

# Are Information Systems Manageable?

(First of a two part series)

Do these lamentations sound familiar?

- We seem to spend more time fighting with our software, than working with it.
- Can I really trust this data?
- Why doesn't our technology staff seem to understand the needs of our business?
- The (choose one: network/Internet/printer/or other vital component) is down again? I thought we finally had that fixed.
- We keep spending money on the latest technology, but how do we know we're making the right decisions?
- Technology management plan? I wouldn't know where to start.

The unfortunate fact is that many companies are held hostage by their information systems. Business managers are expected to take responsibility and accountability for something they often don't understand, can't manage, and possibly even fear.

The natural human responses to this difficult situation can range from distrust, to frustration, intimidation, fear, anger, denial, and perhaps worst of all, avoidance. If any other functional area within a company (such as production, sales and marketing, or accounting) were to operate in this fashion, fast and sure steps would be taken. Why should Information Systems be any different?

One could write a book simply trying to answer this question, but here I'll list what I consider to be the three most important causes:

1. Business information technology is extremely complex, and rapidly evolving. This evolution is rarely predictable. Technology/product lifecycles are often very short. Frequently a new technology emerges that appears promising, only to be quickly obsolesced by another. Despite our wishes, the best product doesn't usually survive, but rather the one with the best marketing and market share. Standards emerge very slowly, if ever, and manufacturers often engineer proprietary characteristics into their offerings to maintain control of the customer. Disparate and fragmented systems are therefore difficult to integrate seamlessly in support of a business process. What results is a challenging and risky environment for problem solving and decision-making.
2. Information Systems staff is often focused on solving short term problems. When critical systems fail, people and businesses stop working. IS staff therefore must often expend their daily allotment of energy addressing these immediate issues. The problem is especially acute in smaller

companies, where the IS staff may be understaffed, or only exist informally. In this case, someone within the company that exhibits technical skills reluctantly inherits system administration responsibilities. They try to accomplish the minimal support tasks with minimal effort – hence endless firefighting and short-term problem solving. Continuing decisions and investments made in this environment often perpetuate, rather than solve, the underlying problem.

Finally, IS staff is usually technically oriented, educated, experienced, and focused on solving technical problems. There can also be an over-emphasis on keeping up with the latest and greatest technology developments, for their own sake. However there may not be as much emphasis on planning, management, communication, solving business problems, supporting people and businesses processes, as we might like. I'm not suggesting that IS staff are incapable of addressing these issues, just that this may not have been the focus of their skills development, management direction, and compensation, so far.

3. Our expectations of information technology are often unrealistic. That's a zinger. We all want technology to improve our businesses, and to make our lives better, and in many cases it does. But we want this to be true, so very much, that we're often too eager to accept the industry vision and hype. I have seen a tendency for business people to abdicate responsibility for critical analysis, detailed planning, education, risk management, problem solving, and questions about benefit and measurable ROI, to vague hopes of a technology solution. Remember the psychological phenomenon of avoidance and denial, mentioned earlier? We've all witnessed the stock market's recent plunge, in part recoiling from years of false hopes and unrealistic expectations of the benefits of new technology. It's time to get real, again.

So those are my "Big Three" causes - complexity, focus, and unrealistic expectations. Now we must ask, what is the result of this dysfunction, other than simply cost and frustration? How can we identify the subtle and elusive benefits of well-managed Information Systems that are missing?

Let's digress for a moment, and consider the bigger picture. Psychologist Abraham Maslow suggested that as humans grow and develop, once the basic physiological needs of food, water, shelter and physical safety become satisfied, we then strive to fulfill the higher needs such as love, belonging, esteem and self-actualization. Maslow called this the "hierarchy of needs". A key point Maslow made is that, if a human being lives under conditions where it expends all its energy and attention on the basic needs of survival, it doesn't have the luxury to attend to the higher needs. It can't afford to risk death by starvation or exposure.

It seems that many IS organizations likewise expend all their energy and resources addressing the basic needs of survival (keeping the basic network, communications and software running, for example) limiting their potential to achieve the higher benefits.

If we were to come up with a hierarchy of needs for IS development, it might look something like this:

1. Hardware, network, and communications function properly
2. Key software applications function properly
3. Reporting and analytical systems support business decisions
4. Improvement and automation of business processes and the seamless flow of supporting information across the enterprise
5. Facilitate outstanding customer service and relationships
6. Create significant competitive advantage
7. Create a unique value proposition unmatched by any competitor, potentially redefine an offering or an industry

As we progress up the scale, IS offers the potential for significant business improvement, competitive advantage, and transformation. For example, when we're on the receiving end of truly excellent customer service driven by well-executed information systems, it's a wonderful thing. And when it's elevated to a true art form, the system may be virtually invisible, hidden by great and well-trained people providing the service.

So the key question, and the premise for this and the subsequent article, is: Can we effectively plan and manage the performance of IS, to ensure its consistent and significant contribution to the success of the business?

The answer is clearly yes.

In order to achieve the higher value that IS can deliver, we should focus on the following:

1. Base all IS planning and investment decisions on critical thinking and sound judgement. Every IS investment must have a focused and measurable ROI - allowing that many significant returns are intangible, they still must be factored.
2. All IS investment decisions must be made with adaptability in mind, since future technical developments are virtually unpredictable. This implies that we shouldn't stick our necks out too far on the early adopter scale, and base our long term strategies on a mature foundation. Or if we do adopt emerging technologies (and there are sound competitive reasons we may wish to do this) we must realistically evaluate the risks and plan accordingly.

3. Like most important endeavors, this is a journey, not a destination. We're never finished. We must expect to continue investing in maintenance, upgrades, education, training, and general system and process improvement, so that we manage system lifecycles thoughtfully and deliberately.
4. Plan and manage IS performance just as you do any other department within your organization. Ensure that measures reflect the results you desire, and that they are tied to satisfying the business objective, not solely internal technical performance goals. Manage and compensate IS staff on these measures. Constantly evaluate and evolve these measures as business conditions change. Manage each project carefully, with full executive sponsorship and participation.
5. Make IS management an equal partner of the top management team. This may involve educating the IS management staff on business management issues. If a smaller company cannot afford this level of IS management expertise on staff, it should find a capable and trusted advisor (a management consultant, or part-time CIO) and make them a fully engaged part of the management team. We should also consider educating upper management on relevant IS issues and practices. Executive management must actively participate in strategic IS planning, if it wants to ensure the effectiveness of IS, and improvement of the overall business health as a result.

In our next article in this series, we'll closely explore a management approach to this challenge.

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