IT Strategy in Uncertain Times

by Ron Raumer

The increased uncertainty brought on by the double-whammy of the dot.com bust coupled with the tragic events of September 11th has left many business and government leaders asking what impact these events will have on IT in their organizations and, more importantly, what they should do going forward.

The U.S. economy is receding, putting downward pressure on the budgets of both governmental organizations and businesses everywhere. Although total IT spending in the U.S. has not yet declined, it is growing at a much-reduced rate according to the Gartner Group. And capital spending for hardware and software has actually fallen in the past year. IT budgets have been slashed across the board. The funding for e-business, e-government and Internet initiatives, sometimes justified on the basis of "me-too" or "not being left behind", have been especially hard hit.

The fall-out from all of this is that IT is being asked to provide a stronger rationale and business cases demonstrating the value of IT before funds are approved. The increased uncertainty is requiring IT to respond to several key questions:

1. **Are we doing the "right" things?** "Right" meaning what the business most needs, both now and in the future, especially in the current economic slowdown.
2. **Are we spending the right amount?** Too little, too much? If too much, where can we reduce costs?
3. **Are we getting our money's worth?** Value for our IT investment.
4. **Do we have the requisite resources?** People, processes, skills, tools, technologies to get the job done.
5. **Are they organized and managed appropriately?** For efficiency, effectiveness and accountability.
6. **Are we managing the risks?** Current and future, especially with the regard to new risks which have emerged since September 11th.
7. **What should we be doing going forward?** To improve, anticipate and prepare.

An IT strategy can answer each of these questions.

What is an IT Strategy?

An IT strategy sets out how information technology is to be used across an organization in the future. It describes how information technology will support the organization's mission, goals and strategies, thereby, aligning IT with the organization's direction. See Figure 1.

An IT strategy considers the internal and external changes an organization is facing and the potential opportunities for using IT that are available to it. The opportunities for using IT are weighted against the strengths and weaknesses of the IT capabilities – both technological and organizational – to determine what the gap is between current capabilities and the desired future position. The IT strategy lays out the broad strategic directions that IT must pursue to close the gap and balance capabilities with opportunities and risks.

Figure 1 – IT Strategy Framework

An IT strategy also defines the future IT architecture and the initiatives and projects necessary for implementing the opportunities and closing the gap. Lastly, a strategy lays out the degree of change required of the IT organization – IT vision and mission, culture, structure, staffing, skills, and processes – necessary to realize the strategy.

IT Strategy Example

Let us take a simplified example of a Regional Park Authority, one that has sufficient funding for acquisition and development of new parks, but limited funding for their operations and maintenance. An external factor might be that the population in their region is growing rapidly and creating a greater demand for park services.

The Park Authority might establish an organizational strategy of increasing the number of parks it operates while keeping the same level of budgeting for park maintenance and operation.

It would then identify opportunities to use IT that are aligned with this goal. Opportunities might include automating its' park maintenance processes and implementing an e-government park reservation system accessible by the public over the Internet.

It might formulate an IT strategy of enhancing IT systems that improve the efficiency of park maintenance workers and a second strategy of deploying self-service Internet-based systems, accessible by the public to reduce park reservation and administrative staff workload.

These strategies and opportunities would be weighted against the current IT capabilities available to implement them. It might be determined that existing servers would need upgrading to support the new systems and that the IT organization would need new skills to support the e-government technology. Projects would be defined to implement the new technology and the changes to the IT organization.

Strategy as Partnership and Process

Some IT organizations have tried to develop IT strategies in isolation from the rest of the organization. Usually, the result has been a strategy that is neither accepted nor implemented. Too often a strategy imposed is a strategy opposed.

Strategy development and IT alignment is more frequently successful when it is developed as a collaborative effort in partnership between IT and users, with both having equal weight in decision-making. This can be achieved by forming a council, responsible for initially developing the IT strategy and later for maintaining and evolving it.

Strategy is a process. When strategy is a one-time event that produces a static document, the strategy soon becomes outdated and useless. When strategy is an ongoing process it maintains alignment between IT and the organization and ensures that IT is doing what the organization needs now and in the future.

Aligning IT with the Organization

Alignment is defined as the degree in which IT supports the organization in achieving its' mission, goals and objectives. The higher the degree of alignment the greater value IT is to the enterprise. In today's climate, alignment is especially important since many organizations are allocating resources to the highest value activities and reducing costs by eliminating low-value activities and related staff.

Aligning IT, requires understanding the organization's future direction. In some organizations the enterprise direction is well understood and documented, in others it is not documented but implicit in the plans and actions of the enterprise, and in some it must be constructed.

A clearly articulated and understood organizational direction becomes the focus for and "drives" the entire IT strategy.

Opportunities and Risks

With a clear defined organization direction, potential opportunities for using information technology to assist the organization in realizing its' future state can be identified and risks can be considered. Opportunities might include implementing new information technologies or e-government applications. They may include enhancing the IT infrastructure of networks, servers and PCs.

In today's environment governments are facing external factors such as the economic downturn and heightened risks. Therefore, governmental organizations might identify opportunities to use technology to reduce cost or increase funding or to protect information or IT physical assets to counter threats and risks that have recently emerged.

An important input into the opportunity identification process is a "health check-up" or assessment of current IT application systems and infrastructure. The application systems or infrastructure components that rate lowest because they do not meet the organizations requirements become candidates for improvement. Of those, the best improvement opportunities are the ones that make the greatest contribution to the organization achieving its' goals and objectives and, thereby, have the greatest degree of alignment.

Also during opportunity identification it can be useful to survey IT and industry trends and to benchmark similar organizations to identify potential new or emerging trends that can be of benefit to the organization.

Prioritization

In most organizations today, the opportunities for using IT far outweigh the IT resources and funding available. So which opportunities should they do first?

In the absence of an IT strategy, organizations frequently allow individual departments to proceed with IT projects on a piecemeal basis, as funding is available. In other organizations, potential

projects are compared one against the other on the basis of cost/benefits evaluations. The degree to which an opportunity supports the organizations objectives and strategy is rarely explicitly considered.

However, to achieve alignment opportunities must be prioritized based not only on their cost/benefits but, more importantly, on their degree of alignment with the organization. The opportunities that can make the greatest impact on the organization's success are given the highest priority because they have the highest degree of alignment.

This is done by prioritizing opportunities against a set of criteria that include the degree of alignment or "contribution" to the organization as the key criterion. The value of the opportunity and risk are usually also included as criterion. The criterion should reflect the decision-making values that the organizations' executive management use in making non-IT investment decisions. So it may vary from organization to organization, but it must include "contribution" to achieve alignment. Relative weighting may also be applied to the criterion. A typical set of criteria and its' relative weighting might be:

- **Contribution** (50%) – The degree to which the opportunity contributes to the organization's ability to achieve its' mission, objectives and strategy.
- **Value** (30%) – The benefits less the cost, with both tangible and intangible benefits and costs considered.
- **Risk** (20%) – The lack of risk with regard to the risk of:
  - not meeting the business objectives,
  - the technology not working,
  - the organization not ready or able to absorb the change, and
  - the implementation not being successful.

Economic Justification of IT Investments

Even though priorities are established using alignment as a key criterion, a clear and compelling business case is typically necessary before projects can be approved to proceed. This is especially true in today's times of economic downturn and shrinking budgets.

The key elements of a business case are a description of the project's objectives, scope, approach, and organization and a cost/benefit analysis. The cost/benefit analysis summarizes both positive and negative impacts of the opportunity, weighted against each other. Both tangible and intangible costs and benefits are included.

Frequently a total cost of ownership (TCO) approach is used. TCO means the total cost of acquiring, implementing, operating, maintaining, and disposing of the IT asset, across the its useful life. This is in contrast to simply calculating the acquisition cost. The TCO is usually more than the acquisition cost, sometimes several times more.

Through the combination of prioritizing opportunities and evaluating their business case, the opportunities that are the best for achieving the organizations goals are identified.

Strategies for Closing the Gap

Once the IT opportunities are known, they are weighted against the capabilities of IT – both technologically and organizationally – to determine what the gap is between current capabilities and the future desired state.

Once the gap is known, strategy options and scenarios can be evaluated and IT strategies can be formulated. If, for example, IT capabilities are not sufficient to implement the opportunities in the desired timeframe, they could be augmented or outside resources could be acquired.

Alternatively, opportunities could be implemented over a longer time frame. The strategic possibilities are only limited by the analytical and creative abilities of the strategy team.

Architecture

Architecture serves as a blueprint for the future deployment of IT systems, databases and technologies in support of the IT strategy. Architecture is often though of as a diagram of the future network or a graphic depicting the various applications and their interfaces. But architecture is really much more. Architecture can be defined as a set of values and preferences used to guide decisions in the selection, acquisition, deployment and management of information technology.

Architectural categories include applications, data, technology infrastructure -- networks, servers, PCs -- security and the IT organization. See Figure 2.

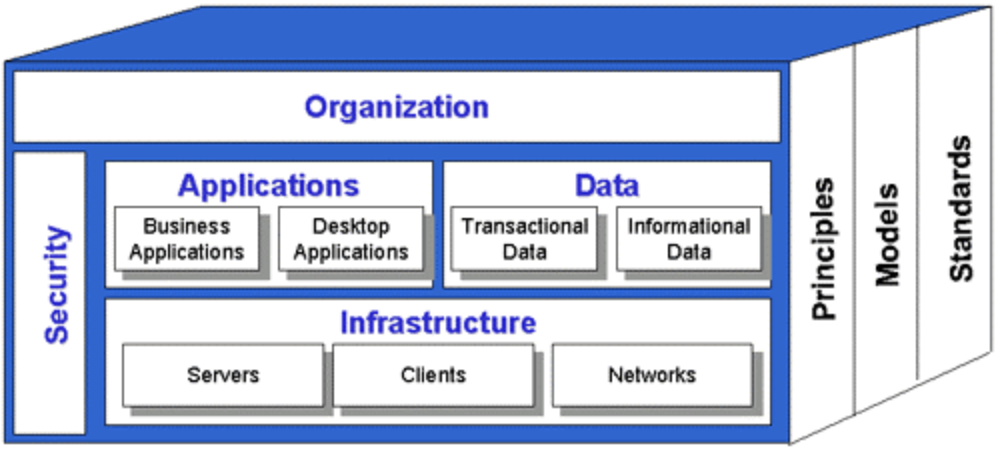

Figure 2 – Architecture

Architecture can be embodied in a set of principles, models and standards.

Principles are at the highest level and describe the values and preferences for making decisions. Some examples of principles are:

- We will be a follower in the adaptation of technology, only deploying technology that has been in use by other organizations for at least six months.
- We will acquire package software solutions rather than undertake custom development.
- We will establish levels of access privileges for other agencies that ensure that they can access only authorized data.
- We will use a common desktop PC vendor across the organization.
- We will use a common e-mail system across the organization.

Generally, there are a small number of principles for each architectural category.

A model is a graphical or diagrammatic depiction of a principle. Examples are a network diagram, a configuration diagram for the organization's desktop PC standard and a database diagram.

A standard is a detailed specification for guiding technology decisions. Standards typically change over time as technology changes, but the principle changes less frequently. Not every principle requires a standard. Some examples are:

- We will use TCP/IP as our WAN protocol.
- We will use MS-Outlook as our e-mail system.

Principles, models and standards are adhered to when making technology decisions, but rare exceptions can be made when justified. A rigid architecture can cause frustration and resistance to implementation, so there needs to be flexibility.

As the technology, the organization and the external environment evolves, so too will the architecture.

Organizational Alignment

An IT strategy will typically require changes to an organization's technology environment such as the replacement of servers, a wider bandwidth for LANs or the WAN, or implementation of new e-government applications. But an IT strategy can equally require changes to the organization. And these are often over-looked.

The diagram below, adapted from the 7-S Framework developed by Waterman, Peters and Phillips, illustrates how a change to any one of the seven organizational elements can impact the others. For example, a change to strategy may require a revised organizational structure and revised business processes. New information technology may require new skills and staffing levels.

Figure 3: Organizational Inter-relationships

The actions required to change the capabilities of IT as necessary to close the gap and implement the IT strategy are identified in an organizational alignment program. Changes may be required to the IT organizational structure, staffing levels, skill sets, levels of outsourcing, IT business processes or even to the IT values, mission and culture.

Coupled with the organizational alignment program is a change management plan. The purpose of the change management plan is to communicate the changes to those impacted and to involve them directly in the change process. This helps those in the organization absorb the change, it lessens resistance and it builds support and momentum toward successfully implementing of the strategy.

Strategy Implementation Roadmap

Lastly, an IT strategy includes a roadmap representing the initiatives, projects, and resources necessary for successfully implementing the strategy. Strategy is focus and emphasis. The roadmap gives the strategy life and focuses efforts on the organization's most critical activities. The prioritized initiatives and projects to be undertaken are scheduled over the planning horizon which may be 18 months, two years or longer depending on the planning needs of the organization.

Summary

In uncertain times an IT strategy is more important then ever. An IT strategy can align the IT capabilities with what the organization needs most. It can provide a framework and process for prioritizing IT initiatives so the most important things are done first. It can determine what IT capabilities need to be augmented and which can be reduced to cut costs. It can ensure that risks are considered and managed. And it can provide an ongoing process to maintain alignment and position IT to capitalize on its capabilities during the eventual economic upturn.

About the Author

Mr. Ronald J. Raumer is a management consultant and founder of Raumer Associates, a strategic consulting practice located in the San Francisco Bay Area. Mr. Raumer has developed IT strategic plans for more than a two-dozen organizations including local, state and federal governments, not-for-profit organizations, emerging businesses and fortune 500 companies. He has practiced and consulted in more than twenty countries throughout America, Europe, the Middle East and Asia. For questions, or to offer comments about his article, please contact Mr. Raumer at ron@raumer.com or 925-946-1700. Or visit his web site at www.raumer.com.

