



# WHITE PAPER

---

## ACADEMIC PROGRAM INNOVATION AND PERFORMANCE MANAGEMENT

*by Dr. Lynda Wallace-Hulecki*

The access mission of community colleges places program innovation and renewal at the heart of the strategic enrollment management (SEM) enterprise, as the ability to innovate and renew program offerings is central to your ability to address the multitude of educational needs of the communities you serve within a complex and changing economy. Indeed, having the “right” programs, in the “right” markets, delivered in a manner that is conducive to the learning needs and preferences of the students you serve are mission critical (Black, 2008). The U.S. population is aging and becoming increasingly more racially and ethnically diverse. Changes in demography have implications for changes in student learning styles and, by extension, in instructional pedagogy. Increasingly the student, not the institution, will define what learning is, how it is to happen, and when and where it occurs. To address the diverse range of student needs, flexible curriculum delivery options and technology enabled learning approaches are essential sources of competitive advantage.

It has long been recognized that there is a symbiotic relationship between enrollment management, strategic planning and academic program innovation (Dolence, 1993, 1997). At the core of an institution’s strategic plan is the academic mission and program plan. Enrollment planning, effectively implemented, brings a systems perspective in strategically focusing an institution on its program areas of marketplace relevance, distinctive competence, and competitive advantage. When aligned with budget plans and priorities, the resultant SEM plan becomes the lever by which the academic plan is realized, and a touchstone for measuring the effectiveness of institutional enrollment performance. In this way, the enrollment management plan becomes an integral component of the institution’s strategic plan, rooted within the academic context, and linked to resource management decisions. Thus, academic program innovation and renewal become the cornerstone of the enrollment enterprise, enrollment becomes the lifeline to institutional vitality, and the enrollment planning process becomes the vehicle by which to realize continued success in achieving enrollment and financial goals (Wallace-Hulecki, 2010).

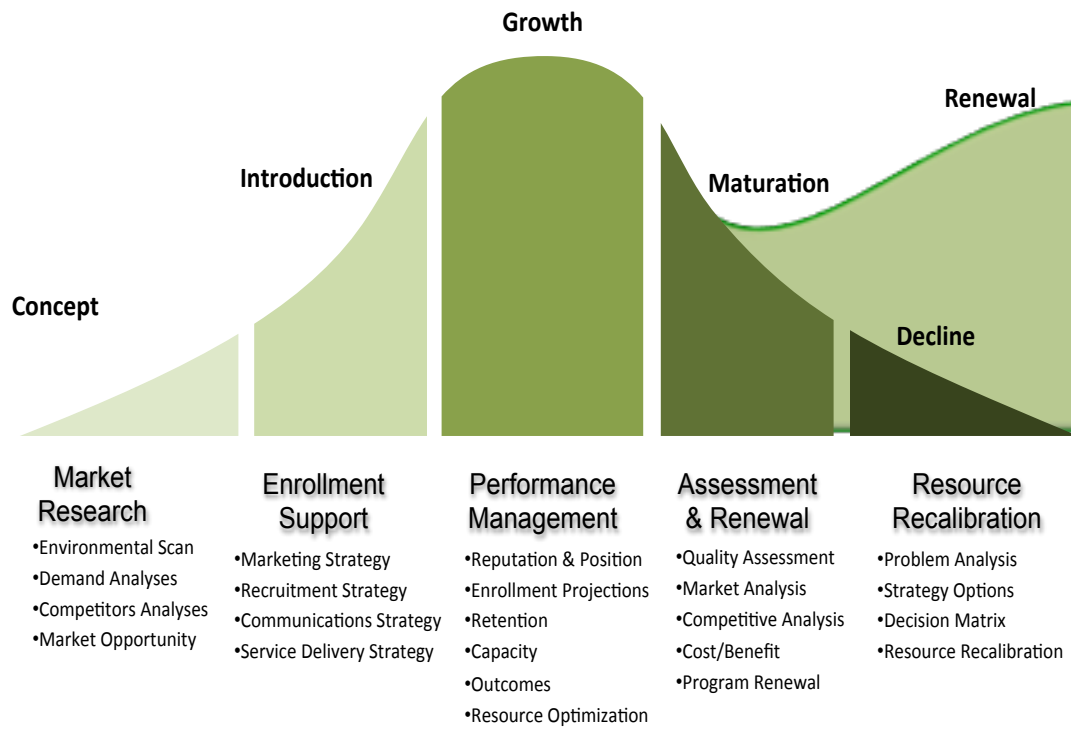
This paper presents an overview of the academic program lifecycle and an integrative approach to academic program planning linked to enrollment goal-setting and resource management. A model consisting of six program planning filters is presented and described in its application for ensuring relevance of college programs to the needs of the students and communities you serve, as well as for exercising “strategic dexterity” in program innovation and renewal processes to enhance responsiveness and competitiveness. In this regard, two conceptual frameworks are presented for program innovation: one for the introduction of NEW programs, and one for the renewal of EXISTING programs. A construct is also provided for developing a program performance management system from an environmental “systems” perspective. The paper concludes with a case study that applies the concepts, models and tools described herein at a fictitious institution, *Student Success College*. The case study describes how each step in an integrative approach to enrollment and academic program planning can be executed, including examples of analyses that may be useful for assessing and managing program capacity. While the case study is hypothetical in nature, the situational context, planning processes and supporting research employed are drawn from actual experiences of this author in working with client institutions.

Effectively applied, the concepts, models and tools presented in this paper may be used to “harness the power” of the enrollment goal-setting process—the subject of another white paper by this author titled, *Establishing Realistic Enrollment Goals*—in (a) focusing the collective effort on identifying high impact opportunities for enrollment performance improvement, (b) adopting an integrative approach to strategy development, and (c) fostering shared responsibility and accountability for enrollment results within capacity conditions.

## THE ACADEMIC PROGRAM LIFECYCLE

Similar to the student lifecycle, every academic program has a lifecycle. As shown in *Figure 1*, the lifecycle begins with the generation and approval of a program concept, followed by the development and introduction of the program, its subsequent growth and maturation over time, through to its renewal or potential decline.

*Figure 1: Academic Program Lifecycle*



A high-performing enrollment organization engages in **integrated planning** with a focus on the needs of students and on creating a student experience both inside and outside the classroom that engenders student loyalty and affinity to the institution. In an institutional context in which a SEM culture is integrated with the academic enterprise, the decision to launch a new academic program at the concept stage of program development would be supported by thorough market research to identify and/or validate the market potential. Prior to the launch of the new program, a marketing plan would be designed to support the program rollout with clearly articulated target audiences, key selling points, marketing channels, recruitment strategies, and promotional material. Furthermore, related policies, procedures, and support services would be determined before the program launch, so that all individuals and units responsible for the success of the program and the students it serves are on the same page. Similarly, mechanisms would be in place at each subsequent stage of the lifecycle to monitor program reputation relative to competitors, assess student academic performance and progression, scale and manage capacity as enrollment changes, assess enrollment performance issues and opportunities, and identify appropriate strategies for timely intervention to support program renewal.

Foundational to ensuring program relevance and vitality throughout the program lifecycle is the need for research and analyses. To illustrate:

- ❖ **Environmental scanning** can prove useful in identifying gaps and opportunities for new program development, untapped or under-served markets for expansion of existing programs, potential threats to enrollment by competitors, to name a few;
- ❖ **Market research** may provide value-adding insights on target population segments in relation to their education objectives, learning needs, instructional delivery preferences, and service expectations; the reputation and perceived competitive positioning of the college and existing programs; as well as test or validate the market potential of new program ideas;
- ❖ **Enrollment and retention analyses** can aid in monitoring and tracking the flow and performance of students by program relative to expected standards of performance;
- ❖ **Student attrition/causation** studies provide insights on attrition causation factors and in assessing the impact of intervention strategies employed;
- ❖ **Capacity analyses** are useful in assessing options for optimizing the use of available resources (e.g., human resource, space, financial, technology);
- ❖ **Program assessment** brings a systemic perspective in determining program relevance, performance, and quality; and
- ❖ **Cost/benefit and risk analyses** consider both the financial and non-financial impacts of programs relative to desired outcomes.

Indeed, supported by timely and actionable research and analyses, no academic program should atrophy from a lack of relevance to student or societal need.

The strategic intelligence (research, data, analytics) used to inform enrollment goal-setting and planning at the institutional level that was described in the previously referenced white paper on enrollment goal-setting, should also provide “cascading intelligence” for use in academic program planning where possible. From an integrated planning perspective, cascading intelligence creates a consistent base of useful information that can be applied to multiple levels of planning at the institutional, divisional, department and program levels. Through the application of cascading intelligence, options for achieving “optimal” enrollment can be identified, whereby “optimal” is defined within the academic context in realizing alignment between the enrollment goals and strategies established at the institutional level, and the priorities of the academic division for achieving desired goals via program innovation, growth and investment. In this way, an institution’s SEM planning process and resultant SEM plan serve to operationalize the academic development goals of an institution.

## ACADEMIC PLANNING FILTERS AND MODELS

As previously alluded, in response to increasing challenges in managing the nexus between enrollment, financial imperatives, and academic program quality, SEM has become an invaluable tool for operationalizing the academic development priorities of many institutions. In mature enrollment organizations, enrollment goal-setting and the development of a SEM plan are integral components of the institution's strategic planning process, aligned with academic program development priorities, and linked to resource management decisions.

Colleges and universities alike have adopted various policies and processes, some more structured than others, for academic program innovation and renewal in order to address external requirements for accountability and accreditation, as well as to serve internal continuous improvement initiatives for enhancing institutional effectiveness and student learning outcomes. Findings from a 2003 study published by the EDUCAUSE Center for Applied Research (ECAR) on continuous improvement strategies in higher education indicated that the quality movement was both “active and evolving”, and was motivated primarily by a desire to “build alignment” between institutional and departmental goals, as well as to improve “institutional effectiveness and agility” (Rice and Taylor, 2003, pp. 8-10).

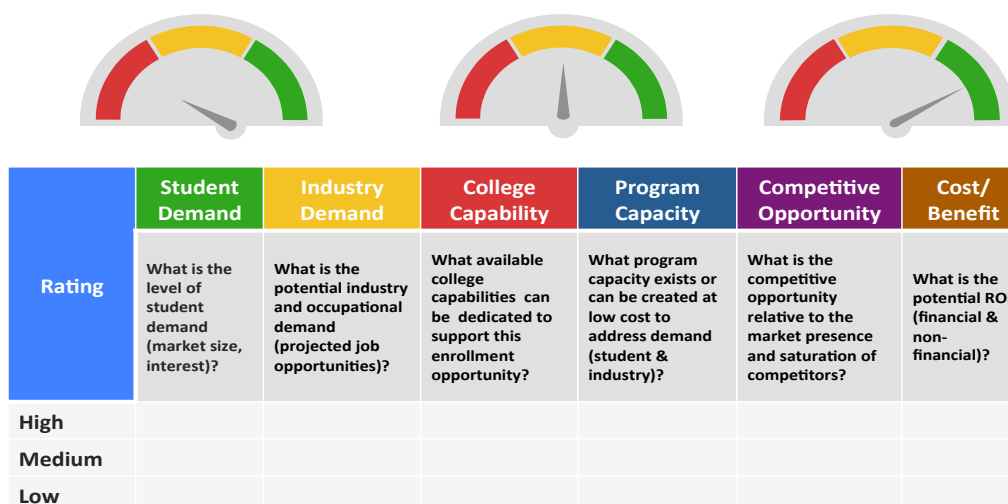
In recent years, many institutions have faced severe financial shortfalls along with growing external demands for accountability, which have placed even greater pressures on ensuring relevance and competitiveness of program offerings and overall institutional effectiveness. More recent studies published by ECAR have reaffirmed the importance institutions have and continue to place on continuous improvement processes, as well as the increasing advancements being made in the use of analytics and performance management systems (e.g., balanced scorecards) to enhance performance management and resource optimization (Bichsel, 2012; Norris and Baer, 2013). A review of relevant literature identified the following to be among the more commonly applied tools and models for continuous improvement in use within the higher education context:

- ❖ *Academic Quality Improvement Program (AQIP)* applies the principles of continuous quality improvement to program and institutional accreditation.  
<https://www.ncahlc.org/Pathways/aqip-home.html>
- ❖ *Quality Matters (QM) Program* is a nationally recognized, faculty-centered, peer review process designed to certify the quality of online courses and online components.  
<https://www.qualitymatters.org/higher-education-program>
- ❖ *Malcolm Baldrige Criteria for Performance Excellence* applies a management model with a systems perspective to performance management that may be adapted for

- application to academic program planning. <http://www.nist.gov/baldrige/>
- ❖ *Kaplan and Norton's Balanced Scorecard* is a commonly applied construct for establishing enrollment goals and key performance indicators (KPIs) to ensure a balanced perspective in managing performance at the institutional, tactical and operational (e.g., program) levels. <http://balancedscorecard.org/Home/tabid/495/Default.aspx>
  - ❖ *Dickeson's Program Planning and Prioritization (PPP)* model offers a step-by-step approach for the review and prioritization of programs for optimal deployment of resources during times of fiscal constraint. <http://www.academicstrategypartners.com/about-us/>
  - ❖ *Stage-Gate® Idea-to-Launch Model* is a systematic process for enabling improved agility in idea-to-launch innovation processes. [http://www.stage-gate.com/resources\\_stage-gate.php](http://www.stage-gate.com/resources_stage-gate.php)
  - ❖ *Lean Six Sigma Model* and related techniques are commonly applied to maximize productivity and quality in academic and administrative processes, such as in program innovation and development decision processes. <http://leansixsigmainstitute.org>

However, most program innovation and renewal processes that we have examined are conducted with an isolated focus at an academic department level, rather than as a highly collaborative and integrative institutional process that underlies effective SEM practice. A practical model we have developed that is aligned with quality-based criteria for performance management and has proven useful to many client schools in fostering an integrative approach to SEM planning is presented in *Figure 2* and described below.

*Figure 2: Academic Program Planning Filters Model*



The model consists of **six program planning filters** for assessing program opportunities. The planning filters with supporting research and analyses may be applied at multiple levels of planning (institutional, divisional, departmental, program) and serve two primary purposes:

1. **To identify new program opportunities** through the assessment of student and industry demand using quantifiable data, determination of what college and program capabilities exist or must be added in order to address identified demand, confirmation that sufficient institutional capacity exists or can be created to meet demand, an analysis of the potential return on investment (ROI)—both financial and non-financial, and research of competitors in the same program space to determine market saturation and potential niche opportunities. The goal is to find new program opportunities where all six planning filters align—sufficient student demand, industry demand, school and program capabilities, institutional capacity, cost/benefit and competitive opportunity.
2. **To continuously improve and, if necessary, morph existing programs** in order to remain congruent with changing student expectations and needs, current with emerging industry trends, aligned with school and program strengths and capabilities, in sync with institutional capacity such as available space and technology support, financially viable, and protected from erosion of a program's competitive advantage. With an intensive program renewal process in place, no program should reach the decline stage of its lifecycle. Programs will be reengineered long before they begin to atrophy.

A fundamental premise underlying the program planning filters model is that all academic programs should seek to address some student, industry, or community need. Though this premise may be challenged on the grounds that there should exist “learning for learning’s sake,” there is substantial evidence indicating that most consumers of higher education credit courses do not pursue this worthy aim without some tangible outcome in mind (e.g., career opportunity, university transfer, professional development).

While the model is generic in nature, its application is unique to each institution both in terms of the variables selected to underlie the rating system, as well as in how it is applied within the college’s academic planning context. The sections which follow describe the application of the planning filters model in identifying opportunities for new program innovation, the continuous improvement of established programs, as well as in targeting high potential programs for growth and investment through a process that brings an integrative approach to planning with a focus on serving the needs of students and the community.



## NEW PROGRAM INNOVATION

“Responding quickly to new and diverse education markets that are dynamic, competitive, and that demand both program customization and market relevance is challenging for most institutions” (Knowles, 1995, p.201). The challenges community colleges face in this regard have intensified in recent decades and the rapidity of change can be expected to continue into the future. Therefore, in order to remain competitive, colleges will be under increasing pressure to identify high potential opportunities for program innovation that align with market demand, and exercise strategic dexterity in the development and effective launch of new programs. Yet, all too often, an ad hoc approach is taken to generating new program ideas, internal infrastructure is lacking to support the effective development and launch of new programs, and program development and approval processes are protracted in application—sometimes spanning 12-18 months (or more) from the point of idea generation through to launch of a new program.

In an effort to address the underlying issues, some colleges have adopted techniques to improve agility in associated processes, such as the aforementioned *Stage-Gate® Idea-to-Launch* and *Lean Six Sigma* models, and/or have created new organizational entities and processes to become more entrepreneurial, such as by integrating contract training activities with credit-granting programs, creating a single unit or division responsible for entrepreneurial activities (e.g., continuing education divisions, contract training centers), participating in educational partnerships or consortia, to name a few. While these approaches focus on the quality and efficiency of administrative processes, this represents only part of the equation. The remaining elements center on the need to ensure marketplace relevance and competitiveness.

Drawing from the literature, the following quality-based principles underlie program innovation policies and practices:

- ❖ **Market research and related intelligence** is used to demonstrate the education needs of the marketplace, competitive landscape, and the internal and external environmental factors that are likely to impact the success of the program (positively and negatively)
- ❖ **Strategic thinking, action, and learning** is fostered in the program innovation process through an integrative approach to academic and enrollment planning
- ❖ **“Mind-to-market” agility** is adopted in the development and approval of new programs through policies and processes that balance speed, rigor, and quality
- ❖ **A learner-centered perspective** is infused in the design of programs, curricula, pedagogy, instructional delivery, as well as in co-curricular enrollment and student

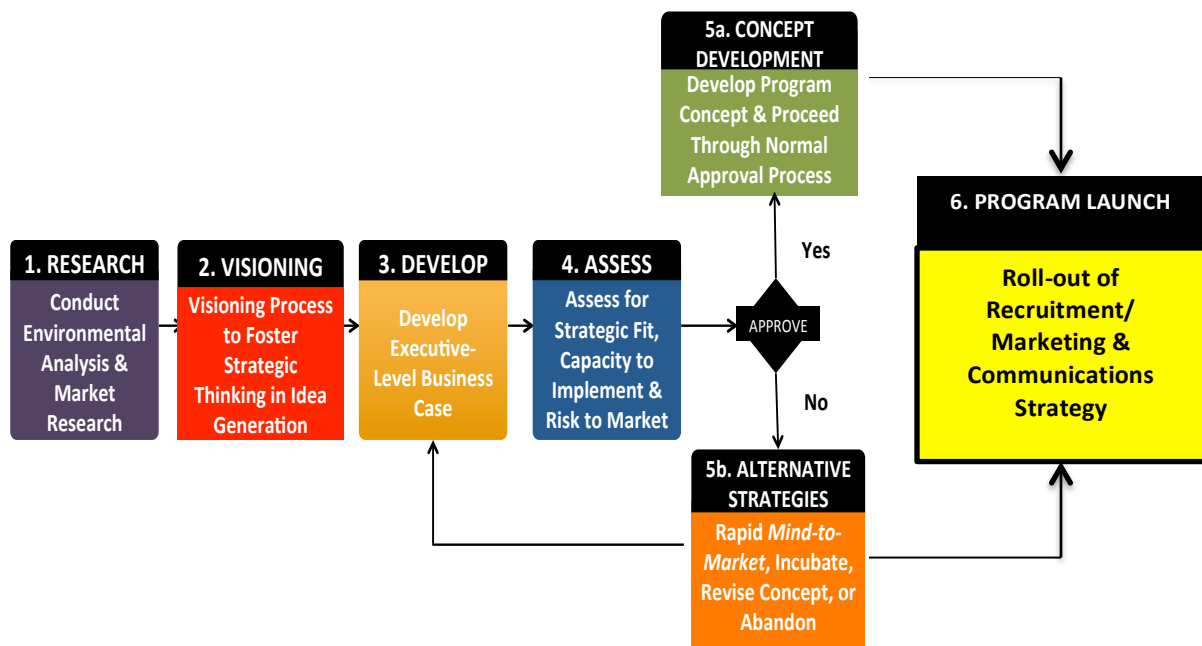


success support systems

- ❖ **A support infrastructure** ensures an effective audience-specific recruitment/marketing and communications strategy to support the successful launch of new programs
- ❖ **Performance management systems** (e.g., KPIs, reporting) are established and effectively used to inform performance management, program development, resource allocation decisions, and assessment

A conceptual framework for a new program innovation process that is grounded in these quality principles is depicted in *Figure 3*. The framework consists of a sequential series of six planning steps by which new program ideas are generated, assessed for market potential, and effectively executed. For purposes of discussion here, a **NEW** program is defined as one that does not exist or one that is being reconceptualized through the repackaging or morphing of existing courses to address an identified market need and, hence, must advance through a program approval process.

*Figure 3: Conceptual Framework for New Program Innovation and Development*



The application of the framework described herein recognizes that some program innovation opportunities need time to percolate, others require due diligence as part of the regular governance approval processes, while still others require a rapid decision process in order to take advantage of time-sensitive opportunities to leverage a college's competitiveness or to optimize existing capacity and better serve the marketplace.

The process begins with **an environmental analysis** and **market research** to identify potential enrollment and program opportunities (Step 1), followed by a strategic thinking process leading to the **generation of innovative ideas** for academic program innovation (Step 2). A “mind-to-market” program development process follows that permits **strategic dexterity** in decision-making, whereby an **executive business case** is developed for each program innovation idea for *initial* consideration (Step 3), followed by an **assessment** of strategic fit, organizational capacity to support implementation, and potential risk to market the program (Step 4), ultimately leading to a determination of whether to **proceed** to develop and implement the program through normal channels (Step 5a), or **adopt alternative strategies** for rapid “mind-to-market” implementation, incubating the program concept, revising the program concept, or **abandoning the concept** altogether (Step 5b). The final critical component in the launch of an approved program is the development and execution of a multi-channel, audience-specific **recruitment/marketing and communications** strategy (Step 6).

A detailed description of each of the steps of the conceptual framework follows, including demonstrated utility of the six program planning filters. While the framework appears linear in flow, depending on the nuances of college-specific governance and decision structures, the decision processes may be somewhat more iterative in nature.

### ***Step 1: Research***

Recruitment and marketing efforts cannot compensate for offering programs that are ill-suited to audience-specific needs. To illustrate, a client community college launched 23 new programs in four years in response to a government funding incentive. Six years later, only three of the programs remained viable. Why? Each program was conceived largely on the basis of faculty disciplinary interests without the benefit of market research and analysis to validate marketplace need and potential demand, the learning needs and preferences of target population segments, and the competitive positioning of the college and program among target audiences. In addition, the launch of each program was not accompanied by a well-defined recruitment/marketing and communications strategy. The consequences were far-reaching and severe—the credentials had limited employer recognition which led to student dissatisfaction and, in turn, the loss of institutional reputation and trust among many students, alumni, employers and the broader community.

As previously noted, the strategic intelligence used to inform enrollment goal-setting and planning at the institutional level should also provide “cascading intelligence” for **consistent** use in academic program planning at the divisional, department and program levels where possible. The type of information and research to be collected may change over

time as the college's situational context changes. Therefore, what is collected, how frequently, and in what form should be reviewed on a periodic basis in consideration of the academic and enrollment planning information needs of key decision leaders. **Of paramount importance is that college decision leaders agree to what research/data is to be collected and commit to its use as the primary basis for decision-making.**

Using the six program planning filters as a framework, *Figure 4* presents a template for identifying the strategic research questions and associated types of intelligence that may prove useful for the collective purposes of enrollment and academic program planning.

*Figure 4: Template for Identifying Program Planning Research and Intelligence Needs*

Academic Program Planning Filters	Environmental Factors Likely to Impact Enrollment	Strategic Research Questions (What do we need to know?)	Level of Granularity Required *			What are the Options to Address Research/Information Requirements? (ILLUSTRATIVE ONLY)
			C	D	P	
I. EXTERNAL ENVIRONMENT						
Student Demand	Population Demographics & Projections	<ul style="list-style-type: none"><li>How does the college’s <b>student profile</b> compare to current &amp; projected population demographics?</li><li>Where are the gaps?</li></ul>	✓	✓	✓	<ul style="list-style-type: none"><li>Conduct an environmental scan</li><li>Engage SEM Works, or other 3<sup>rd</sup> party marketing firm, to conduct an <i>Enrollment Opportunity Analysis</i> in order to identify near-term high potential market and enrollment opportunities</li></ul>
	Education Participation	<ul style="list-style-type: none"><li>What are the <b>college-going rates</b> by market segment?</li></ul>	✓	✓	✓	<ul style="list-style-type: none"><li>IPEDS Analytics</li><li>Request special report from state funding agency</li></ul>
	Political/ Policy	<ul style="list-style-type: none"><li>What are the college’s <b>funding opportunities and threats</b> for specific programs/markets?</li></ul>	✓	-	✓	<ul style="list-style-type: none"><li>State and federal funding policies</li><li>Institutional accreditation status</li></ul>
	Social Value/ Lifestyle Trends	<ul style="list-style-type: none"><li>What is the perceived <b>value of a college education</b> among primary markets segments in our region?</li><li>How <b>affordable</b> is a college education by market segment in the college’s service region?</li></ul>	✓	✓	✓	<ul style="list-style-type: none"><li>Participate in the College Board <i>studentPOLL</i> survey</li><li>Participate in the NCES financial aid survey (NPSAS)</li><li>Engage a third party research firm to conduct a price/value sensitivity analysis</li></ul>
	Technology Trends	<ul style="list-style-type: none"><li>What are the needs/ expectations of college-goers for the role of <b>technology</b> in a college education?</li></ul>	✓	✓	✓	<ul style="list-style-type: none"><li>Participate in the EDUCAUSE study on college/ university student technology use</li></ul>
Industry Demand	Occupational & Industry Outlook	<ul style="list-style-type: none"><li>What <b>occupations and industries</b> have the <b>highest projected growth</b> in the college’s service region?</li></ul>	✓	✓	✓	<ul style="list-style-type: none"><li>Bureau of Labor Statistics</li><li>Engage labor market research firm such as <i>EMSI</i> or <i>Burning Glass Research</i> to produce industry and occupational demand/supply forecasts and workforce skills gap analyses at the regional level</li></ul>
Competitive Opportunity	Competitors	<ul style="list-style-type: none"><li>How has the college’s enrollment <b>market share</b> been trending relative to</li></ul>	✓	-	✓	<ul style="list-style-type: none"><li>Participate in the <i>National Community College Benchmark Project</i></li></ul>

Academic Program Planning Filters	Environmental Factors Likely to Impact Enrollment	Strategic Research Questions (What do we need to know?)	Level of Granularity Required *			What are the Options to Address Research/Information Requirements? (ILLUSTRATIVE ONLY)
			C	D	P	
		competitors? What are the college's <b>competitive advantages and disadvantages</b> among primary student segments (e.g., affordability, program mix)?	✓	-	✓	Engage SEM Works, or other 3 <sup>rd</sup> party marketing firm, to conduct a <i>Market Opportunity Analysis</i>
II. INTERNAL ENVIRONMENT						
Institutional Capability	Applicant Demand	Which programs/disciplines experienced highest/lowest <b>applicant demand</b> in recent years?	✓	✓	✓	Request analysis from Institutional Research Hire an enrollment analyst who is dedicated to enrollment and program planning
	Enrollment Yield	Which programs/disciplines experienced highest/lowest <b>applicant-to-enrollment conversion</b> ?	✓	✓	✓	
	Ist-Year Persistence	Which programs/disciplines experienced highest/lowest <b>fall-to-fall 1<sup>st</sup> year persistence</b> ?	✓	✓	✓	
	Completion	Which programs/disciplines experienced highest/lowest <b>completion rates</b> ?	✓	✓	✓	
Program Capacity	Program Innovation & Growth Capacity	Which programs/disciplines enroll the highest/lowest proportion of students as the program of <b>1<sup>st</sup> choice</b> ?	✓	✓	✓	
		Which programs/disciplines are most/least <b>under-enrolled</b> ?	✓	✓	✓	
		Which programs/disciplines have the greatest <b>potential to optimize the use of technology</b> in instructional delivery?	✓	✓	✓	
		Which programs/disciplines have <b>unused capacity</b> (course seats, class/lab space use, instructor)?	✓	✓	✓	
Cost/Benefit	Cost/ROI	Which programs/disciplines have the highest/lowest <b>net revenue contributors</b> ?	✓	✓	✓	
		Which programs have the highest/lowest <b>completion rates</b> within 2 years of expected time to completion?	✓	✓	✓	
		Which programs have the highest/lowest <b>employment rates</b> within 6 months of graduation?	✓	✓	✓	

\* C=College-Level, D= Department/Discipline Level, P=Program Level

When external environmental threats and opportunities are brought into alignment with internal program and enrollment strengths and constraints, gaps and opportunities may be identified. Ideally, a systematic program of market research (e.g., environmental scan, competitor analyses, market opportunities analyses) should be established on a rolling three-to-five-year basis to inform ongoing enrollment and program planning. However, for many community colleges, the ideal is more the exception than the norm. More often than not, market research and enrollment analyses are conducted on a scattershot basis, or when mandated by external agencies for program funding and/or accreditation purposes. However, a number of client schools have adopted alternative measures that have proven to be affordable and effective in serving their research purposes. These include:

- ❖ A rolling annual reserve fund that is used to support a systematic program of market research that is conducted via an internal institutional research office (if one exists) and/or third party market research firms.
- ❖ Participating in college/university consortia to cost-share the conduct of research with other institutions that have similar needs and interests.
- ❖ Establishing industry sector advisory committees or hosting sector-specific summits with key business and industry leaders to identify emerging needs within the region.
- ❖ Establishing a talent team of 4-6 individuals who bring diverse backgrounds to conducting an environmental systems analysis (refer to *Chapter Two*).
- ❖ Designating a faculty/staff person with expertise in marketing, social science research or a related discipline to monitor environmental trends, and to serve as a “trend spotter” and proposal writer in support of new program initiatives *across* academic units.

In combination, the research/analyses stemming from multiple sources may be used to identify recurring themes that reveal the best opportunities for future program development.

Beyond the strategy for collecting the requisite intelligence, there also must be a strategy for its dissemination and use. The utility of information derived from these types of efforts is time-sensitive. Therefore, a rollout plan must be developed for the use of the research findings as described in *Step 2* of the process (below), including a communications strategy that aims to (a) ensure consistency in the information communicated, (b) convey the critical importance of maintaining program relevance to the process of enrollment management, (c) foster understanding that realizing the college’s enrollment goals is a shared responsibility across academic and service areas, and (d) demonstrate the commitment of executive leaders to act on the research outcomes. The communications strategy should take into consideration the various target audiences that need to be reached in order to ensure awareness of the process, understanding of roles/responsibilities and accountabilities,

opportunities for engagement, and expected outcomes. A template for use in developing a communications strategy is presented in *Figure 5*.

*Figure 5: Communications Template*

TARGET AUDIENCE	Message	Action	Delivery Method	Lead / Owner	Who Does What	Time-line	Objective	Effective-ness Measures	Antecedents for Success
Full-time Faculty									
Sessional Faculty									
Staff									
Administration									
Others (e.g., Board of Directors, Advisory Committees)									

### *Step 2: Idea Generation*

As previously argued, program innovation should be strategic, not haphazard. Strategic decisions require the informed perspectives of many constituents. Therefore, an integrative approach to enrollment and academic program planning should be fostered that maximizes opportunities for coordination, integration, and collaboration within and across divisional boundaries, beginning with the program idea generation process.

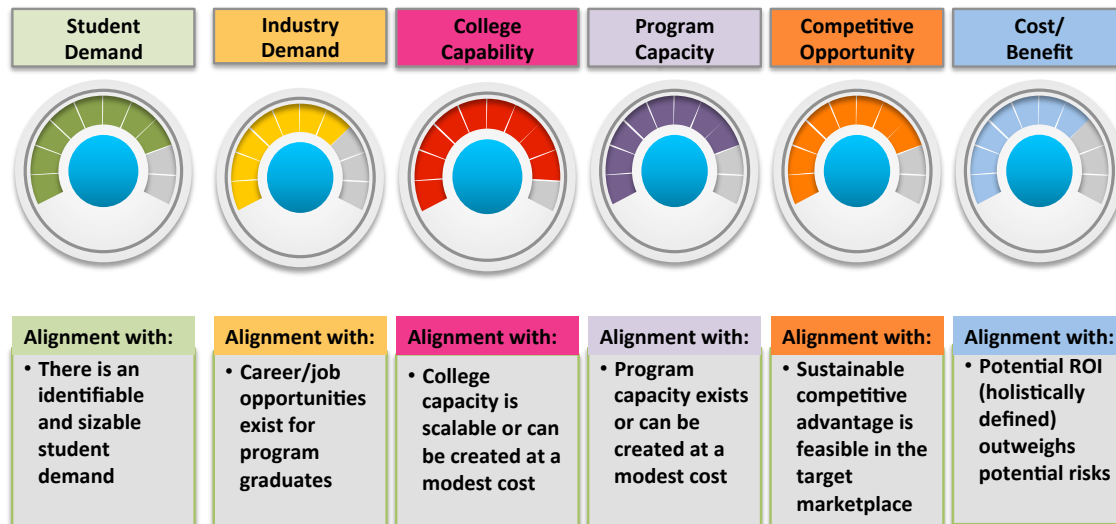
The process to explore strategic enrollment opportunities and program innovation ideas could begin with an **enrollment visioning** exercise as described in the enrollment goal-setting white paper, that involves a cross-divisional planning retreat of academic, enrollment and administrative leaders at which market research and related intelligence is presented to inform strategic discussions on potential enrollment and program opportunities. In doing so, a breadth of perspectives can be brought to bear in conducting a **SWOT** analysis of internal strengths and weaknesses relative to external opportunities and threats in exploring program innovation ideas in answer to the following questions:

- ❖ How can we use and capitalize on our internal strengths?
- ❖ How can we improve on each internal weakness?
- ❖ How can we exploit and benefit from each external opportunity?
- ❖ How can we mitigate each external threat?

The six program planning filters model may be used as decision criteria in the process for identifying potential program innovation opportunities for exploration, where all six

planning filters align as depicted in *Figure 6*—that is, sufficient student demand, industry demand, institutional capability, program capacity, competitive opportunity and cost/benefit.

*Figure 6: Application of Six Planning Filters as Decision Criteria*

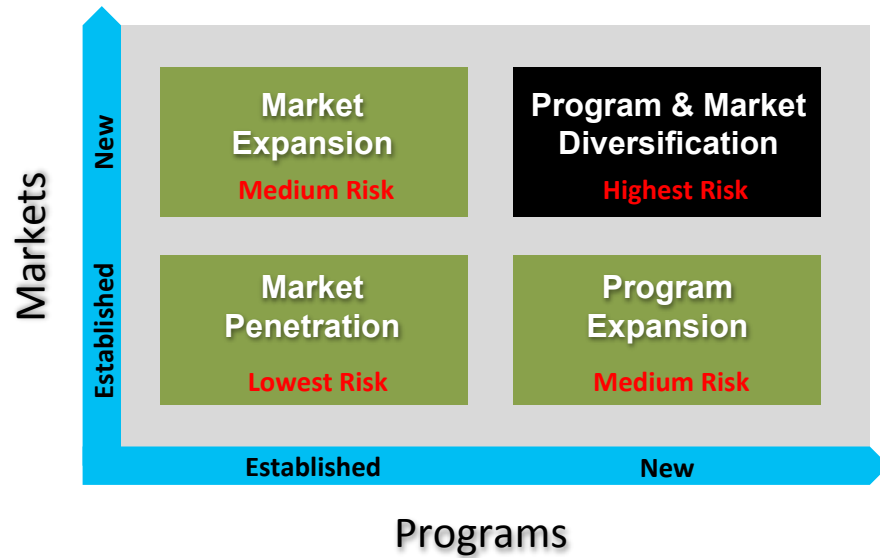


If an enrollment visioning retreat is not deemed appropriate or practical, another option is to conduct a series of facilitated discussion sessions over a two-to-three week period either by academic and service division, or as general open sessions at which the findings from the research conducted in *Step 1* are presented and feedback is garnered on program ideas in answer to the questions noted above. Although valuable insights may be garnered, this approach often is more resource-intensive, protracted, and may not realize the level of commitment, engagement and action that is desired.

Program ideas emerging from the visioning/consultative process could then be explored in more depth at the academic division, department and unit levels whereby a cascading planning process is used as a means to (a) refine the initial ideas generated, (b) identify other ideas, (c) consider such factors as the relative fit with department/program development priorities, capabilities, and strengths, and (d) assess the capacity conditions and potential risk to execute. In relation to the latter, it should be recognized that every program innovation strategy has some element of risk associated with it. The inherent risks associated with four possible program innovation and development strategies are presented in *Figure 7*.



*Figure 7: Program Innovation and Development Risk Analysis*



As the figure depicts, the least risk is incurred when pursuing a strategy of further penetrating an *established* market with *established* high performing programs. Moderate risk levels are associated with a strategy that launches *new* programs in *established* markets or takes *established* high performing programs into new markets where the institution has little or no visibility or awareness—which requires extensive time and investments in marketing. The highest risk is in launching *new* programs in *new* markets in an effort to diversify. Fundamental to these determinations is how to define an “established market” and “high performing program”.

In this context, an established market relates to high priority student populations that reflect those most representative of the communities/regions you serve, such as freshmen direct from high school, adult/workforce development learners, transfer students, first generation learners, underrepresented populations, to name a few. In addition, an established market may pertain to specific market segments defined by geographic region (local, in-state, out-of-state, international), by campus location in the case of multiple instructional delivery sites, by learning modality (e.g., part-time learners, online learners), or some other variant on the theme. The definition of a high performing program is a topic of discussion later in this paper under the section, *Existing Program Innovation*.

From an integrated planning perspective, this consultative process should be fused with the enrollment goal-setting process. Assuming this approach is taken, a critical analysis of available market research and intelligence would lead to the identification of strategy options for both NEW and EXISTING program innovation, such as the following:

- (a) Expand high performing programs with available capacity within established markets that are not saturated and/or new markets
- (b) Maximize net tuition revenues from improved retention and/or growth of revenue-generating programs and courses
- (c) Reallocate resources through changes in the design and/or delivery of established programs
- (d) Balance enrollment between high performing programs that are revenue-generating with those that operate at a net expense
- (e) Repackage and leverage existing course offerings in creating new programs for select markets
- (f) Invest in new programs within established and/or new markets
- (g) Divest/sunset existing programs that are no longer serving community needs and/or yielding desired ROI (financial & non-financial) and redeploy resources

Each of the identified strategy options subsequently would be considered in relation to centrality to mission, market viability, cost/benefit and related factors. The desired deliverable from this step of an integrated planning process would be the identification of high potential program development “targets of opportunity” linked to enrollment goals, and an action plan for the development of an executive business case described in *Step 3*, below. A template for documenting the outcomes stemming from the consultative process is presented in *Figure 8*.

*Figure 8: Template for High Priority Strategy Options*

PROGRAM IDEAS/ STRATEGY OPTIONS	Markets (list)	Risk Level (H, M, L)*	Related Enrollment Goal(s)	Actions to be Taken	Lead / Owner	Who Does What	Time-line	Effective-ness Measures	Antecedents for Success
I. New Programs	Established								
	New								
II. Established Programs	Established								
	New								

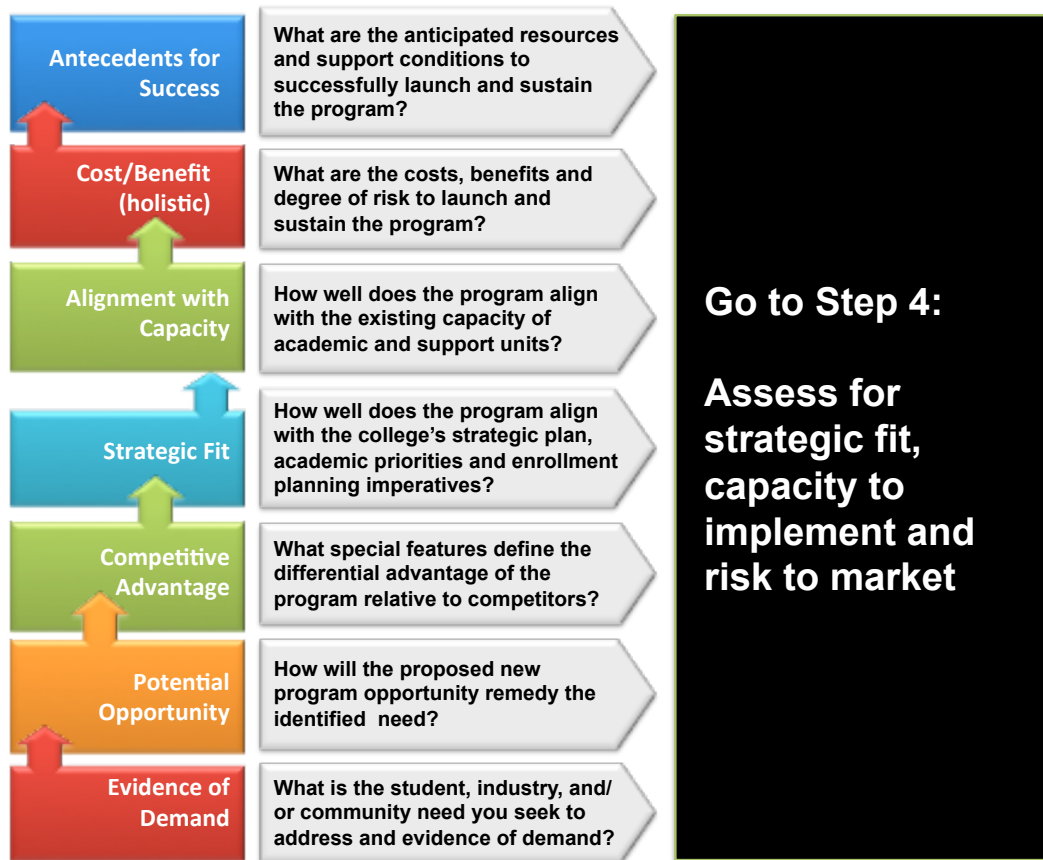
\* H= High, M=Medium, L=Low

Exploring strategy options of this nature require the informed perspectives of many. Therefore, as part of the idea generation process, consultations should be extended to include a broader range of constituents from across divisional boundaries such as professional staff from student recruitment, admissions and transition services, as well as learning and development specialists, academic advisors, program advisory committees, program coordinators in continuing studies, among others as appropriate. The focus of the consultations should be on determining the degree to which each strategy option is likely to yield desired results or realize competitive advantage. Among the many factors that should be considered are the scalability and capabilities of student and enrollment services to support the launch and sustainment of each identified strategy, as well as other antecedents for success (e.g., potential erosion of internal/external political capital if the strategy fails).

### ***Step 3: Develop an Executive-level Business Case***

In an effort to streamline the approval process for new programs, this step involves the development of an executive-level business case for initial review before significant resources are invested by faculty/staff in the development of new programs or morphing of existing programs. Typically, the dean or department chair assumes leadership in the development of the executive business case for preliminary consideration by the Vice President of Academic Affairs and the Deans' Council. If approved, the executive business case subsequently would be considered by the college's SEM leadership as a component of the enrollment planning process. The core elements of the executive business case are presented in *Figure 9* and described below.

*Figure 9: Elements of an Executive-level Business Case*



Elements of an executive-level business case include:

- Evidence of Demand:** This is a concise statement of the student, industry, and/or community need you seek to address, supported by research and data from *Step 1* that substantiates potential demand in evidence-based terms.
- Potential Opportunity:** This portion of a business case answers the question, “how will the new program or redesign of an existing program remedy the identified problem/need?” It should be succinct while providing enough detail to describe the proposed program direction.
- Competitive Advantage:** The potential unclaimed or underserved niches that define the competitive differential advantage of the program are highlighted, such as program attributes, campus attributes, pricing, instructional delivery methods, existing marketplace reputation and positioning, as well as program benefits and outcomes.

- d) **Strategic Fit:** Any investment of institutional resources must be aligned with the college's long-term strategic goals, academic development directions, and aid in addressing associated enrollment and financial imperatives.
- e) **Alignment with Capacity:** Indications should be provided of the existing capacity conditions to offer a quality learning experience within the academic unit responsible for the program, as well as the service units that will support its effective launch and student success (e.g., institutional marketing, admissions/recruitment, career services, registrarial services, library, student success services, teaching and learning). If existing capacity is deemed insufficient, affordable options for ramping up capacity should be identified.
- f) **Cost/Benefit Analysis:** One essential ingredient of a cost/benefit analysis is a financial comparison of estimated 'total' costs to deliver the program versus expected revenue based on enrollment targets. However, the cost/benefit analysis should not be limited solely to financial indicators. Rather, a holistic perspective should be taken to include the non-financial benefits to students, industry, and the community as well.
- g) **Antecedents for Success:** Other required resources and conditions should be identified for the successful implementation and sustainability of the program initiative.

#### *Step 4: Assessment*

At this juncture, a decision is made regarding whether each new program initiative should be advanced or not and, if so, in what way. The decision criteria employed should align with the executive business case elements as depicted in *Figure 10*. Consideration should be given to assigning weights to each criterion in keeping with institutional planning priorities, and the college's enrollment and financial imperatives.

*Figure 10: Preliminary Approval Decision Criteria*

DECISION CRITERIA	Assigned Weight	Weighted Program Rating		
		Program 1	Program 2	Program 3
❖ Evidence of Demand	.20			
❖ Potential Opportunity	.15			
❖ Competitive Advantage	.15			
❖ Strategic Fit	.10			
❖ Alignment with Capacity	.10			
❖ Cost/benefit (holistic)	.20			
❖ Antecedents for Success	.10			
	1.00			

The specific variables underlying the rating for each of the six planning filters should draw from, but not necessarily be limited to, the research conducted in *Step 1*; and should be consistently applied across all programs to the extent possible. The deliverable from the assessment process should realize a prioritized list of program opportunities and decision outcomes such as the examples delineated in *Figure 11*.

*Figure 11: Examples of Decision Outcomes*

Decision Options	Description
Advance	Advance program development and proceed through normal channels for approval and funding
Fast-track	Fast-track for rapid “mind-to-market” implementation to remain competitive
Incubate	Incubate as a pilot for program initiatives of potential high cost/risk
Revise	Revise select program elements to improve ROI
Abandon	Abandon and not advance beyond this point

The decision process should involve the college’s executive leaders, academic leaders at the level of the dean, and enrollment management leaders or SEM committee (if one exists). Ideally, the timing of decisions should occur at a sufficiently early stage in the annual business planning cycle to ensure that enrollment/program opportunities that are approved to proceed to the next stage of development can be considered in the annual budget planning process. With that said, to ensure “strategic dexterity” in decision-making, some flexibility needs to be provided for the consideration of new strategic opportunities that emerge throughout the year.

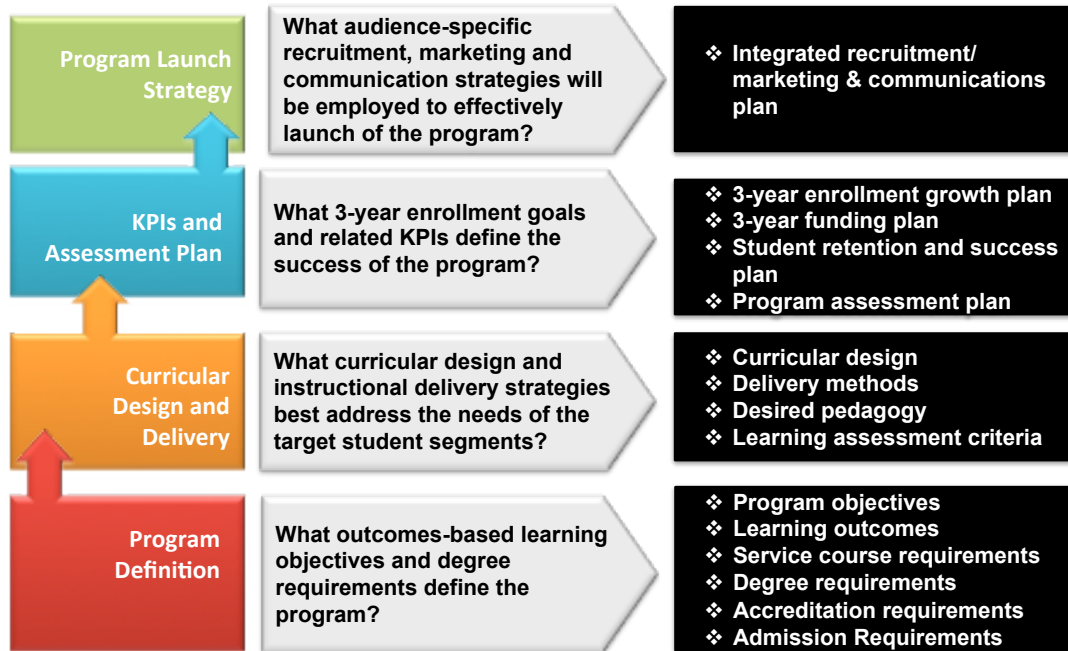
### *Step 5: Concept Development*

At this stage, program development begins for those programs approved to advance through the normal development process, as well as for those programs identified for fast-tracking or incubating on a pilot basis. The program development process may be expedited for the latter two options, depending on whether the concepts are brand new or based on the morphing of existing programs and courses.

Regardless of the process and associated timelines, the importance of ensuring fit between the needs of the diverse student segments you serve and the learning model underlying the curriculum and instructional delivery methods cannot be over-emphasized. Key questions

and related factors that should be considered in developing the program concept are presented in *Figure 12*.

*Figure 12: Development of Program Concept*



This is the CRUCIAL step in the process during which alignment is made between the new program initiative and the development of associated enrollment strategies and KPIs. Rollout plans are developed for the effective launch of each program initiative as described in *Step 6* (below). In addition, a program-specific assessment plan is developed that includes agreed upon key performance indicators (KPIs) for each of the first three years of operation (e.g., student demand, admission/enrollment yield, 1<sup>st</sup> year persistence rates, tuition yield, etc.) and criteria for assessment of expected ROI. A balanced scorecard approach to defining KPIs described in yet another white paper by this author title, *Measuring Effectiveness to Drive Performance Improvement and Recalibrate Resources*, may serve as a useful tool in this process. The assessment plan should delineate roles/responsibilities for data collection, analysis, and reporting; as well as accountabilities for program performance management and three-year assessment.

### *Step 6: Program Launch*

If the institution is willing to invest resources in the development of new programs, it should be willing to invest resources to ensure the successful launch of programs, which involves the following:



- (1) **Target markets** are identified (e.g., freshmen direct from high school, transfer students, adult learners, veterans, online learners)
- (2) **Selling points** are developed (e.g., opportunities for professional networking, work experience as a component of the program, employment opportunities for graduates)
- (3) **Promotional campaigns** are designed and aligned with communication preferences of target market segments (e.g., in-person, phone, mail, email, web portal, social media)
- (4) **Recruiters** are armed with the knowledge and tools necessary to promote each new program
- (5) **Service areas** are equipped to respond to program-specific inquiries
- (6) **Effectiveness measures** are defined and an associated performance reporting strategy is developed to monitor the ROI of recruitment/marketing and communications strategies (e.g., numbers of generated inquiries, applicants-to-enrolled conversion rates, etc.)

## EXISTING PROGRAM INNOVATION AND PERFORMANCE MANAGEMENT

Ensuring the continuous improvement and renewal of established programs is fundamental to a college's future enrollment success. Yet, repeatedly we hear from campus leaders that policies and procedures associated with the program review process are so time and resource intensive that available capacity is insufficient to support continuous renewal efforts on a timely basis. Many institutional leaders assert that the effort involved in the process has become a deterrent to faculty/staff engagement, and impedes the responsiveness and competitiveness of the college in serving community needs. For this reason, institutions should not rely on episodic assessment processes as the sole basis for program renewal. Rather, a small set of **key performance indicators** (KPIs) and associated metrics should be identified for the routine monitoring of program performance in answer to the question, "How well are existing programs performing relative to established goals?" Ideally, a review of KPIs associated with existing program performance should become part of the "cascading intelligence" that is monitored on a systematic basis to inform integrated enrollment and program planning described earlier in this chapter (refer to *Figure 4*).

In our consulting practice, we have found two conceptual frameworks to be particularly useful in working with client schools that seek to enhance integration between enrollment goal-setting and the program development priorities of the academic division. These include:

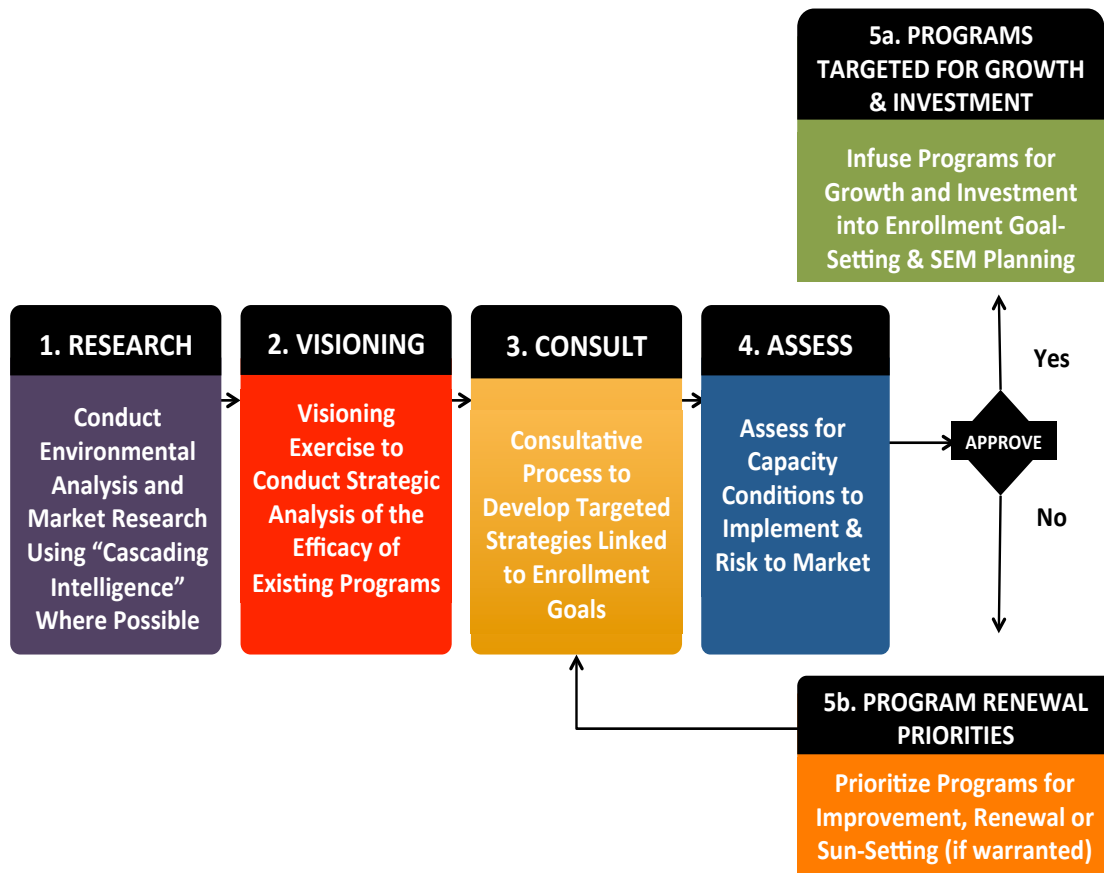
- (1) A framework for guiding continuous renewal of established programs that permits strategic dexterity for timely decision-making, and
- (2) A construct for performance management of academic programs.

Each of these frameworks is described below, followed by a case study that demonstrates their application.

### 1. Framework for Continuous Renewal of Established Programs

A conceptual framework for the continuous renewal of established programs is depicted in *Figure 13*. This framework is grounded in the same quality-based principles undergirding new program innovation that were presented in the previous section. The framework consists of a sequential series of five planning steps by which the performance of established programs is reviewed for continued alignment with the needs of the marketplace and student learners leading to a determination of which programs should be considered for targeted enrollment growth and continued (or additional) investment, as well as priorities for program renewal.

*Figure 13: Conceptual Framework for Continuous Renewal of Established Programs*



The process begins with a review of the **cascading intelligence** used to inform the enrollment goal-setting process at the institutional level (Step 1), followed by a visioning exercise at which a **strategic analysis** is conducted of the efficacy of existing programs relative to marketplace and student learning needs with a view to identifying targets of opportunity for potential enrollment growth and investment (Step 2). An **academic planning and consultative process** follows that permits **strategic dexterity** in decision-making within the context of the enrollment goal-setting process (Step 3). As part of the consultative process, an **assessment** is conducted of organizational capacity conditions to support implementation of identified enrollment and program opportunities and the associated potential risk to market (Step 4), ultimately leading to a determination of which programs should be targeted for enrollment growth and continued (or additional) investment (Step 5a), as well as priorities for more in-depth program assessment to inform program modifications, more extensive program renewal and, if warranted, program sun-setting and redeployment of resources (Step 5b).

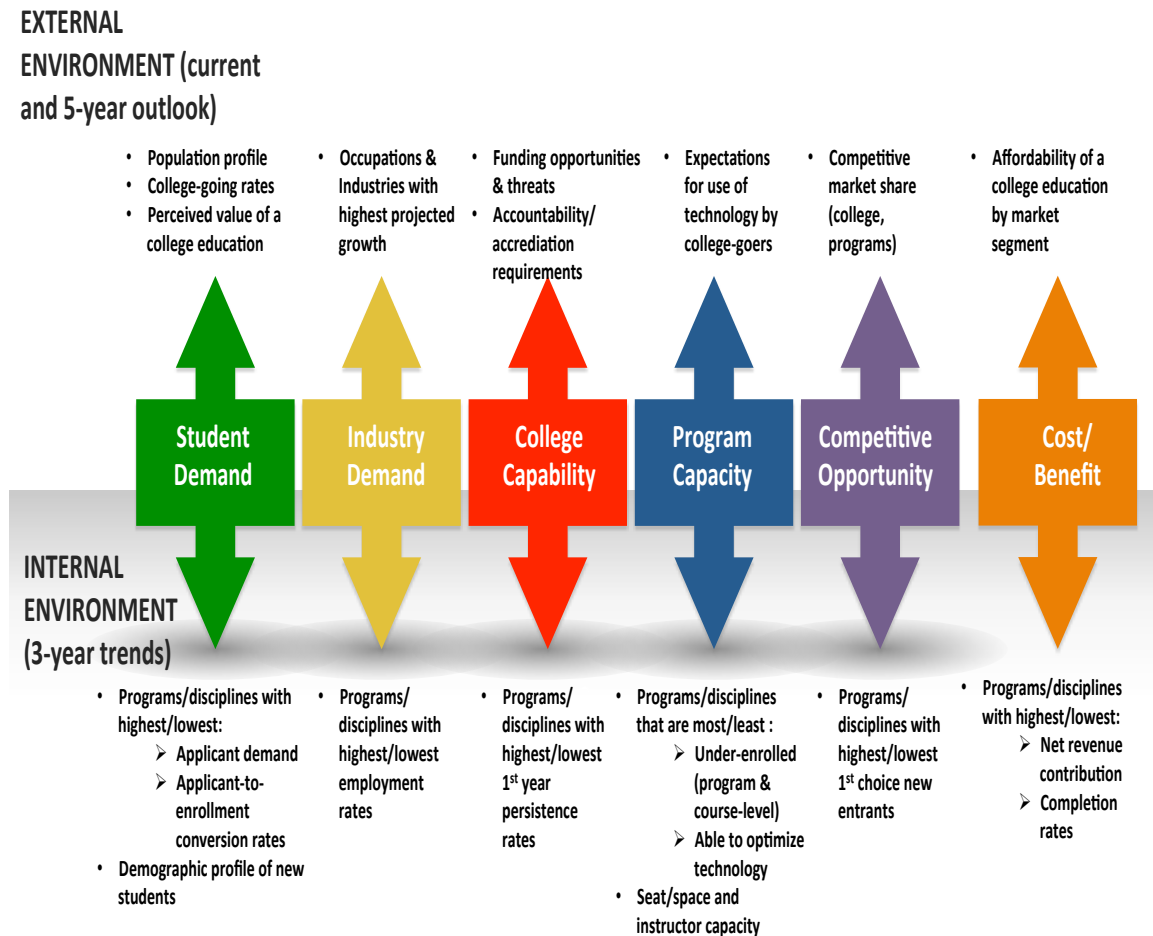
Similar to the NEW program innovation process described earlier, depending on the nuances of college-specific governance and decision structures, the decision processes may be somewhat more iterative in nature than the linear process flow represented here.

## 2. Construct for a Program Performance Management System

As referenced above, the first step in the conceptual framework involves a review of the cascading intelligence used to inform the enrollment goal-setting and planning process. A component of the intelligence information should include a small set of **key performance indicators** (KPIs) and associated metrics for the routine monitoring of program performance. The KPIs should be meaningful for decision leaders at all levels. By aligning internal KPIs and external environmental factors that address each of the six program planning filters, a critical analysis can be conducted to identify programmatic gaps and niche market opportunities for NEW program development, as well as opportunities for EXISTING program renewal—that is, programs that are **high performing** and may be candidates for enrollment growth, programs that **require modest improvement** in targeted areas, those that are experiencing substantive performance issues and warrant more **in-depth program review** or potential **sun-setting** and the redeployment of resources.

Drawing from the key research questions for developing cascading intelligence presented earlier in *Figure 4*, a construct for developing a program performance management system from a systems perspective is presented in *Figure 14*.

*Figure 14: Construct for Academic Program Performance Management*



Some institutions develop dashboard-style reports with drill-down capabilities and alert triggers to inform the routine monitoring of program performance. Dashboard-style reports typically allow for **real-time updates** to performance metrics, as well as provide **drill-down** (or cascading) reporting capabilities to serve the needs of decision leaders at all levels of operation (department faculty, academic deans, executive leaders). If **performance thresholds** associated with high, medium and low performance are defined for each performance metric, alert triggers can be generated when a program falls below an acceptable level of performance as illustrated in *Figure 15*. This allows for proactive examination of the situation and timely interventions to be made if warranted. When multiple alerts are generated for a given program, it may suggest that the program should received heightened priority for an in-depth program assessment. Programs with a consistent basis of high performance across all (or most) indicators may reflect strong programs with potential to leverage.

*Figure 15: Illustration of a Program Performance Dashboard*



To illustrate the application of the aforementioned frameworks, a case study at Success Community College (fictitious name) will be used. While the case study is hypothetical in nature, the situational context and planning processes employed are drawn from actual experiences in working with client institutions. It should be noted that within an integrative planning context, the first two steps of the EXISTING program innovation process are consistent with the NEW program innovation process. In both instances, the first step is the conduct of market research and analyses (Step 1) and the second step involves a visioning exercise (Step 2)—both of which are fused with the enrollment goal-setting process (refer to white paper by this author). Subsequent steps in the NEW and EXISTING program innovation processes beyond these first two steps follow different decision pathways.

### A Case Study at Success Community College

Success Community College (SCC) is a public, two-year college that is geographically located in one of the most rapidly changing and competitive markets in the country. In considering the internal and external environmental factors impacting enrollment, College leaders anticipate that SCC will be challenged in future years to maintain congruence between the programs and services they offer and the changing needs of the communities they serve within available organizational capacity conditions and funding constraints. Therefore, third party assistance was secured to inform the development of enrollment goals and strategies linked to priorities for academic program innovation and renewal that represent the most significant promise for the institution. In doing so, the following five-step process was employed.

### *Step 1: Research*

SCC engaged SEM Works to conduct an *Enrollment Opportunities Analysis* (EOA) to inform their enrollment goal-setting and planning process. The objectives of the EOA were fourfold: (1) to determine how well the College's student profile was aligned with the demographic profile of the college-aged population in their local region, (2) to benchmark institutional enrollment performance on select KPIs by program cluster relative to primary competitors, (3) to identify environmental factors that may impact enrollment (positively or negatively) in the near term (e.g., state funding policies, college-going rates among priority population segments, etc.), and (4) to identify niche opportunities for potential enrollment growth. In addition, the College secured the services of *EMSI*—a firm specializing in econometric modeling and labor market research—to undertake a detailed analysis of the region's industry and occupational outlook, a workforce skills gap analysis, and an assessment of potential gaps and opportunities relative to the College's existing program offerings within the competitive marketplace.

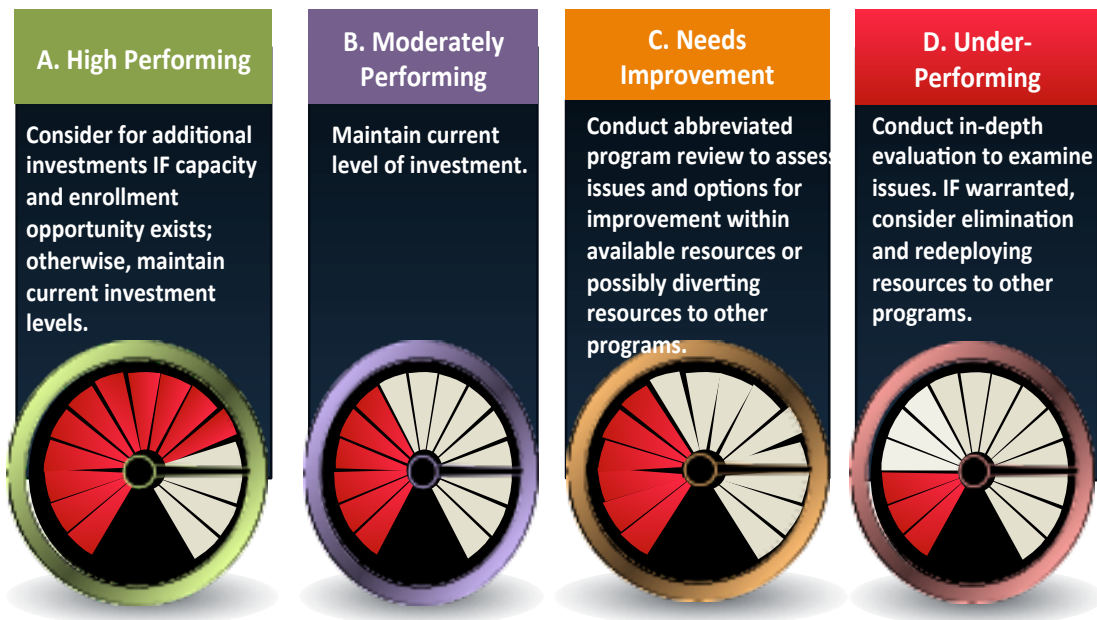
On the strength of market intelligence gleaned from both research sources, SCC was able to identify in which of their established programs there was (a) industry **employment opportunity** over the next 3-5 years, (b) an existing or projected **under-supply** of postsecondary graduates among competitor institutions in the region, (c) specific market segments with potential **untapped demand** (e.g., veterans, second career adult learners, transfer students), (d) **potential new markets** in which the College had limited presence, (e) **programmatic gaps** and **niche markets** for new program development, as well as (f) **curricular skill gaps** in select programs relative to successful programs at competitor institutions.

Concurrent with the external research, a College-designated talent team comprised of staff and faculty with data/research expertise was tasked with responsibility for conducting a review of the performance of each of the College's established programs based on a small set of KPIs including: (1) applicant demand; (2) applicant-to-enrollment conversion rates; (3) first-year persistence rates; and (4) program completion rates (on time and time-to). The analysis was to include the most recent three-year trend in program performance on each KPI, with drill-down by primary student segment (e.g., freshmen students direct from high school, transfer students, adult learners, veterans) in order to identify areas for targeted intervention. In addition, the task team was charged with responsibility for exploring options for a dashboard-style reporting solution compatible with their enterprise application student system based on a review of the *Gartner Magic Quadrants* annual assessment of business intelligence and analytics software solutions available at [http://www.gartner.com/technology/research/methodologies/research\\_mq.jsp](http://www.gartner.com/technology/research/methodologies/research_mq.jsp).

### Step 2: Visioning

Following the compilation of enrollment and market intelligence from all sources, the College's task team undertook a critical analysis to determine the efficacy of each of SCC's programs using pre-established decision criteria as shown in *Figure 16* and described below.

*Figure 16: Program Efficacy Grid*



- ✓ **Category A—High Performing Programs for Potential Investment:** Programs that were rated as “high performing” on the benchmarked KPIs, as well as identified as having high enrollment opportunity as evidenced by student *and* industry demand.
- ✓ **Category B—Moderately Performing Programs:** Programs that were rated as “moderately performing” on the benchmarked KPIs, as well as identified as having moderate-to-high enrollment opportunity as evidenced by student *and* industry demand.
- ✓ **Category C—Programs Needing Modest Improvement:** Programs that fell below the acceptable performance threshold on one of the benchmarked KPIs, as well as identified as having moderate-to-high enrollment opportunity as evidenced by student *and* industry demand.
- ✓ **Category D—Under-Performing Programs At Risk of Decline:** Programs that were identified as being at risk in relation to at least one of the following criteria: (a) fell below the acceptable performance threshold on two or more of the KPIs; (b) had reached market saturation within the competitive marketplace; (c) had low potential student demand; and/or (d) had low potential industry demand.



Using a consistent base of information and standard definitions, the task team rated each College program according to a performance rubric of high/medium/low associated with each of the KPIs. Performance thresholds for determining high/medium/low ratings were derived from the competitor analysis that was conducted as a component of the EOA.

In addition, a recommendation was made to acquire a dashboard-style reporting system with the demonstrated functionality profiled on the iDashboards website (available at <http://www.idashboards.com/Solutions/For-Your-Industry/Education/Higher-Education.aspx>) in order to permit real-time updates to SCC's performance metrics, the generation of alert triggers relative to established standards of performance relative to competitor schools derived from the EOA, and drill-down reporting capabilities to serve the needs of decision leaders at all levels of operation.

A summary of the results from the research and analyses was presented at an **enrollment visioning retreat** facilitated by SEM Works. Based on the information presented, an enrollment vision was established by College leaders for the next 5 years, as well as high-level enrollment goals by priority student segment. In addition, high potential program opportunities were identified for enrollment growth, investment and renewal among EXISTING programs, as well as for NEW program innovation. Outcomes from the retreat were subsequently referred to the academic division for further consideration.

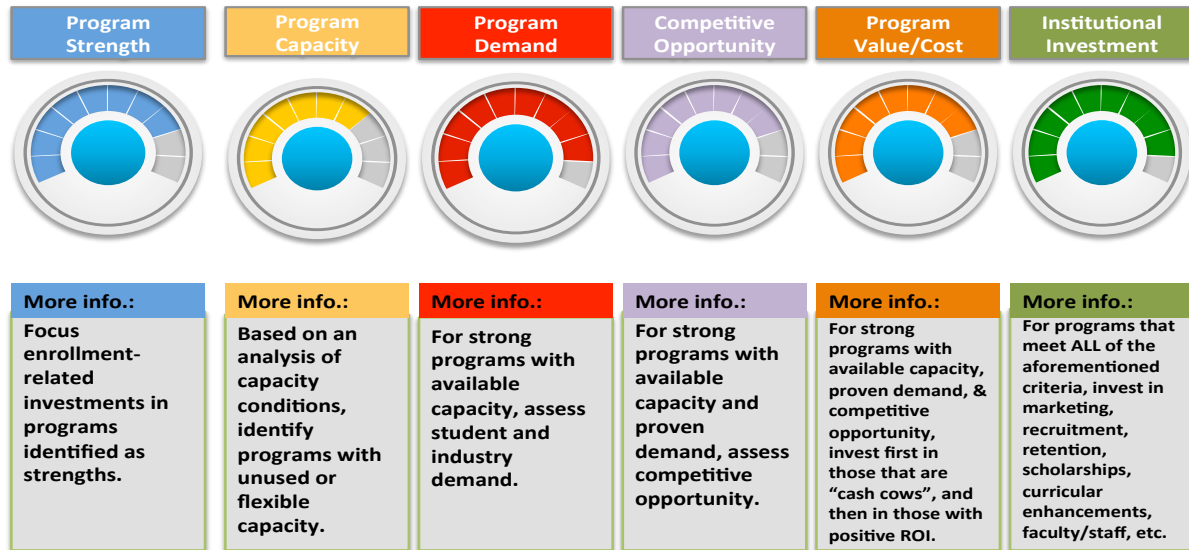
### *Step 3: Consult*

Executive leaders at SCC understood that “strategic” enrollment growth was a matter of survival in meeting financial imperatives. While the College had experienced substantial enrollment growth in recent years, enrollment increases in established programs and via new program introductions occurred largely in an uncontrolled manner. Therefore, the Vice President of Academic Affairs decided that a cascading approach to integrated planning was required as an extension of the visioning retreat. This involved a one-day **academic planning summit** with academic deans, program coordinators/chairs as well as key frontline service leaders from student recruitment, marketing, admissions and transition services, academic advising, career services, student success services, continuing studies, among others. The purpose of the summit was to build awareness and understanding regarding the criticality of strategically targeting high performing programs for expansion, continuously improving programs to ensure quality, currency and competitiveness, as well as new program developments where there was a demonstrable niche opportunity.

Recognizing that there is no simple or one-size-fits-all definition of a “high performing” program and the political sensitivity of discussions of this nature, SEM Works was requested

to facilitate the academic planning summit. The agenda included an overview of the research and outcomes from the enrollment visioning exercise, best practice principles for strategically managing enrollment, as well as a recommended methodology for applying quality-based principles in targeting programs for growth and investment at SCC. In relation to the latter, a sequential series of decision criteria for identifying programs of highest potential for investment was presented as depicted in *Figure 17*.

*Figure 17: Strategic Enrollment Growth Decision Protocols*



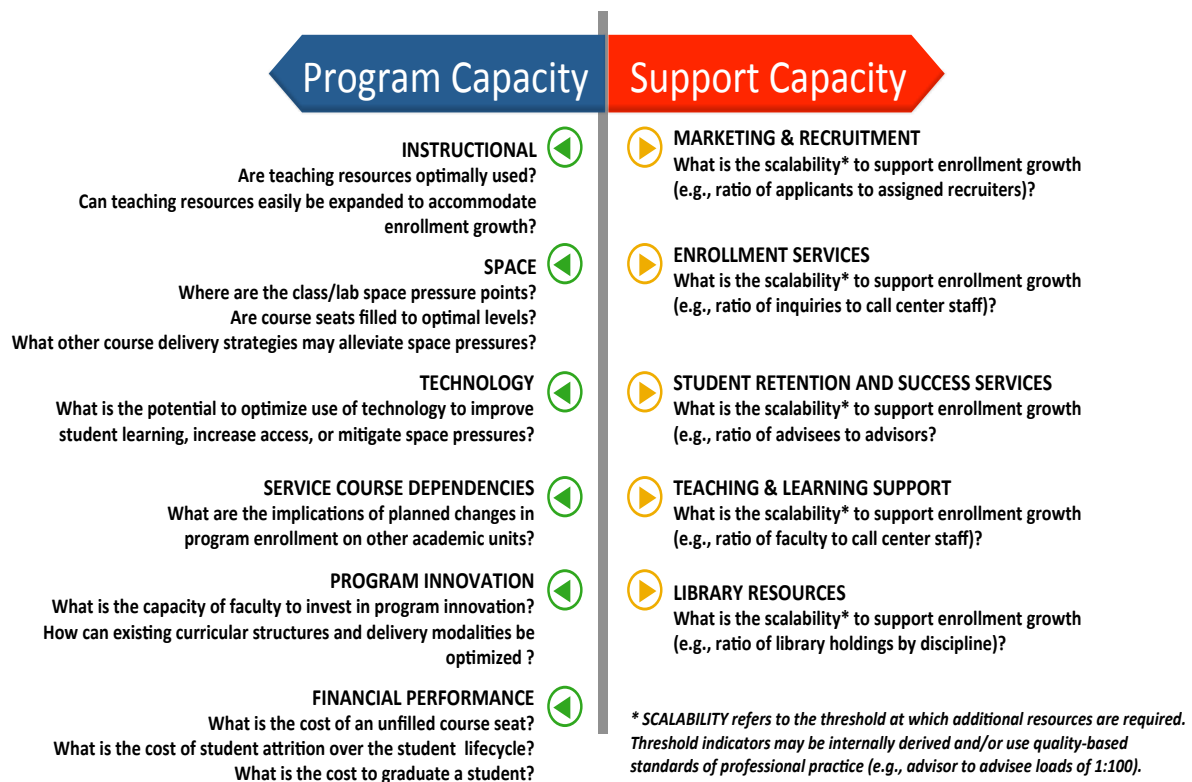
The summit was co-sponsored by the Vice President of Academic Affairs and the Vice President of Enrollment Services. At the summit, the sponsors emphasized that the suggested decision criteria advocated were intended to enable **"agility"** in enrollment and program planning, and not serve as a replacement for more rigorous strategic management decision processes that focused on academic reform, such as the Dickeson model (2010) of program prioritization that was gaining momentum in some community college systems. In addition, the importance of **evidence-based decision-making** was stressed as a prerequisite for being strategic in enrollment management and in the allocation of available College resources. With that said, the Vice Presidents qualified their remarks by indicating that data alone does not drive performance improvement. Rather, the **informed judgment** of College leaders and the **collective will to act** does. In this context, informed judgment relies on quality research and analyses on program performance, capacity conditions, and external forces that influence enrollment; and the will to act refers to holding people accountable for adopting a culture of evidence in decision-making and assuming shared responsibility for the effective execution of decisions taken.

#### Step 4: Assess

Based on the method agreed-upon at the planning summit, the Vice President of Academic Affairs in consultation with the Deans' Council developed a short-list of programs for enrollment growth and investment. As an extension of the cascading planning process, the list of programs was subsequently referred to the respective academic departments for an assessment of available instructional and organizational capacity to support implementation.

SCC had limited staff expertise, systems and tools to conduct capacity analyses for optimizing the use of available resources in realization of optimal enrollment. Yet, failure to determine optimal enrollment within the capacity conditions of the College and to allocate resources effectively can undermine the quality of established programs and constrain investments in program innovation, thereby resulting in **opportunity loss**. Therefore, the support of the College's talent team of research/data experts was called upon to work with academic and administrative leaders at all levels in assessing capacity implications of enrollment growth within the targeted programs, where "capacity" was broadly defined to include program capacity (instructional, space, technology support, etc.) as well as the scalability of institutional support functions as reflected in *Figure 18*.

*Figure 18: Capacity Management*



To inform the work of the task team, the Vice President of Academic Affairs sought the advice of the SEM Planning Committee on the specific capacity research questions that are of collective concern for enrollment and academic program planning purposes. Once agreement was reached, the task team reviewed the options for leveraging existing faculty/staff expertise, data/information resources, and technology-based systems to address identified information gaps and deficiencies. They determined that there are relatively **simple and low-cost solutions** that could serve as a starting point on a continuum of developments of more sophisticated decision-support systems. A few examples follow:

- ❖ **“Killer” Course Analysis**—This is a simple analysis that identifies the courses in which students have the greatest likelihood of poor performance or attrition (i.e., assigned grades of “D”, “W”, and “F”). The analysis can be segmented by size of classes (e.g., less than 20, 20-50, over 50) and by discipline. The information may serve to frame a structured dialogue with faculty responsible for the delivery of these courses regarding strategies to enhance student success (e.g., supplemental instruction, use of tutoring services), as well as provide academic advisors with valuable information to assist students, particularly in their first year, in developing realistic student success plans.
- ❖ **Course Capacity Analysis**—Many students seek permission to take select courses (mostly electives) elsewhere and have the earned credits apply toward their program of studies. The reasons students opt to take courses elsewhere often are due to a lack of available course seats at their home institution during desired times to fit class schedules, or in order to lighten their course load during the primary academic terms. An analysis of student “letters of permission” may provide insights on lost opportunities in delivering high demand courses that are “cash cows”. The information may serve to frame a structured dialogue with faculty responsible for the delivery of the identified high demand courses in exploring strategies for better meeting student course demand.
- ❖ **Course Dependency Analysis**—This analysis is most often over-looked, yet is simple to compile and very useful for anticipating course seat capacity needs in programs that incorporate courses from outside their home department. It answers the question, “What is the likely impact of an enrollment increase/decrease of “N” students in a specific program/department on course seats in other academic units? A simple excel spreadsheet may be used to present the distribution of course seats taken by students from a given home program/department across the departments in which the courses were actually taken, as shown in the example matrix presented in *Figure 19*. If three-year trends are available, coefficients can be generated on a rolling basis to assist in estimating

the potential cross-impact of enrollment changes in established programs based on historical course-taking patterns of students.

*Figure 19: Course Dependency Analysis*

**← Course Seats taken by Department →**

Home Dept. of Enrolled Students	Business	Education	Health	Science	Humanities	Total Course Seats Taken by Home Department of Enrolled Students
Business	70	5	5	10	10	100
Education	15	80	5	5	15	120
Health	5	10	60	5	5	85
Science	5	5	5	170	20	205
Humanities	5	5	10	30	100	150
Total Course Seats Filled	100	105	85	220	150	660

**Example:** Business students consumed a total of 100 course seats of which 70 seats were taken in the students' home department (Business), 10 seats were taken in each of the Departments of Humanities and Science, and 5 seats were taken in each of the Departments of Education and Health.

- ❖ **Cost of an Unfilled Seat**—This analysis demonstrates how much potential revenue could be captured if strategies were implemented to improve course seat fill rates by discipline. Working with the business office, pro-rate the cost of instruction to the level of an individual course, or alternatively compile the average cost at the discipline or department level to calculate the average cost of a course seat. The information may serve to frame a structured dialogue with faculty responsible for the delivery of courses with high seat vacancy rates in order to explore root cause factors, as well as strategies for maximizing class seat occupancy and revenue potential while ensuring the needs of learners are met.
- ❖ **Cost of Student Attrition/Cost to Graduate a Student**—These types of cost analyses are fairly complex and require skilled analysts who are adept at financial modeling, particularly if a “total” cost analysis is applied whereby overhead costs for support services are apportioned to individual programs. With that said, *CollegeMeasures.org* (<http://collegemeasures.org>) provides standard definitions and calculations for gauging the cost of student attrition and the cost to graduate a student based on IPEDS data for individual institutions by state. Although the information is not at a program level and may not have the desired rigor in approach, the information is based on standard definitions that have been consistently applied across institutions. Therefore, this

information may prove to be a useful resource in establishing performance thresholds relative to a select comparator set of institutions, as well as in developing more rigorous approaches to program-based costing analyses in coordination with the business office.

- ❖ **Program Performance/Cost Analyses**—If there is internal agreement on a select few KPIs for monitoring program performance as previously discussed, and there is the ability to gauge whether a program is cost-recovery, break-even, or cost-incurring, the resultant information can be compiled using a *Boston Consulting Matrix* as illustrated in *Figure 20*. This analysis has utility in demonstrating which programs may have potential for enrollment growth AND revenue potential as “cash cows”, versus those that may have enrollment growth potential but operate on a break-even basis or at a loss. The focus here is on ensuring a BALANCED financial outcome. Given the access missions of community colleges, some resource-intensive programs operate at a financial loss even though they are high demand and address a demonstrable community need and/or state-mandated requirement. At issue is to ensure the program enrollment mix that underlies the college’s enrollment plan will yield a balanced financial outcome overall. The analysis may also serve to inform a structured dialogue with budget leaders regarding the college’s business model for expected revenue contributions and attributions.

*Figure 20: Performance/Cost Analysis*

Program Performance <sup>(1)</sup>	Program Costs		
	Revenue-Generating	Break-Even	Cost-Incurring
Above Average	Advantage****	Opportunity**	Evaluate Cost
Average	Advantage***	Opportunity*	Evaluate Cost
Below Average	Evaluate Performance	Evaluate Performance	Evaluate Performance & Cost

(1): Key indicators reflect those associated with program vitality, such as program demand, admission-enrollment yield, 1<sup>st</sup> year persistence, program outcomes

Based on research conducted by the task team, campus leaders learned that program performance management requires academic cost-consciousness, which focuses on improving the learning process while maintaining program quality, competitiveness, and financial viability. In doing so, an understanding of cost and performance is required at the activity level among those responsible for the activity—faculty. Therefore, the task team recommended that the aforementioned analyses should be used as a starting point for

building cost consciousness with the academic community. They further recommended that in embarking on the development of capacity analyses of these types, the College should start small and build by selecting a single critical issue such as determining the cost of an unfilled course seat, or the service course dependencies of programs offered. In doing so, a small working team will be assembled involving faculty and staff from across divisional boundaries who are empowered to design and conduct the capacity analysis, develop a communication rollout plan, and assist in the interpretation and use of the resultant information based on best practice approaches for piloting program performance management systems of this nature (refer to another white paper by this author titled *Measuring Effectiveness to Drive Performance and Recalibrate Resources*).

Following from the work conducted by the academic departments, the academic planning process culminated in decisions by the Vice President of Academic Affairs in consultation with the Deans' Council on priorities for enrollment growth and investment in existing programs, as well as new program innovation. These decisions were infused into the SEM planning process for the development of targeted strategies aligned with program priorities.

### *Summary*

In the words of Robert Birnbaum, author of the classic book, *Management Fads in Higher Education*: “Judgment without data can be arbitrary; data without judgment can be sterile” (2001, p. 207). This case study serves to demonstrate that there are no flawless performance management systems to support integrated SEM planning (Massey, 2003). With rising costs and shrinking budgets, strategic growth in enrollment, effective management of program performance, resource optimization and net revenue generation in the delivery of quality programs have become and likely will continue to be survival imperatives. Therefore, in order to maximize the potential for enrollment success, college leaders must invest in developing the strategic intelligence required to effectively manage the performance of programs at each stage of the program lifecycle, and possess the “will to act” in addressing identified gaps/deficiencies based on “informed” judgment while retaining the emphasis on the quality and financial vitality of the academic enterprise.

## **FINAL THOUGHTS**

If you subscribe to the notion that academic program innovation and renewal are the cornerstones of the enrollment enterprise, then the success of your efforts in creating a high performance enrollment organization hinges on your ability to create the conditions for



shared responsibility of enrollment outcomes with the academic community. In this paper, a conceptual framework for an integrative approach to enrollment and academic program planning was presented including a roadmap for its application. A simple model consisting of six program planning filters was advanced as a tool for identifying new program innovation opportunities, targeting existing programs of high potential for enrollment growth and investment, as well as for prioritizing programs that warrant improvement in order to remain congruent with the needs of the marketplace and student learners. Best practice considerations were also set forth for managing program performance with improved dexterity in decision-making throughout the academic program lifecycle.

By fostering an integrative approach to enrollment and academic program planning, applying greater dexterity in decision processes, and adopting a systematic and evidence-based approach to the lifecycle management of programs, the necessary conditions will be created to ensure your college maximizes program innovation opportunities, programs are designed with the needs of the market as a barometer, programs with the most potential in a given market are identified, and the program portfolio is robust—enabling, not impeding the achievement of institutional enrollment goals, financial vitality, and sustained competitiveness.

## ABOUT THE AUTHOR

### **Lynda Wallace-Hulecki, Ed.D.**

**SEM Works Vice President of Research Services and Senior Consultant**



Dr. Lynda Wallace-Hulecki is the vice president of research services and senior consultant at SEM Works. Her higher education career and consulting experience spans more than thirty-five years within both the university and two-year college sectors in Canada and the United States. She has extensive leadership experience and an impressive record of accomplishments in bringing about campus-wide strategic enrollment success, an integrated approach to academic and enrollment planning, and transformative change in policies, systems and practices. For twenty-three years of her career, Wallace-Hulecki directed an institutional analysis and planning office—a position for which she was awarded a distinguished administrator award.

Dr. Wallace-Hulecki has served on both federal and provincial committees related to inter-provincial student mobility and higher education accountability in Canada. Wallace-Hulecki

has been an active member of numerous professional organizations (e.g., AACRAO, ARUCC, NASPA, AIR, SCUP, EDUCAUSE) as a presenter and a presentation reviewer; and is a regular presenter at international conferences on enrollment management. She has authored numerous white papers and book chapters on the application of SEM theory in practice, including two chapters in *Strategic Enrollment Intelligence*, Canada's first book on enrollment management. In addition, Wallace-Hulecki served as editor to SEM Works' inaugural e-newsletter on enrollment trends and issues impacting higher education.

Lynda earned a B.Sc. in the mathematical sciences from the University of Manitoba, as well as a M.Ed. in higher education administration—student affairs, and an Ed.D. in leadership and higher education from the University of Nebraska-Lincoln. She has participated in Harvard's Institute for Management and Leadership in Education (MLE), as well as in the world-class Chair Academy for college and university leaders. In 2011, Lynda was appointed to the International Practitioner's Advisory Board for the Leadership Academy. Lynda's graduate research focused on the evolving field of strategic enrollment management, and on the application of learned concepts in leading change, in building organizational capacity for enrollment performance measurement, and in building shared responsibility for enrollment outcomes with the campus community through an integrated approach to academic and enrollment planning.

## REFERENCES AND RESOURCES

- Bichsel, J. (2012, August). *Analytics in higher education: Benefits, barriers, progress, and recommendations* (Research Report). Louisville, CO: EDUCAUSE Center for Applied Research, August 2012, available at: <http://www.educause.edu/ecar>.
- Birnbaum, R. (2001). *Management Fads in Higher Education*. Jossey Bass.
- Black, J. (2008). Perfecting enrollment strategy. [Whitepaper]. Available at: [http://www.semworks.net/papers/wp\\_perfecting-enrollment-strategy.php](http://www.semworks.net/papers/wp_perfecting-enrollment-strategy.php)
- Burning Glass: Careers in Focus. (Website, 2014). Available at: <http://www.burning-glass.com/solutions-for/educators/>
- College Board *Student*POLL survey (Web Site, 2014). Available at: <http://research.collegeboard.org/data/studentpoll>
- CollegesMeasures.org (Web Site, 2014). Version aspiraHub 2014.6876 - Copyright© 2014 Matrix Knowledge). Available at: <http://collegemeasures.org>
- Dickeson, R. (2010). *Prioritizing Academic Programs and Services*. Jossey Bass.

- Dolence, M. G. (1993, 1997). *Strategic enrollment management: A primer for campus administrators*. (2nd ed.). Washington, D.C.: American Association of Collegiate Registrars and Admissions Officers.
- Economic Modeling Specialists Intl. (EMSI), a CareerBuilder Company. Available at: <http://www.economicmodeling.com/services/>
- Gartner Magic Quadrants (Web Site, 2014). Available at: [http://www.gartner.com/technology/research/methodologies/research\\_mq.jsp](http://www.gartner.com/technology/research/methodologies/research_mq.jsp)
- Knowles, J. (1995). A Matter of Survival: Emerging Entrepreneurship in Community Colleges in Canada. In Dennison, J. D. (Ed.), *Challenge and Opportunity: Canada's Community Colleges at the Crossroads* (pp. 184-207). UBC Press.
- Kotter, P. and Fox, K. (1985). *Strategic Marketing for Educational Institutions*. Prentice-Hall, Inc. New Jersey.
- League for Innovation. (2004). *An assessment framework for the community college: Measuring student learning and achievement as a means of demonstrating institutional effectiveness*. [Whitepaper]. Available at: <http://www.league.org/publication/whitepapers/0804.html>
- Massey, W. (2003). *Honoring the Trust: Quality and Cost Containment in Higher Education*. Anker Publishing Company, Inc.
- National Center for Education Statistics, *National Postsecondary Student Aid Study*. Available at: <http://nces.ed.gov/surveys/npsas/>
- Norris, D. and Baer, L. (2013, February). *Building organizational capacity for analytics*. EDUCAUSE publication. Available at: <http://www.educause.edu/library/resources/building-organizational-capacity-analytics>.
- Rice, G.K, & Taylor, D.C. (2003, September 30). *Continuous-improvement strategies in higher education: A progress report*. The Center for Institutional Effectiveness, Datatel, Inc. EDUCAUSE Center for Applied Research, Research Bulletin issue 20, 2003. Available at: <https://net.educause.edu/ir/library/pdf/ERB0320.pdf>
- The Academic Senate for California Community Colleges. (2009). *Program review: Setting a standard*. Available at: <http://files.eric.ed.gov/fulltext/ED510580.pdf>
- Wallace-Hulecki, L. (2010). Reframing SEM from the Academic lens: Theory in Practice. In Black, J. (Ed.), *Strategic Enrollment Intelligence: Canada's First Book on Strategic Enrollment Management* (pp. 71-95). Academica Group.