Multi-faceted Planning in “REAL” IT

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Developing and communicating visionary and practical strategies for information technology efforts is at once inspiring and onerous. In our too-REAL world, the dynamic impacts of rapid technology movement, exponentially growing client expectations, increasing demand on resources, and sheer momentum of change seem to defy the usual concepts involved in planning. Yet we must find ways to chart our courses, meet the ongoing needs of our institutions, lead in overall IT directions, and articulate these efforts.

This paper presents a multi-faceted set of planning ideas, philosophies, and implementations. The ADP Center at Iowa State University uses these to help serve clients in a continuing quality manner. The paper includes an overview of planning objectives, strategic directions, goals for the year 2000, client expectations, organization methods, and implementation priorities.

The on-going plans focus on mission-critical information systems and client service support. Administrative tools are presented to show the practicality of this “Multi-faceted Planning in REAL IT” at ISU.
Multi-faceted Planning in “REAL” IT

Planning for information technology programs and activities in organizations can be conceptualized in many different abstractions, processes and implementations. If one would ask a random group of people about what planning for IT means, what it should include and how it should happen, surely, the answers would cover a broad range of concepts, focuses, and details. Their responses would reflect the general paradigms of the respondent’s view of IT. Many professionals find it hard to plan in the dynamic IT environment. Some information technology professionals feel it may be impossible to plan for the future in IT. There have been recent indications that some CEOs of large IT corporations feel that long-term planning is too formal for IT activities. They suggest that planning can be a hindrance and thus they look at driving out long-term planning to actually make their business more change oriented and successful.

Suggestions that planning may not work in IT presents quite a paradox. Without a plan or focus, our organizations may be going in many directions which can cause a lower success level or actual failure. All organizations and individuals are going somewhere; it is a matter of being a planned or is not driven by may be a lot tougher; be wasted, and efficiencies may be be the case with good planning, then the road valuable resources may effectiveness and much lower than could planning.

The benefits of strategic planning include a systematic approach for guiding an organization over time through known and unknown changes in its environment with the goal of achieving desired outcomes. This approach confronts major strategic decisions facing an organization. It involves developing a desired future and identifying ways to bring it about through broad principles and concepts. Strategic planning attempts to take advantage of the new and different opportunities of tomorrow while reducing any negative consequences of the unexpected challenges. Strategic planning should be an active rather than passive activity in the approach to continually monitoring an organization’s current assessment to keep the organization focused and in line with the changing environment.

Some confuse strategic planning with making future decisions. One can only make decisions for today, but can try to predict the future and develop plans based on present-day factors. This is why plans need to be flexible to allow for the changes over time. With an underlying understanding of where an organization wants to go, a plan will be easier to modify as factors change over time.
**Communicate Directions**

A key objective of planning is to communicate to staff and clients the directions and actions for reaching the organization’s goals. It is important that the plan be more than a document that sits on a shelf. It should be an active instrument used to define organizational directions as well as to communicate the directions to staff, clients and constituents. Meeting client expectations and providing quality services in all activities is of primary consideration.

A major problem in many organizations is a lack of clear definition of the major functions and goals. This leads to the view that the organization does not know what it is doing and to varying concepts about what they are and should be doing all based on the constituent’s viewpoint and knowledge. Well defined and organized planning documents can do much to alleviate these shortcomings.

From the time of development through implementation, it is important that the staff feel they have a part in the plan and understand its meaning. This will help staff feel committed to the strategic plan and refer to it in daily activities. The strategic plan should also provide a direction for staff members. In all of their planning activities, annual or daily, the staff can use the plan as a guide to sort out relevant activities.

A strategic plan is also important in working with clients and constituents for communicating the defined priorities and goals. This is aimed at showing that an organization is in control of its efforts and directions to help the constituents feel comfortable about their investment and about the services they receive from the university and the ADP Center.

This principle of communication is inherent in communicating vision, goals and directions to various entities. At ISU, the university, Business & Finance, and ADP Center five year plans were developed by communicating commonality in language, directions, goals, and strategies.

While commonality is important, a single concept of planning or a single plan will not answer varying views. Thus, the ADP Center at Iowa State University has a multi-faceted approach to developing plans and to using tools for monitoring the status of plans. Multi-faceted planning involves planning on various levels, timeframes and situations. This is different than a one-time, static document. Figure 1 shows the three levels of planning at Iowa State University, while figure 2 shows the planning levels in the ADP Center as well as the different timeframes used.
Dynamic activities require on-going interactive use of the planning tools to assure that the intended impact of planning is attained. In this sense, planning has its own life. Planning needs to be dynamic to reflect the various changes in an organization and its environment. As a plan matures, it needs to be flexible to adapt to changes in the environment. If planning is thought of as a one-time document development that cannot change, the plans will not be useful to an organization because the plans will not grow with the organization.

**Planning Tools and Levels**

Recognizing the importance of multi-faceted planning, Figure 2 represents the different planning levels and planning timeframes used in the ISU ADP Center. This model also represents the notion that strategic goals are broad and each level beyond that expresses more specific goals. Each of these is further explained.

**Strategic/Long Term**

Strategic/Long term planning provides a foundation for the direction of where the Center wants to go. This is important in the rapidly changing environment of IT. A **broad set of goals** provides the spectrum for new technologies that may be developed or any changes in the environment.

**Annual to 18 Months**

This time frame provides direction for goals and **projects** that need to be implemented in order to reach the strategic goals. These are generally more defined by budgets, and other resources available.

**Quarterly**

Quarterly planning provides a timeframe that is easier to grasp on a large project. This also provides a guideline for how a particular project is progressing. An important aspect in completing a project is to break it down into doable pieces or tasks. Through quarterly planning, annual goals can be broken into doable **tasks**.

**Monthly**

Monthly meetings and interactions are used to monitor progress and other **details** on projects. This gives the opportunity to make changes to meet unexpected needs during the quarter.

**Daily**

Each day presents a specific set of tasks and a new set of plans for the day. These are primarily **production** requirements and answer the basic question, “What do I need to accomplish today and how will I accomplish it?” Properly done, this is much like strategic planning in that it sorts out the important tasks that need to be done in order to reach the...
goals. Daily goals help attain quarterly goals, quarterly goals help attain annual goals, and annual goals help attain strategic goals.

The remainder of the paper focuses on the development of the current ADP Center Strategic Plan as well as implementation of the plan and multi-faceted tools to monitor the Center’s progress toward its strategic goals.

Developing the Current ADP Center Strategic Plan

Setting the Stage
A strategic planning group was formed within the ADP Center with the charge of developing a comprehensive ADP Center long-term plan. This group consisted of nine individuals from different areas across the Center. During the first meeting, the group discussed many issues that would help set the stage for future group discussions, activities and decisions. The group took time to discuss the topic of strategic planning. This discussion included what strategic planning is, what the purpose of strategic planning is, why do strategic planning, how will this plan be used, and how will this affect me.

The group discussed their individual roles in developing this plan. Because each person represented an area, they were to act as the representative for that particular area. This meant that individuals were to obtain constant feedback from their team. Another part of role definition was determining the parts of strategic planning for which the group was responsible. It was determined that the group would develop the plan and the ADP Center Administrative Group would be responsible for implementing the plan.

A process was developed to chart the steps involved in developing the plan. This process helped the group stay on track by knowing what needed to be done and the order of the activities. The process, as shown in figure 3, consists of gathering inputs; developing a vision, current assessment, and strategies; and writing a final report.

Another critical issue that needed to be decided was the timeframe for which we were planning. Since the information technology industry is constantly changing at an increasing rate, the group had to determine a reasonable timeframe to project. The group felt a ten year timeframe was too long and would be very hard to project. One to two years would be easier to predict, but the group felt that this planning was more like project planning and not planning for the future. Therefore, five years seemed like an appropriate timeframe to project.
Administrative Data Processing Center
Administrative Information Systems Technology Planning Process

Planning Process Approval
Determine Group

Set the Stage
Purpose of Strategic Planning
Process
Roles
Time Frame

Gather Input
Determine what input is needed
Determine process to collect

Present Preliminary Vision to ADP Center Staff

Develop Preliminary Plan
Vision
Current Assessment
Strategies

Present Preliminary Plan to Director

Complete Written Plan

Present to ADP Center Staff

Final Plan Approval from VP Business & Finance

Outside Sources
CAUSE
CUMREC
Peer Institutions
Technology Vendor:
"1994-95 Info. Industry & Tech Update"

Computation Center
Strategic Directions Review

Telecommunications
Strategic Directions Review

University Strategic Plan

Clients
VP Business & Finance
VP Student Affairs
Business Directors
Student Affairs Directors

ADP Center Staff
9 Focus Groups

Business & Finance Strategic Plan

Purpose of Strategic Planning
Process
Roles
Time Frame

Figure 3
Inputs
The strategic planning group discussed the importance of obtaining inputs. Obtaining inputs from various sources would involve more people. This involvement can create an interest in the future of the Center as well as create buy-in and commitment to the final plan. It was decided that we should get as much input as practically feasible.

The group then discussed potential inputs for the planning process. The group brainstormed a list of areas to collect information and processes for collecting the information. The group decided to get input from the ADP Center staff, but thought it would be valuable to give the staff some background before asking them for input. “Discovering the Future: The Business of Paradigms,” video was shown in several staff seminars in order to help the staff think about breakthrough visioning ideas for the year 2000.

The strategic planning group held nine focus group meetings wherein staff were asked for input on two questions:
“Where do we (as an ADP Center) want to be in the year 2000?”
“What is the current assessment of the ADP Center?”

The SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis was used to analyze our current assessment. Strengths and Weaknesses examine internal factors such as structure, culture, and resources (people, dollars, space, technology, tools). Opportunities and Threats examine external factors such as economic, demographic, political-legal, social, and technology.

Additional focus groups were conducted with the university Business & Finance Directors and the Student Affairs Directors. Similar input was also obtained from the Vice Presidents for Business & Finance and Student Affairs.

Since the ADP Center works closely with other technology providers on campus, the group obtained inputs from the Computation Center and Telecommunications Department regarding their strategic directions.

The group also obtained valuable inputs from various outside sources, such as publications from CAUSE and CUMREC that focused on where other institutions are heading. Various articles from vendors and other information technology publications were passed among the group members to make notes of important issues for the group to consider in developing the Center’s plan. Another publication that was helpful to the group was the “1994-95 Information Industry and Technology Update,” published by IDC. This publication predicted future directions in different areas of information technology, such as systems software, office information, client/server, etc.
The ADP Center developed its strategic plan concurrent with the development of the university strategic plan and the Business & Finance strategic plan. These emerging plans were also used as inputs to the ADP Center strategic plan.

**Sorting**
Next, came the task of trying to sort all of the inputs into meaningful information. This was a large task considering the group collected 264 vision responses and 220 SWOT responses from the staff focus groups alone.

The group used an affinity diagram to sort like ideas into categories. Using this tool, a group distributes all the ideas on a table. The group can also use Post-It® Notes and place the ideas on a wall. Next, the group members silently sort the ideas into categories with similar ideas. Once the process has stopped, the group discusses the categories and develops header cards for each category, representing the central idea in each category.

**Plan Development**
To develop the Center’s Strategic Plan, the group used the process shown in the diagram below. This process included developing a vision, a current assessment, and finally, a set of strategies. These steps are explained below.
Vision
The affinity diagramming process led the ADP Center Strategic Planning Group to five major goals. The group developed the vision by describing the goals envisioned for the year 2000. The vision was developed first in order to avoid any tunnel vision that may occur from current views and habits. This vision was then presented to the staff to provide them with a summary of the inputs as well as to provide initial direction for the plan.

Current Assessment
Next, the group assessed the Center’s current position, internally (strengths and weaknesses) and externally (opportunities and threats). Once again, the group used the affinity diagramming tool to sort responses in each SWOT area. From the categories and header cards, the group analyzed the results and prepared a current assessment summary.

Strategies
Strategies were developed to show the Center’s actions needed for getting from where it is today (current assessment) to where it wants to be in the year 2000 (vision). Strategies were developed to link the current position to a goal or vision in the year 2000. The importance of this step is to verify that a particular goal is important and to commit a strategy to reaching that goal. Many times if a plan of action is not developed to complete a goal or task, it will not get done.

Strategic Goals
The following describe the five ADP Center Strategic Plan goals for moving toward the year 2000.

Goal 1: Enhance University-wide Administrative Information Systems and Client-support Services
Much of what the ADP Center envisions itself accomplishing in the next five years will be built on its established foundation of quality mission-critical business systems, reliable client-server networks, service to clients, high standards, and rapid response time. This foundation has enabled the ADP Center to position itself for change. By using technological advances, multi-platform delivery systems, team building, and reengineering concepts, the ADP Center will use its past as a springboard to propel itself into the next arena of information management.

Goal 2: Lead in the Development of Effective Partnerships
While the ADP Center must work with its clients in determining its focus of things it can do well within the resources available, the Center recognizes its responsibilities to a wide range of clients and understands the importance of addressing their needs and concerns. To maintain its effectiveness, the ADP Center must continue to emphasize partnerships between the ADP Center, its clients, and its vendors. Where beneficial partnerships can exist, the Center will need to help build them. Additionally, the Center will need to foster a spirit of cooperation that allows for a high degree of integration and connectivity with other campus agencies that provide IT support. Within this spirit of cooperation, the Center must help reach a consensus about shared duties, spheres of activity, and responsibilities. The ADP Center will need to be a co-leader with its partners in reengineering the university’s business processes.
Goal 3: Expand and Enhance Information Access
One of the most important goals for the ADP Center will be to build on its established systems and networks to provide integrated access to university information through a coordinated network environment in which the university can conduct its business. The Center will need to work to make technological solutions more user friendly.

Goal 4: Foster Continued Development of a Quality, Highly Productive Staff
A critical element in the ADP Center’s vision is its concept of what its staff will need to be in the coming years. The ADP Center must encourage the highest aspirations and professional development in its staff members. It must challenge them to seek new knowledge and encourage them to understand new technology and then apply their knowledge in practical situations for the ADP Center’s clients.

Goal 5: Promote the Development of Technological Tools and Capabilities
Iowa State University is a community that values the ability to translate knowledge into action and prizes a willingness to work with experimental technologies, sometimes even before their potential to become part of the mainstream has been recognized. As an integral part of a university community in which technological advances are occurring at an ever increasing rate, the ADP Center must take a leadership role in blending new technologies into the university’s administrative information systems. The Center must be poised to take advantage of these advances and to incorporate them into its development and application platforms.

Implementing the Plan
Planning for and following up on implementing the plan is also very important. Various methods were used to inform the staff about the plan and to start the implementation.

A staff seminar was held to review the purpose of strategic planning, and the process used. A considerable amount of time was spent on communicating the vision and goals for the Center. Examples were given so each team could see how the team fits into the strategic plan.

To implement the strategic plan, the Administrative group developed a matrix, as shown on the following page, to help teams focus on goals and strategies relevant to them, to verify all strategies had ownership, and to consider any timeframe sequences. Each bar represents an activity for which a team has participation.
### Planning Tools and Levels

Figure 4 shows the different planning levels and tools used in the ISU ADP Center. As defined earlier, these tools are used to assist in the implementation and monitoring of the strategic plan.

### Conclusion

Planning in a dynamic IT environment can seem like an enormous challenge. By using a well-defined strategic plan as a foundation and multi-faceted planning tools to support strategic activities, an organization can be better prepared for future changes in the IT environment. This should give more assurance that future goals will be met.