Bridging the Gap between Technology and the Organization

10 Non-Negotiable Rules for Success

A Kaufman Global White Paper

Kaufman Global
Tele: +1 317 818 2430
www.kaufmanglobal.com

KaufmanGlobal®
ACCELERATING PERFORMANCE

Introduction

Most business leaders and IT executives / managers have been there. Although the experience is always costly and painful, many are forced to return time and time again. These unpleasant stopovers occur at the many crossroads of the infamous *Implementation Disaster Avenue*. Among the many hazardous intersections that await technology projects and their managers are:

- "I Didn't Realize Each Change Would Cost *That* Much" Massive Toll Road
- "It's Not Working the Way You Promised" Delayed Bonus Memorial Highway
- "Why Am I Finding Out About These Requirements Now?" Street of Sorrows
- "Why Are People Still Using the Old System?" Profit Bypass
- "*How Many* Months Late Will It Be?" Expressway to Nowhere
- "Why Am I Only Finding Out About This Additional Cost Now?" Bull-evard
- "Why Didn't You Tell Us That You Wanted That Earlier?" Mobius Loop
- "How Could It Be *That Much* Over Budget?" Exitless Roundabout
- "Operations Says They Can't Use It the Way It Is" Dead End
- "We Are Losing Customers Because of Problems With It" Lane of Losses

When hapless technology implementation projects are wrecked in these intersections, the impacts are always damaging and sometimes catastrophic. The delays and cost overruns are only the tip of a mammoth iceberg of negative impact. The most disruptive consequences are created by damaged customer goodwill, disheartened employees and lost business. Despite the suffering, it often seems as if such carnage is an unfortunate fact-of-business-life.

The problem, in terms of the traffic metaphor, is that every involved party sends multitudes of vehicles simultaneously across every intersection of *Implementation Disaster Avenue*. These vehicles are agendas, technical requirements, technology knowledge, operational demands and so on. Every vehicle is overloaded and each ignores traffic signals and speed limits. Each races to beat the others to the schedule deadline with its personal wish list cargo of requirements, bells and whistles. The result is unspeakable carnage of profits. Invariably, a few of the lost vehicles are those that are carrying requirements or functions that everybody needs. The impacts caused by the "lost cargo" aren't discovered until system start up. While such events are unfortunately commonplace, they need *not* be an inevitable consequence of technology implementation.

As unlikely as it may seem, technology can be implemented smoothly, efficiently, on-schedule and within budget. Technology can be implemented to serve the balanced needs of all users and customers, both internal and external to the organization. Technology can be implemented to do what it was supposed to do with only the smallest surprises and bumps in the road. Technology implementations can be sources of increased teamwork, cross-functional understanding and the development of a collaborative organization culture. Such implementations, while rare triumphs in most organizations, can become commonplace. Kaufman Global calls the method that makes this possible **Bridging the Gap between Technology and the Organization (BTG)**.

What Is the Gap?

The gap is the location where operations personnel and their processes, requirements, demands, hopes, fears and needs collide, bump, rub, grind, abrade and crash against requirements, operational constraints, the promises and complexities of technology and the expectations of the people who design and deliver it. This gap is where the action is; it is where critical decisions are made and the success or failure of every technology implementation is determined. The gap is the place where Enterprise Information System (EIS) implementations go south. Almost no technology implementations fail as a result of technology limits, resource shortfalls or faulty logic. The meltdowns occur when conflict and disarray within the gap are allowed to compromise the best intentions and knowledge of everyone and everything involved. If the processes that occur in this gap are not carefully structured, coached and led, disaster is a certainty.

Figure 1 displays a conceptual view of the gap. It offers several insights as to why traditionally managed technology implementations run into problems. There are five principle elements in **Figure 1**. They are:

1. Current State Systems – The software, hardware and systems prior to the technology implementation.
2. IT Experts – Those responsible for providing the technical expertise during the development, implementation and maintenance of the organization's information technology.
3. The Organization – The rest of the organization and the way work is done before the implementation has begun (this includes people, processes, culture, etc.).
4. Future Technology and the Organization – The "after" implementation situation in which the implemented technology is successfully operating as planned to increase performance and profits.
5. The Gap – The distance (and the processes that help traverse it) between the current state and the future state.

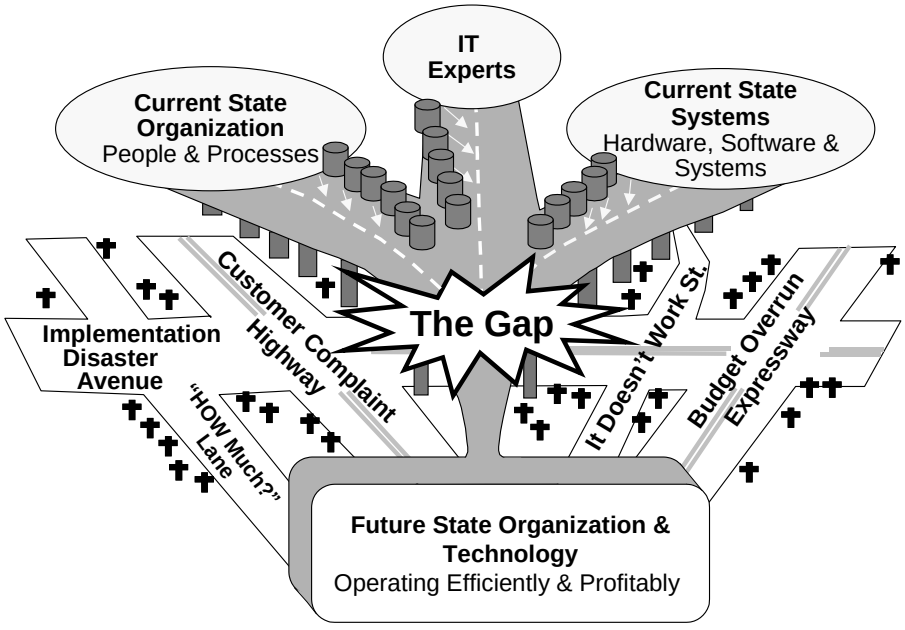

***Figure 1** — Conceptual representation of the "Bridging the Gap" Challenge*

The critical gap is not any of the individual horizontal "distances" between technology, IT experts and / or the rest of the organization. There will always be disparities between the interests and requirements of applied technology, the people who utilize the technology on a day-to-day basis (including customers), and the operational requirements of the organization. It is the diversity between the various parties that, if properly managed, leads to innovative and profitable solutions. The gap is something more profound, yet much more hazardous, than differences in skills and perspectives.

As **Figure 1** displays, BTG keeps technology / IT implementations high above *Implementation Disaster Avenue*. Yet, if a project leadership team eschews the many crossroads of *Implementation Disaster Avenue* in favor of the BTG span, many tough challenges remain to be overcome. The IT experts, the organization and the technology itself would all prefer, in the best of all possible worlds, to transit every performance requirement and functional "bell and whistle" they want across the bridge. Every party fights to get what it wants through the gap before and / or instead of others.

In order to accommodate such frenzied hordes, the bridge in **Figure 1** would have to be eleven lanes wide. A project with this kind of "bandwidth" would cost ten times more than the most shameful overrun in IT history. And it would fail anyway, because none of the parties would be required to jostle up against the others, bargain, compromise, learn from one another, enrich their own perspectives from the interactions and develop more elegant and cost-effective solutions for the entire enterprise. **Figure 1** shows that the bridge is quite narrow. This restricted bandwidth, seen by traditional implementation managers as a limitation, must be viewed as a vital enabler that keeps costs in line and drives the interactions that produce the most effective implementations.

Yet, if the traffic patterns in the transition from many lanes to one are not properly led and managed, the journey over the bridge will be just as catastrophic as the traditional demolition derby on *Implementation Disaster Avenue*. A traditional implementation management approach to controlling such traffic amounts to nothing more than placing a few traffic barrels, installing some merge signs, waving the green flag and then running for cover and hoping for the best. This doesn't work down below on *Implementation Disaster Avenue,* and it won't work high up in the gap. Success demands that management construct a bridge and lead a process that permits the efficient movement of only the most critical, cross-loaded vehicles at the highest possible, safe speed across the gap. BTG is an IT implementation team's bridge design, cargo selection methodology and traffic management system.

Basic IT Implementation "Rules of the Road"

BTG provides a methodological "bridge" that carries technology implementation efforts over the hazards of *Implementation Disaster Avenue*. This paper examines the ten immutable BTG "rules" that make it possible for technological solutions to optimally contribute to organizational excellence and profits. These rules and the explanations that accompany them are the distillation of "best practices" in technology implementation across all industries. They represent basic, non-negotiable truths about project management, technology change, social dynamics, human behavior and leadership. To the extent that a given implementation in any field is successful, those who are responsible are tapping into these basic truths even if they don't realize it. BTG provides a road map for IT implementation success that enables even a novice driver to safely lead his / her project over *Implementation Disaster Avenue*.

Rule 1: Technology Does Not Solve Problems; People and Processes Do

Problem: In our high-tech world, it is tempting and convenient to view technology as a "silver bullet" that can quickly solve most problems. Marketing campaigns and the media actively encourage this view. Regrettably, things are rarely so easy, even with "straightforward" technology such as personal computers. A recent U.S. television commercial illustrated the insidious nature of this perspective. A customer asks a sales person, "How can I get more organized?" The sales person grabs a personal digital assistant (PDA) from a nearby shelf, shows it to the customer and intones, "The new generation of hand-held's…(fadeout)." The implied message is that the PDA will instantly "organize" the customer. If an individual is not organized with paper and pencil, he / she is not going to miraculously become organized by purchasing a device that requires just as much data entry discipline with even more careful input requirements, battery replacement (or recharging), periodic merges with his / her desktop and so on.

Of course, the sales person cannot deal with the real issue by advising; "Perhaps you ought to get some help in organizing your day-to-day business life and in dealing with your lack of discipline." Not compelled or inclined to deal with the real issue, this customer (and tens of thousands of others) have spent $150 to $500, continue to be disorganized and are probably even more frustrated. Organizations do the same thing every day but spend millions and compromise their future effectiveness as well by throwing technology at poorly defined issues. IT implementation teams must be compelled to identify the problems clearly before they install solutions.

The BTG Answer: The BTG approach provides a set of reliable, repeatable processes for forcing the correct type of interactions between all parties and for managing the traffic patterns through the gap. **Figure 2** presents a portion of the BTG project management structure. The critical central element of the BTG is the Executive Steering Committee (ESC). The ESC is drawn from the executives and high-level managers who are responsible for the success of the business unit in which the implementation is taking place. In some cases, all of the existing high-level management team will be included in the ESC. The ESC guides, prioritizes, makes decisions and directs the project. It approves the charters of the integration team(s) and the work stream teams. The ESC meets once a week to review each team's progress and status in a highly structured manner. The ESC does not meddle or propose technical solutions (the people with these skills should be on the individual work stream teams). The ESC is responsible for allocating resources, approving charters, making "go / no-go" decisions and choosing options when the integration team(s) cannot.

Each ESC member individually "champions" one or more integration or work stream teams. In smaller projects, some ESC members will not be champions. On large, complex projects, some ESC members will champion more than one team. The role of a champion is to coach the team, monitor its progress, improve the project management skills of team members, break down barriers and work behind the scenes with other ESC members to resolve conflicts between the teams.

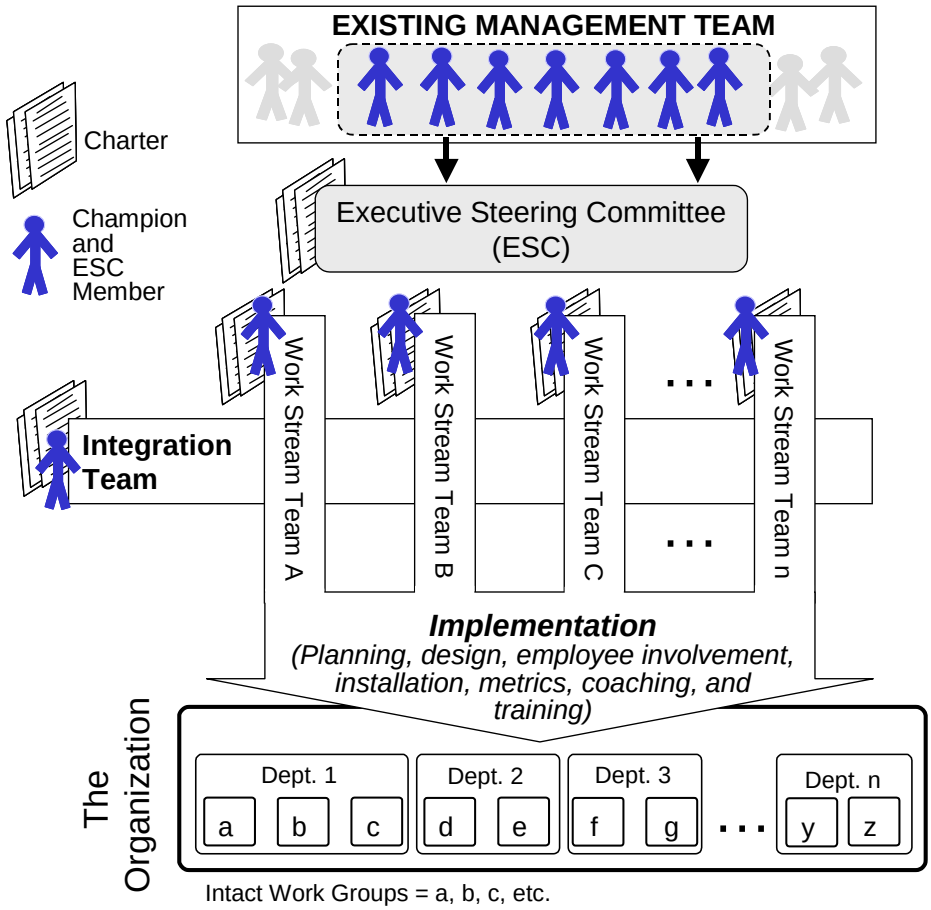

Figure 2 *— The BTG Project Management Structure*

The charters are formal, written agreements between the ESC and each of the teams. The charters specify activities, deliverables, schedules and roles / responsibilities. The work stream teams are cross-functional and are composed of organization members who are assigned to the teams for 10 to 100 percent of their time. It is best if the work stream teams contain no managers; work stream teams are most effective when hands-on personnel are doing the work. The integration team is comprised of personnel who can make difficult judgment calls on a daily basis. The integration team is responsible for making decisions in the case of the numerous value judgments and cost-benefit trade-offs that arise in every project. The only people that can make these decisions are those that are functionally responsible for financial and operational success. For this reason, the integration team is typically comprised of cross-functional managers and supervisors.

The BTG structure shown in **Figure 2** compels formally appointed appropriately cross-functional teams to explore the processes and issues they are attempting to impact *before* they change anything and / or select or install IT solutions. Working with a list of executive approved objectives and priorities (the charters), as well as weekly coaching / review from the ESC and daily coaching from the champion, a project team cannot go too far astray for very long.

Rule 2: Make as Many Mistakes as Possible Early in the Process

The Problem: Most traditional IT implementations start out smoothly. For the first few months, activities proceed on schedule amidst an almost tranquil aura of mastery and confidence. Then, like clockwork, problems begin to appear. At first, they are minor and almost beneath notice. As the weeks roll by, the small problems multiply and a few become serious issues. Day-to-day project activities evolve into continuous emergency responses to unexpected catastrophes that require complicated, ad hoc fixes. As deadlines are missed and budgets are overrun, management mobilizes more and more resources in a desperate attempt to save the day. Such heroic efforts eventually wrestle most IT implementations to a draw, but the cost and damage to the organization is massive.

Why is this situation so common? Why does it happen time and time again in the same organizations? Strangely enough, a large part of the problem is *making too few mistakes* early in the implementation. **Figure 3** illustrates the mechanics of this counter-intuitive assessment by displaying the relationships between the involvement of various groups of personnel, design changes, and the relative cost of changes during an IT implementation.

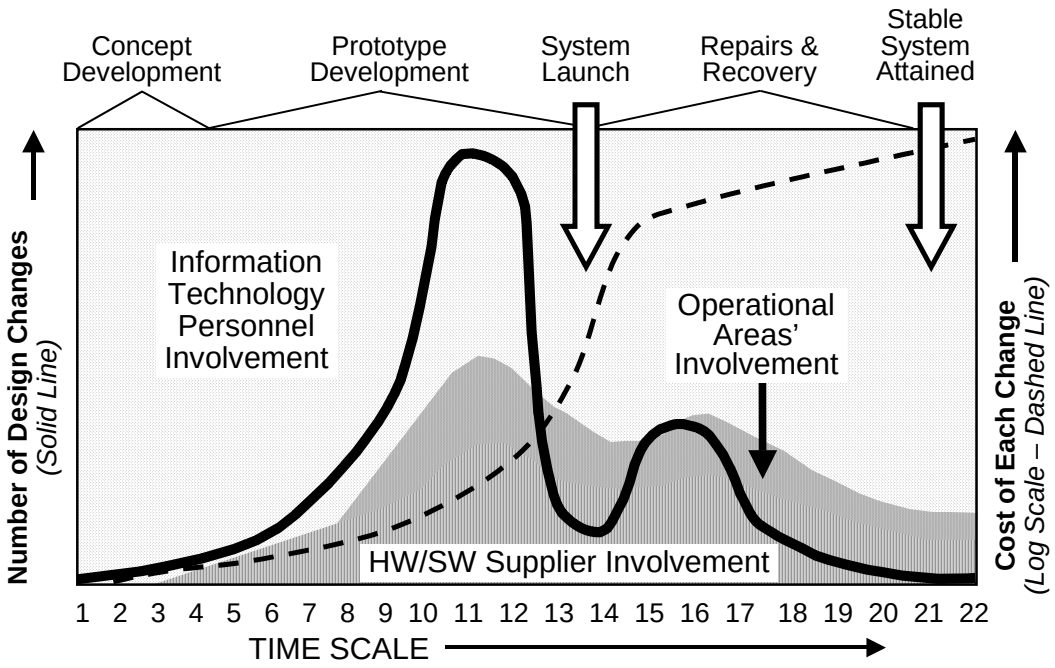

***Figure 3** — The Traditional Pattern of IT Implementation Design Changes, Involvement, Relative Times and Costs*

This composite "hypothetical" project is one that lasts about 22 months. The thick black line tracks the typical number of significant design changes (left axis) during an IT implementation. As you can see from **Figure 3**, there are almost no significant changes during the early concept phase of a traditionally managed project. The reason for this can be easily deduced from the distribution of total project hours that are consumed by various functional areas. The involvement of different types of personnel during the implementation is illustrated by the relative proportion of different shaded areas at any point on the timeline.

The height of **Figure 3** represents 100 percent of project labor hours. The involvement of IT personnel is shown as the lightly speckled area. As the figure shows, IT personnel account for almost 100 percent of

project effort during the concept design. The vertically striped area represents the participation of hardware and software (HW / SW) suppliers. As shown, these personnel only begin to be involved in month three and participate significantly only when problems arise during the prototype (or beta-test) period during month's seven to twelve. The darker shaded area shows the participation of the operational areas that are / will be the users (customers) of the new or improved system. Their participation only reaches about 15 percent of total project hours as the prototype test phase runs into problems.

As you can see from **Figure 3**, the concept and prototype design phases of most traditional IT implementations are almost entirely the province of IT personnel. They will often have a few cursory performance requirements from the users, but IT "does" most of the design in relative isolation. As a consequence, there are few significant changes during the first six months; every child is beautiful to its own parents. As the concept begins to gel, HW / SW suppliers are brought in to supply the means to implement it. The suppliers point out problems that will require more of their services and a small flow of changes begins. As the implementation proceeds towards a prototype design and / or beta test, operational areas become involved. When they examine the performance profile of the proposed system, they point out serious problems. The trickle of changes becomes a raging torrent.

The dashed line (tracked on the right side axis) in **Figure 3** displays the cost of a change at various points of an IT implementation. Note that the index of cost operates on a log scale; that is, costs rise 10 times faster than the slope of the dashed line. As the figure shows, the cost of changes during the prototype phase is much higher than during the concept phase. Changes made after system launch are tens to hundreds of times more costly than those made earlier in the implementation.

A period of false confidence and satisfaction occurs in traditional IT implementations directly prior to full system launch (month 13-14). At that point, most of the problems encountered in the beta test have been resolved (as much as they can be). The false tranquility is shattered when the system is brought on-line and must be used in real time by users who have not been intimately involved in the design. They discover all sorts of problems. Each one is extremely disruptive to operations and very expensive to resolve. HW / SW suppliers rush to provide additional patches, and IT personnel scramble to add modules. The system that was originally an elegant, sleek concept becomes a horrible disfigured kludge of jerry-rigged components that functions only through brute force and with heavy support. The implementation misses its schedule and overruns its budget.

The BTG Answer: Strange as it may seem, the BTG solution is to encourage and generate *as many mistakes as possible early in the process.* The "catch" is that these early mistakes must be good, integrated mistakes. **Figure 4** displays this ideal pattern. For comparison purposes, the line from **Figure 3** indicating number of changes is shown in gray (the project launch and stable system arrows from **Figure 3** are shown in gray as well). Note that the largest proportion of changes occurs during the concept phase. As the solid black line shows, the BTG approach generates very few changes in the "high-rent district."

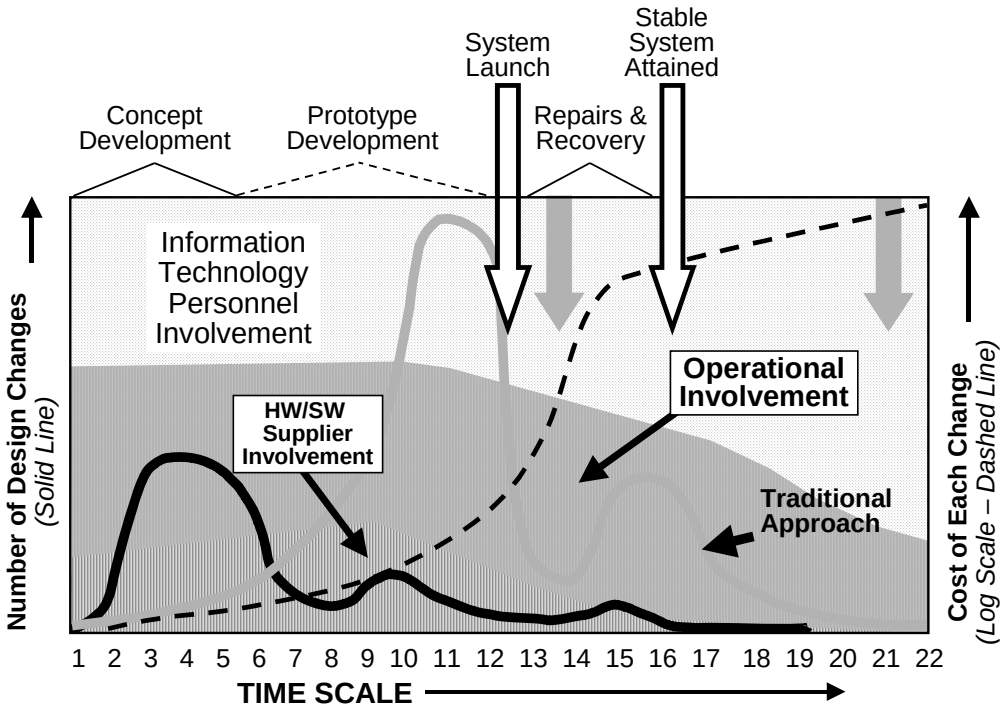

Figure 4 *— The Bridging the Gap Pattern of IT Implementation Design Changes, Involvement, and Costs*

These changes are driven by the brainstorming, experimentation and concept testing (and yes, intense conflicts) that occur when IT personnel, operations staff and HW / SW suppliers are involved in tightly focused teams that are formed on day one. 40 percent of project hours are devoted to operations personnel involvement and approximately 15 percent of project hours are devoted to HW / SW suppliers right from the start. No decisions are made by isolated functions and no "sounds good but will never work" concepts have a chance of surviving more than a few days. The integration team or the ESC deals with issues that are not resolved by the work stream teams.

The overwhelming proportion of changes is made in the concept development phase. There is a small flurry of additional changes during prototype development in months eight through eleven (even the best-run project misses some issues). A relatively small number of changes are required after system launch during months 14-16.

Even greater benefits vis-à-vis schedule are realized by the time a stable system is established. As you can see from the two curves, a BTG implementation achieves a stable system a full five months ahead of the traditionally run project (over a period of 22 months, this is 22 percent faster). This much quicker arrival at a stable system is due entirely to the extensive cross-functional work done early in the concept and development phases. No amount of effort downstream can rescue an implementation that has short-changed itself in the earlier phases. Even if the problems are overcome, the basic system design will be more complicated, more fragile and more support-intensive than a system that benefits from extensive up-front discussion, analysis, conflict and brainstorming. You can either encourage chaos (the good kind) during the early phases or you will experience much more of the bad, expensive type of chaos during the remainder of the implementation.

Rule 3: There Must Be an Integrated Strategy and Vision

The Problem: Ask almost any executive, "Does your corporation have a formal business vision and strategy in place?" and you will likely hear, "Yes." If the vision was recently developed, the executive will then proceed to inundate the questioner with laminated wallet cards, framed plaques and perhaps coffee cups and baseball caps emblazoned with portions of the organization's vision and strategy. The follow-up question, "Does your corporation have a formal IT vision and strategy?" generates responses that range from, "What's that?" to "I don't know" to "Sure, we must…but I don't know what it is." Typically, only the executive responsible for IT knows and understands the IT vision. If either IT or non-IT executives are asked "Is there any relationship between the business strategy and vision and the IT vision?" they will invariably laugh, stare perplexedly and / or make a cynical observation about the inexorable, often frustrating nature of the universe.

The absence of integrated visions and strategies practically guarantees that any technology implementation will quickly deteriorate into a pile-up on *Implementation Disaster Avenue* rather than a smoothly organized convoy that quickly crosses above the gap to increased profits. Twenty years ago, when IT was simply a faster way to do things, the disparity between business issues and technology implementation problems was not a potential killer issue. It is now.

The very fabric of modern business is progressively becoming IT based. The transfer and analysis of and response to information concerning schedules, parts, services, products, orders, plans, payments and customer service are inextricably woven through every business and IT process (increasingly these are one and the same) at the molecular level. Almost every transaction and every employee's action impacts and is impacted by, the IT environment. IT strategy must be an integral, seamless part of a business strategy. If it is not, profits and market opportunities will be squandered and competitors will surge ahead.

The traditional approach to business planning / strategy and IT strategy / implementation is shown in **Figure 5**. Here, the thinner brackets represent less common but (as you might expect) more effective "spans" of activities / data that are included in either strategic planning (left side) or IT planning (right side). As the left side of **Figure 5** shows, it is rare (the thinnest brackets) for strategic planning to cover the gamut of everything from basic industry inputs and executive requirements to strategy, business plans and technology issues. The thickest bracket on the left hand side of **Figure 5** demonstrates a traditional strategic planning process involving only marginal development / exploration of executive requirements. In this case, executives generate performance expectations for the coming planning period, often with little or no consideration of the industry trends and pressures in operations technology, customer service, IT and / or productivity improvement (e.g., "Lean") that are driving the need for improved performance. In short, executives do not explore the complex terrain they face and the trade-offs between alternative courses of action.

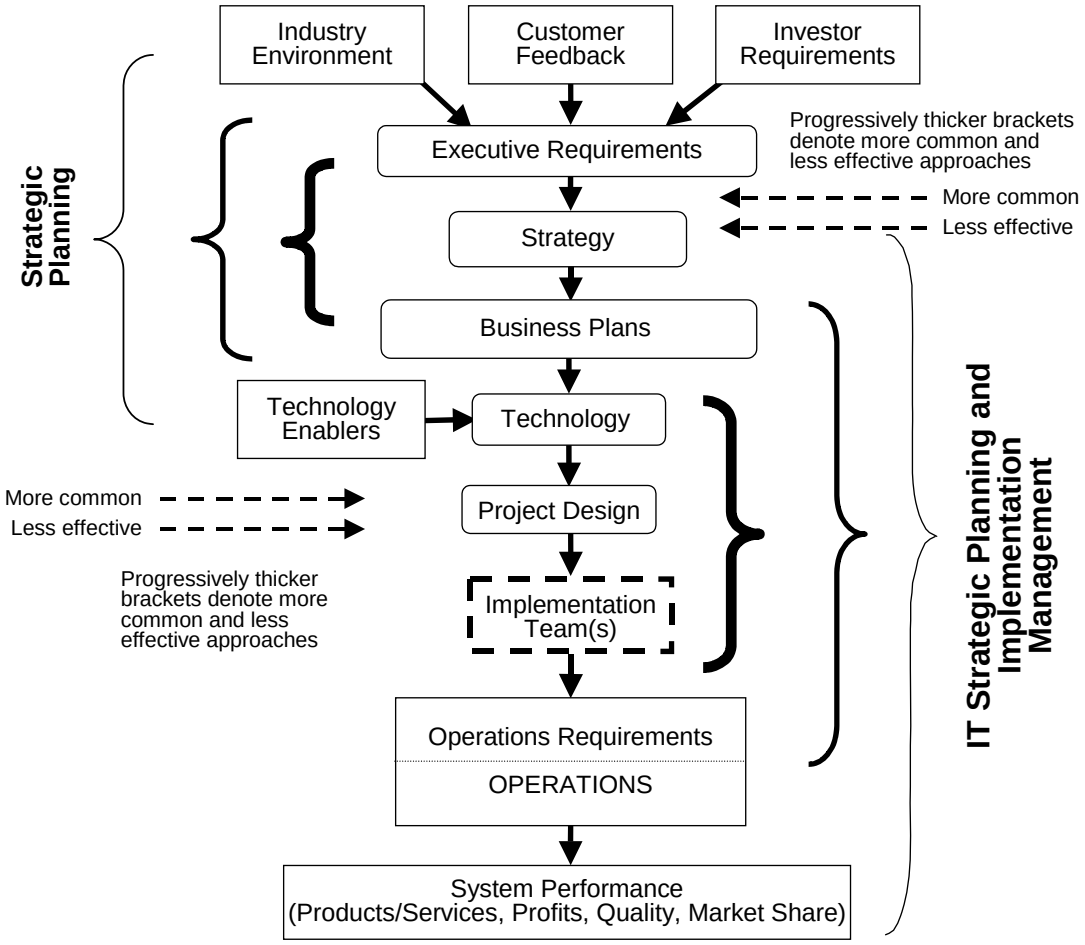

Figure 5 *— The Traditional Planning, IT and Implementation Approach*

At the same time, the majority of organizations operate similarly impoverished IT planning and implementation approaches. Most organizations, whose style is illustrated by the thickest brackets on the right side of **Figure 5**, include only technology, project design and implementation issues in their IT plans. Once the business plan is generated, IT personnel are either given their marching orders for implementation explicitly or they develop their own technology solutions based upon what they can "noodle" from the business plan.

As the above discussions illustrate, the gap appears yet again at the strategy and business plan level. In pre-BTG organizations, there is little or no conceptual overlap between strategic planning and IT planning. The business plan will have all the right words in it but there will have been little discussion behind the words about how to best use technology as a strategic weapon.

In these organizations, the bulk of the strategic planning and IT implementation efforts is devoted to cascading corporate objectives (results) into detailed performance objectives for operating departments or units. In short, there is little planning but much directing. These organizations are basically leaderless at the corporate level in terms of what trades-offs to make; operating units are free to employ any legal method at their disposal to attain objectives. This approach almost completely negates the inherent advantages of size, the potential of technology and the brief windows of opportunity that markets provide.

The BTG Answer: A world-class IT strategy plan and implementation model demands the prior establishment and operation of an integrated business / IT plan. As you might expect, few organizations start a project with such a plan in place. At the same time, organizations cannot put their technology implementation projects on hold until the corporate business and IT visions and strategies are fully merged. Business success demands action. BTG allows for the development of an integrated business and IT strategy on a project-to-project basis. In fact, many organizations find that their initial BTG IT implementation is the impetus for the first steps in the development of an integrated plan. This process, as it is repeated on successive IT implementation efforts, begins to provide the foundation for the evolution of a merged corporate business / IT vision and strategy to develop down the road.

Figure 6 displays a high level overview of the BTG approach to a single IT implementation. In the ideal world, industry conditions, customer expectations, technology enablers and investor demands would all be explicitly understood and balanced at the start of a project. They would have been distilled into a set of executive requirements that had already provided the framework for an integrated IT and business strategy. The project would then be implemented to support such a strategy. This is hardly ever done well before the first BTG implementation. The fallback position of BTG is to force an approximation of these pre-conditions through extensive executive participation via the Executive Steering Committee (ESC) and its champions. While not the optimum route, the executives will do a great deal of "integrating" as they coach, guide and direct the teams.

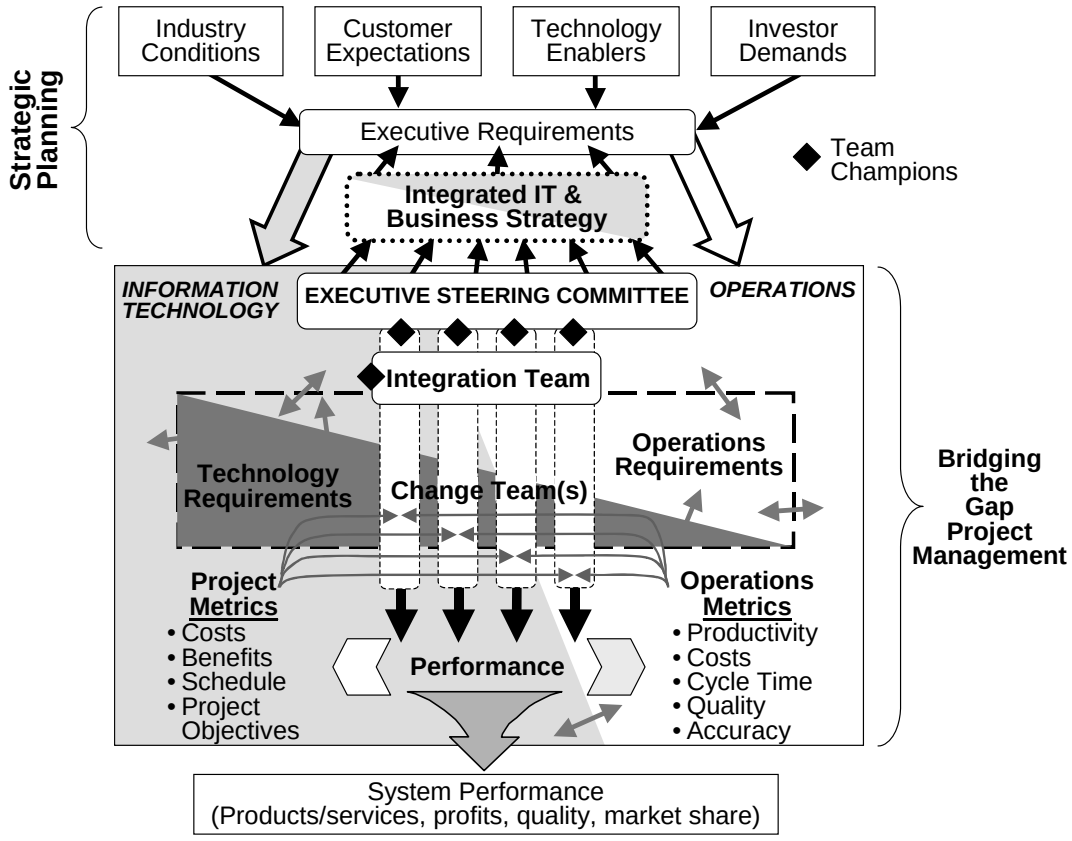

***Figure 6** — The BTG Approach of Forcing Business-IT Alignment in Project Implementation*

A key role of the ESC in the first days of an implementation is to identify the key technology-operations issues of the project and the impact they will (may) have on long-term business issues. For example, let's suppose that one division of a multi-divisional organization proposes a project to design a multi-site customer service center. The center would allow customers of the division to have a single point of contact to purchase a system that uses components from many different sites. This saves the customer time and money and enables the seller to provide a value-added service and capture a larger market share (as well as charge a bit more for the convenience perhaps). Yet, if this strategy makes sense, why does it make sense only for one division? The executives reviewing a go / no-go decision must view such a proposal as one link in a future chain of an integrated IT / business strategy. Viewed in this way, many of the implementation tactics and scalabilities (as well as the scope of the initial project) might change dramatically.

This is the principle reason why a broadly based ESC is absolutely essential to the success of an IT implementation. The ESC members will guide the project but they will do something perhaps even more critical; they will begin to parse, a project at a time, the basic framework for an integrated IT and business strategy that they all understand intimately. The only way to forge this sword of competitive success is in the crucible of ESC project management.

An element of **Figure 6** that facilitates the development of an integrated approach in a much more subtle manner is the emphasis on metrics from day one. The project metrics of cost, schedule and the like are obvious candidates for weekly status reviews by the ESC. What is more subtle but profoundly insightful is an equal focus on the operational metrics that the implementation will affect. That is, project metrics are critical but the projected impact on operations, as assessed by hands-on operations employees using their own metrics, is even more critical. Each deviation from desired or necessary states is a small but crucial lesson for everyone in how IT and business strategy interacts.

Rule 4: Only the People Who Do the Work (Operate the Processes) Understand What They Need *and* Only Technology People Really Understand What the Technology Can Do

The Problem: It is a universal constant of the human condition that casual observers of processes almost always believe that they have the answers to problems that others have pondered for years. One time in ten thousand, a naïve observer might come up with a startling insight that process experts have missed. While this is an appealing notion often used in movies, it rarely occurs. Most of the time, casual input about complex issues consists of half-baked over-generalizations (e.g., "To solve your budget problem, you must manage your costs more carefully!"). This sort of "help" is worse than useless in the midst of complex projects because the real problem solvers must waste time responding to them.

Only the people who do the work understand what they need to do their jobs. Any job, no matter how straightforward, requires skill and knowledge that are not apparent to a passing "expert." Unless a casual observer learns to do the job as well as actual hands-on process workers in real world conditions *and then* does the job for a year or so, he / she does not understand it fully. Such a time investment, made by specialized technical personnel, would virtually halt all system development in organizations with more than one employee. While the time cannot be invested, the same insights and knowledge must be garnered and developed through other means.

At the same time, only IT professionals understand the full power and capabilities of the technology that is available (and changing almost daily which is why the very early participation of hardware / software suppliers is essential). Without the unique perspectives of IT personnel and suppliers, systems solutions

would often be only pale shadows of what could be done with current technology. Yet, the unique and often passionate fervor of "technologists" cannot be allowed to hold undue sway; the most advanced, state-of-the-art technology is often not required, too expensive, off-target, too complex and frequently doesn't provide for user requirements. Technology is often the answer but not to every question.

The BTG Answer: The solution is to toss the unique insights and requirements of IT professionals, users, support areas and time / budget constraints into the project pot right from day one. We saw this in **Figure 4**. This is the only way to create a solid design concept and a robust, flexible system. To achieve this, the project must have strong leadership and an enforced structure of daily activities throughout the entire IT implementation. The BTG approach compels IT personnel, users and support staff to understand completely others' evolving viewpoints, success criteria and performance requirements. This is accomplished by compelling all parties to work together in a manner that focuses on the organization's performance requirements (rather than individual functional agendas) throughout the entire project. As **Figure 4** illustrates, all parties are intensively involved right from the beginning.

This collaboration does not occur easily or naturally. Left to exhortations to "work together" and "be a team," almost every well-intentioned implementation soon deteriorates into a traditional, **Figure 3** situation. The collaboration required by the BTG approach demands that leadership be actively and strongly involved via the ESC from day one to the end of the project.

At first, everyone involved is uncomfortable; change is always difficult. This is why, without strong day-to-day, facilitation and coaching in real time, the BTG approach is almost impossible for most organizations to implement successfully *on their own* the first time they use it. When conflict, suspicion and resentment naturally occur, traditional reflexes take over and project personnel begin to avoid dealing with each other and key issues. They hope that time will "break the will" of the other side and they will then get their way. When this happens, the project becomes locked into a poor concept and is doomed to the traditional scenario shown in **Figure 3**. With BTG facilitated by outside coaches from the beginning, all parties quickly discover that there is less stress, more focused project objectives and criteria and infinitely greater feelings of achievement.

Rule 5: Seamless, Integrated Solutions Are Expensive and Risky to Develop In-House

The Problem: EIS (Enterprise Information Systems) such as BAAN, PeopleSoft, SAP, JDEdwards and others are one-stop shopping in the form of integrated systems. The successes and wide acceptance of these systems (once implementations are complete) set a bad example for in-house IT development efforts. It is important to realize that the current structure of every large, integrated solution that exists today was not developed without incredible pain, expense and applied learning over many, many years in hundreds if not thousands of implementations. In effect, the big successful systems available now are the product of millions of disastrous trips on and over *Implementation Disaster Avenue*. After an infinite number of fender benders, thousands of vehicles over the edge and hundreds of multi-vehicle pile-ups, a successful (but different for each integrator) structure was developed.

Nature tells us, via self-organizing systems theory and the rules of operation of chaotic systems, that large complex systems are dangerous, as one mistake can bring down the entire system: this is the concept of "brittleness." That is, apply pressure at the right spot and the entire system "cracks" apart. Modular systems are not as brittle; a break in any one or two modules does not necessarily bring down the entire system. This is why even "seamless" packaged EIS solutions are always modularized. This "chunking" (to use complexity theory terms) was not a planned choice of the developers; it was a forced

recognition / acceptance of the impossibility of designing one seamless program that could do everything.

The BTG Answer: As an almost absolute commandment from the Systems God, in-house IT design and programming efforts should never attempt to construct large integrated solutions. When each in-house development effort begins, it is a unique journey across an unknown *Implementation Disaster Avenue* with unfamiliar vehicles and unknown but dangerous cargo. It is better to make such crossings in many small trips with little cargo (profits) at risk each time. If the business strategy or problem mandates big changes, an already developed integrated solution is the best bet; somebody else (hopefully, a competitor) already paid for the mistakes that taught the developers the right way to do things.

Rule 6: Customization of Packaged Solutions to Your Process Absolutes Is Almost Always a Bad Decision

The Problem: Operations personnel (users) have an uncomfortable reality to face; they must realize that their business is, after all is said and done, not much different from every other business in their industry. The technology that works for Die Mutter Assurance, GmbH will satisfy 99 percent of the requirements for Giant Policy Insurance, Inc. and those of Smyth-Hyde Guaranty, Ltd. Nevertheless, it is common for functional managers to believe that their organization's processes and customers have unique and special needs. Designing to these illusory needs is expensive and risky.

Modification of any type of software is always time consuming, fraught with danger and expensive. Who has not made a "small" change in an Excel program that created a problem that took hours to correct. Most business-to-business software vendors develop a basic package that fits the general needs of most users. They are, of course, more than happy to customize their most of their profit is generated (e.g., the changes after system launch in **Figure 3**).

In fact, such customization services are a central element of their business plans. It is absolutely essential that a profit driven organization avoid such changes at any cost unless it is a life or death (to the business) issue from the perspective the ESC.

It is true that many organizations have processes that are unique in their specific sequence and activities. The one-of-a-kind nature of such processes is not driven by rare external customer requirements or company specific business demands. Almost without exception, processes appear unique because they have mutated over time in response to idiosyncratic, internal pressures and system "tweaks" that are implemented by isolated functions or individuals who do not possess a full understanding of the downstream impacts they create. When most processes are carefully analyzed, it is common to find that from one-quarter to two-thirds of the process steps can be eliminated without causing problems. In fact, the elimination of such waste (and "uniqueness") invariably improves the productivity and efficiency of the overall system.

The startling conclusion is that most processes between organizations appear unique because they have evolved distinctive combinations of waste. To managers, the waste is not visible and the idiosyncrasies of the system appear necessary (and are defended by most users who only "see" their part of the process). As the veil of waste is removed from a process, it quickly begins to resemble most other best-practice processes in similar functional areas. World-class practice in any specialty has a limited number of basic parameters. These world-class parameters are almost always the same across organizations. These parameters must serve as the basic design criteria for all of your implementations.

The BTG Answer: BTG assures that every IT implementation absolutely minimizes the amount of customization that is attempted. The ESC monitors this as one of its primary duties. Each change is made only if the entire ESC (or integration team) agrees that its benefits outweigh the openly discussed and carefully enumerated costs of the necessary customization.

Rule 7: Information Technology Innovations Must Not Be Implemented Incrementally

Problem: In most operational situations, it *is* world-class practice to slowly improve processes via reengineering, process improvement and / or kaizen (a Japanese word: "kai" means "small, ongoing, good," "zen" means "small, change for the better"). The general approach is to incrementally fix aspects of the "as-is" process until outstanding performance is attained. The rationale is that a great many small things create the majority of waste in most processes and that these small wastes, if removed, create adequate to world-class performance without requiring large and costly steps. This tactic is central to all "Lean" and "just-in-time" systems in modern operations. The problem is that this model of the world is absolutely not applicable in most technology-driven environments. Of course, low-tech waste must be attacked in all environments including IT and administrative processes. However, such an approach, when pursued as the primary improvement strategy in technology implementations, can be disastrous.
The first problem is that small incremental changes will not keep an organization apace with the rapidly evolving capabilities of IT systems. A perfectly optimized, ten-year-old IT solution cannot compete with a moderately functioning new solution.

If the using organization is not in a technology-sensitive market; this may not be a problem. If maintaining near or real-time transactions with customers and suppliers is critical, incrementally optimizing an out-of-date system is the kiss of death.

Figure 7 displays the traditional incremental or repair approach to technology implementations. The top line of the process flow shown in **Figure 7** almost guarantees cost overruns and missed schedules. By identifying and attempting to correct gaps between the "as-is" and the desired "to-be" process, the project is detoured directly onto *Implementation Disaster Avenue*. As discussed in Rule 6, customization of the software to fix "little" problems soon becomes a mammoth and expensive effort. The project is quickly transformed from a concern with the performance of the end product to a software management crisis.

When operational deadlines approach, the project team is forced to abandon its n^{th} iteration of the "gap-customize-run prototype" loop and must move to the "give up" stage where the "best bet" solution that can be identified is "slam-dunked" into place. Naturally, such desperate terms are not used in the PowerPoint presentations that describe these tactics. The discussions center around concepts such as "balancing requirements against cost", "making trade-offs between perfect systems and reality," and the like. The message between the lines is, "It's too late to do it right so we have to get something done." The new system is then implemented and rolled out to the organization. The next year or two is then spent fixing all of the problems that were swept under the carpet by short-circuiting the "gap-customize-run prototype" loop.

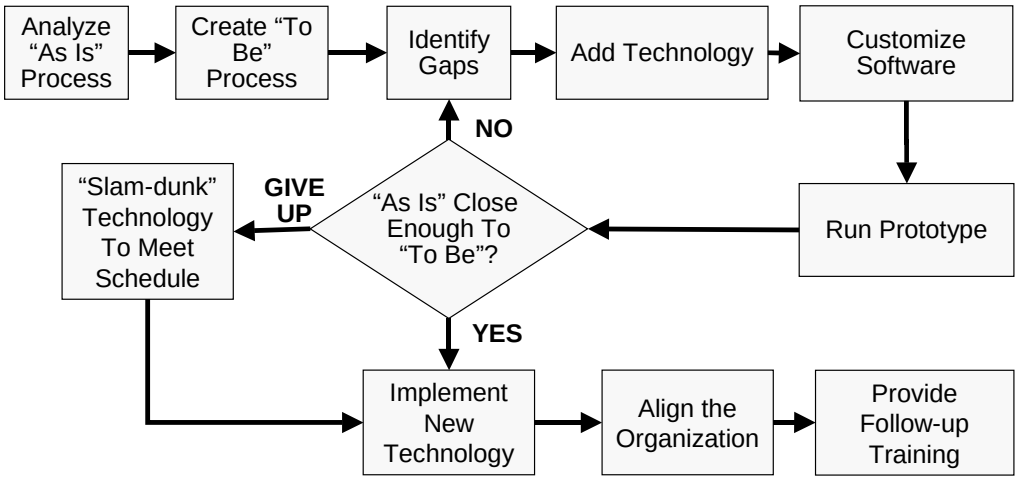

***Figure 7** — The Traditional, Incremental "Repair" Approach to Technology Implementation*

Even if the prototype runs well, critical problems pop up later because the organization was not aligned to understand / support the "to-be" model (once again, we see another cause of the after launch changes shown in **Figure 3**). Users and customers, not having been intimately involved in the implementation process, have no sense of commitment and are often gleeful when pointing out problems. This makes the next technology implementation even more problematic and costly.

The BTG Answer: The key is to understand that technology is evolving far faster and in a more comprehensive manner than most business leaders realize. This means that technology can do much more than most leaders demand and a great deal more than most operational personnel imagine. The downside is that such technology is very complex; it will always be expensive and risky to modify the technology. Such modifications are the primary driver behind the large number of EIS implementations that have cost organizations tens of millions in lost business and cost overruns in the last decade. **Figure 8** presents the approach that avoids this dangerous route across *Implementation Disaster Avenue*.

As **Figure 8** shows, the first step is to align the leaders of the involved portion of the organization (i.e., the division, location or the entire corporation). These leaders (as members of the Executive Steering Committee) must appreciate the issues and the risks that are being discussed in this paper. Otherwise, they may erroneously believe that the "repair" model is appropriate, and they will eagerly accelerate onto *Implementation Disaster Avenue*. Once the leaders appreciate the unique requirements of technology implementations and after they have studied and selected the performance requirements they desire from the system (but not the methods used to deliver them), a "to-be" technology model is created.

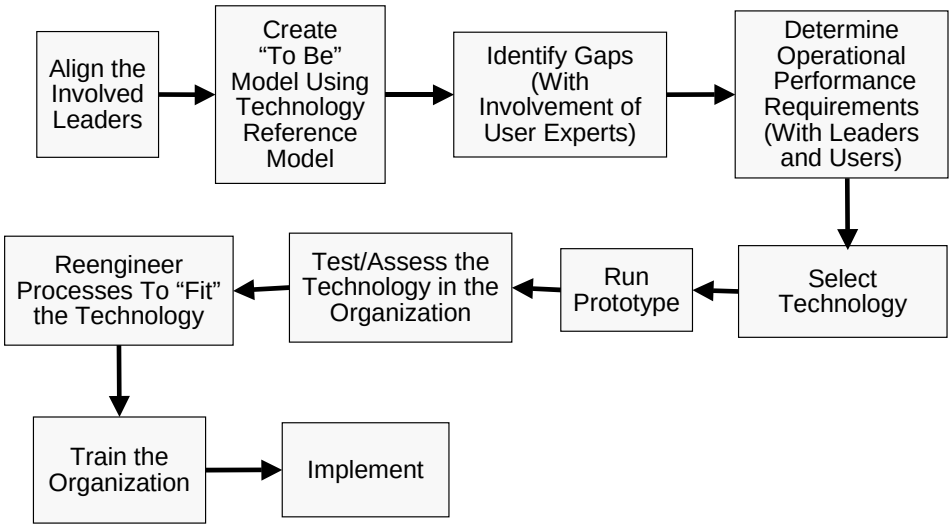

Figure 8 *—The BTG Technology Implementation Approach*

This "to-be" model is generated from existing "technology reference models." These reference models derive from successful implementations that have proven themselves many times. These benchmark implementations have been completed on time, on budget and have performed in an outstanding manner. For almost any business process, suppliers have been involved in dozens, if not hundreds, of successful implementations. The lessons the good suppliers have learned (one of which is not to use the "repair" approach) are invaluable. It is ironic, but most of the software suppliers that profit mightily from modifications advise their clients not to make them. The customers protest that their processes are special, and the suppliers do not argue too long or too strongly (as there are alternative suppliers waiting on the sidelines who will not argue at all).

Once the "to-be" model is developed, performance gaps between it and the current system are identified with extensive participation of operational users in the work stream teams (and approved by the Executive Steering Committee). Once the gaps between the "to-be" model and performance requirements are identified, final and binding agreements are made via charters as to all performance criteria that must be achieved in the real-world operating environment. Then, and only then, is technology selected.

The technology is tested in a prototype manner to assure that it can do the job required of it. This is not only a hardware / software ability check, it is also a "does the proposed system work like we planned" test. Once the prototype has proven that it works, the existing processes are reengineered to force-fit them into the new technology. This requires the in-depth and intensive participation of users. Waste must be eliminated and work adjusted to fit the new processes. Much discussion and conflict must be managed. This is why the work stream teams operate with formal charters and consist of cross-functional personnel; the mandate of the charter and its broad process knowledge enable the team to work through conflict that would tear apart an informal group. After processes are reengineered to fit the technology, all users are trained in the philosophy and day-to-day mechanics of the new system. Only then is the system officially launched.

Rule 8: Excellent People and State-of-the-Art Technology Are Not Enough

Problem: This rule should be intuitively clear by now but it is critical to call it out specifically. Too often, all of the earlier rules are brushed aside by an executive's assertion that, "Our people are good; they can deal with these issues." Contrary to common sense and every executive's fondest wishes, the best and most appropriate technology and the smartest, hardest working people do not guarantee success. If they did, it would be easy to implement technology. After all, the best technology is widely available and has been repeatedly implemented. Every organization attempts to obtain the best personnel they can locate. Ironically, not only are good people and the latest technology "not enough," these two assets are hard pressed to raise the probability of success (an implementation that works on time and within budget) to 30 percent in a traditionally managed implementation.

This is not to say that people and technology are not important. Obviously, they are critical; they are the foundation upon which everything else is built. The wrong technology at the wrong time can cost millions and wreak havoc that takes years to remedy. Processes that are not defined and / or unreliable can not only hamstring a project, they can seriously wound an entire enterprise. People who are not skilled, motivated and / or properly led will hurt every part of the organization they touch. Rightfully so, executives strive for the best technology, the highest skilled people and the most efficient processes they can get. Yet, these assets, while absolutely critical to success, are not sufficient to create it by themselves.

The truth is actually contrary to what intuition suggests. Without appropriate structure and leadership, the odds of encountering serious problems are positively correlated with both increasing technological expertise within the IT area and the dedication and fervor of hard-driving operations personnel. That is, as people are more gifted, knowledgeable about and focused on their own agendas in a technology implementation, the project is increasingly likely to encounter serious problems. The problems arise from the disparate worldviews, success criteria and implementation priorities of the two groups. The more knowledgeable and more focused each group is about their personal mission, the more intense will be the fervor for doing things "their way." This creates delays, poor or no communication, hidden agendas, sudden surprises and unexpected changes. The situation is just as dangerous when one of the two parties is extremely capable and / or powerful and the other is less so. In that case, the stronger party will push its solution through on time and often within budget. However, the implementation, not having the benefit of adequate input from the "underdog" (and others that were never even asked) cannot perform as required.

The BTG Answer: The answer is simple in concept: management must impose a leadership structure - BTG, on the implementation effort. Without a defined structure, energy and enthusiasm run amuck. Within the defined BTG structure, energy, enthusiasm and technical expertise are not only focused, they are multiplied. It is leadership's role to mandate and coach the BTG structure; this is the definition of enacted leadership: defining reality and then supporting the reality until it is a success.

Rule 9: Do Not Expect "Project Management" Tools to Substitute for the Leadership of BTG

Problem: There are four basic aspects of good leadership at every level: focus, structure, discipline and ownership. Focus is an individual knowing, in objective terms, what is important in his / her daily work in order to help the organization attain its objectives. Structure is the set of expectations, norms, social constraints, policies and procedures, spoken and unspoken communications and so on, that keeps people aimed at their individual foci. Discipline is the ability of the organization to maintain an effective structure over time. Ownership is created by generating a feeling in each involved person that their

efforts to maintain their focus directly impact their personal pride in themselves and their work group. The problem with project management approaches is that they rely almost exclusively on written focus and structure in the form of charts, spreadsheets, activity and tasks lists. They do almost nothing to create the living structure, focus and discipline, and resulting ownership that are the hallmarks of a successful, low-stress project. Expecting a project management system to substitute for leadership is much like expecting a list of camping "dos" and "don'ts" to help a bunch of barefoot city slickers cross the Rockies on foot in January.

The BTG Answer: You already know what it is. The ESC, champions, charters, integration teams, team leaders, work stream teams provide real, living, day-to-day focus, structure, discipline and ownership. No team can hide from its duties more than a week (even less, because the champion will be checking in). Teams are given written ESC permission and authority to achieve their goals, *and* they get face time each week with the executives to receive recognition or coaching. The ESC serves to keep all of the executives on one page and talking with one voice. No project management software in the world can do this.

Rule 10: The Skills to Implement the Bridging the Gap Project Management Methodology Are Not Common

The Problem: BTG is not rocket science. Rocket science, to an individual who is not an aeronautical engineer, is difficult to understand; day-to-day experience teaches us little about rocketry. BTG is easy to understand. Most people in business have been on teams or have reported to a steering committee of one type or another. This makes it seem as if BTG, being easy to understand, would be easy to implement. Nothing could be further from reality. The skills required to compel an ESC to guide, coach, prioritize and direct without meddling and back seat driving are not common. The skills required teaching champions the fine line between coaching and nit picking are not common. The skills required to meld cross-functional team members (some of whom may not be full-time) into an aggressive, focused force for action are not common.

All of these skills must be honed in real-time, on numerous successive projects. Once acquired, these skills can be taught to others (in real-time project environments). But it is a critical mistake to expect functional managers, training personnel or high-verbal volunteers to be able to keep such an effort under control without support.

The BTG Answer: An organization facing a technology implementation requires a third party to act as player-coaches, who work hand-in-hand with high-potential individuals (co-implementers) within the organization to lead them through BTG. Kaufman's process offers particular value in that it includes a transfer of BTG knowledge to the internal co-implementers (who are assigned full-time to the project) so that they will become the organization's future BTG facilitators and leaders.

Conclusion

This paper has presented a great deal of information about IT implementation methods. The ten BTG "rules" provide dos and don'ts that have proven themselves time after time in multitudes of organizations across many industries. On the surface, such content gives the appearance of being a primer on some of the basics of project management. We believe that the focus of this paper is much broader and profoundly more significant. It is our hope that the readers will search "between the lines" for the primary topic of this paper: the structure of leadership as it relates to IT implementation.

Organizations, departments, processes and implementation projects succeed or fail on the quality of leadership that guides them. Sometimes the leadership comes from a driven individual who toils silently behind the scenes. Sometimes the leadership derives fortuitously from the combined personalities and motivations of a randomly selected team. Other times, a focused manager, supervisor or process worker who understands what must be done and is able to convey this knowledge to the team provides the leadership. All too often, none of these sources of leadership is evident and the initiative flounders from problem to problem without respite.

This paper provides a structure that implementation leaders can use to avoid the most common pitfalls of technology implementation. With these fundamental problem areas avoided, implementation leaders can apply the majority of their resources to the critical few issues whose resolution creates a resounding success (rather than just "surviving the project"). Ironically, as technology becomes more complex, technology implementers must focus even more intensely on the leadership side of the equation; it is the people who possess the knowledge and must be compelled to integrate it with that of others. More complex technology involves more people, more agendas and more knowledge. Without a reliable, repeatable structure such as BTG to do this successfully, projects are almost guaranteed an extended, all-expense (and what expenses!) paid trip to *Implementation Disaster Avenue*.

About Kaufman Global

Kaufman Global is a proven implementation partner that focuses on accelerating performance. For 20 years we have worked with clients around the world to drive enterprise-wide change initiatives and cultural transformations. Leveraging Lean, Six Sigma and proprietary change management techniques, Kaufman Global delivers structured implementation and transformation projects that enable sustainable operational and financial results.