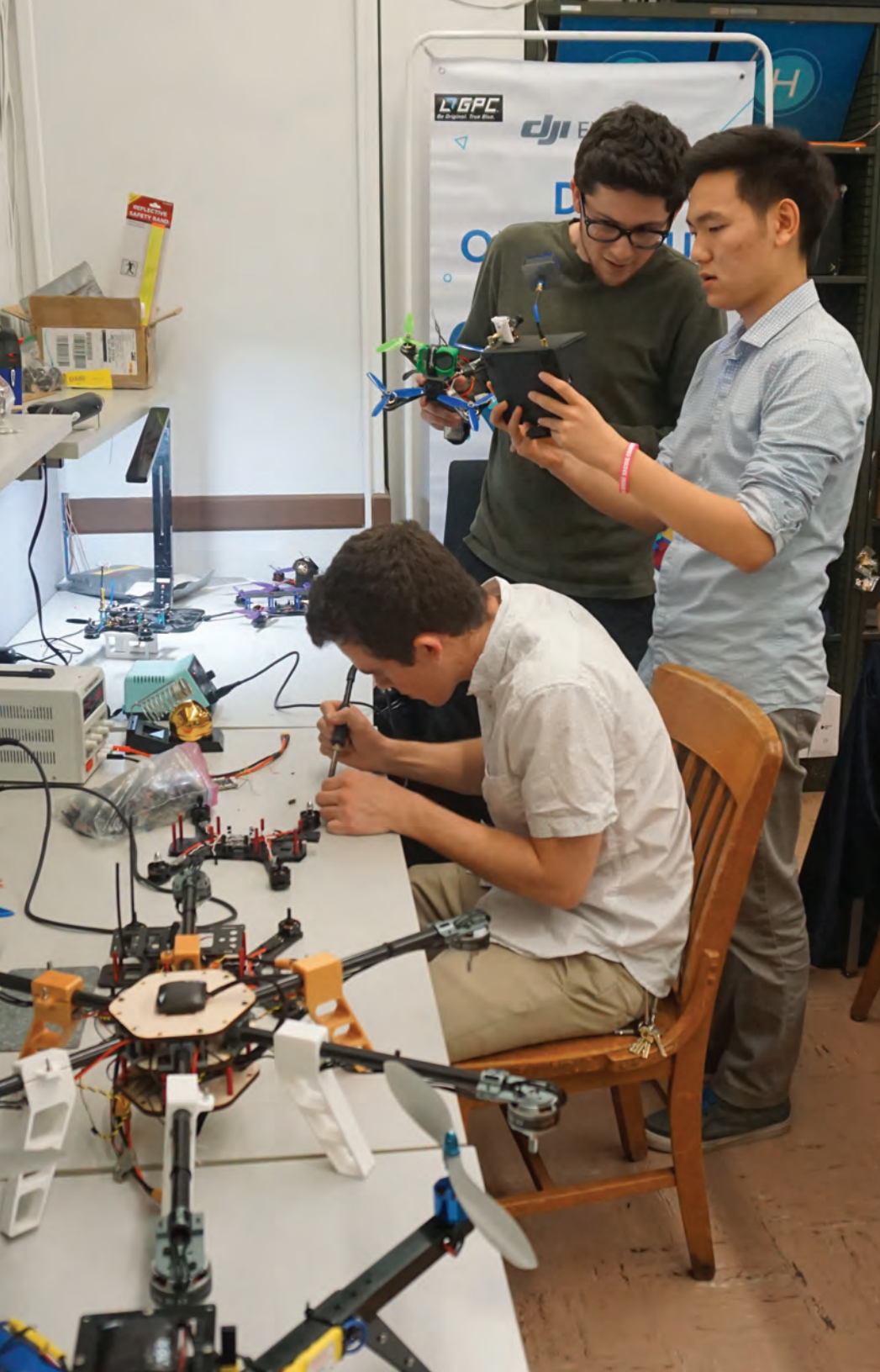


STRATEGIC PLAN 2019

Berkeley Institute of
Transportation Studies



THE FUTURE OF MOBILITY



Technological innovation, urbanization, and increased global economic activity and trade are driving fundamental changes in society and our planet. Technology—from data science to artificial intelligence to the app-driven sharing economy—is altering notions about travel and mobility. At the same time, with rising vehicle miles traveled, increased urbanization, changes in global supply chains, and the growth of e-commerce, the transportation sector remains an important contributor to global greenhouse gas emissions.

Launched to address the post-WW II era of expansion and innovations in transportation in 1947, ITS was the first of its kind organization to tackle the interdisciplinary nature of transportation.

This then-novel approach still frames ITS's philosophy of recognizing the complex interplay of disciplines—including engineering, the physical sciences, social sciences, and humanities—in addressing transportation problems and solutions in aviation operations, environmental and health impacts of transportation, infrastructure management, intelligent transportation system, logistics, pavement engineering, traffic operations, traffic safety, transit operations, transportation and energy, transportation planning, and urban transportation.

Director Alexandre M. Bayen

Associate Director Daniel A. Rodriguez

Assistant Director Laura Melendy



Vision

ITS Berkeley supports a future of mobility that improves sustainability, economic health, and quality of life for everyone.

Mission

Through the work of our faculty, researchers, students, and staff, ITS Berkeley produces leading edge innovations that impact the movement of people and goods.

Values

The core values that drive ITS Berkeley's culture, faculty, researchers, students and staff are:

- Pursuit of the social good
- Culture of innovation
- Equity, diversity, and inclusion
- Multidisciplinary perspective
- Academic freedom and integrity



Conduct mobility research that has a transformational impact on society by leveraging technological innovation.

ITS Berkeley encourages research on technological innovation applied to mobility—understanding the transformative impacts of emerging technologies on the system and its users to examining the technical, institutional, and policy development required to shape the implementation and adoption of such innovations. Findings from theoretical and applied research on technological innovations serve as building blocks for future policy applications and new research inquiries across disciplines. Through this work, ITS drives the transformation of mobility systems, optimizing technology while addressing the social good.

In the short term, technological innovation is embodied in the emerging automation and electrification of vehicles. In the medium term, the urban mobility ecosystem might expand to a third dimension, with air vehicles having a promising role in the movement of people and goods.

ITS Berkeley will:

Play a leading role in shaping how technological innovations, such as vehicular automation and electrification, are implemented by encouraging interdisciplinary research on technological innovations for mobility and enlisting support of professionals beyond academia who have made extraordinary contributions in transportation.

Be a trusted convener of stakeholders in public, private, and nonprofit sectors to share funding, ideas, and emerging research to shape how technology can disrupt the mobility space for the public good by creating forums and discussion for academic, public, and private stakeholders to examine ideas and emerging research and provide outlets for presentation.



Lead the transformation of transportation systems analysis and decision-making through innovative applications of data science and through developing a data-sharing culture.

ITS Berkeley promotes applying data science tools to mobility problems to improve operations, support planning and policy functions, and generate new insights. ITS is a leader in transforming the research culture towards increased data sharing.

ITS Berkeley will:

Accelerate incorporating data science in transportation by attracting researchers and practitioners to work on mobility-related challenges by addressing data privacy; supporting acquisition, maintenance, and availability of data; organizing competitions, idea challenges, and workshops; and encouraging the application of data science to transportation problems.

Shift the culture around research data to support the creation of new and novel data sets, and increase the sharing of and access to existing data among ITS researchers, partners, and stakeholders by developing a collaborative process for sharing data and for data acquisition, curation, and sharing, and encouraging researchers to post and share data sets and code.



Cultivate transportation leaders in research, policy, and practice.

ITS Berkeley builds an academic and alumni community of informed and innovative leaders who are concerned with the social impacts of innovation and policy by recruiting top talent at all levels, engaging students in novel and creative research, and encouraging a rigorous mindset that challenges the status quo.

ITS Berkeley will:

Develop graduate students into leading academics, professionals, and policy-makers by identifying, recruiting, engaging, and supporting promising graduate students across multiple transportation-related disciplines and advancing academic careers with opportunities for publication, conference and seminar participation, networking, public service, and professional development.

Instill and disseminate ITS's values of rigorous academic standards, multidisciplinary perspectives, and innovative thinking for the public good by challenging graduate students to work on complex, multifaceted societal challenges at the highest academic level and attracting and retaining top researchers, faculty, postdocs, and staff aligned with our values.

Engage high-ranking appointed officials, public sector stakeholders, including state and US DOTs, and private- industry stakeholders in ITS research, dissemination, and education activities by growing our engagement with senior practitioners and strengthening our lectures and seminars.



Build and maintain a strong, stable, impactful organization.

ITS Berkeley fosters an organization that supports existing research and researchers as well as nimbly and effectively responds to emerging and future research opportunities. We communicate our research results to the academic community, the policy community, and broader society. Through sharing accessible, societally relevant solutions, we generate dialog and contribute to future solutions.

ITS Berkeley will:

Earn academic, professional, and public recognition for ITS as the thought leader in the future of transportation and as the nation's preeminent transportation research institution by disseminating research to the global academic community and communicating findings to policy-makers and professionals to inform and influence outcomes.

Foster interdisciplinary collaboration externally and within ITS, across centers, and across campus to broaden faculty and student participation in ITS research, business development, and philanthropy by building and sustaining strong relationships with alumni, industry, government, non-governmental organizations, foundations, and other universities collaborative relationships.

Develop an organizational structure to support leading-edge research and long-term financial stability for ITS by improving agility, responsiveness, and resiliency of the organization and diversifying, strengthening, and growing the funding portfolio.



ITS serves as the nucleus for multidisciplinary transportation research, student engagement, and outreach at UC Berkeley, with 35 faculty members from nine UC Berkeley academic departments and schools. Additionally, approximately 60 researchers and students are associated with ITS through our various research and educational activities.

ITS's expertise, coupled with our physical proximity to Silicon Valley and the cities of San Francisco and Oakland, provide unparalleled opportunities to examine, propose, and test policies, technologies, and infrastructures.

its.berkeley.edu

Institute of Transportation Studies
University of California, Berkeley
109 McLaughlin Hall
Berkeley, CA 94720-1720
510-642-3585
its@its.berkeley.edu

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PHOTOS:

Paul Kirchner: page 4, 12; Amanda Cairo: page 2, 6, 8, 10,14;
Adam Lau: back cover; Graphics: by Jane Macfarlane



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