PATHWAY A

Future of Funded Research at the University of Cincinnati

COMMITTEE MEMBERS
Suzanne Boyce (CAHS)
Melanie Cushion (CoM)
Margaret Hanson (Grad School)
James Heubi (CCHMC)
Jeffrey Johnson (CEAS)
Gerald Kasting (Pharmacy)
Teik Lim (CEAS)
David Linger (UCRI)
Michael Magazine (LCoB)
Donna Martolf (CoN)
Tara Smith (A&S)
Stephen Strakowski (UCH)
Kumar Vemaganti (Faculty Senate)
Nelson Vincent (UCIT)
Craig Vogel (DAAP)
Bradley Wilson (CECH)
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Overview:

Research success, both funded and traditionally unfunded, is the primary driver for any university’s prestige and reputation, ultimately improving its ability to accomplish all of its missions. While University-level research investments strive to support society and enhance our University’s reputation, we must also strive to sustainably invest in our researchers upon whom our success as a research institution truly depends. We must recognize, even in the best external funding environment, it is unusual for the research enterprise to generate sufficient revenue to pay for infrastructure, facilities or research administration that supports such efforts. Nevertheless, research is essential to the University of Cincinnati’s (UC) mission in all aspects of what the University seeks to be, including: educating and training of future scientists, teachers, and clinicians; generating knowledge that has positive outcomes for stakeholders inside and outside of the institution; improving healthcare; and enhancing community economic and social growth and well-being. As with our educational mission, research efforts must be proactively supported and nurtured to maintain its role in our mission, assure sustainability and to remain competitive. Vigilance on what constitutes a sustainable research enterprise is critical, since the viability of research cannot be taken for granted if left unattended. In the current research environment, shifting faculty dynamics, increasing outside competition, dramatic shifts in external funding sources and constant changes to the challenges research attempts to solve, all create a highly mobile and challenging environment for sustainable growth in research which requires sufficient infrastructure support to meet these challenges.

Based on these considerations, the following recommendations focus primarily on traditionally funded research endeavors for our university. Any university-based research mission must be guided by values which define what it is and what it aspires to be. For UC those values include:

- Quality of effort
- Equality of opportunity
- Cross-disciplinary by design
- Faculty-centric in commitment
- Sustainable and competitive

Four overreaching goals will frame our efforts:

I. Reaffirming the Centrality and Essential nature of our Research Mission
II. Building a Culture and Environment of Cross-disciplinary Research
III. Creating a Sustainable Infrastructure which supports Cross-disciplinary Research
IV. Realigning the Faculty Reward System to Value Research Excellence

Each of these goals is addressed in turn below with specific recommendations for each. The specific recommendations can be grouped under University and/or College policy, University Policy with investments required and Faculty Development.

GOAL I: Reaffirmation of the Research Mission of the University of Cincinnati.

Major research intensive universities such as UC are anchored by three primary missions: education, research and service to the community. While education is an exceptionally important
part of our mission at UC, research is equally important to our vision of who we strive to be, the well-being of our community-at-large and to our educational mission in providing experiential learning and training for our students. Moreover, it is through research accomplishments that major public universities build prestige in order to attract the best faculty, students and philanthropic gifts. Our three missions are not in competition with each other, but rather the strength of our University as a whole is predicated on our ability to integrate and leverage all of our missions into a single vision.

**Recommendation 1 (University Policy): Reaffirm the research mission as essential to the overall vision of the University.**

There are 3 critical steps in accomplishing this recommendation:

**Step 1.** Reaffirm to ourselves and the community the importance of our research mission at all levels from the Board of Trustees and central UC Administration, to our faculty, staff and students. This must be so openly communicated and clear that our research mission is a part of “who we are” and “why we are here.”

**Step 2.** Seek greater integration between all of our missions of research, education, and community service.

**Step 3.** We must reaffirm our intent to become national and international leaders in research based on our values of quality, equality, cross-disciplinary effort, sustainability and competitiveness.

**Goal II: Build a Culture of Cross-Disciplinary Research.**

**Recommendation 2: (Investment Required) Identify areas for University research excellence which build on existing strengths and which provide the greatest opportunity for cross-disciplinary effort.** A central goal for the future of funded research at UC will be the dramatic enhancement of broad-based cross-disciplinary research (interdisciplinary and multi-disciplinary team efforts), involving diverse faculty teams across units and colleges in order to develop expertise and international recognition areas of excellence. Initial areas of focus will build on existing foundations, and were selected where UC:

1) has proven expertise, leadership and strength;
2) has unique opportunity in areas of current and future relevance; and
3) has established facilities capable of supporting such areas.

The reality we face is that we cannot afford to initially focus on unlimited areas of excellence in an environment of limited resources. Nor can we continue an existing culture of disparate college-based initiatives which silo our efforts. However, we must guard against replacing one silo-based culture with another solely represented by independent institutes and/or centers. Rather focus areas must be viewed as opportunity and dynamic pathways bringing discipline-based faculty together to create cross-disciplinary effort limited only by our imagination. (Figure 1. & Table 1.) In so doing, it becomes all of our responsibility to be inclusive of all UC has to offer.
Figure 1. Focus Areas must be viewed as cross-disciplinary engines within a framework that is sustainable. In such a view, converging efforts between different focus areas will become the key to our sustainability. As examples, the crossover between sensing and health or between analytics and the environment may lead to greater opportunity than if they remain apart. Future focus areas must build on and not compete with each other in this framework.

Table 1. Initial Areas of Excellence

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<td><strong>1.</strong> The Environment: Air Water, Urban</td>
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<td><strong>2.</strong> Analytics/Information: Analytics, Cybersecurity, Data Management</td>
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<td><strong>3.</strong> Sensing: Remote, Development, Application</td>
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<td><strong>4.</strong> Health: Urban, Global, Effectiveness/Outcomes, Disparities</td>
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<td><strong>5.</strong> Manufacturing: Engineering, Business, Design, Application</td>
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<td><strong>6.</strong> Sustainability: Across All Areas of Excellence</td>
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It should be noted at the outset that cross-disciplinary research must be built from collaborations among units that are already outstanding and, ideally, already have track records of extramural collaborations. **It is therefore a prerequisite that UC invest adequately in relevant programs within each focus area.** Such investments may include adequate start-up for new faculty, re-investment in existing faculty to achieve the next level of success or to bridge existing success, facilities and state-of-the-art equipment. Clearly, some key areas of excellence have been underfunded in recent years and are now short of essential faculty and infrastructure. Restoring these areas and maintaining them thereafter will require a
large infusion of new resources.

Consistent with this approach, several major funding agencies have undertaken robust efforts to support cross-disciplinary research and training, including NSF (e.g., http://www.nsf.gov/od/oiia/additional_resources/interdisciplinary_research/), NIH (e.g., http://commonfund.nih.gov/interdisciplinary/), Education and Research Centers funded by CDC (e.g., http://www.cdc.gov/niosh/programs/tg/), Research Opportunities in Spaces and Earth Sciences (ROSES) at NASA (e.g., http://science.nasa.gov/researchers/sara/grant-solicitations/), and the Health Resources and Services Administration (e.g., http://www.hrsa.gov/advisorycommittees/bhpradvisory/acicbl/reports/firstreport.pdf).

Step 1. Requests for Proposals (RFP) (Investment required) will be announced in each of the 5 major areas of excellence and will be used to identify the resources required in each. Each proposal must include overall goals, be inclusive across campus, identify areas of initial research in and mechanisms to enhance cross-disciplinary effort, define measures of outcome, ways to make the program sustainable, estimated cost with respect to number of faculty hires, facilities and start-up funding requests and a timeline for development. Needs such as cluster hires must be defined including how such clusters will interact, justification for a cluster, special needs such as shared or combined facilities, and barriers which must be overcome for success of the entire cluster (Space, RPT, Joint appointments, etc.).

Step 2. Shared Research Space (Investment required) for cross-disciplinary efforts must be developed. This is especially important for cross-disciplinary efforts involving cluster hires or where a focus resides within multiple colleges. The University Office of Planning+Design+Construction under the direction of architect Mary Beth McGrew has already drafted feasibility plans for shared space across campus. This plan should be re-evaluated and implemented consistent with the cross-disciplinary themes in these research strategic plans.

Step 3. Create a physical space in a central University location to promote relationship building, encourage intellectual discourse and foster interdisciplinary partnerships among disparate faculty (Investment required). A major impediment to research across disciplines is the lack of easy access to convenient meeting space for faculty from widespread areas of campus. While technology has made it easier to maintain collaborations over distance, it is not conducive to the process of building relationships that lead to collaboration. Physical space should be easily scheduled. The location should be reachable by frequent shuttle, be close to the shuttle stop, and also close to an area available to faculty for short-term parking (Previous Faculty Club).

Recommendation 3 (College Policy): Create and publish a strategic research plan for each college. Each of our 13 colleges should be expected to formally evaluate their current strategic plan relative to the guiding values and recommendations for research outlined above. This process should be a collaborative effort between faculty and the administration of each college. This evaluation should include an analysis of opportunities for alignment with the initial set of focus areas singled out by the university and described above. This evaluation should specifically consider innovative means of achieving cross-disciplinary and cross-collegiate collaboration. A specific analysis of such means should include, inter alia:
sharing of resources, sharing of faculty, mutual respect and recognition and integration with education. The resulting documents should be published either on the college website or the Office of Research web pages.

**Recommendation 4 (Investment Required):** Develop cross-disciplinary research programs and interdisciplinary degree programs at all levels, using a model that supports college participation rather than creating additional competition for college resources. Such programs and cross-disciplinary degrees must be led by colleges in order to enhance their research goals, recognition/ranking and resources rather than yet another competitive drain on existing resources.

*The next challenge we face will be to guide how colleges and individuals work together such that “No college or faculty is left behind.”*

**GOAL III: UC Must Create a Sustainable Faculty Environment and Culture for Cross-Disciplinary Research.**

**Recommendation 5 (University Policy; Investment Required):** Create one or more staffed units which support faculty research development, trains faculty in core research methodology, supports faculty in seeking research funding and fosters cross disciplinary research efforts. This may be done by creating a Center for Enhancement of Research Careers (CERC) that provides value and training at ALL levels of our faculty researchers’ careers similar to the development of CET&L for teaching and learning. Units could be modeled similar to the CCTST but support a more diverse faculty within a cross-disciplinary effort across the entire University, including its regional colleges.

**Step 1. (Faculty Development; Investment required):** Create communality to build strong cross-disciplinary teams. Creating a productive, vibrant and sustainable interdisciplinary team requires a communal core. In typical departments, this core occurs because it is structured around a graduate degree program and/or a shared space. Additional structures could be envisioned, such as shared “time” (bringing everyone together for weekly and/or monthly day-long retreats), shared students, shared space or shared resources. But most critical will be a shared vision or mission. Cross-disciplinary teams will initially focus in the identified areas of excellence.

**Step 2. (Faculty Development; Investment required):** Develop programs to actively teach and reward faculty to work collaboratively and to stimulate team science. In summary, develop guides to effective and productive cluster development.

**Step 3. (Faculty Development; Investment required):** Support a far more robust program of cross-disciplinary workshops, colloquia, and seminars featuring high-profile, external participants who would be broadly attractive to constituents throughout the University.

**Step 4. (Faculty Development; Investment required):** Train faculty on how to reach out to industry partners. Many industries depend on universities to provide them with R&D. Concentrated efforts to understand the needs of potential industry partners provide a win-win opportunity: additional resources and jobs for our students, and high-quality R&D products and highly-trained employees for
industry.

**Step 5. (Faculty Development):** Draw on the expertise of HR staff or other colleges to help train our faculty on critical professional practices. This expertise could include: hiring practices, performing annual reviews, philosophies and methods for creating a functional and incentivized work environment, and the many other “middle” management skills critical for successful, thriving units, centers, and departments. Such efforts should be integrated with well-developed and supported succession planning within each unit.

**Step 6. (Faculty Development; Investment Required):** Encourage and train research leaders to move towards the creation of large, (often) cross-disciplinary research groups and physical or virtual centers through funding incentives (such as an allocation of F&A funds to the centers) to provide center-customized administrative support and bridge funding for center members. In summary, create our own clusters.

**Step 7. (University Policy; Investment required):** Encourage interdisciplinary research by developing a reward system for departments “lending” faculty to another department for teaching or co-teaching a course.

**Recommendation 6 (University Policy; Investment required):** Create enhanced revenue streams for colleges in support of their research enterprise.

**Step 1. Re-model PBB to reward individual/inter-collegiate and cross-disciplinary research.** Either adjust PBB to support cross-disciplinary research or develop an alternative budgeting model that does not make a College’s (and the University’s) research mission subservient to its success in competing with other Colleges for undergraduate enrollment. The argument that tuition dollars are revenue generators and research is not is inherent in any and all universities which are research intensive and is counterproductive to the mission of research. A new model should: a) focus on rewarding new revenue generation that enhances the University’s overall revenue stream, rather than cross-college competition that does not; b) incentivize cross-disciplinary collaborations that enhance the ability of the University to attract new, high-quality faculty and students who are increasingly drawn to these outstanding research efforts; and c) recognize activities that elevate the stature of the University.

**Step 2. (Faculty Development; Investment required):** Enhance opportunities to diversify our funded research portfolio.

A. Take advantage of databases of funding sources, Academic Analytics and our lobbying groups in Washington and Columbus. Dedicated university-wide support for identifying resources in the Office of Research should be considered.

B. Develop stronger partnerships with industry, particularly in cases in which there is a natural relationship. The relationship of CEAS with GE Aviation (leveraged through UCRI) and, more recently, the relationship between Eli Lilly and the College of Medicine are cogent examples. Enhanced relationships with the pharmaceutical industry and medical device development companies
are additional examples.

C. Emphasize the value of research partnership with industry rather than trying to control the intellectual property. Formulate a contractual template that attracts industrial partnership, including favorable IP terms for industry.

D. Provide formal training from outside industry experts on entrepreneurism as a means of diversifying our research portfolio, and how that can be achieved by our research faculty.

E. Create opportunity for communication and networking, through a venue of frequent face-to-face meetings (in a variety of venues and capacities) in which top researchers, center directors and university leaders engage with potential external partners in industry and government.

F. Uncover goals and interests with external research partners in industry and government to facilitate future collaborations.

G. Improve integration with UC Foundation:

1. Redirect the UC Foundation to measure success by gains made at UC rather than in how they are able to get ‘credit’ for dollars.
2. Measures of success should also be governed by the ability to generate research rather than the number or size of gifts.
3. This effort will need to directly pursue corporate funding opportunities, and to work more proactively with units to enhance alumni relations, which may be prerequisites, in some cases, to robust corporate contributions.
4. We must identify better ways to integrate UC Foundation efforts in the overall research mission of the University. This integration may require a new model of interaction between the UC Foundation and UC, which not only considers the needs of individual colleges, but also emphasizes the fundamental principles for overall university research efforts.
5. Work with the UC Foundation to create entrepreneurial streams of funding as gifts to support commercialization of UC IP by faculty and students.

Step 3. (University Policy; Investment required): Revise the F&A distribution model to one that is more supportive of research infrastructure within the university/college structure and incentivizes research effort by faculty and college.

Recommendation 7 (University Policy): Change the fundamental way we hire and locate faculty from a disciplinary-based to a cross-disciplinary-based system.

Step 1. Create an institution-wide policy for joint appointments that includes: procedures for hiring, allocation of work and research revenues, annual evaluation, tenure and/or promotion, etc. Develop MOU templates that outline all relevant aspects in the joint appointment, to be used for offers, annual reviews, and RPT.
Step 2. (University Policy): Develop university-wide hiring practices (with requisite training) that make use of the best research on locating and attracting a broad, strong and diverse pool of applicants and reducing unconscious bias in evaluating, interviewing and selecting applicants, to ensure the highest quality candidate available for all aspects of the position. Cluster hires among colleges should be also supported.

Step 3. (University and College Policy): Involve industry partners in the hiring of STEM faculty. They may have connections to expand the pool and can offer useful industry practices for evaluating candidates. If they are engaged and invested in the decision, they may be willing to offer resources to the new hire, in the form of start-up funds, equipment, lab space, collaborations, etc. greatly sweetening the pot to attract the strongest candidate.

Recommendation 8 (University Policy; Investment Required): Level the playing field: Provide sufficient numbers of designated research support offices/persons, for ALL researchers in the UC system, to help with pre-award, submission, post-award, and annual and final reports.

GOAL IV: Realign faculty reward system to value faculty as long-term drivers of research as well as educational excellence.

Faculty incentives at UC are not optimally organized for building a top-tier research institution. Some of the most constraining forces are connected to the traditional model of Reappointment, Promotion and Tenure (RPT), which emphasizes proof of worthiness in the early years of employment while neglecting the post-tenure role of faculty in conducting and supporting research. However, changes in models of research (e.g., from individual accomplishments to teamwork) and the emphasis external funding places on cross-disciplinary effort makes it necessary to re-evaluate this older model in the light of current conditions. In this goal, we highlight changes to the current system where revision and/or supplementation may “free-up” faculty to engage in more robust, wide-ranging research projects, take advantage of new opportunities for collaboration inside and outside the institution, and support essential functions of the research infrastructure, such as mentoring and service.

Recommendation 9 (University and College Policy): Provide enhanced opportunities and options for career development leading up to and beyond tenure.

Step 1. Provide a more flexible tenure clock across entire university system. Currently, the university is forced to make a decision on tenure by the 7th year. This is an artificial timeline, set by cultural norms and not practical considerations. Faculty have always been able to request an early tenure decision, but how does anyone benefit (university or faculty) by forcing a decision by 7 years, if both parties wish more time? Consideration should be given to faculty requests for extending the decision regarding tenure to the 10th year by mutual agreement for all faculty in all colleges.

Step 2. (Faculty Development): Provide training to faculty in planning the long-term nature of a research career trajectory beyond achievement of tenure. An infrastructure that supports faculty research careers, development and training should be piloted and a suitable sustainable self- supporting funding
model for this center should be sought. This effort should be to promote mentoring, teach and refine research skills, promote faculty research rewards and recognition, etc. Excellence should be emphasized and focus should be on conducting excellent research. Efforts to promote and enhance faculty election to national academies should be created in this structure. [See Recommendation 5.] [See Figure 2.]

**Step 3. (University Policy; College Policy; Investment required):** Award faculty engaged in active scholarship with increased opportunities for paid leave or release time outside of the usual sabbatical leave and merit based systems **currently in place.** Find ways to give faculty more “deep” free time for research. Establish a model for research faculty which balances effort between teaching and research. Most importantly, understand ourselves as a university, the balance between education and research and how each affects the other. As with the current system, faculty will need to provide a detailed plan for how their activities will be helpful both to their own career goals and to the institution’s goals for growing our research enterprise.

![Figure 2: A strong theme amongst our original recommendations is the procurement and development of human resources at all career stages. The graphic above visualizes the process. Squares represent existing programs, clouds represent aspirational programs.](image)

**Step 4. (University Policy; Investment required):** Create an additional promotion opportunity after full professor. Full professors are needed to take on
leadership/directorship roles in departments, provide mentoring of junior faculty, and bring their years of academic knowledge and experience to serve in upper administration. Full professors are the most valuable human resource we have in our University; however, we often do not reap the full benefits of their talents (and our investments). We need a formal means to acknowledge and reward those who achieve excellence in their work long after the title “full” and well before the title “emeritus.” We should also continue to leverage senior faculty knowledge by providing innovative lifestyle options (gradual progression toward retirement over 5-10 years) that will encourage continued involvement while looking forward to a secure retirement.

Step 5. (Faculty Development): Emphasize successful, long-term career trajectories early in the tenure path. New professors need support and guidance to get their research going, while managing teaching and service commitments. However, attention needs to be on the long-term career success of a young faculty member, without over-emphasizing the tenure decision. Young faculty should be trained to think far beyond tenure in their professional decisions. They should learn to have a vision and benchmarked goals that will exceed tenure expectations and set them on a successful trajectory for their entire professional career at UC. [Figure 2.]

Step 6. (Faculty Development; Investment required): Provide flexible career paths for both pre and post-tenure with training in research at multiple levels. Establish mentoring at all career stages. Re-engage emeriti and senior level faculty to encourage their active participation in research, administration or mentoring activities. Focus on developing and retaining faculty rather than recruiting from the outside.

Step 7. (University Policy; Investment required): Develop a broader definition of sponsored research (i.e., maintaining our traditional research portfolio while encouraging innovative research mechanisms, industry-sponsored research and entrepreneurial activities) in direct support of faculty career advancement. Position and allow faculty to perform and benefit career wise or financially from innovative research and entrepreneurial activity through entities such as the University of Cincinnati Research Institute (UCRI) as long as they maintain excellence and fulfill obligations in their UC effort.

Step 8. Provide additional funds for pilot projects necessary prior to external grant submissions. Re-evaluate the internal grant systems and funding levels (University Research Council) to foster diverse research and grant training for graduate student and junior faculty, as well as provide research incentives to mid-level faculty, and career-shift funds to more senior faculty to change focus in their career path.

Recommendation 10 (University Policy; Investment required): Form a taskforce of faculty committed to interdisciplinary research (similar to UC Forward). Use it to map the diverse types of research and use it to foster new relationships and understand emerging fields and topics. Help emerging research in non-traditional colleges and connect to traditional researchers to create hybrids. Promote senior and young faculty interaction to leverage wisdom and experience with current and emerging approaches. Create greater diversity in research efforts by building a pipeline for minority research that starts with
undergraduates running through graduate and post docs to create a source from within UC to develop minority faculty and to make it more appealing to external candidates consider UC when they see our commitment. Such a taskforce could also provide guidance in selecting future research focus areas of excellence.

Conclusion:

If the University of Cincinnati wants to remain as a research intensive institution, we are faced with significant challenges and changes that must take place to ensure our future success. Academic research is a core driver of discovery in all of the University missions and this core value must be reaffirmed and supported. Within this document are recommendations for cultural shifts and institutional decisions that must take place to foster a more nimble and supportive research climate. These suggested actions will not be possible without significant resources. Although investments must be “smart” they must be sufficiently resourced to ensure success. A vibrant research mission ensures success in education, clinical outcomes and community well-being.
PATHWAY B
Research in the Arts, Humanities and Social Sciences

COMMITTEE MEMBERS
Adrian Parr – Chair (A&S/DAAP)
Sonja Andrus – (Regionals)
Kathryn Bonansigna (DAAP)
Elaine Hollensbe (LCoB)
Jennifer Krivickas (Libraries)
Bruce McClung (CCM)
Mary Brydon-Miller (CECH)
Frank Russell (Niehoff)
Kurt Sussmannshaus (CCM)
David Stradling (A&S)
Nicasio Urbina (Faculty Senate)
Robert Zierolf (Grad School)
The world’s finest research universities have areas of strength in myriad academic fields. Although research in the arts, performing arts, humanities, and social sciences tends not to generate large amounts of extramural funding, these areas are no less vital at prestigious academic institutions; excellence in these areas is prerequisite for national and international standing and is essential in providing a rich and inclusive learning and research environment.

**Purpose:** The recommendations of this white paper aim to improve the absolute and relative support of arts, humanities, and social science research at the University of Cincinnati. In so doing the commitment and productivity of research in these fields and for research across the University will be enhanced.

**The Value of the Arts, Humanities, and Social Sciences (OUTPUT)**
Research in the visual and performing arts, humanities, and social sciences provides immeasurable value to the University of Cincinnati and the communities it serves.

1. **Reputational Capital**
Pathway B Research faculty contribute to UC’s international reputation. Students choose UC because of faculty reputation. Faculty develop positive community relationships through outreach, including performances, public lectures, and consulting. They engage in regional, national, and international research collaborations that heighten the institution’s reputation around the world. Faculty deliver invited talks, produce popularly consumed publications, pen opinion pieces, and deliver interviews in general media. Pathway B Research faculty are engaged in a variety of community projects.

2. **Public Good**
Pathway B Research pursues the public good. It is involved with identifying, exploring, and articulating conditions, formulating problems, or analyzing states of affairs. The outcomes of Pathway B Research are often the result of stimulating, or enhancing human capacity (emotions, senses, ideas). The innovativeness of Pathway B Research comes from the manner in which it changes how people think about the world; it alters and influences how people learn and participate in civic life. This research often involves an exercise of imagination. This kind of research neither relies on producing predictable outcomes, nor can its outcomes necessarily solve specific problems. Instead, it engages enduring problems, questions, and issues.

3. **Project Outcomes and Assessment**
Pathway B Research can lead to an incredible diversity of outcomes. Successful research production can include publications, invited lectures, visiting professorships, funding (donations, grants, commercialization projects), community performances or shows, presented papers, course adoptons, references in newspapers or other popular periodicals, and shifts in public policy or intellectual paradigms.

**Recommendations for Assessing Value**
An accurate assessment of research must value the full variety of projects undertaken at UC. Assessment must account for imagination, innovation, connection to the community and social problems, aesthetic value, instrumental value, and reach. The question becomes, can the university develop a method of assessment flexible enough to accommodate the variety of research produced on its diverse campus?

We must move away from an assessment model that depends upon the number of publications, number of papers presented, and size of external grants to define the research success. Rather, we should honor awards, the extent of readership/viewership, and citation indices. This broader assessment model can help indicate the impact of research on the scholar’s discipline, the breadth of interdisciplinary influence, and engagement in the community.

Projects should be assessed for internal grant-worthiness based upon the intrinsic value of the work itself. However, other measures of the work’s outcome can demonstrate to external reviewers and the general public the value of the work conducted in these areas, including a discussion of the reach of the project and even discussions of funding (grant-based, commercialization, and philanthropic) associated with the project.

Core Areas of Focus
There are six areas of research strength have been identified and which could be built upon for future success:

1. Urbanization
2. Visual Studies
3. Sustainability
4. Global Studies
5. Digital Studies
6. Health/Medical Studies

By building upon the above research strengths, the University of Cincinnati has a terrific opportunity to utilize already vibrant and rigorous work being done by faculty in the arts, humanities, and social sciences and to make it outstanding.

RECOMMENDATIONS

Aim: For the University of Cincinnati to be better positioned to create a research environment that uses and builds upon the individual and collective research strengths of faculty in the arts, humanities, and social sciences.

Investing in Pathway B Research (INPUT)
To further improve Pathway B Research, the University of Cincinnati must make strategic investments in areas of need.

1. Space
UC currently has no policies regarding studio rental for Pathway B researchers: faculty in Architecture, Fine Art, Interior Design, Fashion, and other fields, particularly in the performing and fine arts, often cannot pursue creative research in the confines of their office and must pay for studio space. Similarly,
some Pathway B researchers have no departmental or college travel funds to present research at national and international meetings, colloquia, and symposia. Studio rental and travel funding vary widely not only between colleges but also within programs. A minority of Pathway B faculty can access resources from the Taft Research Center and the Semple Fund for travel funding. While it may be beyond the current URC budget to provide travel funding and studio rental fees, the URC needs to establish guidelines to address these expenses and a fund to help faculty who exceed a certain threshold of personal expenses.

Recommendations

• A competitive application process to fund studio space;
• Competitive grants to support exhibition expenses;
• Competitive grants to specifically support community-based research

2. Time
Not all research in Pathway B disciplines is dependent on extensive start-up costs or expensive labs. For many Pathway B research professors, time is proverbially more valuable than money. URC has traditionally focused its Arts and Humanities and Social Science dollars on summer stipends or research support for faculty research programs, “primarily for those in the initial stages of developing their research careers.” Many Pathway B researchers need release time from teaching in order to pursue sustained research during the academic year. A URC Fellowship program could provide faculty with such release time. A fellowship of $6,000 could be used for release time and to pay for adjunct professors to give the faculty member a semester release to focus on research. Faculty who apply and receive one of these fellowships could be designated as “URC Faculty Release Fellows.”

Recommendations

• URC should create a Faculty Release Fellow Program for Pathway B Research.
• Institutional support for teaching-based research by integrating such classes into current faculty teaching load
• Streamlining competitive grants so that they provide funding for both research travel and the time needed away from teaching to do this
• Staff support (sourcing, writing, and administering grants; planning of exhibitions and events)

3. Resources
The URC currently funds Pathway B Research for those “primarily ... in the initial stages of developing their research careers.” Such funds can be used for archival research, travel to field sites, data collection, et cetera. While this funding model addresses the front-end expenses of Pathway B Research, there is currently no attention paid to the back-end expenses of publication and promotion: copyright, copying of musical parts, copyediting of monographs and articles, indexing and related bibliography services, layered costs associated with image rights, gallery fees and publicity, media support for promotion and global access. Pathway B researchers need a funding source to help defray the expenses of publication and distribution. Additionally, PBB is currently a serious obstacle for the transdisciplinary nature of many engaged in Pathway B research.

Recommendations

• The creation of a publication fund
• National conference travel scholarships
• International conference travel scholarships
• Scholarships for research materials (specifically geared to materials needed for studio practice, community-based research, and teaching-based research)
• A competitive grant to offset research expenses after a faculty member has reached a certain threshold in out of pocket expenses
• Shift away from PBB to values-based budgeting
PATHWAY C

Economic Engagement and Commercialization

COMMITTEE MEMBERS
UC:
Dorothy Air, co-chair
Christopher Lindsell
Steven Doehler
Bill Heineman
Mark Schulz
Jason Heikenfeld
Stephen Samuels (in Julie Heath’s absence)
Gigi Escoe
Kettil Cedercreutz
Drew Boyd
Tom Dalziel

Community/Industry:
Nick Nicolaides, P&G, co-chair
Alan Vicory, Confluence Water Cluster
Gary Lindgren, CBC
Gary Conley, TechSolve
Rick Micehman, Michelman
Mike Hooven, Atriecure,
Tim Schigel, Cintrifuse
Michael Flood, IBM
Adam Singer, Chamber
Mark Skinner, SSTI
Mark Collar, Third Frontier
Bob Coy, CincyTech
Wael Safi, P&G
Sara Adams Anderson, Cintrifuse
BACKGROUND

Drivers for Pathway C

- Becoming a benchmark “Economically Engaged and Entrepreneurial University” is a priority for UC
  - Evidence includes:
    - Inclusion in the 2019 Master Plan and previous UC/21 Strategic Plan
    - Carnegie designations for “Curricular Engagement” and “Outreach and Partnerships”
    - Resource investments in community planning, real estate enhancement, workforce development partnerships, product development, community service, health initiatives, industry collaborations and sustainability initiatives.
    - APLU Top Award for “Innovation and Economic Prosperity” initiatives

- This choice is driven by
  - Increasing public expectations for universities as economic drivers across the country
  - Federal funding agencies’ expectations to translate innovation into societal benefit
  - State-wide and regional priority in Ohio (OBR Task Force and CBC Study) for commercialization of university innovation and relevant workforce talent

UC’s Current Status:

UC has been proactive in creating its Economic Engagement Agenda and in launching new initiatives to move the University forward as a fully engaged University in the regional ecosystem. Examples of initiatives include: establishment of the UC Technology Commercialization Accelerator, UCRI, and UC Forward, as well as participation in many major collaborations, such as the Confluence Water Cluster.

Our growth in this area has been a clearly progressive one, but the University’s total potential has yet to be realized. As the University plans for future growth, however, UC’s newly launched initiatives and achievements now form a solid foundation for taking our economic engagement to the next level and truly leveraging our capabilities as an essential component of the region’s economy and as a leader among universities.

The recommendations that follow for Pathway C are strategically focused to further enable and scale what we have started and to maximize the full range of university potential within the regional ecosystem.
PATHWAY C PROCESS:

I. Team:
A team of both internal and external members, which included faculty, administration, industry, economic development, and investors, conducted the work leading to Pathway C recommendations.

II. Self-Study Approach to Determine Needs and Recommendations:
Qualitative and quantitative data from the following sources were used as the basis for Pathway C recommendations:

1) CICEP Internal Assessment Tool (developed by APLU’s Commission on Innovation and Economic Prosperity) for a standardized assessment of UC’s perceived economic engagement among faculty and administrative groups
2) Follow-on UC Internal Assessment Questionnaire to assess knowledge of specific UC program initiatives
3) 2011 Regional Innovation Task Force Initiative for assessing UC’s role and perceived performance by external stakeholders in the region
4) July 2013 UC Economic Engagement Retreat to drill deeper into issues and potential solutions.

III. Problem Definition Based on Assessment Outcomes
Significant input was sought from the Pathway C Team in assessing the data from the Self-Assessment process. The results indicated a high degree of congruence across all assessment measures. All data pointed to the same three inter-related areas for growth and improvement needed to significantly enhance our ability to bring economic engagement and commercialization outcomes to the next level of achievement. The three areas are:

- Developing mechanisms for valuing a stronger internal culture of economic engagement;
- Establishing an infrastructure to guide, facilitate and support economic engagement and commercialization activity;
- Establishing a communication network that supports economic engagement from both marketing and educational perspectives.

IV. Stakeholder Value Propositions Underpinning Recommendations
UC’s commercialization activity exists within an ecosystem of stakeholder groups; therefore, recommendations that addressed the needs of stakeholder groups were also factored into the final plan:

- University/Colleges: “Expanded opportunities, increased prestige, and preservation/attraction talent.”
- Faculty: “Transformation of intellectual capital/technology into societal improvement and new resources and prestige.”
- Students: “Experiential learning to be “next gen” entrepreneurs, and have a competitive workforce advantage.”
• **Investors:** “Free, unfettered access to resources, expertise and technology in which to invest.”

• **Industry:** “Access to IP, physical resources and expertise and increased potential for co-creation and commercialization of new technologies.”

• **Community:** “Job growth and wealth creation needed for a vibrant, sustainable community.”

V. Existing Best Practices Underpinning Recommendations:
Recommendations are based on existing best practices among benchmark universities. Institutions reviewed included MIT, Arizona State University, Purdue University, University of Kentucky, Carnegie Mellon, University of Utah, Washington University, Penn State, University of Michigan, Ohio State University and Colorado University. While each has unique approaches, **two overarching themes emerged from the analysis of these universities’ success: 1) intentionality and 2) commercialization infrastructure investments.** These two themes were demonstrated across all or a substantial number of the universities through the following types of initiatives.

- Top leadership support
- Dedicated, centralized infrastructure for commercialization
- University gap funds, such as early stage technology development grants and seed funds
- Commercialization aggregated at a physical location for increased visibility
- Integration of tech transfer office, accelerators, incubators, etc. to provide a one-stop, commercialization function
- Interdisciplinary cooperation and leveraging of unique university centers, institutes and expertise
- Participation of faculty, staff and students to create a broad-based culture of entrepreneurship
- High level reporting line for Office of Commercialization
- High level external advisory boards
- Use of alumni network for both monetary and physical resources
- Proactive engagement with corporate/industry partners through corporate visits, part-time entrepreneurial residencies, etc. to encourage networking and cross pollination.
- Educational initiatives for prospective faculty and student entrepreneurs
- Facilitative conflict of interest policies
OVER-ARCHING GOAL:
To develop an entrepreneurial ecosystem that expands opportunities for all of UC’s stakeholder groups and provides support for the commercialization of a wide range of intellectual property throughout the university.

RECOMMENDATIONS:
Based upon assessment data, stakeholder needs and identified best practices, the following three areas of recommendations are proposed:

Area 1: Culture

Issues:
A culture that embraces economic engagement is core to success. Core issues included:

- Current Reappointment, Promotion and Tenure (RPT) criteria align with traditional values of teaching, research/scholarship and service and do not recognize and reward economic engagement.
- Changing RPT criteria is complicated as decisions occur at the faculty/department level, making uniform incorporation of economic engagement/commercialization into RPT guidelines challenging.
- Community engagement and commercialization is not universally understood by faculty, resulting in limited understanding of the opportunity and ways to participate.

Solutions:
GOAL 1: Promote, value and reward community engagement to change culture

- **Objective 1.1 Leadership Stance**
  Establish a leadership position of economic engagement as a recognized value of the University
  - Assemble a high level team charged with developing a leadership position and plan for disseminating the position
  - Incorporate into Vision and Mission Statement

- **Objective 1.2 RPT Recognition and Reward Systems**
  Expand RPT criteria to include community (economic and/or social) engagement and commercialization as a valued area of contribution and develop additional reward mechanisms for faculty achievements
  - Work with Faculty Senate leadership to develop a set of agreed upon principles, provide channels for faculty input and to formulate a final set of reward/incentive recommendations
Seek additional input into expanded RPT criteria and other potential incentives from Deans and other high level administrators for a balanced set of recommendations.

Provide informational venues to insure understanding of the recommendations, their benefits and position among the other traditional RPT criteria.

**Objective 1.3 Educational Initiatives**

Increase ability to lead and/or participate in entrepreneurial initiatives through educational programs that provide background knowledge and skills needed to succeed.

- Establish a multi-pronged educational program targeted at different levels of need
  - General Orientation Session on a semi-annual basis to stimulate interest and provide basic information regarding Intellectual property and commercialization processes
  - Commercialization Informational Series Sessions to assist faculty in understanding commercialization processes and ways to engage
  - Entrepreneurial Boot Camp to work with faculty with early stage technologies and an interest in taking them forward to commercialization

- Assemble team of experts for delivering program (i.e., technology transfer, Accelerator Entrepreneurs in Residence, College of Business, College of Law, and external experts from industry, investors, patent law, etc.

- Market the availability of the program through large broadcasting methods and individual outreach

- Showcase program successes to stimulate additional interest

**Objective 1.4 Expanded Pathways for Participation**

Create novel pathways for faculty to engage in entrepreneurial activities.

- Establish a team of faculty and industry representatives to develop a framework for novel, joint opportunities, such as joint university/industry appointments, University/Industry Exchanges, topic-specific university/industry forums

- Establish “Tiger Team” to serve as liaisons between Centers of Excellence/Departments and both Accelerator and UCRI to identify opportunities with commercial and/or industry-sponsored research potential

- Create a University-Community Engagement Council charged with identifying community issues and expertise available to address those issues and to facilitate connections to relevant networks

- Establish a “convening process” to bring together interdisciplinary teams, augmented by additional expertise, to take newly identified opportunities forward
**Area 2: Commercialization and Engagement Infrastructure and Resources**

**Issues:**
There is a need for a comprehensive university-wide infrastructure to guide, facilitate and support the Innovation and Engagement missions of the University. Core issues include:

- Limited focus on the front end of the Innovation Process (as early as grants) to increase potential for commercialization
- Fragmented and under-powered University commercialization infrastructure
- Poorly understood pathways for commercialization
- Non-facilitative policies and procedures
- Lack of centralized and easily searchable repository of university resources to facilitate partnerships, collaborations and new opportunity creation
- Lack of “single point of contact” to assist external stakeholders in navigating the university system and connecting with resources

**Solutions:**

**Goal 2:** Establish an integrated and readily understood campus-wide infrastructure to support and grow UC’s economic engagement impact across all opportunity areas

**University Infrastructure for Federal and State Grant-based Intellectual Property**

- **Objective 2.1 Change the Model (Figure 1.)**
  Create an infrastructure focused on expanding opportunities and supporting commercialization of all types of Intellectual Property

**Pathways for Technology Commercialization**

![Diagram of Pathways for Technology Commercialization](Image)

*Figure 1.*
• Re-mission current Intellectual Property Office into being a Technology Commercialization Accelerator with fully integrated vs. parallel functions (Figure 2.)

Figure 2.

• Align staffing to execute on commercialization mission
  • Expand skill set and capacity of tech transfer staff through new hires and training of current staff to execute on new models
  
• Increase functionality and expand capabilities of the new Accelerator Model through
  i. addition of patent counsel
  ii. creation of external alliances/contractors for conducting due diligence, developing commercialization plans and marketing technologies with licensing potential
  iii. further integration of entrepreneurs-in-residence into overall functions of the Accelerator

• Objective 2.2. **Expand the Focus (Figure 3.)**
  Focus on all stages of the commercialization continuum in order to create a more robust pipeline of opportunities
Figure 3.

- Adopt a broader vision for commercialization and when it begins
  - Assist in identifying grant opportunities that have commercialization potential
  - Provide grant advising related to incorporating relevant commercialization considerations that might differentiate proposals from the competition
  - Assist in identifying collaborators that add commercialization value
- Follow progress of projects and provide continued advising to strengthen IP position and assist in transitioning into Accelerator projects

**Objective 2.3  Align and Provide Resources to Support Full Range of Opportunities**

- Expand Accelerator resource commitments sufficient to meet the needs of the overall university – including students, i.e., funding for increased Entrepreneurs-in-Residence services and commercialization grants
- Create an alumni network for expanded industry connections, resources and mentoring
- Establish a Seed Fund for investing in UC start-up company opportunities in order to develop start-up companies to increase potential for success vs. spinning out shell companies

**Objective 2.4  Make it Easy!**

Provide universal resources and processes that facilitate entrepreneurial involvement across all stages of the innovation and commercialization continuum

- Develop a resource guide that lays out an understandable framework for commercialization of all types of intellectual property and clear pathways for
pursuing commercialization related to federally sponsored vs. industry sponsored research
- Provide support mechanisms to address needs earlier in the innovation process (including grant submissions) to set the stage for commercialization outcomes
- Provide navigational tools for identifying and accessing resources (Resource Directory)
- Create a “Welcome Mat” to increase visibility and triage internal and external inquiries to appropriate resource connections
- Align policies and procedures to support and facilitate the commercialization

- **Objective 2.5 Transform the University into a Living Commercialization Incubator**
  Transition the university into a dispersed, living incubator by identifying and leveraging all resources relevant to commercialization activities
  - Create policies and processes for use of University resources by university start-ups as well as community start-ups/ small companies
  - Develop comprehensive inventory of available resources
  - Create the appropriate infrastructure to manage incubator functions, i.e., contracts, invoicing, compliance, tracking
  - Market opportunities

- **Objective 2.6 Leverage Commercialization activity as vehicle for Student Learning**
  Create pathways for student participation in commercialization activities
  - Establish an internship program for start-up companies
  - Deploy student teams to work on due diligence related to UC’s technology commercialization opportunities
  - Expand Accelerator staffing and financial resources to support student start-up initiatives

*Infrastructure for Industry and Non-traditional Intellectual Property Opportunities*

**Objective 2.7 Grow the UCRI Structure and functionality into a Sustainable Vehicle for Commercialization of non-federal and state funded intellectual property and non-traditional forms of intellectual property as well as increase the base of industry-sponsored research**

- Engage industry partners through collaborative agreements whereby UC’s background intellectual property will be commercialized in parallel with the newly developed foreground technology by the partner. Monetization occurs from the value contribution of both the background technology and joint development.
- Provide mechanisms for commercialization of non-traditional intellectual property, such as service and consulting opportunities
- Leverage State and Federal grants that focus on transitioning late technology readiness level (TRL) projects to the market via collaboration with industry partners.
• Coordination UCRI functions with University commercialization infrastructure for seamless processes, increased opportunities and ease for faculty participation

**Area 3: Strategic Economic Engagement Communication**

**Issues:**
The University's role in engagement and as community resource lacks both internal and external visibility. Core issues included:

- Fragmented messaging related to economic engagement and commercialization
- Limited focus on use of communication as a vehicle for opening doorways for new opportunities, and conveying a unified brand expression of UC as a broadly recognized resource in building the community

**Goal 3:**
**Establish Economic Engagement Strategic Communications Plan that becomes part of UC’s Brand**

- **Objective 3.1 Revise Communications Infrastructure**
  Create an infrastructure capable of identifying UC stories from across all colleges, establishing an engagement brand and increasing visibility of engagement to both internal and external stakeholders

  o **Strategy**
    1. Establish a Communications Board of PR representatives from each college tasked with:
       a. developing a unified concept for the University
       b. coordinating messaging across colleges
       c. developing strategies for increasing visibility of engagement and impact

- **Objective 3.2 Expand Strategy**
  Develop new media strategies focused specifically on engagement

  o **Strategies**
    1. Develop media releases focused entirely on engagement to celebrate successes and foster our culture of innovation and engagement
    2. Expand outreach efforts to get the message out
    3. Fully utilize social media outlets
## UNIVERSITY OF CINCINNATI TABLE SUMMARY OF GROWTH AND IMPROVEMENT PLAN

### GOAL 1: Promote, value and reward community engagement to change culture

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Actions</th>
<th>Timeline</th>
<th>Resources</th>
<th>Indicator/Measure of Success</th>
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</thead>
<tbody>
<tr>
<td><strong>Objective 1.1</strong>&lt;br&gt;Leadership Stance&lt;br&gt;Establish economic engagement as recognized value of UC</td>
<td>1) Establish leadership position for economic engagement as valued part of UC’s Mission 2) Incorporate message into Vision/Mission statements</td>
<td>1) July 2014</td>
<td>No financial resources required for 1.1</td>
<td>Economic engagement position is communicated across all areas of the university</td>
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<tr>
<td><strong>Objective 1.2</strong>&lt;br&gt;RPT Recognition&lt;br&gt;Expand RPT to include Engagement (social and economic) &amp; Commercialization as valued contribution</td>
<td>1) IEPA Teams to work with Faculty Senate, deans, and administration to develop RPT guidelines to include engagement in departmental, college and provost criteria 2) Provide informational venues to roll out</td>
<td>1) July - December 2014 2) January 2015 Information sessions</td>
<td>No financial resources required</td>
<td>Near-term: increase in colleges including engagement in RPT criteria  Long-term: ALL colleges include engagement in RPT  Increased number of faculty participation/rewarded</td>
</tr>
<tr>
<td><strong>Objective 1.3</strong>&lt;br&gt;Education&lt;br&gt;Increase knowledge of and skills for participating in entrepreneurial activities</td>
<td>Initiate educational program to increase faculty interest and ability to participate in entrepreneurial activities  • Tier 1 Program: Introductory series on opportunity identification, IP &amp; pathways to commercialization</td>
<td>1) July 2014 launch of Tier 1 Program</td>
<td>$15,000 Part-time admin support Tier 1: No financial resources required. Led by Office of Entrepreneurial Affairs in partnership with Col of Business</td>
<td>Growing number of faculty participating in Tier 1 program  Increased # disclosures  Increased # of viable licensing opportunities</td>
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<td><strong>Objective 1.4</strong> Establish Pathways</td>
<td><strong>Expansion of Pathways for Faculty entrepreneurial engagement</strong></td>
<td><strong>Tier 2 Program:</strong> Entrepreneurial Boot Camp for faculty with interest in pursuing technology commercialization (Model after NSF supported Cincinnati Creates Companies Program)</td>
<td><strong>Tier 2 Program:</strong> No financial resources required. To be led by Office of Entrepreneurial Affairs and College of Business Pro bono external experts</td>
<td>Increased # faculty involved in economic engagement and commercialization (verified by Tech Transfer Office/RPT records) Increased Accelerator deal flow and # of executed licenses</td>
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<td>1) Establish “Tiger Team” liaisons between internal and external entities (industry, Centers &amp; Departments &amp; Accelerator/UCRI) to identify commercialization opportunities and/or industry sponsored research</td>
<td>2) Initiate a Program for joint university/industry appointments</td>
<td>1) July 2014 initiate “Tiger Team”</td>
<td>1) $50,000 ($10,000 per Liaison)  Entrepreneurial stipends for “Tiger Team Liaisons ($10,000 per Liaison)</td>
<td>New opportunities identified by Tiger Team Growing # faculty participating in programs</td>
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<td>3) Initiate University/Industry Exchange Program to create joint learning opportunities and new opportunities Establish University – Community Engagement Council and convening process to identify opportunities and facilitate connectivity</td>
<td>3) Same as 2)</td>
<td>2) January 2015 Plan completed for new pathways</td>
<td>2) No additional financial resources needed due to mutual exchange relationship</td>
<td>Increased # new university/industry opportunities from new programs</td>
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<td>4) September 2014</td>
<td>4) September 2014</td>
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## Goal 2: Establish a Campus-wide Infrastructure to Support and Grow UC’s Economic Engagement Impact

<table>
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<tr>
<th>Related Objectives</th>
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<tbody>
<tr>
<td><strong>Objective 2.1</strong></td>
<td><strong>Make it easy!</strong> Establish framework for commercialization activity and enabling tools</td>
<td>1. Establish understandable framework for commercialization of all types of IP and clear pathways for faculty to follow</td>
<td>1) July 2014</td>
<td>Short Term: Acceptance and positive feedback by administration and faculty</td>
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<td>2. Provide navigational tools for identifying and accessing resources (Resource Directory)</td>
<td>2) Completed Directory Faculty Expertise; Complete Faculty Expertise Directory July 2014 for expanded Directory</td>
<td>Long Term: Increased interest in participating in economic engagement</td>
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<td>3. Establish Center for City as Front Door to University to facilitate collaborations and partnerships – Feature: Hot Topics – Working with UC</td>
<td>3) January 2015</td>
<td>Faculty empowered to pursue entrepreneurial interests in alignment with new Policies and Procedures</td>
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<td>4. Align policies and procedures to support and facilitate commercialization</td>
<td>4) June 2015 Review completed; July 2015 Policy approvals</td>
<td>Increased # of Collaborations and Partnerships</td>
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<td>1)  No financial resources needed</td>
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<td>Positive feedback from external constituencies</td>
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<td>2) Seed funds were allocated as 1X funds from 2019 for initial development.</td>
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<td>3) $75,000 Additional financial support for Directory’s ongoing expansion, refinements and IT maintenance and</td>
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<td>4) $60,000 Salary Support for Center for City</td>
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<td>4) No financial cost; leadership team needed from OGC and OTC</td>
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| **Objective 2.2 Enabling Infrastructure**                                        | 1) Re-frame OTC into Tech Commercialization Accelerator with focus on IP protections within context of commercialization outcomes                                                                 | July 2014                                                              | **Staff/funding requirements**: (see detailed budget)  
**Overall Operations**: Assoc. VP, 50% Admin Assistant  
**IP, deal flow, marketing and licensing functions** - Director, two senior technology managers, two patent attorneys, IP docket manager  
**Commercialization Functions**: 3 part-time EIRs, Student teams  
**Entrepreneur Grant Funding**: Continuation of 2019 Entrepreneurial Grants and Entrepreneurs in Residence and additional Third Frontier funding (plus match)  
Patents: New IP and maintenance of active patents  
**Seed Fund**: $25,000 Funding for management fees of fund                                                                 | Fully integrated one-stop resource for commercialization implemented  
Resources are sufficient to support the needs across the university (including student start-ups)  
Increased revenues generated  
Increased number of start-up companies better positioned to succeed  
Increased number of licensing deals                                                                 |
<p>|                                                                                 | 2) Expand skill set of tech transfer staff through new hires and training of current staff to execute on new models                                                                                         | January 2015 New framework fully implemented                           |                                                                                                                                                                                                                                                         |                                                                                             |
|                                                                                 | 3) Create external alliances to assist with needs that extend capabilities, as needed                                                                                                                     | On-going                                                               |                                                                                                                                                                                                                                                         |                                                                                             |
|                                                                                 | 4) Create an alumni network for industry connections, resources and mentoring                                                                                                                               | Alumni network development on-going                                   |                                                                                                                                                                                                                                                         |                                                                                             |
|                                                                                 | 5) Establish a Seed Fund for investing in UC start-up company opportunities                                                                                                                                | Seed Fund – 1st Closing January 2015 2nd Closing July 2015            |                                                                                                                                                                                                                                                         |                                                                                             |</p>
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<td><strong>Objective 2.5</strong>&lt;br&gt;<strong>UC as Living Incubator</strong>&lt;br&gt;Transition the university into a living incubator by identifying and leveraging all resources in commercialization activities</td>
<td>1) Create policies and procedures that allow use of University resources by start-up companies and small companies&lt;br&gt;2) Market opportunities</td>
<td>January 2015&lt;br&gt;Draft of policies completed&lt;br&gt;March 2014 approval&lt;br&gt;Marketing ongoing</td>
<td>Office of Research, Entrepreneurial Affairs and Technology Commercialization, and General Counsel to draft</td>
<td>Co-location of entrepreneurial activity in alignment with policies&lt;br&gt;Increase income generated by business deals utilizing University resources</td>
</tr>
<tr>
<td><strong>Objective 2.6</strong>&lt;br&gt;<strong>Student Pathways</strong>&lt;br&gt;Create pathways for student participation in commercialization activities</td>
<td>1) Establish an internship program for start-up companies&lt;br&gt;2) Deploy student teams to work on due diligence related to technology commercialization opportunities&lt;br&gt;3) Expand staffing and financial resources to support student start-up companies</td>
<td>July 2014&lt;br&gt;Launch of internship program&lt;br&gt;April 2015&lt;br&gt;Student Accelerator Competition</td>
<td>Educational Program Co-led by Entrepreneurial Affairs and Technology Commercialization and College of Business&lt;br&gt;Accelerator to lead Student Competition</td>
<td>Student teams deployed to start-up companies&lt;br&gt;Student team competitions result in 6 funded Accelerator projects&lt;br&gt;Student Ambassador Program for liaison between Accelerator and Faculty/Research Programs</td>
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## Goal 3: Establish Economic Engagement Strategic Communications Plan that becomes part of UC’s Brand

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<tr>
<td><strong>Objective 3.1</strong></td>
<td><strong>Infrastructure</strong></td>
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<td>Create vehicle increasing visibility of engagement to internal and external stakeholders</td>
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<td></td>
<td>1) Establish a Communications Board of PR representatives from each college to develop unified concept to coordinate messaging across colleges and to develop strategies for increasing visibility of engagement and impact</td>
<td>July 2014</td>
<td>No costs associated with Board members as already on salary</td>
<td>Consistent messaging that contributes to the UC brand of major engagement</td>
</tr>
<tr>
<td></td>
<td>2) Board to continue as the vehicle for promoting engagement</td>
<td>Ongoing</td>
<td>$50,000 Funding for staff person to facilitate Board activities</td>
<td>Increased internal and external visibility of UC’s resources, activities and impact Resulting new connections and opportunities</td>
</tr>
<tr>
<td><strong>Objective 3.2</strong></td>
<td><strong>Strategies</strong></td>
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<td>Fully utilize social media outlets</td>
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<td></td>
<td>1. Increase marketing efforts re: engagement</td>
<td>July 2014</td>
<td>$25,000 Costs for development of community impact e-newsletter/newsletter/events</td>
<td>Increased Internal and external visibility of UC’s engagement and impact leading to new opportunities and partnerships</td>
</tr>
</tbody>
</table>