IT STRATEGIC PLANNING

> "You've got to be very careful if you don't know where
> you are going, because you might not get there."
>
> *Yogi Berra*

BACKGROUND

Henry Mintzberg, former president of the Strategic Management Society, points out that "strategy can not be planned because planning is about analysis and strategy is about synthesis."[1] Failure to recognize this basic distinction accounts for the frequent failure of such exercises, as does an excessive focus on technical detail, lack of suitable leadership, and perhaps most important, failure to align technology to institutional mission and priorities.

Strategic planning involves a structure or framework, a set of procedures (both formal and informal), and of course content. Beyond these basic elements, the underlying assumptions about strategic planning are that the future can be anticipated, forecasted, managed or even controlled, and that the best way to do so is to have a formal and integrated plan about it in place. The process of planning itself may turn out to be more important than the results, and that process requires, as Mintzberg suggests, both analysis and synthesis. Planning simply introduces a formal "discipline" for conducting long-term thinking about an institution, and for recognizing opportunities in and for minimizing risks from the external and internal environments.

Among the hundreds available, perhaps the most well-know model of strategic planning has the SWOT (for strengths, weaknesses, opportunities, and threats) appraisal of internal and external environments as its centerpiece. But whatever the model, following decades of research across hundreds of organizations, empirical evidence on the effectiveness of strategic planning is mixed at best. So, why plan? Again, the answer may lie in the process itself; like the ritual rain dance, planning improves the dancing, if not the weather.[2]

But a more sophisticated response is required, especially if strategic planning is to be justified in the context of professional organizations like universities. Strategic planning found its origins and its fullest expression in the top-down, bureaucratic, centralized, and standardized organizations that readily lend themselves to control. This "machine" model hardly applies to what March and Olsen called the "organized anarchies" of academe.[3] In the words of the ECAR alignment study: "we might describe colleges and universities as networks of cottage industries rather than enterprises. Aligning priorities in an enterprise is challenging. Aligning priorities within a network of cottage

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industries is downright hard."[4] The IT culture and the academic culture differ in almost every important respect: the former has an institutional focus, the latter a disciplinary focus; one emphasizes speed, change, and short life cycles, the other values tradition and long-term commitments to research and theory. Rather than control, then, the advantages of formal planning in the university seem to revolve around communication, education, prioritization, consensus building, and most important, legitimizing whatever decisions do get made.

Cassidy has identified at least six reasons why strategic planning makes sense for CIOs.[5] The first three address the administrative environment and help get IT off the "cost page" and on to the "asset and investment page." The last three address the internal responsibilities of the IT organization itself.

1. It promotes effective management of an expensive and critical asset of the institution.

2. It improves communication between the fiscal and IT units of the university.

3. It helps to align or even link the direction of IT to the business functions of the institution.

4. It improves the flow of internal information and processes within the IT division.

5. It helps to efficiently and effectively allocate IT resources across the campus.

6. It tends to reduce the time and expense of IT life cycles, particularly in terms of vendor review, selection, approval, and implementation.

The 2004 Educause study of IT alignment in higher education identified a total of 13 reasons for developing IT strategic plans, but three were dominant: align technology with institutional priorities (76 percent of respondents); secure financial and other resources (53 percent); and enhance IT service levels (45 percent). In general, these motivations were strongly correlated with perceived outcomes.

The same study found that most publicly available plans (i.e., those on the Web) did not conform to standard planning methods and frameworks in the professional literature; tended to be inward-looking and rarely benefited from environmental scanning; were more often tactical than strategic; rarely related IT planning to teaching and learning; focused more on institutional vision and mission than on budgets; and had inadequate communications and assessment strategies. Apparently, the bar is not very high from a national perspective.

Each year, Educause conducts a survey of institutions nationally to identify the top ten issues in IT. In 2006, strategic planning ranked seventh in the list, behind security,

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funding, ERP, disaster recovery, faculty development, and infrastructure.[6] Of course, all of these issues lend themselves to comprehensive or individual strategic planning. Educause posed this list of critical questions for strategic planning:

- What process models will the IT organization use to develop its strategic planning process?

- Will the IT organization hire consultants, or will it in source strategic planning?

- If consultants will be hired, will the organization use their methods to maintain strategic planning after they leave?

- How will strategic planning inform decision-making: at the cabinet/executive level or at the operational/tactical levels?

- What approaches will the organization use to articulate service or program success (e.g., benchmarks, metrics, service-level agreements)?

- How will a focus on strategic planning be maintained in an organization with varying planning cultures?

- What methods or approaches will IT leaders use to align future-oriented programs and services across the entire organization?

ACHIEVING ALIGNMENT: SOME LESSONS LEARNED

Whatever the model of institutional strategic planning employed by a campus, the IT division must find a way to "align" with it. The good news is that both institutional and IT strategic planning have things in common that can make them effective: namely, a compelling vision, a clear communication plan with a wide array of campus stakeholders, leadership combined with collaboration, and a practical means for execution together with access to the necessary resources. While all of these elements are important, linking IT planning to institutional budgets may be one of the most effective means for achieving alignment, at least in the short-term.

Gartner Group has identified five organizational styles that are crucial to strategic technology planning.[7] The first is a navigator that tracks and evaluates the impact of emerging technologies for strategic advantage. The second is the guerrilla, a pragmatic and tactical team for deploying new technologies. Third, a priest or evangelist is needed for educating and persuading senior management. Fourth, a conductor is required for coordinating the plan with other organizational units. Finally, a research team should be in place to investigate technologies ahead of institutional need. In each instance, there is a balance between being technology-focused versus being business-focused.

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The experiences of CSU campuses together with those from institutions nationally offer some useful guidelines for insuring that the IT plan is aligned with institutional mission and priorities. The Educause study of IT alignment was based on: a quantitative online survey of 483 higher education institutions; qualitative telephone interviews with 22 higher education IT executives; an in-depth review of 57 higher education plans found on the Web; and four case studies from on-site visits. The key findings from that study were largely independent of campus size or Carnegie classification and suggested that institutions with greater IT alignment were those:

- With a clearly articulated campus vision and/or priorities;

- That consider planning important and closely linked to the institutional budget;

- That have published an institutional plan or campus IT plan or that engage in planning activities continuously;

- Reporting dynamic or stable environmental climates (as opposed to turbulent or volatile ones);

- That perceive both their IT governance process and their IT strategic planning process to be effective;

- That have greater communication with and involvement of key constituents, especially faculty and deans; and

- Where objectives are clearly documented at the time IT initiatives are approved.

While the themes of institutional culture, leadership, communication, relationships, and the like may sound familiar, there is at least one key element where the CSU appears to be well ahead of institutions nationally, namely measurement and assessment of IT performance. This is an expensive process, both in time and money, but the 10-year Measures of Success commitment in the CSU stands out as a relatively unique example of promoting institutional and IT alignment.

When given the stark choice between a "top down" or "bottom up" strategic planning process, not surprisingly CSU executives chose the former almost unanimously. In the view of most presidents and provosts, strategic planning always starts with a vision from the top that is clearly and consistently communicated to everyone; only then can a plan be created that will have any meaning or effect.

While presidents and provosts, and most deans, agreed that "top down" planning models seem to work best, they also recognized that the mission, size, age, demographic composition, programmatic emphases, culture, and "complexity" of the campus (not to mention personalities) could each play a role in the process. However, everyone agreed that budgetary links and specificity in the plans (e.g., the percent of

FTES instruction that will be delivered online by a date certain) made all the difference, regardless of the process. Budget allocations, specificity of objectives, and staff accountability were the themes that drove implementation as opposed to plans that sat on the shelf.

Several CSU officials indicated that multi-year budgeting makes sense to the extent that IT strategic planning is explicitly linked to the budget cycle; transparency and predictability are crucial to stakeholder buy-in. There was also considerable support for the president or provost taking funds "off the top" for IT at the beginning of the process to serve long-term institutional needs.

THE CSU EXPERIENCE

In the 2005 campus computing survey, 77 percent of CSU campuses reported having a strategic plan for IT; 18 percent were currently preparing a plan; and five percent did not have one. The corresponding percentages for comparison institutions nationally (i.e., Carnegie Public Masters 1) were similar; 81, 16, and 4 percent, respectively.[8] In the 2006 campus computing survey, 70 percent of CSU campuses responded "yes" compared to 76 percent of institutions nationally.

The spring 2006 survey of CSU campus presidents showed that 13 campuses currently have a campus wide IT strategic plan and three more have them under development. The remainder indicated either that the systemwide ITS serves as their strategic plan or they have such plans at the divisional level.

Institutional strategic planning in the CSU can be thought of as a continuum, ranging from relatively simple mission and goals statements posted to the Web, to full-scale public relations campaigns that permeate the campus, to detailed "no-nonsense, by-the-book" technical exercises. Of course, these models are not mutually exclusive, and some campuses do all three.

Mission and goals statements, however brief, do several things. They establish the underlying philosophical premises and purposes of the institution, and the things that may be unique or distinctive about it. They identify the principal customers, clients, or users, and the programs and services available to them. And they can give both internal and external stakeholders a sense of historical perspective, i.e., what the institution has accomplished in the past and what it hopes to accomplish in the future. They usually represent the conventional wisdom or consensus of campus stakeholders.

A second type of institutional strategic planning in the CSU is the broad thematic approach. This often has an identifiable slogan, a precise target date for achieving results, and a concise set of outcomes that can be communicated easily and ubiquitously across the campus. It may be accompanied by marketing brochures,

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charts, and other techniques for reaching both internal and external audiences, and is often driven from the office of the president.

The third model relies heavily on research, collaboration, and technical detail. It incorporates all of the elements about strategic planning found in the professional literature, and requires an elaborate process for filling in each. It tends to be broad in scope, and seeks to integrate all campus strategic planning efforts under a single umbrella. It also can be the most exacting in terms of developing budgets and fixing accountability.

The systemwide Integrated Technology Strategy (ITS) has been portrayed more as a framework and a process and less as a plan per se; that logic underlies many campus plans as well. Perhaps the key difference is that the campus IT strategic plans have a closer relationship to the annual budget process than the systemwide ITS. The units of analysis in campus budgets are narrower (i.e., colleges and departments) and the budgetary linkages between IT and institutional initiatives seem to be more tightly drawn.

For some CSU campuses the ITS framework and initiatives have formed the basis for the campus IT strategic plan for the past several years. Others have established independent plans that link to the ITS but often go far beyond it to align with campus strategic plans for libraries, student services, enrollment management, and facilities planning. Still others fall somewhere in between. On balance, IT strategic plans in the CSU tend to fall into two broad categories: those that are holistic, integrated, broad in structure, process, and content, and those that focus on unique but narrower capabilities for IT in the institution.

EXAMPLES

- There is almost everything about the CSU, Chico institutional plan and process to recommend as a best practice. Procedurally, each vice president submits annual strategic plans, and priorities are developed through campus-wide retreats and reviews. Divisional goals are set and linked to budget allocations. System initiatives and priorities play a role as well. All of this, including IT, is highly integrated around the academic programs of the institution. Much like its IT organizational and governance structure, Chico also has a highly integrated IT strategic planning process. The campus has produced three five-year IT strategic plans: Target 2000, Beyond 2000, and Aligning With The Future. Five planning themes animated each of these efforts: teaching and learning, information literacy, electronic information resources and infrastructure, integrated administrative systems, and assessment and knowledge management. The Chico library strategic plan is an integral part of the IT plan.

- Figure 1 shows the five-year strategic planning model used at CSU, Los Angeles. It includes two-year and five-year objectives with initiatives for achieving them, a set of seven strategic divisions (one of which is technology), fixed accountability,

and an estimate of the money and timeframe required for each initiative. One notable feature of the model is the identification of specific sources of funding for each initiative (general funds, non-state funds, and bonds). The plan is developed by a campus-wide Strategic Planning Coordinating Committee.

Figure 1
CSU, Los Angeles

Strategic Planning Model
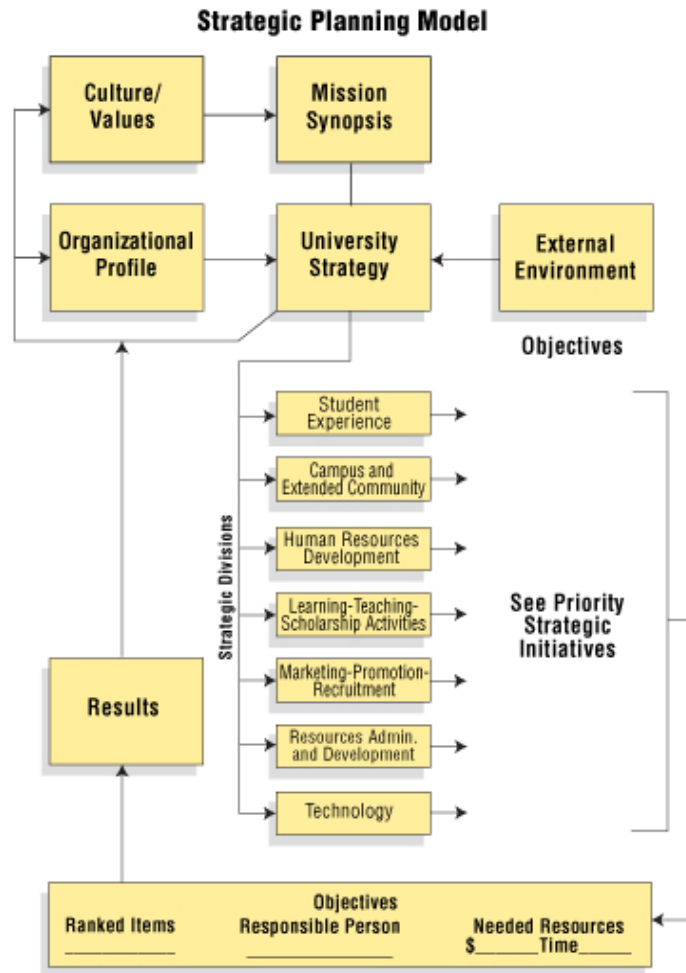
- While most institutional strategic plans in the CSU extend out five to ten years (e.g., Vision 2010 at San Jose or Destination 2010 at Sacramento), there is at least one example of very long-term planning. Envision 2035 at CSU, Northridge is a comprehensive effort to chart the future of the campus in every respect: academic programs; facilities, enrollment growth; student services; transportation, parking, housing, greenbelts, and other amenities. The draft master plan and supporting documents are available for review on the Web together with subscriptions for newsletter and email updates.

- The 2005 IT Strategic Plan at CSU, Monterey Bay relied heavily on a Web-based process map (Figure 2). The map contains presentations, references, notes,

and other documentation related to IT planning activities. The process map provides the university community with an up-to-date summary of the entire IT strategic planning process.

- The IT strategic plan at California Polytechnic State University (CalPoly) has been portrayed as a three-stage highway project. Stage 1 includes initiatives that are focused on fixing or improving existing "stuff" that are *transactional* in nature ("preventing potholes and gridlock"); e.g., network, lab, and classroom refresh; security and risk management; assistive technology.   Stage 2 initiatives are *transitional* and designed to move the institution "from highway to interstate;" e.g., LMS, technological convergence, portals, e-commerce. Stage 3 projects and initiatives are *transformational* and highlight new services and capabilities such as "service stations, theme parks, and clover leafs;" e.g., one-card; middleware; knowledge management. The campus conducts an annual "blue book review" of IT services that documents lessons learned and benefits derived from the previous year, list areas requiring further advice and study, and outlines an action agenda for the coming year.

- Humboldt State University produces annual updates to its base IT strategic plan of 2000 and supplements it with additional planning initiatives. Three of the latter are worth noting, although funding issues have slowed their implementation: the risk analysis and disaster recovery plan of 2002; the server consolidation/migration plan of 2003; and the smart classroom build-out and support plan of 2004. Other CSU campuses have developed "sub-IT strategic plans" of this nature, but few match the scope of these at Humboldt. Similarly, the campus strategic plan encompasses more than 200 pages, six thematic strategies, and 19 focus groups. IT is part of the infrastructure theme.

- Almost all CSU campuses have an IT presence on the Web. As might be expected, some are easier to navigate than others. But the print medium is still a powerful influence in an academic culture. CSU, Fullerton is a good example.. Its annual reports and brochure of IT services for faculty and staff are slick, colorful, informative, and written in a style for non-technical users. These are useful reminders that a marketing and communications component should be part of any IT strategic plan.

Figure 2
CSU, Monterey Bay

IT Strategic Plan Update Process

Consultation

Draft Plan Review

Final Review

Approval
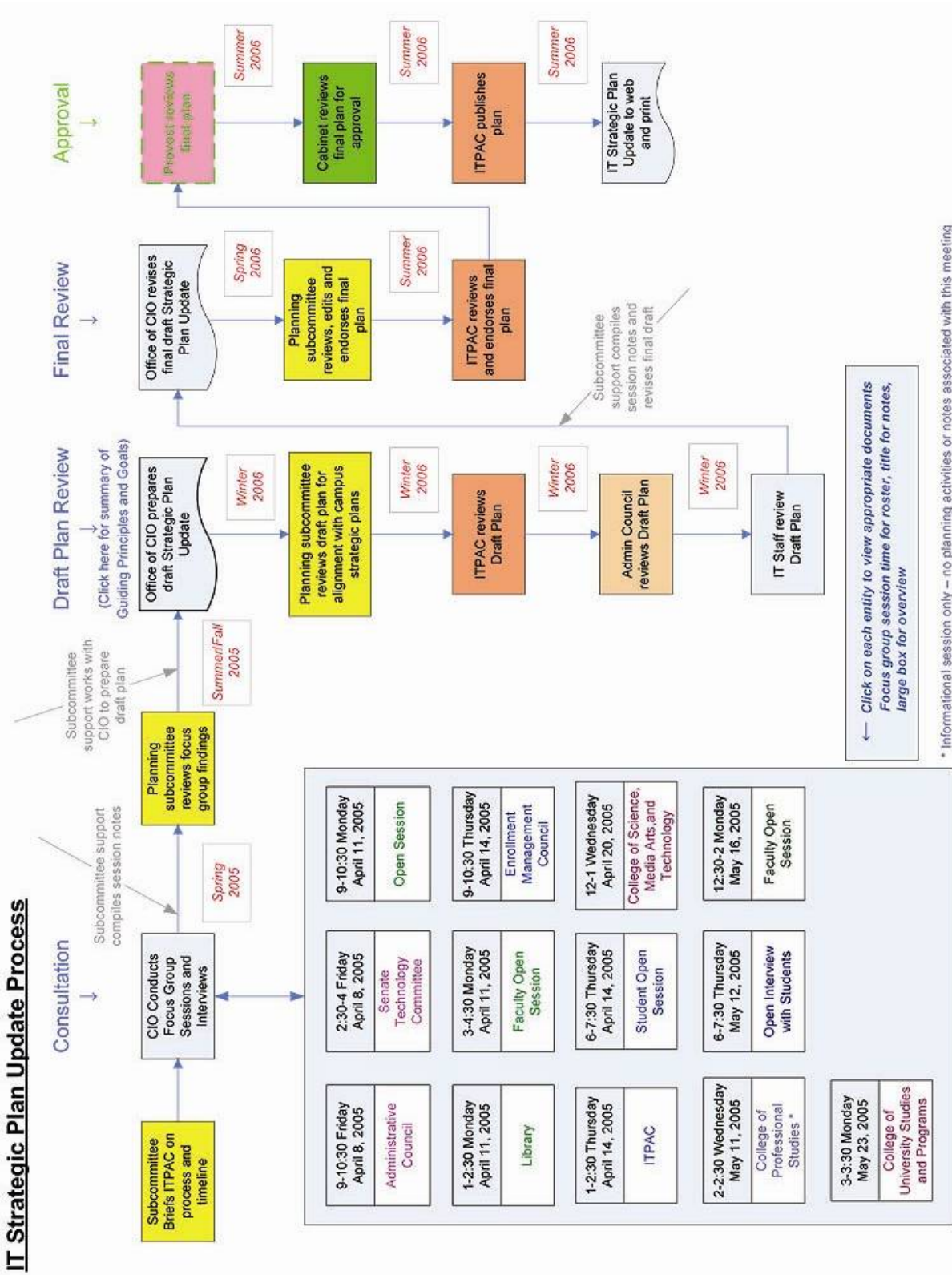
The degree of alignment between the campus strategic plan and the IT strategic plan is sometimes direct and obvious (CSU, San Bernardino and CSU, East Bay are good examples), but more often indirect. IT plans are infrequently mentioned in the institutional plans, but the latter are almost always at least referenced in the former. Almost all CSU institutional strategic plans speak of creating a "learner-centered" environment, although they vary widely in the formal role devoted to technology in that process. Community engagement and partnerships is another frequent theme (e.g., at Fresno, Bakersfield, San Marcos, and East Bay), although Monterey Bay appears to be one of the few examples where technology plays a prominent role. On the other hand, as more and more technology initiatives move from goals to operational realities (e.g., portals, LMS, smart classrooms, wireless networks, etc.) they may lose their strategic emphasis. One thing that was obvious from the campus visits was that enrollment growth solves many problems. Campuses with little or no enrollment growth find that budgets, facilities, and equipment rarely keep up with technological change.

On balance, at least three things stand out about IT and institutional alignment in the CSU: first, the commitment to accountability and a culture of evidence, as noted previously; second, executive involvement with IT as represented by the Technology Steering Committee of campus presidents and the Provosts Technology Steering Committee; and finally, strong IT advisory structures at both the campus and system levels.

A SAMPLE STRATEGIC PLANNING TEMPLATE FOR IT

In its simplest terms, strategic planning is an attempt to answer four basic questions: "where are we now; where do we want to be; how big is the gap; and what will it take to get there in terms of time and resources?" Answers require both a horizontal awareness and understanding of the institution's internal and external environments, and a vertical, introspective analysis of the IT organization itself.

Perhaps the most widely known model of strategic planning is John Bryson's *Strategic Planning for Public and Nonprofit Organizations* and the companion workbook *Creating and Implementing Your Strategic Plan*. Bryson proposes a ten-step strategic planning process (Figure 3) to include:

1. Identify and agree upon a strategic planning process.
2. Identify organizational mandates.
3. Clarify organizational mission and values.
4. Assess the organization's external and internal environments to identify strengths, weaknesses, opportunities, and threats.
5. Identify the strategic issues facing the organization.
6. Formulate strategies to manage these issues.
7. Review and adopt the strategic plan or plans.

8. Establish an effective organizational vision.
9. Develop an effective implementation process.
10. Reassess strategies and the strategic planning process.

Figure 3

THE TEN-STEP STRATEGY CHANGE CYCLE.
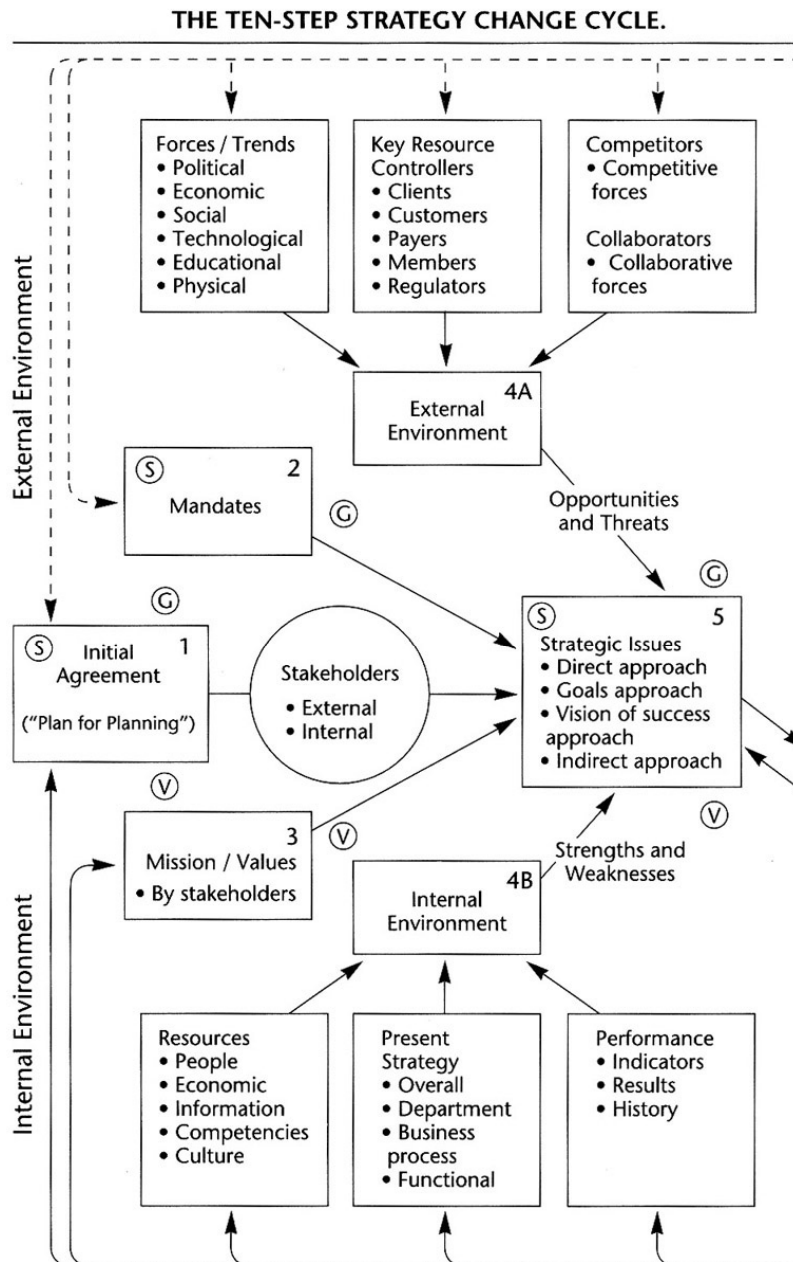
Figure 3 (cont.)
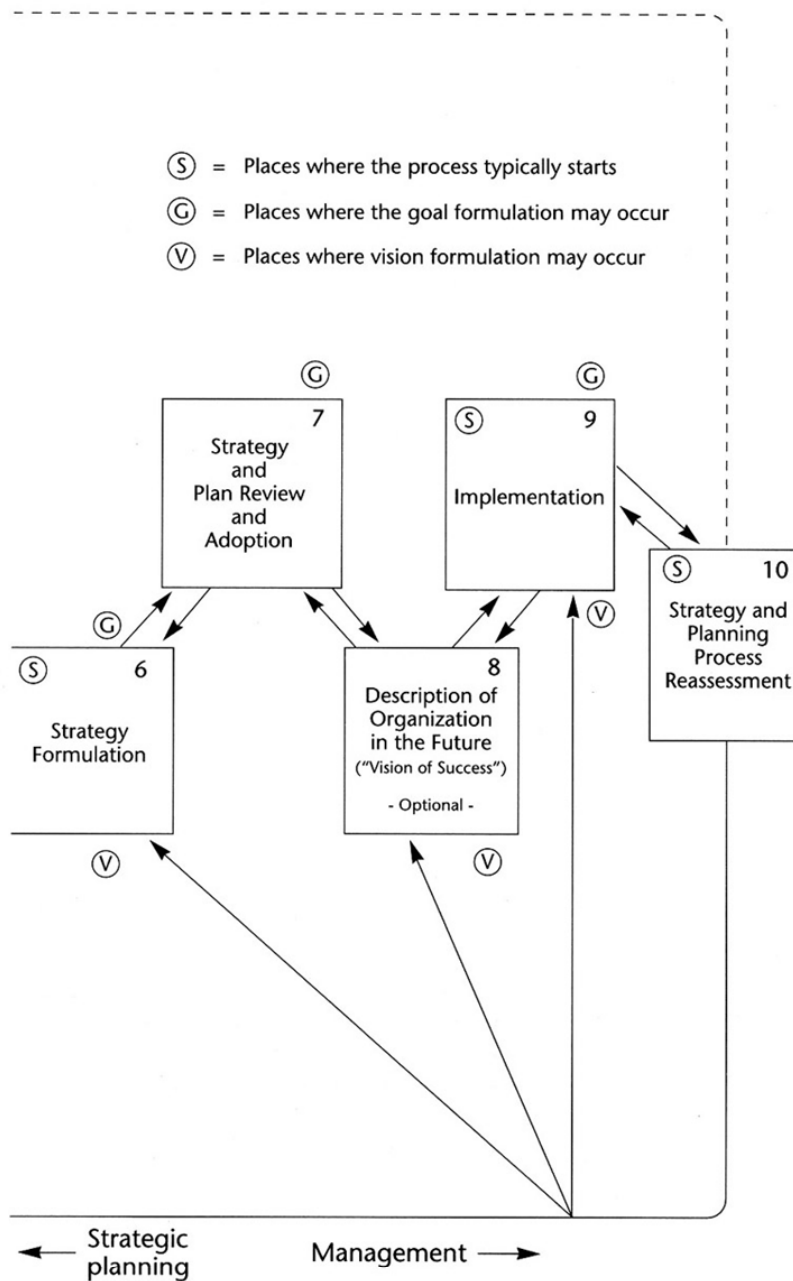
Figure 4 is drawn from Cassidy's, *A Practical Guide to Information Systems Strategic Planning.* Despite the corporate sector emphasis, it outlines the four broad phases required. The *conceptual* phase establishes the vision, mission, purpose, processes, and scope of the strategic plan. The *analytic* phase provides the internal and external environmental information to guide the overall effort. The *planning* phase develops the objectives, strategies, options, priorities, resources, and recommendations for achieving the end results. Finally, the *monitoring and evaluation* phase establishes metrics, keeps

everything on track, points to needed adjustments, and documents the levels of success that have been achieved over time.

Figure 4


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                        │ Establish the Plan       │
                        │   •  Purpose             │
                        │   •  Process             │
                        │   •  Scope               │
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Document High Level Business Direction
- Business Plan (Mission, Vision, Values, Goals, Objectives, Business Priorities)
- Business Information (History, Description, Financial Summary, Industry Summary, Environmental Factors, Internal Strengths and Weaknesses)
- Environmental Requirements
- External Requirements (Customers, Suppliers)
- Operating Vision

Document Current IS Situation - Internal
- IS Environment
- Organizational Structure
- Expenditures
- Backlog
- Other Locations

Document Current IS Situation - External
- IS Industry Trends
- Competitor Profiles

Document Detailed Level Business Direction
- Information Needs
- Business Processes
- Business Requirements

Determine IS Direction
- Mission, Vision
- Strategic Objectives
- Strategies
- IS and the Business Goals
- Computing Architecture
- Policies and Responsibilities
- Annual IS Objectives
- Service Architecture

Determine Gap from Current to Future
- Business Operating Vision Assessment
- Environmental Requirements Assessment
- Information Needs Assessment
- External Requirements Assessment
- Business Application Assessment
- Business Requirements Assessment
- Technical Computing Architecture Assessment

Determine Recommendation
- Options (Cost, Time, Resources, Benchmark Information, Advantages, Disadvantages)
- Recommendation
- ROI Analysis

In broad terms, these phases are familiar to CSU stakeholders who participated in the first and second rounds of the Integrated Technology Strategy. Although the scope of ITS planning was large (involving all CSU campuses) the underlying logic can be applied to a single campus as well.

In addition to a stable planning structure, the ITS has adhered to a systematic planning process with five key elements: assumptions and principles; stakeholder collaboration; initiative filtering and prioritization; research and evaluation; and sustained leadership. This process was used in developing the first list of initiative priorities, and then replicated (with few exceptions) to produce a "second wave" of initiatives in academic technology.

In March 2006, the system recognized the ten-year history of the ITS with a presentation to the CSU Board of Trustees. The printed agenda for that occasion provided a brief summary of the five components underlying the ITS planning framework.

Following is a sample 11-point checklist, in sequence, for building the major components of an institutional or IT strategic plan. While these steps are generic in nature, they should be adjusted for the cultural and organizational context to which they are applied.

1. Readiness Assessment: Campus planners "should not try strategic planning at home" unless others are also ready to do it. A readiness assessment involves having answers in advance to a host of basic questions, such as: Why are we doing this? How much will it cost and how long will it take? What will "I" get out of it and what will my role be in it? How much will change as a result, and how soon? Is there a critical mass of stakeholders who believe that change is necessary, and even desirable? How well have previous planning efforts worked, and what must be done differently? Much of this stage boils down to anticipating stakeholder concerns, recognizing the limits of organizational change, and managing expectations about both.

2. Mission, Vision, Values, and Goals: These tend to be fairly abstract, even philosophical, principles that are highly interrelated. They represent the consensual wisdom about the institution, and its purpose—past, present, and future. They reflect the ultimate outcomes and rewards that planning is designed to achieve, i.e., "what do we want to become?"

3. Internal and External SWOT Analysis: While some strengths, weaknesses, opportunities, and threats are largely obvious and intuitive, most are not. This step implies rigorous research and data collection and analysis. Indeed, the attempt is to identify those areas that are not obvious or known and to derive competitive advantage from them. It forms the baseline from which planning begins; i.e., "where are we now," and where do we stand in comparison to the best practices identified elsewhere (benchmarking).

4. Gap Analysis: This involves a careful and systematic comparison of steps two and three and raises additional questions? If the gaps are large, and resources or other barriers in doubt, are the goals realistic or should they be adjusted?   If

the gaps are small, have the goals been set too low? In any case, is it worth proceeding recognizing the potential risks and rewards?

5. Objectives: Given the values, goals, and strengths of the institution, as well as the risks stemming from both the external and internal environments, what measurable objectives seem realistic? These can be modest and operational (the next year or two), tactical and short-term (the next few years), or strategic and long-term (five years or more). Of course, in academic settings many of the most important goals may be more qualitative than quantitative, never an easy distinction when setting objectives. Once established, weights should be given to each objective so priorities and rankings are apparent to all. The stakeholder "filtering" process for doing this was one of the hallmarks of the ITS.

6. Options: This should be an open-ended discussion among all stakeholders about the "how" of achieving each objective. In the beginning, everything should be on the table to encourage innovation and creative solutions. But, again, a filtering process must be introduced to bring all of the potential options in line with anticipated resources and the risk-reward ratio from previous analyses.

7. Strategies and Initiatives: This is the programmatic dimension and the heart of strategic planning. They drive policy and the allocation of resources. They represent the collective judgment of the institution about what will work in closing gaps between current conditions and a desired future or target state.

8. Timelines and Resources: Open-ended timelines are rarely useful; they encourage waste and reduce accountability. Target dates for each objective are indispensable together with the resources (both sources and amounts) to accompany them. Transparency in "who gets what and when" is also a crucial means for achieving stakeholder buy-in. Tying budgets and institutional reward systems to the strategic plan is one of the best means for insuring that it will be implemented.

9. Accountability: This step simply identifies "who is expected to do what and when." As the saying goes, if everyone is responsible, no one is responsible. If multiple players are attached to a single objective, their responsibilities should be spelled out.

10. Communications: Presumably, critical internal and external stakeholders were the ones who developed the plan and are on-board with it. But a wider audience, on and off campus, who are important to its success may not be on board. A formal communications strategy using digital and print media as well as meetings and personal contacts can lower resistance and build coalitions crucial for success.

11. Feedback and Evaluation: Real-time monitoring mechanisms are the best way to reduce surprises and to make adjustments as conditions change. But formal

metrics and comprehensive assessments are also needed on a periodic basis. A fixed percentage of the total plan's budget should be allocated for the purpose of answering one fundamental question: "how are we doing, so far?"

Figure 5 (on the next page) represents an attempt to summarize the 11-step process described above. It contains five basic elements that should be part of any IT strategic planning model.

Figure 5

Basic IT Strategic Planning Model


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│  Institutional Vision: Establish the campus   │
│     mission, values, and strategic directions │
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│  Current IT Environment: Develop readiness    │
│  criteria to conduct strategic planning; document │
│    IT capabilities by performing an internal  │
│    and external SWOT and "gap" analysis       │
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│  Future IT Environment: Engage the campus     │
│  community in creating a new IT vision tied to the │
│  campus mission; develop an IT strategic plan that │
│  effectively organizes objectives, priorities, projects, │
│  resources, and timelines to implement the vision │
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│  Communication Plan: Constantly inform the    │
│    campus community about the vision and      │
│       status of the IT strategic plan         │
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│  Accountability: Develop a monitoring, evaluation, │
│  feedback, and formal assessment mechanism to │
│     constantly review and revise the plan     │
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