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Academic Innovation Center

Introduction

In order to provide an environment in which new ideas are generated and new initiatives can be tested and supported, the SRA Innovation Task Force proposes a three-step process toward the creation of the innovation center that is identified in the Master Plan. We envision three distinct, but related, initiatives related to increasing innovation, nimbleness, and responsiveness to our stakeholders. The following paragraphs outline plans for the development of 1.) an Academic Accelerator, 2.) an interdisciplinary experimental unit that is department neutral (Academic Switzerland), and 3.) a physical space in which innovative initiatives could be co-located (the innovation center outlined in the Master Plan).

Academic Accelerator

The Academic Accelerator is designed to help faculty develop ideas for academic programs and certificates and bring this ideas to fruition. Specifically, the Accelerator is designed to:

1.) help foster a climate of innovation;
2.) provide or arrange for services that support academic program development (e.g., brainstorming sessions, market research services, budget model development, instructional design and technology support, seed funding identification); and
3.) provide services to assist in the implementation of new, experimental programs (e.g., program-level marketing and advertising services, recruitment, admissions services, advising).
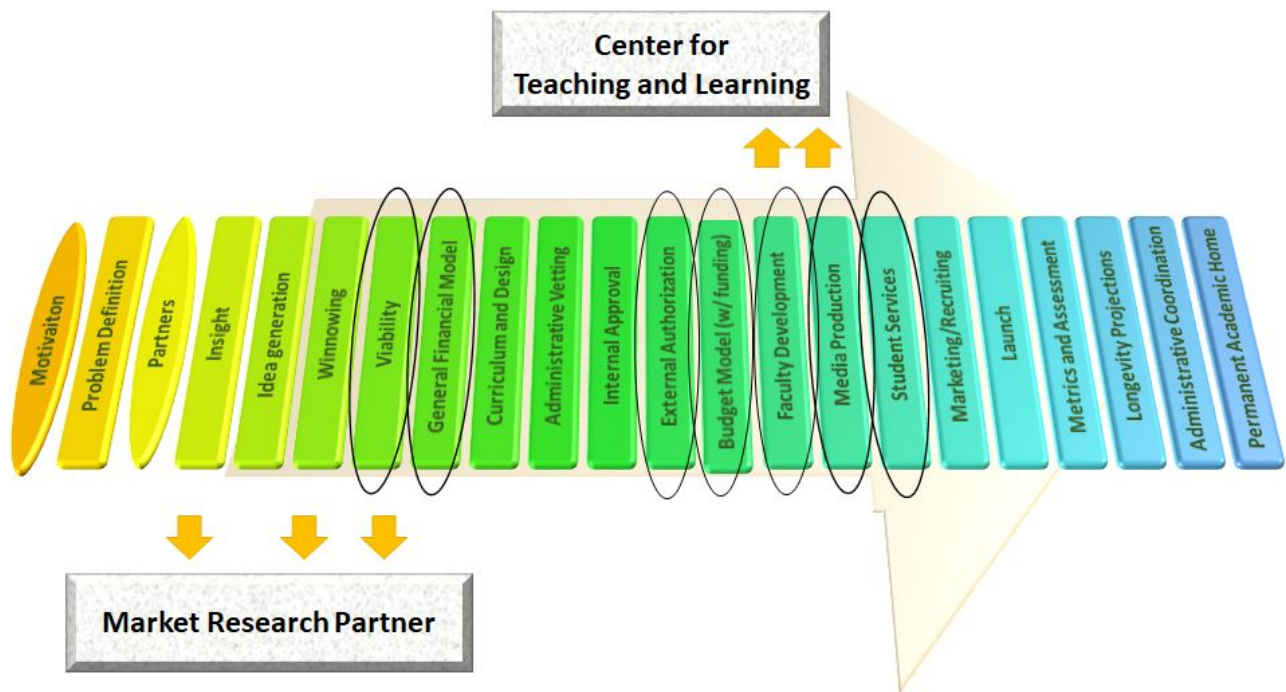
The Accelerator is intended to serve as a support for faculty and staff, not as an obstacle. The ultimate purpose of the Accelerator is to "remove the entrepreneurial burden" from the faculty with the program idea and either accelerate the time between ideation and delivery or "fail fast" and kill the idea.

Following the Invent@NMU process, the Accelerator will take ideas from "the back of a napkin to market" in the least amount of time, at little effort on the part of the program "inventor" and with as few resources as possible. Currently, the Accelerator process is being simplified to mirror the streamlined, five step Invent@NMU model. Market research services are supplied through a graduate student who works for both Invent@NMU and the Accelerator. A "soft launch" of the Accelerator is planned for April, 2019 with the grand opening occuring during the first weeks of the fall, 2019 semester.

We envision a model in which the Accelerator contains a project manager who serves as its "concierge," guiding those with ideas for academic programs through the Accelerator process. Similar to the Invent@NMU model, students and NMU staff will be available to provide support from ideation to program marketing and advertising (listed below). Program "inventors" may use as many services of the accelerator as they wish.

The services provided through the Accelerator are support services only; curriculum/content development is under the purview of the academic departments and the internal program approval process remains the work of the faculty (primarily through the Academic Senate and its committees) and the administrators within the Academic Affairs division.

Accelerator Process

Ideation
The Academic Accelerator can provide interested faculty and staff with a place, a method, and a climate for generating and refining ideas. Brainstorming support, perhaps in the form of guidance in the design thinking process. Visitors from Virginia Commonwealth University's DaVinci Center recently guided NMU stakeholders through this process and they provide a training certificate for the process. The process is based on many of the improvisation principles that are at the heart of both the Accelerator and the Academic Switzerland (e.g., yes/and, no ownership of the product).

Research and Discovery
One of the most pressing questions that is asked concerning new academic program ideas is whether there will be student demand for the program. Evidence for student need/market demand for a program is mandatory in in most NMU processes (e.g., Program Innovation Fund,

Educational Policy Committee). One of the most invaluable services that the Academic Accelerator provides is market research.

The Academic Program Research Specialist

The Academic Program Research Specialist of the Academic Accelerator currently coordinates research services for those who wish to assess the viability of their academic program ideas and to gain insight into the best way to refine those ideas. Although there are a number of potential sources of data that could support and guide academic program ideas, the Research Specialist focuses largely on the information provided by the Economic Modeling Specialist International (EMSI) database.

Market Research Partners

The Economic Modeling Specialists International (EMSI) Database

EMSI's composite dataset can give us valuable insight into occupational wages, industry trends, employment growth/decline and concentration, and recently, job posting analytics. Currently, NMU subscribes to the EMSI database. The database is focused almost exclusively on employment opportunities and trends.

Gray and Associates

Gray and Associates offers similar employment data as EMSI, but allows for assessment of student demand. A relationship with Gray and Associates is currently being explored.

The Education Advisory Board (EAB)

The EAB is a well-known, but expensive program research partner. They provide:

1) <u>Simple Data Dig</u>: The EAB, in conjunction with Burning Glass (a Boston-based labor market analytics company), uses an artificial intelligence engine to mine over 80 million unique online job postings to determine real-time employer demand: what job titles, requiring what educational credentials are in high (or declining) demand in various industries and geographic markets. Because this research is a "simple data dig" that results in broad market viability data, it is appropriate for any program idea, even those that are not completely developed. Data from this research is most useful in developing the two-page *Notice of Intent* document that is required by UW-System.

2) <u>Custom Research</u>: These are more in-depth projects that address issues particular to the requesting university. Member universities often use this research to benchmark what's "typical" and "innovative" within a peer group or nationally. In-depth interviews are conducted with target institutions. Because this research is more involved, it is reserved for academic program ideas that are more fully developed. Data from this type of research is most appropriate for developing the *Authorization to Implement* document that is required by UW-System.

EAB also offers access to an extensive library of research which includes archived customized research, large-scale EAB sponsored research, and research review studies.

Program Approval Process

The services provided through the Accelerator are support services only; curriculum/content development is under the purview of the academic departments and the internal program

approval process remains the work of the faculty (primarily through the Academic Senate and its committees) and the administrators within Academic Affairs division. The Academic Senate and leadership from the AAUP are discussing ways to further streamline the internal approval process.

Current Process

Moving new program proposals, new course proposals, course deletions or program changes through the following administrative process is time consuming. New undergraduate or graduate programs take roughly two years from program conception through implementation, while program changes, new course proposals and course deletions take approximately one year. Generating a new program requires approval at the departmental level, multiple NMU academic committees, Academic Senate Executive Committee, Academic Senate, the Provost, the NMU Board of Trustees, Michigan Association of State Universities (MASU), and the Higher Learning Commission (HLC).

For the purposes of this discussion, the following describes the two-year process for implementation of a new program at NMU. The process starts with initiation of talks from faculty and department head regarding the design, scope, coursework and requirements of the new program. Once the decision is made by the department to move forward, the administrative process begins by completing required forms for CUP (Committee on Undergraduate Programs) or GPC (Graduate Program Committee), depending on the degree conferred by the proposal. Undergraduate programs forms are submitted to CUP by October 1st and completed graduate programs forms are submitted to GPC by September 15th. These dates provide time for the appropriate academic committee to review and return feedback to the faculty for revision before committee approval. Both CUP and GPC are responsible for verifying academic merit and rigor of the proposed coursework.

For any new program (undergraduate or graduate), there are a number of forms to be submitted for academic committee approval (GPC/CUP). These forms include an Executive Summary, New Program Proposal Form and New Course Forms for each new course. The mission of the forms is to capture key points of the new program proposal. While there are subtle differences in the content of the forms used between CUP and GPC, the forms all capture the following information: program title, program rationale, bulletin description of courses, financial viability of the program, timeline for matriculation, and coursework. After academic evaluation and approval by CUP/GPC, the proposals are forwarded to the Educational Policy Committee (EPC) where the assessment of the financial components of the new program proposal are evaluated. Upon EPC approval, the proposals are sent to Academic Senate Executive committee prior to two readings over a one- month period in Academic Senate. Upon approval by the Academic Senate, the provost is required to sign off on the new program and then present the program to the NMU Board of Trustees. Once approved by the trustees, the decision-making procedure leaves the university going to MASU followed by the HLC.

Current Process (NMUFA)

The current process of implementing a new program through the NMUFA is different from what was previously stated for AAUP faculty. For the sake of continuity (and as a courtesy), NMUFA faculty use CUP forms, or variations thereof, to submit their proposals. The article below is an

excerpt from the NMU - NMUFA Master Agreement...Article 17.7 pertains to shared governance, and it is used for our proposed curriculum changes:

> "The review and approval process for any proposed changes to the curriculum (including those that may involve the reduction, allocation, and reallocation of resources) in the Technology and Occupational Sciences (TOS) department will follow the process below in order of priority:
>
> 1. Curriculum changes are generated (usually by the faculty).
> 2. The department head of TOS reviews and recommends.
> 3. The Curriculum Review Committee (with input from NMU's Registrar) reviews and recommends.
> 4. The Dean of the College of TOS (changed from the College of Professional Studies as the current contract iteration shows) reviews and recommends.
> 5. The Provost reviews, recommends and approves.
>   ..."

For clarification purposes, there is also a simultaneous review by Academic Affairs and the Vice President of Extended Learning to coincide with the Dean and Provost for full approval. If there is an entirely new program being proposed, it will also require the approval of the President of NMU and the Board of Trustees. Although this five-step process is well delineated, there is quite a bit of back-and-forth discussion and overlapping of time frames to help work more collaboratively to provide clarity and streamline the process.

Developing and implementing new academic programs at NMU involves three general processes: 1.) **Pre-Authorization:** Ideation and development, 2.) **Authorization:** Approval from NMU and external entities (e.g. MASU), and 3.) **Implementation:** Implementation and ongoing oversight of the new program.

Proposed Process

The purpose of the academic accelerator is to facilitate a streamlined process for the development of new, innovative programs providing NMU faculty with the ability to quickly develop and implement new programs. In addition, the accelerator is used to stop the development and initiation of new programs prior to the significant investment of time on the part of the faculty. While the external processes (MASU and HLC) of program implementation are out of the hands of NMU, the academic accelerator will improve the program approval process internally. The two distinctions between the current process and the proposed process is the use of a faculty member to act as a facilitator for new program development. The second provide greater data analysis regarding the viability of the program and benefit to NMU students.

To help alleviate the burden of new program development, the accelerator will provide a "safe place" for faculty to propose new programs. The academic accelerator will identify and provide a faculty liaison who acts as a facilitator for development of the program. The liaison will have intimate knowledge of the program approval process and will provide resources to the faculty member(s) involved in the development of the new program.

Initial conversations between the faculty and the liaison will discuss the new program and identify potential collaborations and determine the possibility of an interdisciplinary approach to a novel program. Once the new program idea is developed, the liaison will facilitate communication to notify departments heads, deans, and the provost the idea and brief rationale for the new program. After notification, the discovery phase regarding market analysis and job/skill set demand are evaluated. In depth analysis from organizations including EMSI, Gray and Associates, and the EAB will determine the viability of the program and the benefits to our graduates. Upon completion of the market analysis, the new program will either move forward to academic committees (GPR/CUP and EPC) or pursuit of the new program will be stopped. If the market analysis is favorable, the new program moves forward to GPC/CUP and subsequently to EPC. After approval by academic committees, the approval process continues the traditional route of Senate Executive Committee, Academic Senate, the Provost, the NMU Board of Directors and the external organizations of MASU and HLC.

One of the primary benefits to the accelerator is the data analysis of program viability and job growth. The depth of research provides a better picture of the market for the university and our graduates beyond that of the Bureau of Labor Statistics allowing for greater analysis by EPC. In addition, the majority of the information required by academic committees is refined and completed so that submission of online forms for CUP/GPC (currently being developed) are improved permitting an easier and quicker review by the academic committees.

Process for Submitting Projects Ideas
Although academic departments can submit program ideas to the Academic Senate (and eventually to the Provost) for approval without having used the services of the Accelerator, program ideas are significantly more compelling when backed by some form of market research data. If an academic department decides to use the services of the Academic Accelerator for market research, the following process will be used:

1) The Accelerator sends out a Request for Proposals for program ideas. Responses to the RFP must address the following:

   a) Name(s)/Title(s)/Department(s) of requester(s)
   b) Reasons for requesting the data (drop down list provided)
   c) Name of the new program/idea
   d) Degree that the program will confer (if any)
   e) Target geographical area (where the market/job postings exist; where the EAB should focus when it analyzes job postings)
   f) Delivery format (e.g., online, face-to-face, hybrid)
   g) Primary program components/outcomes
   h) Skills
   i) Courses
   j) Expected occupations of graduates
   k) Suggested keywords and phrases for the EAB to use
2) The Accelerator collects the ideas and submits them to the market research process for a simple analysis.
3) The Accelerator receives the research results and works with the faculty who proposed the ideas to generate summaries.

4) If the faculty member and the sponsoring department are supportive of the idea and believe that there is sufficient evidence to move forward, they ….

Academic Switzerland

The Task Force understands that many of the high-demand careers of the future (and the curricula that prepare students to succeed in them, will be interdisciplinary in nature. Fore example, data science currently involves a complex mixture of math/statistics, computer science, business, cognitive science, and art and design (data visualization), etc. We envision a department, college, school, or division that is different than the existing colleges and serves as a "neutral" launchpad for new academic programs, especially those that are interdisciplinary in nature and cross current department and college lines.

The group discussed administrative structures briefly and referred to other models on campus in which interdiscplinary academic programs utilize faculty from multiple departments (e.g., gender studies, honors program). However, the Academic Switzerland would require oversight and direction for all of the programs contained in it, not just a single program. A number of ideas were generated for who should oversee the unit (e.g., existing deans, hire an associate dean or director), but the group decided that, in the spirit of creating a Switzerland, we should avoid trying to place the new unit yet (either organizationally or physically).

Regardless of where the unit is physically housed or to whom it reports, the Academic Switzerland should be different both in terms of its climate/culture and, where possible, its policies and procedures. Like the Academic Accelerator, Academic Switzerland should launch and administer programs in a way that is both cost and time efficient, creative, and in a way that best engages students.

Financial Models and Administration (including startup funds)

Online Programs

Once a program opportunity is received, evaluated, and deemed viable, the Vice President for Extended Learning will determine whether or not the proposal qualifies for consideration as a profit sharing program. If the program qualifies for inclusion in the revenue sharing plan, ELCE will formalize a Memorandum of Understanding to define key roles and responsibilities for all partners to include terms of the revenue sharing plan. For qualifying programs, an individual program budget including projected revenues and expenses will be developed. A final budget report showing actual expenses and revenue will be prepared at the end of each academic year and included in an aggregate summary for the fiscal year. At the conclusion of the fiscal year, a summary of all programs by College will be generated. Net revenues (revenue generated less all operational costs) associated with the complement of programs offered in partnership with each College will be divided between the stakeholders according to an agreed upon formula.

Because most cost recovery programs take three to five years to establish program viability, we propose an experimental program process, during which the program is not owned by a particular department, but whose student credit hours (and any net revenue) are shared with the departments that were involved in the development of the program and whose faculty teach in the program.

1. Experimental programs are launched and operated through (a particular fund)
2. Tuition revenue from experimental programs will not be reallocated to the General Fund until five years have passed since the program's inception unless there exists an earlier and substantial positive ratio between revenue and operational expenses.
3. Once an experimental program is considered "established", the tuition revenue from those cost-recovery programs….and the program is assigned to a department???

On-Campus Programs

We recommend that all programs that are offered out of Academic Switzerland run on a similar cost recovery (RCM) model in which a portion of the net revenue is funneled to the departments and/or faculty who participate in developing and offering the program.

Mitigating Risk

Both the Accelerator and Academic Switzerland are about risk and reward. Several protections will exist to limit the risk assumed by the Colleges, the academic units, and Academic Switzerland to include the application of a viability assessment for all new program ideas, the review/approval of all qualified programs by the appropriate Dean, the Provost, and the Vice President for Extended Learning and Community Engagement (for online programs), and the annual review of programs based on actual budget performance at the conclusion of the fiscal year. However, it is recognized that a certain amount of risk will continue to exist and that the risk experienced by each partner may assume different forms. For online programs, ELCE assumes risk in the form of a reduced administrative overhead application as well as development costs associated with each qualified program. Even with the above protections in place and the effective management of a viable slate of qualified programs, ELCE and the Colleges assume risk based on the possibility of a net deficit at the end of the fiscal year. In order to insulate the Colleges from the impact of a loss in any given year, ELCE will establish internal ELCE *reserve accounts*.

1. Accelerator
   a. the Accelerator is a different place where all assumptions are set aside and ideas can be explored by anyone interested
   b. support for program development process
   c. ranges from brainstorming (design thinking) to program implementation and maintenance
      i. includes brainstorming (design thinking) support
      ii. includes market research support
      iii. curriculum development completely outside of Academic Accelerator
   d. remove entrepreneurial burden from faculty
   e. "kill it fast"
   f. process based loosely on Invent@NMU
   g. located at Invent@NMU initially
   h. faculty make decisions about program development, accelerator provides information and decision points
   i. connected to academics; same internal process (either revise current process or design an alternative, expedited process)
   j. has startup funds (PIF or Global Campus investment)
   k. based on improve principles (yes...and; no ownership until MUCH later)
   l. database of ideas (to connect people and document)
   m. keep faculty involved (doesn't live on the 6th floor)
   n. metrics/sunset plan for programs (like the PIF)
   o. timelines outlined in process
   p. connect with businesses
2. Academic "Switzerland"
   a. A place for new, interdisciplinary programs to be launched
   b. Nobody "owns" the programs (maybe ownership moves to a department after concept is proven, or maybe not….lives in Switzerland)
      i. Need a connection to faculty and AA
         1. Perhaps overseen by current deans
         2. Model after the DaVinci Center
            a. overseen by deans and VP of innovation, but runs on alternative model/different rules
            b. clear connection to academics
            c. close connection to industry
         3. Model after honors program and gender studies (not owned by any one department)
   c. Transparent budget and operations
      i. Perhaps run on cost recovery/RCM
   d. Incentives are vitally important (we have tried joint appointments before and they end up going to a single department. Can we develop incentives for faculty and their departments to participate in interdisciplinary programs? Can we provide incentives for people to generate ideas for interdisciplinary programs and recognize them (and their departments) even if the idea ends up not involving them?

       i. Individual
   1. release time
   2. bonus/stipend
      ii. Group
   1. SCH/Headcount for departments involved
   2. Net revenue share (especially if on cost recovery)
   3. RCM/decentralized system/freedom
   4. Startup funds with fair access
   5. Connection with business
e. Issues
       i. Departments own
   1. Courses
   2. Programs
   3. Faculty
      ii. Joint appointments have not worked
3. Innovation Center (Master Plan)