Final Report of the Academic Planning Research Work Group

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Executive Summary

Following review and reflection upon a wide range of input (as detailed in the full report), the Academic Planning Workgroup emphasizes the following values:

A. Research is fundamental to the mission of Marquette University and we must commit to ongoing growth and development of this crucial part of our identity.
B. The value of research and scholarship in all aspects of the University's teaching mission must not be underestimated – scholar-teachers who are actively exploring cutting edge research and application that informs their teaching contribute to the rich academic experience of all our students. Student researchers (undergraduate to graduate and professional students) are also important members of our community of scholars.
C. We value all forms of research and scholarship. Marquette is enriched by having individual researchers exploring significant questions in their discipline, engaged scholars who work with community or corporate partners, and teams of faculty bringing multidisciplinary perspectives to address significant issues.
D. Fundamental to each of these values is the centrality of inclusive practices and policies to foster equitable access to research opportunities on our campus, promote research that contributes to social justice beyond our campus, and recognize that scholarship and research are strengthened when conducted by a diverse group of individuals.

Inspired by Pope Francis and his commitment to fostering a "Culture of Encounter," we envision a "**Research Culture of Encounter**" where the search for truth and a commitment to sharing knowledge animates all aspects of the Marquette community. Recognizing that every intellectual pursuit can contribute to the benefit of our world, we seek to promote a research culture of encounter that empowers faculty, staff, and students to think and work together creatively and collaboratively.

In order to support Marquette University in its journey to create a vibrant Research Culture of Encounter, we emphasize the following key priorities:

1. **Faculty workloads** should not be determined with simple one-size-fits-all strategies. Colleges and departments should have flexibility to develop optimal strategies for balancing workloads among faculty, within budgetary constraints.
2. A faculty-led process for creating **Research Communities**, implemented by the Committee on Research, will serve as a dynamic way to identify emergent research strengths and focused areas for potential growth. These communities should be additive and not a replacement for our existing research activities.
3. **Student (graduate and undergraduate) research opportunities** must continue to be enhanced, leveraging a variety of strategies that include integration into courses, independent study, and paid opportunities.
4. We must identify and leverage existing resources and strategically develop future resources including **shared core facilities and centers** that will aid in our research endeavors and attract the next generation of faculty and students to Marquette.

In the spirit of Marquette's guiding value that calls upon us to *create bold, ambitious plans enacted with agility, authentic accountability and a commitment to the greater good*, we recognize that we must carefully steward available resources and create a transparent and collaborative process that engages faculty and University leaders as partners in bringing this vision to life.

Preface: Research in Marquette's Mission, Vision, Guiding Values and Strategic Plan

Research is an integral part of Marquette University as faculty's role as scholar-teachers embodies the commitment to lifelong learning and research more deeply engages students at all levels in the search for knowledge. This report will emphasize the key points highlighted below from University statements as foundational to our strategies for supporting the future of research on campus.

Mission, Vision, and Guiding Values

The Mission, Vision, and Guiding Values of Marquette University clearly articulate the importance of University research and scholarship. Research in Action is one of the six interconnected themes that are the foundation of our *Beyond Boundaries* Strategic Plan.

Marquette University Mission Statement

Marquette University is a Catholic, Jesuit university dedicated to serving God by serving our students and contributing to the advancement of knowledge. **Our mission**, therefore, is the search for truth, the discovery and sharing of knowledge, the fostering of personal and professional excellence, the promotion of a life of faith, and the development of leadership expressed in service to others. All this we pursue for the greater glory of God and the common benefit of the human community.

Marquette University Vision Statement

Marquette University aspires to be, and to be recognized, among the most innovative and accomplished Catholic and Jesuit universities in the world, promoting the greater glory of God and the well-being of humankind.

We must reach beyond traditional academic boundaries and embrace new and collaborative methods of teaching, learning, research and service in an inclusive environment that supports all of our members in reaching their fullest potential.

Marquette graduates will be problem-solvers and agents for change in a complex world so in the spirit of St. Ignatius and Jacques Marquette, they are ready in every way "to go and set the world on fire."

Marquette University Guiding Values

In accordance with the Catholic, Jesuit mission and vision of Marquette University, we hold that all people and things are created to praise, reverence and serve God in our community and throughout the world, and thus every aspect of the university's lifeblood and work holds this principle and foundation as its beginning and end. Therefore, we will enact the following values and behaviors in our lives and our work to serve the greater glory of God:

- Pledge personal and holistic development of students as our primary institutional vocation.
- Pursue academic excellence and educate students who are men and women for and with others throughout the world.
- Embody a spirit of interdisciplinary curiosity, research, innovation, entrepreneurship and application to change and improve ourselves, our community and our world.
- Nurture an inclusive, diverse community that fosters new opportunities, partnerships, collaboration and vigorous yet respectful debate.
- Live as servant leaders with a commitment to the Jesuit tradition and Catholic social teaching for all people, beliefs and faith traditions.
- Create bold, ambitious plans enacted with agility, authentic accountability and a commitment to the greater good.

Beyond Boundaries Research in Action

Grounded by our Guiding Values and inextricably tied to the university's mission and vision, Beyond Boundaries sets in motion a clear strategy for Marquette's future — where we want to be, how we will get there and what we can do to go further, to Be The Difference for our students. Beyond Boundaries is an integrated, actionable plan built around six themes. Together, those themes set the course for Marquette to be recognized among the most innovative and accomplished Catholic, Jesuit universities in the world.

The central goal of the Research in Action theme is to advance Marquette as a university committed to research and scholarship with a distinctive emphasis on excellence in strategically defined areas, including innovation. Specific details concerning some of the metrics used in evaluating our progress in growing research at Marquette are provided in the Introduction section below.

Process and Guiding Principles Utilized by the Academic Planning Research Workgroup

The Research Work Group obtained input from the campus community via multiple avenues. The group participated in listening sessions hosted by the University Academic Senate (UAS) on November 12, 2020, and March 25, 2021; held two additional virtual "coffee chats" for informal discussion on November 18 and 30, 2020; reviewed input received via the Economic Planning Website; and created a webpage[1] with an additional input portal to obtain comments on the role of research at Marquette and ideas about potential research themes. The Workgroup met regularly to discuss input and frame its approach to building the recommendations in this report, breaking into smaller subgroups for more focused efforts on key topics. Members of the group also communicated with chairs, associate deans, and deans to hear additional input and the associate deans for research discussed Workgroup questions at two of their meetings this year. Additionally, the Workgroup discussed intersecting efforts with members of the Teaching and Student Workgroups and met with the Marquette University Student Government (MUSG) executive committee as part of a UAS session. We acknowledge, with great appreciation, the administrative support of Melody Baker of the Office of Research and Innovation (ORI) who staffed the Work Group throughout the process and ORI graduate assistant Kat McConnell who created and managed the group's website.

Throughout the text, we will call out sections where the original charges to the Workgroup are applicable.

Charge 1: Review the University mission.

After review of the University mission, vision, guiding values and strategic plan statements in the preceding section, reflection upon additional Jesuit resources and the input of the Marquette community, and discussion of process, the Research Workgroup has developed guiding principles for framing the future of research at Marquette. The process that we engaged in and the guiding principles that we identified were used to inform the specific directions taken in exploring and addressing the original charges given to the Workgroup.

[1] See https://www.marquette.edu/innovation/research-planning.php for the Work Group webpage, accessed April 29, 2021.

Our commitment to **equity** is fundamental to the process and guiding principles. Beyond evaluating proposed changes for their potential to create or exacerbate inequities based in gender, race, ableism, and class differences, we proactively seek to dismantle these inequities in our campus community. We pursue inclusive practices and policies to foster equitable access to research opportunities on our campus, to promote research that contributes to social justice beyond our campus, and to recognize that scholarship and research is enriched when conducted by a diverse group of individuals.

Inclusivity fosters **innovation**. The Marquette research community is strengthened by the engagement of faculty, students, staff, and external partners, collaborators, and research participants in our endeavors.

We also value disciplinary **diversity** and the role of faculty leadership. We recognize that each academic field develops unique research needs, impact metrics, and practices. We further understand that a 'one-size fits all' policy or evaluation model disadvantages some of these fields over others. In the interest of maintaining diversity and equity among distinct research fields, individual departments and colleges must determine appropriate programs, policies, and procedures, and evaluate these changes according to their own disciplinary norms. Faculty should be the driving force in determining focus areas for research growth.

The University Committee on Research also released a statement on the value of research earlier this academic year (see Appendix A). As noted above, the Work Group solicited input from members of the University community on the role and value of research at Marquette. Selected student and faculty perspectives will be included in this report (as illustrated below) and we encourage you to explore https://www.marquette.edu/innovation/research-planning-examples.php for more examples, including video testimonials on the impact of research.

> *Research represents an entire dimension of academic progress and contribution to society. A critical component to make essential new discoveries and to promote excellence in the classroom.* Faculty perspective.

Charge 2: Define what it means to be a focused R2 research university; articulate the synergy between research/scholarship and teaching at Marquette.

As we gathered input and explored options for Marquette's future as a research University, we chose to not utilize the specific language of "focused R2" but to determine creative ways to support focused strategies for growth.

Academic Planning Research Workgroup Principles in Action: A Research Culture of Encounter

"There are two aspects to every university. The first and most evident is that it deals with culture, with knowledge, the use of the intellect. The second, and not so evident, is that it must be concerned with the social reality--precisely because a university is inescapably a social force: *it must transform and*

enlighten the society in which it lives. But how does it do that? How does a university transform the social reality of which it is so much a part?"[2]

-- Ignacio Ellacuria SJ

As scholar-teachers, we envision a "Research Culture of Encounter" where the search for truth and a commitment to sharing knowledge animates all aspects of the Marquette community. While affirming the importance of disciplinary excellence, we also recognize the value of promoting a research culture that looks beyond disciplinary boundaries. Recognizing that every intellectual pursuit can contribute to the benefit of our world, we seek to promote a research culture of encounter that empowers faculty, staff, and students to think and work together creatively and collaboratively. Research, as faculty understand and practice, is not merely *what* we do. It is an essential and life-giving part of *who* we are as professors and mentors. Research that facilitates encounters with other disciplines, cultures, and people does not water down or diminish its importance. On the contrary, such encounters enrich and deepen our research by creating opportunities to engage in meaningful dialogue with others and allow us to address complex issues from more than one dimension.

To cultivate and promote a research culture of encounter, we recommend:

1. Foregrounding faculty and student research as a constitutive element of Marquette's mission to deliver a transformative educational experience and as essential to distinguish itself as an academic institution. Not an optional add-on, the quest to expand the horizon of our understanding is vital to our nature as a university community.

2. Encouraging and rewarding innovative interdisciplinary research efforts. A research culture of encounter recognizes research as *informative* (generating knowledge) and *formative* (shaping minds and fostering responsible inquiry). Expanded evaluative processes for measuring "research productivity" and "research sustainability" for scholar-teachers must be developed in order to support <u>both</u> disciplinary and interdisciplinary activities.

3. Integrating course-based research into the Marquette Core Curriculum to empower students to "Be The Difference" by providing opportunities to think and work beyond disciplinary boundaries. The collaboration needed to ensure high-impact and transformative practices will require re-envisioning research at Marquette. Instead of an add-on or extra, it must become the thread binding the community together.

4. Elevating the profile of researchers and projects that create bridges between schools, colleges, and the world we live in and are called to serve. At the same time, researchers who focus upon the fundamental questions within their discipline must be celebrated and acknowledged for the intrinsic value of their scholarly work and for raising Marquette's research profile.

5. Supporting and monitoring inclusivity and accessibility of research opportunities for a diverse range of faculty and students to encourage intellectual encounters across boundaries of class, race, gender, age, and dis/ability.

[2] 1982 Santa Clara University commencement address, available at https://magazine.scu.edu/magazines/spring-2017/commencement-address-1982/, accessed April 28, 2021.

A Marquette University "Research Culture of Encounter" would encourage all students, staff, and faculty in the lifelong quest of discovery. As it is central to Marquette's mission as a Jesuit university, such a research culture encourages, celebrates, and rewards faculty mentorship for developing intellectually curious and responsible leaders who will "Be The Difference" in our world.

> *It (research) gives opportunities to learn outside of the classroom and provide real world experiences. It also bridges the gap between professors and students and allows for mentorship. I can't stress enough the importance of it for many students in developing their personal and professional career and developing important skills and relationships.* Student perspective.

Charge 3: Identify University research goals, and existing strengths.

While we did receive some campus input on specific existing areas of research strength, we note that there needs to be a broader and more iterative discussion of this important topic. The strategy of facilitating research communities introduced later in this document is one dimension of what we propose as next steps. Individual units (colleges and departments) should also continue to build their own sets of research goals and strengths into their strategic plans.

Marquette as Research University: Historical Performance on Selected Institution-Wide Metrics

No single metric can fully describe our collective research output or its impact. Our diverse and vibrant intellectual community contributes to academic, policy, community, and corporate worlds, generating technological and social innovation beyond campus. Nevertheless, a variety of both quantitative and qualitative metrics tell a story of progress. Research and development (R&D) expenditures have grown dramatically. Our current faculty have achieved numerous prestigious professional recognitions for their scholarship. Our profile as an engaged institution, with community outreach, public policy impact, and corporate connections, has gained both local and national visibility. An active publication record in scholarly venues has enhanced our academic reputation in many disciplines. These successes speak to the achievement of our core mission of the pursuit of truth, which is important for its own sake. However, viewed pragmatically, such successes also increase the capacity of the university to recruit students, to invite cutting-edge scholar-teachers to join us, and to impress future donors, thereby generating a virtuous cycle for the institution. Thus, while we acknowledge the challenges that confront Marquette University in the short-term, we would also draw our focus to the important research achievements of the last decade, and we reaffirm our commitment to this trajectory of growth.

Carnegie Classification

"The Carnegie Classification™ has been the leading framework for recognizing and describing institutional diversity in U.S. higher education for the past four and a half decades. Starting in 1970, the Carnegie Commission on Higher Education developed a classification of colleges and universities to

support its program of research and policy analysis. This framework has been widely used in the study of higher education, both as a way to represent and control for institutional differences, and also in the design of research studies to ensure adequate representation of sampled institutions, students, or faculty."[3]

The research activity scale for the Carnegie Basic Classification includes the following correlates of research activity: research & development (R&D) expenditures in science and engineering (S&E); R&D expenditures in non-S&E fields; S&E research staff (postdoctoral appointees and other non-faculty research staff with doctorates); doctoral conferrals in humanities fields, in social science fields, in STEM (science, technology, engineering, and mathematics) fields, and in other fields (e.g., business, education, public policy, social work).

Current Carnegie Basic levels are classified as:

R1: Doctoral Universities – Very high research activity (~130 institutions)
R2: Doctoral Universities – High research activity (~135 institutions)
D/PU: Doctoral/Professional Universities

Note that due to revisions and data updates the number of institutions in each category may differ slightly, depending upon when the data set was accessed.

R1 and R2 status require a minimum of 20 research Ph.D.s and at least $5M in R&D expenditures. D/PU institutions can have fewer than 20 research Ph.D.s if 30 or more professional practice doctoral degrees are granted in at least two programs.

Current Marquette Status: In 2010, Marquette dropped into the R3 category (now known as D/PU) and hence an original Beyond Boundaries Research in Action objective was to move back into R2. This was reached with 2015 classification, when we moved back into the "high research activity" category. In 2019, there were 261 R1 and R2 institutions in the research activity data set available from Carnegie. Of these, the top 126 were ranked in the R1 category. Marquette, based on the calculated standardized distance parameter, was ranked ~189/261 and was, therefore, in the middle of the R2 category. (See Appendix B for more details on the 2019 Carnegie data.)

Research and Development (R&D) Expenditures

A key benchmark for the Research in Action tracking of research growth and Carnegie classification is annual research and development (R&D) expenditures. This indicator measures institutional success in attracting competitive external research funding and support of faculty through internal funds for all disciplines. R&D is defined as "*creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge."*[4] Updated Research in Action targets set an ambitious goal of doubling our R&D expenditures from $25M to $50M in a five-year window. While we did not reach this goal in the FY20 target year, we did make substantial progress and ultimately reported $37.1M in R&D, despite the

[3] Details on the Carnegie Classification can be found at: https://carnegieclassifications.iu.edu/, accessed April 28, 2021.
[4] NSF definition utilized in the annual Higher Education Research and Development (HERD) report, see https://www.nsf.gov/statistics/randdef/#chp5, accessed April 28, 2021.

ramp-down in research activities that occurred during the fourth quarter (pre-pandemic, we had been trending toward an estimated $40M in expenditures, compared with $37.8M in FY19).

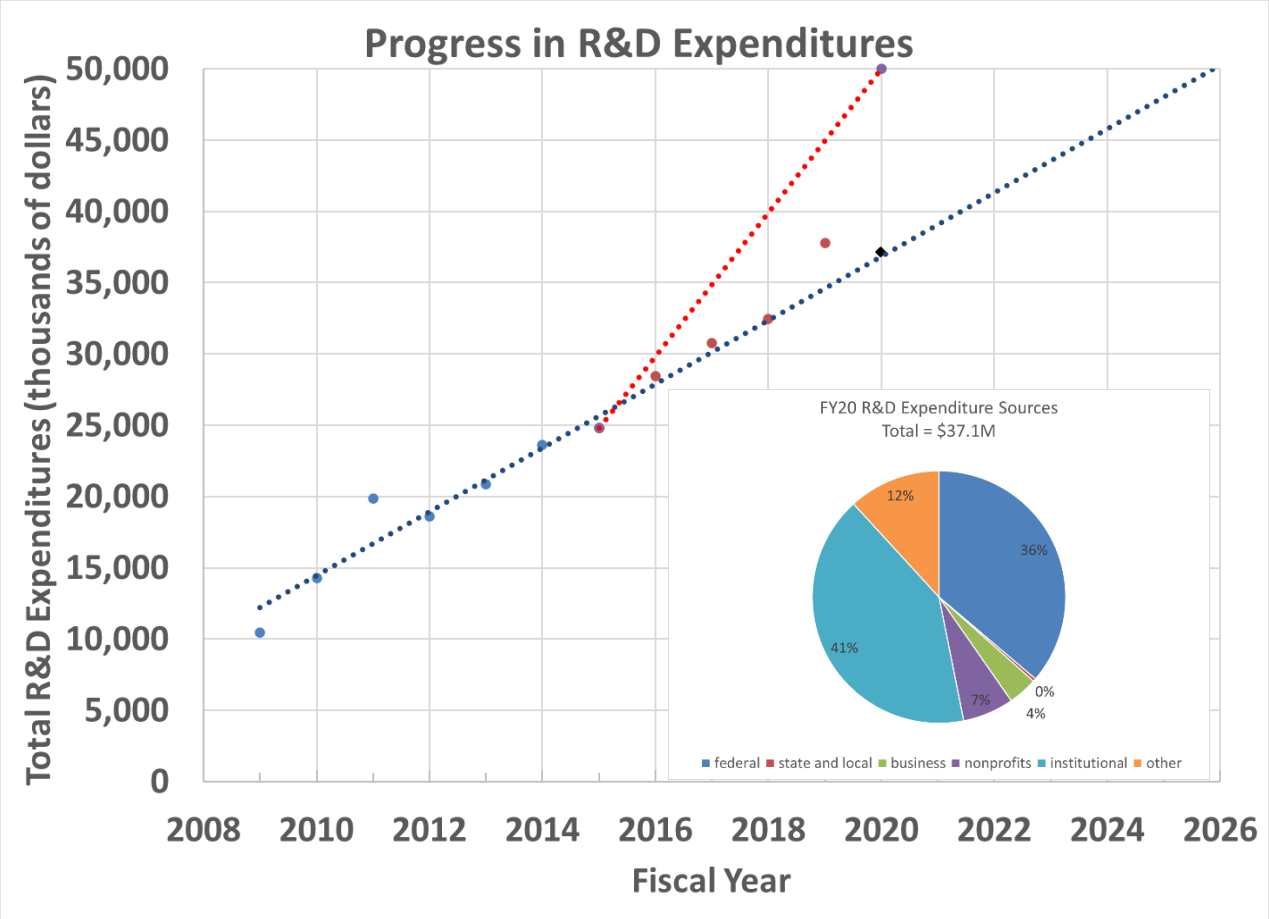

Figure 1: R&D Expenditure Progress Tracking. Red line shows linear trajectory for initial 5-year doubling research goal; blue line shows linear fit to FY09-15; blue points show data from 2009 to 2015, while red symbols show data after setting the R&D goal. Inset shows proportion of FY20 R&D sources – note that institutional funds were 41% and federal funds were 36% of the total.

Budget reductions will undoubtably reduce the institutional funds that support campus research ($15M in FY20). However, it is important to note that we have made substantial gains in securing federal support for our campus research activities, with an all-time record of $13.2M in federally-funded R&D expenditures in FY20. Protecting, and building on, this progress is a critical priority. The strategy of building interdisciplinary research communities discussed later in this report will be a critical component of developing capacity to compete for larger grants, which in turn will help support more faculty and student researchers and generate revenue through facilities and administrative (F&A) costs. We note that future goal setting based on R&D expenditures will require careful analysis of the impact of internal budget adjustments. One continued priority for internal investments will be to adequately support new faculty start-up packages, particularly in the disciplines where significant external funding is expected. The committee recognized that start-up resources generate an excellent return on investment by enabling the University to recruit highly qualified candidates, who virtually always have lucrative offers from other institutions. This enables early career scientists to successfully launch their research

programs while addressing the other demands faced by our faculty (course development, related activities). Please note, none of the recommendations offered in this document should be construed as lessening the importance and impact of start-up funds for individual investigators; while we encourage alignment with core facility opportunities and strengthening campus research communities, we also understand that hiring needs to be determined in the context of departmental/college priorities.

Increasing research expenditures increases indirect funds that can be used to build new facilities, update old equipment and allow the University to stay on the cutting edge. Faculty perspective.

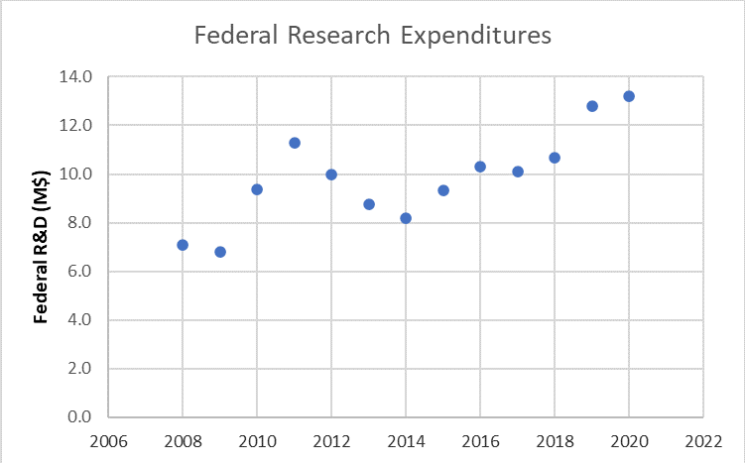

Figure 2: Federal R&D Expenditures. Note that FY11 was peak of American Recovery and Reinvestment Act (ARRA)-funding. Alignment of faculty to compete for emerging federal opportunities will be aided by teaching buyouts and seed funding for interdisciplinary focus areas.

Faculty Awards

The Center for Measuring University Performance (MUP) publishes an annual listing of Top American Research Universities and notes *that while R&D expenditures are one metric for overall research activity, significant awards are another measure of faculty distinction*. Data and details on the specific awards used in this ranking are available online.[5] Note that this list also does not include many prestigious awards that are more discipline-specific. Use of the MUP Center list was chosen to provide a means of benchmarking progress relative to peer and aspirational institutions.

The MUP Center listings lag in time, but for 2017, Marquette had 5 awardees, down one from the all-time high of 6 in 2012. In 2017, we were ranked 113 (with ties) in the top 200 universities and 39th among the private universities. In 2013-2016, awards oscillated between 2-4per year, providing us with a baseline against which to measure future performance. We recommend expanding the tracking of prestigious faculty awards to include a broader range of prestigious opportunities for which Marquette faculty are eligible, based on lists generated by departments and colleges. Tracking should include both applications and awards.

[5] See https://mup.umass.edu/University-Data, accessed April 30, 2021.

Marquette as a Research University: Recommendations for Incorporating Additional Metrics

Scholarly Publications

As stated in Marquette's Mission Statement, the discovery and sharing of knowledge is a core aspect of our University mission. Central to this is the role of scholarly publications, as emphasized in department and college promotion and tenure guidelines. Differences in disciplinary norms complicate the effort for university-wide accounting of this metric, but Faculty Activity Database data point to vibrant publication and dissemination activity across campus: university press books, conference contributions and guest lectures, invited book chapters, peer-reviewed journal articles, etc. Publication success in diverse, reputable scholarly venues remains a key indicator of research vibrancy, innovation, and impact. In some disciplines, traditional scholarly publication indicators will be a primary means of evaluating the level and impact of scholarly activity; other disciplines will factor in grant activities or other indicators such as those for engaged scholarship.

Engaged Scholarship Indicators

Recent University Task Force findings (Corporate Engagement and Community Engagement 2.0 planning efforts) have emphasized the need to identify additional outputs of research/scholarship and value a broader range of mechanisms for how research findings are disseminated and put into practice. Engaged scholarship, broadly defined, includes a variety of applied research, including community outreach projects, media invitations and contributions to public discourse based on scholarly reputation, patents and corporate applications of research, and policy changes. Marquette University joins a broader movement across a variety of academic institutions to monitor and acknowledge these engaged contributions, as well as document their potential contribution to research-teaching synergy.[6]

To be clear, this public-facing scholarship cannot be disconnected from traditional modes of academic discovery and publication. A faculty member's strong academic reputation and research expertise leads news media outlets to seek interviews or to cite their peer-reviewed scholarship. In turn, even if such media engagement does not immediately or directly lead to policy changes, it improves the civility and depth of public discourse, extending the research culture of encounter beyond the boundaries of our campus. In turn, scientific impact of research within disciplinary fields also tends to increase with interventions in public discourse, including via social media.[7] Fostering a vibrant research culture of encounter intramurally has profound extramural consequences that can position Marquette as a leader in multiple areas.

At the moment, we do not have criteria developed to systematically measure engaged research activity at Marquette. Therefore, in agreement with recent task forces that have explored this issue, we acknowledge and recommend a deepening of support for a variety of engaged research contributions. We further call for the institutionalization of systems by which we might track researcher participation to ensure appropriate reward of faculty engaged in these research efforts, noting that underrepresented

[6] e.g. Elizabeth Alderton and Michelina Manzi. 2017. 'Engaged Students: An Authentic Undergraduate Research Experience' T*he Professional Educato*r. http://wp.auburn.edu/educate/wp-content/uploads/2017/10/Alderton-Manzi_rev2_accessible.pdf

[7] Lian, Xuan, Leona Yi-Fan Su, Sara K. Yeo, Dietram A. Scheufele, Dominque Brossard, Michael Xenos, Paul Nealey, Elizabeth A. Corley. 2014. 'Building Buzz: (Scientists) Communicating Science in New Social Media Environments' Journalism & Mass Communication Quarterly. 91(4): 772-791.

faculty are often more likely to focus on community-engaged work. Faculty engagement and university reputation would likely further benefit from monitoring and showcasing such engaged research efforts.

Student Impact Measures

Research is central to the experience of both undergraduate and graduate students at Marquette University. Multiple metrics must be employed to understand the impact of research on students. Measuring the indirect impact of faculty research on the student experience is difficult, but overwhelming experiential and testimonial evidence from Marquette University faculty and students suggests a synergy between teaching and research. Anecdotal evidence suggests that students benefit from classroom experiences with cutting-edge leaders in their field, as well as the professional networks maintained by the research reputation of their academic mentors. Beyond our campus, students tend to report their contacts with research-active faculty as a positive experience.[8] However, we also recognize the need to address the time management tensions between teaching and research tasks in workload responsibilities.[9] Negotiating these tensions to mutually bolster teaching and research varies by discipline.[10] Therefore, the development of specific, discipline-specific indicators to evaluate the success of strategies to enhance the teaching and research nexus should be encouraged at the department level, with broader university support.

Research impacts students when they engage in it directly. Research cultivates the passion for discovery, encourages civil discourse and engaged problem-solving, and rewards a collaborative quest for truth. In this sense, research fosters students as the agents of change envisioned by our Jesuit mission. Research also prepares students for the dynamic and competitive 21st century job market, helping them develop a marketable quiver of proven skills in demand from potential employers: e.g. quantitative and qualitative methods for analysis, interviewing and running focus groups, problem solving and research design, hands-on laboratory experience, fluency in languages, expertise with technology or software, cross-cultural literacy, grant writing, professional presentations, and leadership. Student-faculty research partnership positively impacts learning outcomes such as integrative learning, deepening intellectual skills, and personal and practical learning.[11] Alumni who participated in undergraduate research as students, compared to alumni who did not, report greater capacity for carrying out research and enhancement in their ability to acquire and synthesize information. Furthermore, these alumni report greater capacity to solve problems independently and perceive they possessed better communications skills (listening, writing, and speaking effectively).[12]

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[8] Prince, Michael J., Richard M. Felder and Rebecca Brent. 2007. 'Does Faculty Research Improve Undergraduate Teaching? An Analysis of Existing and Potential Synergies' *Journal of Engineering Education*. 96(4): 283-294.

[9] *Ibid*.

[10] Colbeck, Carol L. 1998. 'Merging in a Seamless Blend: How Faculty Integrate Teaching and Research' *The Journal of Higher Education*. 69(6): 647-671.

[11] Kuh. G.D. 2008. *High-impact Educational Practices: What they are, who has access to them and why they matter*. Association of American Colleges & Universities. https://www.aacu.org/publications-research/publications/high-impact-educational-practices-what-they-are-who-has-access-0

[12] Bauer, K.W. and Bennett, J.S. 2003. 'Alumni Perceptions Used to Assess Undergraduate Research Experience.' Journal of Higher Education 74: 210-230.

Many students use research as the means to explore their place in the world, finding direction and purpose in the experience.[13] For example, there is a strong correlation between undergraduate research experience and the pursuit of graduate study. In their study of alumni, Bauer & Bennett found that alumni who participated in undergraduate research were twice as likely to complete doctoral study compared to alumni with no research experience.[14] In addition, these alumni were more likely to report that faculty played an important role in discerning their career path.[15] For these reasons, research is a high-impact learning practice, and we need research-active faculty to team with both undergraduate and graduate students.

These more general insights about the value of research match the findings of recent Marquette University Senior Surveys. Between 2013 and 2019, about 20% of senior students reported working with a faculty member on their research.[16] Of those who worked in such capacity, overwhelmingly they reported a positive experience, with between 82% and 93% of students reporting that their participation enhanced their learning experience somewhat to a great deal.[17] Students of color reported an even more positive experience than white students. Ideally, we would develop longer-term indicators of the research impact on alumni career trajectory beyond the initial post-graduation snapshot provided by the First Destinations survey.

> *I chose to attend Marquette because of the opportunities I would have to do undergraduate research, and the chance to make close, personal relationships with professors that would further my career.* Undergraduate student perspective.

Graduate education, as a means of further developing well-educated individuals and preparing students for the ever-changing workforce, is intimately entwined with research. For faculty in many disciplines the training of graduate students is a key component of their research program and hence their intellectual endeavors and productivity. The synergy that develops between faculty mentors and graduate students fuels both the practice and significance of the scholarly activity. Our graduate students are also accomplished early-career scholars – some great examples of their successes can be found online at the Graduate School website.[18]

Beyond the role that graduate student research plays in enhancing faculty research programs, research-active faculty are critical to the success of the University's educational mission. Graduate education requires faculty to be actively engaged in research. Development of new knowledge and dissemination of information is a key component of many master's, doctoral and professional degree programs on campus. In fact, many current programs require students to engage in a research experience for

[13] Hunter, Anne-Barrie, Sandra L. Larson and Elaine Seymour. 2007. 'Becoming a Scientist: The Role of Undergraduate Research in Students' Cognitive, Personal and Professional Development' *Science Education*. 91(1): 36-74.
[14] *Ibid*; Zydney, A. L., Bennett, J.S., Shahid, AA., & Bauer, K.W. 2002. 'Impact of Undergraduate Research Experience in Engineering.' J*ournal of Engineering Education* 91: 151-157.
[15] *Ibid*.
[16] *Marquette Senior Survey*.
[17] *Ibid*.
[18] See https://www.marquette.edu/grad/student-success.php, accessed April 30, 2021.

accreditation purposes. The reputation of graduate programs is largely dependent on the research and scholarship of its faculty, thus the ability to recruit and retain high-quality graduate students is inextricably linked to faculty research. Graduate student research also extends the undergraduate experience by providing accelerated degree program opportunities, better preparing our graduate teaching assistants, and providing peer-like mentoring encounters.

One of the powerful things it (research) has taught me is the importance of collaboration with others to create knowledge to solve problems. Graduate student perspective.

Strategic Priorities

Workload: A Foundation for Understanding Faculty Research Productivity and Sustainability

I came to Marquette because of the balanced view of research and teaching. Faculty excel at research and teaching. Faculty perspective.

In accord with our Jesuit mission and identity, and our desire to foster a research culture of encounter, our planning process must be guided by the question: What kind of people do we want our faculty to be? Marquette University embraces faculty who boldly transform and enlighten society through research, teaching, and service to the university, their profession, and the community. This is true not only for individual research but also for research communities. Marquette University encourages faculty to participate in our intellectual community, acknowledging the collective nature of discovery. Knowledge production is a pillar of the university identity, and universities are critical sites for creativity and innovation. To remain consistent with our Jesuit identity, our research culture of encounter must be valued not only for its capacity to encourage [inter]disciplinary scholarship but also as a vehicle for social justice on campus, creating inclusive and welcoming scholarship communities valued for their own sake. Marquette University embraces a scholar-teacher model, recognizing that research, teaching, and our lives in the service of God cannot be disentangled.

This synthesis of teaching, research, and service requires us to acknowledge the multiple demands made on faculty time. We must consider faculty as *people*. Indeed, the goal of creating a diverse intellectual community on campus requires us to acknowledge how research opportunities can be shaped by inequities. Without proper monitoring and care, changes to workload can exacerbate inequities rooted in gender, race, class and ableism, thereby making the recruitment, retention, and professional growth of research-active faculty from underrepresented groups more difficult. For this reason, our report emphasizes workload as a foundational concern for research. In so doing, we endeavor not only to avoid exacerbating inequities, but to find creative means to foster a more inclusive research culture than ever before. We note that intersecting impacts of the COVID-19 pandemic, economic disparities, and racial justice that have been so evident in the past year indicate that personal circumstances impact access to research opportunities and need to be considered when crafting strategies to address equity concerns.

Understanding faculty as people and exploring the impact of workload changes, we should consider both **research productivity** and **research sustainability** for the university. Research productivity includes measures of output and the impact, determined at the department (or equivalent) level due to varying metrics across disciplines. Research sustainability includes indicators of morale, research-active faculty retention and recruitment, and the development of support systems to maintain productivity. Furthermore, the documented influence of emotions on scholarship outcomes shows how we must not divorce the full person from their workload responsibilities; faculty who enjoy teaching and research and report less work-related anxiety or boredom tend to be, unsurprisingly, better teachers and researchers.[19] With this spirit, we offer the following guiding principles:

1. We self-consciously use the term *scholar-teacher*, rather than teacher-scholar, because we acknowledge our charge as a research workgroup and have put research at the heart of report. However, we also recognize the deep synergy between scholarship and teaching, as well as the importance of scholarship on pedagogy, and we have prioritized the exploration of how we might enrich this nexus. Indeed, S*cholar-teacher* applies to all faculty – labeling only some faculty as scholar-teachers is inconsistent with campus understanding of the rich interconnections between these activities. The distinctive opportunities made possible by the *scholar-teacher* model are critical to attracting students at all levels to Marquette.

2. Workloads should not be determined with simple one-size-fits-all strategies. Colleges and departments should have flexibility to develop optimal strategies for balancing workloads among faculty, within budgetary constraints. Different types of scholarly activities will require thoughtful balancing, even within a single department. For example, departments or colleges should explore credit allocation for:
    i. Teaching large courses or smaller enrollment courses with multiple preparations
    ii. Mentoring graduate students working on thesis or dissertation requirements
    iii. Mentoring undergraduate research (such as independent study, McNair program, summer research experiences, and many other campus programs that encourage undergraduate research)
    iv. Grant activities
    v. Professional external service and leadership
    vi. Significant internal leadership and service

3. Participating faculty play a vital role and need to continue to be part of the balance. More complete integration of participating faculty into the professional activities of departments would benefit all faculty and students. Merit review should consider the multiple ways all faculty, including participating faculty, serve the University.

Research, a high-impact educational practice, should be highlighted as a teaching priority. We recognize and value research mentoring as a vital teaching activity. A key to developing sustainable student research support is the institutionalization of faculty incentives, including rewards in tenure and

[19] Stupinsky, Robert H., Nathan C. Hall, and Reinhard Pekron. 2019. 'Faculty Enjoyment, Anxiety and Boredom for Teaching and Research: Instrument Development and Testing Predictors of Success' *Studies in Higher Education*. 44(10): 1712-1722.

promotion and other professional recognitions.[20] As highlighted above, mentoring undergraduate and graduate student research activity should be factored into workload and should be included as part of teaching load calculations. Potential strategies could include grouping students into a class and using that as part of the teaching load or providing a course reduction on a regular basis after mentoring X number of students, adapting the model employed at Chapman University[21] to include a broader array of research mentoring.

The impact of workload changes on faculty research should be evaluated both through the lens of *productivity* and *sustainability*. At the department and college level and cognizant of disciplinary norms, we recommend further development of research output and impact indicators, including the aforementioned scholarly publications and engaged scholarship metrics. We also recommend that indicators of faculty morale and research talent retention be considered as metrics for research sustainability for the institution. In the most recent Campus Climate Survey, the data on faculty morale suggests some cause for concern. The Fall 2020 Academic Experience Survey of instructors indicates that the Covid-19 crisis has compounded the challenges for morale, deepening disparities in research opportunities by tenure status and gender; significantly more women reported being challenged by insufficient time for research, balancing work and life priorities and managing work expectations, compared to male instructors. Improvements in these morale indicators, and the closure of gender inequities revealed by them, should be closely tracked as potential signs of the university's research health and longevity.

Administrative support is also important for research productivity and sustainability – reductions in this area will require additional faculty time and effort, which can negatively impact research. We also note the need for continuing attention to 'wrap-around' support from areas such as human resources, including healthcare, mental health, and caregiving resources.

Finally, we note the inequities in workload that disproportionately impact certain members of our research community. Across academia, women and faculty of color tend to bear greater service burdens, and we must adopt proactive strategies to monitor and account for equitable and just distribution of these commitments.[22] This should not be the sole work of the Institute for Women's Leadership or the ADVANCE program, but a commitment of all on campus to proactively address these concerns.

[20] Davis, Shannon N., Rebecca M. Jones, Duhita Muhatmya, and Pamela W. Garner. 2020. 'Encouraging or Obstructing? Assessing Factors that Impact Faculty Engagement in Undergraduate Research Mentoring' *Frontiers of Education*. https://www.frontiersin.org/articles/10.3389/feduc.2020.00114/full

[21] Kim, Christopher S., Leahy, Anna, and Kendrick, Lisa. 2017. 'Credit Where Credit is Due: A Course-Load Banking System to Support Faculty-Mentored Student Research' *Scholarship and the Practice of Undergraduate Research.* 1(1): 55-62.

[22] Cassandra M. and Victor M.H. Borden. 2017. 'Faculty Service Loads and Gender: Are Women Taking Care of the Academic Family?' R*esearch in Higher Education. 57(1);* O'Meara, KerryAnn, Dawn Culpepper, Joya Misra and Audrey Jaeger. 2020. *Equity-Minded Faculty Workloads: What We Can and Should Do No*w. American Council on Education, Washington DC.

Building on our strengths to define focus areas for growth (research communities)

Charge 4: Identify research themes consistent with University mission, identified strengths, and potential for growth in areas of high impact.

To deepen the research culture of encounter at Marquette, the Research Workgroup has developed an ongoing process for building **Research Communities** for faculty to identify, launch, and further develop scholarly communities engaged in research initiatives that build on the university's many strengths. We recognize the need for a permanent faculty-driven process with the potential to continually identify emergent strengths and areas of potential growth. Therefore, we propose long-term protocol and criteria, building on existing institutional infrastructure, for this purpose. The Committee on Research will be charged with developing strategies for how scarce university resources might be directed to these research communities, and we are committed to creating welcoming spaces for interdisciplinary research on campus. New resources (competitive grants and philanthropic sources) will be sought to provide sustainability and grow impact of the research communities.

Charge 6. Identify implications for those faculty whose research/scholarship do not fall within the identified research themes.

We note that these research communities are additive and dynamic and are not meant to replace the important diversity of research on campus; *research in all areas will continue to be encouraged and supported*.

The development of a clear, transparent process to identify, coordinate, and support research around themes serves the broader mission of the university. The process can become an ongoing opportunity for reflection on how the themes that guide our research serve the Jesuit apostolic priorities of 'Walking with the Excluded' and 'Care for Our Common Home.' These broader priorities, and the pressing social and environmental justice problems they call upon us to contemplate, can be addressed more robustly and innovatively from a variety of disciplinary directions. We therefore focus on research communities (or creative clusters) rather than individuals. More concretely, a well-designed process can itself become the focal point for engagement, thereby facilitating interactions among researchers across campus and beyond.

Faculty-led proposals for and evaluations of research themes allow us to achieve three primary goals, consistent with a research culture of encounter, inclusivity, and the Jesuit apostolic priorities:

1) State our identity more clearly as a research institution for purposes of advancement, recruitment, and marketing.

2) Create focused opportunities for interdisciplinary conversations and intellectual community within and beyond campus, including the development of faculty and support for participation in these conversations. Importantly, this opportunity-making includes a recognition of the time necessary to incubate collaboration and shared ideas.

3) Increase competitiveness of research teams for large-scale research programs and leverage efficiencies in the sharing of project management, facilities, equipment, and personnel to support ambitious initiatives.

The Committee on Research (COR) will be charged to work with the Vice President for Research and Innovation (VPRI) during FY22 to determine a plan for (re)allocating resources to pilot Research Community Awards which support the development of interdisciplinary groups of faculty, students, and staff focusing on a collaborative theme. COR and the VPRI will host campus group discussions to learn from faculty and student research communities already formally or informally in place and to facilitate the initial planning of new or expanded research communities. A tentative plan for launching the Research Community Awards process is shown in Appendix C. In addition to the funding competition, COR will work with the VPRI and others on the Research and Innovation team to identify additional opportunities for centralized administrative support and other services to facilitate team development and the search for external resources needed for growth and sustainability.

Centralized Resources: Core Facilities and Centers/Institutes

The Research Workgroup began the critical process of identifying cost-effective strategies to optimize the benefits and fairness of current University investments in research and scholarship. The targeted creation of cores and centers that enable a larger user base to benefit from existing and future resources was identified as a highly effective strategy commonly used by peer institutions.

University centers, institutes, and core facilities can be broadly viewed as centralized resources that enable the development, aggregation, and management of specialized tools, capabilities, or services that benefit researchers across multiple organizational units. This could involve human resources, financial resources, technical expertise, space, and/or equipment.

Core facilities at other institutions are often sustained by a combination of a) user fees, b) increased revenue from grants, donors, or other common funding sources, c) facilities and administrative cost returns on sponsored or newly enabled extramural grant funds, and/or d) more efficient utilization of existing resources expended by individuals or academic units.

The benefits of core facilities and centers can include the creation of new multi-disciplinary research teams, better alignment of research and scholarship with University goals, increased quantity and quality of student research opportunities, increased extramural funding, increased generation of intellectual property, and the pursuit of the institutional mission.

Early institutional steps that lead to the creation of cores and centers with the broadest impact include a) the creation of funding mechanisms that invest in the development and advancement of multi-disciplinary research teams and projects rather than individuals, b) revising University, College, and Departmental policies to promote the sharing of faculty expertise, faculty time, equipment, and other resources, and c) incentivizing organizational units to consider the broader research needs and opportunities during the recruitment of new faculty and staff.

Charge 7. Identify implications for other University research support such as the libraries and research compliance functions.

Finally, we highlight the importance of University libraries as core research support. We recommend that library leadership be included in all future exploration of research communities and strategic planning for development of research focus areas at local levels (department and college) in order to plan for future collection changes and continue to align services.

Broadening Student (Undergraduate and Graduate) Participation in Research

> *Research is one of the most integral parts of student academic life at Marquette University. I would not have had half the academic experience at Marquette without my research. It is what I am most proud of and most excited to continue post-grad."* Student perspective.

Fostering student curiosity and the search for continuous learning through research is an important outcome of the MU educational experience, and is, in some cases, tied to program accreditation. For such experiences to occur, faculty need to be provided with adequate time to mentor student research as well as sufficient mechanisms for helping connect students to research. Processes that reward faculty engagement in student research should be mindful of the distinction between students working on faculty research and students being mentored in the conduct of their own research. Time is needed for both experiences and should be rewarded commensurately (see workload discussion above).

In some disciplines, course-based undergraduate and graduate research can be integrated into the curriculum. Such integration creates a more equitable distribution of research opportunity by providing a standard gateway to the experience. Paid research opportunities can remove other barriers for some students to engaging in research opportunities. Input from students and faculty also indicated the importance of different avenues for publicizing opportunities (such as engaging with student organizations) and the need for a mix of faculty-led project ideas as well as creating pathways for students to move their own ideas forward (such as the Explorer Challenge).

We recommend the further development and monitoring of discipline-specific indicators to measure departmental success in specific types of research opportunities afforded to both undergraduate and graduate students. This effort should include deepening systems to ensure that students from traditionally underrepresented populations have equitable access to research opportunities. Such indicators might include, depending on disciplinary norms and research practices: the number of co-authored scholarly works between faculty and students, participation in research presentations (including in-house opportunities to showcase work, as well as disciplinary conferences), paid and unpaid hours of laboratory work or research assistantships, independent studies, and awards of prestigious external fellowships or internal research support. This data on research opportunity could be matched with longer-term alumni surveys, rather than immediate job prospects following graduation, to determine overall impact on the students' career and life trajectory. Our analysis has been limited by the First Destinations Survey, which does not provide a measure of the long-term impact of undergraduate research experience on alumni career success or quality of life. Thus, more systematic metric development and data collection should take place at the level of department and

college, but with campus-wide resources to support such monitoring and a long-term vision of research impact on our students' lives after graduation.

Recommendations

To implement the vision of this report, we offer the following proposed specific recommendations, recognizing that many of these recommendations are already underway. We offer these recommendations as a way to engage many on campus in a transparent and collaborative effort. These recommendations also form the basis for addressing Charge 5 to the Workgroup.

Charge 5. Identify strategies for how University resources can be directed to these areas to grow strengths.

a. Review COR internal funding mechanisms (Summer Faculty Fellowship/Regular Research Grant program, Way Klinger Early Career Awards, Way Klingler Fellowship) and recommend potential adaptations to better leverage these resources.

b. Identify potential core facility/shared research space models to support interdisciplinary, team-based work.

A. Recommendation for the *Beyond Boundaries* Research in Action Implementation Team (Committee on Research and Associate Deans for Research)
   - Review all the recommendations and subsequent campus input and create a timeline for prioritized items.

B. Recommendations for the Committee on Research (COR)
   - Review all central internal research funding mechanisms to evaluate whether changes are appropriate to best support research endeavors with available resources. (Example – the Way Klingler Fellowship Program).
   - Work with the Vice President for Research and Innovation to facilitate campus discussions on building research communities during FY22 and finalize plans to launch the requests for proposals by the end of FY22.
   - Regularly engage with University Advancement to support understanding of effective communication with donors about research at Marquette.
   - Engage with the Office of Diversity and Inclusion to get additional perspectives on how to further engrain inclusivity and diversity into research at Marquette.
   - Work with the Vice President for Research and Innovation and the Associate Deans for Research to integrate workgroup recommendations into the priorities of the Research in Action Theme of Beyond Boundaries.
   - Report more frequently to the University Academic Senate on COR activities and progress on the Workgroup recommendations. Facilitate on-going input from campus stakeholders.
   - Collaborate with other UAS committees such as the Committee on Teaching, Board of Graduate Studies, and Board of Undergraduate Studies on common priorities.
   - Use existing resources to foster the identification and support of multi-disciplinary research teams.
   - Use existing resources to enable targeted reductions in teaching loads for researchers and scholars in departments most impacted by increases in teaching loads.

- Identify opportunities for synergies and improve efficiencies through the targeted creation of cores and centers.
- Compile and disseminate best practices implemented across campus.
- Promote increased fellowship and collaboration among institutional scholars and researchers by supporting a variety of opportunities to bring individuals and groups such as workshops and social gatherings.

C. Recommendations for Associate Deans for Research (ADRs)
- Develop indicators for each college/school to document the impact of COVID-19 and University budget reductions on research activities (examples: grant applications, assessment of publications currently in the pipeline, etc.). Determine what strategies are appropriate for better supporting faculty in each area.
- Identify and address Department, College/School, or University processes that discourage collaboration among units or make it more challenging.
- Provide leadership in the development of metrics to reward faculty participation in student research in consultation with Department Chairs.
- Continue to meet annually with the University Committee on Research to share best practices, discuss common challenges, and help prioritize next steps for the Research in Action theme of Beyond Boundaries.
- Assist in the identification and creation of multi-disciplinary research teams and identify opportunities for synergies and improve efficiencies through the targeted creation of cores and centers.
- Promote policies that enable the utilization of College resources by other organization units without negative impacts to host College.
- Develop listings of the research strengths and potentials in home College/School and actively brainstorm synergies with other Associate Deans for Research, leading to further exploration of opportunities for collaboration and growth.

D. Recommendations for Department Chairs and other Associate Deans
- Provide consistent messaging about the value of research and be mindful of the impact of service and teaching obligations on research endeavors. Ensure workload documents are developed and followed.
- Provide leadership in the development of metrics to reward faculty participation in student research in consultation with Associate Deans for Research.
- Provide leadership for the development of courses that embed research opportunities into classes so that all students are availed the possibility to engage in this high impact practice.
- Assist in the identification, creation, and support of multi-disciplinary research teams.
- Identify University, College, and Departmental policies and practices that hinder the creation and productivity of multi-disciplinary research teams.
- Identify opportunities for synergies and improve efficiencies through the targeted creation of cores and centers.
- Identify resources that can be shared with other academic units without constraining access and utilization by existing departmental researchers.
- Think creatively about how individual researchers/scholars can continue to be supported through fellowships and other opportunities.

- Explore the possibility of targeted department dashboards to highlight and track research mentoring and student-faculty research partnerships, while also monitoring for equitable distribution of these duties.

E. Recommendations for Deans
   - Identify and address College/School processes that discourage collaboration between units or make it more challenging.
   - For the Dean of the Graduate School: assist with connections between the COR and the University Board of Graduate Studies and the Graduate Student Association to build resources in support of graduate student research activities.
   - Develop a mechanism to discuss open positions so that synergies, where appropriate and feasible, can be developed during the hiring process (e.g., maximizing start-up packages or other hiring incentives, etc.).
   - Think creatively about how individual researchers/scholars can continue to be supported through fellowships and other opportunities.
   - Ensure that the libraries are integrated in strategic planning for research.

F. Recommendations for Provost
   - Provide consistent messaging about the value of research across the university and resource the administrative structure to support research commensurately (ORSP, Research and Innovation, IRB, etc.).
   - Work with the deans and VPRI to coordinate hiring plans and identify appropriate start-up packages. The committee noted that MU may benefit from adopting the approach used at other institutions in which research priorities are enhanced by incenting departments to hire candidates with prioritized expertise through the enhancement of start-up packages.
   - Work with University leaders, particularly the Vice President for Inclusive Excellence, to address resource support and transparency for diversity (see below).
   - Require Colleges/Schools to include plans to foster research by individuals, multi-disciplinary teams, and focus areas as part of their strategic plans.

G. Recommendations for Senior Vice Provost for Academic Affairs
   - Work with University leaders, including the Provost and Deans, Department Chairs/Associate Deans, and University Promotion and Tenure Committee to address promotion and tenure concerns, particularly with respect to implementation of department/college-level standards for recognizing research productivity.

H. Recommendations for Vice President for Inclusive Excellence
   - Work with the Provost and other University leaders to address resource support and transparency for diversity (see below).

I. Recommendations for Vice President for Research and Innovation
   - Assist the COR in implementing the aforementioned recommendations.
   - Strongly advocate for research, particularly with donors and upper administration.
   - Cultivate new opportunities to fund research initiatives.
   - Explore how to best create an online, centralized research exchange/database, including expertise, collaboration interests, opportunities for students, and availability of shared resources and that is accessible to students and faculty.

- Explore the impact of conserving a portion of F and A funds for the support of research and scholarship across campus (potentially including cost centers).
- Explore whether there is need and capacity to target lingering structural inequities among researchers (see below).
- Oversee the creation of a pipeline program to help develop research leaders who can successfully supervise large scale projects.

J. Recommendation for the President
   - Articulate the impact of Marquette's accomplishments as a research university and assist with attracting donor support to enable the University community of scholars (faculty, students, and staff) in continuing to make a difference in the world through research.

Resource Support and Transparency for Diversity and Inclusion: Beyond Acknowledging Disparity

A pro-research university is a 'pro-personal life' university, meaning that we value and cherish the bonds of family and friendship in which we find our work embedded, and we recognize the many duties that faculty members, as people, confront beyond the classroom. In this vein, and to address the disproportionate impact of work-life balance issues on researchers with families, university fellowships and internal grants should explore how to manage childcare and eldercare.

Suggested solutions include increasing the hours of operation for the institutional childcare facility and enable childcare as billable research expenses.[23] An additional, competitive caregiving or household commitments research grant could supplement existing fellowships for both faculty and students. Where internal or institutional grants cannot be directed toward such expenses, ORSP might compile a list of individual external research grants that permit such expenses and support faculty applications to compliment funding that does not. These caregiving and household commitments support systems should be competitively available to all researchers regardless of gender. We recognize that such systems require careful consideration of compliance with equitable labor practices and coordination of human resources policies, and we call for an exploration of potential models adopted by other universities for supporting researchers in this holistic manner.

Marquette must become an even brighter beacon for research talent. Therefore, the availability of health care coverage for graduate students and the impact of the absence of an employer-provided plan should be continually re-evaluated in regard to its impact on recruitment, retainment, and graduation rates. The university should also devise a system to track successful faculty recruitment, monitoring when and how departments and colleges recruit and hire their first-choice job candidates. The successes and failures of retaining research-active faculty should also be monitored over time to evaluate workload policy changes' impact on the campus talent pool. University leadership should continue to reaffirm, in both actions and words, the fact that faculty and students are a research resource that must be protected.

The university should conduct a survey on economic hardships among faculty members to make visible the continuing disadvantages produced by student loan debt and other financial challenges rooted in

[23] We note that Lehigh University has adopted flexibility for internal expenditures related to faculty caregiving expenses as part of its COVID-19 response and may provide a model for consideration. See https://www.lehigh.edu/~inprv/faculty/covidsupport.html, accessed 4/30/21.

structural inequities. Such hardships can prevent some faculty members from pursuing or accepting prestigious fellowships without additional monetary support, for example to facilitate cost of living adjustments for sabbatical visits and other uncovered expenses. If such barriers to research opportunities exist on campus and systematically exclude and disproportionately affect scholars from underrepresented racial and class backgrounds, an additional competitive fellowship should target this inequity. We expect these measures to increase Marquette's capacity to win prestigious external grants by ultimately opening access to these competitions for more (and more diverse) faculty.

Dashboards: Transparency and Accountability Beginning at the Department and College Level

Targeted dashboards represent one department-level tool to address workload and equity concerns among faculty by promoting transparency through a simple visual display of work activity benchmarks, otherwise overlooked activities, the differences in effort required by those activities and compensation (if any) provided for those activities, sorted by categories of equity concern.[24] To be clear, this type of dashboard is not meant to be an exhaustive database of all professional activities (not another FAD). Instead, each department should choose which activities tend to be overlooked/unrewarded or might be subject to racial or gender inequities, and then highlight those specific activities in a simple visual display for transparent tracking over a period of time. Any contribution to equitable workload management will contribute to a fair distribution of research opportunity, but department dashboards could also specifically track and celebrate diverse forms of research mentoring and faculty-student research partnerships.

[24] O'Meara, KerryAnn, Elizabeth Beise, Dawn Culpepper, Joya Misra and Audrey Jaeger. 2020. 'Faculty Work Activity Dashboard: A Strategy to Increase Transparency.' Change: The Magazine of Higher Learning. 52(3): 34-42.

Appendix A: COR Statement on the Value of Research

Letter of Resolution from the Committee on Research:

Marquette University is a Catholic, Jesuit university dedicated to serving God by serving our students and contributing to the advancement of knowledge. **Our mission**, therefore, is the search for truth, the discovery and sharing of knowledge, the fostering of personal and professional excellence, the promotion of a life of faith, and the development of leadership expressed in service to others. All this we pursue for the greater glory of God and the common benefit of the human community.

On the Importance of Research and Scholarship at Marquette

Research and Scholarship are critical to the purpose of the University and the pursuit of its mission. Marquette is called to search for truth and discover knowledge to educate our students and serve others.

Importance of Research and Scholarship to the Education of Marquette Students

Jesuit education calls for more than mere schooling in received wisdom. It demands mutual engagement of faculty and students in a continual and common search for truth and justice. Research and scholarship are essential to the creation of the culture needed to establish the intellectual and moral growth and excellence required of our students. Modern students and leaders require unprecedented abilities. This includes the depth of specialized knowledge required of modern graduates in many disciplines, the capacity to critically evaluate remarkable volumes of information and ideas, and the ability to employ a range of problem-solving approaches and skills.

In turn, the existing and near-term alternatives to higher education will require Marquette to address the needs of the modern student more effectively. Research and scholarship, as high-impact experiential learning practices, address this need in multiple ways. First, a vibrant culture based in research and scholarship creates learning opportunities that cannot be duplicated by online programs or other alternatives to higher education. This culture of research and scholarship informs teaching and learning at all levels; provides hallmark experiences that improve our undergraduates' success in their chosen careers and admission to graduate programs; and lays the intellectual foundation required to effectively train our own graduate and professional students. Second, a commitment to the Jesuit approach to knowledge generation will continue to attract the brightest students and faculty. Our community of scholars breathe new life into classes, programs, experiences, and opportunities for the entire Marquette community, including faculty, staff, students, and alumni. Research-active faculty substantially increase the institution's ranking and reputation, as well as the range and quality of work to which students are exposed. Third, the integration and inclusion of modern, cutting-edge knowledge enhances course content to a degree that cannot be duplicated by textbooks and other widely available teaching resources. This enhancement advances collaborative opportunities that translate faculty interdisciplinary, collaborative research into student interdisciplinary experiences. A recent example

includes the University's community approaches to the COVID-19 pandemic, which leveraged our role as a research and student-focused institution to bring together scholars from the Marquette community (including faculty, staff, and students) to agilely address the consequences of the COVID-19 pandemic, explore the underlying issues that exacerbated the pandemic's impact on vulnerable and underserved populations, and develop strategies to address the needs of our changing world.

Importance of Research and Scholarship to the University's Service to Others

The mission of the University is grounded in a Catholic, Christian understanding of God, the human person and society, and the betterment and advancement of our community. Research and scholarship are essential to the change of societal practice that leads to the Greater Glory of God. This occurs through the identification of the problems inherent in our society as well as the discovery of innovative solutions that create a more just society. While this is true of any University, it is especially important to Marquette given our institutional commitment to *cura personalis*, service to other, and pursuit of a more just society. Research activity affects the lives of our immediate and greater area community members, by providing better access to cutting-edge programs, treatments, practices, and knowledge to which they otherwise may not have access. Across campus, Marquette scholars are successfully addressing current and future problems related to the physical and mental health of humans, efficient preservation and utilization of Earth's resources, disparities that suppress the most vulnerable, and other barriers to a more just, equitable society. They/we seek to understand the human experience through the interdisciplinary analysis of texts, language, and objects that explicate the past, raise questions about the present, and offer guides to future possibilities. Scholars create knowledge by posing new questions, reinterpreting cultural artifacts, and offering critical analyses that develop different perspectives. A vibrant culture of research and scholarship thus is essential to attract students, faculty, and donors that are committed to this goal.

The Future of Research in Action

The future of research and scholarship at Marquette University must be responsive to the serious financial challenges that the University faces. However, we remain committed to the vision of Marquette as an active research university that engages its community of scholars in improving the lives of others and making the world more equitable. Marquette's research activities should continue to serve as a means for attracting and retaining talented students, faculty, and staff and as a conduit for the discovery and sharing of knowledge to benefit the human community.

Signed*:

Amy Van Hecke, Ph.D., Professor of Psychology, Chair, Committee on Research

Lezlie Knox, Ph.D., Associate Professor of History and Department Chair, Vice Chair, Committee on Research

David A. Baker, Ph.D. Professor and Chair, Department of Biomedical Sciences, Secretary, Committee on Research

Anne Clough, Ph.D., Professor, Mathematical and Statistical Sciences

Jody Jessup-Anger, Ph.D., Associate Professor, Educational Policy and Leadership

Brooke Mayer, Ph.D., Associate Professor, Civil, Construction and Environmental Engineering

George D. Cashman, Ph.D., Associate Professor, Department of Finance

David Berzins, Ph.D., Professor, Dental Biomaterials

Atiba R. Ellis, J.D., Professor, School of Law

Kati Tusinski Berg, Ph.D., Associate Dean of Graduate Studies and Research, College of Communication

Kim A. Gretebeck, Ph.D., Associate Dean for Research, College of Nursing

Jeanne M. Hossenlopp, Ph.D., Vice President, Research and Innovation, *ex officio* member of COR

Katherine Durben, Executive Director, Office of Research and Sponsored Programs, *ex officio* member of COR

***University affiliations are stated for identification purposes only.**

Appendix B: 2019 Carnegie Classification Metrics

Carnegie Basic Classification: MU is currently in the high research activity (R2) category.

From Carnegie[25]: *"Please bear the following information in mind when reviewing this material:*

- These measures analyze the relative level of research activity. They do not address issues of quality, impact, or significance. The resulting categories do not imply quality differences.

- This is one of many possible ways to analyze research activity. Other approaches might be more appropriate to other purposes.

- While this approach is suitable for classification purposes, we do not believe the institution-level results should be used for institution-by-institution comparison and ranking.

We created two indices of research activity--aggregate and per-capita--based on principal components analysis (PCA) of several correlates of research activity: science and engineering (S&E) R&D expenditures; non-S&E R&D expenditures; S&E research staff (postdoctoral appointees and nonfaculty research staff with doctorates); doctoral conferrals by broad disciplinary area (humanities, social sciences, STEM fields, and other fields); and the first three items divided by the number of full-time faculty for the per-capita analysis. Before conducting the analysis, raw data were converted to rank scores to reduce the influence of outliers and to improve discrimination at the lower end of the distributions where many institutions were clustered. Institutions with tied rankings were assigned the average rank among the ties."

[25] The Carnegie Classification of Institutions of Higher Education (n.d.). About Carnegie Classification. Retrieved April 28, 2021 from http://carnegieclassifications.iu.edu/.

PCA loadings based on rank-order data

Aggregate analysis (first principal component explained 71% of the total variance)	
Doctorates: STEM	0.909
S&E R&D Expenditures	0.899
Research Staff	0.894
Doctorates: Social Sciences	0.864
Doctorates: Humanities	0.839
Non-S&E R&D Expenditures	0.817
Doctorates: Other Fields	0.621

Per-capita analysis (first principal component explained 71% of the total variance)	
Per-capita S&E R&D Expenditures	0.935
Per-capita Research Staff	0.930
Per-capita Non-S&E R&D Expenditures	0.619

There were 261 R1 and R2 institutions in the research activity data set available from Carnegie. Of these, the top 126 were ranked in the R1 category. Marquette, based on the calculated standardized distance parameter, was ranked 189/261 and was in the middle of the R2 category.

Aggregate data

Catgegory		S&E R&D Expenditures (1000s)	Non-S&E R&D Expenditures (1000s)	S&E Research Staff*	Doctorates: Humanities	Doctorates: Social Sciences	Doctorates: STEM	Doctorates: Other Fields
Doctoral Universities - Very High Research Activity (Standardized Radius>=-0.05)	N	130	130	130	130	130	130	130
	Minimum	9,020	1,079	32	0	0	25	0
	Maximum	2,556,641	126,607	6,962	147	107	576	256
	Mean	423,807	26,123	576	45	39	201	78
	Median	295,776	18,986	346	36	37	160	65
Doctoral Universities - High Research Activity (Standardized Radius<-.05)	N	131	131	131	131	131	131	131
	Minimum	850	0	0	0	0	0	0
	Maximum	319,037	78,248	484	42	43	105	739
	Mean	42,930	4,612	38	5	7	28	38
	Median	25,644.0	2,191.0	23.0	0.0	4.0	23.0	24.0
All Institutions	N	261	261	261	261	261	261	261
	Minimum	850	0	0	0	0	0	0
	Maximum	2,556,641	126,607	6,962	147	107	576	739
	Mean	232,638	15,326	306	25	23	114	58
	Median	95,197.0	7,185.0	85.0	10.0	15.0	62.0	41.0
Correlations	Aggregate Index	0.758	0.688	0.603	0.783	0.838	0.826	0.457
	Per-capita Index	0.667	0.595	0.557	0.539	0.559	0.707	0.152
	Radius	0.764	0.691	0.613	0.762	0.811	0.829	0.416
Marquette		23,692	6,342	34	12	0	25	17

*Postdoctoral appointees in health, science and engineering and nonfaculty research staff in science and engineering with doctorates.

Per-capita data

Catgegory		Per-capita S&E R&D Expenditures (1000s)	Per-capita Non-S&E R&D Expenditures (1000s)	Per-capita S&E Research Staff*	Number of Faculty Used as Denominator	Distance (standardized)
Doctoral Universities - Very High Research Activity (Standardized Radius>=-0.05)	N	130	130	130	130	130
	Minimum	37.9	0.6	0.0	238	-0.03
	Maximum	1,290.5	78.5	4.2	4,070	1.97
	Mean	278.6	19.7	0.4	1,469	0.86
	Median	232.3	15.0	0.3	1,263	0.79
Doctoral Universities - High Research Activity (Standardized Radius<-.05)	N	131	131	131	131	131
	Minimum	2.3	0.0	0.0	85	-1.67
	Maximum	3,753.4	256.6	5.7	2,044	-0.06
	Mean	119.4	10.0	0.1	504	-0.86
	Median	62.9	4.7	0.0	469	-0.82
All Institutions	N	261	261	261	261	261
	Minimum	2.3	0.0	0.0	85	-1.67
	Maximum	3,753.4	256.6	5.7	4,070	1.97
	Mean	198.7	14.8	0.3	985	0.00
	Median	147.9	9.1	0.1	740	-0.06
Correlations	Aggregate Index	0.339	0.287	0.318	0.787	0.992
	Per-capita Index	0.552	0.410	0.495	0.472	0.866
	Radius	0.398	0.320	0.367	0.752	1.000
Marquette		40.92	10.95	0.06	579.00	-0.75

*Postdoctoral appointees in health, science and engineering and nonfaculty research staff in science and engineering with doctorates.

Appendix C: DRAFT Request for Proposals for Research Community Awards

Request for Proposals for Research Community Awards

The **Research Community Award Request for Proposals (RFP)** is intended to advance Marquette's mission as a driver of discovery via a culture of research encounter, illustrating the fulfillment of the University mission and priorities through interdisciplinary, collaborative research and scholarship. Research Communities should: 1) Propagate our identity more clearly as a research institution for purposes of advancement/sustainability, recruitment, and marketing; 2) Create opportunities for interdisciplinary conversations and intellectual community within and beyond campus, including the development of faculty and support for participation in these conversations, including a recognition of the time necessary to incubate collaboration and shared ideas; and 3) Increase competitiveness of research teams for large-scale research grants and programs and leverage efficiencies in the sharing of project management, facilities, equipment, and personnel to support ambitious initiatives. Research Communities will accomplish these goals via supporting faculty participation in areas of research synergy; addressing large problems more robustly from a variety of directions; promoting inclusivity, and developing faculty in different ways, including leadership development for managing teams and collaborative research.

Planning Year

Academic year 2021-22 will serve as a time to ramp up to a competition. During this year, there will be a series of events to help potential groups prepare or the RFP competition. Various activities will be held and may include: panel discussions with teams who have successfully come together in various ways, workshops on various related topics, socials to bring researchers together to discuss their ideas, etc.

Types of and Process for Research Community Awards

Research Community awardees will be selected from amongst groups that self-nominate themselves. Two types of Research Community awards are available. **"Exploratory Phase"** awards are for new and emerging communities who are in the visionary planning phase. **"Established Phase"** awards are for those who have previously worked together and now wish to deepen their engagement, expand their focus, or explore new initiatives. Summer Faculty Fellowships (SFF) and Regular Research Grants (RRG) will continue to be available through the Committee on Research to support individual or two-faculty collaborative teams.

The application process will consist of 3 steps: Letter of Intent Submission, Open Call (4 weeks), and Final Proposals. Letters of Intent, including initial member lists, are submitted first. Then, there will be a 4-week "Open Call" phase, whereupon the Letters of Intent and initial member list from each group will be posted on the Office of Research and Innovation website to solicit interest from additional, potential team members. A notice of the opportunity to contact/join groups will be circulated amongst the Marquette community. Inclusion of additional members during this step will be encouraged. After the 4-week Open Call, groups will submit full proposals. Full proposals will be reviewed and ranked by the Committee on Research. The final selection will be made by the Vice President of Research and Innovation, in consultation with rankings from COR. Please see the attached timeline for anticipated deadlines.

Eligibility and Group Composition

Applications must indicate for which type of award (Exploratory or Established) the group is nominating itself. Members of groups should include Marquette full-time and/or part-time regular, and/or participating, and/or clinical faculty. Staff, students, and community partners may also be included. There is no minimum or maximum number of participants or required number of disciplines represented, but all groups must justify the rationale for their composition and as a community must be willing to welcome interested parties.

Review Criteria

Applications will be reviewed by the Committee on Research. The strengths and complementarity of the group members, the significance of the focus issue, and the potential for major impact are key criteria in selection. The **Research Community Award Request for Proposals (RFP)** is intended to advance Marquette's mission as a driver of discovery via a culture of research encounter, illustrating the fulfillment of the University mission and priorities through interdisciplinary, collaborative research and scholarship. Research Communities should: 1) Propagate our research identity more clearly as a research institution for purposes of advancement/sustainability, recruitment, and marketing; 2) Create opportunities for interdisciplinary conversations and intellectual community within and beyond campus, including the development of faculty and support for participation in these conversations, including a recognition of the time necessary to incubate collaboration and shared ideas; and 3) Increase competitiveness of research teams for large-scale research grants and programs and leverage efficiencies in the sharing of project management, facilities, equipment, and personnel to support ambitious initiatives. Research Communities will accomplish these goals via supporting faculty participation in areas of research synergy; addressing large problems more robustly from a variety of directions; promoting inclusivity, and developing faculty in different ways, including leadership development for managing teams and collaborative research.

Types of and Process for Research Community Awards

Research Community awardees will be selected from amongst groups that self-nominate themselves. Two types of Research Community awards will be available. **"Exploratory Phase"** awards will be for new and emerging communities who are in the visionary planning phase. **"Established Phase"** awards will be for those who have previously worked together and now wish to deepen their engagement, expand their focus, or explore new initiatives. Summer Faculty Fellowships (SFF) and Regular Research Grants (RRG) will continue to be available through the Committee on Research to support individual or two-faculty collaborative teams.

Research Communities can look different based upon their individual needs and purposes. For example, a group could be brought together to enhance conversation and activity around a particular topic, to develop a large center grant application, to build out a new yet complimentary area of research, etc. It is anticipated that four Exploratory and two Established awards will be made.

The application process will consist of 3 steps: Letter of Intent Submission, Open Call (4 weeks), and Final Proposals. Letters of Intent, including initial member lists, will be submitted first. Then, there will be a 4-week "Open Call" phase, whereupon the Letters of Intent and initial member list from each group will be posted on the Office of Research and Innovation website to solicit interest from additional, potential team members. A notice of the opportunity to contact/join groups will be circulated amongst

the Marquette community. Inclusion of additional members during this step will be encouraged. After the 4-week Open Call, groups will submit Final Proposals. Final proposals will be reviewed and ranked by the Committee on Research. The final selection will be made by the Vice President of Research and Innovation, in consultation with rankings from COR. Please see the attached timeline for anticipated deadlines.

Eligibility and Group Composition

Applications must indicate for which type of award (Exploratory or Established) the group is nominating itself. Members of groups should include Marquette full-time and/or part-time regular, and/or participating, and/or clinical faculty. Staff, students, and community partners may also be included. There is no minimum or maximum number of participants or required number of disciplines represented, but all groups must justify the rationale for their composition and as a community must be willing to welcome interested parties.

Review Criteria

Applications will be reviewed by the Committee on Research. The strengths and complementarity of the group members, the significance of the focus issue, and the potential for major impact are key criteria in selection. Groups consisting of members from two Colleges or more are expected to be prioritized in the award process. In order to provide the opportunity for as many groups as possible to benefit from the Research Community award, past awarded groups must complete a reflection/evaluation in order to be considered for additional funding.

Requirements

Each Research Community will select one member to serve as a project team lead. This position can rotate annually. The team leads of all Research Communities will meet together on a monthly basis to talk about common needs and participate in leadership training.

Sustainability will be a key factor and all Research Communities must develop a sustainability plan and be willing to talk with donors and other parties about their work.

Award Funding

Exploratory Phase awardees will be supported for a one-year period with a grant (funding level still to be determined). **Established Phase** awardees will be supported for a two-year period with a grant (funding level still to be determined). These funds may be used, subject to University policies and procedures, for teaching release, stipends for graduate assistants and salary for other personnel, for non-personnel operating expenses, for capital expenses, for travel to conferences, and for summer salary and fringes. Funds may not be used for tuition of graduate assistants or for replacement of administrative expenses. Awardees in both categories will receive additional non-monetary support via the Office of Research and Innovation (e.g., website hosting, consultation with University Advancement and the Office of Marketing and Communication, assistance with meeting coordination, assistance with group space requests, leadership development, etc.).

Reports

Annual reports of group progress and finances shall be submitted to the Office of Research and Innovation annually by July 1. Financial reports will include expense details and rationale for departure from original budget. Reports will include a narrative of the use of award funds and the impact on advancing the group's focus, as well as any achievements such as publications, grants, and outreach/impact (media, talks, community testimonials, etc.).

RESEARCH COMMUNITY AWARD: Letter of Intent

Letters of Intent must be submitted by **June 15, 2022**, electronically by the Team Lead, to the attention of the *Committee on Research* (COR) at: melody.baker@marquette.edu. Use Calibri 12 point font with 1 inch margins. Please keep in mind that COR reviewers have diverse interests and areas of expertise. AVOID JARGON and address a lay audience.

Team Lead Name: __ Telephone:

Department: __ E-Mail Address:

I. Type of Research Community Award Sought:
___Exploratory Phase ___Established Phase

II. Abstract

Describe the focus issue(s) of your group, proposed approaches, and anticipated outcomes. Indicate briefly how receipt of the Research Community Award would advance the research culture and objectives of your group and of Marquette. The abstract should not exceed 1000 characters including spaces.

III. Group Members

List the initial members of the group. Provide unit affiliation, and a one sentence description of the work the member does that is relevant to this application. Provide the role of the member in the group, if known (I.e., Team Lead, Co-Team Lead, etc).

RESEARCH COMMUNITY AWARD: FINAL APPLICATION

Final applications must be submitted by **4:00 pm on September 20, 2022,** electronically by the Team Lead, to the attention of the Committee on Research (COR) at: melody.baker@marquette.edu. Use Calibri 12 point font with 1 inch margins to complete the Application. Please keep in mind that COR reviewers have diverse interests and areas of expertise. AVOID JARGON and address a lay audience.

Team Lead Name: __ Telephone:

Department: ___ E-Mail Address:

Type of TBN Award Sought (indicate one): ___Exploratory Phase ___Established Phase

I. Abstract

Describe the focus issue(s) of your group, proposed approaches and anticipated outcomes. Indicate briefly how receipt of the Research Community Award would advance the research culture and objectives of your group and of Marquette. The abstract should not exceed 1000 characters including spaces. Note: if the abstract has not changed, this information can be re-used from the Letter of Intent phase.

II. Group Members

List the initial and new (indicate) members of the group. Provide unit affiliation, and a one sentence description of the work the member does that is relevant to this application. Provide the role of the member in the group, if known (I.e., Team Lead, Co-Team Lead, etc.).

III. Proposal (four pages maximum)

a. What is the focus area of your group?

b. What are the goals and objectives of your group's collaboration? What is it that you hope to accomplish?

c. What are the strengths of your group's members, including any interdisciplinary strengths? How will assembling and supporting this group via this mechanism advance discovery?

d. How do the proposed activities of this group support Marquette's mission and *Beyond Boundaries*?

e. What existing resources or strengths will you be building upon or incorporating? What assets do you bring to the table?

f. What will be different as a result of being supported by this award? What would be the impact/outcomes of this award?

g. What, if any, external groups will you be engaging?

h. What methods or measures will you use to evaluate your group's learning, growth, progress, impact, or effectiveness?

i. What problems or limitations might your group encounter, and how will you address them?

j. What type of assistance does your Research Community need in order to be successful?

IV. Timeline of Activities (1 page maximum)

V. Budget and Budget Justification (one page maximum)

VI. Reference List (one page maximum)

Note: If proposed protocol includes experimentation with human subjects or animals, a copy of the statement of approval by the University Institutional Review Board must be submitted before funds are released. If available by deadline, submit with application.

In order to provide the opportunity for as many groups as possible to benefit from the Research Community award, past awarded groups must complete a reflection/evaluation in order to be considered for additional funding.

Requirements

Each Research Community will select one member to serve as a project team lead. This position can rotate annually. The team leads of all Research Communities will meet together on a monthly basis to talk about common needs and participate in leadership training.

Sustainability will be a key factor and all Research Communities must develop a sustainability plan and be willing to talk with donors and other parties about their work.

Award Funding

Exploratory Phase awardees are supported for a one-year period with awards up to a figure yet to be determined. **Established Phase** awardees are supported for a two-year period with awards up to a figure yet to be determined. These funds may be used in accordance with University policies and procedures. Awardees in both categories will receive additional non-monetary support via the Office of Research and Innovation (e.g., website hosting, consultation with University Advancement and the Office of Marketing and Communication, assistance with meeting coordination, assistance with group space requests, leadership development, etc.).

Reports

Annual reports of group progress and finances shall be submitted to the Office of Research and Innovation annually by July 1. Financial reports will include expense details and rationale for departure from original budget. Reports will include a narrative of the use of award funds and the impact on

advancing the group's focus, as well as any achievements such as publications, grants, and outreach/impact (media, talks, community testimonials, etc.).

RESEARCH COMMUNITY AWARD: Letter of Intent

Letters of Intent must be submitted by **March 15, 2022**, electronically by the Team Lead, to the attention of the *Committee on Research* (COR) at: melody.baker@marquette.edu. Use Calibri 12 point font with 1 inch margins. Please keep in mind that COR reviewers have diverse interests and areas of expertise. AVOID JARGON and address a lay audience.

Team Lead Name: __ Telephone:

Department: __ E-Mail Address:

I. Type of Research Community Award Sought:

___Exploratory Phase ___Established Phase

II. Abstract

Describe the focus issue(s) of your group, proposed approaches and anticipated outcomes. Indicate briefly how receipt of the Research Community Award would advance the research culture and objectives of your group and of Marquette. The abstract should not exceed 1000 characters including spaces.

III. Group Members

List the initial members of the group. Provide unit affiliation, and a one sentence description of the work the member does that is relevant to this application. Provide the role of the member in the group, if known (I.e., Team Lead, Co-Team Lead, etc).

RESEARCH COMMUNITY AWARD: Full Proposal

Full proposals must be submitted by **4:00 pm on April 15, 2022,** electronically by the Team Lead, to the attention of the Committee on Research (COR) at: melody.baker@marquette.edu. Use Calibri 12 point font with 1 inch margins to complete the application. Please keep in mind that COR reviewers have diverse interests and areas of expertise. AVOID JARGON and address a lay audience.

Team Lead Name: __ Telephone:

Department: __ E-Mail Address:

Type of TBN Award Sought (indicate one): ___Exploratory Phase ___Established Phase

I. Abstract

Describe the focus issue(s) of your group, proposed approaches and anticipated outcomes. Indicate briefly how receipt of the Research Community Award would advance the research culture and objectives of your group and of Marquette. The abstract should not exceed 1000 characters including spaces. Note: if the abstract has not changed, this information can be re-used from the Letter of Intent phase.

II. Group Members

List the initial and new (indicate) members of the group. Provide unit affiliation, and a one sentence description of the work the member does that is relevant to this application. Provide the role of the member in the group, if known (I.e., Team Lead, Co-Team Lead, etc.).

III. Proposal (four pages maximum)

a. What is the focus area of your group?

b. What are the goals and objectives of your group's collaboration? What is it that you hope to accomplish?

c. What are the strengths of your group's members, including any interdisciplinary strengths? How will assembling and supporting this group via this mechanism advance discovery?

d. How do the proposed activities of this group support Marquette's mission and *Beyond Boundaries*?

e. What existing resources or strengths will you be building upon or incorporating? What assets do you bring to the table?

f. What will be different as a result of being supported by this award? What would be the impact/outcomes of this award?

g. What, if any, external groups will you be engaging?

h. What methods or measures will you use to evaluate your group's learning, growth, progress, impact, or effectiveness?

i. What problems or limitations might your group encounter, and how will you address them?

j. What type of assistance does your Research Community need in order to be successful?

IV. Timeline of Activities (1 page maximum)

V. Budget and Budget Justification (one page maximum)

VI. Reference List (one page maximum)

Note: If proposed protocol includes experimentation with human subjects or animals, a copy of the statement of approval by the University Institutional Review Board must be submitted before funds are released. If available by deadline, submit with application.

Research Community Request for Proposal Timeline (Tentative)

Task	**Person/Group Responsible**	**Deadline**
Include Research Community guidance in Report	Research Workgroup	May 1, 2021
Hold a series of events to help applicants in forming teams/project ideas	Committee on Research (COR/Office of Research and Innovation (ORI)	Academic year 2021-22
Disseminate Research Community Request for Proposals	Committee on Research (COR/Office of Research and Innovation (ORI)	December 15, 2021
Open website to generate ideas, similar to what was done for the COVID initiative (name, area of interest)	ORI	January 15 - February 15, 2022
Accept and Post Letters of Intent/Open Call Period	ORI	February 15- March 15, 2022
Teams develop full proposals	Teams	March 15 – April 15, 2022
Full proposals due	ORI	April 15, 2022
Review Full Proposals	COR	Early May, 2022
Notify successful teams	ORI	June 1, 2022
Meeting with individual teams	Implementation committee	June 1 – June 30, 2022
Launch Research Communities		July 1, 2022
Monthly meeting with team leads		July 1 - ongoing

* Pending available funds, this is anticipated to be an annual process.