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# **AC 2012-3485: STRATEGIC PLANNING METHODOLOGY WITHIN ARCHITECTURAL AND INTERIOR DESIGN TECHNOLOGY PROGRAMS**

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# STRATEGIC PLANNING METHODOLOGY WITHIN ARCHITECTURAL AND INTERIOR DESIGN TECHNOLOGY PROGRAMS

## Introduction:

Most Engineering Technology Programs will likely, at some stage of their development and maturation, face the need to develop a strategic plan in order to chart the course of their future. This often places faculty and administrators of these programs on unfamiliar ground as they step out of their areas of expertise to find suitable methods to structure their visions and plans. However, without strategic plans, programs may falter and faculty may begin to question their programs' direction, lack of cohesiveness and identity and begin to feel uncertain about their ability to stand the test of time and rough waters of the current economic climate.

This then brings to mind the following questions: How often does one express concern about where their program is heading? What makes it unique in the context of encroaching innovation and other, similar programs? What are those things that will keep it alive in the face of tough, fiscal decisions? How does one develop a clear vision and plan that will ground program development at every step?

## Purpose:

The following paper discusses strategic planning undertaken within the Design and Communication Technology (DCT) Department at Indiana University Purdue University Indianapolis (IUPUI). In particular, it reviews the history of a unique approach to strategic planning that examines operating principles, program identities, shared visions and uniqueness before laying out goals and objectives, which would be a more typical approach.

This paper also begins by reviewing the literature that discusses strategic planning relevant to specific engineering technology programs such as Architectural Technology and Interior Design. It then traces and reviews the steps taken by the DCT Department at IUPUI in developing their strategic plan. It assesses this particular case study by means of reflection and description and seeks to draw out strategies for developing strategic plans that are particularly applicable to Engineering Technology Design Programs. It follows upon research undertaken by organizational planning theorists, who contend that planning for sustainability and longevity is best done through identifying operating principles (rather than by first determining specific objectives). The paper also sets out and critiques definitive steps for developing sustainable programs that can weather the future by being built upon well-thought out operating principles and a shared vision.

It is the authors' intent to discuss this within the framework of a pilot study that could serve as a template for others to follow as they travel through this unfamiliar territory of strategic planning. Once this pilot has been completed, then more data driven assessment will begin and out of this will fall a longitudinal study of the value, success and pitfalls of this process. The paper will begin with a discussion of the literature and context that forms the foundation of our particular approach.

## What We Know About Planning for the Future:

If you have been assigned the task of creating a strategic plan for your academic department or unit, it might be well for you to remember two adages:

“If you want to make God laugh, tell him your plans” (Woody Allen)

And:

“Tomorrow is promised to no one” (anonymous)

As prophetic as these sayings may be, we still plan for our future as though we can control it and that it is sure to come. Unfortunately, neither is the case, but, we still plan. Perhaps, it could be said, that planning for the future is in our DNA. Individuals, families, business organizations (young or old, public and private, profit and non-profit and universities) plan their futures. In organizational theory, it's called “strategic planning.”

The contents of this paper will guide and direct your approach to creating a strategic plan that will position your organization to live a healthy and happy life now and long into its future, or at least it will increase your chances of doing so. There are no guarantees for success; there is only a probability of it. Luckily, planners can enhance their probability of success by following sound fundamentals for strategic planning that are described in this paper. Herein, the authors explain these fundamentals and illustrate how they were implemented by the DCT Department at IUPUI as they created their strategic plan.

We begin by listing and describing three fundamental tasks strategic planners complete as they strategically plan.

1. They encourage, seek and desire participation from everyone involved in the organization. They communicate this loud and clear. If a group or organization is too large for all to participate, those not directly involved should have their voices heard and interest advanced through others who will represent them.<sup>1</sup>
2. They take a meta-perspective and assess and evaluate their organization's current situation and behavior. They evaluate all their current practices for sustainability and overall effectiveness. They answer this question: “Are we making healthy choices?” They turn the mirror on themselves and evaluate everything they do as they operate within their organization. They evaluate their interpersonal relationships with colleagues, the quality of their decision making, their problem solving, and how well they interact with others outside their sphere of influence, etc. Everything they do is data for analysis.
3. They forecast the future by examining the trends in their industry. They determine what might impact higher education generally and their organization specifically. They accomplish this by conducting environmental scanning techniques such as SWOT analyses, gap analyses, stakeholder interviews and focus groups, quality audits, process analysis, and

benchmarking.<sup>2</sup>

Completing these three tasks is essential to strategic planning, but something else is needed if an organization wants to live a long and prosperous life. Research on organizational longevity by Goodwin<sup>3</sup> demonstrates that organizations that live to be 100 years or older adopt a unique conceptualization or perspective about planning for the future and about the existential nature of their organization. They are:

1. When planning, think long term rather than short term.

Typically strategic plans cover a two to three year period. Businesses explain that three years is about all they can effectively plan for as too many things change and they must focus on goals that effect their profit and ROI. Universities have a different focus. Their goals are in educating people which is a long-term investment in capitol and resources and do not typically focus on “making money”<sup>4</sup>

2. Conceptualize your organization as belonging within the biological realm (i.e. a living organism).

Humans belong to the biological realm. Humans possess a warning system that lets them know when they are in danger. This is called their immune system. Think of your organization having this human characteristic and evaluate the organization’s immune system.<sup>5</sup> Determine how well the organization’s immune system is working and how quickly and in what manner people in the organization respond to it. It is essential to possess a healthy immune system and respond to it in a timely and effective manner to survive.<sup>3</sup>

Fortunately all people are endowed with knowledge of what’s right and wrong; we call this their conscience function. Like an immune system, organizations also possess a conscience function telling them what is right from wrong.<sup>6</sup> Evaluate your organization’s conscience function. Determine how well it’s working and how people in the organization respond to it. With a seared or defective conscience, the organization’s leaders have no moral or ethical code. They may resort to harming their employees, community and their environment.

Before we illustrate how these three fundamental tasks and perspectives were implemented and adopted by the DCT department at IUPUI let us review a brief history of the literature on strategic planning and comprehend its purposes.

Brief History of Strategic Planning and its Purposes:

Strategic planning has been around for some time. In the early 1920s, the Harvard Business School developed the Harvard Policy Model, one of the first strategic planning methodologies for private businesses.<sup>7</sup> It was used widely from the mid-1960s to mid-1970s. Organizations considered visionary within the engineering and technology industry such as: 3M, Hewlett-Packard, Boeing, Motorola and Sony fully embraced the practice.<sup>8</sup> The 1990s brought a revival of strategic planning as a “process with particular benefits in particular contexts.”<sup>9</sup>

“Strategic planning is the continuous process of making present entrepreneurial (risk-taking)

decisions systematically and with the greatest knowledge of their futurity; organizing systematically the efforts needed to carry out these decisions; and measuring the results of their decisions against the expectations through organized, systematic feedback.”<sup>10</sup> Essentially, Drucker <sup>10</sup> is saying that strategic planning helps you prepare for the future. It does not predict it or shape it. The future will be what it will be. But every organization including university programs, regardless of their size or discipline, can prepare itself for the future and be prepared for whatever comes. Even families can benefit from strategic planning. For example: Have you had a strategic planning meeting with your family lately?

In the past twenty years universities, schools and departments within them have undertaken strategic planning in a proactive effort to better meet the many emerging challenges from their external and internal environment, and in response to decreasing financial support, rapid technological advances, changing demographics, and outdated academic programs.<sup>11</sup> Faculty from all departments and degree programs within schools such as the one written about in this paper can benefit from preparing themselves for the future.

Universities, schools and departments within them have had mixed results from their strategic planning efforts. “Overall, strategic planning at universities has been only moderately successful, as only few were able to achieve significantly successful results and transform themselves dramatically. Others have been able to make important changes in parts of their operations. But many institutions have stumbled, dissolved into controversy, or lost their nerve.”<sup>12</sup>

Planning theorists and scholars have endeavored to explain why this is the case. Thus far, however, “there is no consensus (or clarity) on major determinants of strategic planning’s success in universities.”<sup>13</sup> Perhaps there are too many independent variables to control within the planning process to determine through scientific inquiry what causes the success\or failure of strategic planning. This was not the focus of this paper.

The level of success notwithstanding, it is still important for higher education to engage in strategic planning. The process is very useful in assessing and evaluating the internal environment, the external environmental forces, and trends that may well affect the sustainability of the institution in the short and long term. With this information the organization/university can prepare for whatever lies ahead.

The key steps in traditional typical strategic planning are much the same today. The following are the steps involved in a typical plan. Universities have chosen to use these steps even though they are typically used by businesses quite differently than by universities. Example statements from an engineering and technology school housed within a large mid-western university are provided below:

- I. Vision statement: This states what the school wishes to become. A vision sets out the reasons for organization’s existence and the “ideal” state that the organization aims to achieve.

Example vision statement: Our vision is to be one of the best urban schools of engineering and technology, recognized locally, nationally, and internationally for our achievements.

II. Mission: This states essentially what the school currently does.

Example mission statement: Our mission is to provide our constituents with the following:

- High quality, well-rounded, and relevant educational experiences that promote critical thinking, scholarly work, and effective communication
- An environment that encourages and promotes excellence in technical proficiency, leadership, scholarship, basic and applied research, creative pursuits, and lifelong learning and that provides opportunities to develop the necessary skills

III. Core Values: This states what is important to the school.

Examples of core values: Core Values that define, inform, and guide our decisions and actions are:

- *Academic Excellence:* Academic excellence is our first priority. We foster, recognize, and value lifelong excellence in learning, teaching, research, and scholarship.
- *Collaboration & Partnering:* We value teamwork, collaboration, and partnership building within and across disciplines and with the community.
- *Diversity:* We value and encourage intergenerational, multiethnic, and international diversity in our research foci, curricula, and pedagogy

IV. Goal Setting and Objectives: Goals state what the school will accomplish in the next three to five years. Objectives provide a clear identification of specific steps that are taken to accomplish each goal. These are selected after the internal and external environmental scans are completed. Each objective and goal has a “champion” assigned to it. This is a person who insures that it gets accomplished.

Examples of goals and objectives:

- Excellence in Teaching and Learning
  1. Attract more students, including better prepared students and a more diverse population to the school. .  
Champion’s name\_\_\_\_\_
  2. Increase involvement in Project Lead the Way and similar programs.  
Champion’s name\_\_\_\_\_
  3. Continue to improve our process for recruiting students from K-12.

Champion's name \_\_\_\_\_

### Selecting the Right Strategic Plan Model to Follow:

It is important to select and use the most appropriate planning model for your size and type of organization. Universities and academic departments within them differ from for profit businesses. It is wise to adopt a planning model to accommodate the differences.

Research by McNamara explains that choosing the right planning model depends on the following:<sup>14</sup>

- the culture of the organization,
- the complexity of the organization's environment,
- the size of the organization
- the amount of residential expertise in doing strategic planning.
- the leadership philosophy and practices of the organization's leaders,

With this in mind, let us first describe the characteristics of the DCT department and the culture in which it lives. We will then describe the planning model chosen, why it was chosen and how it was implemented. You will also read examples of what the faculty of the department developed as they completed each step of the strategic planning process.

### Characteristics and Culture of the DCT Department at IUPUI:

The DCT department is housed in the IUPUI School of Engineering and Technology. Their Dean is an engineering professor with a strong research background as are the large majority of full professors in the school. However, there are no full professors in the specific department discussed herein. Due to the applied nature of its disciplines, the scholarship of teaching and learning (SOTL) is the faculty's primary research emphasis with less research being done within its specific disciplines.

The department also has a very diverse portfolio of programs with faculty from very different disciplines. It is housed in an Engineering and Technology school whose basic culture, mission, research focus, degree programs, pedagogy, faculty expertise and disciplines are very different than their own.

Within the department there are 11 full time faculty and four programs: Architectural Technology (ART), Interior Design (INTR), Computer Graphics Technology (CGT) and Technical Communication (TCM). There are two Associate's degrees offered in ART and INTR and all but TCM have Bachelor's degrees. There is an opportunity for all students in DCT to advance into a Master's Degree Program in Technology in a variety of disciplines, but none, as yet in ART, INTR or CGT. Despite this rich variety of disciplines in the department it should be noted that there is no faculty member with a particular expertise in strategic planning though the seeds of it have been addressed, off and on, over a period of several years.

Methodology:

Choosing a Facilitator and Coach:

The faculty realized they had very little expertise in strategic planning as noted above. To address this, they decided to ask Dr. Goodwin, an associate professor from the Organizational and Leadership (OLS) program to facilitate the planning process and coach them through it. Dr. Goodwin has worked with many organizations on their strategic planning and is very familiar with the culture of their school and their particular programs because his program is also in the IUPUI School of Engineering and Technology and he was their Acting Chair several years earlier.

The Strategic Planning Model Selected:

Based on DCT Department's characteristics an "organic" (or a Self-Organizing-type) planning process was selected. Essentially this method requires continual reference to common values, dialogue around their values, and continued shared reflection around their current processes.<sup>15</sup> The faculty members were asked to list their operating principles rather than their values.

During three regularly scheduled planning meetings facilitated by Dr. Goodwin, the faculty of the department of DCT completed the following strategic plan model. To begin, they were given the following instructions.

General Instructions provided to the faculty at the beginning of the process:

"Your strategic plan will cover spring 2011 to spring 2014 (3 year period). During this fall semester, you will be asked to attend special planning meetings and complete the following five step model. Use the special meetings to work only on completing your plan. Steps 1 and 2 will be facilitated by Dr. Goodwin from the OLS program. We will be using a unique model called the "Organic Planning Model." This model was chosen because it is suited to your departmental characteristics, and the culture you operate within."

The following section outlines the different steps taken to develop DCT's strategic plan. It is intended that this may serve as a template for others to follow as was noted in the introduction to this paper. Five Steps to complete the Organic Planning Model:

Step 1. Complete a list of the department's operating principles (often referred to as norms).

The facilitator directed the faculty to identify their operating principles rather than identifying their values. Operating principles guide and influence everything they do. They are behaviors and as such are more akin to behavioral norms than values. They are observable in how every goal or objective is accomplished, how the faculty treat each other, their school colleagues, their students and community. Operating principles are more behaviorally anchored than values are. They translate our beliefs and values into observable actions and are therefore more easily accessed and evaluated. They answer the question, "How do we behave?" As well, experience



has taught the facilitator that identifying operating principles leads to clearer and more concise behavioral expectations than a list of values do, making them easier to assess and evaluate.

The department's first task was to list all their operating principles that apply to what Steven Covey calls their "area of influence."<sup>16</sup> Completing this task fosters an open discussion about how they treat one another, how they treat their students, staff, and school administrators. They describe their current behaviors. They assess their "now" (i.e. their present behavior), and not their past or their future behaviors.

It was important, at this stage, for each program to consider operating principles first and then delve into what it wished to accomplish and what it wished to become in the future. Building sound and healthy relationships requires open communication and mutual agreement on how we behave toward each other. People in unhealthy, abusive or dysfunctional relationships, who cannot escape from them or improve them, are indeed fettered. For example, what can a couple expect to accomplish during a planned vacation together when one of the partners has secretly filed for a divorce?

During step three of this model they evaluate the efficacy and consequences of their operating principles. After their evaluation is complete they may decide to change some of their operating principles.

#### Process Followed:

All faculty members, as a group, participated in an open discussion. The discussion was facilitated by Dr. Goodwin. The list of operating principles was written on large flip chart paper and hung in a place where faculty could see them on a daily basis for about a month. The list was discussed informally but thoroughly by the faculty. Caution: Do not rush this step. It will take time and patience.

#### Examples of the Faculty's Operating Principles:

- Publically defend, privately discuss
- Use collaborative decision making
- Support new programs and initiatives
- Trust each other's expertise
- Support and listen to one another in times of crisis and triumph
- Think of the department as a living Organism that is evolving
- Consider needs and desires of other programs and departments

Step 2. Agree on area(s) of distinction and create your shared vision.

Create a shared vision for the department. Shared vision emerges from personal visions. "Building a sense of commitment in a group by developing shared images of the future we seek to create and the principles and guiding practices by which we hope to get there."<sup>17</sup> The

operating principles are in a sense a shared vision in that they describe the faculty's agreed upon behavioral norms. With their operating principles in place, the faculty must now mutually create a shared vision of what the department will become in the future.

A shared vision fosters commitment, not just compliance.<sup>18</sup> An agreed upon vision helps an organization "prepare for its future." The shared vision has two essential parts. Part one was completed when the faculty listed its operating principles. Agreeing on how they behave sets the stage for part two which is deciding on an area of distinction.

An excellent start for creating a vision is to begin by selecting area(s) of distinction. Select a product, service, or in the case of higher education, offer unique and distinctive curricula and one that is singular. Offering a degree program with singular distinction is desirable. Drucker explains the importance of uniqueness when he states that, "In many markets one prospers only at the extremes: either as one of the few market leaders who set the standard, or as a specialist supplying a narrow range of products or services, but with such advantage in knowledge, service, and adaptation to specific needs as to be in a class of its own." <sup>19</sup>

So, this department has a choice. It can distinguish itself by providing the best quality and service without possessing any other uniqueness within its market or it can provide something totally unique. It is probably best to create a vision that provides both.<sup>20</sup>

One other important objective of this step in the strategic planning process was to determine how programs set themselves apart from similar programs at other universities. This might be considered as reasons a prospective student is attracted to a particular program, what draws a student to enroll in the program and begin their academic study. Therefore an accurate definition of a program's areas of excellence was critical to identify.

The theory that informs this step follows the teachings of Peter Senge from M.I.T. provided in his book the Fifth Discipline Essentially the goal is for the faculty to arrive at a shared vision.<sup>21</sup> This is accomplished through the process of dialogue and consensus building with everyone's involvement. A shared vision is born out of every one's' individual visions. It is therefore the collective will of the faculty.. Dr. Goodwin described a shared vision using a metaphor of an organization taking a trip on a boat that is moved by people pulling on its oars. Their destination is their vision, where they are headed, their future state. The degree to which they all share in the vision affects their level of motivation to row. They will row harder and more enthusiastically to get to a place they desire to be than to one they don't.

Process Followed:

All the faculty members were involved in listing their possible areas of distinction. A large group conversation was facilitated again by Dr. Goodwin. The conversation focused on answering the three following questions:

1. What is its area of distinction (i.e. what is it known for doing or providing)?

2. What would entice a student to choose your programs over all others?
3. If we were to travel into the department's future (say three years into its future) and look around, what is it doing?

The faculty areas of distinction were written on a large flip chart and hung in a place where faculty could see it on a daily basis. In further discussions it may be revisited and modified by the faculty as a whole. A word of caution, however: Like Step 1, do not rush this step. It will take time and patience. It should also be noted, as stated above, that it was crucial to define areas of excellence so that a relevant shared vision can emerge – one that describes what we do and want to do, rather than who we are.

The process necessarily included all full-time program faculty during time dedicated at regularly scheduled program meetings. A brainstorming exercise of what each faculty member thought were unique identifiers of the program was recorded. Some discussion emerged, particularly when elements of the vision became very specific to the curriculum. It was challenging for faculty members to consider shared vision at the same level of definition, for example are we good at teaching Revit software? Or are we good at teaching relevant electronic design tools? By focusing at too specific a level of distinction, we risked limiting program goals and instead defining course-specific goals. Commitment to the process and commitment to defining a shared vision for the program led faculty through the process described by Senge, ultimately agreeing upon a list of approximately four areas of distinction noted below.<sup>22</sup>

Examples of the Faculty's Areas of Distinction:

- Sustainability and the green economy are embedded into our curriculum and projects.
- Collaborate with corporate partners to provide placement for students
- We are a faculty composed of a diversity of interests and talent and draw upon that as a multi-faceted resource that we can offer to our students.
- Focus upon community-based/real-life design projects in our studio courses.

Further discussion ensued upon prioritizing the defined areas of distinction. It is important at this point in the process to refer back to operating principles to avoid following a path of creating a wish-list and instead truly defining what we do best based on how we behave. Naturally, faculty member preferences emerged in the prioritization process in those noted above. It was essential to consider operating principles when defining the level of emphasis so as not to create individual wish lists but rather a reflection of program vision. Working through these preferences, as suggested by Dr. Goodwin, created a collective definition with group commitment.

Further Stages to Complete:

The first steps in this pilot study (reviewed above) were conducted during the time period of a semester term. It is anticipated that the next steps will continue and be completed in the following semester term. They are as follows:

Step 3. Set goals to achieve within the next 3 years and list objectives to accomplish the goals

In this step the faculty members list a set of goals (with time table and name of champion) for the department to accomplish during this three year planning cycle. This should be done in individual program meetings without the facilitator.

Process followed:

This activity will be completed by faculty without the facilitator as they meet together in their individual programs. They should be instructed to list and prioritize the goals they want to accomplish in the next three years. They need to be reminded to refer back to their operating principles to determine if their goals are congruent with their operating principles, support, and advance their shared vision and areas of distinction. They must list them by semester and year under one of three following categories.

- Things we will **START** doing;
- Things we will **STOP** doing;
- Things we will **CONTINUE** doing:

Under each goal list the objectives for achieving the goal. Objectives are the precise step(s) to take in order to accomplish each particular goal. Also, name a person (champion) to lead the goals and objectives to completion. At periodic follow up meetings the champions will report on their progress toward accomplishing the goal.

Step 4. Compose your finished plan.

The final task is to create a finished planning document and provide all faculty with a copy. Ask for a volunteer to organize and write the document.

Process Followed:

Refer to your plan at every department meeting. Make it an agenda item even if only for a brief discussion. Bear in mind that it is a living document and can be altered. Rather than “written in stone,” it is more, “written in the sand.”

Summary and Recommendations:

The purpose of this pilot study is to serve as a template for other programs who desire to craft a tactical plan for their future development and maturity. Utilizing the series of steps previously

outlined, a framework for conversation and exchange exists which can be visited and examined over time to provide consistency and determine actionable tactics for any academic area of study.

At present, a survey has been created which, after IRB approval at IUPUI, will allow our faculties to examine more closely the comparative results of our work. Questions which we will seek to analyze include:

- How close do you feel your program is to achieving a unique, marketable identity?
- How close do you think your program is to determining all of the actions that are needed to achieving your unique identity?
- What word best describes your program's operating principles with respect to one another?
- What is your program's top operating principle with respect to students?
- What do you feel that we need to develop and discuss in more depth before we move on?
- Do you feel we need to discuss strategic planning for the department (as opposed to the programs) in the near future?
- What is the main thing that we need to STOP doing?
- What is the main thing that we need to CONTINUE doing?
- What is the main thing that we should START doing?
- Should we continue discussing strategic planning in next semester's meetings?

With the addition of this survey, reliable assessment can take place, and the quantitative success of this process can be further analyzed. However, there is no question that significant value lies within the above mentioned procedure. It is possible for faculties who are committed to the longevity of their programs to work together to fashion a purposeful future for themselves and their interests. As previously mentioned, this activity cannot be completed in haste, but should be approached as an ongoing exercise.

If our academic programs are to survive the ever changing world of higher education, maintain relevance and significance, and properly serve our students and disciplines, a solid dedication to planning and development is essential. Faculties are the only ones who can transform programs, champion their desires and set a course for success. It is for this reason that every academic program should be concerned with self-examination, growth and strategic planning to meet the needs of our future educational environments.

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