GUIDEBOOK FOR THE ENGAGED UNIVERSITY

Best practices for reforming systems of reward, fostering engaged leadership, and promoting action-oriented scholarship
ABOUT

Beyond the Academy is an international network of sustainability researchers committed to making universities friendlier places to do interdisciplinary research with real-world impact. We believe academia should reward interdisciplinarity, engaged scholarship, and co-production of science, and prepare graduate students to be effective sustainability leaders. We share stories, resources, and ideas with the aim of spreading successful models across institutions.

CITATION


Our work is made possible by a grant from the National Academies Keck Futures Initiative with support from the University of Minnesota, Duke University, University of Cambridge, University of California Los Angeles, and the participation of network members.

Statements and views expressed in this report are solely those of the authors and do not imply endorsement by the University of Minnesota. Copyright 2022.

Booklet layout & design by Riley Grittinger

Cover photo by Joshua Hoehne on Unsplash, cropped and recolored by C. Locke.
LAND ACKNOWLEDGEMENT

This document was created at the University of Minnesota, Twin Cities, which is located on the traditional and contemporary homelands of the Dakota people. This land was ceded to the U.S. government in the Treaties of 1837 and 1851, followed by an attempted extermination of Dakota people from the state of Minnesota in the 1860s. As an original land-grant institution, the University of Minnesota continues to benefit monetarily from Indigenous land allotted to it by the Morrill Act of 1862. As scholars dedicated to reforming academia, it is our duty to acknowledge these harms and affirm historical and continued Indigenous sovereignty here and across North America, including on land occupied by other universities in the Beyond the Academy network.
# Table of Contents

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Network Members</td>
</tr>
<tr>
<td>6</td>
<td>Contributors</td>
</tr>
<tr>
<td>8</td>
<td>Glossary</td>
</tr>
<tr>
<td>11</td>
<td>Executive Summary</td>
</tr>
<tr>
<td>18</td>
<td>Chapter 1: Building an Engaged Campus</td>
</tr>
<tr>
<td>28</td>
<td>Chapter 2: Co-production as Best Practice</td>
</tr>
<tr>
<td>42</td>
<td>Chapter 3: Metrics for Assessing Research Impact</td>
</tr>
<tr>
<td>50</td>
<td>Chapter 4: Tenure &amp; Promotion</td>
</tr>
<tr>
<td>62</td>
<td>Chapter 5: Training Engaged Scholars</td>
</tr>
<tr>
<td>72</td>
<td>Chapter 6: Engagement Leaders</td>
</tr>
<tr>
<td>84</td>
<td>Chapter 7: Diversity, Equity, &amp; Engagement</td>
</tr>
</tbody>
</table>
NETWORK MEMBERS

Universities participating in the Beyond the Academy network include Arizona State University, Duke University, Colorado State University, McGill University, Stanford University, UCLA, University of California Santa Cruz, University of Cambridge, University of Colorado Boulder, University of Georgia, University of Hawai‘i at Mānoa, University of Maryland, University of Minnesota, University of Pittsburgh, University of Vermont, University of Washington, and Yale University.
GUIDEBOOK CONTRIBUTORS

Elena Bennett
McGill University
Professor; Canada Research Chair, Sustainability Science
Natural Resource Sciences and Bieler School of Environment

Leah Gerber
Arizona State University
Founding Director, Center for Biodiversity Outcomes
Professor, School of Life Sciences

Nancy B. Grimm
Arizona State University
Regents Professor; Virginia M. Ullman Professor of Ecology, School of Life Sciences

Anne Guerry
Stanford University
Chief Strategy Officer and Lead Scientist, Natural Capital Project

Jessica Hellmann
University of Minnesota
Director & Ecolab Chair in Environmental Leadership, Institute on the Environment

Bonnie Keeler
University of Minnesota
Associate Professor, Humphrey School of Public Affairs
Co-Director, Center for Science, Technology and Environmental Policy

Melissa Kenney
University of Minnesota
Director of Research and Knowledge Initiatives, Institute on the Environment

Elizabeth King
University of Georgia
Associate Professor, Odum School of Ecology and Warnell School of Forestry & Natural Resources

Christina Locke
University of Minnesota
Humphrey School of Public Affairs and Center for Science, Technology and Environmental Policy

Sara Mason
Duke University
Senior Policy Associate, Ecosystem Services Program
Nicholas Institute for Environmental Policy Solutions

Nathan Nibbelink
University of Georgia
Associate Dean for Research, Warnell School of Forestry & Natural Resources
Professor, Spatial Ecology and Conservation
Lydia Olander  
Duke University  
Director, Ecosystem Services Program and National Ecosystem Services Partnership  
Nicholas Institute for Environmental Policy Solutions  
Adjunct Professor, Nicholas School of the Environment

Stephen Posner  
University of Vermont  
Director of Policy and Partnerships, Gund Institute for Environment

Taylor Ricketts  
University of Vermont  
Gund Professor and Director, Gund Institute for Environment

Kirsten Rowell  
University of Colorado Boulder  
Research Leadership Director, Research and Innovation Office  
Director, Global SustainABILITY Scholars  
Associate Faculty, Department of Environmental Studies

Dave Secord  
Principal, Barnacle Strategies Consulting  
Affiliate Associate Professor, Biology, University of Washington  
Adjunct Professor, Resource and Environmental Management, Simon Fraser University

Carissa Schively Slotterback  
University of Pittsburgh  
Dean and Professor, Graduate School of Public & International Affairs

Tamara Ticktin  
University of Hawai‘i at Mānoa  
Professor, School of Life Sciences

Bhaskar Vira  
University of Cambridge, U.K.  
Head of Department of Geography and Professor of Political Economy  
Department of Geography and University of Cambridge Conservation Research Institute

Edgar Virgüez  
Carnegie Institution for Science  
Postdoctoral Research Scientist, Department of Global Ecology, Stanford University

We acknowledge organizational, editorial, and research support from Sean Cullen, Hannah Dunn, Lauren Fisher, Noah Fribley, Maddie Hansen-Connell, Vishal Jamkar, Mira Klein, Bethany Laursen, Keira Leneman, Conor McKenzie, Amaniel Mrutu, Kathleen Murphy, Adi Penugonda, Annamarie Rutledge, John Seng, and Seth Sykora-Bodie.
GLOSSARY

**ACTION RESEARCH** is a disciplined process of inquiry conducted by and for those taking an action. The primary reason for engaging in action research is to assist “actors” in improving and/or refining their actions [1].

**ANTI-RACISM** refers to the active process of identifying and eliminating racism by changing systems, organizational structures, policies, practices, and attitudes so that power is redistributed and shared equitably [2].

**CIVIC SCIENCE**, also known as citizen science or community science, is participatory action research whose outcomes are often advancements in scientific research, as well as increased public understanding of science [3].

**COMMUNITY ENGAGEMENT** describes collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity [4].

**CO-PRODUCED RESEARCH** involves processes that iteratively bring together diverse groups and their ways of knowing and acting to create new knowledge and practices to transform societal outcomes [5].

**ENGAGED SCHOLARSHIP** is teaching and research that connect the rich resources of the university to our most pressing social, civic, and ethical problems [6].

**INSTITUTIONS** are enduring regularities of human action in situations structured by rules, norms, and shared strategies, as well as by the physical world [7]. In this guidebook, institutions may refer to human action-situations occurring at the university or sub-university (departmental or unit) level.

**INTERDISCIPLINARY** describes research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice [8].

**JOINT KNOWLEDGE PRODUCTION** is the process of scientists, policy makers and actors from civil society coming together to cooperate in the production, dissemination, and application of knowledge to solve problems [9].

**MODE 2 SCIENCE** refers to how scientific knowledge is produced. It contrasts with Mode 1 production of knowledge that is motivated by scientific knowledge alone (basic research). In Mode 2, multidisciplinary teams work on specific problems in the real world for knowledge production [10].

**PARTICIPATORY EVALUATION** is an approach that involves stakeholders of a program or policy in the evaluation process [11].
**PARTICIPATORY RESEARCH** is an umbrella term for research designs, methods, and frameworks that use systematic inquiry in direct collaboration with those affected by the issue being studied for the purpose of action or change [12].

**POST-NORMAL SCIENCE** is a problem-solving framework that incorporates the scientific management of uncertainty and of quality, the multiplicity of perspectives and commitments, and the intellectual and social structures that reflect problem-solving activities [13].

**THEORY OF CHANGE** is a comprehensive description and illustration of how and why a desired change is expected to happen. Groups and project stakeholders identify the conditions they believe have to unfold for their long-term goals to be met [14].

**TRANSDISCIPLINARITY** describes research efforts conducted by investigators from different disciplines working jointly to create new conceptual, theoretical, methodological, and translational innovations that integrate and move beyond discipline-specific approaches to address a common problem [15].
GLOSSARY REFERENCES


EXECUTIVE SUMMARY

Whether “inside” or “outside” the academy, few people are insulated from environmental, economic, and social struggles. And most of them—most of us—want to leverage our time and talents to make the world a better place. Academics like to think of their work as relevant, but the biases and bureaucracies of universities, their cultures of insularity, hubris, and elitism, rarely encourage or reward researchers’ external impacts. This means the traditional university model is underperforming relative to its social and environmental potential.

“Universities that are not engaged with their communities in the twenty-first century will soon find themselves disengaged from any meaningful relevance ...”

-Gavazzi & Gee, 2018 [2]

Further, today’s solutions-oriented students increasingly demand curricula and research opportunities that help them engage in the world around them. Graduate students and early career researchers enter the academy with high expectations, strong feelings of empowerment, and little tolerance for the status quo. There, they run smack into a mismatch between their institutions’ stated mission to serve society and the policies and reward systems that effectively limit those same institutions’ impact and relevance.

“We are the higher education we choose.”

-Gary Rhoades (2006), as referenced in O’Meara, 2021 [1]

We, the Beyond the Academy network, have identified this as a critical time for evaluation, reflection, and reform. A global pandemic, uprisings in support of racial justice, and demographic shifts, among other factors, have only clarified the urgency: We must update the value proposition of the university. Funded by a grant from the National Academies Keck Futures Initiative in 2018, our network has hosted workshops, conducted extensive reviews of peer-reviewed literature, collected case studies, and identified best practices from across our institutional homes. We have sought out and compiled the best ideas for how to reform academic structures and promote more engaged, action-oriented scholarship that addresses our most pressing grand challenges.
There’s good news; we found many promising innovations. Universities are creating offices of engagement, funding grants for community-engaged scholarship, training researchers in knowledge co-production, and reforming reward structures to value external impact. However, these bright spots remain uncoordinated experiments rather than contributions to systemic change. As one researcher puts it, the new wave of university-community partnerships are still too often “person-dependent rather than an integral part of the fabric of the institution” [3].

The next phase of academic reforms must build toward the broad institutionalization of engaged scholarship. We call this model “The Engaged University.”

*The Guidebook for the Engaged University* gives the academy both a vision and a roadmap to a more impactful future, in which universities, including their scholars and staff, catalyze solutions for the world’s most pressing challenges.

**Chapter 1: Building an Engaged Campus**

Creating a culture of engagement requires involvement at every level of the university, from students to faculty, administrative leaders, and even curricula. An engaged campus requires the university to reorient, from a unidirectional provider of to a coproductive partner in socially relevant knowledge, expertise, and solutions.

**The engaged university can be described as:**

- Making community-based research and service-learning key criteria in hiring, promotion, tenure, and resource distribution decisions.
- Providing strong institutional support for university centers oriented toward public engagement and featuring widespread faculty/student participation.
- Prioritizing engaged research and service, such that interdisciplinary and collaborative work is common among faculty.
- Offering curricula steeped in service-learning and designed to include students in engaged research.
- Featuring commonplace community involvement designing, conducting, and evaluating research and service-learning curricula.

To get there, we offer assessment tools to help identify places where engagement can be institutionalized throughout the university and examples of accreditation programs, networks of engaged universities, and awards for engaged campuses helping transition institutions toward cultures of engagement.

**Chapter 2: Co-production as Best Practice**

Co-produced research involves “processes that iteratively bring together diverse groups and their ways of knowing and acting to create new knowledge and practices to transform societal outcomes” [4]. Evidence shows that co-produced knowledge is more likely than traditional research to be considered socially relevant, publicly accepted, and useful in decision-making. It also requires more resources, time, and training. Research objectives are likely to change over the course of the engagement, creating challenges for projects with predetermined expectations or funding constraints. Co-produced research often faces institutional skepticism, and researchers take professional risks when choosing this approach.
The engaged university champions co-produced knowledge by:

- Developing, training, and socializing its researchers in effective, engaged, and co-produced scholarship, emphasizing the imperative to build respectful, reciprocal relationships that foster mutual learning and center the needs of community partners.

- Lifting up examples of successful partnerships and highlighting community voices and contributions to impactful research outcomes.

- Dedicating funding for co-production activities that are difficult to finance via traditional grants and contracts.

- Acknowledging and taking into account the extended timelines and the potential risks of co-production in annual reviews and promotion processes.

- Expanding institutional definitions of “what counts” as knowledge in recognition that the research outputs that are most valuable to academics may not be the same as those deemed most valuable by their communities.

Chapter 3: Metrics for Assessing Research Impact

Metrics signal what is important in the academy, and so they act as powerful incentives, shaping research investments and behaviors. When universities shift resources and expectations toward the change needed in the world, they must shift their evaluative emphasis to measure not only research quantity and prestige, but their applicability and impact. In other words, we need to think differently about how we measure research success.

The engaged university’s review policies and practices:

- Encourage researchers to articulate their own theory of change and determine appropriate and trackable self-reported metrics, coupling these individualized measures with tailored mentoring to support professional development and promote departmental buy-in.

- Adopt a “narrative with numbers” approach, using quantitative measures to complement, rather than supplant, qualitative data and stories.

- Recognize and correct systemic and personal biases embedded in research and engagement assessments.

- Measure performance or merit against the mission statement of the research group, unit, or institution.

- Are evaluated and updated regularly across the long time horizon required to measure societal impacts.

- Are redeveloped and institutionalized alongside other engagement-oriented reforms to funding, recruitment, and promotion.

Chapter 4: Tenure & Promotion

Universities want engaged faculty. But institutionalized practices of faculty reward rarely support that goal. Traditional promotion and tenure policies incentivize quantity over quality and disciplinary standards over external impact. Altering advancement structures will take time and culture change.
The engaged university creates the conditions to encourage, support, and reward those who work toward real-world benefit. It does so by:

- Aligning tenure and promotion guidelines with institutional and departmental mission statements and strategic plans, including public service and applied research.
- Framing scholarship as a continuum from basic research to engaged research, allowing scholars to self-identify their work, and developing promotion criteria accordingly.
- Making the tenure process transparent to applicants, new hires, and the general public.
- Creating promotion review criteria specific to community-engaged scholarship.

Chapter 5: Training Engaged Scholars

Future leaders will face complex problems and difficult tradeoffs. Preparing students to meet the world’s biggest challenges requires opportunities for students to exhibit and refine their values, experience realities different from their own, and to feel discomfort, manage ambiguity, and observe policy processes. Current graduate curricula push students to become specialists without perspective, technical experts who lack larger insights, and scholars unprepared for the competing values of the real world. Interdisciplinary courses and degree programs fall short when it comes to preparing students to effectively develop partnerships outside academia.

Chapter 6: Engagement Leaders

Expanding the engagement and impact of the university requires shifts in the duties and responsibilities of the campus community, including faculty, staff, researchers, and administrators. In order to address local, national, regional, and global challenges, universities will need leaders who can develop and sustain partnerships with communities, public agencies, businesses, NGOs, Indigenous governments, and other institutions and leaders beyond the academy. “Engagement Leaders” are key to the growth of engagement in initiatives. These include tenure- and non-tenure track academics and university staff who have the leadership skills and capacity to undertake and model co-production. Professionals throughout the university often have the skills and practical
experiences needed to collaborate beyond academia, but their pathways to recognition and promotion can be too murky to effectively incentivize the work it takes to become engagement leaders.

**The engaged university cultivates and incentivizes engagement leaders by:**

- Recognizing, elevating and promoting engagement leaders’ work in internal and external communications.
- Advancing financial parity by providing base funding for engagement-oriented positions from internal (non-grant) budgets.
- Establishing promotion pathways with clear benchmarks for engagement professionals.
- Offering professional development opportunities on par with those afforded tenure-track faculty, so that engagement leaders may, for example, be principal investigators on grants and earn sabbatical-like opportunities.

**Chapter 7: Diversity, Equity, & Engagement**

Change that stands to truly address complex, interconnected issues must be based on diverse inputs, from diverse communities, and with equity and inclusion at the center. University goals related to diversity, equity, and inclusion (DEI) are deeply connected to university policies around engagement. Not only are diverse scholars more likely to incorporate underrepresented groups in their research and to use interdisciplinary methodologies, engaged scholars are more likely to come from groups underrepresented in academia. This means institutions that recruit and retain diverse scholars are more likely to deliver impactful and innovative scholarship that is attentive to the needs of historically marginalized communities.

An engaged university works toward total integration of diversity, equity, and inclusion across every aspect and function, because that journey stands as an example to partners, communities and students, establishing new norms for how change happens.

**The engaged university fosters diversity, equity, and engagement by:**

- Publicly connecting researcher diversity to effective engaged scholarship and internally aligning institutional rewards and incentives to support both.
- Centering job descriptions around engaged work, interdisciplinarity, diversity, and departmental commitments to sustaining engaged scholarship.
- Recognizing the unequal burden of service that falls upon the shoulders of underrepresented groups of scholars and creating transparency about faculty and staff workloads across university activities in order to prevent engagement from adding to their invisible labor.
Conclusion

We believe that engaged scholarship is the future of the academy—it is the only model that can hope to repair broken relationships with external communities, train effective changemakers, and truly leverage the resources of the university in service to society. Engaged universities are positioned to outcompete traditional universities for the best students, faculty, and researchers, as well as secure more public support and funding.

The preparation of this guidebook has made it clear that it is possible to do engaged, action-oriented scholarship in the academy and to be recognized and rewarded for that work. If your institution does not provide the infrastructure or support needed to foster cultures of engagement, we encourage you to share the best practices synthesized in this guidebook with your university communities.

We acknowledge that institutional change is not easy. The reforms we propose will require some aspects of university life to become less dominant while other aspects are allowed to grow and flourish. Priorities will shift as universities revise incentive structures and adopt new cultural norms. And no universal approach will work for all disciplines or departments. Context matters and solutions are best when they are championed locally by coalitions of dedicated staff, students, faculty, and researchers.

Our vision is for a university community where researchers are encouraged and empowered to seek solutions to complex societal challenges, where engaged and interdisciplinary scholarship is valued and incentivized, and where students are trained to lead in dynamic and demanding situations unbounded by sector or discipline. In this future, the academy is an inclusive, accessible, equitable, and welcoming place for ideas and individuals from diverse viewpoints and backgrounds. In this future, the engaged university revives public trust in institutions and makes visible the potential for higher education to advance new leaders and partner with communities to solve society’s greatest challenges, whether they be neighborhood-level or planetary in scope.
References


An intentional, campus-wide commitment to engagement will help maximize the impact and relevance of the research university and provide structural paths to the formal recognition of engagement as a primary function of the campus community.

How can universities institutionalize a commitment to engagement and monitor and report their impact?

DEFINING TERMS & ESTABLISHING PURPOSE

Terms like “community engagement” and “engaged scholarship” have a range of definitions across disciplines, departments, and individuals within a single university [7] (see glossary for term definitions). While working definitions are flexible and can be changed as input is gathered from diverse voices across campus, setting a campus-specific definition of engagement will increase transparency, accountability, and allow for assessment over time [8–10].

UNIVERSITIES are home to scholars, facilities, and usable expertise from across every conceivable field, all assembled under one banner [1]. And yet, this unparalleled set of resources is rarely—let alone effectively—leveraged to address critical social and environmental challenges. Business-as-usual approaches to academic research and teaching disincentivize engagement with and limit the utility of institutions of higher education for solving our communities’ grand challenges.

Community engagement “describes collaboration between institutions of higher education and their larger communities for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity” [2, 3]. Accordingly, most universities’ stated purpose includes serving the public good through education. A reorientation toward a framework in which the university and community co-produce solutions to societal issues is required to reap the benefits of true, reciprocal engagement [4]. Extension programs and investments in science communication are critical, yet on an engaged campus, outward-facing engagement is promoted at every level, from student curriculum to staff support, faculty research, and administrative leadership [4–6].
A campus-specific commitment to engagement should be linked to institutional mission(s) and strategic goals. For example, Columbia University President Lee Bollinger has described engagement as the “fourth purpose” of the research university [11], defining engagement as “merging scholarly knowledge... with groups and institutions beyond the academy... [an effort that] interacts positively with the three more traditionally articulated purposes of universities – research, education, and service.” Being intentional about the motivations and end goals of engagement will help identify the timeline, methods, and stakeholders to include in establishing a campus-wide engagement strategy, prioritizing resources, and determining evaluation timelines and approaches [8, 9]. An institutional strategy for engagement should also identify the key audiences for engagement beyond the university and discuss how new commitments may align or conflict with other key institutional goals.

**ACTION PLANNING: THE LEVELS OF ENGAGEMENT**

Universities vary widely in the degree to which they institutionalize and incentivize engaged research and learning. Barbara Holland’s Levels of Commitment to Community Engagement Matrix provides the following self-evaluation framework [12].

---

**Public engagement is considered least to most institutionalized on four levels:**

| Level 1 | “We would provide service to the community, if we had additional time and resources, but it is not specifically encouraged or rewarded.” |
| Level 2 | “We encourage faculty, students, and staff to volunteer in their local communities because to do so is good for society and is consistent with the actions of an educated person.” |
| Level 3 | “We see the community as a laboratory for research and teaching purposes. We have expertise that can help solve community issues, and we can help study community problems. Our students spend time in community based learning experiences and, in some cases, required service projects.” |
| Level 4 | “We ask the community to be our partner in setting and conducting our scholarly service agenda. We invest in service learning within the curricular experience of students, and have support and reward structures for faculty and students who engage in community-university partnerships.” |
Institutionalization of engagement can occur across multiple dimensions of decision-making within universities, including:

- hiring/promotion/tenure,
- organizational structure,
- faculty and staff involvement,
- student involvement,
- mission and vision,
- community involvement, and
- outreach.

That the institutionalization of engagement requires reforms across multiple university systems highlights the need to establish campus-wide buy-in and muster support from top administration, faculty, research staff, and students. Specific investments in support for engaged research as well as cultural reforms (including the valorization of engaged scholarship) aid in creating an environment that allows engaged scholars to thrive and invites interaction with societal actors and surrounding communities.

Below we adapt Holland’s approach to illustrate how dimensions of decision-making map onto the levels of engagement.

**CAMPUS OFFICES DEVOTED TO PUBLIC ENGAGEMENT**

Many universities have dedicated offices for public engagement (OPEs). These serve to amplify, implement, or legitimize community-
engaged work across the university, and they can function as a “front door” for community partners to make initial contact with the university [13]. OPEs that promote the work of students, faculty, and staff simultaneously promote community connection. For example, an OPE may offer an annual award recognizing outstanding scholarly engagement, rewarding individual efforts while also demonstrating the institution’s commitment to such engagement. Campus engagement offices can also employ skilled conveners who can identify opportunities for faculty engagement, navigate opportunities for research without pushing a single department or disciplinary agenda, and build trust with potential external partners [14]. The most effective engagement offices guide institutional outreach by working to address societal issues, strengthen civic responsibility and democratic values, and enhance scholarship, research, creative activity, curriculum, and teaching and learning.

Engagement services not only encourage, but help researchers overcome barriers to co-produced research. For example, Michigan State University’s Office for Public Engagement and Scholarship (OPES) provides training in effective engagement for faculty, staff, and students and supports engaged researchers through activities including dedicated writing retreats that encourage the communication and publication of community-engaged scholarship (engage.msu.edu).

**RESOURCE ENGAGEMENT VIA DEDICATED FUNDING**

Reforming funding structures is one of the most direct ways to change research culture [15]. Engaged researchers must secure support through grants that reward relationship building and other aspects of community engagement. Thus universities may further engaged scholarship by, for instance, earmarking funds for diversion to community partners to alleviate the costs associated with partnering with the university, compensating outside partners for their time, transportation, and food costs for meetings, which are often unallowable expenses under traditional grants. The Academic Venture Fund (AVF) at the Cornell Atkinson Center for Sustainability is one such dedicated resource, and it provides supplemental funding for researchers to build relationships with community partners.

“While most universities invest energy in the launch and initial collaborative efforts to form teams around grand challenges, far fewer have invested in continued leadership engagement, central funding and long-term staff support.”

- Weiss and Khademian, *Inside Higher Ed*

Many universities have invested in Grand Challenge initiatives, which invest large sums of money in externally-engaged transdisciplinary research efforts [1, 14]. Writing in *Inside Higher Ed*, Weiss and Khademian note that “while most
universities invest energy in the launch and initial collaborative efforts to form teams around grand challenges, far fewer have invested in continued leadership engagement, central funding and long-term staff support.”

In other words, enduring change is not built by establishing a Grand Challenge, but by establishing and nurturing it over time, making long-term investments in engagement capacity that can sustain partnerships, support innovative and risk-taking projects, and facilitate transdisciplinary research that falls outside traditional funding mechanisms.

**INTERNAL EVALUATION AND ASSESSMENT**

Monitoring engagement activities on campus can yield a wealth of both quantitative and qualitative information. Among the many approaches for monitoring and assessing engagement activities on campuses [8, 12, 16–18], we highlight three resources for the evaluation and assessment of campus-wide engagement efforts.

We recommend universities start with one of the following self-assessment tools, then tailor the instrument to their specific needs. The “Building Capacity for Community Engagement: Institutional Self-Assessment” [19] and the “Assessment Rubric for Institutionalizing Community Engagement in Higher Education” [20] are comprehensive rubrics for scoring progress toward institutionalizing engagement at the department, college, school, or university level. The TEFCE (Towards a European Framework for Community Engagement in Higher Education) Toolbox applies a research framework to the university’s own operations from team-building and data collection through report generation and impact assessment [18].

The process of assessing the success of community engagement should reflect the input of diverse institutional constituencies, including administrators, faculty, research staff, students, and community partners. Focus on concrete and near-term goals, and repeat the evaluation process as often as needed to identify successes and failures and set goals for the coming period [at a minimum, an annual review is necessary; 21]. Consider integrating data and perspectives from outside groups. Though often absent in university self-assessments [22], community partners’ stories can provide the most compelling evidence for the impact of university engagement [8].

When undertaking such an assessment, harness the wealth of expertise and institutional knowledge on campus. Consult with the university’s office of research on data collection techniques and include expert evaluators on the assessment team [8]. While bottom-up support for an initiative like this is invaluable, it is also helpful for OPEs to ally with champions of engaged scholarship within high-level administrative positions.

**EXTERNAL ASSESSMENTS AND AWARDS**

The following are existing opportunities that reward the engaged work of universities and individual stakeholders. They provide recognition as well as goal-setting incentives to help others pursue a more engaged campus.

1. The Carnegie Community Engagement Classification (CCEC) is the gold standard for accreditation of engaged universities in the U.S., and it has been instrumental in a culture shift toward community engagement recognition since 2005 [2]. Applicants provide a detailed narrative of engagement
activities across their university, periodically reapplying to maintain the institution’s CCEC status. Workshops and other resources are available for guidance. Pilot programs to apply the classification in other countries have been undertaken in Australia, Canada, and Ireland [23].

2. Campus Compact, a coalition of colleges and universities in the United States, offers engaged campus awards to institutions and individuals, a credentialing program for individuals (Community Engagement Professional Credentialing Program), and the Ernest A. Lynton Award for early career engaged faculty [6].

3. The U.K.-based National Co-ordinating Centre for Public Engagement awards the Engage Watermark that recognizes higher education institutions’ efforts to support public engagement [24]. It also offers a streamlined self-assessment tool, mentoring and consulting, and resources for strategic planning for universities aiming to become more engaged.

4. Engagement Australia offers Excellence in Community Engagement Awards for exemplary engagement activities to both students and leadership [25].

5. The Talloires Network for Engaged Universities [26] is a global coalition that offers awards for civic engagement at member universities, including the University Award for Innovative Civic Engagement and the McJannet Prize for student community engagement initiatives. It also boasts several cohort programs to develop leaders in civic engagement.

6. The International Association for Research on Service-Learning and Community Engagement [27] offers awards and recognitions, publishes a journal, and hosts an annual conference.

7. The Engagement Scholarship Consortium [28] is a global network that offers grants, awards, an annual Emerging Engagement Scholars workshop, and an Outreach and Engagement Practitioners Network. The Consortium sponsors two journals and hosts an annual conference.
UNIVERSITY OF VICTORIA’S ASSESSMENT OF COMMUNITY-ENGAGED RESEARCH [22]

In 2016, the University of Victoria completed a systematic, comprehensive assessment of engaged research activities across the entire campus. Following the recommendations of University of Brighton scholar Angie Hart [29], among others, the assessment addressed multiple levels of engagement (individual, community, and systemwide) and leveraged both quantitative and qualitative data. Sources included publications, events, workshops, and policy meetings; a review of reports and prior assessments; in-depth case studies of engaged research projects; interviews with key administrators; and the consultation and comment of community partners.

Outcomes:

The impact report provided the University of Victoria with:

- An inventory of outputs and outcomes of the University’s engagement oriented units in a bounded period of time (2009 - 2015);
- Documented case studies of exemplary engaged research projects;
- An impact rubric to assess engaged scholarship activities;
- And guidelines for reviewers assessing engaged scholarship in grant proposals, tenure and promotion, etc.

Key finding:

The assessment indicated high levels of impact among the community organizations involved in the University’s engagement efforts and excellent alignment with its mission to be a “good neighbor” in the local community (over 70% of documented impacts occurred locally).

Additional documented impacts:

- The University’s investment in engaged research leveraged $21 million in external funds between 2009 and 2015.
- The University’s strong reputation as a leader in engaged scholarship drew high quality students, faculty, and staff to campus.
- Evidencing the importance of the newly hired engaged learning coordinator, the report showed increasing faculty demand for the incorporation of engaged learning and pedagogy across campus and across courses.
- In many cases, those research products with highest social impact proved to be products other than peer-reviewed publications.
CONCLUDING THOUGHTS

Weaving community engagement into the fabric of universities is critical for developing solutions to complex challenges. Students, faculty, staff, and administrative leadership set expectations for engaged scholarship, identify best practices that align with campus goals, and promote programs that foster and reward engaged research. For universities aiming to institutionalize greater engagement, we recommend a baseline assessment that includes defining terms and establishing clear and measurable expectations for engagement. Thereafter, institutionalization can take many forms, including establishing OPEs, resources to support engaged scholars, and policies that reduce barriers to collaboration. Certification systems and evaluation rubrics provide a road map for monitoring and assessment over time. This is the three-step foundation for building an engaged campus that values community engagement and institutional structure that incentivizes researchers to maximize the impact and relevance of the modern research university.

REFERENCES


Chapter One: Building an Engaged Campus


Co-produced research involves “processes that iteratively bring together diverse groups and their ways of knowing and acting to create new knowledge and practices to transform societal outcomes” [1]. Co-production is part of an evolving cluster of related approaches, including participatory research, Mode 2 science, civic science, post-normal science, joint knowledge production, action research, and community-engaged scholarship [2] (see glossary for definitions). Mainstream adoption of these practices is encouraged by a growing body of evidence showing that co-produced knowledge is more likely to be socially relevant, publicly accepted, and used in decision-making than knowledge produced by traditional academic research [1–5]. The future relevance of university scholarship is therefore tied to the establishment of co-production as a best practice for researchers and institutions [6].

Co-production requires a unique set of skills, not commonly taught in university curriculum. Effective engaged scholarship, as noted in Chapter 1, involves building meaningful partnerships beyond university walls, then investing in the establishment of ongoing collaborative processes with those partners [7–11]. Yet these elements of co-produced research may run counter to the expectations of traditional funders, who prefer pre-defined research objectives and more typical academic products. As a result, co-production can be a professional risk for researchers [7, 12–14].

“A key feature of successfully co-produced research is the amount of ‘advance work’ – such as building trust and revealing tensions and expectations between collaborators – that is needed before knowledge-generation begins. In fact, this advance work can have profound effects, as knowledge co-production processes are heavily influenced by the circumstances of their creation.”

-Norström et al. 2020 [15]
PARTNERS IN CO-PRODUCTION

University researchers seeking to expand the impact and relevance of their work may seek collaborations with partners from multiple sectors. For example, Stanford University researchers have partnered with private sector companies and multilateral development banks to improve the sustainability of their supply chain and procurement decisions [16]. At the University of Maine’s Senator George J. Mitchell Center for Sustainability Solutions, the Collaborating Toward Climate Solutions (CTCS) initiative supports “on-the-ground problem-solving for the complex challenges that communities face.” The CTCS research team engages with municipal officials to co-develop climate change impact adaptations local communities can embrace and enact [17]. And, at the University of Minnesota, funding from a new grant was allocated to community partners so that they could powerfully shape the research agenda of a new urban sustainability initiative [18]. These examples illustrate the potential of cross-sector collaborations to inform academic research and address pressing societal needs.

At the same time, private companies and well-resourced NGOs have vastly different access to resources, time, and expertise, compared to small community-based organizations. The process of co-production, therefore, must attend to power differentials between universities and their partners. Here we focus on best practices for working with under-resourced community partners, particularly those historically harmed or exploited by academic research. Crucially, then, establishing partnerships with these organizations is ethically bound to disrupt an extractive research mentality with a focus on building reciprocal relationships that foster mutual learning, uphold respect, and center the needs of community partners [19].

Critical to all processes is explicit, constructive, and recurring engagement with tensions across power relations as a source for transformation.

-Chambers et al. 2021 [20]

GUIDELINES FOR RESEARCHERS

Existing university-community partnerships offer emerging best practices for effective, responsive, and impactful co-produced scholarship. We synthesize guidelines from three long-term co-development initiatives from educational institutions across the United States. First, a University of Minnesota project working with tribal partners on social-ecological issues surrounding wild rice [21], then a University of Hawai’i collaboration with native Hawai’ians to develop culturally sensitive ecological research protocols [22], and, finally, a cross-disciplinary community-science project led by Cornell University [23].

The University of Minnesota’s researchers sought a partnership with tribal resource managers and inter-tribal organizations to evaluate threats to wild rice—an important cultural resource for tribes. Decades of exploitive research practices
on behalf of the University had eroded trust between researchers and tribes. In order for the proposed project to be successful, a new model of collaboration was needed that centered the values of shared decision-making and mutual benefit. Together, and as equal stakeholders, these groups co-developed a protocol for holding university researchers accountable to the priorities and values of tribal members. In it, all partners made commitments to flexible timelines and objectives (which allowed them to prioritize the iteration and adaptation required to build trust), co-development of research methods, and appropriate commitment and compensation of partners over time [21].

The Hawai‘ian project came about after decades of conflict between ecological researchers and local stakeholders. Working with a local grassroots community organization, the University of Hawai‘i co-developed the Kūlana Noi‘i (Research Standards) that, since 2018, have applied to all university-affiliated researchers studying natural resources integral to the livelihoods and cultures of native Hawai‘ians [22]. All researchers seeking to work in culturally relevant ecosystems in Hawai‘i must first complete training modules that emphasize nurturing community and habitat through relationships based in communication, respect, reciprocity, and self-awareness [22]. Then, they must agree to abide by the Kūlana Noi‘i in the field and in their research products.

A third example is the NOISE Project at Cornell University. This citizen-science research initiative prioritizes the voices of historically underrepresented communities in collaboration with researchers and educators [23]. NOISE has published a workbook called Partnerships for Impact that outlines best practices for researchers and community partners engaging in collaborative work. In addition to a focus on transparency and trust-building, NOISE recommends researchers spend time in and with those communities they wish to work alongside and take care to express genuine gratitude for the collaboration and the individuals involved. The NOISE project also notes that researchers have a responsibility to acknowledge and address past inequities, even those that pre-date university-community partnerships.

Further guidance based on a synthesis of best practices from the academic and practitioner literature suggests:

- Clarify the community and researchers’ expectations at each stage in the research process. Whenever possible, compensate community members/organizations for their expertise, time, and labor.
- Host project meetings off campus and consider renting rooms from community organizations in which to hold them. Provide parking passes and on-site childcare and pay attention to align meeting times with community schedules and commitments.
- Encourage reflection on the social and ecological history of the relevant research site and its legacy communities. Consider, as broadly as possible, how research might impact the web of relationships in the community.
- Establish consent practices, requesting permission to engage in new research and setting expectations around communication at each stage as the research progresses and changes over time.
- Explicitly address each party’s incentives and intentions, and collectively discuss potential points of conflict. Beyond the proximate
research objectives, how might the process of co-production challenge traditional power structures or status quos?

- Acknowledge the timeframe and limitations of the partnership, and seek any mutually beneficial opportunities to sustain research and knowledge exchange beyond the funding cycle of the specific project.
- Discuss intellectual property, including the ownership of and credit for co-produced knowledge. Determine who has input or control over how data is stored, analyzed, and distributed.
- Identify responsive grievance procedures so that community members and researchers alike know how to communicate about and quickly address moments when the project seems to have strayed from agreed-upon standards.

GUIDELINES FOR INSTITUTIONS

Institutions devoted to democratization of learning, community engagement, and scholarship for the public good are recognizing co-development as an integral component of engaged action-oriented scholarship [3, 6]. For these reasons, it is imperative that institutions remove institutional barriers that disincentivize co-production. The following institutional guidance draws on existing projects to advise university leaders interested in supporting co-production involving faculty, researchers, and students.

Join networks dedicated to engaged scholarship

Institutions that share their commitment to co-production can support each other’s initiatives and share emerging best practices. Networks include...

- The Talloires Network of Engaged Universities is the largest global coalition of universities centered around university-civic engagement. Members are “committed to strengthening the civic roles and social responsibilities of their institutions” [24].
- Campus Compact is a national coalition that is driven by relationships. It seeks to prepare students through “civic education and community development” [25].

Apply for engagement recognition

Independent foundations and other organizations may offer relevant certifications that attest to institutional commitments in the realm of engaged scholarship. One example is the...

- Carnegie Classification (see Chapter 1: Building an Engaged Campus). Receiving this classification signifies that an institution has proven, through data collection and evidence, that it fosters community engagement by building partnerships with community organizations [26].

Market engagement practices

Encouraging communities inside and beyond the university to adopt co-production requires that we lower the perceived risks of such work. Trumpeting existing initiatives in multiple venues will help build recognition of institutional commitments and provide positive reinforcement. Examples include...

- Promote co-produced research through press releases, website features, podcasts, and alumni newsletters.
Host on-campus events to celebrate and promote co-produced research processes and products.

**Provide adequate funding**

As noted, traditional funders may sidestep coproduction as it clashes with long-standing research practices and products. Spurring coproduction at the institutional level, therefore, suggests universities establish their own funding mechanisms for building external relationships. These need not always be financial...

- Provide course credit and paid opportunities for students investing in building external relationships.
- Fund research that prioritizes external collaboration and co-production [5].

**Example:** The University of Vermont (UVM) Gund Institute for the Environment encourages collaboration by providing Gund Catalyst Awards. The purpose of the funding is to mobilize scholars and decision-makers to understand and address environmental problems through increased collaborative research. Awarded projects receive support from Gund Institute staff from the beginning in order to build relationships with partners outside of academia and work with those who would use the co-produced research [27].

- Facilitate equitable acquisition and distribution of project funding to researchers and community partners by removing bureaucratic barriers to paying non-university partners.

**Reform institution standards and practices**

Evaluation is a key part of university research. In the case of a new, less prescriptive form of research, co-production, evaluation must evolve. This applies to evaluating research objectives and outcomes as well as to evaluations of the quality of community partnerships and the value of co-produced research for academic careers...

- Adopt university-wide standards for evaluation of partnerships during and after project completion and build evaluation into funding awarded for co-production (see Spotlight on page 34).
- Reform tenure and promotion guidelines to reward investments in community engagement and external impact (see Chapter 4: Tenure & Promotion).

**Example:** The University of North Carolina at Chapel Hill utilized several task forces to assess consideration of engaged scholarship in tenure and promotion policies and practices. These various task forces convened over a decade to provide and revise campus-wide recommendations and guidelines for formally recognizing engaged scholarship in tenure and promotion. To this day, it is an ongoing and complicated process but with help from the institution and administration, the process continues to be supported and valued [28]. Continuing to reform tenure and promotion guidelines breaks down barriers for engaged scholars and allows them to take the time necessary to build relationships and participate in co-production.
Facilitate partnerships and provide trainings

Co-production is a high-touch process, requiring constant communication and, frequently, the ability to overcome historic inequities. It must be undertaken seriously and with adequate funding, staffing, training, and outreach...

- Facilitate processes that encourage and sustain partnerships and make it easier to start new partnerships. This includes development of memorandums of understanding, joint intellectual property agreements, hiring dedicated staff for maintaining relationships, and providing access to funding to sustain partnerships between sponsored grants.

- Provide training programs for faculty, staff, and students interested in engaged scholarship:

  **Example:** ESSA [29]: Based at Arizona State University, the Earth System Science for the Anthropocene (ESSA) reading group brings together interdisciplinary graduate students to discuss readings focused on five key themes: collaboration, team science, communication, solutions-driven research, and transdisciplinary scholarship centered around equity and justice. The ESSA reading group is part of a larger ESSA network that fosters collaboration among students, faculty members, and practitioners across disciplines.

  **Example:** DukeEngage [30]: DukeEngage at Duke University provides support for group programs and independent projects that connect students and faculty with communities, locally or globally, to address critical social issues. Projects may include a research focus, though research is not required. Students are immersed in the community they work in for a minimum of eight weeks, with the expectation that the relationship will foster mutual benefits and reciprocal learning. Each student engages in a formal reflection to derive meaning from their experience.

Create an environment for engagement

As noted above, holding co-production meetings off campus is often a way to shake off stakeholder inequities, but it is not always possible. Universities interested in sustained co-production efforts should take steps that make it easy for community stakeholders to participate in on-campus meetings, such as...

- Create welcoming collaboration spaces for hosting off-campus partners that provide free parking, rooms for breastfeeding mothers, access to on-site childcare, and interpreters.

- Provide trained facilitators with experience in co-production and external engagement and train faculty, staff, and students in inclusive facilitation techniques such as Art of Hosting (https://artofhosting.org/).
PRINCIPLES FOR EVALUATING CO-PRODUCED RESEARCH [2]

Norström et al. published a 2020 synthesis of best practices in evaluating co-produced scholarship in sustainability fields. The goal of the synthesis was to develop principles that funders, program managers, and university administrators can use to evaluate co-produced research projects [2]. They suggest an assessment scheme based on four principles of successful co-produced research [2, 15]:

1. **Context-based**: Ensure co-produced processes are grounded in an understanding of a specific challenge: the origins of the challenge; its particular socio-economic, political, and ecological contexts; and the cultures, beliefs, and needs of those affected.

   **Assessment**: Ensure the assessment itself uses concepts and language appropriate to the place, issue and participants, and that participants themselves negotiate the terms of the assessment [31].

   **Guiding questions**:
   - Did the request for co-production originate from an entity already affected by the issue?
   - Are the goals of the co-production process linked to the existing priorities of partners?
   - Will the process strengthen existing skills and relationships between participants working in the context?
   - Will the skills and outputs developed during the process be useful to participants following completion of the initial project [32]?

2. **Pluralistic**: Ensure processes include a range of perspectives, knowledge, and expertise from partners representative of different genders, ethnicities, and ages.

   **Assessment**: Use a mix of quantitative and qualitative indicators to document the participation of stakeholders. Instead of waiting until the end of the project to interview or survey participants, utilize video diaries or short, periodic surveys throughout the process to evaluate group dynamics and research impact [33, 34]. Participatory evaluation methods (see glossary) such as participant surveys or focus groups can be used to link participant representativeness, interactions, and input to outcomes like knowledge gains, decision-making capacity, and network quality [31, 34, 35].

3. **Goal-oriented**: Articulate clearly defined, shared, meaningful intentions and objectives that are related to the specific challenge.
Assessment: Develop a theory of change (see glossary) for the project that outlines expected outputs, outcomes, and impacts, so that these can be evaluated throughout and after the project. Evaluating co-produced research processes can be done in layers. Proximate assessment may center around building new relationships, understandings, and social networks [35]. Other short-term indicators may focus on changes in capacity to address a given challenge, or increased attention given to the issue by media and non-academic publics. Medium-term indicators relate to the degree to which project outputs are used by partners or other non-academic actors to inform actions or policies, and can be tracked with indicators that link knowledge generation to decision-making [35, 36]. Fulfillment of larger-scale, longer-term, or less tangible goals can be difficult to attribute to the co-production process, but several approaches can help:

- Contribution analysis establishes causality through incremental changes attributed to interventions throughout a process [37].

- Developmental evaluation and related approaches use real-time rapid feedback data to enable a project to continually evolve to meet its goals over short and longer terms [38–40].

- To track progress on large-scale, long-term social or environmental objectives, include ongoing monitoring as a project goal that allows for continued assessment beyond the project timeline.

See Chapter 3: Metrics for Assessing Research Impact for more information about measuring attention, uptake, and impact.

4. Interactive: Ensure processes produce ongoing learning, active engagement, and frequent, quality interactions among participants.

Assessment: Capture the nature, frequency, and quality of interactions among participants through quantitative metrics derived from attendance lists or meeting minutes, or through richer qualitative approaches using interviews or open-ended surveys. Assessment should also capture learning, how perceptions of participants change or stay the same throughout the process, the degree to which a shared perspective on the problem emerges, and participants’ perceptions of equity of process [36]. Shared perspectives will not always result from co-produced processes, but there should be evidence of mutual respect of different knowledge systems and perspectives, and evidence that language and terms are communicated effectively and understood by all participants [41].
## HOW-TO GUIDES AND TOOLKITS

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collective Impact Forum</strong></td>
<td>Offers resources for “collective impact work” and a self-assessment tool to determine readiness for undertaking co-production initiatives [42].</td>
</tr>
<tr>
<td><strong>Co-create</strong></td>
<td>Offers a publicly available curriculum for undertaking projects co-designed by multiple stakeholder types, e.g., users, customers, employees, and partners [43].</td>
</tr>
<tr>
<td><strong>NIHR INVOLVE</strong></td>
<td>Provides a handbook called “Guidance on co-producing a research project” that discusses the key principles of co-produced research [11].</td>
</tr>
<tr>
<td><strong>Co-production Portal</strong></td>
<td>A web portal toolbox, from the Swiss Academy of Sciences, that offers a search tool to explore methods and tools for co-producing knowledge, submitted by transdisciplinary practitioners [44].</td>
</tr>
<tr>
<td><strong>i2S</strong></td>
<td>A toolkit from the Australian National University that is committed to promoting Integration and Implementation Sciences (i2S) as a new discipline centered on improving research impact on complex real-world problems. The i2S website houses extensive resources on tools, approaches, and case studies, as well as opportunities for sharing resources (journals, conferences, etc.) [45].</td>
</tr>
<tr>
<td><strong>ODI (now the Digital Societies programme)</strong></td>
<td>Offers “ROMA: a guide to policy engagement and policy influence”, which is a roadmap for diagnosing problems, developing strategies to address problems, and monitoring and learning from actions [46].</td>
</tr>
<tr>
<td>“Doing Science Differently: Co-producing Conservation Outcomes”</td>
<td>A synthesis paper on co-production best practices from the Luc Hoffmann Institute that is aimed at conservation scientists [6].</td>
</tr>
<tr>
<td>“A practical guide for sparking co-productive agility”</td>
<td>A practical roleplay guide, developed by researchers, that can be used to “spark dialogue on how to foster co-productive agility in any setting.” This teaching tool allows people to reflect on roles often taken on during co-production processes with the intention of fostering more agile actors, who have a willingness to navigate the various tensions and agendas of those involved [47].</td>
</tr>
<tr>
<td>“Why Am I Always Being Researched?”</td>
<td>This is “a guidebook for community organizers, researchers, and funders to help us get from insufficient understanding to more authentic truth.” Power dynamics among these groups have created an uneven field on which research is designed. Chicago Beyond created this guide to shift the power dynamics and rethink how research is conducted [48].</td>
</tr>
</tbody>
</table>
COSTS OF CO-PRODUCTION

Compared to conventional research, co-production takes relatively more facilitation expertise, participant commitment, and time to develop and produce research. Co-production is dependent upon having or setting aside the time to build and maintain relationships, access to funds to support community partners throughout the engagement, and flexibility with regard to evolving timelines and expectations for final products [3]. In this way, co-produced research can be both riskier and costlier than traditional disciplinary research that is not dependent on relationships with outside partners. Community partners may become fatigued if they are consistently sought out for advice or collaboration [7] and researchers may find themselves without recognized knowledge products if collaborations fall apart. Lemos et al. 2018 emphasize that the close interaction between researchers and community members may be taxing or intimidating. Both parties may feel that they do not have “the training, personal inclination, understanding of each other’s context or organization support to participate in co-production” [7]. Oliver et al. 2019 [3] describe some of these risks, summarized below. We encourage researchers to consider both the costs and the potential benefits of co-produced research, recognizing that not all aspects of the process of co-production can be controlled.

Recreated from Figure 1 from Oliver, K., Kothari, A. & Mays, N. The dark side of coproduction: do the costs outweigh the benefits for health research? Health Res Policy Sys 17, 1–10 (2019).
CONCLUDING THOUGHTS

Research shows that co-produced research helps to bring diverse groups together and results in knowledges considered more socially relevant, informative for decision-making, and widely accepted by the public. Making co-production part of the research university toolkit means administrators and leaders must remove barriers that disincentivize co-production and offer adequate resources and necessary support for all stakeholders. Co-production is not, in other words, without its costs. Understanding those costs—whether they accrue to the institution or its partners—and finding ways to remediate them is part of establishing best practices. We highlight a few of the universities and programs that have been effective in promoting co-production as a form of engaged scholarship. Following in their footsteps will lead to more widespread adoption of co-production, and a shorter learning curve with regards to the best practices most appropriate to each undertaking.

REFERENCES


METRICS not only measure what has been done, but influence what will be done. That is, they signal priorities, act as proxies, and shape trajectories. Funders use metrics to allocate grants, design requests for proposals, and track the responsible use of their funding. Recruiters rely on metrics to make hiring decisions. And, in colleges and universities, administrators at every level use metrics to evaluate and promote students, staff, faculty, and programs. In the academy, metrics are often powerful incentives, shaping researcher investments, behaviors, and careers [1].

While traditional research metrics like publication counts, journal impact factors, and tallies of grant income are bureaucratically useful, they do little to capture the aspects of research that are most important to society: identifying solutions to real-world problems, promoting science literacy and engagement, and fostering the next generation of change agents. Moreover, traditional metrics have built-in biases that have been shown to discriminate against certain research styles and topics, reward insularity over innovation, and promote research quantity over quality [2, 3].

Research that is co-produced and externally engaged is more likely to lead to societal impact, but is perceived by some as less likely to lead to scholarly definitions of impact. That is, the practice of engagement is at odds with traditional research metrics. Successful engagement requires long-term relationships, a commitment to co-development, and an orientation not to academia, but to products valued by communities and decision-makers. Building a culture of engagement therefore requires rethinking how we measure research impact in ways that better align scholarly and societal metrics.

How can institutions adopt a more comprehensive and pluralistic approach that leverages the power of metrics to promote engaged solutions to grand challenges?
BEYOND TRADITIONAL METRICS

Alternative metrics and approaches for measuring research impact have recently gained traction inside and outside the academy. Below, we summarize four alternatives that better capture societal impact and scholarly engagement than strict citation counts and other traditional metrics. Each comes with pros and cons.

Altmetrics

Algorithms can scrape publicly available Internet data to produce “altmetrics,” which stand as proxies for a research product’s degree of scholarly influence beyond academia. The company Altmetric provides a free tool for researchers to evaluate their online and social media presence, combining information including a given article’s clicks and downloads, social media and blog shares, and media mentions [4].

Pros: Altmetrics incentivize researchers to take ownership over the promotion and dissemination of their work and emphasize the contemporary importance of sharing and communicating research with (and within) the public. These scores may also indicate the relative relevance of scholarship to contemporary issues of public concern. Altmetrics also incentivize scientists to broaden their audiences [5], increasing public attention, university reputation, and attraction of students and researchers.

Cons: Altmetrics measure attention and popularity, not necessarily impact or influence. Social media-based metrics favor researchers with public profiles, are unable to differentiate between high- and low-quality research (for example, retracted studies often gain popularity following their retraction, and, for altmetrics, all publicity is good publicity), and can be manipulated [6]. Due to differential access to and use of varying web platforms, altmetrics are also biased toward and against scholars in certain countries [6].

Impact tracking

Consistent, systematic recording of research impact can complement traditional academic metrics. Researchers are encouraged to maintain an “impact file” in the same way they keep their CV or service activities up to date [7]. The impact file provides a ready resource for scholars asked to substantiate research impact, as when applying for grants or tenure. Among the items appropriate to an impact file are records of stakeholder meetings, engagements with outside organizations, invited talks, service on public advisory or non-profit boards, and documentation of the research’s translation into legislation, policy analysis, or management plans. Statements from external partners could support or validate the contents, via a list of references or the inclusion of external letters.

The impact file is also key to those asked, at the departmental and institutional levels, to complete annual surveys about their research and activities or track progress on impact metrics. Those seeking additional help with these annual reviews may look to templates like the Science +
Beyond the Academy

Chapter Three: Metrics for Assessing Research Impact

Story “researcher thought leadership” survey [8]. This survey prompts scholars to consider (and increase) their publications and presentations for non-specialist audiences, media savviness and attention, and social media presence. Departments or institutions might also find such a survey fruitful if administered regularly over time, tracking shifts in impact activities.

**Pros:** Impact files incentivize researchers to invest in building long-term, responsible, and productive relationships with external partners. They provide ready evidence of impact for quick turnaround requests and can form the basis of annual, impact-oriented institutional reporting. Existing templates, such as the “I Want to Plan My Impact” organizer from Fast Track Impact, are available to researchers who wish to track external partners, outreach strategies, and indicators of external impact.

**Cons:** Careful and consistent impact tracking demands additional time, beyond that already invested in engagement and co-production, from both researchers and evaluators. Programs may need to build additional organizational capacity to administer surveys, solicit letters, or otherwise substantiate impact reports. External feedback is also burdensome for external stakeholders requested to validate research impact, and narrative reporting may be dismissed as too subjective or difficult to validate and compare across researchers or research programs. Finally, societal impact may take years or decades to demonstrate; impact files are, to some extent, misaligned with short-term milestones of grant reporting, evaluation, or promotion.

**Impact Compass**

The Impact Compass is a tool developed by the Stanford Graduate School of Business to assess individual or institutional performance across multiple metrics [9]. The tool helps students rank the social impact of potential employers, but can be adapted to measure research impact. The axes of the compass identify the values on which each assessment is based, scaled from one to three. The “fuller” the compass, the closer one is to their holistic goal. The impact compass could be adapted by individuals, as well as tenure committees, departments, or funding agencies, to assess multidimensional contributions of researchers, research programs, or institutional performance.

**Pros:** Standardized and simplified categories and scales improve the consistency of evaluation, leading to more transparent criteria for measuring impact. The tool is flexible; axes can be defined according to departmental priorities. The compass emphasizes multiple dimensions of impact and allows different types of researchers, who excel at different categories, to receive high overall scores.

**Cons:** The interpretation of scores remains subjective. For example, a lower score doesn’t necessarily indicate a less worthy opportunity, and a higher score may not mean an inherently better project or researcher. For example, on a “scale” axis, local work impact will score lower than global impact work, despite its importance and relevance to the local community. Researchers and institutions must develop an agreed-upon process for tracking, reporting, and interpreting Impact Compass scores.

**Narratives**

To avoid reducing diverse research products to numbers alone, researchers are often asked to draw out the connections between their work and its outcomes and impacts qualitatively,
through written stories, reports, or case studies. The narratives can be assessed by a panel of experts, included as part of academic CVs, or converted to scores using a standardized rubric.

Narratives about research impact are common to researchers applying for various kinds of funding. For example, the U.S. National Science Foundation (NSF) requires proposals to include a “broader impact” statement that discusses the societal relevance of the proposed activities and the involvement of underrepresented groups [10]. Because the NSF is so influential among U.S. funders, organizations like the American Anthropological Association recommend using the NSF’s Broader Impact guidelines as a starting place for creating university standards for assessing research impact [11].

Pros: Narratives incentivize researchers to articulate how and why their work is relevant, impactful, or important [12]. This allows researchers to communicate context that is not always legible in quantitative metrics. Narratives can provide compelling cases for difficult-to-prove impacts, including lagging impacts. Panels reviewing narratives can assess social/public impact holistically using any number of predetermined criteria and goals. Unlike many quantitative metrics, the narrative format is not discipline-specific.

Cons: Reviewing narratives is time intensive and expensive. Review processes may lack transparency and clear criteria. Interpretation of impact is subject to reviewers’ biases for specific topics, credentials, methodologies, geographies, etc. And in the narrative format, researchers are incentivized to “reach” for causation when societal impact is difficult to determine or the impact of the work has not yet been realized.

**BEST PRACTICES**

In developing metrics for societal impact, institutions can hew to the ethical and effective use of such metrics by drawing on the following guidelines [13–17].

1. Use “baskets of indicators” [13]. Evaluation should include a suite of quantitative and qualitative indicators that are designed to measure different aspects of research impact.

2. Adopt a “narrative with numbers” approach. Quantitative measurements should complement rather than replace qualitative data and stories.

3. Limit the use of journal impact factors, which measure journal prestige rather than research impact or quality [14].

4. Recognize and correct systemic and personal biases embedded in assessment processes [15]. For example, is local, qualitative work consistently being overlooked in favor of global, quantitative research?

5. Measure performance or merit against the mission statement of the research group, unit, or institution [16].

6. Encourage researchers to develop individual professional development plans and use these plans as a basis for annual evaluation. Collectively develop and agree upon the suite of metrics that will be used to measure research impact.

7. Evaluate and update indicators regularly [16].
U.K. Research Excellence Framework (REF2021)

The United Kingdom’s Research Excellence Framework (REF) is a national system used to assess research quality in higher education institutions in order to distribute educational funding in the U.K. The first version of REF was created in 2014 by the U.K.’s main funding bodies. The goal was to create a shared policy vision for the “continuation of a world-class, dynamic and responsive research base across the full spectrum within UK higher education” [18]. The REF evaluation process is designed to improve accountability for public investments in research, to provide benchmarking information for institutions, and to inform the allocation of funding across competing institutions and programs [18].

REF evaluation is focused on three elements: “Originality, significance and rigour” of the research outputs compared to international quality standards (60%); “Reach and significance” of research impacts on the greater society, culture, economy, policy, health, or environment (25%); and “Vitality and sustainability” of the environment in which the research takes place (15%) [19]. REF2014 was the first national evaluation to include societal impact criteria in the allocation of research funding [20]. In this scheme, universities submit case studies of exemplary research that are ranked by discipline-specific sub-panels of senior academics, international members, and research end users.

Research impact, as defined by REF, includes “an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia” [19]. Impacts can apply to any geographic unit—whether institutional, local, regional, national, or international—in which a “beneficiary, community, constituency, organisation or individual’s… activity, attitude, awareness, behaviour, capacity, opportunity, performance, policy, practice, process or understanding” is changed [19]. Institutions chose cases for submission that best illustrate areas where research made a “distinct and material contribution to the impact taking place, such that the impact would not have occurred or would have been significantly reduced without the contribution of that research” [19].

Submitted case studies must explain how (or through what means) the research led to or contributed to the presumed impact, and they must include sources of information to corroborate these claims, including documentation of policy impact, references to discussion of an academic or their work “in the records of meetings, conferences, seminars, working groups and other interchanges” [20].

Under the impact category, research institutions submit references—people or groups that can provide testimonials to corroborate the stated impact of each case study [19]. The relationship between research and impact need not be direct or linear (for example, in the case of co-produced research).
The review panel then rates the submitted works on the following scale, with scores helping to determine the distribution of the next year’s institutional support [21].

- **Four star** Outstanding impacts in terms of their reach and significance.
- **Three star** Very considerable impacts in terms of their reach and significance.
- **Two star** Considerable impacts in terms of their reach and significance.
- **One star** Recognised but modest impacts in terms of their reach and significance.
- **Unclassified** The impact is of little or no reach and significance; or the impact was not eligible; or the impact was not underpinned by excellent research produced by the submitted unit.

The REF framework was updated in 2021, though it continues its reliance on panel review and narrative case studies as the basis for measuring research impact. Critiques of the REF process note that it is labor intensive, expensive, and takes away from other valued activities. Some have raised concerns that implementation of the REF has decreased the authenticity and novelty of research [22–24].

The data included in REF assessments provide unique opportunities to conduct secondary analysis of impact case studies. A recent analysis of REF projects rated highly for broader impact identified the importance of additional data interpretation, customized knowledge products, and investments in boundary-spanning or “social learning” as key components of high-ranking cases [25].
CONCLUDING THOUGHTS

Traditional metrics for assessing research impact, allocating funding, and evaluating promotion often discourage or disincentivize engaged scholarship. Because engagement takes time, impact is difficult to measure using traditional metrics such as publication count or grant income. To build a culture of engagement, then, we must rethink how we measure research impact that aligns scholarly and societal metrics.

Embracing both qualitative and quantitative approaches will strengthen the culture of engagement. Alternative and detailed metrics, while not immune to biases, can be collated for comprehensiveness and the inclusion of different perspectives that better capture impact and highlight engagement and outreach activities. Though the use of these metrics is resource-intensive, their development and institutionalization are essential for encouraging researchers to take part in engaged scholarship.

Institutions may further foster a culture of engagement by allowing researchers to articulate their own theories of change (see glossary) and choose the metrics that best fit assessment of their research. Any metric will, by design, incentivize activities and reporting that align with the metric. In other words, all metrics are biased, but some are useful, especially when coupled with narratives or information that helps situate the research in a broader societal context.

REFERENCES


Tenure and promotion processes shape career paths, confer power and prestige, and establish institutional norms and expectations. Yet there is a disconnect between what institutions say they want (i.e., engaged faculty) and institutionalized practices of faculty reward [1], such that researchers who practice engagement and co-production with community partners are disadvantaged compared to peers who do more traditional research and publication types. Scholars urging change point out that these policies inhibit engagement-oriented university research [2]. Shifts in academic policy are required to align rewards and funding structures with institutional missions of public service and community engagement [3–7].

How can universities ensure their tenure and promotion policies encourage researchers to use engaged scholarship to address society’s grand challenges—and reward them for doing so?

First Things First: Institutional Readiness

Reforming tenure and promotion policies alone cannot create a culture of engaged and co-produced scholarship, but should be viewed as one among many efforts toward building an engaged campus [8–11] (see Chapter 1: Building an Engaged Campus).

Coupled with mentorship, administrative support, funding, and hiring and retention practices, promotion and tenure policies play a key role in encouraging, supporting, and rewarding scholarly impact and engagement. Many of these are long-standing practices, however, and an institution must be prepared to undertake change in any of these areas. See the Spotlight on VCU (page 57) for an example of laying the groundwork by creating “institutional readiness” in order to maximize the impact of tenure and promotion reform.

A true “template for reform” [12] includes embedding engaged scholarship in the institution’s mission, identifying criteria for assessing engaged scholarship, making the peer review process more inclusive of non-academic experts, and valuing local impact and practice-
oriented funding sources. A comprehensive approach to such multifaceted reforms should include a review of best practices for faculty recruitment, hiring, mentorship, dossier preparation, and evaluation [13].

“Inquiries to Guide P&T Reform Through Best Practices

Questions for university leadership:

Do tenure and promotion policies reflect departmental and institutional priorities?

Include engaged scholarship and diversity in institutional and departmental mission statements and strategic plans. State the mission statement at the beginning of tenure and promotion policy documents and clearly tie indicators used to assess candidates to that mission statement. For example, the University of Minnesota guidelines for tenure and promotion require inclusion of departmental mission statements and suggest ways to align values of diversity, equity, and inclusion with departmental academic missions and the mission of the University [15].

Are engaged scholars rewarded for their work?

Frame scholarship as a continuum, with traditional, basic research on one end and engaged and co-produced research on the other. Allow individuals to identify where their scholarship lands on that spectrum and assess that work accordingly [16]. A strong message from university leadership that normalizes and validates engaged scholarship can resolve mixed messages about whether engaged scholars have done the “right” kind of work to earn promotion and tenure as they approach periodic review [16]. Any standards of excellence for assessing scholarly work adopted at the institutional level should apply across disciplines and across the continuum of engagement. For example, Mary Taylor Huber’s Six Attributes of

“Creating a culture of reward requires consistency, alignment, and comprehensiveness at all stages and levels of evaluation, from defining expectations in the initial [faculty] appointment to preparing individual candidates’ [promotion] dossiers to incorporating appropriate criteria.”

DRS. JULIE THOMPSON KLEIN AND HOLLY FALK-KRZESINSKI, 2017 [8]

We have compiled sets of questions relevant to the revision of tenure and promotion processes to reward interdisciplinary and engaged scholarship [8–10, 13, 14] (see glossary for definitions). The best practices included alongside each question may serve as a reference guide for leadership, review committees, and faculty undertaking the change. “No” answers indicate areas in need of further attention.
Scholarly Excellence, which measure a research product on the basis of clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique can be applied to engaged or basic scholarship [17].

Is the tenure process transparent to applicants, new hires, and the general public?

From initial contract negotiations to rationales for non-appointment, understanding the details of an institution’s tenure process can help engaged scholars (in fact, it is key to all scholars’ institutional success). A comprehensive review of policies and the ways they are communicated also allows assessment of fit between those policies and the institution’s public mission statements. Steps as simple as posting tenure and promotion policies on a public web page can improve transparency. In-depth efforts, like policy audits, can assess how well official policies explain tenure and promotion approvals and denials in practice; a mismatch indicates a need for policies or practices—or both—to be amended.

Are ambiguous terms clearly and publicly defined?

Terms used in official documents can be vague. “Service,” for example, can refer to on-campus service, community outreach, or both, easily leading to confusion among tenure candidates and review committee members [7]. Giving examples of terms used in official documents, and explaining how candidates will be evaluated against them, can put engaged scholars on equal footing with their more traditional colleagues at review time.

Are committees allowed representation from multiple disciplines and departments?

Intentionally diversifying review committees can help minimize epistemological and racial or cultural biases against engaged work. Adding more perspectives to the committee better ensures all aspects of the research will be understood by reviewers [18].

Are joint appointments handled fairly?

Engaged scholars often have dual appointments across departments. To set expectations, require split-appointment faculty to undergo only one set of annual review processes and tenure and promotion reviews, and include representatives of both departments on such review committees [18]. Appointment percentages and the details of each department’s expectations should be documented, at the point of hiring and co-developed with the candidate [13, 18, 19] (see Chapter 7: Diversity, Equity, & Engagement).

Is it standard practice to include non-academic partners in the review process?

When engaged scholars are up for review, consider inviting letters of support from community partners, outside collaborators, and non-academic leaders in engaged scholarship [12]. Discuss with academic leadership, faculty, and tenure and promotion committees how external evaluations will be solicited and should be interpreted in the promotion process.
Questions for review committees and departmental leadership:

Have expectations been clear to the candidate from the point of hiring onward?

In traditional departments, review criteria should be tailored to the individual engaged scholar. A Memorandum of Understanding (MOU) or Letter of Approval (LOA) created jointly by the researcher and their department(s) can outline expectations at the point of hiring [13]. Additionally, these can be individualized and made explicit by encouraging researchers to develop professional development plans, revised periodically to track the candidate’s progress and flag any changes to original expectations. Professional development plans may also guide the determination of appropriate evaluation metrics for that candidate's tenure or promotion review. Any modifications to the original MOU/LOA/plan should be documented in the candidate’s personnel file [13] and provided, along with any other feedback, to the candidate in detailed, written form [18].

Do timelines and appointment percentages reflect faculty members’ realistic workloads?

Between the 1980s and 2000s, university departments began expecting faculty to excel in research, teaching, and service [20]. Scholarly publication took prominence as a performance metric, though most faculty time is, in practice, spent on teaching activities [20, 21]. That has meant the implicit penalization of engaged scholars via standard tenure timelines, because relationship-building is both time-consuming and necessary to their work. To address this problem, Carnegie Mellon University has lengthened its tenure clock to nine years for interdisciplinary researchers [9], while Arizona State University’s School of Arts, Media, and Engineering chose to explicitly reward interdisciplinary network-building in its tenure and promotion criteria [22] (see Spotlight on page 56).

Is the review committee thinking beyond research, teaching, and on-campus service?

Engaged scholarship is often shunted into the broad evaluation category of “service” [4, 23], which is traditionally undervalued in tenure and promotion decisions [3, 7, 24]. Instead, create flexible criteria that can be tailored to both engaged and traditional researchers. For example, at the University College Cork, researchers choose from a list of indicators within each criteria category (e.g., teaching, research/innovation, engagement) that best represent their work [25]. The Copernicus Institute of Sustainable Development at Utrecht University [26], created the “MERIT” promotion system (Management, Education, Research, Impact, and Team Spirit), in which no researcher is expected to excel in all criteria. The Institute has also chosen to assess impact through effects on and narratives from community partners. For its part, Virginia Commonwealth University has determined that engaged work should be embedded in all tenure criteria, renaming these engaged scholarship, engaged teaching, and engaged service [27] (see Spotlight on page 57).

Guidance on incorporating engaged scholarship into review processes, consultation, and training are all available through the National Review Board for the Scholarship of Engagement [28]. The University of Minnesota’s Office of Public Engagement also offers a list of indicators that departments can use to incorporate public engagement into tenure and promotion policies [29].
Do standards for assessing impact apply fairly to engaged scholars?

Any unit-level standards for assessing impact must apply fairly to both engaged and traditional work. As mentioned previously, Huber’s Six Attributes of Scholarly Excellence for assessing learning, research, teaching, service, and outreach are appropriate metrics to apply to engaged scholars [17]. Michigan State University’s guidebook, *Points of Distinction*, recommends another approach, orienting criteria around four dimensions: significance, impact, scholarship, and context [30]. Singh et al. [3] expand the evaluation of engaged activities to seven dimensions: “reach (the size of the audience), rigor (how research-based the engagement is), innovation (novelty of engagement), number (quantity of effort), depth (amount of work behind each effort), prominence (perceived esteem of the effort), and outcomes (changes resulting from the effort).” For institutions creating and revising standards for the assessment of research impact [31], the American Anthropological Association recommends the NSF’s Broader Impact guidelines [32] as a starting point.

Do candidates have the opportunity to present their work in narrative format?

Changfoot et al. [2] argue that the impacts of community-based engaged scholarship are best communicated through contextually rich narratives. These allow candidates to tell stories about their research, including participation with local communities and nuanced or long-term impacts that are difficult to quantify [33] (see Chapter 3: Metrics for Assessing Research Impact). Faculty can also integrate impact statements directly into scholarly articles or include as supplemental materials. For example, Galford et al. [34] included a qualitative assessment of research impact and quotes from end users as part of a peer-reviewed manuscript reporting their research results.

Do candidates receive credit for a wide range of co-authored scholarly products?

Between 1975 and 2005, the number of co-authors per published article increased by 75% [35], indicating a rise in collaborative work. Beyond journal articles, engaged research results come in many other product types, including workshops, software, technical reports, broadcasts, open-source code or datasets, creative performances, exhibits, websites, maps, and policy or planning documents [12]. Research products and co-authorship are often credited differently by different disciplines, and so it is important, at the institutional level, to establish protocols for crediting the work of engaged scholars that apply across disciplines [8, 11]. Review committees can then draw on established protocols to assess co-authorship. One example is the CRediT project, which defines a taxonomy of 14 contributor types [36] and has been adopted by a number of scientific journal publishers [8]. Standards for assessing co-authored products presented in diverse outlets have also been codified into tenure and promotion policies at schools including the University of Southern California [8], the University of North Carolina at Greensboro [12], and the School of Arts, Media and Engineering at Arizona State University [22] (see Spotlight on page 56).

Is local impact recognized?

Engaged scholars are often experts at working collaboratively with community partners to co-develop research projects and address local issues. Local projects are more likely, however,
to be funded by practice-oriented foundations rather than prominent research agencies; their resulting products often score lower on metrics that favor global reach and prestigious funders [12]. Encouraging narratives as part of academic CVs or annual reporting can allow researchers to articulate how their work is contributing to local impact [37]. Communication staff at the departmental or university level are often motivated to promote local impacts of scholarly work. Researchers should be encouraged to work with their communications teams to enhance the visibility of their work in ways that can lead to demonstrable media hits or recognition of locally-relevant impact.
SPOTLIGHT

SCHOOL-LEVEL INITIATIVE AT ASU [22]

The School of Arts, Media, and Engineering (AME) at Arizona State University (ASU) was created in 2003 to focus on experiential media, a topic requiring contributions from Computer Science, Engineering, Psychology, Education, and the Arts. Most AME faculty have joint appointments, allowing them to form research teams with students and other faculty across disciplinary concentrations. The AME tenure and promotion criteria were developed by an interdisciplinary panel of faculty and reviewed by all participating departments before submission for approval by Arts and Engineering Deans and the Provost. Since adoption, the criteria have been reviewed and updated every two years.

An evaluation of the first four years of the new procedures showed an increase in interdisciplinary collaboration. AME faculty reported having better clarity regarding expectations and increased trust in a fair evaluation process, while evaluators reported better understanding AME faculty work. Among all participants, the evaluation process became more familiar and easier to use over time.

Practices used in the new evaluation process include:

- **Interdisciplinary evaluation committees.** Every step of evaluation, from the departmental level to the college level and through to the Dean’s recommendation, includes representation from multiple disciplines. Faculty holding joint appointments receive a single evaluation that contains input from each of their departments.

- **Standards of excellence that apply across disciplines.** Criteria to determine the reach and rigor of faculty outputs are documented in a matrix. The matrix’s categories (“major,” “standard,” “minor,” and “supportive”) are flexible enough to be applied to diverse product types, e.g., scientific publication, software, and artistic performance.

- **Group authoring principles.** For research products and creative works that do not follow a traditional author listing format, researchers have the option of grouping co-authors as “primary,” “secondary,” and “supporting” and including narratives describing the contributions of each author.

- **Rewards for networking.** Collaboration, or “connectivity,” is explicitly rewarded by AME criteria, which uses the following weights: research 40%, teaching 30%, connectivity 20%, and service 10%. Evaluators review multiple aspects of faculty networks: number of collaborators (based on a list of research products and advisees), strength of network connections (based on the number of products produced jointly by the same pair of collaborators), the disciplinary makeup of collaborations, and the number of authors per research product.
Guidelines for interdisciplinary and disciplinary work components. AME criteria are transparent and specific as to the disciplinary and interdisciplinary expectations for faculty with joint appointments in traditional departments.

UNIVERSITY-LEVEL INITIATIVE AT VCU [27]

Between 2011 and 2013, Virginia Commonwealth University (VCU) revised its tenure and promotion policies to include community-engaged language and criteria. Units across campus followed with their own revisions to align unit-level policies with the new University policy. This process formally began when the University’s President formed a 19-member ad hoc committee to review and revise the institutional-level promotion and tenure policies, but the stage was set earlier through intentional preparatory actions:

- **Institutional readiness.** The Division of Community Engagement (DCE) played an integral role in laying groundwork for and implementing the revision process. The DCE, established in 1978, was well staffed (20 full-time workers), administered from the Provost’s Office, and highly active in supporting and coordinating community-engaged work across all campus units. VCU also had a history of championing community-engaged faculty work, having gained a Carnegie Foundation distinction as a community-engaged institution in both 2006 and 2015. In 2011, language and criteria for assessing engagement and impact were included in the University’s strategic plan.

- **Shared definitions.** In 2011, following a realization that units and individuals across campus were using terms pertaining to engaged scholarship differently, DCE staff and a Council for Community Engagement developed a list of standardized definitions for key terms. The approved definitions were entered into a campus-wide glossary and posted to the University’s public website.

- **High-level champions.** VCU’s Provost and its Vice President for Research were outspoken supporters of engaged work and cross-disciplinary research. Researchers with experience in community-engaged scholarship were recruited for leadership positions on the ad hoc tenure and promotion revision committee.

The committee ensured the revised policy language included the shared definitions of community engagement terms, and followed the themes of the University’s strategic plan. Prior to revision, VCU’s policies reflected the three traditional bins for assessing faculty work: teaching, research, and service. Rather than create a new category for engaged scholarship, the committee decided to incorporate engagement into all existing criteria, resulting in a
scheme measuring community-engaged scholarship, community-engaged teaching, and community-engaged service. A campus education effort accompanied the revision process, and campus and public feedback was collected via open discussion forums and a web survey.

Commenting on the finalized policy revisions, organizational scholars Pelco and Howard [27] write, “We urge other institutions to recognize promotion and tenure revision as just one step along the road to developing a campus climate that supports faculty for undertaking community engaged teaching, scholarship, and service rather than as the successful endpoint. The impact of community-engaged language in an institution’s faculty reward structure ultimately depends on the quality and quantity of supports that the institution provides to its members for deeply embracing that language.”
CONCLUDING THOUGHTS

Institutionalizing engagement among faculty and researchers requires reforms to the systems of recognition and reward. Improving transparency in the criteria of promotion and tenure, both internally and externally, sets appropriate expectations for incoming scholars, review committees, and public stakeholders. Engaged research differs from traditional scholarship in that it requires additional time and resources and produces knowledge products aimed at societal impact. Promotion criteria can be adapted to the evaluation of engaged scholarship without sacrificing rigor. Existing standards of scholarly excellence can be applied to engaged research and reviewers can be trained in the evaluation of engaged and interdisciplinary research.

Excellence in engagement can also be evaluated with respect to teaching and service, activities that are often overlooked in traditional promotion and tenure criteria. A more holistic, inclusive, and tailored approach to evaluation allows for a diversity of scholars to thrive in the academy and can better align institutional missions with the incentive structures that shape faculty investments in research, teaching, and service. Policy reform should be coupled with mentorship, administrative support, funding, and reforms to hiring and retention practices in order to create a culture that rewards and sustains engagement.

REFERENCES


GRADUATE students will be unprepared to address complex societal and environmental challenges without exposure to knowledge, skills, and experiences in engaged research [1, 2]. In other words, they will become specialists without perspective, technical experts who lack an awareness of broader contexts [3]. Graduate programs need to provide training in community engagement, cultural competency, conflict management, and relationship building if institutional commitments to both students and engaged research are to be realized [4–8]. Even interdisciplinary courses and degree programs often fall short when it comes to preparing students to navigate partnerships outside academia and to become the next generation of engaged scholars and effective agents of change.

Today’s forward-thinking academic mentors and graduate program leaders no longer ask students to check their identities and values at the door, but encourage them to explore the tensions between academic research and advocacy. Universities and departments are working to model effective community engagement, incentivize the production of public-facing knowledge products, and provide the institutional support and structures to facilitate external partnerships.

Most graduate programs prioritize the skills that graduates will need in order to compete for increasingly scarce academic positions [9–12]. Professor KerryAnn O’Meara, former President of the Association for the Study of Higher Education, notes “graduate students across disciplines have said that they want to be prepared for work that connects their intellectual passions with the needs of society but feel unprepared to do so” [13]. O’Meara recommends building graduate students’ individual competencies toward community-engaged scholarship through [13]:

- Exposure to research methods appropriate to engaged work in their discipline, including
Student training for engagement with non-academic societal actors requires facilitation at three levels:

- To build individual competencies for boundary-spanning research and effective, ethical engagement
- To cultivate enabling relationships through mentorship and inclusive communities of practice
- To create supportive, validating institutional structures and cultures

strategies and ethics related to participatory action and community-based research.

- Reflection on issues of differential power and privilege between university actors and external partners. Students should learn and acknowledge their institution’s history of community engagement, including its mistakes, such as past exploitation of community members. Mentors should facilitate these conversations whenever possible and not expect students to navigate complex university legacies without guidance.

- Experience developing different types of knowledge products, such as policy briefs, websites, blog posts, and non-academic grant proposals.

- Finding and participating in professional communities related to engaged work.

- Training in theories of change (see glossary) including the social and political dimensions of science-policy translation.

- Practice in boundary-spanning skills such as strategic thinking, co-development, problem-solving, decision-making, and policy implementation.

MENTORSHIP FOR ENGAGED SCHOLARS

Faculty mentors and directors of graduate programs play important roles in establishing norms and expectations for engaged scholarship [14]. Because graduate education occurs mainly within disciplinary departments, effective socialization for community engagement must be embedded within the courses, programs of study, and mentorship experiences of all students, regardless of program affiliation [15]. Effective mentors will emphasize collaborative research and co-production as standard parts of graduate training. Engaged scholars also benefit from
networks of mentors, including faculty, research staff, student peers, and external stakeholders, who can model effective partnerships, help students navigate the inevitable conflicts of engagement, and support the formulation of their professional identities as engaged scholars. Ideally, departments will orient toward:

- Assisting students in developing mentorship networks instead of traditional dyadic and top-down mentor relationships [16].
- Encouraging students to seek out academic mentors who self-identify as engaged scholars or serve as members of external organizations or community groups that share common social or environmental values [16].
- Advocating for students to think creatively about their research, make connections to their non-academic interests, and formulate their identities as scholars and advocates [17].
- Offering to co-author or become co-investigators on engaged projects so that students get first-hand experience alongside their mentors.
- Reinforcing graduate students’ professional identities as engaged scholars by nominating them for awards, sharing positive recommendations, and introducing them to colleagues with similar values [13].
- Supporting students through some of the unfamiliar aspects of engaged scholarship, including uncertain timelines, moments when the expectations of academic and non-academic partners diverge, and concerns about intellectual property and co-produced research [18].
- Combating negative narratives about interdisciplinary and engaged scholarship by highlighting examples of successful engagement leaders inside and outside academia, particularly examples close to home.

“Among the factors that influence graduate student academic development and learning experiences (e.g., collegiality and curriculum), research has consistently shown that advising is one of the most significant variables associated with academic success.”

Jaeger, Sandmann & Kim, 2011 [14]

CREATE SUPPORTIVE INSTITUTIONAL STRUCTURES AND CULTURES

Just as there are barriers to engaged scholarship for tenure-track faculty members, there are barriers to students’ embrace of the same. For example, restrictive thesis and dissertation committee membership rules prevent advisory collaboration with non-academic partners. Requirements that dissertations be presented in the form of discrete, peer-reviewed manuscript drafts limit students’ ability to produce policy documents, business proposals, communication strategies, or educational materials. In many cases, these outdated rules rob students (and their advisors!) of valuable opportunities to collaboratively produce action-oriented outputs that address pressing real-world problems. Institutional leaders and program directors who are strongly committed to engaged graduate
training can support students via innovative cohort programs, training and mentoring programs, changing institutional norms and rules, and providing dedicated funding to support engagement activities. Supportive institutional structures for graduate students include the following:

- Allocating resources for dedicated staff, interdisciplinary centers, workshops, externships, capstone projects, and other mechanisms that facilitate collaboration between students and partners external to the university.

- Allowing community members or external stakeholders to serve on graduate advisory committees.

- Providing training for advisors and committee members in evaluating engaged research [19].

- Expanding coursework to include content on responsive and ethical community engagement [14].

- Highlighting departmental or campus commitments to engagement and integrating engagement opportunities into recruitment and orientation materials for prospective graduate students [13].

- Valorizing and rewarding pluralistic forms of scholarship as legitimate, rigorous, and desirable.

- Hiring program representatives who advocate for students seeking opportunities to conduct engaged scholarship, including choosing supportive mentors for thesis and dissertation committees.

- Providing dedicated funding in the form of ongoing grant or fellowship programs to support engaged and applied student research [20].

- Developing “digital badges” or other credential programs that students can use to showcase their engagement skills for future employers [21, 22].

- Allowing teams of graduate students to pursue collaborative, even cross-disciplinary PhD projects regarding issues too unwieldy for a single researcher or research field [23, 24].

- Fostering experiential learning by expanding internship opportunities beyond the campus [25].

Innovative universities have embraced a number of these ideas to great effect. For instance, Duke University’s Bass Connections brings together students and faculty to co-investigate complex societal problems [26]. At Arizona State University, the Graduate Certificate in Environmental Communication and Leadership program offers graduate students in science-based fields training in co-production and communication with public audiences and decision-makers, as well as strategic leadership development. Another graduate certification, Michigan State University’s Certificate in Community Engagement, “is designed to help graduate and professional students develop systemic, scholarly, and respectful approaches to their community-engaged work” [3]. The program works to provide the necessary support and structure to strengthen graduate students’ skills toward successful community partnerships. And, in the same vein, the University of Georgia made it a priority “to provide a more formal support structure for graduate students” [3] and created graduate coursework and a noncredit portfolio program that both empower students to develop their effectiveness as engaged scholars.
ANGLES NETWORK

ANGLES (A Network for Graduate Leadership in Sustainability) is a collaborative network of university leaders seeking to improve training and resources for leadership development among graduate students. ANGLES developed a searchable database of programs and workshops in the United States and Canada that teach essential sustainability leadership skills across seven key aptitudes [27]:

1. Fostering Justice, Equity, Diversity & Inclusion
2. Building Emotional Intelligence
3. Collaborating for Impact
4. Communicating and Engaging
5. Strategic Thinking & Planning
6. Working Productively & Efficiently
7. Making Your Work Matter

Building individual competencies in these areas is critical for engaged scholars.

In 2019, the network published the book Developing Change Agents: Innovative Practices for Sustainability Leadership [28]. The book describes models of graduate leadership education, policy engagement, competencies for transdisciplinary graduate research, and curricular reforms designed to institutionalize engagement and boundary-spanning work by graduate students.
The CREATE Scholars Program at the University of Minnesota serves graduate students interested in community-engaged research at the intersection of the environment and equity [18, 29]. Graduate students from any discipline can apply to the 12-month program that includes a semester-long practicum course, a funded externship with a community partner, cohort-building activities, and professional development training. Within the practicum, they receive training in co-problem formulation, cultural competency, community-engaged research, and the science of collaboration. In the externship portion, faculty and community mentors supervise teams of students paid to work on applied problems. The program helps to normalize and institutionalize engaged scholarship by mentoring students as they find their own identities as engaged scholars, articulate how their engagement skills align with their professional goals, and enter a supportive community of practice.

Recreated from Figure 1 from Keeler, B. L. et al. Community-Engaged Scholarship for Graduate Students: Insights from the CREATE Scholars Program. Journal of Higher Education Outreach and Engagement 26, 125-137 (2022).
CONCLUDING THOUGHTS

Providing graduate students with adequate training in engaged scholarship is crucial for developing future change leaders who are able not only to bring attention to but to actually address complex challenges. Key guidance for departments, programs, and institutions includes aligning all levels of the academic system behind the institutional priority of engaged scholarship, building students’ individual competencies in various aspects of applied study, cultivating collaborative relationships with mentors and communities of practice, and backing it all up with supportive institutional structures and cultural messaging. Students will leave their graduate programs ready to both pursue and model engaged scholarship as they move into teaching, research, and leadership positions throughout society.

REFERENCES


IMAGE REFERENCES

1. Images for the figure on page 63 were downloaded from vecteezy.com.
Outreach and extension programs that bring academic knowledge and expertise outside the ivory tower are nothing new, particularly at land-grant universities and their non-U.S. peers [1]. However, emerging social and environmental challenges mean existing structures are often not fit to purpose for a rapidly changing society [2, 3]. New staffing models are needed to recruit and retain researchers who have the capacity to build relationships, seek out new partners, and co-create knowledge with communities [4]. In this chapter, we explore the importance of the “engagement leaders” who cultivate the leadership, capacity, and partnerships needed for the co-production of knowledge, itself so central to this mission.

Who and What are Engagement Leaders?

People often talk about two basic categories of long-term university scholars: “tenure-track” and “non-tenure track” [5]. In an engaged university, both of these groups drive innovation and orient the academy toward societal challenges. The chapter on tenure and promotion reform provides recommendations on how to support tenure-track faculty engagement leaders. But the second category, “non-tenure track” scholars, unfortunately tends to be defined only by what it is not.

With an eye to inclusivity, we redefine engaged scholars by who they are, what they do, and what they offer to the university community and to the world. More specifically, we recognize and elevate non-tenure track scholars’ intentional efforts to build societal engagement into their work. We also explore how universities can better support the growth and visibility of this diverse group of faculty and professional scholars. We describe and honor an affirmative, inclusive community of high-impact scholars, along with their tenure-track colleagues who conduct similar work, as “Engagement Leaders”.

How can universities identify engagement leaders and strengthen their capacities in linking academia more closely with partners beyond the academy?
Engagement leaders are university staff or faculty of varying ranks and titles who:

- bring a driving motivation, expertise, and capabilities aimed at real-world relevance and impact;
- lead or join networks of scholars with off-campus practitioners, researchers, communities, and decision-makers;
- develop skills to collaborate with non-academic communities in the implementation or co-production of science, innovation, and sustainable solutions, along with reciprocal skills for being usefully engaged by such communities [6];
- bring complementary experience working in governments, non-governmental organizations (NGOs), and/or the private sector;
- often have educational credentials and CVs comparable to those of tenure-track faculty, along with applied or practical experience frequently exceeding that of tenure-track faculty;
- and work in myriad roles and have a wide range of positions, funding mechanisms, and institutional situations.

Engagement leaders contribute to creating an engaged university because:

1. **Engagement leaders bring real-world experience into teaching and scholarship, develop and deepen relationships and partnerships outside academia, and co-produce impact-focused research and experiential learning products.** They open doors to networks of opportunities for students. In addition to bridging the university and its communities, they often act as boundary-spanners within the university, connecting interdisciplinary teams, catalyzing insights, and developing multifaceted solutions for complex challenges.

2. **Engagement leaders are nimble, responsive, and adaptive to changing societal demands.** Making impact their primary mission, engagement leaders often structure their time differently than traditional faculty. They may prefer a reduced teaching load or condensed teaching schedule (e.g., short courses) to build in maximum flexibility for co-development. In line with the expectations of engagement-focused institutions, they may also have a more expansive view of the “ideal” products of academic productivity.

3. **Engagement leaders’ real-world impacts pay dividends for society and the university.** Engagement leaders together with their partners enhance institutional prestige, impacting communities and habitats, demonstrating the relevance of academic work to society, providing experiential learning opportunities, unlocking new sources of funding, and influencing scholarship and practice across fields. All these contributions help attract the top-level faculty and impact-oriented students.
They may also prove critical for attracting philanthropy, as alumni and foundations prioritize a visible, measurable social return on investment [7].

**RECOMMENDATIONS FOR ELEVATING ENGAGED LEADERS**

The work of engagement professionals is already core to the missions of many academic institutions. However, for those in non-tenure track positions, employment can be tenuous due; financial and administrative realities and expectations or shifts in deans’ or university priorities regularly imperil their positions and, therefore, their inclusion within the academy. Additionally, norms and practices within academia can impede their success [8]. But there are feasible, attainable reforms and immediate steps universities can take to support and foster engagement leaders.

**Fund engagement work**

**Challenge:** Many engagement leaders depend heavily (if not exclusively) on external grants to fund their own salaries, the work they do, and the staff and students they employ. This can create perpetual uncertainty about the stability of their employment [8, 9]. More importantly, it directly impacts their ability to drive mission-critical work by inhibiting the development of long-term, external relationships. Engagement leaders demonstrate the entrepreneurial spirit universities prize, yet they understandably have trouble building long-term research capacity when their funding is insecure.

**Opportunities and Bright Spots:**

- We recommend baseline funding for engagement-oriented positions from internal (non-grant) budgets, along the lines of two months’ annual hard funding to public engagement and grant-writing activities. The Institute on the Environment at the University of Minnesota, as an example, uses a combination of university core support, philanthropy, and returned indirect funding for this purpose, while the Nicholas Institute for Environmental Policy Solutions at Duke University uses a combination of institutional endowment, core support from the Office of the Provost, and philanthropic gifts (e.g., from board members).

- Virtually every grant program, anywhere on the spectrum from basic to applied interdisciplinary research, has some room in personnel budgeting to partially support engaged scholarship as we have defined it. Institutions should incentivize grant-seekers thoughtfully integrating this work into their external funding requests.

**Establish clear promotion pathways**

**Challenge:** The myriad positions in which engagement leaders sit often lack clear promotion pathways, making it difficult to build enable engagement leaders to target and sustain scholarship aimed at impact, filling gaps between ideas or solutions and their implementation. Successful co-production and basic talent retention demand creative budgeting and human resources approaches, since the needs of real-world partners rarely align with academic calendars, requirements for tenure, journal publications, normative academic language, and typical science funding models or reward systems.
a career in ways that parallel the security and stability of the tenure-track system [6].

**Opportunities and Bright Spots:**

- Create thoughtful career ladders with clear benchmarks for promotion for engagement professionals, regardless of where they fit in faculty/staff hierarchies or job title regimes. The University of Minnesota’s aforementioned Institute on the Environment recently launched career and promotion pathways for all its research professionals, including a shift toward multi-year contracts which increase in duration given seniority. Promotion is determined through incentive structures that emphasize societal impact, public engagement and partnerships, and impactful interdisciplinary, community-engaged scholarship. These new policies have allowed high-performing engaged leaders to secure multi-year contracts and the recommendations are being integrated into new position descriptions.

- Create an “engaged scholar advancement task force,” charged with, for instance, conducting an audit of HR policies (academic as well as professional or unionized staff) to ensure incentives align with engagement.

- Assess the current pool of engagement leaders to better understand who fills these roles and how they are contributing to the work of the engaged university. Conduct a baseline survey and then follow up to monitor success and challenges over time.

- Develop a recruitment and retention strategy specific to engaged leaders (see Chapter 7: Diversity, Equity, & Engagement). At the University of Washington, the Office of Academic Personnel notes that those holding the job title Professor of Practice must demonstrate a distinguished track record of accomplishment, yet they do not have promotion or voting rights, their positions are of limited duration, and their positions must be sparing. At Duke University, on the other hand, the Nicholas Institute for Environmental Policy Solutions created a new set of positions (program director, policy associate, and senior policy associate) specifically to bring in engagement leaders at multiple levels. There, the job descriptions are clear and tailored to the needs of engagement work.

**Allow engagement leaders to be PIs on grants**

**Challenge:** Though funding agencies rarely impose such limits, universities tend to require principal investigators (PIs) on grants to be tenure-track. This handicaps many engagement leaders, limiting their ability to fundraise and build independent research programs and tying them to tenure-track faculty partners who may have limited capacity, skills, and interest in engaged scholarship.

**Opportunities and Bright Spots:**

- A number of public institutions already use a set of predetermined and transparent criteria to select non-tenured engagement scholars who should be given PI status. This suggests private universities can look to their public peers for best practices, such as clear, published requirements for the achievement of PI status.
Provide sabbatical-like opportunities for engagement leaders

**Challenge:** Engagement leaders, like other non-tenure track faculty and professional scholars in most universities, are not offered sabbaticals, which are immensely valuable to both individuals and their institutions. For example, sabbaticals might enable secondments into government or NGO positions, prestigious fellowships, writing and speaking pursuits, or renewal of applied skills and networks, all of which could elevate institutional prestige and real-world impact.

**Opportunities and Bright Spots:**
- Similar to sabbatical faculty programs, encourage periodic opportunities for experiences outside the university that further the capacities of engagement leaders in scholarship and/or engagement and provide financial support. Such competitive programs could be supported by indirect cost returns or by targeted fundraising.
- Integrate these opportunities into job descriptions and benefit packages to better expand the hiring and retention of engagement leaders.

Provide endowed positions or fellowships to engagement leaders

**Challenge:** Where engaged leaders are not supported by “hard money” budget lines or sustained capital campaigns, fundraising rather than strategic impact can drive their work, making it difficult for them to build the long-term relationships and programmatic capacity necessary for external impact.

**Opportunities and Bright Spots:**
- Under the direction of university leadership, development professionals should think creatively about endowed, continuous capital campaigns or other sustained funding models for positions (academic or professional) that drive the enduring, measurable impact of engagement professionals in institutions and communities. Philanthropic “bang for the buck” may be even greater if targeted at a variety of career stages or if endowment funds are sought from a greater variety of donors or funders.
- For example, Boise State University offers its donors the option to fund an Endowed Lectureship that “provides supplemental funding to support the scholarship, teaching, research, outreach and public service activities of a college, department or program” at a substantially lower donation level than is associated with chair endowments. Similarly, engagement-centric postdoc, graduate, or staff fellowships could offer high societal impact relative to the cost of traditional faculty lines.

Cooperate on mission-driven fundraising

**Challenge:** Engagement scholarship often requires fundraising through foundations or private individuals that goes beyond integration into existing traditional scientific grants. Universities with strict fundraising rules can increase internal competition across schools and departments, making it difficult to fundraise for interdisciplinary engaged scholarship.

**Opportunities and Bright Spots:**
- Inspirational, mission-driven funding campaigns can be built using a cooperative model...
working to raise resources to meet multiple missions across campus (e.g., education, research, and engagement). For instance, the highly salient challenges of sustainability and climate change might engage expertise and capacities across a university, while funding is often targeted by position, program, or college.

- Foster intentional communities of practice on and off campus, in which engaged scholars—regardless of university rank, title, or status—meet regularly to discuss the work of engaged research, learn and share best practices, work out collaboration issues, and strengthen networks. Prioritizing and regularly scheduling these activities builds trust, respect, and shared values and aids the university community in recognizing the value and contributions of all engaged scholars.

- Demonstrate the value of engagement leaders’ experiences in diverse ways. Recognizing the skills of engagement leaders and prizing their time outside of academia by hiring, adequately supporting, and celebrating them sends a signal that their work matters and sets up a virtuous cycle in which more will sign on to do the work of the engaged university. This increases engagement leaders’ career mobility and flexibility alongside faculty, professional scholars, staff, and students.

- Recent climate and sustainability focused programs at a number of the Beyond The Academy partner universities (e.g., University of Arizona, Stanford) that encompass engaged scholarship have been/are being funded as major institutional initiatives built to coordinate fundraising across schools and units.

Develop a shared culture of engaged scholarship across various position types within the university

**Challenge:** A longstanding cultural divide between university faculty and staff creates inefficiencies in engaged scholarship and impact by creating friction and reinforcing unhelpful power dynamics rather than building potentially ground-breaking collaborations [10, 11].

**Opportunities and Bright Spots:**

- Incentivize and promote a culture of shared value in engaged leadership (see University of Alaska, Fairbanks Spotlight on page 80).

- Provide clear definitions and examples of what impact means in the context of linking research with partners outside the academy. The Gund Institute for Environment at the University of Vermont developed a shared theory of change (see glossary) and a list of desired impacts that were applied to all affiliated researchers.
DUKE UNIVERSITY’S NICHOLAS INSTITUTE FOR ENVIRONMENTAL POLICY SOLUTIONS

Founded in 2005, the Nicholas Institute for Environmental Policy Solutions is designed as a two-way bridge between academia and decision-makers. It endeavors to provide timely, non-partisan research, tools, and facilitation support to help address environmental challenges. Within Duke, the Institute sits under the Office of the Provost and is designed to draw expertise and insight from all the schools (Law, Engineering, Environment, Public Policy, Divinity, Arts and Sciences, etc.).

The Institute’s senior staff are non-tenure track engagement leaders, primarily dually appointed to the Institute along with the professor of practice, adjunct, and lecturer appointments at partner schools across campus. Senior staff are supported by a team of earlier career engagement leaders holding policy and research associate positions.

Unique attributes and strategies support the engagement, co-production, and impact-focused work of the Institute.

**An institute built for co-production and engagement**

- The Nicholas Institute was established as a separate unit built entirely around an external engagement and impact mission that aligns staff incentives and project selection (research) around these goals.

- It selects engagement staff for their diversity of academic and non-academic experience, as well as their ability to bridge external audiences and academic research.

- It enables staff to be effective co-producers because they are not tied to a specific set of academic expertise (they can partner with experts across campus or outside Duke); can be flexible in terms of research topics and deliverables (policy briefs and online tools, in addition to peer-reviewed papers); and have opportunities to assess the needs of relevant decision-makers and make relevant contributions.

- Staff evaluation and promotion are based on success in developing and completing successful co-produced deliverables with key partners, not peer-reviewed papers.

- Supported projects are selected on the basis of their potential for impact and fit with the expertise and capacity of the Institute and Duke partners.
Institutional support

- Funding from an institutional endowment and from the University’s strategic funds (from indirects) covers around 50% of the Nicholas Institute's costs, supporting engagement staff and providing seed funding to enable researchers to follow the work rather than the funding.

- **Equity in compensation.** The salary of the senior engagement leaders sits between the average salaries of the associate and full professors (higher-tier tenure-track positions) at the University.

Faculty appreciation

- Engagement leaders are respected for the networks and knowledge they bring, encouraged to teach courses, bootcamps, and guest lectures across campus to share their on-the-ground experience with students in many disciplines.

- Engagement leaders from the Institute are brought into thought leadership positions, helping to develop a new, campus-wide initiative on climate change.

Sabbatical opportunities

- The Institute’s engagement leaders are regularly invited to participate in sabbatical-like opportunities including secondment into government positions or participation in Fulbright fellowships to build bridges with new stakeholders and experts. Currently, these opportunities require external foundation support, however, which limits their uptake.
UNIVERSITY OF ALASKA INTERNATIONAL ARCTIC RESEARCH CENTER (IARC)

Founded in 1999, the International Arctic Research Center (IARC) at the University of Alaska’s flagship research campus in Fairbanks (UAF) was created through a joint agreement between the United States and Japan. Its mission is to “demonstrate our ability to solve, jointly, problems that are beyond what any one nation can address.” Over time, IARC has expanded its circumpolar reach, while adding talent to sustain critical relationships, networks, influence, and relevance within Alaska.

Established as a group focused on basic research, in recent years the IARC has increased its emphasis on policy-relevant, community-oriented research. Core staff are supported by a handful of large federal grants that have built IARC’s reputation—across political and cultural divides—for developing and translating climate scenarios for agencies, communities, tribes, and businesses. The implications of their research hold promise for remote villages as well as global capitals. Today, the IARC employs more than 100 scientists, analysts, students, and staff who share their abundant talents and resources throughout the community, actively cultivating relationships and skills for diverse partnerships, regardless of their status as tenured faculty, other faculty, or staff.

The IARC value proposition rests on the recruitment, retention, and advancement of engaged leaders in the following domains:

**Research**

IARC researchers have built long-term relationships with Arctic Alaska coastal communities on the front lines of climate change. The Alaska Arctic Observatory and Knowledge Hub (AAOKH) provides resources, tools, and scientific information to communities, making them full research partners in the research process. Community members bring deep connections to place and integral knowledge of traditional marine and land resources. IARC researchers co-produce research with communities via tribal and community meetings and Indigenous student mentoring, collaborating and sharing thousands of field observations and measurements of changes in ocean, snow, ice, and ecology.

**Education**

Embracing a partnership with the UAF Honors College, IARC co-created the Climate Scholars Program, which empowers undergraduates, pursuing any major, to become action-oriented, climate change leaders. IARC research faculty hold joint appointments with the Honors
College. This allows them to retain externally funded research workloads driven by societal relevance and stakeholder priorities, augment their salaries, all while interacting with students to extend their geographic and generational reach.

**Service**

The flexible structure of IARC allows its scientists, communication experts, and grant-funded personnel—regardless of title or rank—to be visible and valued across the state. Sector-spanning, high-impact initiatives under the IARC umbrella include the Alaska Fire Science Consortium, the Alaska Climate Adaptation Science Center, the unique Community Partnerships for Self-Reliance program, and many more.
CONCLUDING THOUGHTS

These are “all hands on deck” times. Academia must push all of its talents and capitals to the fore to meet urgent challenges like sustainability and inequality. Acknowledging, valuing, and better supporting engagement leaders is essential to fostering university research that informs and accelerates active, diverse responses to societal problems. Many institutions have taken positive steps, and these must be scaled and shared as quickly and widely as possible. Cultivating engagement leaders is one among many pragmatic, actionable steps to building engaged universities.

REFERENCES


11. Devereaux, D., McAndrew, B., Pratt, C., Stevenson, R. & Wilfert, R. Transforming Staff-Faculty Relationships: Closing the Great Divide. (2019).
UNIVERSITY goals related to diversity, equity, and inclusion (DEI) are deeply connected to university policies around engagement [1]. Not only are diverse scholars more likely to incorporate underrepresented groups in their research and to use interdisciplinary methodologies, engaged scholars are more likely to come from groups underrepresented in academia [2–4]. This means institutions that recruit and retain diverse scholars are more likely to deliver impactful and innovative scholarship that is attentive to the needs of historically marginalized communities [5]. At the same time, these scholars are more likely to be negatively affected by entrenched institutional biases and discrimination inside and outside the academy [6, 7].

If diverse forms of expertise are needed to fulfill goals of public engagement, especially across the wide range of issues and constituencies affected by current societal challenges, university diversity, equity, and inclusivity initiatives are natural spaces in which to foster engagement. But how?

ENGAGEMENT & IDENTITY

Researchers are often motivated to participate in engaged research by their own identities, life experiences, and values. Women and faculty of color are more likely to have humanistic and service orientations that motivate greater commitments to teaching and outreach, including inclusive pedagogical practices and research agendas that center the needs of local communities [8]. Diverse identities also contribute to more diverse scientific knowledge. A recent, large-scale bibliometric analysis confirms a relationship between the characteristics of scientists and the science they produce, underscoring the need for institutions to hire diverse researchers in order to produce broad and diverse scholarship [9]. To acknowledge the synergies between diversity, engagement and the public service mission of institutions, Strum et al. 2011 recommend acknowledging and amplifying the connections between “(1) student success with faculty diversity, (2) faculty diversity with community engagement and inclusive pedagogical practices, (3) faculty diversity with engaged scholarship, and (4) engaged scholarship with institutional rewards and supportive institutional cultures.”
RECRUITMENT & RETENTION

Departments and universities seeking to attract, hire, and retain engaged researchers and increase faculty diversity, must be willing to foster climates in which these researchers thrive. This requires assessing current hiring and retention practices and aligning strategies with the twin goals of engagement and inclusion. It also entails a close look at review and promotion policies, as noted in earlier chapters. This is because engaged scholars can be disadvantaged in academia, from the job market to retirement, due to the challenges associated with co-developed research, including the previously outlined disparities in funding opportunities, publication rates for engaged scholarship, and recognition for co-authored work [10–12]. Standards for recruitment, retention, and promotion can either perpetuate or minimize these biases.

Researchers involved in community engagement may approach their work from different epistemological perspectives than more traditional colleagues, and so institutional and disciplinary reward systems must be tailored to regard such perspectives with esteem, or inclusivity goes out the window [13]. University leaders can create more inclusive academic cultures by considering embedded norms of excellence and prestige and whether they might implicitly discourage innovation, collaboration, and engagement [1, 14–16, 17, 18].

For instance, institutional biases affecting retention include inequities in workloads among faculty, staff, and researchers that can impact salary decisions, work satisfaction, and promotion decisions. We know that women tend to spend more time on high-effort service activities and less time on research than their male peers [3, 6, 19], while faculty from historically underrepresented racial groups spend more time mentoring students and on diversity work than their majority colleagues [20–22]. These factors compound at the intersections of race, gender, and other identities [20, 23]. Valorization and recognition of engagement is important, but the retention of engaged scholars is dependent upon policies that support cultures of work equity, including modified service or teaching expectations.

“Minority faculty are... pulled between the commitments to communities of color almost all bring with them to the academy and a departmental culture which tells them either directly or mostly indirectly to abandon those ties or risk professional suicide.”

George J. Sanchez, 2004 [7]

In tandem with the recommendations regarding tenure and promotion (see Chapter 4: Tenure & Promotion), current literature on the recruitment and retention of diverse and engaged scholars offers fruitful suggestions for engagement-oriented institutional change.
Chapter Seven: Diversity, Equity, & Engagement

RECRUITMENT

- Center job descriptions around engaged work, interdisciplinarity, and diversity. Job descriptions with targeted statements about departmental culture and available supports for engaged scholarship [24], as well as departmental preferences for exemplary mentoring, teaching, outreach, and community engagement signal that the hiring committee is serious about university commitments to DEI and engaged research. When crafting job posts, cite institutional-level strategic plans for diversity and inclusion, policies promoting engaged scholarship, and/or initiatives that foster interdisciplinary collaborations.

- Use targeted recruitment strategies. When distributing job advertisements, be attentive about reaching out to organizations, networks, scholarship programs, and doctoral programs, even non-traditional ones, that prioritize community engagement [25] and have high participation by scholars from underrepresented groups [26, 27]. University diversity and inclusion offices may have lists to use as starting points for outreach [28].

- Consider cluster hiring, the practice of recruiting multiple faculty to join a cohort within or across programs, as a means to recruit a small community of engaged scholars across departments or research priorities [29, 30]. When hires are well supported and promotion policies align with hiring goals, cluster hiring often results in improved faculty diversity and rates of retention, increased collaboration and community engagement across campus, and expanded research and mentoring opportunities for students [29, 31].

RETENTION

- Encourage faculty in efforts to recruit and mentor diverse students and provide resources to improve inclusive pedagogy and integrate community engagement into coursework. Place greater value on these activities, use the guidelines in earlier chapters to innovate metrics to account for them, and promote shared responsibility for building a more engaged and inclusive program year by year [21].

- Provide new faculty and researchers with mentorship opportunities that align with their professional goals for engagement. Students and incoming faculty will need multiple mentors to gain diverse perspectives as they navigate professional development at each stage of their education and career [31, 32].

- Foster a culture of transparent communication and honest, constructive feedback. This dovetails with the call for promotion criteria and timelines. Encourage researchers to develop individual professional development plans and use their plans as the basis for their annual evaluations. Annual reviews and promotion guidelines that value multiple forms of scholarship produce more balanced reward systems and improve faculty satisfaction [33] (see Chapter 4: Tenure & Promotion).

- Increase transparency around faculty and staff workload. A randomized control study of 30 academic departments across the U.S. finds, for instance, that developing a data dashboard showing faculty workload distributions across a range of activities results in a greater sense of fairness, action
readiness, and self-advocacy in participating compared to control departments [34] (see Spotlight on page 89).

- Rather than relying on market competition to determine salary increases—that is, requiring competitive outside offers before considering salary raises [35]—consider programs aimed at the preemptive retention of faculty and staff, mechanisms to address salary equity and salary compression, and clearly defined alternative advancement pathways for faculty and staff who leverage unique skills and professional goals [36, 37].

- Set clear departmental/institutional goals for growth and progress in the areas of DEI-minded hiring and retention, and decide how to measure success. Climate surveys and exit interviews may need to be amended in order to better predict or explain retention success; intentions around leaving or staying are best captured at granular levels through qualitative or mixed methods [38, 32, 37].

- Keep in mind that base salary is not the only way to reward and promote engaged work. Provide supplemental funding and support for such scholars in the form of course releases, fellowships, dedicated community-engagement funds, and professional training in community-engaged scholarship [39].
FACULTY RECRUITMENT

The University of Michigan’s Advance Program provides research-driven best practices to recruit for diversity and excellence. A component of this program is STRIDE (Strategies and Tactics for Recruiting to Improve Diversity and Excellence). STRIDE is designed to help faculty produce diverse candidate pools and run effective searches through strategic recruitment, inclusive position descriptions, search committee training, and best practices in managing visits and negotiation with candidates [40, 41]. Institutions like Rutgers have adopted approaches developed in STRIDE, especially the invitation “to break exclusionary habits when topics, methods, or epistemologies differ from those in the center of their disciplines” [42]. The Advance Program’s detailed 2018 handbook on faculty searches and hiring practices is available online at https://advance.umich.edu/wp-content/uploads/2018/10/Handbook-for-Faculty-Searches-and-Hiring.pdf.

In addition, the University of Michigan has created research collaboratives designed to create communities of practice and to “serve as an intellectual hub and social reference group that will strengthen the collective work of new and existing faculty who are dedicated to anti-racism” [43]. These incubators provide funding to interdisciplinary teams and opportunities for students and postdocs to work with faculty on engaged scholarship and social action.

Change can happen with:

- Awareness and understanding
- Resistance to status quo
- Effective strategies
- Sustained effort

Individuals create the structures and individuals change the structures.

WORKLOAD EQUITY

Inequities in the distribution of academic service can lower productivity, increase burnout, and decrease retention, especially for women and underrepresented minority faculty [44]. Even small differences in service loads accrue over time and can contribute to disproportionate rates of faculty promotion and a less diverse professoriate. Department conditions that support equity (e.g., transparency, clarity, and flexibility) are significant, positive predictors of faculty satisfaction and retention [15, 45, 46].

The Faculty Workloads and Rewards Project at the University of Maryland aims to improve organizational policies and practices that shape equity in workload for all faculty. The multi-year project worked with over 50 academic departments in the U.S. to evaluate how organizational policies and practices contribute to the distribution of faculty workloads, and to measure the success of interventions designed to promote more equitable department workload. Participating departments developed simple, easy-to-read displays of different faculty work activities (e.g., service, teaching, and research) as a means to increase transparency across faculty and identify potential equity issues in their units. Additional interventions included allocating differential credit for work of higher or lower effort, teaching credit swap systems that define the teaching workload expectations for all faculty, rotations of time intensive roles, and differential pathways for faculty to meet their instructional workloads.

The researchers observed that these interventions enhanced transparency, promoted greater clarity, and increased accountability. Faculty in participating departments were more likely to report feeling satisfied with their teaching and service loads and agree that their workload was fair [47, 48]. When faculty members feel their work, and the context around it, is recognized by colleagues, they are more likely to be retained, productive, and satisfied [47]. A report outlining the project methodology, results, and examples of workload equity interventions is available at https://advance.umd.edu/fwrp/home.

Example of the committee service matrix as adapted from Equity-Minded Faculty Workloads: Worksheet Booklet [46]. Faculty would collectively agree on service activities and expected time commitment and track participation over time. Expectations for individual faculty service could be tailored to rank, teaching load, and research expectations.
CONCLUDING THOUGHTS

Universities committed to engaged scholarship must also be committed to fostering a more diverse, equitable, and inclusive workplace for underrepresented scholars. But these scholars face institutional biases and discrimination that disadvantage them and prevent them from being on the same playing field as traditional scholars, from hiring to promotion and retention. Universities eager to tackle current societal challenges will need diverse forms of expertise, and changing practices to address biases and barriers is a necessary first step. Institutionalizing engagement can be an effective way to promote diversity, equity, and inclusion, suggesting there may be benefits associated with intentionally linking strategies for promoting DEI and engagement.

REFERENCES


