create's mission is to make technology accessible, and to make the world accessible through technology.









Highlights

RESEARCH: CREATE faculty and students published 55 papers on accessible technology, 20 of which formally acknowledged CREATE support. CREATE launched a collaboration with the <u>Institute for Learning and Brain Sciences</u> to study the developmental impact of access technologies, recently hiring two post doctoral fellows to support this work, and will be hiring two more post doctoral researchers in fabrication and accessibility in Fall 2021. CREATE faculty also won <u>numerous awards at ASSETS 2020</u> for their accessibility work.

EDUCATION: CREATE launched a <u>student mini-grants program</u>, conducted a <u>fall seminar on accessibility and race</u> run by CREATE Co-Director Mankoff (who recently received an <u>AccessComputing Capacity Building award</u>) and alumnus Anne Spencer Ross, hosted a workshop on A.I. for <u>Accessibility+CS Education</u> jointly with Microsoft (90 participants), ran a winter workshop for undergraduates with disabilities sponsored by Google (45 participants), and established a Spring Virtual <u>Study Away</u> program jointly with Teach Access (80 participants; 22 from UW), run by CREATE Director for Education Ladner (who also won a National Science Board <u>Public Service Award</u>).

TRANSLATION: CREATE faculty ran a year-long reimagining mobility conversation hub, which included over 150 members. CREATE research was deployed on the Google Play store. The summer internship work of Ph.D. student Kelly Mack, winner of a Dennis Lang disability studies award, is now available in Microsoft PowerPoint. Finally, CREATE's first Community Day was held in June 2021, and CREATE launched its partner program (join us!).

OPERATIONS: CREATE formed its <u>Advisory Board</u> and held its first meeting in June 2021. CREATE also established its leadership structure and categories for additional membership types.

FUNDRAISING: CREATE was founded with a goal of raising \$10 million for the first 5 years. Microsoft and lead donors helped launch CREATE with over \$3 million. CREATE raised \$1 million in additional funding from a postdoctoral <u>training grant</u> from the National Institute on Disability, Independent Living and Rehabilitation Research (NIDILRR).

Research

Outcomes from AY 2020-2021

CREATE faculty and their graduate students were prolific in their research output in academic year (AY) 2020-2021, producing 55 publications related to accessible technology, 20 of which explicitly acknowledged CREATE support. (For context, 55 publications is sufficient for the entire proceedings of a typical domain-specific conference in computing in a given year.) Although a complete review of CREATE's research is beyond the scope of this report, multiple highlights stand out from CREATE's research activities in AY 2020-2021.

CREATE's major research project areas for the

year, most of which are continuing, include: (1) work on mobile and wearable accessibility, especially making developer tools for more accessible apps, and automating large-scale app accessibility evaluations (Wobbrock, Fogarty, Findlater, Froehlich); (2) using fabrication to make "making" (craft, 3-D printing, manufacturing) accessible (Mankoff); (3) making urban spaces such as sidewalks and indoor areas accessible (Caspi, Froehlich); (4) improving the accessibility of computer science education and work, including creativity tools, interface design, presentation tools, and data visualization (Wobbrock, Mankoff); (5) creating a blocks-based accessible programming environment for teaching programming to blind students and single switch users (Ladner); (6) understanding how early childhood mobility, such as with motorized toy cars, affects childhood brain development (Feldner, Steele); and much more.



CREATE Associate Director Kat Steele, AccessEngineering students and lab members examine electromyography systems at a workshop to develop guidelines for making accessible labs and research spaces in engineering.

The ACM ASSETS conference is the premiere venue

for research publications on accessible computing. There were 57 total papers published at ASSETS 2020, six of which had a CREATE author (10.5%). CREATE authors also nearly swept the awards. The conference's Best Paper went to "Input Accessibility: A Large Dataset and Summary Analysis of Age, Motor Ability and Input Performance," by CREATE Associate Director Leah Findlater and her student Lotus Zhang. The conference's Best Student Paper — a paper with a student lead author — was "Living Disability Theory: Reflections on Access, Research, and Design," by Megan Hofmann, Devva Kasnitz, CREATE Co-Director Jennifer Mankoff, and Cynthia L. Bennett. Finally, Best Artifact went to "Exploring Smartwatch-Based Deep



Kim Ingraham

CREATE/I-LABS EXPLORE IMPACT OF CHILDHOOD MOBILITY TECH

In 2021, CREATE and the UW Institute for Learning & Brain Sciences (I-LABS) joined forces to launch a project exploring early childhood mobility. Funded by a \$500k gift from anonymous donors, this CREATE/I-LABS collaboration explores how childhood mobility technology, such as powered wheelchairs and electric toy cars, affects brain development. On the CREATE side, Associate Directors Heather Feldner and Kat Steele lead this collaboration with I-LABS. Postdoctoral Fellow

Kim Ingraham, who completed her Ph.D. at the University of Michigan in Mechanical Engineering, joined the team in Fall 2021. Research results from this work will be forthcoming in AY 2021-2022 and beyond.

Learning Approaches to Support Sound Awareness for Deaf and Hard of Hearing Users," by Dhruv Jain, Hung Ngo, Pratyush Patel, Steven Goodman, and CREATE Associate Directors Leah Findlater and Jon Froehlich. This level of research recognition at ASSETS for a single university is unprecedented.

CREATE faculty collaboratively wrote and submitted a research center grant for NIDILRR called an "ARRT." which stands for "advanced rehabilitation research training" program. The team was awarded the 5-year, \$1 million grant in June 2021. It will support training the next generation of accessibility researchers across fields, including rehabilitation, computer science, engineering, and disability studies. This program will train four postdoctoral fellows to be leaders in physical computing for rehabilitation research that supports community living and participation for people with disabilities. Each fellow will complete a 24-month training program to build their expertise through engagement with partners from disability communities and organizations. Training will include research and mentoring (70%), coursework (20%), and community engagement (10%) that will expand expertise in using basic and complex adaptation tools, 3D-modeling software, and fabrication machines (e.g., laser cutters, 3-D printers). We believe this training program will position clinicians and engineers, in partnership with people with disabilities, to remove barriers and create innovative solutions that can enhance community living.

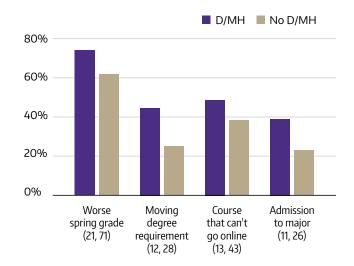
Goals for AY 2021-2022

In the next academic year (AY 2021-2022), CREATE faculty will continue to pursue cutting edge high-impact research that advances both (1) our understanding of people, disability, and technology, and (2) the state of the art in accessible technology design and engineering. Our goals include:

- To continue to publish prolifically at high-visibility venues, and to have at least 50% of our publications benefit from, and therefore acknowledge, CREATE support. Although we think it is contrary to the spirit of free inquiry to set a target number of papers, which can prioritize quantity over quality, our consistent track record justifies expecting dozens of new papers from CREATE faculty and students.
- To launch at least one new "moonshot" research project involving at least two CREATE faculty.
- To welcome at least two new faculty members

MENTAL HEALTH AND COVID-19

CREATE's view of disability is expansive and includes mental health. For example, for students with disabilities and mental health concerns under COVID-19, stress may be compounded by financial risks or pre-existing conditions. In a study, CREATE Co-Director Mankoff found that some students with disabilities experience more adversity related to the COVID-19 pandemic than their peers. Surprisingly, she found online learning enabled greater access for these students by reducing the need for fatiguing travel to campus and increasing safety, although online learning made some mental health concerns worse by reducing human interaction. This work is currently under review at a top journal. Furthermore, to build shared knowledge around mental health, the CREATE Accessibility Seminar in Fall 2021 is focused on Margaret Price's book "MAD at School: Rhetorics of Mental Disability in Academic Life."



Students with Disability/mental health concerns had more academic worries than non-disabled peers.

and/or postdoctoral fellows into CREATE as active researchers and collaborators.

- To provide matching money for at least one successfully funded CREATE research project.
- To be highly visible via conference and keynote presentations, awards, press releases, and project videos, all crucial modes of research dissemination.
- To submit a large center grant or similar (e.g., NIDILRR RERC) describing new research projects that would fund CREATE at a significant level.

Education

CREATE's education initiatives, led by Director for Education Richard Ladner, teach students about accessibility, how to champion it in industry, and how to increase representation of students with disabilities in the workforce. Student members represent a variety of disciplines, with interests in accessible technology research, education, or translation.

Outcomes from AY 2020-2021

Over the past year, CREATE student membership has reached 130. Student members receive updates from CREATE and are eligible to apply for CREATE Student Minigrants, described below. Many of these students participated in the graduate CREATE Accessibility Research Seminar that was held virtually once a week during the past academic year. The seminar covered a wide variety of topics, including exploring the intersection of disability, race, and accessibility during Winter 2021. To help students find accessibility-related courses, a webpage was created to list courses on the UW campus. CREATE also co-sponsored four DUB Seminars by leading accessibility researchers Abigale Stangl (UW), Sara Hendren (Olin College), Patrick Carrington (Carnegie Mellon University), and Vivian Motti (George Mason University).

CREATE launched its Student Minigrants in Fall **2020.** By year's end, the minigrant program had awarded four grants to student researchers. The CREATE funding helped to pay study participants and

develop software prototypes. The awardees were:

- "Inclusive Design in Video Communication
 Accessibility with Deaf/deaf and Hard of Hearing
 Signers," led by Ana Liu, a Master's student in
 the Department of Human Centered Design and
 Engineering. This project resulted in a submission
 to the ACM CHI Conference on Human Factors in
 Computing Systems (CHI 2022).
- "VerbalEyes," led by Lucy Jiang, an undergraduate student in the Paul G. Allen School of Computer Science and Engineering. The research in this project helped justify the design of VerbalEyes, a student-led project to create automated audio descriptions. A poster about the project at the 2021 Tapia Conference won the First Place Undergraduate Award.

WORKING ACROSS THE EDUCATIONAL SPECTRUM

Education in CREATE is a multifaceted endeavor that ensures tomorrow's technology is fully informed by a disability perspective. In addition to fostering successes by students with disabilities in their transition to college, graduate school, and postgraduate positions, we are conducting cuttingedge work across the educational spectrum. For young children, we are collaborating with the Institute for Learning and Brain Sciences (I-LABS) to study the impact of accessible technology on brain development. For elementary school students, we are working to make educational games more accessible. For middle school students, we are developing Blocks4All, a block-based language that supports switch input and screen reading. For college students, we have just begun a comprehensive study of the barriers to technologymediated STEM learning faced by students with disabilities, and are actively working to improve software such as programming environments to increase inclusiveness.



Many educational apps, such as Mental Math (above), which requires tapping targets to enter digits, use game engines that expose no on-screen widgets (like buttons) to built-in accessibility services. Therefore, these widgets are invisible to screen readers and other accessibility-related services. Our research is attempting to address this problem.

- "Universal Access to Autonomous Vehicle: Universal Design Principles During Transition to Robot-Taxi," led by Solji Lee, a Master's student in the School of Art + Art History + Design. The research in this project led to a design Master's thesis that was demonstrated at an exhibition in the Henry Art Gallery.
- "Visualizing the Accuracy of Automatic Captions," led by Kelly Mack, a Ph.D. student in the Paul G. Allen School of Computer Science and Engineering. This research supported a class project in the graduate data visualization course.

Several workshops were held during the past year that were co-sponsored by CREATE. They were:

- The Accessible Computer Science Education Fall Workshop, held virtually November 17-19, 2020, co-organized with Microsoft and the Coleman Institute for Cognitive Disabilities. Ninety people attended the workshop that focused on accessible CS education at all levels.
- OurCS@AccessComputing, held virtually January 13-15, 2021, co-organized with AccessComputing, and funded by GoogleCSR. The research-focused workshop for undergraduates with disabilities in computing fields was attended by 46 students. See the CREATE Newsletter No. 1 article, page 10.
- <u>Teach Access Virtual Study Away</u>, held virtually each Wednesday from March 17 - April 21, 2021 for 1.5 hours, organized by Teach Access. Twenty-one of the



CREATE Ph.D. student Michael Rosenberg completed his dissertation on ankle exoskeletons in AY 2020-2021.

82 student participants (26%) in the workshop were from the University of Washington.

Also this past year, two CREATE Ph.D. students completed their dissertations. Anne Spencer Ross completed "A Large-Scale, Multi-Factor Approach to



Anne Spencer Ross

Understanding and Improving Mobile Application Accessibility" in June 2021, co-advised by CREATE Associate Director James Fogarty and CREATE Co-Director Jacob O. Wobbrock. Dr. Ross joined the faculty of Bucknell University in Fall 2021. Also, Michael Rosenberg (photo at bottom left) completed his dissertation, "Modeling

and Predicting Response to Ankle Exoskeletons" in June 2021, advised by CREATE Associate Director Kat Steele. Dr. Rosenberg joined Emory-Georgia Tech in Fall 2021 as a postdoctoral fellow.

Goals for AY 2021-2022

In the next academic year (AY 2021-2022), CREATE faculty will continue to educate the next generation of technologists to prioritize accessibility in their work. Our goals include:

- To continue the Student Minigrant program and award at least four grants of up to \$2000 each.
- To continue the graduate Accessibility Research seminar and tackle topics that address emergent and current issues (such as mental health).
- To co-sponsor DUB seminars by leading accessibility researchers.
- To increase our Ph.D. graduates who focus on accessible technology and disability.
- To have CREATE students participate in the Teach Access Study Away program.
- To continue our series, "Responsible Data Science for Urban Spaces," an accessibility-focused projectbased multi-quarter course that educates students about bias-free "smart cities" data projects.
- To continue our conversation series, "Reimagining Mobility," featuring local and national leaders in mobility, accessibility, and technology that engages in conversations about mobility as a multifaceted concept, exploring how mobility intersects with other dimensions of access across contexts of research, education, and public policy.
- To make our own campus more accessible, and to share best practices for making educational environments more accessible.

Translation & Community









SoundWatch uses a sound recognizer based on deep learning to classify and provide feedback about environmental sounds in real time. It is now available in the Google Play store.

In 2020-2021, CREATE's translation initiatives, led by CREATE Director for Translation Anat Caspi, were focused on three pillars as it worked to establish relationships with community partners: cooperation, trust, and transparency. As a new organization, CREATE seeks to provide inclusive leadership in accessible technology. CREATE faculty recognize that modeling positive and creative leadership that encourages mutual respect between researchers, participants, and community organizations paves the path from innovative research to sustainable real-world impact.

Outcomes from AY 2020-2021

Our efforts in AY 2020-2021 included several meaningful, intentional efforts to work with organizations from industry, academia, and advocacy groups in a spirit of cooperation, trust, and transparency, enabling downstream translation achievements that will accomplish CREATE's mission.

With industry, CREATE focused on communicating and translating current research outcomes and on establishing relationships that provide pathways for future impact. Projects gaining traction with industry included:

- SoundWatch and other real-time sound awareness tools that use machine learning for people who are d/Deaf or hard-of-hearing (Findlater, Froehlich). This work has been shared at Apple and Google, who also have initiatives in this space.
- Work on large-scale mobile app accessibility testing, runtime accessibility repair, and accessibility test results (Fogarty, Wobbrock) shared at Google, Apple,

Work by Anne Spencer Ross, advised by CREATE directors James Fogarty and Jacob O. Wobbrock, approached large-scale mobile accessibility using an "epidemiological model" of app accessibility, investigating many of the factors that cause an entire population of mobile apps to be inaccessible, from source code flaws due to code reuse to development practices leading to missing labels to company practices leading to poor documentation.





A young mover explores his new wheels while surrounded by his family and workshop volunteers at CREATE'S UW Go Baby Go workshop on Nov. 6, 2021. All Go Baby Go cars have electrical adaptations and custom seating modifications to make self-initiated mobility accessible for young children with disabilities.

and Microsoft. Students involved in this multifaceted project also directly contributed to development of Screen Recognition in iOS 14 and updates to Google Accessibility Scanner, a widely used Android accessibility testing tool.

- White papers arising from collaborations with Microsoft and other academics highlighting broad area efforts at the intersection of technology and education to improve outcomes for faculty and students with disabilities (Ladner, Caspi).
- Work with Amazon employees to establish an accessibility coding brigade to fuel future translation and outreach activities in the area of "coding for accessibility" (Caspi).
- Work with Nintendo to establish a Nintendo accessibility special interest group, which prompted a large donation of Nintendo systems, games and switches (Caspi).
- A mechanism for other companies to work with CREATE in corporate social responsibility engagements (Caspi).

With non-governmental and advocacy organizations, CREATE focused on establishing supportive partnerships to ignite collaborations in research and sustainable translation. For example:

- Speaking at several community outreach events
 benefiting partner organizations including Provail
 Therapy Center, Boyer Children's Clinic, Global
 Initiative for Inclusive ICTs (G3ict), and Northwest
 Access Fund (Caspi).
- Providing active collaborations or endorsements to advance community work and activities of other organizations supporting accessibility, including the Digital City Testbed Center, Allen Institute for Al, MV Professional Services, HopeLink, SF Tech Council, Provail Therapy Center, TeachAccess and the Washington Assistive Technology Act Program (Ladner, Feldner, Caspi, Steele).
- Co-authoring Mobility Data Interoperability Principles
 to promote data sharing between systems,
 operators, and providers and the riding public,
 empowering transit agencies, service providers,
 and system managers to provide better service and
 improve the customer experience, including for
 people with disabilities (Caspi).
- Working with local governments in Mexico and the NGO Liga Peatonal to deploy and support Project Sidewalk into two Mexican cities: San Pedro Garza García and Mexico City. We are working with these organizations to improve urban accessibility and pedestrian access and safety in Mexico.

Within academia, CREATE fostered active partnerships both at the University of Washington and beyond, including:

- Establishing collaborations at UW with I-LABS,
 AccessComputing, AccessEngineering, the Center
 for Technology and Disability Studies, the DO-IT
 center, the Taskar Center for Accessible Technology,
 the Center on Outcomes Research in Rehabilitation,
 and AccessCS4All (Caspi, Ladner, Feldner, Steele,
 Mankoff, Wobbrock).
- Supporting student-led organization HuskyADAPT, whose aim is to foster an inclusive, sustainable, and multidisciplinary community at UW to support the development of accessible play technology.
- Organizing hackathons in which student teams competed to create prototypes to solve particular problems. CREATE was represented at DubHacks, UWBothellHacks, and Code for America Brigade's National Day of Civic Hacking.
- Leading numerous open community seminars and events:
 - "Reimagining Mobility" (Steele, Feldner)
 - "Accessible Hour of Code" (Ladner)
 - "Just and Sustainable Research with People with Disabilities" panel (Caspi)
 - "Non-ableist Data Science" workshop (Caspi)
 - Accessibility walkability seminars in Maryland, Washington and Oregon (Caspi)
 - Coding collaborations on accessibility projects with DemocracyLab, National Day of Hacking and CodeForAmerica Brigade (Caspi)
 - "Accessible Teaching in the Allen School" (Mankoff)

CREATE faculty launched, participated in, and maintained various Communities of Practice, including:

- ASL STEM, a resource for sign language scientific terms (Ladner)
- GoBabyGo UW chapter (Feldner)
- Al4ALL UW chapter (Caspi)
- OpenThePaths (Caspi)
- XRAccessResearch Network (Caspi)

Goals for AY 2021-2022

In the next academic year (AY 2021-2022), CREATE faculty will continue to translate research-to-practice and build community for doing so. Our goals include:

• To enhance awareness of CREATE to organizations



A Go Baby Go workshop volunteer connects a speed controller that will enable kids and families to adjust speeds while driving their custom modified ride-on car.

potentially interested in working or partnering with us.

- To enhance awareness of community-related events to CREATE faculty, enabling faculty to build relationships with potential partners.
- To move at least one product into public deployment and to identify at least two candidates for the same within the next 12 months.
- To engage stakeholders and partners to gain input about opportunities to improve measures and preparedness efforts to reduce disparities experienced by people with disabilities during pandemics and other natural disasters.
- To engage six local and global disability advocacy organizations in a joint effort committed to advancing promising disability inclusion policy and practices globally.
- To forge a connection between CREATE and CoMotion, the University of Washington's technology transfer and intellectual property office, fostering mutual awareness.

Operations

In AY 2020-2021, CREATE operations, led by Co-Directors Wobbrock and Mankoff, focused on building its leadership structure, establishing regular meetings, and determining its governance and decisioning procedures. In addition, CREATE formed its external advisory board, an effort led by CREATE Associate Director Jon Froehlich. CREATE also held its first advisory board meeting in June 2021, which aided in goal-setting for the next academic year. Finally, CREATE also established its first website at https://create.uw.edu/. (Revisions are already underway for the second version.)

CREATE leadership comprises two Co-Directors (Mankoff, Wobbrock), one Director for Education (Ladner), and one Director for Translation (Caspi). In addition, CREATE comprises five Associate Directors: Feldner, Findlater, Fogarty, Froehlich, and Steele. The four CREATE directors meet weekly and the full leadership meets bi-weekly.

Additionally, CREATE membership includes additional faculty (39), postdocs (4), students (118), and visitors who work with CREATE leadership. Numerous mailing lists were created to engage members, including lists for faculty, students, and the broader community.

The first CREATE Newsletter was published in Winter 2021 and shared widely with stakeholders. Multiple CREATE email digests were sent out informing the community about CREATE achievements and activities. An <u>online newsfeed</u> was also created as part of the website.

CREATE's advisory board was formed with four luminaries in Fall 2020, and met in June 2021. It includes: (1) Mary Bellard, a leader in accessibility

CREATE ADVISORY BOARD









From left: Bellard, Cooper, Gilbert, and Lazar.

and innovation at Microsoft who has worked on accessibility training curriculum, the Disability Answer Desk, and accessibility hacks; (2) Rory A. Cooper, inventor and assistive technology researcher at the University of Pittsburgh; (3) Juan E. Gilbert, a professor and Chair of Computer & Information Science & Engineering at the University of Florida; and (4) Jonathan Lazar, a prominent advocate for digital accessibility and the incoming leader of the TRACE Center at the University of Maryland.

Goals for AY 2021-2022

In the next academic year (AY 2021-2022), CREATE leadership will continue to strengthen center operations to better facilitate our work. Our goals include:

- To revamp and revise the CREATE website to better showcase CREATE work, community, and people.
- To formalize operational definitions of CREATE membership ranks and the visibility of CREATE members on the website.
- To hold at least one productive advisory board meeting, in person if possible.
- To hire a staff member for building and managing community partnerships.

MULTIPLE HONORS FOR CREATE LEADERSHIP

CREATE leadership was recognized in AY 2020-2021 with multiple awards. Associate Director Kat M. Steele received the DO-IT Trailblazer Award for ensuring that disability, accessibility and universal design are included in engineering curricula at UW and beyond. Director for Education Richard E. Ladner won the 2020 National Science Board Public Service Award for his national contributions to including people with disabilities in STEM [video, press release]. Co-Director Jennifer Mankoff won the 2020 AccessComputing Capacity Building Award for her leadership of AccessSIGCHI. Congratulations to all award winners!

Finance

CREATE's budget is structured on a five year cycle.

One year in, we are focusing our primary fundraising efforts on creating sustainable funding sources for CREATE. Our financial values include equity, sustainability, transparency, and impact. We spend money to support research breakthroughs, promote education and translation, develop new researchers, and foster additional fundraising to further our mission. Whenever possible, we aim to spend funds such that "2+2=10" by pursuing joint efforts toward larger goals.

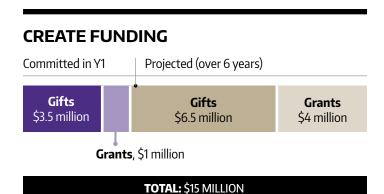
Our goal is to raise an average of \$10 million over every five-year period, and to generate sustainable sources of funds. Additional goals are to encourage faculty to work on high impact projects, and to support CREATE's research, education, and translation missions broadly. These goals will be achieved through funding of seed grants, student mini-grants, and larger moonshot awards, as well as matching money for external sources. Another goal is to support the careers of students and faculty with disabilities. Below, we detail our initial spending plan over years 2-6 of CREATE's life and our approach to developing a longitudinal sustainable plan.

Fundraising in AY 2020-2021 and beyond

In AY 2020-2021, Microsoft and lead donors made \$3.5 million in inaugural gifts to CREATE. One result of these gifts was the launch of CREATE's collaboration with I-LABS, described above. Another result is that all CREATE co-founders were able to receive two small research budget infusions of \$40,000 to support their research in accessible technology. Finally, two small seed grants were funded, and multiple student minigrants were funded (see Education report, Page 4).

Furthermore, NIDILRR funded a ~\$1 million ARRT training grant for postdoctoral researchers. This will bring in four postdocs over the next five years. Additional impacts of this grant on CREATE's budget include reducing the salary support being drawn by Co-Director Mankoff and Director for Translation Caspi, and providing funds for postdoc hiring from a source other than the main CREATE budget. The ARRT is a key reason that CREATE has the ability to stretch its initial budget to six years instead of five.

Going forward, CREATE plans to diversify its funding



sources, and to work with its founding partner, Microsoft, to identify individual donors and industry connections that can lead to gifts. CREATE is starting a partners program, which is free to community non-profits and costs \$25,000 over two years for industry partners; Google and Microsoft have joined. CREATE's faculty also engage in individual fundraising, and CREATE plans to amplify these efforts through administrative support and matching money, when possible.

One challenge is how to bring money into CREATE from faculty fundraising. Currently, all support for faculty flows outward from CREATE. This requires CREATE to establish sustainable funding sources that can be used for matching money and staff salaries. Renewable paying partners will provide a small but steady stream of gift income. However, diversification is important. To that end, CREATE founders submitted an RERC proposal, which would have provided \$5 million over years 3-7 of CREATE. Unfortunately, this submission was not funded, but the work will be reused in additional submissions of this kind going forward.

Goals for AY 2021-2022

In the next academic year (AY 2021-2022), CREATE will continue to pursue sustainable funding for accomplishing its mission. Our goals include:

- To reach the \$10 million fundraising goal established with Microsoft.
- To enroll at least one new industry partner in our paid partners program.
- To fund seed grants, director stipends, and student mini-grants at least at the same levels as in our first year.