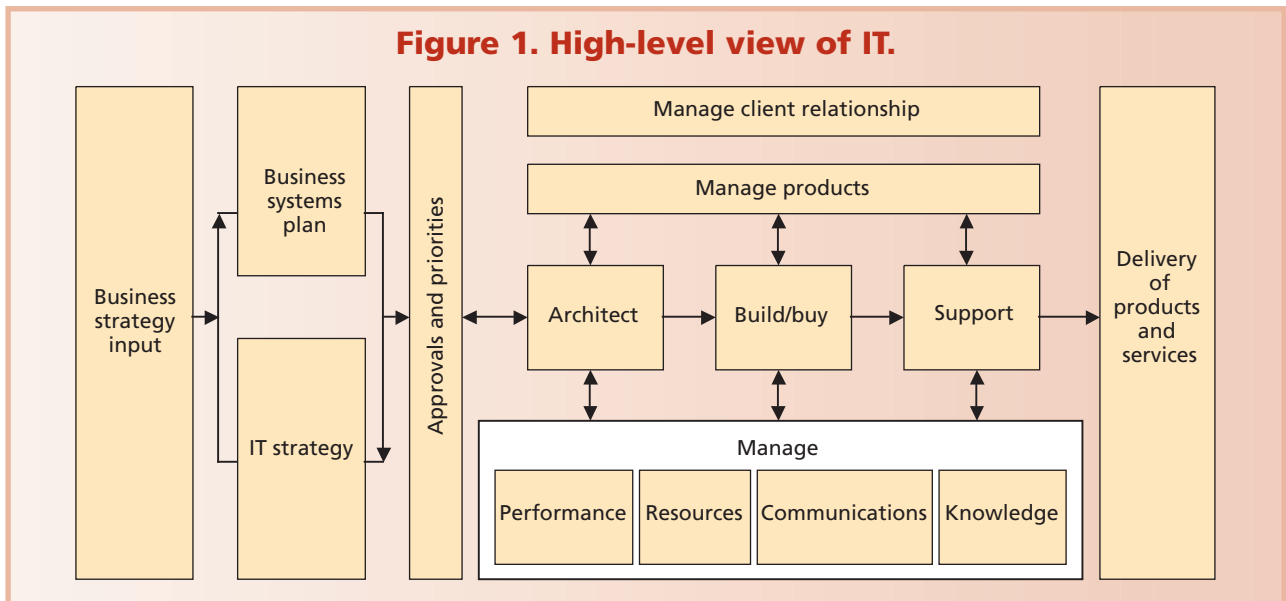
Many books and articles have been written on planning in the operation of IT departments in various businesses. We know that fundamentally, most IT groups operate in basically the same manner. At the highest level, each technology department builds, buys, or supports activities. In the financial services and pharmaceutical industries, for example, swiftness is rather important and using technology to enable and drive the business is paramount. The chemical manufacturing industry, on the other hand, moves a bit slower. As a result, the enterprise, including the IT and business staff, derives, calculates, and audits the business benefits before delivering the product or services.

John C. Henderson and N. Venkatraman analyzed the different facets of aligning IT strategy

Inside

**How Does a Project
Management Office Work?**

Figure 1. High-level view of IT.



and business strategy (“Strategic Alignment: Leveraging Information Technology for Transforming Organizations,” *IBM Systems J.*, vol. 32, no. 1, 1993, pp. 4-16). In one case, the authors cite Baxter Healthcare’s launch of a new business program, ValueLink, whereby it takes over the materials management function of its customers—in this case, hospitals—on a partnership basis. Baxter does this with the help of stringent performance clauses based on its superior information processing capabilities derived from its analytic system/automated purchasing information systems. In another case, Henderson and Venkatraman cite Procter & Gamble and Wal-Mart Stores partnering in a new, integrated IT system to redesign key business processes that help manage product movement through their North American distribution channels. While there are several similar examples of aligning IT strategies with business strategies, this article focuses on the fundamental alignment of business objectives with the IT function’s actual activities.

To understand IT and business alignment in its entirety, it’s important to focus on the high-level view of technology development and execution, as Figure 1 shows. We begin the process by taking a god-like view of the IT world and further subdivide the world into various countries, which in this case I call components. Notice there are 14 components in IT’s overall operating system; we’ll examine each in more detail.

BUSINESS STRATEGY INPUT

In process operation terms, the business should drive IT function activities. Consequently, recent trends indicate that most CIOs and senior IT directors drive home the point that the IT group takes its

lead from the customer it serves, which is the business.

If IT takes its lead from the business, then each IT initiative should be aligned and tied to a business activity. This leads to the overall IT mantra, which I call the alignment link, shown in Figure 2.

The alignment link can help IT professionals focus not just on technology for technology’s sake, but on the use of technology to enhance and further the business. With this type of balanced focus on the business, IT will not only perform its initiatives, but also look to the business to drive what it does.

So, from an operational standpoint, the first and most important aspect of IT development is its reliance on the company’s business strategy. IT should not move forward without a clear, concise understanding of the current environment it supports and the goals, mission, and objectives therein.

My purpose here is not to go into the technical development of the strategy, but to outline how it is done and show why IT professionals should be aware of this process in the overall technology operation.

IT STRATEGY AND BUSINESS SYSTEMS PLAN

With a clear understanding of the business direction, most IT professionals can create an IT strategy, a detailed

Figure 2. Alignment link.

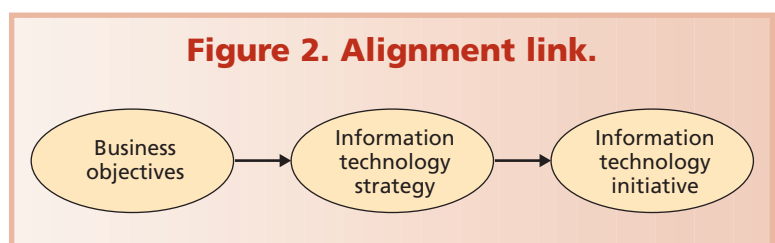
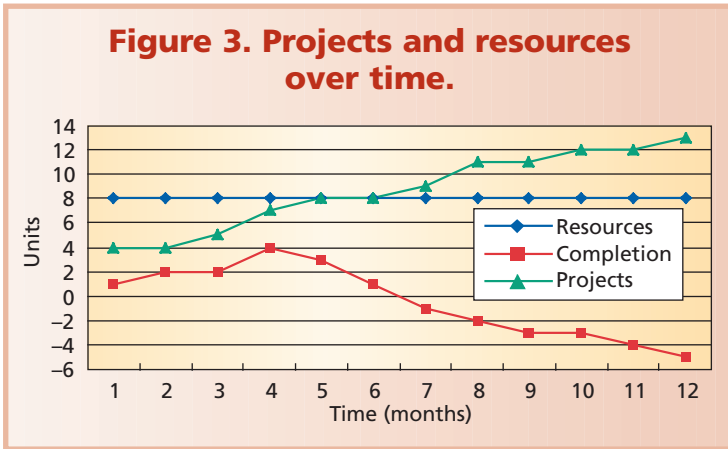


Figure 3. Projects and resources over time.



roadmap from a technology standpoint showing the IT function's direction.

In recent years there has been much discussion on the relevancy of the IT strategy and the business systems plan (BSP). I think the BSP can be used as the sole direction document for the IT function. What I have discovered, however, is that most IT strategy direction documents are so technical that business partners have a hard time understanding them. The BSP, however, is a more business-friendly document that focuses initially on the business's mission, goals, objectives, strategies, and aspirations. The BSP also considers the alignment link, which should drive most IT initiatives (<http://www.practicalstrategieseries.com/portfolio.aspx?p=technology>).

APPROVAL AND PRIORITIES

After analyzing the IT landscape and determining that there is sufficient alignment of the business with the IT function, sign-off ceremonies usually take place. This is where business and IT leaders meet to agree on IT activities for the coming year.

Because of technology's rapidly changing nature, IT planning has a short time frame (usually 1 to 3 years). In the '60s to mid-'70s, IT plans and strategies were generated in a 5- to 7-year time frame. That changed drastically with the introduction of the PC in the early '80s and accelerated with the advent of the Internet.

There were two drivers of this acceleration: the technology itself and the speed at which computers process information. Another, more critical factor, was the acceptance and use of technology-related products and services. The more users wanted, the more technologists were able to deliver. There is no difference between what goes on in society and what goes on in a corporation. The business will always seek more advanced uses of technology, and the IT department must be able to deliver that technology.

IT's activity schedule must be driven by the business, but guided by IT. The IT department must then determine its priorities in scheduling. Without this step, the IT function

will operate in a state of organized chaos—the function knows what it needs to deliver on a monthly basis, but those expectations constantly change based on the needs of lower-level users. When those needs are taken on as problem-solving tasks, it can disrupt the IT portfolio. This can eventually lead to user dissatisfaction over the nondelivery of IT projects, or what I call the customer-service death spiral. As Figure 3 shows, the spiral goes something like this: At the beginning of the year, IT and the business entity agree to a list of IT initiatives. Members of the IT function are taught to be customer-focused. They accept this challenge by accommodating all requests from users. Each time the user requests

a change or an implementation activity, the IT function adds the assignment to the portfolio. Because the IT function operates with limited resources and a fixed time frame to complete projects, each new project disrupts the portfolio and creates a resource drain on the projects already in progress.

Optimally, the IT function would be able to sustain project development with a fixed amount of resources over a fixed time frame. The function would also be able to handle four projects during the year. In this typical example, however, the IT function completes only one or two projects during the year. As time goes by, its completion rate of other projects falls to zero while the function continues to take on additional work. This is a perfect example of the customer-service death spiral. By taking on more projects, the IT function assumes it is being customer friendly, but customer service actually decreases because of nondelivery.

Because of this spiral, all IT functions must have adequate prioritization and approval processes. These processes ensure that when new activities surface on the IT agenda, each project can be properly sequenced in the portfolio and other activities can either be diverted or redirected. The approval and prioritization process should involve both IT and business personnel. This way, the lines of communication are open to both the business and IT functions, and expectations can be met effectively and realistically.

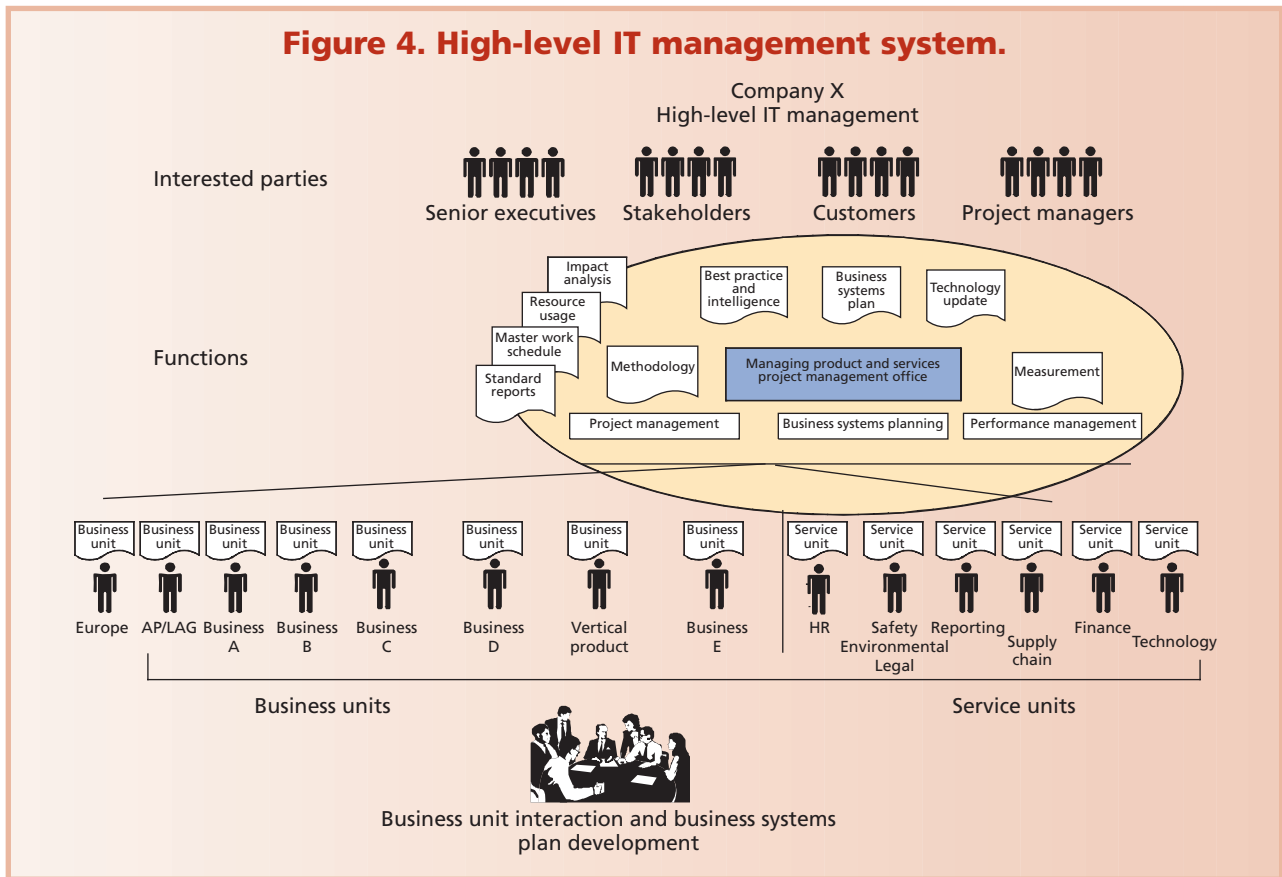
MANAGING THE CLIENT RELATIONSHIP

The business of IT is no different than buying a hamburger from McDonald's. Clearly the emphasis should be on the customer's needs. IT functions cannot afford to be insular. As an entity, the function needs to be outwardly focused. Internal activities related to how IT operates and how things get built and delivered all must be considered, but should never be sacrificed for the customer.

We can categorize customers into five constituents:

- *Immediate customers* have a direct relationship with the IT project team. These are people who work directly

Figure 4. High-level IT management system.



with the IT function and are considered on an equal basis with the business side personnel in ensuring that the work gets accomplished. Say the corporate division of Company X wants to develop a safety and health system. The IT system development team needs the business customers to be intricately involved with the development effort.

- *Second-level customers* are impacted by an activity completed for an immediate customer. For example, after the corporate IT function for Company X delivers the new system, the corporate customer makes sure it works to specification. Let's say the business unit of Company X collects safety and health data. Those business unit users are the safety and health applications' second-level customers.
- *Extended customers* benefit from a system in the long term. At Company X, the corporate entity delivered and used the system, and the business unit gathered data. We might later determine that a state agency that requested the safety and health information from Company X could be the ultimate beneficiary of the work being done. The state agency would be the extended customer.
- *Stakeholders* are clients who might not have direct input into the project, but are impacted by its results. Let's switch to a financial services example involving a proj-

ect where one of the products was a financial report detailing ongoing capital projects within a company. The stakeholders for this project are the CEO, CFO, and president of a division within the company. They have input into the kind of reports being generated, but other than specifying what they would like to see, the stakeholders are completely separated from the IT process.

- *Sponsors* are the people who ultimately sign the check on the project and ensure that the IT function is satisfied with its completion. Some business sponsors are deeply involved in the project and might serve on a steering committee with the senior-level IT person.

The most important point here is that each IT function must perform a customer segmentation analysis so that they know and understand the business constituents' needs. The IT function personnel need to ensure that the customer really matters to them and that they will spare nothing to deliver the goods effectively. Figure 4 shows a high-level management system for the fictitious Company X.

MANAGING PRODUCTS

The IT function delivers two basic outputs: products and services. As a result, the IT function should view itself as a manufacturing entity that creates and delivers "things" to

its customers. Managing that product is one of the most important aspects of the function. Examples of manufactured products include maintenance system reports, various intranet/Internet applications developed internally, a data warehouse for storing corporate information, and document management systems.

Methodologies are the mode, method, and way in which an IT function operates in the creation of its products. If the operating system depends on methodologies for the delivery of the system, then manufacturing these products is relatively easy.

The system development life cycle is the language the IT function uses for the delivery of its products. The methodology varies depending on the type of product being delivered. For example, the methodologies could be for

- *package software*, which includes products bought and delivered to the end user with minimal customization or code changes;
- *custom-developed products* that are developed internally by taking the user specifications and translating them into “computerese” and then delivering an end product;
- *infrastructure activities*, which vary quite a bit, from the purchase of new servers, new platform equipment, and hardware, to the installation of various PBX lines for communication within the corporation; and
- *reengineering activities* that change the fundamental operation of the business. It requires taking a fresh look at the business and determining how a redesign will benefit business operations.

An IT department must also concern itself with the way it services the products after their release. Too often, a product or service is delivered without considering the post-development activities related to the products. For example, it is extremely important that adequate thought, both strategic and tactical, is given during the planning process. These thoughts may include a determination regarding the resources—whether in terms of dollars, personnel, or technology—needed to maintain and retain customer satisfaction. The result of this upfront thinking will result in allocated dollars, not just for the development, but for continuing support, ranging from the broad hierarchy of support levels—whether 24/7 support or fee-for-service support.

As part of managing products, three other components (as shown in Figure 1) play a key role: architecture, build or buy decisions, and support.

IT architecture tells the story—from an IT perspective—of how the initiatives fit into the big-picture goals. In most companies, architecture focuses around three main areas: data, process, and technology.

The decision to build versus buy is critical to any organization. Building any product requires time, resources, and effort that differs from existing products on the shelf. It’s more expensive to build software than to buy it off the shelf. A company will likely decide to build the software if the evaluation indicates that no products are available to meet the organization’s requirements.

Some suggest the best way to support the entire IT function is to create a project management office. The PMO ensures that the company uses the proper methodologies, provides the right tools to address the IT community’s needs, and lets IT operate as a clearinghouse for all information related to its operations management. PMOs can be central to one particular function within the business unit and have a global reach across the entire business. See the “How Does a Project Management Office Work?” sidebar for more information.

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MANAGING PEOPLE

Managing people is the most important aspect of technology management. People have basic expectations of what their workplace should be and what to expect from their employers. The most common expectations include:

- a relaxed and comfortable atmosphere with limited stress (if stressed, they’ll seek effective means to manage accordingly);
- the flexibility to make mistakes and not feel threatened by them;
- free and open communication and the sharing of knowledge;
- an honest day’s work for an honest day’s pay; and
- being judged by work accomplished.

Organizations must have a performance, resources, communications, and knowledge management process in place. Individuals need to know how they are performing, what process determines promotion, how they are being evaluated, how they can improve, and what steps are needed for actualizing this improvement.

Further, an effective communication process in terms of organizational structure and procedure is essential. Does your organization have a matrix management structure or is it flat? A clear understanding of the organizational structure will help to facilitate proper and effective communication, both internal and external to the organization. For example, a new IT technician is best served by understanding the organizational structure—including who the various leaders are, what position they hold, and where they fit in the hierarchy. This information helps the new tech understand how and to whom he or she should communicate.

How Does a Project Management Office Work?

Let's look at how a PMO should function. First, all planning activity should occur within individualized business units when they have been given any kind of enterprise edict from the corporate-level leaders. Second, specific business units should strategize and determine what the varied initiatives will be for the coming year to address the business unit in support of the corporate strategy. Within each business unit, depending on the number of activities that need to be monitored and managed, there should be a PMO to manage resources, costs, and people, and to ensure that projects are on schedule. The PMO is there to redirect and consolidate initiatives and to ensure that business units are performing tasks beneficial to the corporation. Before initiatives can be started, however, the PMO must drive the business unit to develop a comprehensive business systems plan that documents all the activities that should occur within the next one to three years.

Note that all businesses, depending on their initiatives and activities, could have a PMO within the business function and within the IT function. The PMO in the business function is usually called the *program management office*, or corporate PMO.

The difference between the two PMOs is that within the enterprise, the program management office could manage programs that not only have an IT component,

but also finance, human resources, or another functional component. A program could have many projects, hence the differentiation between the program office and the project office.

The corporate PMO will drive the business PMO to develop its business systems plan. The corporate PMO not only manages the business systems plan process, but also sets the standard for the appropriate methodologies that should be used throughout the company. It also manages the performance management (measurement) process for the company. The corporate PMO summarizes all the information from the different businesses of the corporation and presents a comprehensive picture of what the corporation—not the individual businesses—will be doing for the upcoming one to three years.

Numerous individuals will be interested in the corporate PMO's activities. Project managers can get rolled-up information—from a resource and cost effective perspective—to help them manage their projects more effectively. In addition, senior executives can get consolidated information from the entire enterprise in one singular location. Plus, stakeholders—those that might be affected by the activities of individualized projects—can inquire about some of a project's fundamentals. Finally, customers can get up-to-date information on the status of their projects.

This process is not limited to the IT technician, but extends to every person within the organization. Understanding the organization helps to ensure that the communication process is adjusted for the intended audience.

The resource and knowledge structures are interdependent. The resources needs of the organization and the need to keep track of knowledge are essential to the growth and continued development of the entity.

Those responsible for managing people must be able to form bonds with them. A clear focus in the workplace on relationships will not only make life better, but will improve the work environment. Author Margaret J. Wheatley puts it this way in her book, *Leadership and the New Science: Discovering Order in a Chaotic World* (Berrett-Koehler, 2006): "The learning for all of us seems clear. If power is the capacity generated by our relationships, then we need to be attending to the quality of those relationships. We would do well to ponder the realization that love is the most potent source of power." Managers must also be able to lead the people to better themselves, and not just the organization in which they operate. On this aspect of leadership and how one performs as a leader, Larry Bossidy of Allied Signal once said,

The answer is, how are the people you lead doing? Do they learn? Do they visit customers? Do they manage conflict? Do they initiate change? Are they growing and getting promoted? You won't remember when you retire what you did the first quarter of 1994. What you will remember is how many people you helped have a better career because of your interest and your dedication to their development. When confused as to how you're doing as a leader, find out how the people you lead are doing. (Eli Cohen and Noel Tichy, "How Leaders Develop Leaders," *Training and Development*, May 1997, pp.1-21).

Clearly, managing people requires skill and finesse to keep employees motivated to do their best work. Organizations must be committed to supporting their talent resources so that staff can continually innovate, leading to better products and services for internal as well as external customers.

PRODUCT AND SERVICE DELIVERY

The manner in which products and services are delivered to the customer has a direct correlation to the system methodology used. The system methodology I mentioned

IT QUALITY ENHANCEMENT AND PROCESS IMPROVEMENT

previously details the task that IT personnel should perform—from the project's analysis phase throughout the implementation period.

The implementation phase signals the completion of the project. It is a phase in which the IT team finishes the system, converts data, tests users, and turns the system on for actual usage with live data. Throughout this phase, the IT group needs to regularly communicate with its customers and show them how to use the delivered product.

Most projects fail at the end because the builders of the system forget about effective user training, user documentation, and post-audit work. An example of post-audit work could be a review of deliverables that were promised at the beginning of the project. Project managers need to ensure that what was promised was actually delivered, whether it is in the measure of actual return on investment or perhaps in headcount reduction because of the new system.

The benefits generated from effective technology planning will, in essence, drive the business to exceptional gains both from a cost and revenue perspec-

tive. Understanding the complete landscape of technology and business is essential for any business manager or technologist. Paramount to that, however, is an appreciation of the value-added gains precipitated by first thinking and planning through the process before actually executing. With the rapid use and speed of technology constantly increasing, proper strategic planning activities in the future are essential, leading to an exemplary and successful IT/business relationship and safeguarding many IT careers. ■

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