
An IT Manifesto for Business Managers

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This manifesto is based on the author's personal experience working both in management and IT. Its ten tenets are designed to help business managers become leaders who successfully realize the strategic potential of information technology.

Four years ago, I wrote a paper with this title. I enjoy writing about a subject that I have been fascinated by for many years. With the dramatic changes in the information technology (IT) world, I thought it would be interesting to write a new version, to list the ten steps a business manager should take to succeed as an IT leader.

I think it important to know the perspective from which the subject matter is viewed. I have been in the IT and business world almost since its origin when IBM dominated the field with its central mainframe computers driven by COBOL applications. I came into the IT world from a business background of seven years in the finance field. The next 25 years were in business-oriented IT positions but I did have a stint of programming. I spent five years in consulting before entering the academic ranks, where I currently direct an IT Business Center providing workshops, conferences, and working papers on management-related IT issues to some 55 corporations. What follows is not based on

specific research or surveys, but rather emanates from individual experience and watching, talking to, and reading about companies in their attempts to adapt to the evolving IT world.

1. Participate actively in the IT–business partnership

The first thing that the business manager must realize is the necessity of participation. It is no longer “you guys and we guys;” it’s “us guys.” In the earlier stages of IT development, the IT people were the principal decision makers. It was the “glass-house” era where things happened inside the confines of the computer center. However, as technology began to democratize the workplace with increasingly more user-oriented applications and simpler operation, line managers became more actively involved — and rightfully so. A major finding of MIT’s Management of the Nineties Project was titled “The Line Manager Takes Charge of IT.” This became true in some instances; but in the 21st century, it can be termed more of a *partnership*.

The focus of the line manager should be on the applications that will support the business and the competitive positioning of the company. No longer can this role be delegated. The business manager must understand the forces that provide competitive positioning, have a constructive relationship with the IT function and IT personnel, and participate in steering committees and

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company meetings where IT applications are designed and reviewed. In addition, the democratization of technology has made it easier to use, with the result that the line departments and line managers within those departments often become direct users of IT systems. This requires a degree of computer literacy, which will be described in a later section.

2. Recognize the E-world for what it is — and is not

Technology is thought to be a key enabler of business actions. However, some technologies such as the Internet are more than enablers. The personal computer (PC) was an enabler, allowing employees within a company to do their own data processing at their desk and to interact with others, usually within the company.

E-business and the Internet can be termed “drivers,” as they allow things to be done that were not possible until their development. They can be considered an extension of the PC, further “democratizing” the use and connection of PCs to individuals. But in this case, the extension is much more; — it allows global connections outside the home or office and at reasonable cost. This universal connectivity changes the structure and competitive positioning of existing and future companies.

A technology driver like the Internet affects everyone but its effect varies, depending on the industry, on the companies within the industry, and on disciplines within the companies. Internet applications can change the competitive structure allowing, in some cases, companies to directly compete with larger traditional companies, and to do so in a rapidly shrinking timeframe. However, this does not mean that basic business functions are eliminated. One still must have a concept of the product, understand the competition, develop a business plan, secure financing, and have a sound

product introduction strategy. The list of dot.com failures accentuates this point.

A company like General Electric with widely diverse business units is a good case in point. A *Wall Street Journal* article related

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how former chairman Jack Welch at their annual meeting for executives issued a “rally the troops order: storm the Internet.” Welch called the new Internet technology the greatest change in business in his lifetime. All GE units were affected, but to widely differing degrees, depending on their products and services. The financial services units were affected the most because the main product is information or bits. The industrial and heavy equipment business units were affected but not as greatly as financial services. They are producing product (atoms versus bits). Start-ups cannot compete as easily, although the promotion and marketing of the products can be affected. The article goes on to state that Welch, a long-time devotee of handwritten notes, even began using e-mail to communicate with his staff. Although the use of e-mail by Welch came one year before his retirement, it is indicative of the emergence of the online executive in the “blur” world of instantaneous business and technical change with the Internet and E-commerce at the core. Welch’s late move to e-mail sets the stage for a later discussion of information literacy and computer literacy.

3. Know your individual and department IT needs

This has always been important, but the changing e-world and the previously stated increased role of the business manager in

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IT decision making makes this a necessity. The first requirement is to understand what information is needed to run the overall business, and your department in particular. To do this, it is essential to understand the current and future strategies of your company and your company's current and potential competitors. This should form the basis of your information needs.

These needs can be categorized as individual and departmental. The advent of the Internet and the Web has made it feasible to have ready access to the personal information you need. It starts with e-mail and includes access to company and competitive information via the Web and the company's intranet. You also will want to have timely personal access to the key business indicators of the functions for which you are responsible. An understanding of these needs is the cornerstone for determining your department information needs.

Department information needs include the data and information to perform the administrative aspects of the business functions under your control. For example, if your area of responsibility is marketing/sales, you must be aware of how to receive and compile orders from your customers, the connection with the supply sources to fill

these orders, the processing of the orders, the shipment, and the handling of returns. The Internet and E-business have had almost revolutionary effects on functions such as marketing/sales. The manager must be aware of all of this and take a leadership role in directing IT to automate the entire process, and in a competitive fashion.

4. Concentrate on the why and what, not the how

This is a fundamental consideration in a business manager's involvement with IT. The focus of his or her involvement should be on the *what* and *why* while avoiding the *how* issue. The *how* dimension focuses on the necessary infrastructure, the programming or acquisition of specific programs, and their eventual operation and maintenance. It is beyond the scope of a business manager. The concentration should be on *what* applications are needed to strategically and profitably run the business. And certainly *why* these applications are needed is the compelling issue. This may appear obvious but experience shows that some managers like to dabble in the *how* domain. This is a factor in the failure of many dot.coms. The dot-com top managers are more technology oriented and have a tendency to spend too much time on the *how*.

An organizational push in the right direction is the job split between of the Chief Information Officer (CIO) and the Chief Technology Officer (CTO). The CIO job is a demanding and challenging one, maybe the most difficult in the business world. To be responsible for both the technology and the strategic direction of the business may be an impossible task. Many companies are facing this and have evolved into a split in the management of IT. The technical infrastructure, the *how* area, is being turned over to a technical specialist called the Chief Technology Officer (CTO). This frees up the CIO to concentrate on the *why* and *what* areas, working closely with business management.

The pertinent questions remain: “What do I want done?” (the specification) and “Why do I want it done?” (the benefit or return on investment). As a business manager, you are closer to the *why* issue than the IT staff. When one is deep in an information systems discussion or meeting, ask yourself, “Are we working on the *what* and *why* questions.” If not, you are probably wasting your time by delving into areas where you cannot contribute. Working with the new CIO/CTO approach can assist you in this process.

Another concern related to the *why* question is the IT value proposition, finding the link between IT investment and specific business benefits. It is easy to quote broad terms in such a quest like having more accurate and timely customer data, improving speed to market, reducing purchasing costs, or reduction in product/service delivery time. These broad statements should be translated into more specific measurement and outcomes. IT has become, for most companies, the single highest capital expenditure, currently estimated at 30 percent and expected to grow to 50 percent in the next five years. While much of the IT value proposition is intuitive and many would agree the return on investment is there, there is still a need to be more specific in selected areas.

An example is the vacation planning program of Marriott Lodging as described in a Gartner Report on “Business Value and IT Value.” Reservation agents tap a database that profiles guests’ vacation activity preferences to arrange services such as golf tee times, dinner reservations, and the like. Marriott’s records show that, on the average, guests using this planning service spend \$100 more per night. This additional revenue can be measured against the IT costs to produce the customer database.

Business managers should not give overdue attention to the business value proposition, but selective examples such as the Marriott one may well be in order. Business managers can play a valuable role by maintaining

an overall awareness of the business and IT value propositions.

5. Maintain an end-user perspective in systems development

In addition to a focus on the *what* and *why*, a business manager should continually

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stress the importance of the user of the system, whether it is an external customer or internal user. This involves asking the developers their plans in this area, stressing the importance of the user interface and what is termed “ease of use.” The developers often assume that they represent the typical user and develop the interface based on their skill level. Understanding the composite of users and the various skill levels involved is crucial. For example, many of the users are intermittent users as compared to dedicated users. Often, two or more interfaces should be employed, depending on the frequency of use and system familiarity of the users.

The use of technology to automatically connect customers requires a level of user friendliness or usability that is taken for granted in a human-to-human environment. How many times does one have to key in choices from a wide range of options? One is directed to press 1 to order, press 2 with a question, press 3 for account information, and then enter a last name. The realization is that one is not comfortable using phone keys as a typewriter. Eventually, one makes enough mistakes that a human being is needed, but there appears to be no way of making contact. This is not good business. Applications using broad connectability

must test and retest for usability before the rollout. There are more considerations in developing effective customer focus, and technology plays an increasingly important role.

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A manager can increase the chances of a smooth system introduction by asking questions related to system usability. More companies are instituting usability laboratories to fully test the systems with the variety of potential system users. Fidelity Investments has an advanced user lab that provides this crucial service. A good question is to ask is: Is a systems lab of some sort planned, and if not, how will this affect the introduction? Can changes be readily made after the system goes into operation, and what is the expected turn-around time to do so? The point here is to emphasize that the role of a manager should be “front end” rather than “back end.”

6. Assume more of a leadership or champion role

It takes mutual understanding to establish a positive relationship between IT and business managers. Part of a business manager’s job should be to work with both the CIO and their staff to show that line leadership of IT projects does not diminish the role of IT. Rather, the existence of line leadership emphasizes the added importance of the work.

A business manager can start by taking charge of more IT projects, taking on the role of leader or champion, particularly for major initiatives such as those involved with developing and implementing E-business applications.

Be aware, however, that the two roles are not identical. A leader has a formal and definite responsibility. For example, he or she heads the steering committee that oversees and leads the project, and makes the major decisions on its progress. Champions have informal but powerful roles. They may not participate in the formal process, attending steering committees and the like, but the implementation team knows the champion supports their effort and can be called upon for support when they need it. As a system development effort proceeds, there will no doubt be periods (e.g., initial testing) when line management objects to the extra time required of its staff who are busy working with the current system. This is when a key champion who has the respect of the management team can be called upon to relate the benefits of the new approach, and that additional initial effort is needed to make the transition.

A recently installed system in an investment company incorporated a completely new system infrastructure with difficult conversion challenges but with major gains in “ease of use” when the new approach was implemented. Business managers were on the team, but several champions were brought into play to ease the conversion while the two systems were running in parallel. The champions were selected because they had a good grasp of the system but primarily because they were highly respected by the managers of the affected departments.

More and more, a business manager should be assuming the role of leader or champion. For the most part, this is where the responsibility should rest. It will be a major step in supporting and working alongside the CIO and the information professionals. Many studies have stated that a business executive should be assigned responsibility for leading major new initiatives. The business importance of these applications makes this leader or champion role one of the most important elements in IT success.

7. Understand the need for personal IT literacy

Based on your assessment of your computer and information literacy, it is important to begin developing and executing an education/training program to bring yourself up to speed. The program should focus on the system or application currently being studied or implemented, it should be conducted in real-time, and it should include the subject matter that is critical to the application development in progress. For example, if the focus is on using the Internet to conduct business electronically, a general understanding of the Internet and issues such as security, privacy, and backup should be obtained. If an application is being developed where a corporate database is being accessed (sometimes called data mining), to develop analytical knowledge about existing customers and potential new customers, a fundamental understanding of concepts such as the data warehouse, the data mart, and online analytical processing is vital.

In a large number of companies, education and training historically have focused on administrative and line personnel or junior and middle managers. There is usually scant attention given to education for senior managers. This can be a serious problem, particularly in the IT field. The prevailing assumption is that the upper management levels have already attained a solid business and IT education background from their schooling and their experience rising up the corporate ladder. This is not a practical assumption when one considers the IT field. First, many of today's business managers graduated at a time when IT was under-emphasized or not taught at all. In its current form, IT arrived late on the scene; thus, there is serious catching-up to do, and personal attention to one's level of information literacy is a starting point for this process.

Information literacy implies an understanding of the general concepts of information processing; how information systems shape

and support a person's job function, a department, or operating unit, or how an enterprise application is linked with the company's customers as well as its suppliers. It is an awareness of the growing role

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of the technological drivers that allow companies to restructure entire business processes.

While there has been acceptance of the above, there might still be an argument as to the extent of computer literacy, but most would agree that computer familiarity and usage are becoming indispensable to business managers. The thinking is that the advances in software application and software "ease of use" are the "push" factors, while business managers desire to be more involved in the IT decision process and to build a favorable image with both IT people and business people are the "pull" factors. Computer literacy has become the necessary facilitator for attaining information literacy.

Computer-literate senior managers are regular users of e-mail and are also able to access outside news and financial databases via the Web for business use. Executives with computer literacy are thought of as keyboard facile and comfortable in front of a laptop or palm top where they may spend an hour a day or more. Computer literacy is a hands-on awareness and experience with PC usage such as the following:

- E-mail use: send and receive
- Use of the corporate portal
- Order business books online
- View and analyze the company Web site
- Emulate how a customer or prospective customer uses your Web site
- Use search engines to locate meaningful business-related information

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- Analyze Web sites of your competition
 - Use a handheld device to maintain your address book and personal schedule
 - Use handheld devices to access e-mail or the Internet
 - Conduct remote videoconferences and meetings

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This may appear to be an imposing list and out of range for many executives. And while this may be true, the list must be viewed in light of the particular job responsibilities and the IT applications implemented by the company. This will probably reduce the list; however, in some cases, it could extend it.

8. Develop a personal IT literacy program

It has been pointed out that people learn in different ways, and this important factor should be taken into account in planning how a line manager develops the proper levels of computer and information literacy. One school of thought says that humans have different “intelligences,” with different parts of the brain controlling different abilities.

The theory of multiple intelligences was developed by Harvard psychologist Howard Gardner, who suggested that there are seven intelligences: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, inter-personal, and intra-personal. Drawing on Gardner’s work, others have correlated types of intelligence with effective computer-learning techniques. They claimed that individuals with high logical-mathematical or musical intelligence do

best with programmed instruction; those with high linguistic intelligence do best with written documentation; those with high spatial intelligence prefer to start with the big picture and a fast overview; and that those with bodily-kinesthetic intelligence prefer a hands-on, do-it-yourself, trial-and-error approach. Those with inter- or intra-personal skills will learn more effectively on an individual basis or in a small group with a good deal of personal interaction and discussion. While this is an oversimplification and it is apparent that most of us have more than one kind of intelligence, it should be obvious that to be as effective as possible, a business manager should take into consideration his or her intelligence and learning style. It has been noted by some who have worked in this field that senior managers tend to be in the inter- or intra-personal category and react better to individual tutelage.

The so-called mentor process is an effective method for senior managers to acquire computer literacy. A qualified, technology-savvy, younger manager is teamed with a senior business manager. This was the approach established by Jack Welch and General Electric. The senior manager sets aside specific times to work with the mentor. One- to two-hour modules per week, for example, are easier to carve out than daylong or weeklong sessions. These shorter sessions should be scheduled as the first event of the day, if possible. Educators should follow the basics of executive pedagogy. Subject matter should be timely and relevant, and have clearly stated objectives. Visual aids should be used selectively and the education should center on real-life situations with which the senior manager is familiar.

Another factor in developing an educational program is timing. The frenetic wall-to-wall meeting style and activity load in businesses today make it difficult to pique the interest of a manager if there is not a pressing reason for the learning. Thus, it is important to schedule the training when there is motivation for learning; for example, when a new

system is under development and close to rollout. This just-in-time element is a needed motivator to offset a high activity schedule.

9. Maintain a high degree of patience

Murphy's law states that whatever can go wrong will go wrong. In the IT world, the follow-on dictum is that Murphy was an optimist. While not excusing system failures, network downtime, and the like, it is true that we are dealing with complicated hardware and software which all has to play together. A simple application can involve the connection of several dozen pieces of hardware and software, each from a different vendor and most of which are continually updated in new releases. The mathematics favor breakdowns somewhere along the line. Management must realize that errors are part of the game, and must concentrate more on resolution rather than joining in the verbal polemics.

The major reason for the collective outbursts over IT failure is the fact that management has not felt the responsibility or, in many cases, shared the responsibility for a major IT project. But this is changing, and with it must come a more patient understanding on the part of line management.

10. Take an IT person to lunch

This is a light way of stating that the success and the perception of success are based on the quality of the relationships

between IT management and line management. Each must understand the other's role and appreciate the value of being on the same team and sharing problems as well as successes. The most common attribute of a good relationship is regular and constant contact and communications. In addition, to more on-site interaction, it is beneficial for line managers to attend outside seminars and workshops with senior IT managers. These should normally be business focused rather than technology focused. Only regular contact can build up a sense of trust, and it has been said that once trust is shared, risk can be shared as well. Frank, open, and honest communication is the building block.

This kind of relationship is built from a good deal of personal contact. This can be called the "coffee pot syndrome," where line and IT managers drink coffee and have lunch together. The informal and social type of interaction can be more effective than a relationship that comes only through formal meetings and engagements. Also remember that while e-mail connectivity can be effective for general kinds of information exchange, the widest bandwidth remains face-to-face communication. The latter should not be overlooked and is a necessity for what can be termed "emotion-rich" subject matter.

So, the final tenet of this IT manifesto says, good naturedly, "take an IT person to lunch."