

College of Science, Oregon State University

# Strategic Planning Process

Concept Paper: Outreach and Engagement

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## Sub-group Members

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## Executive Summary

Our charge with this concept paper was to identify trends and strategic themes for outreach and engagement within today's context. The College of Science is dedicated to serving our community and providing pathways for developing science literacy and engagement. By expanding our outreach, we aim to create access to science education and research, foster community relationships, and develop needed services.

## OSU context

Outreach and engagement are at the forefront of OSU's broad vision. Goal 3 of the University's 5-year strategic plan (SP4.0) calls for the following:

### **SP4.0 GOAL 3. SIGNIFICANT AND VISIBLE IMPACT IN OREGON AND BEYOND**

Oregon State will actively engage with the communities we serve, from rural and urban Oregon to every part of the globe, bringing knowledge, experiences and cultures into the university; promoting the vitality of our communities and the quality of life for Oregonians; and being of service to government and industry. We are **distinctive** for our:

- Reputation as Oregon's statewide university.
- Programs that serve as learning laboratories for communities to engage with Oregon State faculty and students. Economic development impacts that originate from OSU research and innovation.
- Inclusive partnerships that connect our scholars and students through global networks and exchanges.
- Highly engaged alumni and friends who serve as ambassadors for our educational programs and research endeavors.

The importance of faculty in meeting OSU's outreach goals is made clear by a **cross-cutting call** in GOAL 1 (RESEARCH):

Faculty who are actively engaged in public scholarship and outreach.

Of the 20 **actions** set out in SP4.0, the following one is most singularly aligned with outreach and engagement:

Retool our approach to university-industry and alumni, parent and friend engagement.

The **tactic** for addressing this action item is to "implement an agreed model for aligning engagement efforts among campuses, colleges, the OSU Alumni Association, and the OSU Foundation."

SP4.0 also includes the following **achievable strength** (Goal 2030) related to outreach and engagement:

We have a strategic presence in Oregon's urban and rural areas and offer programs that serve the needs of learners, businesses, and communities. In 2020, Oregon State University was awarded its [second Carnegie Community Engagement Classification](#), a designation that acknowledges the strength of OSU's commitment to community engagement and engaged scholarship among Oregonians statewide.

SP4.0 finally also includes several **metrics** for annual evaluation of GOAL 3. These include:

- the demographics of OSU degree recipients;
- the number of courses and credit hours delivered at external locations such as Portland Center or HMSC and through continuing education;
- our rural student enrollment;
- the number of companies and partners with whom the University has engaged in contracts.

These metrics, though valuable for the University to assess SP4.0, seem distant to the metrics that may be needed for COS to annually evaluate its 5y plan pertaining to the College's outreach and engagement. Which metrics might be effective for



Driven by unbridled curiosity, our students and scientists unlock how Life and the **Universe** work. Together we will:

- ignite a passion for science in **all learners**,
- thrive in a data rich **world**,
- Improve human and **ocean** health,
- develop sustainable materials to power **our planet**, and
- move discoveries from the lab to **people's lives**.

## Values

- Our **people**—our students, faculty, staff, alumni—and their successes.
- Fundamental research for a better **future**.
- **Collaboration** to solve the **world's** problems and create opportunities.
- Meaningful experiences that transform **lives**.
- Outstanding teaching for engaging **learners**.
- **Diversity** to **build** the best **teams** to do the best science.
- An **inclusive community**.
- Scientific literacy **for all**.

## Current COS Strategic Plan for Outreach & Engagement

*What transformative ways of engagement have we invested in? What novel and innovative approaches are we known for? How have these contributed to increased learning, improved access to education and student success?*

The most recent COS strategic plan (2015-2020) set into place a central Goal 3 along with 5 sub-goals related to outreach and engagement. These goals are listed below in **bold**, followed by Committee reflections spurred by the above questions.

**COS Goal 3. To excel in outreach, engagement, visibility and economic development.**

**3-1. Expand partnerships with OSU Outreach and Engagement and Research Impacts Network (ORIN) to promote public understanding, lifelong learning and civic engagement.**



Though prominently highlighted in goal 3-1, ORIN seems to currently have minimal presence in the Research Office as well as little COS involvement. See <https://research.oregonstate.edu/ord/orin/orin-list-participant>.

COS is nonetheless deeply and successfully involved in programs that promote public understanding of science. These programs range from the pre-college SMILE program (which has been around for some years) and the Oregon STEM Education Plan which is just underway with a 5-year plan as of March 31, 2022, to the college's many public lectures from the recurring Distinguished Lecture Series and the Gilfillan Lecture to assorted public library talks, and assorted special science lectures and events to which the public is invited. Other COS programs as highlighted in our recent annual reports include DSW Discovering the Scientist Within; Biochemistry Blast for High School Students; Oligotrophic for SMILE; Dam Proud Day; Total Solar Eclipse Day 2017; Discovery Days; Juntos Family Weekend; Hatfield Marine Science Center experiential learning; Family Science and Engineering Nights; and our OMSI partnership. Please note that the committee's time was short and there was no practical way to make this list complete. Apologies to any worthy entry that has been left off. A central location for gathering and updating such information in an internal web site is discussed in Section VII below (Strategic Themes).

### **3-2. Enhance engagement of key external constituents, including alumni and friends, to advance and support our mission.**

Depending on the definitions one employs, "key external constituents" and "friends" have certainly been engaged. For example, our most recent COS Annual Report (2019-21) describes (on p. 42) outreach to alumni, friends and the public via our Distinguished Lectures, Town Halls, and our co-sponsorship of the Provost lecture; and then (on p. 54) the John L. Fryer Aquatic Animal Health Laboratory (primarily CAS funded) is cited for hosting interactive community outreach, exemplifying engagement with external constituents. A point that will be made below (see Strategic Themes for the Future) is the value of defining terms, which will help fill gaps in the planning, program development, marketing, and the formulation of helpful metrics of progress.

**3-3. Engage more deeply with policymakers and government agencies on state and federal initiatives.**

This goal was met and exceeded by TRACE.

While other data were not easily at hand to our committee, there are certain to be many other areas of engagement/consultation that went on between COS and policymakers and agencies, including interdisciplinary initiatives, program development, and policymaking contributions.

**3-4. Enhance marketing and communications efforts to show how our contributions address today's most pressing problems and advance science.**

There may be areas in which our marketing and communication of our outreach and engagement could be improved. Some suggested areas for discussion will be made below.

The 2017-19 COS annual report does cite, on p. 39, examples of our scientific communication to broad audiences (e.g. the Gilfillan Lecture series) as well as our communication to more specialized audiences by our faculty at global venues and conferences.

An area of outstanding communication is the wide and effective dissemination of our Diversity Action Plan that aims to build inclusive excellence in all we do on campus and beyond.

**3-5. Drive economic development by nurturing innovation in education and by helping to build an ecosystem for successful translation of fundamental research for societal benefit in partnership with the OSU Research Office.**

The emphasis on the Research Office in this subgoal 3-5 harks back to the ORIN initiative in subgoal 3-1, which appears to idle. But there are many other examples of addressing 3-5, including conferences, showcases and other events sponsored on campus. For example, the Annual Report 2017-19 (on p. 38) includes the following COS-sponsored or co-sponsored campus events that were effective in translating fundamental research to technological partners and other interested participants: Symbiosis 2018, Genetic Code Expansion 2018, Crown Gall 2017. Faculty and students also attended many outside venues for technological

translational sharing of their fundamental research. Other examples of innovative economic development beyond campus are the crosscutting startups highlighted in the Research and Innovation concept paper, including e-MSion Inc., Vallisacor, Microbiome Engineering, nexTC and Inpria.

## Current Partnerships & Online Education

*What partnerships have we developed?*

Our partners range from pre-college students and their families helped by our pre-college programs, to companies, academic institutions, and government agencies involved in our policy making and technology transfer activities. The committee does not have ready at hand access to an undoubted large number of other college partners. This gap in data and metrics is worth filling and will be considered further below (see Strategic Themes for the Future).

*What is our current status in online education?*

Ecampus as it pertains to OSU coursework and curricula is best addressed by the Concept Paper on Education. But online outreach of an educational nature is an opportunity that will be considered further below (see Trends in Higher Education)

## Equity, Access & Inclusion (EAI)

*Is there equity in access and achievement in our outreach and activities?*

**For our outreach and engagement activities we are guided by the COS Diversity Action Plan, continually questioning our actions with guidance questions like the following:**

- In our admissions outreach, are we acting to lessen and eliminate ingrained biases and barriers to student recruitment and admission?
- In our outreach to other educational institutions, particularly including HBCU's, MSI's, are we building professional and community relationships that will help us in our recruitment of underrepresented students and faculty?



- In our outreach and engagement with professional entities, including companies, professional societies, and government agencies, are we guided in all of our conversations, negotiations and agreements by the COS Diversity Action Plan?
- In our public outreach and engagement, are we creating opportunities and pathways that will welcome and engage a wide and increasing diversity of people in all our activities?
- Are we actively making ourselves accessible and available to all children and all families in our outreach and engagement activities?

### Concrete actions to improve EAI in our outreach & engagement:

- **A strong recommendation:** We should look toward the NSF “Includes” program, to seek grants for engaging tribal CC’s and other MSI’s. External funding should also be sought from the NSF Racial Equity in STEM program.
- **Another strong recommendation** is to establish a baseline data analysis to identify outcome gaps in our outreach and engagement mission, disaggregated according to the social identities of the people we are reaching out to. See DAI 4.1  
<https://science.oregonstate.edu/diversity-plan/goals/goal-4>
- **Also strongly recommended:** OSU has articulated its goal to consider pursuit of federal recognition as a Hispanic Serving Institution (HSI) and/or an Asian American and Native American/Pacific Islander Serving Institution (AANAPISI). An OSU task force will review data, literature and best practices and broadly engage with community members, to explore institutional adaptations, innovations and investments necessary to seek federal recognition as an HSI or AANAPISI and make recommendations for consideration by the President and Provost. COS should partner with our Office of Institutional Diversity to internally engage our community to clearly articulate our vision and benefits to us in this recognition.

### Lessons Learned

*What have we heard from our community in this area? What do our strategic partners think of our work in this area? What are lessons learned?*

While outreach and engagement are undoubtedly popular items in the public perception of the University, some discussion we heard in our engagement groups suggested that COS might not be widely identified as a leader in outreach and engagement activities. If indeed a strong branding of COS outreach and engagement has not been achieved, this is an opportunity gap with actionable remedies (see Strategic Themes for the Future below).

## Trends in Higher Education

*What are the national trends? International trends? What are the projected growth markets? What challenges and trends do you see as potentially affecting or influencing how our college provides its services and conducts its mission? What key issues must the College of Science deal with and what opportunities should the college pursue?*

- **E-outreach and E-engagement.** A foreseeable and formidable set of online, electronic, and hybrid opportunities are likely to greatly expand the scope and range of outreach and engagement along with our online educational reach to outside (unenrolled) learners. Artificial intelligence, virtual spaces and fast internet to all communities are bound to shape how we can provide outreach in the future. Will we stumble just to keep up as these technologies advance, or will COS foresee the opportunity and become an early innovator, helping to propel a growing market for E-outreach and E-engagement products?
- **Outreach incentives for faculty.** A national trend running in parallel with the diversification of higher ed is the amplification of community outreach and engagement as a *means* of diversification. How better to build a diverse college campus than to broaden our horizons by reaching out to communities? Given the interests of academic faculty in these important issues of diversity and community, national surveys have unsurprisingly shown that faculty are incentivized when outreach and engagement are included among their position responsibilities. (See Demb and Wade, reference 2 below, to learn more about the incentivization that takes place when outreach and engagement are valued as meritorious work rather than simply encouraged as voluntary self-satisfying pursuits.

- **Outreach appointments.** A trend that COS is pioneering is the exploration of types of academic appointments, including Professor of Practice and Professor of Teaching, that are well-suited for outreach and engagement. Another title to consider would be something along the lines of Professor of Outreach and Engagement. Such specialized Professors along with our incentivized faculty (see preceding point) could supply lots of power to the strategic initiatives discussed in this concept paper, including high priority and high visibility items such as establishing OSU as an Emerging Tier 1 Hispanic Serving Institution (see Section V Equity, Access & Inclusion, last bulleted item).
- **Outreach infrastructure** (this trend is cross-cutting with the Infrastructure Concept Paper). Outreach and engagement plainly require both human and physical resources. Each particular outreach and engagement program will have its particular requirements for staffing, physical infrastructure, and an operating budget. Nothing surprising there. But a trend toward increasing the efficiency of outreach and engagement infrastructure is exemplified by the **CORE program at OHSU** (see box). With this program, OHSU provides an administrative arm and toolkit for helping faculty find and involve community members in research and outreach projects, many of which are medical studies that reach out with community education and/ or involve study participants from the community. COS and our college members might not need something of this precise specification, but the general idea of assembling an infrastructure that includes FTE at the college staff level along with a web presence for outreach and engagement might be a good start for a COS-tailored toolkit to help with outreach and engagement projects in every COS department.

The OHSU toolkit is part of the CORE (Community Outreach, Research, and Engagement).

See <https://ohsu.edu/community-outreach-research-and-engagement>

The toolkit facilitates contacts between faculty and community members.

The toolkit helps those in an institution-community arrangement with goals such as these:

I want input from a community

I want data from a community

I want data about a community

I want to share my research with a community

- **International trends in outreach and engagement?** A strongly positive trend that should be helpful to international outreach and engagement from COS to the rest of the world is automatic, high-accuracy language translation (with transcription). Language translation could greatly extend our reach as a provider of science to solve problems and to promote learned discussion.

Negative global trends include the acute and long-term effects of war, sanctions, climate change, and continued covid outbreaks. It is in our outreach and engagement DNA for OSU and COS to provide education, services and outreach to help with these global problems. Another negative trend, immigration restrictions, might be mitigated to some degree by engaging with colleagues by online relationships in lieu of bringing them to campus with work visas.

## Strategic Themes for the Future – 5 years

*What should we do to improve and fix gaps? What areas of outreach & engagement should we prioritize in the future to raise our impact? What tools and techniques should we invest in the future to achieve inclusive excellence in our mission? What best practices should we adopt in the next 1-5 years to achieve inclusive excellence in our mission?*

The strategic themes for our 5-year plan can be thought of as filling gaps between what we are doing currently and what we hope to do in the future. Listed below are gaps affecting outreach and engagement in COS.

- **Communication gap.** If COS is not widely recognized as a leading college in outreach and engagement, that may mostly be due to a gap in getting the word out and tying it to the college. We have many programs, and many of

them are known and strongly appreciated. But the home for those programs, COS, is less well known. One widely agreed upon strategy, putting it simply and in capital letters, is to Get the Word Out. In today's world this means creation of a focused online presence. COS outreach is everywhere but there is no single place to look it up. And as we get the word out, we need to ensure that we are making ourselves accessible to all the many groups that make up our constituency. This means we need to take care that our message is fashioned to be both technologically accessible and linguistically comprehensible across demographics. To be fully inclusive we will need to share our message in different ways and in different venues.

- (On the way toward getting the word out to the public, a starting point could be an **Outreach & Engagement link** added to the menu bar of the COS Internal web page. This in and of itself is not a 5-year strategy item but it would serve as a data gathering place for the folks who are trying to take outreach and engagement to the next level of success and public recognition. A hoped-for benefit of an Internal outreach and engagement link would be to bring together the different COS Departments into group activities that from their initial planning phases are seen as outreach and engagement contributions to the college.)
- **Measurement gap.** Developing COS metrics for outreach and engagement will be important for measuring the success of our strategic plan. To develop metrics, it will first be helpful to settle on definitions (see the following bulleted point). The metrics we ultimately choose can be of varied forms, whether quantitative, qualitative, or categorical, as long as they are objective. Note: We can get creative when choosing metrics, borrowing from practices we learn from other campuses and colleges. For example COE uses the Portland Center for recruiting events and obtaining metrics, including URM student involvement. COS could also take advantage of our Portland presence to record numbers of Portland metro students who we reach out to and recruit at that location. As we collect metrics, we should be mindful of which categories of people we are keeping track of. This demands careful attention to keying our metrics according to race, ethnicity, gender and sexual orientation while meticulously protecting the privacy of individuals.

- **Definitions gap.** “Outreach” and “engagement” seem like simple terms until you talk to just about anyone else and realize that they are carrying different definitions than yours. In general, there seem to be two main camps of activities that can be summarized as follows: 1) problem-solving outreach, which is similar to traditional extension that takes care of the particular needs of clients. And 2) open-ended engagement, which builds on interactions and spreads across communities. Both of these are modern and important. TRACE, which helps people with a specific testing need, is an example from the first camp. The Distinguished Lecture series, which promotes conversation, is an example from the second camp. Most of the activities that have been discussed in this concept paper seem to belong (in the main) to one or the other camp. Settling on definitions will assist our internal communication and program development. The Carnegie Foundation defines the essence of outreach as, “collaboration between institutions of higher education and their larger communities”. As we refine the definition of outreach and engagement to guide our actions, we need to emphasize how we wish to broaden our reach to communities that have historically and unjustly excluded from university outreach, engagement and extension. Using care in our definitions of outreach and engagement can help to right historical wrongs.
- **Alumni and friends gap.** COS should aim to increase effective communication and collaboration with a wide diversity of outside alumni and friends of the college. COS should aim to increase the perceived value of its academic offerings within these diverse populations as well as by funding and completing research projects which positively impact them directly. Bringing in our alumni to give talks is a superb way of fostering engagement, including representatives of many groups, asking our alumni to help us bridge our communications to others, searching always for new contacts that widen our circle of friends.
- **Institutions gap.** More emphasis could be placed on collaboration with large institutional partners (government agencies, businesses, non-profits, and more) for the betterment of the national and global research problems which impact the economies of the constituencies that OSU’s students and



faculty represent. Particular effort should be made to foster fruitful collaborations with colleagues at minority-serving institutions as well as at institutions that, like us, are working to become minority-serving institutions. We seek the widest engagement possible in the mutual endeavor of sharing benefits created by institutions of science.

- **Global gap.** Global collaborations should be increased to ensure that research has an increasingly global focus and that partnerships which transcend national borders become more common. Given that the faculty and students at OSU represent such a wide range of nationalities and ethnicities, more emphasis could be placed on solving global problems specific to their lands of origin or in assisting students to do this. Our global outreach will often map in parallel with our effort in addressing local and national problems, for as exemplified by the covid pandemic, local actions have global impact.
- **Startup money gap.** One big challenge (always true) is the cost of new outreach. We have SciRIS. What about SciOUT for funding pilot collaborations in science outreach?
- **Grant submissions gap.** Putting two or more departments together on funding efforts will brighten our grant writing success rate for outreach and engagement projects. E&G funding in combination with OSU Foundation participation might provide matching amounts to further increase our success rates. Do we have COS donors interested in funding Outreach and Engagement? Which funding agencies should we target? (NSF has a broader impact portion in every proposal submitted). The [Murdock Trust](#) seems like an excellent opportunity. Might there be grant submissions to support activities that join together outreach and engagement with proposals to enhance diversity and inclusivity? These questions will of course be answered by diligently searching for funding opportunities, perhaps most efficiently by teams working first at the department level and then coming into working arrangements with teams from other departments with collaborative interests.

- **Sustained funding gap.** Another challenge to strategize and mitigate is the cost (dollars and time) of maintaining a successful outreach and engagement program. How do we keep existing programs alive and self-sustaining? Are there practical best-practices revenue models that could bring fees (or suggested donations) to COS in return for value offered to public participants in certain of our outreach and engagement activities?
- **Administrative gap.** An important management issue is setting priorities among our plans for outreach and engagement. Currently, outreach and engagement lands on the desks of numerous faculty and administrators. Is there a way to centralize any of this? While COS has a marvelously eclectic atmosphere where many of our pioneering efforts emerge from the creative initiatives of individuals and departments, executive leadership and administrative help at the college office are welcomed when opportunities mature into larger projects. While the centralization of project management is not likely to be needed for the creative development and enactment of outreach and engagement, there are at least two aspects of our larger outreach and engagement projects that would benefit from COS office and administrative support, both related to reporting. First, our outreach and engagement projects generally need to report to sponsors and the University on their cross-cutting value to other mission areas, including research and education. Second, the value of an outreach and engagement project to inclusive excellence at the COS and University levels could be reported with maximum impact with COS administrative involvement. In return, the small degree of umbrella management and support provided by COS administration would help outreach and engagement teams to help all the other missions of the college. For example, there is hardly a research grant program today that does not require a statement on how the applying institution intends to include and engage the rest of the world with its discoveries.
- **The student energy gap.** We learned from our engagement sessions that our undergraduates and graduate students are fountains of energy creativity when it comes to outreach and engagement. This is reflected by the often intense degree of empathy our students have for the current K-12 students

in the state – our future recruits. Our students are also among our best active inroads to the wider communities we hope to engage in pursuit of inclusive excellence. Our strategic plan can likely unleash this superpower of our student body into ever-building relationships with pre-college families and community members, particularly high school teachers in communities all around the state.

- **Diversity bridge.** As is true in all we do in COS, we seek a diverse and inclusive cohesion in our outreach and engagement activities. We need to view each gap listed above through a diversity lens, searching and focusing on people who have been excluded in the past, magnifying our efforts to include them in the future.

## **References**

1. Ada Demb and Amy Wade (2012) “Reality Check: Faculty Involvement in Outreach & Engagement”, *The Journal of Higher Education*, vol. 83, No. 3 (May/June) 337-366.