



Cornell Program *in* Infrastructure Policy

EDUCATING THE NEXT GENERATION OF INFRASTRUCTURE LEADERS



Annual Report

of the Cornell Program in Infrastructure Policy (CPIP)

September 2013

Rick Geddes, Director

2013

Dear Friends of CPIP:

This is an update on the activities of the Cornell Program in Infrastructure Policy (CPIP) since its launching in September of 2012. **CPIP had an enormously successful first academic year. It is now filling an important role in academia as one of a handful of intellectual centers in the United States to address the prodigious challenges associated with funding, financing, maintaining, and delivering critical physical infrastructure.**

The 2012-2013 Year in Review

The response from Cornell students and faculty to CPIP's formation has been overwhelmingly positive, with a number of key developments in the first year.

Generous donations provided CPIP with seed funding, and were critical in facilitating the activities described below. They are gratefully acknowledged. Without the assistance and encouragement of Chairwoman Prof. Rosemary Avery, Ms. Tiffany Howe, and Ms. Angelica Hammer in the Department of Policy Analysis and Management, as well as that of CIPA students Alvaro Salas-Castro and Greg Jette, CPIP's creation would not have been possible.

The Mission

The Cornell Program in Infrastructure Policy (CPIP) is focused on improving the delivery, maintenance, and operation of physical infrastructure. This will be accomplished through dedicated teaching, research, and outreach efforts in infrastructure policy. A key focus will be on infrastructure funding and financing. CPIP coordinates scholars across multiple disciplines both inside and outside of Cornell University who share an interest in public policies impacting infrastructure. CPIP develops and disseminates research relevant to those policies. CPIP collaborates with partners in the public, private, and non-profit sectors to achieve those goals.



Student Affiliates

As indicated by our motto, "Educating the Next Generation of Infrastructure Leaders," students are at the center of CPIP's mission. **In the long term, the success of our efforts will be measured by the quality of leaders we help train and place in responsible positions in the infrastructure sector.** Interest in CPIP from Cornell students at both the graduate and undergraduate levels has been extraordinary. Fifteen student affiliates joined CPIP over the past academic year, with several accepting promising positions in the infrastructure space.

broad visibility in this sector. CPIP support has allowed student affiliates to attend many such meetings, including "The Challenges of Public-Private Partnerships in Turbulent Times" at the Kemmy Business School, University of Limerick, and a conference on innovative financing sponsored by the International Bridge, Tunnel and Turnpike Association Annual Meeting in Philadelphia. CPIP support also helped Omid Rouhani, post-doctoral student in Civil & Environmental Engineering, and CPIP fellow, attend the Kuhmo NECTAR Conference and Summer School

Educating the Next Generation of Infrastructure Leaders

CPIP supports a number of graduate and undergraduate research assistants focused on infrastructure policy. This is an area where CPIP support has had exceptional impact. A few examples of topics examined by CPIP students (followed by the name of the student researcher), include:

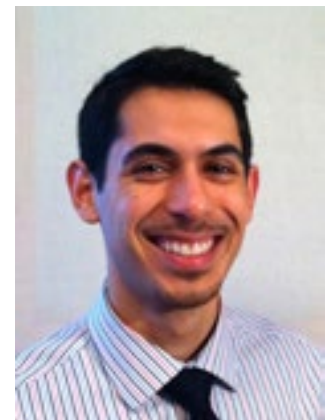
- "The drivers of state-level adoption of PPP enabling laws," (with Benjamin L. Wagner; PAM BA '10, MA '11, published in the Journal of Urban Economics, 2013).
- "The impact of alternative infrastructure funding and financing arrangements across states on infrastructure quality and road safety," (with Rachel Miller, Biological Sciences '15, to appear as a CPIP Working Paper).
- "How small is too small? Estimation of scale economies in water utilities in New York State," (with Renee Botelho, PAM '15, to appear as a CPIP Working Paper).
- "The effect of state-level PPP enabling laws on infrastructure investment," (with Benjamin L. Wagner, PAM '11 and Germà Bel).
- "The effect of New York's scaffold law on construction worker safety," (with Jacob Arluck, PAM '14, to appear as a CPIP Working Paper).

Another impactful CPIP activity is affiliate and student attendance at professional meetings and conferences, which brings students

on Transportation Economics: The Annual Conference of the International Transportation Economics Association at Northwestern University in July. Omid presented papers entitled, "Lessons learned from modeling P3 concession projects in Fresno, CA," and "The general social and private costs of driving." Despite CPIP's early stage of development, the outlook for further student research, participation, and placement is exceptionally strong.



Renee Botelho, Policy Analysis and Management senior, and CPIP Research Assistant



Gregory Jette, MPA'13, a CPIP program graduate and currently an Analyst with the Office of Management and Budget in New York City, Justice Taskforce



Teaching

Teaching goes hand-in-hand with CPIP students' research efforts, and is central to achieving our mission. There have been several noteworthy developments in infrastructure-related teaching at Cornell over the past year:

- The **President of the Republic of Panama, Ricardo Martinelli**, visited Cornell in April of 2013. President Martinelli signed a Memorandum of Understanding (MOU) in support of Panamanian public servants entering Cornell University to complete their Masters in Public Affairs (MPA) degrees. **This was the first time in Cornell's history that an MOU was formed directly with a head of state.** The meeting between President Martinelli and CPIP faculty affiliates to discuss the MOU is pictured below. Both CPIP and the Cornell Institute for Public Affairs (CIPA) personnel attended a July follow-up meeting in Panama City to further explore collaborations between Cornell and the Republic of Panama, including the possibility of Cornell students undertaking a January term to conduct infrastructure policy research in Panama.



President Ricardo Martinelli with Rick Geddes

- **A new concentration within the CIPA program, entitled "Science, Technology, and Infrastructure Policy,"** was approved in the spring of 2012. This new concentration allows CIPA MPA students to focus specifically on infrastructure policy studies. There is already strong interest among CIPA students in this concentration, and we expect new students to be attracted to the concentration in the coming academic year.
- At the undergraduate level, the **PAM department approved a new minor: "Law and Regulation."** Existing courses related to infrastructure policy are likely to be part of that minor, and new courses will be added.
- Three top CPIP student affiliates visited Parsons Corporations in NYC during spring break and toured the Parsons-managed reconstruction of the subways and PATH train tunnels that had collapsed on September 11, 2001, under the World Trade Center.

Recent selected research papers by CPIP affiliates (highlighted):

- **Michael Manville**, "The Price Doesn't Matter if You Don't Have to Pay: Legal Exemptions and Market-Priced Parking," *Journal of Planning Education and Research*, (with J. Williams) (2012)
- **Shanjun Li**. 2012. Traffic Safety and Vehicle Choice: Quantifying the Arms Race on American Roads. *Journal of Applied Econometrics*. 27(1): 34-62.
- Wang, Xun, **Oliver Gao**. 2011. "Travelers' exposure to fine particle mass (PM2.5) and number concentrations in urban transportation environments in New York City." *Transportation Research Part D: Transport and Environment* 16 (5): 384-391.
- Nishida, Y. & **Hua, Y.** (2011). Motivating stakeholders to deliver change: Tokyo's Cap & Trade Program. *Building Information & Research*, Vol. 39, No. 5, 518-533.
- **R. Richard Geddes** and **Benjamin L. Wagner**, "Why do U.S. states adopt public-private partnership enabling legislation?" *Journal of Urban Economics*, Volume 78, November 2013, Pages 30-41.
- Hart, Stuart L.; **Milstein, Mark B.** "Creating sustainable value" *Academy of Management Executive* 17.2 (2003): 56-67.

Cornell Faculty Affiliates

Faculty affiliates form the academic core of CPIP; we are bringing together the best minds from across campus to address infrastructure challenges. Our faculty affiliates generate the cutting-edge research that informs public policy and CPIP teaching.

We now have **eighteen faculty affiliates from thirteen different academic units at Cornell University**. Infrastructure sectors studied include energy, water, wastewater, transportation, and office buildings, among others. Affiliates hold academic appointments in the departments of Applied Economics & Management, City & Regional Planning, Civil & Environmental Engineering, Policy Analysis and Management (PAM), Design & Environmental Analysis, Development Sociology, Chemical & Biomolecular Engineering, and Earth & Atmospheric Sciences, as well as in the Community and Regional Development Institute (CARDI), the Center for Energy & Sustainability, and the Johnson Graduate School of Management. **Affiliates represent diverse academic backgrounds, with research focusing on everything from land use to Nano technologies to parking policy. CPIP facilitates collaboration among this diverse faculty group, which promises innovative solutions to pressing infrastructure problems.**



Outreach

Public outreach and public engagement are core activities, where CPIP is having a major impact. CPIP-sponsored events on campus during the academic year included guest speakerships from industry experts Steve Odland, former CEO of Office Depot, and PAM grad, Amy Semaya, now of Goldman Sachs. CPIP's website, and its presence on social media, are also critical aspects of its outreach activity. In addition, several specific outreach activities conducted under the auspices of CPIP during the year include:

- **CPIP Director Rick Geddes testified in Congress three times over the past two years**, and published numerous essays related to infrastructure policy with popular outlets such as CNN, Real Clear Markets, and US News and World Report. Prof. Geddes also conducted 23 media interviews for print articles, and participated in numerous radio programs as well as several television segments.

- **CPIP faculty affiliate John Foote led a student workshop through Cornell's City and Regional Planning Department.** The workshop focused on addressing transportation challenges associated with Cornell's new NYC Tech campus on Roosevelt Island. The workshop included ten students from several departments, resulting in **concrete recommendations for transportation options** to improve connectivity between Roosevelt Island and the rest of New York City.

- As one member of an expert panel, **CPIP faculty affiliate John Foote participated this summer in a roundtable discussion with Transportation and Infrastructure Committee staff of the US House of Representatives.** The discussion explored the future of public-private partnerships to design, build and operate transportation facilities.

We are happy to provide additional information on CPIP's first year. Please contact Prof. Rick Geddes Department of Policy Analysis and Management, at rrg24@cornell.edu, or 607-255-8391, for more information on supporting CPIP's efforts.



Global Faculty Affiliates

CPIP maintains a global focus. Many of the most innovative infrastructure funding and financing solutions originate abroad, with important lessons for U.S. infrastructure policy. CPIP currently has nine external faculty affiliates representing Australia, India, Spain, Ireland, the United Kingdom, Italy, and Denmark, among others. CPIP provides a platform for interactions among global affiliates. Recent global faculty affiliate CPIP-related activities include:

- A recently completed **one-year sabbatical at Cornell by Germà Bel**, Professor of Economics at the University of Barcelona's school of business and economics. Germà is **one of Europe's foremost experts on public-private partnerships (PPPs)** in infrastructure, and on European high-speed rail policy. Germà's visit was hosted by City & Regional Planning; he visited previously at Cornell under the auspices of CIPA.

- **Professor Eoin Reeves from the Kemmy School of Business at the University of Limerick** will be visiting Cornell under the auspices of CPIP in the spring and summer of 2014. Eoin is an expert on PPPs in Ireland, and will be conducting research on PPPs while at Cornell.

- CPIP Director Rick Geddes attended a June conference on innovative infrastructure financing at the Sauder School of Business, University of British Columbia.



The Year Ahead

CPIP is planning for a much more ambitious year in 2013-2014. Several key activities for our second year include:

- **Martha Gross, PhD PE, Senior Consultant, Transaction Advice, Arup** will visit campus on Thursday October 31st to give a guest lecture in PAM 2470: "Government and the Marketplace" on current infrastructure policy issues. Martha will attend a reception and discussion with CPIP and CIPA students after her guest lectureship.
- **Jorge de La Guardia, Executive Manager and CEO, Locks Project Management Division, Panama Canal Expansion (Cornell, M. Eng., '74)** will be the keynote speaker at a November event at the Cornell Club in New York entitled, "The Panama Canal Expansion: Are New York and New Jersey Ready?" Jorge will provide an overview of the engineering of the new locks and the progress of this critical project. The event will take place in the evening of Wednesday, November 6th, with a panel discussion to follow Jorge's amazing PPT presentation. Details of the event will be sent out shortly.
- **Jorge de La Guardia will visit Ithaca after his New York City presentation to serve as a guest speaker** in PAM 2470: "Government and the Marketplace," where he will discuss challenges facing global infrastructure projects. Jorge will attend a reception and discussion with CPIP and CIPA students after his guest lectureship.
- **CPIP faculty fellow John Foote will teach a new infrastructure policy class** in the spring semester of 2014, focused on infrastructure funding and financing issues. This course will address a variety of key infrastructure policy, funding, and financing issues, including public-private partnerships, municipal bonds, private activity bonds, TIFIA loans, Build American Bond, and many others.
- **Mr. Tom Madison, Executive Director of the New York State Thruway Authority will lead the Tappan Zee Bridge Replacement Project Team to campus** for a presentation, panel discussion, and CPIP reception on that project. This important CPIP event will occur in early winter; details will be forwarded as they become available.
- **CPIP Director Rick Geddes will serve as a keynote speaker at an event in Washington DC in late September entitled "Breaking the Infrastructure Gridlock."** This event will be cosponsored by The Atlantic and the Third Way organization. More details will be forwarded as they become available.

www.human.cornell.edu/pam/cpip



Staying in Touch

We set up a CPIP Twitter account. Please join us. We'll be able to keep you up to date on what is going on in CPIP. If you have noteworthy items related to infrastructure policy that you think our CPIP audience would like to know, please tweet (cucpip) or email cpip@cornell.edu, and we'll tweet, or retweet.

