PARDEE RAND GRADUATE SCHOOL INSTITUTIONAL REPORT

August 2020

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Introduction

History of the Institution and the Redesigned Program

As we have experienced first-hand with the global pandemic and the movement for social justice and racial equity that started in the United States, but has echoes around the globe, the public policy problems we face today are increasingly complex, interconnected, and rapidly changing. We need to bring new ways of thinking to these problems. One place to start is at the nation's elite public-policy graduate schools. The Pardee RAND Graduate School is positioning itself to lead that change. With our redesigned program, we're not just bringing in new courses, but inventing new ways of thinking about and practicing policy analysis. We're shifting the focus from coming up with solutions to also implementing them.

Pardee RAND has a long history of being in the forefront of leading change in the field. In the fall of 1966, Alton Frye circulated a memo entitled, *The RAND Graduate University* to several of his colleagues at the RAND Corporation. In it, Frye proposed a new direction for RAND, calling for the creation of a university to diversify RAND's opportunities for research, develop independence from a single source of military funding, and to fulfill "the simple, personal sense of obligation which many of us on the research staff feel to the academic enterprise." Four years and countless meetings later in 1970, the RAND Graduate Institute opened its doors under the leadership of its founding dean, Charles Wolf, as one of the original eight schools in the nation to initiate graduate-level programs in public policy.

The world and the nature of public policy have changed significantly since the 1970s, but public policy graduate education has remained remarkably the same even at Pardee RAND. Created with the explicit goal of taking RAND's systems analysis methods and perspective and extending them to civil issues such as education, health, and urban planning, for 50 years Pardee RAND has offered an exceptional, rigorous Ph.D. program in policy analysis. But just as systems analysis needed to become policy analysis, policy analysis itself must develop as a field, capable of addressing a wider range of policy problems riddled with complexity and uncertainty.

In 2015, under the leadership of Dean Susan Marquis, Pardee RAND began a redesign initiative that will enable our school to continually adapt in our ever-changing world. We began with a simple yet profound question: If we could build a public policy Ph.D. program from the ground up, what would it look like? To answer that question, we conducted a year-long series of workshops and discussions across the Pardee RAND and RAND community. This initiative engaged a wide variety of people with interest and equity in the school in designing a collective vision for the school and a pragmatic path to couple actions to that vision.

Under this new vision of a public policy school for the future, the Pardee RAND Graduate School created three new streams of study and action that better align with the policy needs of now. Each policy engagement stream has a unique set of focused learning objectives, requirements, and mechanisms for mastering the skills and techniques students will learn. All of them will

have a new focus on ethics, communication, racial justice and social equity, and bringing new more global perspectives into public policy.

Research, Analysis, and Design Stream (RAD) Enables students to understand complex human systems conceptually and empirically, and harness this understanding to design effective policy solutions. Students in this stream acquire a better understanding of the systemic and dynamic nature of policy challenges, and an understanding of what it takes to accomplish real and sustainable change. The Research Stream is an enhanced and updated version of our original program with its emphasis on analytic tools and methods. The changes to this stream will overlap with school-wide program shifts, reflecting the increasing emphasis on critical skills and perspectives and new program elements such as policy design studios and bootcamp, both of which are discussed below.

Community-Partnered Policy and Action Stream Prepares students to work on policy problems in diverse community settings and with a variety of stakeholders. Students marry their quantitative and qualitative skills with extensive field experience through community externships, and eventually longer-term residencies, and work on research projects at the RAND Corporation. The Community-Partnered Stream reflects our view that public policy should reflect the desires, needs, and strengths of communities.

The centerpiece for experiential learning in the Community-Partnered stream are the externships and residencies, where students will work in teams of three to five students in the same geographic region, each based with a different community group, government agency or non-profit within one community and working with their respective partner organization on the same issue (e.g., homelessness or food insecurity).

Technology Applications and Implications Stream Empowers students to engage in technology explorations, experimentation, and development applied to public policy problems and solutions. Tech Stream students focus on engaging with complex problems, understanding current and emerging technology, and working in a culture of curiosity and experimentation. The Tech Stream arose out of the recognition that in today's technology-centered world, private companies are creating services and products with far-reaching societal impacts, often without government regulation, oversight, or understanding. Fast-moving technological change requires a generation of policy analysts prepared to understand, develop, and respond to these changes from positions in government, research firms, nonprofits, and the private sector. Policy analysts must be trained to analyze, communicate, and create policies with broad-reaching impacts from many angles, considering ethical implications, potential disparate impacts on different groups, and long-term effects. The Tech Stream will train technologists to understand

these changes from a policy lens and a public-interest perspective, preparing them for these essential roles.

The Technology and Narrative Lab (TNL) will be central to experiential learning for Tech Stream students. Students will engage in a combination of individual and small group projects in the TNL and explore a variety of topics, some of which will rotate each quarter, others having a longer trajectory. The TNL will foster exploration and experimentation with emerging technologies and their applications to and implications for public policy issues.

Students in all streams will work through the same core curriculum (also known as program required courses) together, building a strong public policy analysis foundation and comradery with each other. Students will have access to courses and experiential learning opportunities from all streams. Shared program elements include a bootcamp, policy design studios, and critical skills and perspectives emphasized throughout the program. Critical skills and perspectives and experiential learning will be discussed in greater detail in Themes 1 and 2.

In developing our new program, over 100 faculty, students, alumni, board members, and experts from the RAND community worked together to identify the new capabilities and novel approaches needed to work with complexity, plan for disruption, and design and implement adaptive solutions. As part of this effort, we also sent teams to over 30 outside organizations to broaden our field of view. Many of the innovative components of our redesigned program were inspired by what these teams learned.

Our ideas for having all entering students participate in an immersive Bootcamp during the first two weeks of the program was inspired by similar activities at Facebook, Scripps Institute, and Doctors Without Borders. Bootcamp introduces program components, acclimates them to RAND and provides new students an opportunity to meet each other, faculty members and current students. Additionally, new students engage in a series of immersion activities to prepare them for the upcoming year and provide a visceral understanding of complex policy problems.

All students also participate in our policy design studios, which serve as a place for students to design integrated, implementable approaches to tackle complex policy problems. Each studio is focused around a specific social issue, for example homelessness or equitable and effective policing, and has two parts: A "skills and tools studio" for students to understand and visualize complex systems, emphasizing techniques that will permit them to "see" complex structures through the dynamics of strategic gameplay; and a "mentored research studio" to focus on a specific policy problem with the intent of gaining novel insights and developing tractable solutions. Students will learn more about the problem, sharpen skills likely to be helpful in tackling it, and then design an individual project on which they will work for the duration of the studio. Collectively, the students develop specific projects that tackle the topic from different perspectives and with varying strategies. Studios teach students how to understand and

visualize complex, dynamic systems, provide valuable practice tackling ill-defined and evolving policy spaces, and provide students with opportunities to integrate the skills they learn through their courses by tackling real-world policy challenges and developing implementable policy solutions.

The school is weaving critical skills and perspectives throughout our program to ensure that students encounter them in a variety of ways over time to provide opportunities to incorporate these skills and perspectives into their professional practice. Discussed in greater detail in Theme 1, we have chosen four critical skills and perspectives:

1) Communications: We have long understood that excellent communication skills are essential to a successful career in public policy. From writing to oral presentation to visualization to video, new and more effective formats for communicating are always being created, and Pardee RAND wants students to be familiar with and equipped to creatively communicate their work in a variety of different formats.
2) Ethics: The new offerings in ethics we have added throughout the program are designed to encourage students to seriously grapple with and develop their own fundamental values and commitments, to enable them to reflect on the role ethics will play throughout their work and lives, a to learn to approach ethical discussions in a constructive and respectful way, and to understand both ethical approaches to their work and the ethical implications of their policy and analytical work. To ensure that students appreciate and are prepared to engage with ethics in their work while at Pardee RAND and beyond, we have integrated ethics throughout our content ecology and within all three policy engagement streams.
3) Global Perspectives: Global perspectives have been a central feature of Pardee RAND since at least 2004 when the naming gift from Frederick S. Pardee enabled us to begin to expand our offerings related to human development with a focus on the bottom billion, including funding for student and faculty research and an international development speaker series. Admissions continues to be committed to bringing in students from around the world, representing the broadest possible range of countries each year. In its content ecology, the school to aims to further global perspectives, adding elective courses that focus on international issues and topics related to other regions of the world, diversifying examples used in core classes to include geographies beyond the US, and funding international development-related work in the school's Tech and Narrative Lab.
4) Social Justice and Racial Equity: Although the school's new social justice and racial equity cross-cutting thread is still in development, the thread is intended to create and spur a wholistic approach to justice and equity policy making and implementation through education, research, and collaboration. The social justice and racial equity thread will empower our graduates with the training, resources, and information needed to effectively engage in research that addresses inequitable social structures and systematic racism that continue to impact the lives of people of color and society as a whole.

Starting in academic year 2016-17 with pilots of our policy design studio and Tech Lab, we have been adding these new elements to our program each year, piloting them first, evaluating the results, making adjustments and then incorporating them into our curriculum. In 2018 we launched a pre-term bootcamp with a policy immersion exercise as the centerpiece, along with an introduction to ethics in public policy and a self-reflection exercise reflecting the principles guiding the broader curriculum overhaul—to equip students to take on complex problems in a rapidly changing world by emphasizing solutions through new thinking, new tools and methods. 2018 also marked the formal launch of our Tech and Narrative Lab under the direction of Todd Richmond.

As noted above, over the past five years, we have been designing and building out the elements of our redesigned program adding in Bootcamp, Policy Design Studios, the Tech and Narrative Lab, the Ethics thread, and most recently externships with our community partners. In fall 2020, we will welcome our first cohort who applied to, and are enrolled in, one of the three academic streams.

After five years of imagining, experimentation, and planning, it is with great anticipation that we begin this new stage of our school of public policy. Because this is an unprecedented shift in the field, we will be consistently monitoring the student experience, academic success, and career opportunities for our incoming students and alumni. We have chosen to focus our self-study themes on the issues we are monitoring most closely during this process.

Themes

The three themes we have chosen for our Thematic Pathway for Reaffirmation have emerged from the work our Redesign Teams have been doing. As we build out the individual elements of the redesigned school, we are thinking carefully about how to design the data collection and assessment mechanisms necessary to measure learning throughout these new program elements. We have intentionally asked ourselves what are our learning objectives? How will we know to what extent students are learning within each objective? What mechanisms can we put in place at various stages to enable us to assess student learning? How can we create a system that allows us to continuously improve?

One of the characteristics of our new instructional environment is that it will be designed for iteration and experimentation and constant improvement. As we have launched the redesigned program, we have done so with an eye towards designing in points of reflection, assessment and learning at the programmatic level as well as at the individual level. Moreover, we envision following this year's full program launch with an external program review process beginning in the 2022-2023 academic year.

Below we provide short descriptions of what we hope to accomplish through our self-study with each of these three themes.

- **Theme 1: Building a Truly Integrated and Interdisciplinary Learning Environment**

In this section we examine how we can build better integration across the classes that make up and among the faculty who teach our core curriculum, how we can integrate important skills and perspectives such as communication, ethics, social justice and racial equity and a global perspective throughout the learning environment and finally, how we can ensure that our students and faculty across the three streams entangle themselves in novel and productive ways.

- **Theme 2: Expanding Experiential Learning**
  In this section we discuss the new experiential learning opportunities we are building in our Community-Partnered Policy in Action and Technology: Applications and Implications Streams. We also present our initial thinking on how we plan to assess these new types of learning.

- **Theme 3: Assessing Students' Core Competencies**
  In this section, we describe and discuss how we will use a new assessment mechanism, a portfolio, to both scaffold and assess learning in the Technology: Applications and Implications stream.

Student and Faculty Overview

Some elements of our program have not changed, and we want to briefly highlight them here. We continue to attract talented students from all over the globe.   For the academic year 2019-20 we had an enrollment of 110 students. The age range of our students is between 21-41 and the average age of our entering class is around 29. 75% of our students have advanced degrees (MA, MPP, MPH and MD) and 96% have at least one year of fulltime work experience. They come for over 40 different disciplines and majors and about 30% of them have a STEM background. Our student body is roughly 50 percent women and about a third come from a country other than the US spanning the globe from Taiwan to Spain and from Canada to Brazil.

Thirty-nine students accepted our offer of admission for fall 2020, and despite the difficulties especially for our international students, we expect 33 of them to matriculate in September, increasing our student enrollment to approximately 120 students. This is by far the largest class we have ever had in our program and reflects the excitement around the three new streams we are launching. Later in this document we will provide additional details on the demographics of our student body.

Drawn principally from the doctoral staff of RAND's research units, Pardee RAND faculty members possess extensive experience both in conducting research and in teaching. A few distinguished scholars from outside RAND are also members of the faculty. We have approximately 200 faculty members who teach, mentor, and work side by side with a student body of around 120. RAND researchers become Pardee RAND faculty members by teaching courses, mentoring and serving on dissertation committees, and/or supervising on-the-job training (OJT) on RAND research projects, projects in the TNL and community externships. Through these and other mechanisms, students have ready access to Pardee RAND's extensive

faculty as well as RAND's staff of more than 1,000 full-time researchers, who mentor students on OJT and guide dissertations.

Academic Program

The basic structure of our program remains largely the same, even as we have divided requirements between core and streams, introduced new courses to reflect the broadening of the field of policy analysis and new experiential learning opportunities to add technical and community-partnerships skills. In the first year, students begin a rigorous set of program requirements through core courses in policy analysis, economics, quantitative and qualitative analysis, social and behavioral sciences, mentored policy design studios, and ethics. Qualifying exams test students' knowledge of this material at the end of the first year. Beginning in the second year, students complete their core courses, take additional elective courses and pursue a deep substantive understanding of at least one policy research area, such as national security, health, or civil justice. Students define their own policy specialization and demonstrate that they have acquired a thorough understanding of the topic through experiential learning, tutorials, and their dissertation research.

From the beginning of the program, experiential learning outside the classroom has been a principal component of our academic program. Students acquire practical experience as paid members of RAND research teams. Students are required to complete 300 days of OJT to earn the PhD and most complete between 500 – 700 days by the time they graduate.

The culminating experience of the program is the dissertation: students write and defend a proposal and dissertation that combines analytic rigor and practical utility under the guidance of a committee comprised of RAND faculty and researchers, and a vetted outside expert.

With the addition of our three streams, beyond the program requirements outlined above, students must also complete a set of stream-specific requirements. Although the Inventory of Educational Effectiveness Indicators Form requires narrative information on educational effectiveness indicators by degree program, and the Pardee RAND Graduate School will retain a single degree program, the PhD in Public Policy Analysis, we found it a useful exercise to use the EEI Form to describe our educational effectiveness indicators by stream, in addition to general program requirements. Therefore, graduation requirements by stream can be found in this Form (See Appendix 2).

Response to Team Report and Action Letter

In 2011 in response to our Educational Effectiveness Report, the Commission identified three areas for continued attention and development: (1) Refining and Conducting Program Review; (2) Improving Degree Completion for Select Populations; and (3) Serving the Underrepresented. After the 2016 Interim Report period, the Commission recognized the progress the school had made in these areas and recommended further potential areas for improvement.

In 2011, the Commission highlighted "the need for a well-designed and regularly scheduled program review process." It noted that such a review should include the OJT component of the program and the dissertation. In 2014, the Pardee RAND Graduate School conducted a program review consisting of a self-evaluation and two external evaluations by prominent academics in the field, economist Alan Krueger and political scientist and former Maxwell School dean Jim Steinberg. The school submitted these reviews to the Commission in our 2016 Interim Report.

The Commission assessed that the review "focused on various areas including on-the-job learning assessment, curriculum improvement, and dissertation quality assurance. This led to a clear set of recommendations and from those, a set of plans for future progress." The Commission recommended continued development of "the program review process with an emphasis on mapping student learning and assessment across program learning components (dissertation, course work, and on-the-job training)."

In 2019, the school developed an updated set of learning objectives for the program as a whole and each Stream (Appendix 4). Using these learning objectives, the school undertook a curriculum mapping exercise, with input from Stream leaders, faculty members, and students. The school has posted its new curriculum map on the internal website and distributed to students, faculty, and school staff (Appendix 5). We have designed the curriculum map for use as an aid in communication with students and among faculty members, aligning educational goals with assessment, and allowing students greater insight into their own educational objectives. We discuss this in more detail in Theme 1 which follows.

In early 2020, the school created a formal decision-making process for the introduction of new program elements. While the school has long used a collaborative style of decisionmaking, with input from many voices (particularly the reimagining process described above), there was no formal process for decisions that followed a systematic process and required input from key decision-makers, students, staff, and faculty. With so many new program elements for the Redesign being finalized in 2020, we felt this was the perfect opportunity to formalize programmatic decisionmaking at the school. A formal process allows for additional input from the school community, increased transparency, and improved decisionmaking through this process. While this process is only required for large, programmatic changes, we plan on using elements of this process for other changes as well. We think the feedback and communication elements of this process will be particularly valuable for decisionmaking in general at the school. (Pardee RAND Graduate School Programmatic Decision-making Process document, Appendix 6.)

We continue to work on designing a Program Review process which as noted above we will implement in academic year 2022-23 once we have data from the first two years of full implementation of our redesigned program. This self-study has enabled us to identify the issues we will want to focus on for this Program Review, and in our concluding section we lay

out the major points of inquiry and focus. We plan to conduct Program Reviews on a regular five-year cycle with the subsequent Program Review occurring in academic year 2027-28.

Improving Degree Completion for Select Populations

In 2011, the Commission urged the school "to identify factors that may inhibit degree achievement," for women and students from underrepresented groups. Prior to the 2016 Interim Review, the school undertook several analyses to understand gaps in degree completion, including a Departure Analysis, a review of the demographics of applicants and admitted students, and a review of admissions outreach approaches. In the 2016 Interim Review, the Commission acknowledged these analyses and noted that "it will be critical for the institution to focus on increasing the number of minority and underrepresented students and their performance, as well as to analyze the interactions of gender, ethnicity and other background variables. Similar comprehensive analyses of the performance and success of international students are recommended."

In our 2016 Interim Review, we noted several outreach efforts focusing on students from underrepresented backgrounds. These efforts included our Diversity Scholarship (more details follow below), a demonstrated commitment to diversity reflected on our external website, and partnerships with pipeline programs such as Public Policy and International Affairs (PPIA) and the McNair Scholars program. In the last four years, we have continued to increase our outreach efforts.

Over the last several years, we have extended application fee waivers to prospective students who have completed service-oriented and pipeline programs. On our website, we list by name over 30 programs, such as Congressional Black Caucus Fellows, Ford Fellows, Upward Bound Math and Science, Mellon Mays Undergraduate Scholars, etc. We also grant fee waivers to graduates of Historically Black Colleges and Universities (HBCU) and Hispanic Serving Institutions (HSI). This has enabled us to reach out to these programs directly, but also signals to students from underrepresented backgrounds that we are looking for their applications.

Our philosophy of outreach includes the idea that increasing representation at Pardee RAND requires us to move beyond waiting for potential applicants to discover our program and apply on their own. It is incumbent on us to actively recruit students of color and to make our program supportive of "non-traditional" policy students. In addition to our annual PPIA PhD in Policy Analysis at Pardee RAND webinar, Pardee RAND participates in the PPIA Public Service Evening with four other policy schools in downtown LA. An important aspect of this outreach is that we are meeting our audience where it is, instead of requiring them to come to Santa Monica. We have also participated in an Info Session about RAND and Pardee RAND at UC Riverside Math and Public Policy departments, and we plan more such outreach regionally to schools with diverse populations. Most importantly, we have continued our long-term investment in our Faculty Leaders Program, referred to as The Next Generation Initiative in our 2010 reaccreditation process. This program is described in more detail below. The Faculty Leaders Program is an example of long-term systemic change rather than short-term fixes.

These outreach efforts are beginning to bear fruit. The Pardee RAND Graduate School analyzes graduate rates based on an eight-year graduation rate. Eight years is used because this gives the vast majority of students in this range time to either withdraw from the program or graduate. Comparing the students who entered from 2004 to 2011 (who have had eight years to graduate), to the students who entered from 2012 to 2019, a clear trend of increased enrollment and graduation rates can be seen for under-represented minority students.

In the 2004 to 2011 entering cohorts, of 186 students (122 domestic), 5 students identified as Hispanic, Latinx, or Puerto Rican, and 3 identified as Black or African American. In the 2012-2019 cohorts, these numbers had tripled and doubled, respectively, to 15 Hispanic students and 6 African American students.

In addition to increased enrollment of Hispanic and African American students, due we believe to increased emphasis on support during the program, graduation rates are also increasing for these students. Though the small number of enrolled Hispanic and African American students from 2004 to 2011 makes graduation rate analysis difficult, with only one student from each group graduating, we recognize that our previous rates were unacceptably low (20% for Hispanic students, 33% for African American students).

Although final eight-year graduation rates are not available yet for the 2012-2019 cohorts, as the majority are still students, by analyzing the number of students who have already graduated or are on track to graduate (using standard school completion benchmarks as discussed in Student Success Assessment (Appendix 7)), it is clear that graduation rates for these students will be higher than in the past, and most likely substantially higher.

Current standing of Hispanic and African American students entering from 2012-2019

Race/Ethnicity	Total	Graduated	Leave of Absence	Withdrawn	Students (currently meeting completion benchmarks)
Hispanic/Latinx/Puerto Rican	15	5	0	0	10 (6*)
Black/African American	6	2	2	0	2 (2)

*Only students far enough along in the program to have met certain completion benchmarks were included, so this number is a conservative estimate.

Given the number of students who have already graduated and those who are on track to graduate, we expect the graduation rates for our most recent eight-years of cohorts to rise to at least 73% for our Hispanic students and 67% for our African American students.

Although this increase in enrollment and graduation rates for students from under-represented backgrounds is encouraging, we are committed to continuing to improve in this area. Our Assistant Dean for Admissions has convened a Diversity, Equity and Inclusion task force to work

with her to further enhance our recruitment efforts. Efforts already underway include seminars about policy analysis at Morehouse College and other similar institutions, a comprehensive look at how we treat the GRE in our admissions process, adding a diversity statement to our application, and a review of our website to make it more appealing to the diverse set of students we seek. We are also continuing to develop and seek long term funding for the Faculty Leaders Program, to include workshops and seminars for alumni of the program to build cross-cohort relationships. In addition to the admissions outreach work discussed in this section, we believe our efforts summarized in the following section will help us continue to attract and admit qualified applicants from under-represented backgrounds and support them so they can succeed.

Diversity, Equity and Inclusion Scholarships
Beginning with the 2020 cohort, each year two students will receive the Edward and Estela O'Brien Inclusion, Diversity and Equity Award (IDEA). Given by acclaimed journalist and Pardee RAND board member Soledad O'Brien in honor of her parents, the IDEA program provides tuition scholarships annually to entering Pardee RAND graduate students whose background or experience, when evaluated holistically, suggests they are uniquely able to contribute to the diversity of the Pardee RAND community and to the academic profession as a whole. The scholarship is intended first and foremost for students who are underrepresented in the student body population, have overcome obstacles such as socioeconomic or educational disadvantage, or are the first generation in their family to attend college and/or pursue an advanced degree. In addition to three years of tuition support, O'Brien IDEA scholarship recipients are also assigned a faculty mentor and provided other professional development support.

In addition to efforts aimed specifically at under-represented minority students, the Pardee RAND Graduate School has also worked to improve support services for all students in the program. Increased mentorship helps to ensure that students – including under-represented students – have the academic guidance, social activities and mental health resources, they need to make their way through the program, feel at home, and are able to better take advantages of the program and their time at RAND, and graduate. These support services include assignment of both a peer and faculty adviser, career services support, support for finding OJT work through the OJT brokerage, and more. Further details for support services can be found in the Student Support Services document (Appendix 8).

Expanding our Reach
In 2011, when we discussed a new program we were planning to launch to bring more diverse voices into the public policy debate, the Commission commended us for conceptualizing the Next Generation Initiative and recommended that it remain in the forefront of our planning and be "combined with thoughtful means to assess and improve its effectiveness." In 2013, we launched the Next Generation Initiative (since renamed the Faculty Leaders Program) a highly successful program we have offered every summer since. In 2016, the Commission encouraged "even more engagement with faculty from HBCU and HSI institutions, and asked us to address

how minority faculty involvement in the Next Generation Initiative can increase the pipeline of viable minority students for admission consideration to the Pardee RAND Graduate School."

The Faculty Leaders Program (FLP) has continued to expand through outreach on the part of both the school and FLP alumni. Our network of alumni now includes over 90 faculty members from 56 institutions across the United States (and South Africa) including Xavier University of Louisiana, Morehouse College, Charles Drew University, and Florida International University. They stay connected through our quarterly webinars that cover various topics and introduce network members to each other. Even more encouraging, our first admitted student recommended by a FLP alum joined our 2019 cohort, and a second FLP-recommended student will be joining our 2020 cohort.

Participants	2013	2014	2015	2016	2017	2018	2019	Total**
Number	12	12	12	11	14	14	14	91
# of Schools	7	9	11*	11	13	14	14	56
• HBCUs	3	4	1	3	3	3	2	13
• HSIs	1	1	2	1	5	5	6	14
# of States & DC	5	8	7	9	7	11	8	19

*Includes US Department of Agriculture outreach coordinator to HSIs
**Counts each institution and state only once

Funding has followed this success. In January 2018, we received a two-year grant from the Henry Luce Foundation that fully funded our program for the FLP 2018 and 2019 cohorts. With this support, we launched a campaign to broaden outreach and target faculty in the humanities and qualitative social sciences, and, particularly, within institutions serving students from minority and underrepresented backgrounds in public policy (e.g., HBCUs, HSIs).

In December of 2019, we conducted a program evaluation to better understand the ways in which the Faculty Leaders Program has achieved its intended objectives, to learn more about the impact of the program on participants, and to identify potential modifications that could further extend impact. The evaluation included a survey of program participants and a series of case studies to highlight a variety of types of impact on Program participants. The program evaluation stated that,

> *"The program has largely achieved many of its intended objectives to-date: the vast majority of alumni have updated their course syllabi to include elements of policy analysis, have written a grant proposal which incorporates policy analysis (often with someone they met during the program), have shared lessons about the program with their academic department, and have recommended students to apply for graduate programs in public policy…The evaluation has demonstrated that the Faculty Leaders Program provides a valuable opportunity to provide training and support in public policy analysis, which impacts both the faculty who participate and the students they mentor at their home institutions."*

The evaluation also suggested areas in which the Faculty Leaders Program could improve, including by creating additional opportunities to engage with RAND faculty during the in-person workshop, narrowing or further focusing the goals of the program, and providing additional opportunities for continued connection at the conclusion of the in-person workshop. Pardee RAND will carefully consider these recommendations for opportunities to expand and improve the Faculty Leaders Program.

When Covid-19 interrupted our plans for 2020, we decided to launch a virtual program for Faculty Leader alumni. Participants met online over one or two sessions. The first session, "Using Policy Analysis to Improve Health and Social Justice: Lessons from the Spring of 2020" gave our faculty leaders alumni an opportunity to come together to examine how the world could radically change in the next 3-5 years as traditional structures, systems, and policies are being reexamined. The second session, "Implementing Ideas: Disruptive Policy Analysis and Pedagogy" was offered by one of our Faculty Leader alums and centered around the sharing of decolonizing approaches towards teaching public policy analysis in the classroom.

In addition to continuing to grow the Faculty Leaders Program, the Pardee RAND Graduate School has instituted additional changes to serve students from under-represented backgrounds. In 2019, the school funded a new, part-time position at the school, the Inclusion, Diversity, and Equity Advisor. The Advisor oversees efforts to ensure that the values of diversity, equity, and inclusion are reflected in every aspect of the school—from research, teaching, and advising to curriculum, admissions, partnerships, and the dissertation experience. These efforts have included engaging with students in conversations about belonging and inclusion and the graduate experience; working to include more authors with, and perspectives from, diverse backgrounds in our curriculum; encouraging students from traditionally under-represented groups as defined by the NIH to apply with R01 funded RAND researchers for supplements to promote diversity; and focusing on attracting and supporting applications from student of color.

Perhaps fittingly for the year marking our 50th anniversary, 2020 has been a clarifying year for our institution. The racial justice protest movement in this country has inspired us to focus on social justice and racial equity. While we are in the first stage of this effort, Pardee RAND has already taken several important steps. We've outlined those steps below. More details on how this effort will be integrated throughout our program follows in Theme 1.

New Pardee RAND Initiatives with Social Justice and Racial Equity Focus

Initiative	Timeline	Description
Brown Faculty Chair Funding Supporting Social Justice and Racial Equity	July 2020- October2020	$124,000 distributed to exceptional RAND researchers who will use this funding to engage meaningfully with the graduate school pursuing original thinking, engaging in exploratory research or extending the reach of previous research and serving as a mentor for our students by building

		social and professional relationships with them through individual and small group meetings.
Pardee RAND Diversity, Equity, and Inclusion Working Group	Six to nine months, beginning July 2020	The Working Group will identify systemic concerns and characteristics of Pardee RAND that serve to prevent racial equity, diversity, and an inclusive environment. The Group has been tasked with identifying obstacles and opportunities, with the goal of recommendations for the near and longer term. These recommendations will advise academic and business planning, as well as informing a broad range of activities and actions of the school community.
New Social Justice and Racial Equity Critical Skills and Perspectives Thread	Ongoing	Social Justice and Racial Equity will become a cross-cutting thread that will be incorporated into the program as a whole. The school's academic leadership, stream leads, and students have begun to identify areas where this can be incorporated (e.g. Tech Stream portfolio).

Theme 1: Building an Integrated and Interdisciplinary Learning Environment
CFRs 1.4, 2.5, 2.6, 2.8, 4.4, and 4.5

Introduction

Pardee RAND selected building an integrated and interdisciplinary curriculum as one of the three themes for our self-study as we have taken the opportunity of the Redesign to more fully realize the original promise of doctoral level training in the field of public policy analysis. That is, we are endeavoring to build a core curriculum where the various disciplines that make up the field can truly speak to and integrate with each other. We are also weaving critical skills and perspectives throughout our program to ensure that students encounter them in a variety of ways over time to provide opportunities to incorporate these skills and perspectives into their professional practice. Our policy design studios provide yet another integration opportunity – students in the required studios draw on the skills they've gained in the core curriculum, the skills and knowledge they've brought into the school, and the new tools and methods they learn in the two required studios. Finally, we believe an integrated and interdisciplinary learning environment will provide a common foundation and language for students to understand the strengths of various approaches to policy problem solving and enable them to learn to communicate clearly and work effectively with colleagues with diverse skills and backgrounds, and appreciate them for these differences. Building this environment in a meaningful way requires time, effort, and intention.

We have chosen three main objectives for ensuring an integrated and interdisciplinary learning environment:

- To integrate our core curriculum so that the contributions each course makes to the overall program are clearly articulated and understood by students and faculty.
- To integrate critical skills and perspectives including ethics, written, oral and visual communication, and the need for a global perspective throughout our content ecology. More recently, we have added social justice and racial equity as an additional critical perspective all students in our program need to acquire.
- To design our three streams so that students and faculty in each stream are intentionally entangled, enabling them to learn to appreciate and collaborate across and among streams and to work productively with colleagues with different skills and dispositions.

Sometimes integration along these lines will happen naturally as students and faculty are agents of integration among themselves, learning, working, and teaching together. But we recognize that osmosis alone will not result in the level of diffusion and integration we seek. Achieving integration throughout the learning environment will require us to build mechanisms, incentives and structures to promote student and faculty-engagement, communication, and assessment and governance. In the sections that follow, we will focus on our approach on three specific areas, core curriculum, critical skills and perspectives, and entangled streams, looking first at what we have accomplished thus far, then laying out our plans for the near-term. We

will address the areas where we believe we need to pay particular attention as we look towards our next program review in the conclusion.

Building an Integrated Core Curriculum

Policy analysis as an academic discipline is inherently multi-disciplinary. To be successful as a policy analyst demands competence across a number of disciplines including economics, statistics, and the social and behavioral sciences, and increasingly ethics, data science, complex modeling, network analysis, and implementation among others. Our students come from a variety of backgrounds including economics, public health, engineering, international relations, biostatistics, and law. At Pardee RAND our core curriculum provides a multi-disciplinary foundation that also plays the role of unifying our students around a body of knowledge. Our twenty-one faculty who teach the core curriculum are drawn from 15 disciplines as varied as anthropology, economics, mathematics, psychology, computer science, and philosophy. As fulltime RAND researchers, they have no requirement to teach and assume their teaching roles in the school because of their desire to engage in the classroom with emerging policy researchers.

This arrangement has its benefits, but it also can result in a core curriculum that functions like a series of independent courses rather than as a cohesive whole. Despite the high quality of the offerings, year after year students have told us that the way classes build on, reinforce, or challenge each other is not always apparent and is often not made explicit. Students tell us this can leave them feeling left adrift to make these connections themselves.

Until recently, we lacked structures to incentivize and facilitate this integration. Faculty members, who teach the core curriculum, are responsible for developing their own syllabi for their classes. While they may build on the syllabus provided by a professor who previously taught an earlier version of the course, they have done so in relative isolation. During the required review by the Faculty Committee on Curriculum and Appointments (FCCA) professors are usually asked to explain how their course relates to those that come before and after if they are part of a disciplinary sequence such as Economics, Statistics or Data Science, but otherwise there has been no explicit requirement that they situate their course within the larger core curriculum.

Faculty who teach our core courses are a small minority (about 10%) of our 200-member faculty, and we have not routinely gathered this group for discussions about the core curriculum. Our periodic faculty meetings, which include faculty beyond those who teach in our core, are not designed for the sort of intensive and focused discussion necessary to build and share this knowledge. Thus, as part of the Redesign process and during the self-study, Pardee RAND challenged itself to create a more systematic approach to integration across our core.   We focused on making progress across three dimensions:

1) Curriculum mapping
2) Faculty engagement

3) Student communication

Curriculum Mapping

From its inception, Pardee RAND has required students entering the program to engage in a rigorous set of core classes which provide the basic tool kit for policy analysis as well as an understanding of how, when, and why to apply these tools.   These courses expose students to multiple disciplinary foundations, ensure a minimum set of competencies, and nurture a common intellectual language among students, irrespective of concentration or stream. Student competency in these tools and approaches is confirmed by a series of qualifying exams administered in the summer of their first year that tests for content understanding.

As part of our Redesign, Pardee RAND took a serious look at our existing set of program requirements and asked ourselves what the world would demand of our graduates in 2030. The answers to this question drove discussions and debates with over 100 faculty, alumni, board members, students and staff over the course of three years. The result was a decision to add new courses including ethics, technology and society, network analysis, and implementation to the core, to establish the three new academic streams and to make some formerly required courses electives. Our intent is to broaden the field of policy analysis to include a wider range of methods, tools, and technology to enable us to understand complex policy problems and complex adaptive systems; directly address the profound change new technologies have brought to society and to how we do our work; and provide a new set of tools that focus on the implications for the broad range of society of public policy and the effective implementation of these policies and programs.

A central element of the redesigned Pardee RAND program, or content ecology, is the introduction of policy design. Studios help students build new capacities to represent complex systems and develop skills for understanding and working in complex environments. Studios integrate other coursework, providing students with better insight into how the skills and tools they gain throughout the program help them tackle policy problems. Studios encourage students' curiosity and agility as their explorations identify the skills, tools and knowledge they will need to grapple with their policy challenge. Each studio develops a community of practice, in which students work independently scoping and designing their approach to the larger policy problem, while learning from classmates' projects along the way. In addition to the two types of required studios described above ("skills and tools", "mentored research"), advanced "inquiry studios" join with the school's Tech and Narrative Lab and community-partners to provide new ways for students, faculty and RAND researchers to tackle complex policy problems with the intent of novel insights and tractable solutions In 2020, studios will address (1) applications and implications of social media for security, democracy and privacy, and (2) impact of climate change on disaster risk, response and resilience. The required first- and second-year courses and studios for the 2020 incoming Pardee RAND cohort are illustrated by quarter in the Curriculum at a Glance document (Appendix 9).

Once we decided on the initial set of courses to be included in the core curriculum (and in the three academic streams), our next step towards building integration across our core was to create a curriculum map drawing on the learning objectives on the syllabi of the core courses (and other elements of the curriculum) as well as input from students. The curriculum map provides a visualization of how courses build on and interact with each other.

This mapping exercise taken on largely by the stream leads, other members of the redesign team, students and the deans, enabled us to ask ourselves, given the learning objectives for our program, what role does each course play in introducing and reinforcing these learning objectives and where are the opportunities to build and strengthen integration and identify gaps in meeting these learning objectives? This visual representation will make it easier for both faculty and students to understand how and where different learning objectives are introduced and reinforced throughout the program, as well as where students are expected to demonstrate mastery of learning objectives.

We plan for the completed curriculum map, and the graphic representation that accompanies it, to serve as the basis for discussions with our core faculty across a range of topics including how the courses relate to one another and how they prepare students for the stream requirements. Longer term, it will facilitate discussions around which courses to continue to include in the core curriculum and the stream-specific requirements now and as we make adjustments in the future, whether due to internal learning or the changing external environment. We expect to gather the core faculty in September prior to the start of fall quarter to introduce the curriculum map, and to hold subsequent meetings quarterly going forward. An annual core faculty retreat is also under consideration.

Faculty Engagement

The process of arriving at the redesigned core curriculum and stream-specific requirements required intensive discussions among the Redesign team, the assistant dean for academic affairs, faculty and other deans. Students were also involved in helping us to deconstruct and understand the content of every course. For efficiency's sake, as these discussions focused on what to do about specific courses, they tended to take place with faculty members in that discipline and sequence. For example, the economics faculty collaborated on decisions regarding how to consolidate the microeconomics sequence from 2 units to 1.5 units, for instance, and the statistics faculty collaborated on decisions regarding how to reduce our core statistics offerings from 3 units to 2.

These initial discussions began to build connections between and among these smaller faculty groups that spawned other collaborative efforts. For example, within the statistics and economics sequences, professors subsequently have aligned on what programming software (e.g. STATA, R, python) they introduce, use, and when and in what course they do so. This change ensures that classes, and capabilities within classes, build upon each other. The decision

was made to have all students start with STATA and, depending on their interest, capabilities, and course selection, add other programming skills and languages, such as Python and R, as they move through the program. Professors teaching core and elective courses are also clearer on what prerequisites are needed for existing electives, so a common format for reviewing material from prior courses can be developed for classes that come later in the program (instead of guessing what students may or may not have picked up in other classes).

Perhaps our most successful integration activity to-date is first year core faculty collaboration across disciplines in the immersion activity during pre-term Bootcamp that entering students are required to attend for the first two weeks of the program. Starting in 2018-2019, four Pardee RAND faculty who teach first year core courses representing different disciplines (e.g. economics, social psychology, anthropology political science, architecture) have been invited to participate as faculty mentors for a 5-day immersion experience. Faculty will be selected to participate in a rotation to ensure that all first year core faculty have the opportunity to serve in this capacity. While serving a number of purposes, one goal is to begin to build social and professional ties among our first-year faculty, increasing both their familiarity with one another and fostering intellectual curiosity about the content of all core courses and pedagogy of other faculty members. It has also enabled students to see and appreciate what each discipline contributes to the analysis of policy problems. We continue this practice that has laid the foundation for future integration efforts.

We also believe the new academic staffing structure created by the Redesign will further enable the integration we seek. While the responsibility for ensuring integration across the program requirements ultimately lies with the assistant dean for academic affairs, Angela O'Mahony, she will have support from the three stream leads. In addition to Todd Richmond, Tech Stream lead, and Philip Armour, Research, Analysis and Design (RAD) Stream lead, Martin Iguchi is serving as interim lead for the Community Stream until our new hire comes onboard. Some initial ideas include quarterly meetings around selected topics, starting with the curriculum map, and an annual retreat.

Student Communication

Enhanced faculty communication alone will not suffice. The primary prod to enhance integration came from our student body and, therefore, we recognize the need to be responsive to their requests for more explicit guidance on what we expect each course to contribute to their learning and understanding. Already improvements have been made in the course syllabi to make the learning objectives more explicit, a change we made in response to our last reaccreditation process. As mentioned above, we have commissioned a few students with graphic design backgrounds to assist us in the development of graphical representations of the map of our redesigned program. Like with faculty, sharing and discussing the curriculum map and the graphic we've developed with small groups of students will be a useful first step.

As we think about how to monitor and assess our progress, the school recognizes a lot can be learned from the experiences of our students. Given this, the school aims to expand how it thinks about evaluation and how it gathers lessons from students to better understand how integration has naturally happened, what could make it better for students, and what mechanisms to invest in.

One initial step we intend to introduce are revised course evaluation forms, but because these are offered after every course, they will provide only a small snapshot of how students are perceiving things as they move through the program. We know from experience, that students' perceptions of the value of courses and their relationship to each other evolves over time. Therefore, we also plan to look for ways we can gather information on integration as students move through the program. Students already engage First and Second Year Reviews that can be used to collect this information. But we will need to design an additional mechanism to capture changes in their perceptions and perspectives as they move through the program. There are also two student representatives on the FCCA that regularly provide student input. In addition to this, the deans and the Research, Analysis, and Design stream lead intend to engage students in focus groups to solicit their perspectives on opportunities for better integration across the core and for how the core can better prepare them for the work they will be doing in their respective streams.

Integration of Critical Skills and Perspectives

As part of our Redesign process and in response to the big question that drove our Redesign, what will the world demand of our graduates in 2030, we developed a list of critical skills and perspectives that we want to ensure permeate our program. Since 2018, the school has been adding emphases on ethics, communications, and the importance of understanding a global perspective on policy issues.

We want to pause here and acknowledge the profound shift occurring in the United States and reverberating around the globe as we were completing this report. The social protests for racial justice and equity which followed in the wake of a series of callous killings of Black Americans by police, caused us to take a hard look at ourselves as an institution and ask, "How can we do better?" One glaring gap we had to acknowledge was that our students could graduate from our public policy program without a meaningful engagement with issues related to social justice and racial equity. As both COVID-19 and the instances of misuse of police power have laid bare for us, racial bias and social injustice lie at the core of many of the most persistent policy problems we confront in America today.

To address this, we held discussions with students and faculty, invited Dr. David Thomas, President of Morehouse College, to talk with us, and gathered our leadership group to decide a way forward. Within two weeks, Pardee RAND decided to add social justice and racial equity as a critical perspective area which, like ethics, will be a cross-cutting thread throughout our program. We also established a Diversity, Equity and Inclusion Working group made up of 6 students, 4 faculty and 2 staff. Their 6-9 month charter is to come up with recommendations

for actions and responsibilities we might undertake as a school community to move closer towards the truly diverse, equitable, and inclusive community and program to which we aspire.

We've outlined in Table 1 how these critical skills have been and continue to be incrementally incorporated in our program. More detail follows in sections dedicated to each critical skill area or cross-cutting thread.

Table 1. Courses and mechanisms by which critical skills have been or plan to be introduced

Critical Skill/Perspective Area	Currently	2020-2021	Beyond 2021
Ethics	•Ethics in Theory, Policy and Practice (core class) •Personal Statement of Ethics (First Year) •Ethics component of Tech and Society course •Research ethics in Designing Empirical Research Course •Bootcamp Ethical Self-Reflection •Ethics component of policy design studios •Ethics on Quals	•Question on ethics in Proposal Defenses •Question on ethics in Dissertation Defenses •Ethics Hackathons in conjunction with the Tech and Narrative Lab •Ethics Discussion Group	•Ethics incorporated into Proposal and Dissertation assessment forms •Primer on ethics for all core faculty members
Communications. **Writing** **Oral Presentation** **Graphic Design and Visualization** **Video**	•Workshops •Core class and elective assignments •Final projects and group work in core classes •Design studio •Visualization workshop •Career services policy poster event	Virtual Writing Center •Tech and Narrative Lab •Community partnership projects •Support for student op-eds and commentaries •Design studio •Studio inquiries •TNL vlogs	•New courses: Understanding policy through story-telling and immersive experience; Persuasive communication; Understanding your audience
Social Justice and Racial	•Diversity, Equity and Inclusion Working Group	New RAND Center to Advance Racial Equity Policy	•Formal program development in AY20-21

| Equity	•Brown Faculty Chair Initiative	Continuing funding of related research Tech Stream-related requirements	
Understanding Global Perspectives	• Research projects through Pardee Initiative for Global Human Progress • Student-run International Development Speaker Series • Student body one-third international • Dedicated funding for dissertations	• More examples in courses from around the globe	• International community partner site • Potential partnership with the Institute for State Effectiveness, to include co-developing international development course for Pardee RAND and beyond

Ethics

Ethics has always had a role in our curriculum, but until recently it has been rather narrowly defined, primarily referring to how to conduct ethical research while also touching on professional ethics in our foundational course in policy analysis. Students have learned, for example, that conducting ethical research, means following protocols from the Institutional Review Board (IRB) for human subjects' research. This is critically important, but it is not enough. Therefore, as part of the Redesign we have expanded the scope of our definition and the sweep of our activities. Dr. Ben Boudreaux, a policy researcher and professor at Pardee RAND Graduate School working at the intersection of national security, technology, and ethics is responsible for developing this cross-cutting thread. He holds a PhD in Philosophy from UC Berkeley and his research focuses on policy related to artificial intelligence (including military AI and algorithmic fairness), cyberspace, and social media.

Working together with Tepring Piquado, Ben Boudreaux has written a white paper on ethics for our program (See Appendix 10). In that paper, they describe how the ethics component at Pardee RAND has been designed to ensure that our graduates can affect change grounded in an understanding of the broader ethical environment and cognizant of the diversity of ethical perspectives. The new offerings in ethics we have added throughout the program are designed to encourage students to seriously grapple with and develop their own fundamental values and commitments, to enable them to reflect on the role ethics will play through their lives, and to learn to approach ethical discussions in a constructive and respectful way. To ensure that students appreciate and are prepared to engage with ethics in their work while at Pardee RAND and beyond, we have integrated ethics throughout our content ecology and within all three policy engagement streams.

Table 1, above, lays out some of the key features that we have incorporated as well as those we plan to introduce in the near future. In 2018, we introduced Ethics in Policy and Practice as a first-year core course and a program requirement which was tested on the qualifying exams the

summer of 2019.   This course, developed by Ben Boudreaux and co-taught with Tepring Piquado, examines ethical issues in public policy, emerging technology, and professional and interpersonal life. Subsequently, in fall 2019 we introduced a self-reflection exercise into Bootcamp to enable students early in the program to start thinking about the importance of ethics in the pursuit of personal and professional goals. Ethics has been a key component of our policy design studios, particularly in the pilot studio on Ethical and Effective Policing and in the first required studios which addressed the problem of homelessness. In 2020, we will conduct our first "ethics hackathon" related to technology implications for society. Going forward, Ben Boudreaux is working with Angela O'Mahony, assistant dean for academic affairs, the stream leads, and other professors in the first-year core to catalogue where ethics is already incorporated in coursework and where needed, to work with professors to develop ethical components for their classes.   We have initiated efforts to add a question to evaluation forms about the ethical implications of work being proposed in proposal and dissertation defenses. Figure 1 below provides a visualization of how we see students encountering ethics throughout their time at Pardee RAND.

Figure 1. How Students will Encounter Ethics throughout their PRGS Career
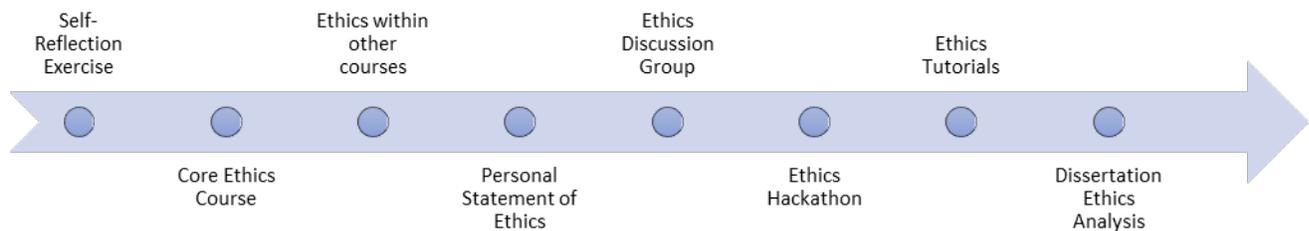
Communications

We have long understood that excellent communication skills are essential to a successful career in public policy. A variety of efforts have been undertaken over the past ten years to respond to this demand with a special emphasis on assisting our non-native English speakers. Our redesign highlighted how rapidly the communications landscape is changing. As the platforms our students are expected to be conversant with multiply, we need to increase opportunities for our students to be prepared. From writing to oral presentation to visualization to video, to social media, new and more effective formats for communicating are always being created, and Pardee RAND wants students to be familiar with and equipped to creatively communicate their work in a variety of different formats.

As is clear in Table 1, we have introduced activities that build skills across a range of communication formats throughout the program. These include class assignments and final projects, as well as in the dissertation itself. In addition to this, the school has sponsored workshops, such as Prof. Dave Baiocchi's visualization workshops, and events, such as the poster event hosted by Career Services, to provide more opportunities for students to practice and improve their presentation skills. Adding to this, the Tech and Narrative Lab (TNL) will play

a role in expanding communication skills to graphic design, video, and web and mobile apps through new workshops on storytelling, communications platforms that support leveraging social media, vlogs and podcasts. These opportunities will be available to all students not just those in the Tech Stream.

Writing continues to be a bedrock skill for our PhD students as the dissertation demands that they can write. Starting in fall 2020, we are launching a virtual writing center supported by RAND communication analysts. There are two components to this virtual writing center: support for writing in the core curriculum and support for students on dissertation status. Within our first-year curriculum, a number of classes assign one or more research or proposal papers or policy memos. At the beginning of each quarter, participating faculty members will share their assignments with a writing instructor who will meet with first-year students as a group to discuss key principles of written communication prior to the assignment deadline. Once the assignment has been submitted, the writing instructor will provide feedback to the student on the quality of the writing to enable students to build on their strengths and recognize and improve on their weaknesses.

We will largely replicate this formula for students on dissertation status where the sheer volume of the required writing can often cause paralysis. Communication analysts will provide quarterly workshops that all students writing dissertations may attend. Those who attend these sessions will then have access to one-on-one consultations with the analysts for writing support.

Social Justice and Racial Equity

The school's new social justice and racial equity cross-cutting thread is still in development, but even in the few weeks since we announced establishment of this thread, a few areas have been identified as especially important. The first is to ensure that course readings and discussions include a diversity of perspectives, particularly those of people with different racial, gender, and socioeconomic backgrounds. As part of the redesign and our community-partner stream we introduced a course on intersectionality and working with diverse stakeholders and communities and we will be addressing potential additional courses in our formal planning process this fall. The school plans to use workshops to create even more opportunities in the academic program for students to learn about issues of social justice and racial equity.

The social justice and racial equity thread will empower our graduates with the training, resources, and information needed to effectively engage in research that addresses inequitable social structures and systematic racism that continue to impact the lives of people of color and other underrepresented groups. The integration of social justice and racial equity throughout all elements of the Pardee RAND program, and specifically as a cross-cutting thread through the three policy engagement streams and the content ecology as a whole, will (i) develop better researchers with a richer understanding of the social and racial implications of different research approaches, policy and program development and implementation, (ii) develop better

policy-makers who recognize the importance of equitable and just relations between the individual and society, as measured by the distribution of wealth, education, employment, and access to quality healthcare, more effective implementation of policies and programs that leads to intended consequences, and (iii) contribute to the development of individuals who continuously strive to promote justice and equity through their professional and personal lives.

Global Perspectives

Global perspectives have been a central feature of Pardee RAND since at least 2004 when the naming gift from Frederick S. Pardee enabled us to begin to expand our offerings related to human development with a focus on the bottom billion through our Initiative for Global Human Progress, led by Prof. Krishna Kumar. Admissions continues to be committed to bringing in students from around the world, representing the broadest possible range of countries each year in the approximately 1/3 of our students who are international. In addition, the school has already been fortunate to have a dedicated fund in the Pardee Initiative for Global Progress, which has supported research opportunities for students to engage on issues related to raising the "bottom billion" in countries across the world.

Over the years, these funds have been used to support research projects, dissertations and an international development speaker series. In FY19, these funds were also used by the student-run International Development Speaker Series to host prolific speakers from a variety of backgrounds and areas of expertise: education (Madhav Chavan), labor (Anthony P. D'Costa), poverty reduction and investment (Philippe Burger, Kathleen Beagle, Francis Malige, Bojana J. Reiner), conflict (Daniel Egen, Sean Carroll, Andrew Natsios), among several others. These discussions have contributed not only in establishing valuable connections between Pardee RAND students and world-renowned researchers, but also in elevating the dialogue of the world's most pressing issues and RAND's unique capabilities to address them.

Also in the most recent academic year, the GHP Initiative supported a number of international development-oriented projects in the Tech and Narrative Lab. These projects have been led by Pardee RAND faculty with extensive student involvement. Development of an app to identify counterfeit anti-malarial drugs – a critical issue in Africa – is an example of these projects. The app is moving forward to the pilot phase of development and has the potential to also be useful in identifying counterfeit COVID19 vaccines.

In its content ecology, the school to aims to further global perspectives, adding elective courses that focus on international issues and topics related to other regions of the world, as well as diversifying examples used in core classes to include more geographies than the US. Students in the past have focused their dissertations on issues in other countries, including India, Nigeria, Kenya, and Uganda. In the future, the Community-Partnered Policy and Action Stream intends to include international sites as it matures beyond its first few years.

Intentional Entanglement of Policy Engagement Streams

When students apply to Pardee RAND, they apply to one of three policy engagement streams: Research, Analysis, and Design (RAD); Community-Partnered Policy and Action (Community Stream); and Technology Applications and Implications (Tech Stream). Streams by their very nature are meant to be interdisciplinary and integrative. We have already discussed how first year courses play a role in providing a basis for all students to learn a common policy language, core competencies, and high-level disciplinary knowledge.   Students will naturally contribute to integration and synergy through shared core coursework, RAND project work, as well as friendships and opportunities for deliberation. This level of integration will happen naturally, but other levels of integration will require intentional brokerage and mechanisms steered by stream leads and staff. This section discusses those mechanisms and incentives.

Effective Analysis and Action Will Build on all Three Streams
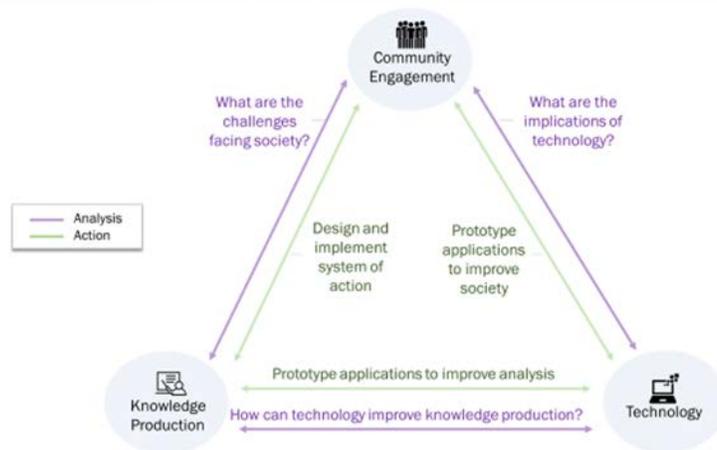
Integration Across Streams

Integration across streams is not only important to maintain cohort cohesion. These cross-stream interactions are valuable opportunities to develop new approaches to policy problems. The idea behind the "entangling" of the three academic streams is that complex policy problems require multiple dispositions (perspectives and talent) and a broad set of skills and knowledge in order to mitigate or solve these problems. Operationally, while students focus on one policy engagement stream, they will need to have access to content and skills from other streams, and they can access that talent by working cooperatively with students in other streams.

To support this integration, Pardee RAND will be encouraging student and faculty engagement and knowledge sharing through seminars, workshops, and elective courses that cut across streams. More importantly, we will be providing students in each stream with opportunities to

work together with their peers in the other two streams especially in experiential learning in the TNL and in community-based projects to develop coordinated solutions to challenging policy problems. In addition, specialized policy inquiry studios, hackathons, and workshops will also provide opportunities for students to work together across streams. Finally, academic streams will have distribution requirements to ensure students are graduating with knowledge of multi-disciplinary approaches to solving policy problems, related skills requisite to designing and recommending solutions for those problems, and the ability to work collaboratively with colleagues and community members from other disciplines.

Theme 2: Expanding Experiential Learning

CFRs 2.5, 2.6, 2.10, 4.1, and 4.3

Introduction

On-the-job-training (OJT) has been a critical component of Pardee RAND since the school's founding and is one of the characteristics that distinguishes us from other schools of public policy. By working side by side with RAND researchers on research projects, students gain invaluable professional experience, apply research techniques learned in the classroom, and obtain in-depth substantive knowledge about their chosen policy field. They also fund their graduate studies since students are paid for all of their work on RAND projects. We've long said that our students graduate with a degree and an extensive CV, an approach that is key to the employment success of our students upon graduation or shortly thereafter.

Given its significant role within the doctoral program, in our last round of reaccreditation, we developed a formal system for tracking, understanding, and improving OJT-related learning.   At the time, we elected not to set strict requirements for student learning in each of the 18 learning objectives we identified; instead, the school enters into discussions with each student at regular intervals to help them resolve barriers to learning in the areas they identify as of primary importance to them. The program encourages each student to achieve a balance across a broad number of these learning objectives (Appendix 11).

The Redesign of our program has significantly expanded the types of experiential learning available to students**.** Working on RAND's public policy research projects will continue to be a central component, but the introduction of externships, and eventually, residencies, for the Community-Partnered Policy in Action Stream (Community Stream) and the introduction of projects, experiments, prototyping, Hackathons, and other focused activities in the Tech and Narrative Lab for the Technology Applications and Implications Stream (Tech Stream) introduces a range of new learning opportunities which will augment, not replace, traditional RAND project work.

In the sections that follow, we will describe

- The learning objectives for our new experiential learning components and how we decided on and developed them

- The types of new experiences and activities we will provide students so they can develop and practice these skills, abilities, approaches, and techniques

- The assessment mechanisms we have developed, or are developing, to assess to what extent students are achieving these objectives

We will focus primarily on the new experiential learning opportunities we are introducing as a result of our two wholly new streams. Later we will offer some thoughts on how we might

adapt what we learn through these new streams and apply them to our existing OJT learning outcomes and assessments.
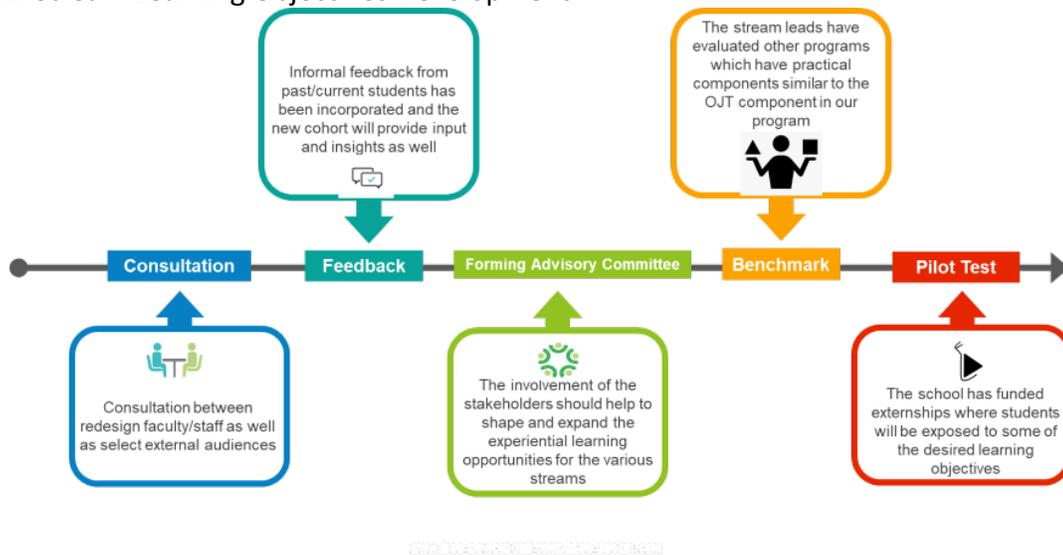
Developing New Experiential Learning Objectives

Our goal with the Redesign is nothing less than to redefine the next generation of policy analysts, in part, by enabling them to be more action oriented. As described earlier in this document, each of the three streams is designed to attract students with different dispositions and to train them to have a different set of core competencies upon completion of the program. The experiential learning components, a central element of these new streams, therefore, also differ in primary objectives and approaches.

The Community Stream is designed to prepare students to work on policy problems with diverse communities and a variety of stakeholders. The Community Stream is premised on the idea that context-based learning and problem-solving will enable students to understand how to translate the quantitative and qualitative skills they use for research and analysis into effective problem solving, to include implementation, that leads to concrete improvements in communities. One of the core values of this stream is a commitment on the part of the school to forging enduring, long-term relationships of a decade or more with our community partners. Such long-term relationships are necessary because the experiential learning component of this stream embeds students in a specific community environment, and emphasizes that policy development and change must occur in partnership with communities at all stages of development, from problem identification to policy development, to policy and program implementation and evaluation. In addition, as we have learned through RAND's long experience with community partnered research, it takes time and commitment to build relationships and trust.

The Technology Applications and Implications (Tech) stream is designed to enable and empower students to engage in technology explorations, experimentation, and development applied to public policy problems and solutions. Tech stream students will work in the Tech and Narrative Lab focusing on engaging with complex problems, understanding current and emerging technology, and working in a culture where curiosity and experimentation are highly valued.

As depicted in Figure 2 below, the process we followed to develop the learning objectives for the experiential learning components of the two new streams followed a similar path.

Figure 2. Stream Learning Objectives Development

The Community Stream will begin with a two-pronged approach. While we have identified seven learning objectives that all students in this stream should encounter during experiential learning, students are also expected to examine all 27 learning objectives for the program as a whole, making note of those they are individually interested in, and which they encountered during their experiential learning. As more students move through the redesigned program, stream leads and faculty members will monitor student experiential learning to determine whether the seven focused learning objectives should be modified, as well as whether it is useful to ask students which of the program learning objectives they encountered.

Community Stream Experiential Learning – Focused Learning Objectives
- Apply ethics in practice

- Demonstrate the ability to communicate effectively with diverse audiences and demonstrate deep listening skills.

- Demonstrate a growth mindset

- Demonstrate leadership, the ability to work effectively with others and managing projects and project teams

- Demonstrate cultural competence and humility and empathy

- Understand negotiation and conflict management strategies

- Demonstrate the ability to work and interact with partners

The Technology Applications and Implications (Tech) stream is designed to enable and empower students to engage in technology explorations, experimentation, and development applied to public policy problems and solutions. Tech stream students use the Tech Lab to focus on engaging with complex problems, understand and use current and emerging technology,

and work in a culture where curiosity and experimentation are highly valued. The Tech Stream has selected five learning objectives for all students that should be reinforced through experiential learning in the stream.

Tech Stream Experiential Learning – Learning Objectives

- Demonstrate ability to frame and analyze policy problems
- Develop and defend implications of how current and emerging technologies can lead to new policy problems
- Formulate applications of current and emerging technologies to address public policy issues and opportunities
- Apply ethics in practice, focusing on professional conduct, ethics related to the conduct of research and implementation, and ethics in personal life
- Demonstrate ability to communicate effectively with diverse audiences using multiple media, with a focus on oral, written and visual media

In pages that follow, we first describe the learning environments we are creating. Subsequently, we provide examples of the types of activities we expect to provide students to enable them to gain exposure to and practice these skills, abilities, techniques or approaches.

Designing Experiential Learning: Community Stream

The first students in our new Community Stream will participate in at least two community externships (4-6 week full-time or 10-12 week part-time), during the summers following their Year 1 qualifying exams and their Year 2 coursework. Established partner communities are Los Angeles and Sitka, Alaska with the expectation that we will establish a third partner community in Pittsburgh, Pennsylvania. Pardee RAND faculty and staff will work with students and community partners to arrange the externships, which will involve teams of 3 - 5 students in the same geographic region, each based with a different community group, government agency or non-profit but working with their respective partner organization on the same issue (e.g., current issues of homelessness in Los Angeles and food insecurity in Sitka). Pardee RAND enters into a memorandum of understanding (MOU) with each partner organization within the specific community. Partner organization supervisors and students complete a learning agreement outlining expectations and goals for both parties.

The student teams will meet periodically during the externship among themselves as well as with designated community agency supervisors and Pardee faculty members for mentorship and evaluation of the experience. Over time, we will identify Professors of Practice that we hope will bring community voices and perspectives to students on a more regular basis. This approach will benefit students, while helping to create connections and synergies across organizations, multiplying the impact of individual partners. As this activity is a version of OJT, Pardee RAND will provide fellowship support to students when they conduct their externships and residencies.

Eventually, we expect new cohorts of Community Stream students to complete a community residency of 12-18 months. We expect to pilot residencies of shorter duration (e.g. 3-6 months) in AY21-22, recognizing that it takes considerable time to develop the type of trusting community partner relationships, shared experiences, and policy development successes necessary to create meaningful opportunities for students After we have successfully piloted the externships and shorter residencies, we will decide with a community whether a student residency of one year or more will be possible and productive.

Our initial community partners were selected in two communities where the graduate school or RAND have existing relationships and have established mutual trust. Los Angeles was selected as a pilot location because of its proximity to our school, the existing relationships RAND and Pardee RAND have with key constituents, and the sheer variety of challenging public policy problems Los Angeles faces as a global city.

Sitka, Alaska was selected because of existing ties to RAND forged through research project work, but it was also chosen because it presented a contrasting experience to Los Angeles. Sitka requires students to leave the comfort of their homes in LA and to immerse themselves in an entirely different environment. Sitka has all the problems of a remote, rural community, enhanced by the seasonality of a major cruise ship destination. Sitka was also selected because RAND researchers had already established strong relationships with key community entities, including the mayor's office, the Sitka tribe corporate entity, and many community organizations. Sitka is also home to the Sitka Sound Science Center – providing scientific expertise and a base for externship opportunities. These experiences will help us refine our externship plans for the first Community Stream cohort.

The externship pilots we had planned to launch in Los Angeles in April were postponed by the pandemic, but a quick pivot enabled us to be responsive to the changing needs of our community partners thereby building trust and demonstrating value. The school funded a number of quick-turnaround projects in Los Angeles to build on existing community relationships and develop community ties that might support future work in the broader Los Angeles community. One such project was developed with United Way of Greater Los Angeles (UWGLA) led by Community Advisory Group member Elise Buik, President and CEO of UWGLA. Four students and one recent alumna were selected to work with UWGLA on how best to be responsive to COVID-19 outbreaks among persons experiencing homelessness (PEH). Martin Iguchi, director of redesign and acting stream lead for the Community Stream, and Ann Pendleton-Julian, professor of design and complex problems, served as the faculty mentors.

The RAND team met daily and interacted with UWGLA staff on a weekly schedule. During the early meetings, students explored perspectives and scoped the problem with our UWGLA partners. Next, students split into two teams to simultaneously develop a top down perspective of the system of care for PEH as well as a bottom up perspective of the experiences of diverse PEH with the system. Tools for exploring the problem included empathy maps, world building, and systems mapping, informed by key participant interviews in the community and secondary

research. It was clear from our UWGLA working partners that the visualizations and material organization helped them to see, almost immediately, the value of visualizations in understanding both system complexity and the lived experience and diversity of PEH served by and neglected by the existing system. UWGLA staff requested and were trained in the use of on-line tools for developing systems maps and flow diagrams so they could continue development of the maps themselves.

The students reported that a very satisfying aspect of the UWGLA project was the sense that they were working in a partnership with the UWGLA. This led to the RAND/UWGLA teams working closely together and developing a shared understanding of the problem. The close working ties also opened doors with other agencies, as the UWGLA team provided our students with enthusiastic endorsements and personal connections.

A second project leveraged our Tech and Narrative Lab. In the immediate days after closing schools due to the pandemic, Los Angeles Unified School District contacted Pardee RAND asking for help developing an interactive map for students' families to locate a broad range of supporting resource including food banks and mental health support. Drawing on our founding membership in the Public Interest Technology-University Network, our students jump-started the effort by beginning with an interactive map developed for another purpose by Pepperdine University, extended the functionality of the map, and researched the available supporting resources. The result was a prototype, fully-functional interactive map that Pardee RAND's Tech Lab provided to LAUSD within a matter of weeks. It is important to note that neither of these two projects, or the four other COVID19-related projects conducted by the school's students and faculty, would have been possible without the groundwork, infrastructure, and relationships put in place as part of the implementation of the redesigned program.

Building on this success, we are moving forward with externships in Los Angeles and Sitka this summer. Three students are working with community organizations in Sitka, based at the Sitka Sound Scientific Center (SSSC) that is providing space for students to meet daily and a science advisor to orient them to Sitka. The key policy issue identified by Sitka residents, in collaboration with the SSSC is food security. Students were matched with three local community organizations: the local food coop, the Long-line Fisherman's Association, and the local Sitka Conservation Society. MOUs were developed with all agencies and learning agreements are in process. Students will be expected to work on a full-time basis and will receive 30 days of fellowship/OJT to support their efforts.

The second set of externships, planned for Los Angeles, started in August on a part-time basis – with the expectation that work with community organizations would extend for 10-12 weeks. COVID-19 seriously disrupted our plans – requiring us to drop the Los Angeles Police Department as a site, and delaying our start in Los Angeles. We now plan to have externs working with three community organizations, with a focus on Persons Experiencing Homelessness (PEH) and a secondary focus on impacts of COVID-19. Students were matched to three organizations: The People Concern (TPC; a full service organization focused on

transitional housing), Los Angeles City Councilman Mike Bonin's Office (working with his Venice/Mar Vista homelessness team), and Seeds of Hope (a faith-based organization focused on growing and distributing food to LA citizens as well as a therapeutic farming program for PEH).

Designing Experiential Learning: Tech Stream

The central feature of the Tech Stream is the Tech & Narrative Lab (TNL) launched in 2018 as one of the early curricular enhancements created by the redesign. The TNL is not designed to conduct research studies in the traditional sense, but rather is oriented towards fostering exploration and experimentation with emerging technologies and their applications to and implications for public policy issues. At the heart of the lab are the core concepts of abstraction (parsing a complex problem), representation, conceptual modeling, rapid prototyping, and narrative explorations

Tech Stream students are required to complete a TNL residency which is designed to move the student to framing of research and experimentation at the intersection of emerging technology and policy. Students will engage in a combination of individual and small group projects in the TNL and explore a variety of topics, some of which will rotate each quarter, others having a longer trajectory. The residency includes a documentation aspect in which both the results from the projects, as well as the processes — acquisition of skills/capabilities, problem framing, experimental methods, and preliminary results — are collected, collated, published, and shared with the broader RAND (and possibly public) audiences. The focus will be on documentation such as video narratives, animation, and modeling such that students become conversant in a variety of mediums beyond the traditional academic paper or report. During their residencies, Tech Stream students will start the process of creating the ten "artifacts" that will make up their portfolios. The portfolio process is discussed in greater detail in Theme 3.

The TNL is currently organized into four "lablets" (a lab within the TNL) each focused on one of four broad areas of technology:

- Artificial Intelligence (AI) and Machine Learning (ML)
- Virtual, Augmented, and Mixed Reality (VAMR),
- The Internet of Things (IoT), and
- Digital Gaming

Each lablet will be overseen by a RAND researcher and Pardee RAND Faculty member who creates opportunities for exploration and supervises Tech stream students interested in exploring how their particular technology influences policy and can be applied to policy solutions, including problems posed by work with community partners as well as problems posed in public policy research. By design, the TNL is all about hands-on work, collaboration, and exploration. It employs the best practices of technology start-ups — rapid prototyping, developing a "minimum viable product," and iterating. This combines with an ethos of curiosity, exploration, play, learning and growing from failure. The TNL is about doing — coding, hacking, prototyping—rather than just thinking. It also is about sharing the work, both process and

results, with others. The expected products of these activities will be varied — algorithms, applications (software and hardware), visualizations, narrative treatments—but all will be artifacts that can be collected into a portfolio. The goal of the TNL is to provide a safe space for experimentation and hands-on development, allowing students (and researchers) to ask, "what if…" and "why not…" questions outside of traditional coursework or RAND research projects.

Overview of Tech Stream Experiential Learning Opportunities and Outcomes

The chart below lays out the skills the TNL aims to build in students through hands-on learning opportunities. Following the chart, we provide an expanded explanation of each skill and the related learning opportunities and outcomes.

Skill	Experiential Learning Opportunity	Expected Outcome
Communication	Storytelling--describing the what, how and why of their work to various audiences	Enhanced ability to engage target audiences which is key to effecting change
Experimentation	Playing with technology thoughtfully in the Lablets	Enhanced curiosity and the ability to try, fail and try again
Rapid Prototyping	Framing "what if" and "why not" questions and answering with rapid prototyping to provide partial answers	Enhanced ability to make progress on complex problems even when there is no 100% solution
Conceptual Modeling	Building frameworks to give structure to enable experimentation and rapid prototyping	Enhanced ability to think through problems holistically and then experiment with manageable pieces of the problem
Abstraction	Breaking down complex policy problems into their component parts through mapping and other tools.	Enhanced ability to understand the facets of a complex problem and to deal with part of the problem while not losing the understanding of how they all fit together

- **Communication** is a difficult skill to master, particularly when the topics are complex, and the approaches used to understand the material are rigorous and often dense. The ability to frame questions and perform analysis is necessary, but not sufficient, to be an effective researcher and/or leader. We will provide opportunities for students to "tell the story" of the work, including what, how, and why things were done, to equip them to engage target audiences and effect change.

- **Experimentation** – we define as "playing" with technology in a thoughtful manner. We will provide students opportunities to be curious and to explore. In the TNL they will learn how to ask "what if…" and "why not…" and then learn by doing. We expect them to make things, break things, fail, and try again.
- **Rapid prototyping** – we define as learning by thinking and doing. In the TNL we will be training students how to approach complex problems where they don't know the "right" answer. Rather than looking at a problem and spending countless hours to arrive at a "perfect" or 95% solution, students will learn to take a question, quickly devise a prototype that is a 10-20% solution, test it, learn from that test and, iterate again.
- **Conceptual Modeling** – To ensure the success of rapid prototyping, we will help students build frameworks (i.e. conceptual models) for their experimentation. Conceptual modeling is taking a complex problem, abstracting it, then building a framework for understanding the broader context/system, often through metaphor or analogy. A good conceptual model provides a way to design experiments and prototyping activities that will address aspects of the model. Conceptual models are made to be iterated and changed as eventually they break – by design.
- **Abstraction** – we see as a mix of art and science associated with taking something that is complex and breaking it down into its essence. Much as Picasso did in the art world by taking the human form and abstracting it into basic shapes, we will train our students in the field of policy and emerging technology to break down complex problems so they can better understand their nature, components and many facets. The skill of abstraction will enable students to engage in meaningful experimentation and prototyping.

Experiential Assessment Mechanisms for Community and Tech Streams

In this section we will focus primarily on the mechanisms we are developing to assess experiential learning in the Community Stream. Theme 3 deals extensively with the primary experiential assessment mechanism, the Portfolio, for the Tech Stream so we will provide only a short explanation of our efforts here.

For the experiential learning in the Community Stream, we are piloting the assessment mechanism during our summer externships described earlier. We will adjust this mechanism as needed based on feedback from these initial pilots before we employ them with the entering cohort for 2020.

Upon completion of their externships, students will identify which of the twenty-seven program learning objectives (LO) (Appendix 4) they encountered most frequently.   The information we gather, will help us better understand what experiences students themselves view as

contributing to their learning. It will also help us add to, or modify, the seven learning objectives listed below that faculty long-involved with community-partnered research have identified as critical elements of working with community members and best learned through experiences as opposed to classroom instruction.

Student performance will be assessed reviews of daily diaries maintained by students during externships, self-assessments listing evidence of LO demonstrations by students at the end of their externships, a team review of peer performance, brief ratings on LO performance by community supervisors, and reviews of LO demonstrations by faculty and/or academic partner supervisor. Where deficiencies are noted, students will be provided with specific supports to strengthen LO relevant skill sets (personalized feedback and attention from team leads and designates).

The table below lays out the seven learning objectives we have identified as those students should achieve through their externships, and, later, residencies in our partner communities. For each learning objective we list the ways in which we plan to assess to what extent students have developed that skill, ability, approach or technique.

Table 2: Community-Partnered Policy and Action:

Skill, Ability, Approach or Technique	Experiential Learning Opportunity	Assessment Mechanisms
Apply ethics in practice	At all stages of student interactions with community members, faculty advisors will address the meaning of true "partnerships," problem identification and priorities, data ownership, and ownership of research products developed with the community. We will focus on sustainability and building community capacity All key elements of applying ethics in practice. Note that the foundation for ethical discussion and assessment is gained through the Ethics Thread, to include coursework, discussed earlier in this report.	Daily reflections – with an explicit request that students consider aspects of ethics when recording their thoughts Faculty supervisors will be asked to address the question with students if not raised – and to discuss the issues if raised.
Demonstrate the ability to communicate effectively with diverse audiences and demonstrate deep listening skills.	Opportunities to listen, learn and speak will be ample. Faculty supervision will assist and allow students to learn while doing	Examples of communications and results of deep listening as evidence of this LO achievement will allow for additional retrospective discussions Community partnerships and a community supervisor will allow for direct community feedback regarding utility of communications and clarity of message
Demonstrate a growth mindset	We have identified perseverance, willingness to fail and to learn from failure, embracing challenges, & welcoming feedback as evidence of a growth mindset	These will be essential in working with community members and will be documented by students and discussed with supervisors

Demonstrate leadership, the ability to work effectively with others and managing projects and project teams	Working with community partners and with the student team during externships and later residencies will provide ample opportunities for leading and active following, with frequent shift in the roles of each student.	We ask students to include in their externship and residency self-assessments and documentation evidence of leadership in their activities and work products complemented by assessments from community supervisors and faculty advisors.
Demonstrate cultural competence and humility and empathy	Externships and, later, residencies will provide additional opportunities to build on what they have learned in the classroom and through their faculty and community mentors	This will be captured by student self-assessment, faculty and community supervisor assessment, as well as in daily reflections.
Understand negotiation and conflict management strategies	We expect externships and, later, residencies to provide ample opportunity for negotiation and conflict management when working with other students and with community members	Documentation provided as described above for externship and residency evaluations.
Demonstrate the ability to work and interact with partners	This is a new skill as interactions with partners are distinctly different than with RAND clients There is a clear qualitative difference in work approach and style.	Assessment will be through externship and residency documentation, supervisors and self-assessment

Assessing Experiential Learning: The Technology Applications and Implications Portfolio

While we explore the required portfolio for the Tech Stream in great detail in Theme 3, the following chart lays out the basic experiential learning opportunities and assessment mechanisms for the Tech Stream. Because all the five learning objectives of the Tech Stream are meant to be present in each learning opportunity, the table is organized by opportunity, instead of by skill as in the Community Stream Experiential Learning chart above.

Table 3: Tech Stream Experiential Learning Opportunities and Assessment Mechanisms

Experiential Learning Opportunity	Assessment Mechanisms
Tech and Narrative Lab Residency	Review committee provides students with comments on current work and suggestions for near-term projects and/or collaborations. Assessment for the residency will be based on review of student efforts as well as portfolio artifacts. During each quarter students will begin with a brief presentation on planned work and be responsible for in-person updates throughout the quarter. Students will be expected to participate in TNL group meetings (designed for those working in the lab) and will present at least twice during the semester to a broader group (lunch seminars and/or other invited talks).

Hackathons: Tech stream faculty members periodically create team challenges whereby a group of students work together with a specified data set and policy problem to create a product (e.g. a data visualization) and policy recommendation.	Hackathon Assessment: all hackathons have a presentation component and are judged as a competition
TNL Experimentation and Development outside the residency: In addition to the residency, students will continue to create artifacts and produce research as part of their work on other Pardee RAND and RAND projects and in their dissertations.	This work will be included as part of the portfolio mentioned above and described in detail in Theme 3.

We have greatly expanded both the experiential learning opportunities available to our students and, consequently, the types of learning objectives and outcomes we expect them to achieve. While the experiential learning opportunities and assessments described above are for students working in partner communities and in our TNL, we recognize that there will likely be applications of these in our traditional OJT on RAND research projects. Over the coming year, under the leadership of Phil Armour, our lead for the Research, Analysis and Design (RAD) Stream, we will be taking a careful look at both the learning objectives for RAND project work and the assessment mechanisms to see what changes we may want to make to enhance that aspect of our program.

Theme 3: Assessing Students' Core Competencies
CFRs 2.8, 2.10, 4.3, 4.4, and 4.7

Introduction

A completed dissertation, typically a long form document demonstrating a student's mastery of the concepts instilled in them over the course of their enrollment in a doctoral program, is the hallmark of a fulfilled doctoral degree. However, as the landscape of learning, policy communication, and employment evolves, evidence is emerging that the dissertation may no longer sufficiently demonstrate the full scope of skills and knowledge a student acquires during the doctoral process. As part of the Redesign of its learning environment described earlier, the Pardee RAND Graduate School has been investigating a new summative assessment mechanism that will enable us to assess the effectiveness of the various types of learning that we are introducing. That mechanism is a portfolio. Assessment portfolios have many advantages and their use will enable a more flexible and robust evaluation of our students' strengths and accomplishments. We recognize that portfolios could be of value across all three academic streams of our redesigned program, we have decided to start by introducing it in the Technology Stream.

In this theme we describe the thinking that led us to using portfolios as part of our Technology Stream and discuss the steps we are taking to introduce and document our plans for using portfolios as a scaffold for learning and an evaluation tool. Finally, we outline the open questions we will address over time as we gain experience and we propose our plans for review and evaluation.

Why Portfolios?

From the beginning of the Redesign process more than five years ago, Pardee RAND staff, students, faculty and alumni have discussed the idea that the new types of learning we are introducing would require additional and even novel assessment mechanisms. It was clear that this would be especially true with the Tech Stream with its focus on hands-on experimentation, trial and error, making and breaking things.

During the reimagining phase of the Redesign process, the school held meetings with faculty, students, alumni, board members and school leadership where we re-examined and challenged many of our most basic assumptions about how our PhD program was designed. In these wide-ranging discussions, participants deliberated on the value of the dissertation as currently described and questioned whether new models or approaches could augment learning and provide better evidence of mastery. We decided that as the accepted culmination of a PhD program, the doctoral dissertation would be retained as the final product of the degree – but an additional summative mechanism should be introduced to capture the new directions the school was pursuing. This decision spurred additional questions: what role would a new summative mechanism play, what form would it take, and should it be introduced for all streams or just some?

Beginning in late 2018, the Pardee RAND administration and the Redesign leads began to explore options and develop plans for designing this new mechanism which would function to scaffold new types of learning and also serve an assessment function. Prof. Todd Richmond, the Director of the Tech and Narrative Lab and Lead for the Tech Stream spent his early career as a lab scientist and professor. From this experience, Todd introduced the idea of a portfolio as an assessment mechanism complementary to the more traditional dissertation. The portfolio within the context of Pardee RAND's Tech Stream is selection of artifacts created during the academic process that demonstrate learning, provides a scaffold to that learning, and also serves as an instrument by which faculty can monitor and assess student accomplishments. Portfolios are commonly used in other disciplines (such as art and architecture but also in game design or computer programming) that have long required a mechanism to provide learning opportunities to showcase individual creativity, flexibility, as well as breadth and depth that cannot be captured through an exam. Portfolios are used in educational and professional settings to capture concrete examples of skills, illustrate the development process, and demonstrate the ability to follow a project through to completion.

With additional research, including through discussions with the Faculty Committee on Curriculum and Appointments (FCCA), we found that portfolios were beginning to gain wide acceptance outside of the public policy domain. Many institutions have developed guides for crafting portfolios for both educational and professional purposes. The career services offices of some institutions are encouraging their students to develop professional portfolios as a way to demonstrate to future employers their mastery of desired skills and competencies. Portfolios are also endorsed by academic organizations such as the Association of American Colleges and Universities (AACU) and the Association for Authentic, Experiential, and Evidence-Based Learning (AAEEBL).

Evaluating how Pardee RAND might use portfolios within the context of our redesigned program, Redesign leads and Pardee RAND faculty recognized that this mechanism would allow for a more comprehensive assessment of experiential learning and creation of new types of outputs such as data visualizations, videos and system maps. A portfolio could provide students a place to compile the best of these products and enable faculty to assess their development over time.

Todd Richmond saw the portfolio mechanism as offering the greatest and most immediate value in the Tech Stream with students experimenting with new technologies and developing applications within the Tech and Narrative Lab. Students could use portfolios to collect and document their work as they experiment outside of their comfort zones, record in-progress work, negative results, and "spectacular failures" that are all part of the learning process. In particular, he noted that by providing a repository for work-in-progress, portfolios can help acculture students into the practice of rapid prototyping and making/breaking artifacts as part of problem exploration and solution generation.

We also believe there is likely value in using a portfolio assessment mechanism to support student learning in their externships and residencies as part of the Community-Partnered Policy and Action academic stream. Like the Tech Stream experiential learning in the Tech and Narrative Lab, students in living in our partner communities could use the portfolio to collect and document their experiential learning and achievements and faculty could use the portfolios to assess progress and identify areas for additional support. Stepping back, whether ultimately used in only the Tech stream or further adopted in the Community and/or Research streams, our judgment is that, portfolios will allow students to demonstrate their accomplishments with richer breadth and depth as they enable the inclusion of artifacts that go beyond papers and other written reports. They also enable students to record their exploration of topics outside of their dissertation area and outside of traditional academic products

From a faculty and staff perspective, a continuously developing portfolio could serve as a tool to keep better track of student progress through the program. By providing a place where faculty and staff could review student work online, a portfolio can provide more continuous support to students, particularly once they have completed their required coursework and before they are making significant progress on their dissertations – a period when it is possible for PhD students to get lost. Portfolios could also be used in yearly reviews to identify gaps in what students aim to achieve compared to what they have actually accomplished. This will help faculty and staff to guide students in choosing classes, as well as help them identify potential focus areas for additional experiential learning opportunities or for RAND project work/OJT.

From a faculty and staff perspective, a continuously developing, living portfolio could serve as a tool to keep better track of student progress through the program. By providing a place where faculty and staff could review student work online, a portfolio could help prevent students from falling through the cracks. Portfolios could also be used in yearly reviews to identify gaps in what students aim to achieve compared to what they have actually accomplished. This will help faculty and staff to guide students in choosing classes, as well as help them identify targeted OJT and other experiential learning opportunities to fill in those gaps.

Beyond academics, portfolios could provide additional benefits for students including motivation and integration with the broader RAND environment. Within the school, students have told us that they think portfolios could encourage students to take more ownership of their education due more regular and measurable records of their accomplishments beyond course grades, with the possibility of including artifacts from their RAND project work that both record what they've contributed and provide specific examples of their work as they seek to join new research projects. .

Finally, looking down the road, we know that portfolios will be invaluable for our Tech Stream students as they move into the post-graduate job market. Increasingly, our Career Services Director has seen an interest from potential employers for information beyond the traditional academic CV and for students who have "hybrid" capabilities – graduates with knowledge of

the academic and research side of problem solving, as well as skills in applications and practical development of technology.

As we have refined our redesign to include the details of not only requirements but assessment mechanisms, our research and deliberation has led us to the decision that portfolios have a clear application in our Tech Stream and the potential for value in the Community and/or Research streams. The addition of the portfolio will provide a richer demonstration of student work and achievement, and improved and complementary assessment mechanism in addition to the dissertation, and potentially more relevant and useful information for employers. We will learn from this first application, learn, refine, and potentially extend over time. Our current implementation plan is outlined in the next section.

Implementing Portfolios at Pardee RAND

Once we agreed on the value of the portfolio, we faced the question of how widely to introduce them. With the Tech Stream's focus on emerging and creative applications of technology for policy, it was clear that the Technology Stream had the most pressing need for portfolios given the variety of innovative activities being developed for that stream. Therefore, we made the decision to introduce the portfolio into the Tech Stream first. The dissertation will remain the overarching narrative addressing a thematic policy issue. But for Tech Stream students this narrative will be informed and supported by experimentation with and on emerging technology as documented in the portfolio.

The next step was to define what a portfolio would mean at Pardee RAND and to build a structure around the portfolio. Two documents were created to codify the intent and define the function of the portfolio: 1) a one-page description and 2) a portfolio evaluation tool (See Appendices 12 and 13).

The one-page description defines the portfolio as a vehicle for learning and an assessment tool. The portfolio requirement is scaffolded by a mix of traditional classroom engagements, workshops, hackathons, and other engagements. All of these activities may generate artifacts for a student's portfolio, and the ideal mix will depend on the goals of each individual student. Necessarily, mentoring will be a key and constant feature provided by the various committees who will interact with the student over time. Portfolios will enable Tech Stream students to demonstrate their mastery of learning objectives through at least ten artifacts, such as software applications, simulations, code bases, visualizations, hardware, or combinations thereof, with at least one example from each of the four technology areas represented in the Lab: Internet of Things, Artificial Intelligence/Machine Learning, Augmented/Virtual/Mixed Reality, and Digital Gaming.

Through portfolios, students will demonstrate a deep understanding of emerging technologies, a strong grasp of policy intersections, and they will demonstrate learning through artifacts of individual and collaborative research ideas. Students should be able to demonstrate that they know how to break down a public policy problem and design an approach to solve it.

The one-page description also describes the role of the Portfolio Review Committee. This 3-5 member committee will be established in the second year through consultation between the student and the Tech Stream lead who will assist in the constitution of the committee bringing in Lablet leads and external experts as appropriate for the student's area of interest.   The Review Committee will work with the student to determine the appropriate number, focus, and scope of portfolio artifacts, as well as assess the progress and execution of the work.

Finally, to guide and assess a student's progress in creating a portfolio, the Review committee will use the Portfolio Evaluation Tool (see Appendix 13). This tool considers the student's overarching goals, background and preparation, process, results, and overall presentation ability. This tool is meant to be flexible – at this early stage for the Tech Stream, students will be encouraged to explore and discover what works without over-reliance on prescriptive guidance. This tool is intended to be used on an ongoing basis, and at least annually, to appraise and orient Tech Stream students as they progress through the program. When the student defends their dissertations, their dissertation committee will evaluate the dissertation report in conjunction with their completed portfolio, which will provide context and background information on the larger central topic.

The Student Experience with Portfolios

What follows is a description of how portfolios will be implemented for the entering cohort in the fall quarter of 2020. The first section describes when and how students will interface with portfolios throughout their time at Pardee RAND. After that is a discussion of how portfolios will be evaluated, expected outcomes, and then a short discussion of the differences and interactions between portfolios and dissertations.

Students in the Tech Stream will be encouraged to begin thinking about their portfolios from the day they arrive at Pardee RAND in September 2020. In preparation for their arrival, the Tech Stream Director will constitute an onboarding committee composed of directors of the lab (Pardee RAND faculty) and lablet leads (RAND researchers). Entering students will meet with this committee at the start of the academic year and throughout the first year to explore their goals, experiences, intentions, and to ascertain if there are any gaps in technical areas that will require further support.

After completing the first-year core requirements along with students in the other two steams, Tech Stream students will sit for their qualifying exams in the summer. Once students pass these exams, they proceed to the Tech & Narrative Lab Residencies. The TNL Residency gives students a time and place to experiment with technologies, develop dissertation ideas, and it is anticipated that during this residency they will begin building artifacts for their portfolios.

	Who forms	Unique to student?	Composition	Function	Duration
Onboarding	Stream Lead	No	Stream Lead; Lablet Leads,	Provides initial assessment and guidance to each entering student; acclimates them to Tech Stream components	Provides guidance during the first year
Portfolio Review	Stream Lead with student input	Maybe	Stream Lead; Lablet Leads, at least one outside technical expert	Provides guidance to students during their second year in the program as they begin to create artifacts. Assesses portfolio artifacts as they are added.	Formed when students enter the Tech Lab Residency in their second year
Dissertation	Student	Yes	Two RAND researchers and one outside technical expert; membership overlap with Portfolio Committee is encouraged	Provides guidance to students once they begin their dissertation. Takes over from the portfolio committee in providing assessment of the portfolio.	Formed when students are ready to begin their dissertation research usually by their third year.

Expected Outcomes and Evaluation of Portfolios: Portfolios and the Dissertation

While the dissertation and portfolio are separate products, they are intertwined in process and assessment. The dissertation serves as a critical framing document that provides context for the work of the portfolio. The Tech Stream dissertation also works in concert with the portfolio to show depth and breadth of understanding in both policy and technology, providing evidence of the depth of research and mastery of skills. As is indicated in Table 3 above, reflecting this connection it is expected that the Portfolio Committee will transition to a Dissertation Committee as a student moves through the program.

As mentioned above, the dissertation is a single, overarching narrative addressing a thematic policy issue. This narrative is informed and supported by experimentation with and on emerging technology as documented in the portfolio. The Tech Stream dissertation will include a description and analysis of the policy problem addressed, the technology applications or artifact developed to better understand, mitigate and/or solve this problem, and the implications and expected efficacy of implementing such solutions.

The dissertation committee, comprised of three or more members with at least one external expert, will also work with the student to determine the number, scope, breadth, and expected quality of artifacts that will be required for the portfolio. Once the student constitutes a dissertation committee, for the remainder of their time at Pardee RAND, this committee will oversee both their dissertation and their portfolio. Tech Stream students will meet with their committee regularly to discuss overall progress and evaluate whether there should be any modifications to the direction of the student's education. The spacing and format of these formal checkpoints will be determined on a case by case basis between students and their committees.

Ongoing Development Work and Open Issues

We are launching the Tech Stream with all its components in September 2020, but a number of the components, including the portfolio, will not be put into operation until the 2020 cohort enters their second year in fall 2021. In this section we summarize the areas where work is ongoing and where there are issues still to resolve.

- Confirm membership of the Onboarding Committee and acclimate the members to this new role
- Work with the Portfolio Review Committee to decide what if any guidance is needed for students regarding what constitutes an appropriate artifact and how to incentivize students to try things that might not work so they can document learning through risk taking
- Decide on the infrastructure for housing the portfolios internally and eventually externally. Todd Richmond is reviewing the different types of hosting platforms for portfolios. A short list of possible hosting sites will be presented to the FCCA and the school administration by January 2021. Factors to be considered include the ease of use, privacy protections, and cost per student.

Pardee RAND is committed to ongoing improvement throughout our academic program. The introduction of any new assessment mechanism requires careful planning along with a sense of humility as there will undoubtably be areas where a course correction is required.   We will be reviewing how well portfolios are performing when we conduct our next program review which is tentatively scheduled to occur during academic year 2022-23 at a point when we should have sufficient evidence available to analyze to what extent our new mechanisms are functioning as we envisioned.

Conclusion

Goals of the Redesign

As we have outlined throughout this document, the Pardee RAND Graduate School has undertaken a redesign of its PhD program in policy analysis in response to demands we have seen in the world. As the world becomes ever more interconnected and problems ever more complex and intertwined, it is abundantly clear we need new ways of thinking about and tackling them. From our perspective, this requires new ways of teaching and practicing policy analysis. We believe the innovative elements we have introduced into our redesigned program will enable us to train our graduates to be the policy leaders the future demands. Some will be leaders in researching, analyzing and designing new policies. Some will be leaders in partnering with communities and turning policy into action. Some will be leaders in fusing technology with policy to explore how technology can be used to improve policy interventions and how where technological innovations spur the need for new policies. All our students will continue to undertake a rigorous academic program, to engage in hands-on learning, and to produce a dissertation which adds to the body of knowledge in their chosen policy field.

New Mechanisms

This document describes our progress in redesigning and establishing our learning environment to produce these results. We have introduced a variety of new mechanisms to greatly enhance, broaden, and assess student learning. We have created a pre-term intensive and immersive Bootcamp to acclimate students to our new learning environment, and introduce them to the new concepts of complex problems, systems thinking, personal, professional, and community ethics. We have updated and restructured our coursework adding courses in Ethics in Policy and Practice, Emerging Technology and Society, Data Science, Implementation Science and Intersectionality to provide students with an expanded toolkit to draw upon. Policy design studios are another innovation we've introduced to equip students with the tools for understanding, mapping and making progress on complex problems. We are weaving critical skills and perspectives related to ethics, communication, social justice and racial equity and a global mindset throughout our program. The Tech and Narrative Lab and the Community Partnerships have greatly expanded the scope, scale and depth of the experiential learning opportunities we provide our students. And the portfolio introduces a way to scaffold student learning in the Tech and Narrative Lab and provide a highly adaptive cumulative assessment mechanism for students and faculty.

As we have designed these new mechanisms, we have also paid attention to the need to assess to what extent they are providing students with the learning we believe they should acquire in our PhD program. Since these new mechanisms do not always lend themselves to easily quantifiable assessments like exams, we are introducing a series of qualitative assessment mechanisms which we have described in this document. We are also thinking carefully and experimenting with how best to design the data collection and assessments necessary to

measure learning at various stages throughout a student's career. We are also paying attention to how we can create a system that allows us to continuously examine, reflect and improve. In Table 4 below, we lay out our initial plans for creating a systematic approach to reviewing, assessing and making any needed course corrections in the new program elements covered in this document.

Table 4: Systemic Approach to Reviewing, Assessing, and Correcting New Program Elements

Objective	Mechanism	Assessment Activity	Responsibility for Assessment
Building a Truly Integrated and Interdisciplinary Learning Environment			
Integrated Core Curriculum	Curriculum Mapping	Annual Review of Core and Stream Required Courses	Assistant Dean for Academic Affairs with Stream Leads
	Core Faculty Engagement such as quarterly meetings on selected topics, annual retreat	Feedback from meetings	Assistant Dean for Academic Affairs with RAD Stream Lead
	Student Communication such as Townhalls, Office Hours, Cohort meetings, meetings with Student Leadership Organization	Revised course evaluations; questions during First and Second year reviews; focus groups	Assistant Dean for Academic Affairs with RAD Stream Lead
Integration of Critical Skills and Perspectives	Detailed in Table 1 (p 22)	Detailed in Table 1	Leadership Team
Entanglement of Policy Engagement Streams	Workshops, Courses, Hackathons, Policy Design Studios, Experiential Learning	Quarterly and annual reviews of numbers of cross-stream participation in these activities	Stream Leads
Expanding Experiential Learning			
Community Stream Externships & Residencies	Individual Level: Daily Diaries; Self Assessments; Team Review; Ratings by Community Supervisors; Reviews of Demonstrations;	Review at individual and stream level after each externship; Annual assessment of stream level success	Community Stream Lead
Tech Stream Residencies, Hackathons, & Experimentation in the TNL	Periodic Presentations including at TNL group meetings & lunch seminars; judged competitions; portfolios	Feedback from Lablet leads, Committees and peers; Annual assessment of individual progress and stream level success	Tech Stream Lead
Research Analysis and Design Stream On-the-Job Training (OJT)	Need to introduce new feedback mechanisms and possibly a required inquiry studio	Quick feedback from Project Leads at the end of each major project	Associate Dean with RAD Stream Lead
Portfolios			

	Initially required in the Tech Stream only. 10 artifacts in four technology areas	The Tech Stream Portfolio Review Committee will periodically assess each student's portfolio; We will also assess the portfolio process including the functioning of the PRC. Student feedback will be an important component.	Tech Stream Lead

Continuing Issues

In addition to the work we've done to redesign our program, we continue to evaluate and improve the three areas the Commission first identified for us in 2011 namely (1) Refining our Program Review Process, (2) Improving Degree Completion for Selected Populations; (3) Expanding our Reach into Diverse Communities.

Refining and Conducting Program Review

As noted earlier in the this document, one of the characteristics of our new learning environment is that it is designed to encourage extensive iteration and experimentation and improvement at the individual student as well as at the programmatic level. We have done so with an eye towards preparing ourselves for a Program Review in the 2022-23 academic year.

We have set our date for our next program review for academic year 2022-23 to allow us to gather experience and data from the first two years of full implementation of our redesigned program. The themes in this report will form the basis of the Program Review. We will be assessing:

- To what extent have we successfully built a fully integrated and interdisciplinary learning environment? How well integrated are our core courses and faculty? To what extent have the cross-cutting themes and perspectives been developed? What evidence do we have that our students are integrating across Streams? What measures of success can we point to? Where do we still have room for development?
- To what extent are our new experiential learning programs providing students with the learning experiences we envision? Where and why have we succeeded? Where is there room for further development? To what extent have we been able to incorporate learning from the Community Partnerships and the Tech and Narrative Lab into our assessment mechanisms for On-the-Job Training at RAND?
- To what extent is the Tech Stream Portfolio process functioning as we envisioned? What aspects are most successful? Where have we encountered obstacles? What have we learned as a result?

We will also be looking more broadly at to what extent and in what ways our new offerings affect recruiting and retention (noting that our first year of our new academic streams resulted in a record-breaking yield and cohort size), how our course offerings changed over time, how the structure of our faculty has changed as needed, how are our new administrative and decisionmaking processes are functioning, and the financial implications of these changes.

This first program review of the redesigned program will enable us to begin to benchmark the efficacy of many of the new elements we have been introducing over the past few years. But it will still be too early to assess the longer term impact on time to completion, completion rates, placements rates and other post-graduation measures of success. For this reason, we are also committing to establishing a regular 5-year cycle for Program Review with a commitment to conducting a second program review five years later during the 2027-28 academic year.

Improving Degree Completion for Select Populations

Pardee RAND has always been a PhD program with a highly flexible structure which provides students the ability to customize their learning experiences. This flexibility allows students the freedom to pursue their areas of interest, while also cultivating characteristics related to leadership and follow-through. Students choose to specialize in a wide range of skills, methods, and policy areas.   However, students also report that they can feel lost in the process. They are not always sure what additional learning they need and finding the right guidance and mentorship can be challenging for some as unlike in other PhD programs, the choice of a dissertation advisor is left largely up to them.   This can make our program especially difficult to navigate for certain populations.

In past years, we have paid particular attention to the persistence and graduation rates of underrepresented populations, women and international students. As noted earlier in this document, we have made progress in these areas. And we will continue to monitor this closely. By design, our three policy engagement streams have broadened the breadth of our program enabling us to attract students with an even greater diversity of backgrounds and career goals. Of the US students in our entering class over half (53%) are non-White and/or Hispanic. Of our entering class, 22% are first-generation college goers and 44% are the first in their families to attend graduate school. Two thirds have advanced degrees in fields as diverse as aerospace engineering, veterinary science, and anthropology.

For this reason, as we have built our new learning environments, we have also created new positions and new processes to provide the additional support and mentoring we believe all students need to be successful in a rigorous PhD program.   As noted throughout this document, we have added three new academic positions—Stream Leads-- to provide oversight for the academic content of the streams, but also to provide additional mentorship for students in that stream.   The Community Stream and the Tech Stream are also bringing in additional faculty to provide guidance and support at critical junctures including during externships and residencies in communities and in the Tech and Narrative Lab. These support structures are particularly important for our new experiential learning opportunities.

Finally, we believe our new cross-cutting themes will promote a more inclusive environment for students and provide them with skills they need to succeed in their professional lives, whether in non-profits, local governments and community organizations, technology companies, or academia. We have introduced Ethics not as a one-off course in the hope of inoculating our students but through multiple touchpoints that provide a formal intellectual framework and vocabulary; exercises that enable students to explicitly identify their own ethical perspective and values while also understanding and respecting those of their fellow students; a structured

understanding of the ethical conduct of community-partnered research; and an explicit identification by students of the ethical implications of their research and recommendations. Communication skills developed across traditional and new media are combined with the development of deep listening skills. A global perspective is brought into not only the problems students address but in the solutions they develop. And, as we develop this new thread within the fabric of our program, the struggle, challenges, and effects of a failure to address social justice and racial equity – and the active work of resolving these long-term and systemic problems.

Expanding our Reach

Finally, we have continued to push forward, expand, improve, and leverage our ground-breaking Faculty Leaders Program. After eight years of holding these summer programs, we have expanded the program to include workshops and connections throughout the year, are asking Faculty Leader alumni to mentor our faculty and staff, have welcomed students of Faculty Leaders into our PhD program, and have nominated and recruited Faculty Leader alumni for senior positions within the school and RAND. Our aspiration is to not only grow this program for Pardee RAND Graduate School but to receive external funding to support other graduate schools who would like to replicate this extraordinarily successful program. Stay tuned!