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ABSTRACT

A process to assess a college's external environment and audit its internal environment in order to pursue options available to postsecondary education is described. Essentially the concept is one of matching opportunities in the external environment with institutional strengths as determined by an internal audit. Strategic planning must consider a critical analysis of forces, trends, and their effects, and must be firmly based on demographic, social, political, and economic data sets. Data are the foundation upon which to build the multi-year institution or system plan. Institutions pass through various stages of development and have different characteristics of organizational functioning. Stages of organizational development are identified as: emergence, growth, development, regeneration, and decline. Types of organizational functioning can be listed as hierarchical, Theory X; collegial, Theory Y; and political, collective bargaining. In addition, tools of strategic planning can be labeled as needs assessment, trend analysis, environmental scanning, and market analysis. The challenge to postsecondary institutions is to diagnose where they are with regard to the first two dimensions and develop elements of strategic planning appropriate for their context. The purpose of the external environment assessment is to formulate assumptions that guide the institutional decision-making process, particularly in the areas of goal setting and human resource development, and to identify strengths, weaknesses, opportunities, and threats in the external environment. It is recommended that management information systems include the integration of data on the external environment and internal operations of institutions, such as registration, scheduling, and student aid. (SW)

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ENTREPRENEURSHIP THROUGH
STRATEGIC PLANNING, MANAGEMENT, AND EVALUATION

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The February 28, 1977, issue of The Chronicle of Higher Education contained an article entitled "Where Are the Leaders in Higher Education?" The author alleges that the modern collegial context has caused the disappearance of the statesman leader in preference to the institutional manager. Arthur Levine asserts that the "single-minded concern with surviving must give way to a commitment to thriving. The accent must shift from persisting to prospering." Brent Knight, President of Triton College, suggests the way to cope with the challenges of the 80's is through strategic planning, marketing, and an entrepreneurial attitude.

This article will describe a process to assess a college's external environment and audit its internal environment in order to pursue options available to postsecondary education. Parts of the process were developed and used at the 1981 Snowmass Institute on Strategic Planning and Management on July 5-10 and at an American Council on Education Leadership Seminar on "Strategic Planning Techniques for Massachusetts Postsecondary Education" presented in conjunction with The Council of Public Presidents and Chancellors and the Chancellor's Office of the Massachusetts Board of Regents on November 30-December 1, 1981.

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The Maturation of the Concept of Strategic Planning

During the post World War II years institutional planning had a focus on acquiring more resources and building facilities for the increased number of students resulting from the equal right demand for access to postsecondary education. Planning in postsecondary education during the 1960s was undertaken in response to immediate needs with minimum regard to the future. During the 1970s the influx of traditional 18 to 22 year old students began to stabilize. Many private and public senior institutions began to experience the impact of a broad range of demographic, social, political, and economic forces. As a result, organizations such as The Council of Independent Colleges (formerly The Council for the Advancement of Small Colleges), the Academy for Educational Development, and the American Association of State Colleges and Universities launched programs relating to comprehensive institutional planning. These projects, and others like it, stressed the need to assess the external environment. The literature began to reflect descriptions of institutional planning processes including some way to assess the external environment. Numerous persons began to add clarity to the concept of strategic planning.³ Essentially the concept is one of matching opportunities in the external environment with institutional strengths as determined by an internal audit.

External Environment Assessment

Tools for external environment assessment include policy analysis, needs assessment, trend analysis, environmental scanning, and market analysis.

Ahmann indicates that needs assessment is a generic term to describe a process "for determining the discrepancy between existing and desired levels of attainment with respect to specific educational goals."⁴ He describes types of needs assessment and the state of the art which has shifted from informal to formal, systematic efforts beginning in the early 1970s attributable primarily to the accountability movement stimulated by federal legislation. Vlahos traces

several changes in needs assessment techniques including its application to
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perceptions of the community and business and industry.

Trend analysis consists of the systematic review of comparable data over time in order to determine direction. Environmental scanning consists of periodic sampling of data which may ultimately form the foundation of trends. An example of such a scan is the College Entrance Examination Board study indicating that 36 percent of the population between the ages of 16 and 65, more than 40 million
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Americans, are in a career transition status. Research by the College Board, however, indicates that only about $\frac{1}{4}$ of the 58,400,000 persons in postsecondary education are enrolled in colleges and universities.

Market analysis consists of obtaining detailed information about markets or market segments served or unserved by the institution. Market analysis is an organized effort to identify the relationship between specific wants and needs of people and the way the institution meets or could meet them. Market analysis, is, in its simplest description, a more coherent way to plan institutional re-
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sponses to conditions within the College's service area.

The project by the American Association of State Colleges and Universities uses a cross-influence matrix of 12 societal trends and 12 values to bring planning assumptions into focus before setting goals in 10 areas. The 12 societal trends are population, government, global affairs, environment, energy, economy, science and technology, human settlements, work, life style, women and participation. The 12 societal values are change, freedom, equality, leisure, interdependence, pluralism, localism, ethics, knowledge, quality, goals and foresight. The 10 goal areas are finance, students, research and development, public service, facilities,
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faculty, curricula, administration, resources, and athletics.

Another way to categorize data about a college's service area is by industry. The list of industries could include textiles, auto, shipbuilding, mining, elec-
9
tronics, telecommunications, biotechnology, health care, insurance, and education.

Information analyzed by the Bureau of the Census includes social indicators such as population and the family; health and nutrition; housing and the environment; transportation; public safety; education and training; work; social security, and welfare; income and productivity; social participation; culture, leisure and use of time. ¹⁰ The project by the Academy for Educational Development used the categories of demographic trends, social expectations, economic trends, ¹¹ and governmental planning.

The purpose of the external environment assessment is (1) to formulate assumptions which guide the institutional decision-making process, particularly in the areas of goal setting and human resource development, and (2) to identify strengths, weaknesses, opportunities, and threats in the external environment. The heart of an institution is its certificate and degree programs. Faculty actively participating in gathering and analyzing data about the external environment keep curricula current and relevant. These data can be fed into the institutional strategic planning process which includes the specification of assumptions. A definition of assumption is as follows:

An assumption is a proposition describing future conditions, some of which the institution has little control over. The level of certainty assigned to an assumption determines the level of precision it is allowed in subsequent planning. The greater the uncertainty about the assumption the greater must be the range of flexibility/hedging/options the institution retains against the non-assumed condition. Raising the certainty level of an assumption yields greater planning precision, better long term goal effectiveness and improved cost efficiency and program effectiveness. A planning assumption proposition can be internal to the institution or external to it. One criterion which is used in making a decision about inclusion or exclusion of a specific proposition at the institutional or department levels rests on whether or not the assumption has a direct bearing on setting goals and objectives at that level.

Institutions and systems vary in their ability and capacity to collect and analyze data about their external environment. Regardless of degree of sophistication, judgments are made relative to the strengths, weaknesses, opportunities, and threats in the external environment. An institution can focus more clearly on each of these through the SWOT exercise. Using whatever data base is available,

impressionistic through hard data, an institution or system can list strengths, weaknesses, opportunities, and threats in the external environment. Data from one source indicate that change in the number of high school graduates between 1979 and 1995 will range from a decline of 59% in Washington D.C. to an increase of 58% in Utah. Eleven states will experience a decline of more than 30% in the number of high school graduates during that period.¹² It should be noted that an increase of 58% in Utah is not necessarily a strength. It is conceivable that some of the 11 states anticipating enrollment declines in excess of 30% would contract with Utah for the delivery of educational services. The same could hold for developing nations.

Each strength, weakness, opportunity, and threat can be labeled demographic, economic, social or political. The purpose of this analysis is to gain insights into which of several options an institution or system will choose in charting a course of action over the next several years. Bowen indicates that colleges experienced enrollment declines in 1934, 1944, and 1952 and suggests four options: (1) redirect resources toward higher quality, (2) redirect resources toward research and public service, (3) redirect resources toward new student clientele, and (4) retrenchment.¹³ Campuses can prioritize these options based on the analysis.

Internal Audit

Institutions pass through various stages of development and have different characteristics of organizational functioning. Stages of organizational development are listed as emergence, growth, development, regeneration, and decline.¹⁴ In addition, an institution can be viewed as being comprised of several major areas such as (1) planning, research, and evaluation; (2) enrollment, retention, and financial aid; (3) academic and student programs; (4) personnel management and development; (5) fiscal resources management and development; and (6) reporting and outcomes analysis.

Each of the above-listed areas is an aggregate of functions within the institution. For example, "planning, research, and evaluation" consists of (1) the capability for external environment assessment, (2) the institutional planning process, (3) institutional research, (4) management information system, (5) institutional self-studies, and (6) the annual evaluation process. As was indicated in the previous section, external environment assessment is a function, for the most part, of an institution's capacity to use the tools of (a) needs assessment, (b) market analysis, (c) trend analysis, and (d) environmental scanning. This type of detail can yield an evaluation format for diagnosing stage of institutional development as displayed in FIGURE 1.

By adding scale and more specific criteria, an institution can diagnose with some accuracy the stage of institutional development. For example, if an institution is unfamiliar or only vaguely familiar with the literature on needs assessment, it should score a "0". If the institution participated in a needs assessment or critically analyzed several needs assessment instruments or studies, it could be ranked "1". Conducting one or more needs assessments yields a "2" and critically evaluating data from needs assessments nets a "3". Feeding the data back into the planning process merits a "4". To score a "5", the institution fed the data into the planning process, implemented change, and evaluated the results.

Such an approach can be taken for each function. Because most of an institution's resources are in direct support of certificate and degree programs, evaluation of them deserves special attention. Certificate and degree programs can be evaluated on the basis of quality, centrality, and market viability. Quality is a function of faculty, students, library holdings, support services, program characteristics, program advisory committees, and other variables. Centrality relates to the degree of closeness to the central mission of the institution. An institution can evaluate the quality of its programs on the basis of the above

FIGURE 1

EVALUATION FORMAT FOR
 DIAGNOSING STAGE OF INSTITUTIONAL DEVELOPMENT

Institution

	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>0</u>
I. <u>Planning, Research and Evaluation</u>						
1. <u>External Environment</u>						
a. Needs Assessment	---	---	---	---	---	---
b. Market Analysis	---	---	---	---	---	---
c. Trend Analysis	---	---	---	---	---	---
d. Environmental Scanning	---	---	---	---	---	---
2. <u>Planning Process</u>						
a. Institutional Goals	---	---	---	---	---	---
b. Specific Objectives	---	---	---	---	---	---
3. <u>Institutional Research</u>	---	---	---	---	---	---
4. <u>Management Information System</u>	---	---	---	---	---	---
5. <u>Institutional Self-Study</u>	---	---	---	---	---	---
6. <u>Annual Evaluation Process</u>	---	---	---	---	---	---
II. <u>Enrollment, Retention, and Financial Aid</u>						
1. <u>Manual of operations for admissions</u>	---	---	---	---	---	---
2. <u>Inquiry System</u>	---	---	---	---	---	---
3. <u>Marketing plan</u>	---	---	---	---	---	---
4. <u>Communication tools</u>	---	---	---	---	---	---
5. <u>Professional development</u>	---	---	---	---	---	---
6. <u>Faculty understanding</u>	---	---	---	---	---	---
7. <u>Manual of operations for financial aid</u>	---	---	---	---	---	---
8. <u>Enrollment projections</u>	---	---	---	---	---	---
III. <u>Program Development (Academic and Student)</u>						
1. <u>Student characteristics</u>	---	---	---	---	---	---
2. <u>Identifying outcomes</u>	---	---	---	---	---	---
3. <u>Certificate and degree programs</u>	---	---	---	---	---	---
4. <u>Career planning</u>	---	---	---	---	---	---
5. <u>Guidance/placement</u>	---	---	---	---	---	---
6. <u>Non-traditional options</u>	---	---	---	---	---	---
7. <u>Curricular patterns</u>	---	---	---	---	---	---
8. <u>Community education</u>	---	---	---	---	---	---
IV. <u>Personnel Management and Development</u>						
1. <u>Policies/practices</u>	---	---	---	---	---	---
2. <u>Institution organization</u>	---	---	---	---	---	---
3. <u>Professional development</u>	---	---	---	---	---	---
4. <u>Management development</u>	---	---	---	---	---	---
5. <u>Interpersonal skills</u>	---	---	---	---	---	---
6. <u>Sense of community</u>	---	---	---	---	---	---
7. <u>Staff management</u>	---	---	---	---	---	---
8. <u>Advisory committees</u>	---	---	---	---	---	---

	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>0</u>
V. <u>Fiscal Resources Management and Development</u>						
1. Cash flow analysis	---	---	---	---	---	---
2. Budget planning systems	---	---	---	---	---	---
3. Budget control	---	---	---	---	---	---
4. Donor cultivation	---	---	---	---	---	---
5. Planning college revenues	---	---	---	---	---	---
6. Gift record keeping system	---	---	---	---	---	---
7. Cost effectiveness	---	---	---	---	---	---
8. Proposal development/grants administration	---	---	---	---	---	---

VI. <u>Reporting and Outcomes Analysis</u>						
1. Internal communications mechanisms	---	---	---	---	---	---
2. External communications mechanisms	---	---	---	---	---	---
3. Output analysis system	---	---	---	---	---	---
4. Impact analysis system	---	---	---	---	---	---

KEY:

- 5 Outstanding, far exceeds reasonable expectations
- 4 Good, generally exceeds reasonable expectations
- 3 Satisfactory
- 2 Doubtful, generally falls short of reasonable expectations
- 1 Unsatisfactory, totally inadequate
- 0 Non-existent

criteria and divide them into three equal groups labeled high, medium, and low quality. The institution can then divide its programs in a similar way based on centrality and array them in the matrix in FIGURE 2.

The next step is to rank the programs on market viability. Market viability is defined as demand in the market place, competition, and comparative advantage. The external environment assessment plays a major role in this step. Programs in cell 1 of the Q/C Matrix are distributed in cells 1, 4, and 7 in the Q/C - Market Viability Matrix in FIGURE 3. Programs in cells 2, 4, and 5 of the Q/C Matrix are distributed in cells 2, 5, and 8 of the Q/C - MV Matrix. Programs from cells 3, 6, 7, 8, and 9 of the Q/C Matrix are distributed in cells 3, 6, and 9 of the Q/C - MV Matrix. This technique can be extended to include support programs. The diagnostic information can lead to a variety of continuation decisions as well as discontinuation of programs.

Matching and Integration

Strategic planning and management is essentially the matching of opportunities in the external environment with institutional strengths. Demographic data indicating a decline in the number of high school graduates, which might be listed as a "threat", can be balanced against the "opportunity" of accessing more of the 36% of the population between the ages of 16 and 65 who are in career transition. The social expectation force of equality of opportunity to a quality education and the political/economic forces of the right to retraining and to continuing education will yield additional lifelong learners who will be offered education and training by one of several postsecondary education providers.

Programs of high quality, centrality, and market viability should not be deprived of the resources necessary to insure their maximum impact on the institution's service area. Programs of low quality, centrality, and market viability should yield to programs designed to take advantage of opportunities in the external environment such as retraining the unemployed or technology transfer.

FIGURE 2
QUALITY/CENTRALITY MATRIX

		Program Quality		
		High	Medium	Low
Mission Centrality	High	XXXX XXXX 1	XXXX XXXX XXXX 2	XXX 3
	Medium	XXXX XXXX XXXX 4	XXXX XXXX XXXX 5	XXXX XXXX 6
	Low	XX 7	XXXX XX 8	XXX 9

A Marketing Approach to Program Development (Washington, D.C.: Council for the Advancement of Small Colleges, 1978).

FIGURE 3
Q/C-MARKET VIABILITY MATRIX

		Program Quality/Centrality		
		High	Medium	Low
Market Viability	High	XXXX XXXX 1	XXXX 2	XXXX 3
	Medium	XXXX XXXX XXXX 4	XXXX 5	XXXX XXXX 6
	Low	XXXX 7	XXXX 8	XXXX 9

A Marketing Approach to Program Development (Washington, D.C.: Council for the Advancement of Small Colleges, 1978).

Programs between these two extremes must be dealt with individually. For example, programs with high centrality and market viability but medium or low in quality must be examined in terms of faculty, students, library holdings, support services, program characteristics, degree of active participation by program advisory committee, and other variables. It is possible that a program may be low in quality simply because it is in the early stages of development or integration such as robotics or rehabilitative engineering, programs which are multi disciplinary in nature.

Integration concepts extend beyond combining disciplines to interrelatedness between institutional planning, institutional research, the management information system, public relations, marketing, and development or fund raising. Management information systems in the past have tended to focus on data elements relating to the internal operations of the institution such as registration, scheduling, class rosters, space utilization, grade reporting, student aid, payroll, budgeting, and other administrative applications. Data have been collected and grouped in files labeled student, personnel, financial, and space. Sometimes the data elements are similar for various reporting agencies and occasionally the independent files can be integrated to produce meaningful reports on topics such as program cost analysis and student longitudinal studies. Occasionally independent file reports or integrated file reports are synchronized with decision points in the annual planning/budgeting cycle but usually stop short of strategic planning. Management information systems of the future must include the integration of internal and external data sets.

In addition, integration goes beyond a single institution. It extends to how an institution fits into a larger system of providers of postsecondary education services.

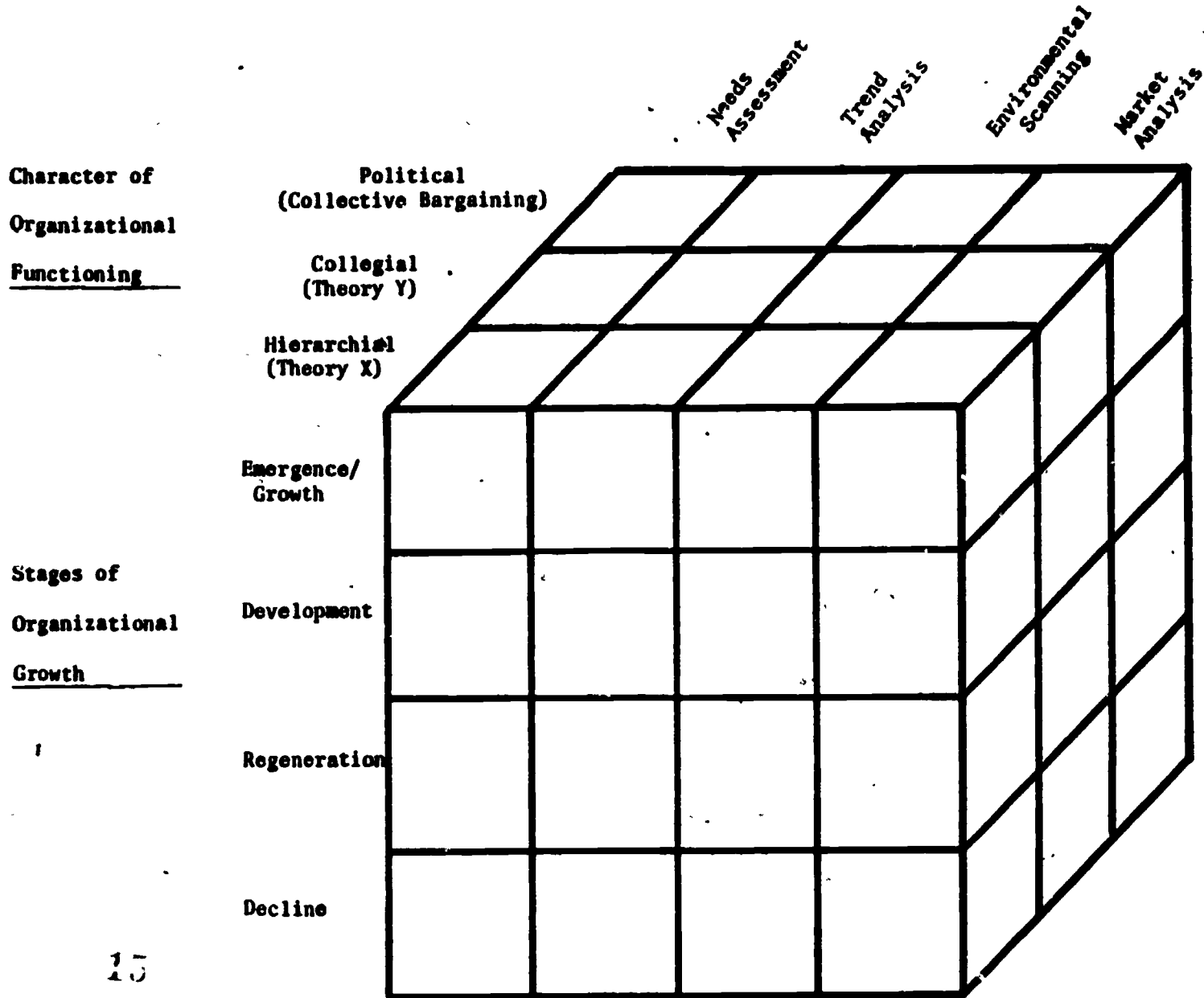
Summary and Conclusions

Planning, however defined, has a focus on designing and shaping the future as opposed to merely changing. Strategic planning must consider a critical analysis of forces, trends, and their effects and must be firmly based on demographic, social, political, and economic data sets. Data are the foundation upon which to build the multi-year institution or system Plan, a document containing a grand design representing intelligent anticipation of activities and events carefully specified in advance to move from one point to another. The data analysis process must strive to produce meaning as it relates to efficiency and effectiveness of relating resources to institutional goals and objectives. Planning, then, is critical analysis and requires the development of an analytical capability to collect, array, and analyze a large number of variables in an effort to portray a system of relationships, causality in some cases.

Institutions pass through various stages of development and have different characteristics of organizational functioning. Stages of organizational development were listed as emergence, growth, development, regeneration, and decline. Types of organizational functioning can be listed as hierarchial, Theory X; collegial, Theory Y; and political, collective bargaining. In addition, tools of strategic planning can be labeled needs assessment, trend analysis, environmental scanning, and market analysis. These three dimensions form a model to help assist institutions to diagnose where they are in the evolutionary process. (See FIGURE 4) The challenge to postsecondary institutions is to diagnose where they are with regard to the first two dimensions and develop elements of strategic planning appropriate for their context. The challenge is to capitalize on strengths, minimize weaknesses, take advantage of opportunities, and eliminate or reduce threats. Strategic planning, management and evaluation holds the potential for reviving the entrepreneurial spirit.

FIGURE 4
MODEL FOR CATEGORIZING DIMENSIONS OF STRATEGIC PLANNING
BY STAGE OF ORGANIZATIONAL GROWTH AND CHARACTER OF ORGANIZATIONAL FUNCTIONING

Tools of Strategic Planning



The entrepreneurial spirit or attitude, however, must be followed by entrepreneurship. Michael Barker, director of policy studies for the Council of State Planning Agencies, an affiliate of the National Governors Conference indicates that companies listed in the Fortune 500 haven't produced a net employment gain in five years. Eighty percent of the new jobs in this country are being created by establishments that employ twenty or fewer people and are less than four years old. Small company's start where the people who run them live. Everything suggests that post-secondary education ought to focus "public service" development efforts on enhancing the possibilities of start-ups. ¹⁹ Specific ways in which postsecondary education can assist small business include (1) develop evaluation formats to assist small business and industry to diagnose their stage of development; (2) assist business and industry to understand their external environment; (3) assist them to conduct an internal audit; (4) assist them to develop a strategic plan; (5) conduct specialized training programs on managerial, technical, and career centered topics; and (6) assist them to prepare bids for federal and other contracts.

We have the tools, do we have the spirit and then are we willing to commit the resources to dedicate our institutions as instruments of economic and social change?

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