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# HOLLY KRAMBECK

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## Education

- Master of Science in Transportation and Master in City Planning  
**Massachusetts Institute of Technology, 2006**
- Post Graduate Certificate in Economics and Finance (with Distinction)  
**University of London, Birkbeck College, 2003**
- Bachelor of Arts in Asian Studies and Bachelor of Arts in International Relations and Foreign Affairs (Distinguished Majors Program)  
**University of Virginia, 1999**

## Positions

The World Bank Group, IBRD (Washington, DC)

*Young Professional -> Program Manager (2009 – Present)*

### ***Select Accomplishments***

Investment Project Lending. As Task Team Leader, coordinated nearly 40 staff and consultants to execute a \$951 million portfolio of transportation infrastructure loans and technical assistance grants in East and Southeast Asia. Have brought three lending projects to the Board, turned around two problem projects, led a restructuring, and completed one implementation completion report.

Development Data Partnership. Founded and currently lead the World Bank's public-private data partnership program ([datapartnership.org](http://datapartnership.org)). Through collaborations with data partners, such as Facebook and Google, as well as support from donors, our program supports more than 250 projects, improving the quality and timeliness of data available to Bank clients for designing public infrastructure and services. Developed sustainable funding model for the initiative, with annual dues paid by members, which include the IMF, the Inter-American Development Bank, the OECD, UNDP, and CAF.

World Bank Data Lab. Founded and currently lead the World Bank's first effort to build functional bridges between our data service teams (geospatial, data science, data engineering, survey solutions, data catalogue, etc.) and operations teams. The Lab's objective is to support modernization of World Bank technical advisory to clients on: data acquisition methods, secure data management, and generating meaningful and ethical insights from data. For a complete list of activities, see intranet site: <https://datalab.worldbank.org>.

Open Transport Program. Designed, raised funds for, and led program to provide technical assistance to transport agencies on improving the efficiency and efficacy of transport data collection, management, and analysis for decision making. For example:

*Open Source National Road Crash Reporting Platform.* Led development and implementation of a modern, open-source national road incident recording and analysis system, which has been translated into eight languages and signed into legislation in the Philippines as the national crash reporting system.

*Rural Road Investment Prioritization.* Led development of an open-source platform for rural accessibility mapping – generating statistics on the percentage of villagers in a given area that can access a county seat (or hospital, school, bank, etc.) within x minutes by road, accompanied by travel-shed isochrones maps. To date, the system has been used to support Bank lending projects in China, Laos, Vietnam, Peru, and Argentina.

*Transit System Mapping.* Led the development of a methodology and suite of open-source software applications based on free, internationally-supported open data (the Open Street Map) and standards (the General Transit Feed Specification). These solutions have enabled the low-cost production of transit maps and databases, empowering transit agencies to make planning and investment decisions based on comprehensive transit data. This approach has been adopted in Bank projects in China, Philippines, Vietnam, Mexico, Sierra Leone, and others.

*The Open Transport Partnership.* Led pilot program in the Philippines, leveraging taxi GPS data to develop a suite of methods for improving the efficiency and efficacy of data collection for transport planning. Expanded pilot program to include private partners, such as Grab and Easy Taxi: <http://bit.ly/38cY66I>. Partnership has since been spun out as an independent non-profit entity, continuing to support use of third-party mobility data to derive insights for governments.

Parsons Brinckerhoff, Inc. (Washington, DC, and New York, NY)  
*Infrastructure Economics and Finance Specialist; 2006 – 2008*

Managed and supported a diverse portfolio of transportation infrastructure consulting engagements in the US, Panama, China and Malaysia. Services included project impact evaluation, project finance, public-private partnership due diligence, and carbon finance advisory.

The World Bank, IBRD (Washington, DC)  
*Short Term Consultant; 2005-2006*

Led development of the Global Walkability Index – a set of evaluation tools used to identify targeted investment and policy strategies for upgrading pedestrian

infrastructure and services. Directed pilot projects in Washington, DC, and Ahmedabad, India. Index tools have since been deployed by the Clean Air Initiative in more than 40 cities worldwide, and paper on the project has received more than 120 citations (<https://bit.ly/3Pm167k>).

Massachusetts Institute of Technology (Cambridge, MA)

*Research Assistant; Teacher's Assistant; Projects 2003 – 2006*

As a Teacher's Assistant for a graduate-level course in economics and statistics for urban planners (Professor Frank Levy), taught mathematics refresher course and assisted students with assignments. Prepared research for projects under the China Transit Research Project (Professor Tunney Lee), Alliance for Global Sustainability (Professor Karen Polenske), and the World Business Council for Sustainable Development (Professor Ralph Gackenhimer). Wrote a published book chapter in Technology Energy Environment Health Chain (Springer Publishing, 2006).

APCO Worldwide (Beijing, P.R. China)

*Project Assistant; 2000 – 2002*

Conducted market and regulatory analyses on behalf of Fortune 500 firms seeking entry into multiple business sectors in China, including electronics, chemicals, software, and airline industries. Also, supported establishment of the company's new corporate social responsibility practice.

**Honors and Awards**

- World Bank Vice Presidential Unit Team Award: Development Data Partnership (June 2022)
- World Bank Vice Presidential Unit Team Award: Data for Covid Response (June 2021)
- World Bank Vice Presidential Unit Team Award: Freetown Resilient and Urban Mobility Technical Assistance (June 2020)
- World Bank Sustainable Urban Mobility for All: People's Choice Award (April 2018)
- Innovation Award, World Bank Transportation and ICT Global Practice (February 2017)
- National Academy of Engineering, Frontiers of Engineering Program Member (June 2016)
- World Bank Global Practices & Cross-Cutting Solutions Areas Recognition Award: Urban Transport and ICT Capacity Building (May 2016)
- World Bank East Asia and Pacific Region Vice Presidential Unit Team Award (team lead): Mapping Manila Transit (May 2015)
- World Bank Innovation Grant Award (November 2014)
- World Bank Sustainable Development Network Knowlympics Honorable Mention for the Philippines National Public Transit Information Service (March 2013)
- World Bank East Asia and Pacific Region Vice Presidential Unit Team Award (team member): China Guangdong Green Freight Demonstration Project (December 2012)
- World Bank Young Professionals Program (2009-2011)

- Parsons Brinckerhoff Research & Innovation Grant (2006)
- Women's Transportation Seminar (WTS) Claire Barrett Memorial Scholarship Award (2005)
- MIT Lloyd and Nadine Rodwin International Travel Fellowship (2004)
- MIT Department of Urban Studies and Planning Tuition Grant (2003)
- University of Virginia Distinguished Major Program (1999)
- Ellen B. Weedon Travel Grant – University of Virginia (1997 and 1998)
- National Society of Collegiate Scholars (1997)
- Edward J. Bloustein Scholarship – State of New Jersey (1995)

### **Current Professional Affiliations**

- Member of the National Academy of Sciences Transportation Research Board, Transformative Trends in Transit Data (founding member)
- Member of National Academy of Sciences Transportation Research Board, Transport Economics Committee (elected 3-year term)
- Member of National Academy of Sciences Transportation Research Board, Pedestrian Committee (elected 3-year term)

### **Skills**

- Foreign Language. Mandarin (Speaking: Good; Reading & Writing: Fair)
- Python: Intermediate app development and data science skills, with experience using a range of libraries (e.g., turtle, pandas, Tkinter, requests, BeautifulSoup, selenium, Flask, numpy, matplotlib, seaborn). Github repo: <https://github.com/Holly-Transport?tab=repositories>
- Web Development. Intermediate web application development skills, with experience using html, css, javascript, jQuery, Bootstrap, Python Flask, and Heroku. Personal website and app portfolio: <http://www.the-communicate.org/>
- Geospatial Information Systems. Advanced experience with OSM iD Editor, ESRI ArcGIS, and QGIS; and some experience with commercial mapping platforms such as Carto and MapBox Studio
- Databases. Beginner experience with SQLite and PostgreSQL (used in developing Python Flask web applications)
- Design. Advanced experience with the full Adobe Suite: (Photoshop, Illustrator, In-Design, Designer)
- Other Software Applications and Languages. Monte-Carlo simulation (Crystal Ball); Linear programming (OPL Studio; Excel); Discrete choice travel demand modeling (Bio-Geme); Microsoft Office Suite

### Public Service

- Volunteer afterschool coding instructor for 5<sup>th</sup> and 6<sup>th</sup> graders, focused on physical computing with the BBC Micro:bit processor and Python. Self-developed class curriculum and materials: <https://bit.ly/3KYwG7q>
- Volunteer webmaster for Thomson Elementary School, a Title I (high poverty) public school in Washington, DC (2017-present): <https://www.thomsondcps.org/>
- Elected member of the DC Public Schools Chancellor's Parent Advisory Board (2021-present).
- Organized an Open Street Map map-a-thon to support flood victims in Laos affected by the Attapeau dam collapse in July 2018. Area buildings and roads completely mapped within 48 hours. Also built webpage to organize and manage flood-related reports, mapping efforts, and data: <https://www.laomap.org/flood-info>.

### Publications and Conference Proceedings

Google Scholar Citations Record:

<https://scholar.google.com/citations?user=c41LKf8AAAAJ&hl=en>

- Khazi-Syed, Afeefah; Pecherskiy, Maksim; Krambeck, Holly. 2022 (*accepted for publication; forthcoming*). "Analyzing Access to Health Facilities by Road Using Unconventional Data Sources." Transportation Research Record: Journal of the Transportation Research Board. US National Academy of Sciences, Engineering, and Medicine.
- Krambeck, Holly; Lu, Yang. 2018. "Low-Cost Large-Scale Greenhouse Gas Emission Estimation Methodology: Better Urban Transport Investment Through Carbon Finance and Evidence from Philippines." Transportation Research Board 97th Annual Meeting Compendium of Papers. <https://trid.trb.org/view/1496830>
- Lu, Yang; Krambeck, Holly; Tang, Liang. 2017. "Using Big Data to Improve and Evaluate Performance of Traffic Signal Systems: Evidence from Cebu, Philippines." Transportation Research Record: Journal of the Transportation Research Board. US National Academy of Sciences, Engineering, and Medicine. [https://www.researchgate.net/publication/319195588\\_Use\\_of\\_Big\\_Data\\_to\\_Evaluate\\_and\\_Improve\\_Performance\\_of\\_Traffic\\_Signal\\_Systems\\_in\\_Resource-Constrained\\_Countries\\_Evidence\\_from\\_Cebu\\_City\\_Philippines](https://www.researchgate.net/publication/319195588_Use_of_Big_Data_to_Evaluate_and_Improve_Performance_of_Traffic_Signal_Systems_in_Resource-Constrained_Countries_Evidence_from_Cebu_City_Philippines)
- Qu, Li; Krambeck, Holly. 2016. "Improving the Efficiency and Efficacy of Benchmarking Transit Level of Service Indicators in Resource-Constrained Environments." Transportation Research Board 95th Annual Meeting Compendium of Papers. <https://trid.trb.org/view.aspx?id=1394296>
- Krambeck, Holly. January 1, 2015. "Mapping Manila Transit". World Bank *Connections* Series. Washington, DC.

<http://documents.worldbank.org/curated/en/2015/07/24441332/mapping-manila-transit-new-approach-solving-old-challenges>

- Krambeck, Holly; Qu, Li. 2015. “Toward an Open Transit Service Data Standard in Developing Asian Countries.” Transportation Research Record: Journal of the Transportation Research Board. US National Academy of Sciences, Engineering, and Medicine.  
[https://www.researchgate.net/publication/295257462\\_Toward\\_an\\_Open\\_Transit\\_Service\\_Data\\_Standard\\_in\\_Developing\\_Asian\\_Countries](https://www.researchgate.net/publication/295257462_Toward_an_Open_Transit_Service_Data_Standard_in_Developing_Asian_Countries)
- Ostojic, Dejan; Krambeck, Holly; Zhang, Yabei; Bose, Ranjan; Lim, Jeannete. August 27, 2013. Energizing Green Cities in Southeast Asia – Directions in Development. World Bank Publications.  
<http://documents.worldbank.org/curated/en/890271468247821479/Energizing-green-cities-in-Southeast-Asia-applying-sustainable-urban-energy-and-emissions-planning>
- Krambeck, Holly. December 1, 2010. Article: “Introduction to Carbon Markets and the Clean Development Mechanism.” International Civil Aviation Organization (ICAO) Environmental Report 2010. [https://www.icao.int/environmental-protection/Documents/EnvironmentReport-2010/ICAO\\_EnvReport10-Ch4\\_en.pdf](https://www.icao.int/environmental-protection/Documents/EnvironmentReport-2010/ICAO_EnvReport10-Ch4_en.pdf)
- World Bank Group. 2010. A City-Wide Approach to Carbon Finance. Washington, DC. Authored *Chapter IV: Transport* (pp 37-42).  
<http://documents.worldbank.org/curated/en/389951468340161434/A-city-wide-approach-to-carbon-finance>
- Krambeck, Holly. January 12, 2010. “Evaluation of Role of Carbon Finance in Developing Country Transport Sector Projects.” Transportation Research Board 89th Annual Meeting Compendium of Papers. Washington, DC.  
<https://trid.trb.org/view/910175>
- Krambeck, Holly. January 2009. “Role of Surface Transportation in US Compliance and Voluntary Greenhouse Gas Emissions Trading Schemes.” Transportation Research Board 88th Annual Meeting Compendium of Papers. Washington, DC.  
<https://trid.trb.org/view/882192>
- Krambeck, Holly. Winter 2008-09. “US Emissions Trading Schemes and Surface Transportation.” Economic Forecasting Review. PB Strategic Consulting quarterly publication. Volume 2; Issue 2.
- Krambeck, Holly; Emerson, Donald. June 4, 2008. “Using Value Capture to Finance the Fort Lauderdale Downtown Circulator.” Presentation and conference proceedings. American Public Transportation Association 2008 Rail Conference. San Francisco, CA. <https://trid.trb.org/view.aspx?id=874655>
- Krambeck, Holly; Shah, Jitendra. April 25, 2008. “Evaluating the Quality of Pedestrian Infrastructure and Services in Chinese Cities.” Presentation and conference proceedings. American Society of Civil Engineers. Transportation and Development

Innovative Best Practices Conference. Beijing, China.

<https://trid.trb.org/view.aspx?id=865230>

- Lai, Peter; Krambeck, Holly. April 25, 2008. "Performance Measures – A Tool to Enhance Transportation Decision-Making." Presentation and conference proceedings. American Society of Civil Engineers. Transportation and Development Innovative Best Practices Conference. Beijing, China.  
<https://trid.trb.org/view.aspx?id=865075>
- Krambeck, Holly; Shah, Jitendra. January 17, 2008. "Evaluating and Comparing the Quality of Pedestrian Infrastructure and Services across Developing Cities." Presentation and conference proceedings. Pedestrians and Bicycles in Developing Countries Panel, Transportation Research Board (TRB) Annual Meeting. Washington, DC. <http://ascelibrary.org/doi/abs/10.1061/40961%28319%2919>
- Krambeck, Holly. Winter 2006-7. "The Changing Face of Global Infrastructure Funds." Economic Forecasting Review. Volume 1; Issue 1. PB Strategic Consulting quarterly publication.
- Krambeck, Holly. 2006. "The Global Walkability Index." Master's thesis. Massachusetts Institute of Technology. Dept. of Urban Studies and Planning & Dept. of Civil and Environmental Engineering.  
<https://dspace.mit.edu/handle/1721.1/34409>
- Chan, Erica; Krambeck, Holly. 2006. "Chapter 8-- Health of a Region: The Socio-Economic Perspective." The Technology-Energy-Environment-Health (TEEH) Chain in China: A Case Study of Cokemaking. Springer Publishing.  
<https://www.springer.com/us/book/9781402034336>
- Krambeck, Holly. April 1, 2004. "China's Psyche." The World and I. The Washington Times Inc. pp. 68-72.

### Storytelling

- Krambeck, Holly. February 26, 2014. "How Your Mobile Phone and Cheap Software Will Reduce Traffic and Save Lives." Storytelling Award Winner. World Bank Forum; Washington, DC. <https://www.youtube.com/watch?v=kCFREyg5p54>

### Interviews and Appearances in Articles and Newscasts

- June 29, 2021. "Partner on data to make it work for public good." Podcast interview. UNESCO Inclusive Policy Lab Podcast.  
<https://en.unesco.org/inclusivepolicylab/learning/partner-data-make-it-work-public-good>
- September 20, 2017. "Dockless bike-share is officially here." Quoted in article. The Washington Post. [https://www.washingtonpost.com/news/dr-gridlock/wp/2017/09/20/dockless-bikes-are-officially-here/?utm\\_term=.ac995d6a7e6d](https://www.washingtonpost.com/news/dr-gridlock/wp/2017/09/20/dockless-bikes-are-officially-here/?utm_term=.ac995d6a7e6d)

- March 21, 2017. "Drones used to map rapidly developing Third World urban areas." Quoted in article. Engineering and Technology. <https://eandt.theiet.org/content/articles/2017/03/drones-used-to-map-rapidly-developing-third-world-urban-areas/>
- March 20, 2017. "Newest Technologies Becoming Weapons in Fight for Land Rights." Quoted in article. Voice of America. <https://www.voanews.com/a/newest-technologies-weapons-fight-land-rights/3774467.html>
- March 10, 2017. "Developing World Cities to Ease Congestion with Big Data." Quoted in article. Apolitical. [https://apolitical.co/solution\\_article/developing-world-cities-ease-costly-congestion-big-data/](https://apolitical.co/solution_article/developing-world-cities-ease-costly-congestion-big-data/)
- December 21, 2016. "How GPS data derived from e-taxi platforms could improve road conditions in developing countries." Quoted in article. Venturebeat. <http://venturebeat.com/2016/12/21/how-gps-data-derived-from-e-taxi-platforms-could-improve-road-conditions-in-developing-countries/>
- December 6, 2016. "After Octopus and Oyster, now phone data are transforming global transport systems." Financial Times. <https://www.ft.com/content/27d1ff88-7436-11e6-bf48-b372cdb1043a>
- August 5, 2016. "What is Driving Uber's Global Impact?" Quoted in article. DevEx. <https://www.devex.com/news/what-is-driving-uber-s-global-impact-88419>
- April 6, 2016. "Grab, World Bank, DOTC kick off traffic data project." Quoted in article. Inquirer.net. <http://business.inquirer.net/209222/grab-world-bank-dotc-kick-off-traffic-data-project>
- April 5, 2016. "V Patrol: Oras na maluwa ang mga kalsada sa Metro Manila." Newscast on project work. ABS-CBN News. <https://www.youtube.com/watch?v=xO6zBC3TNnQ&feature=youtu.be>
- Aksyon News. July 24, 2015. Newscast interview (timestamp: 10:35 start). <http://bit.ly/2VCBJCI>
- November 18, 2014. "WB's role in information technology modernization cited." Quoted in article. The Journal (journal.com.ph). <http://www.journal.com.ph/news/nation/wb-s-role-in-information-technology-modernization-cited>
- October 13, 2014. "The New Cartographers." Featured in article. Next City. <http://nextcity.org/forefront/view/the-new-cartographers>.
- March 6, 2014. "5 Q's for Transportation Economist Holly Krambeck." Featured in article. Center for Data Innovation. <http://www.datainnovation.org/2014/03/5-qs-for-transportation-economist-holly-krambeck/>

## Blogs

- Sanchez Andrade-Nuno, Bruno; Krambeck, Holly. March 30, 2020. "Addressing COVID-19 through Public-Private Data Partnerships – Where Do We Put New Testing



Facilities?” <https://datapartnership.org/updates/covid19-and-public-private-data-partnerships/>

- Sakamoto, Kiwako; DePardy, Vivien; Krambeck, Holly. November 23, 2016. “What can you do with a high-resolution population map?” World Bank blog. <http://blogs.worldbank.org/opendata/what-can-you-do-high-resolution-population-map>
- Krambeck, Holly. Dedicated blog site: <http://blogs.worldbank.org/team/holly-krambeck>. Most read blog: “Rise of the Chinese Ghost Town” <http://blogs.worldbank.org/transport/rise-of-the-chinese-ghost-town>