

Street-Design fürs Fahrrad – Lernen vom Newcomer USA?

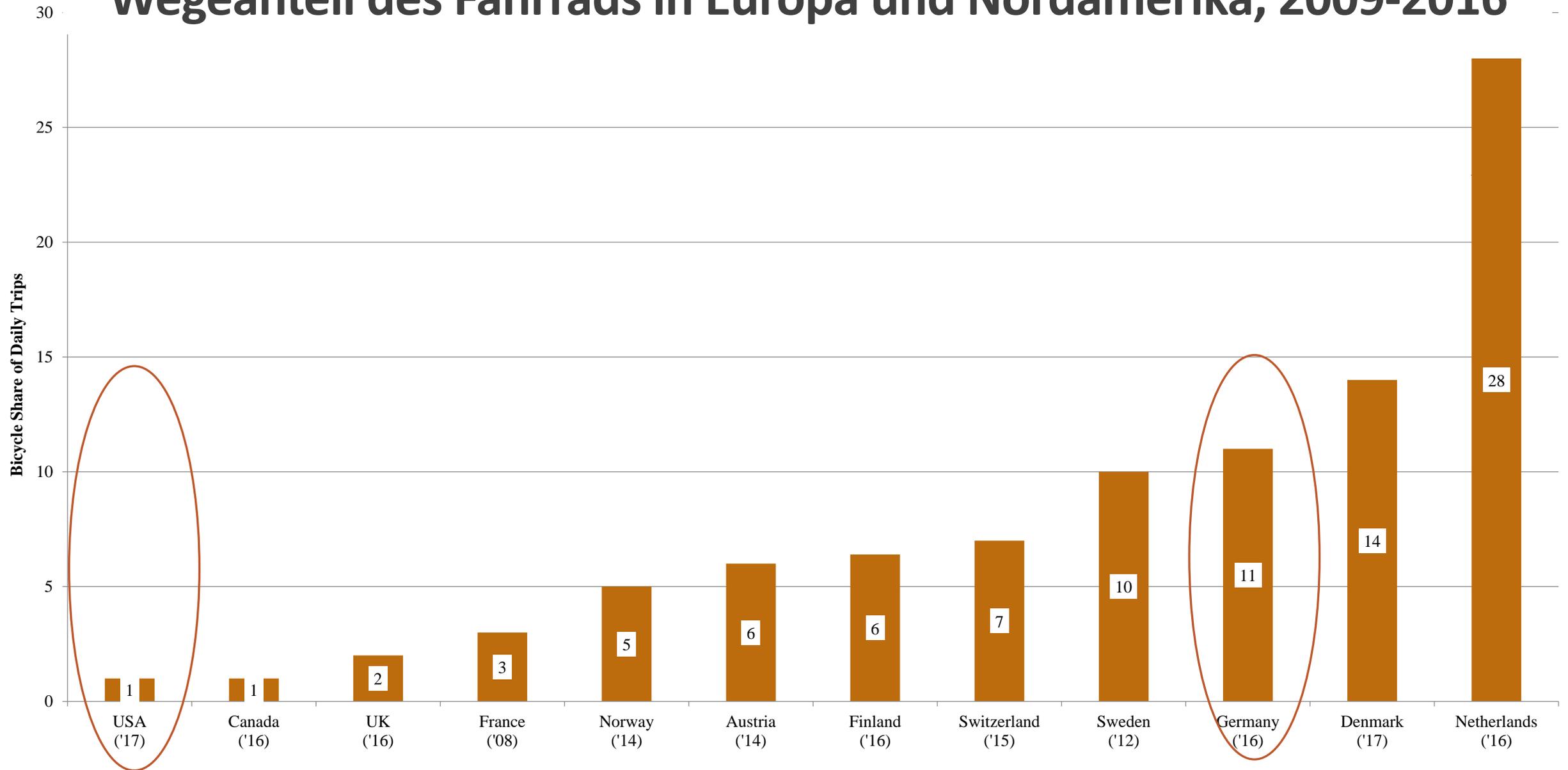
RALPH BUEHLER, VIRGINIA TECH, USA



Radfahren in den USA?

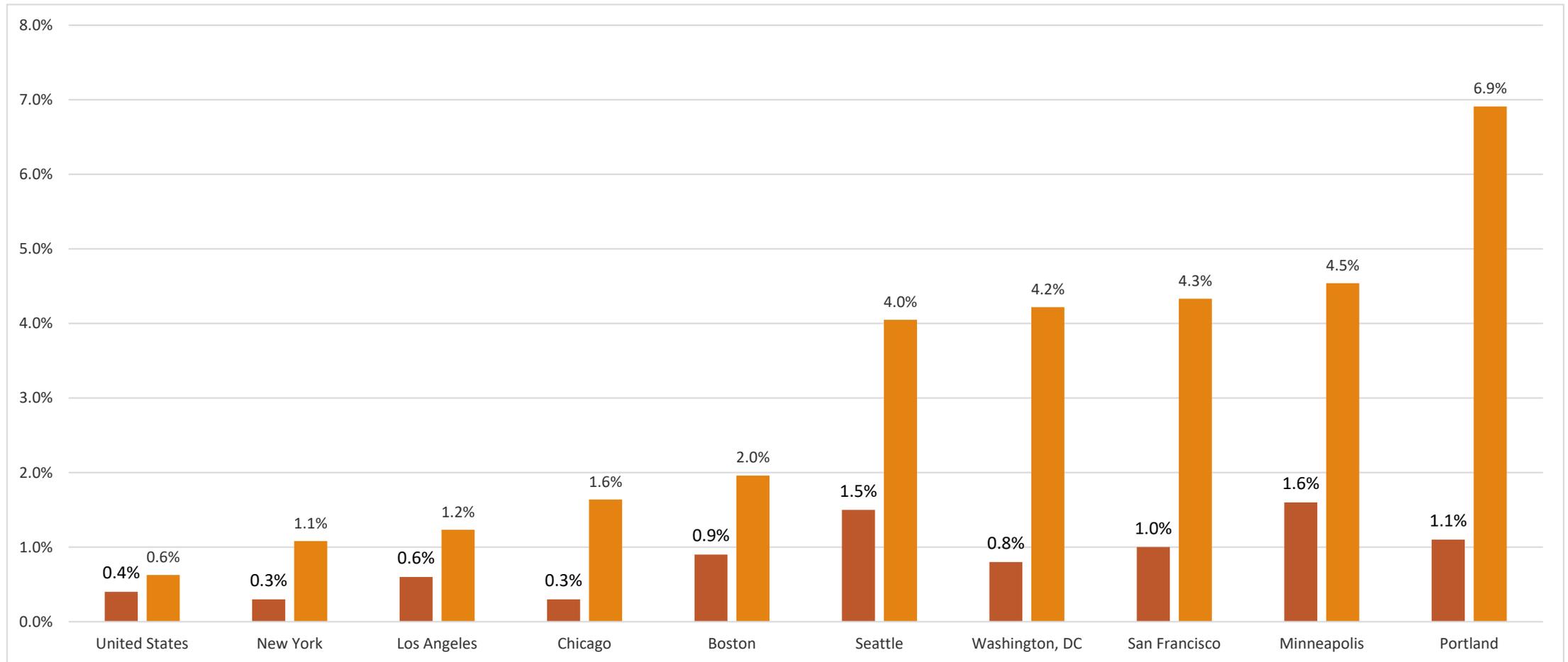


Wegeanteil des Fahrrads in Europa und Nordamerika, 2009-2016

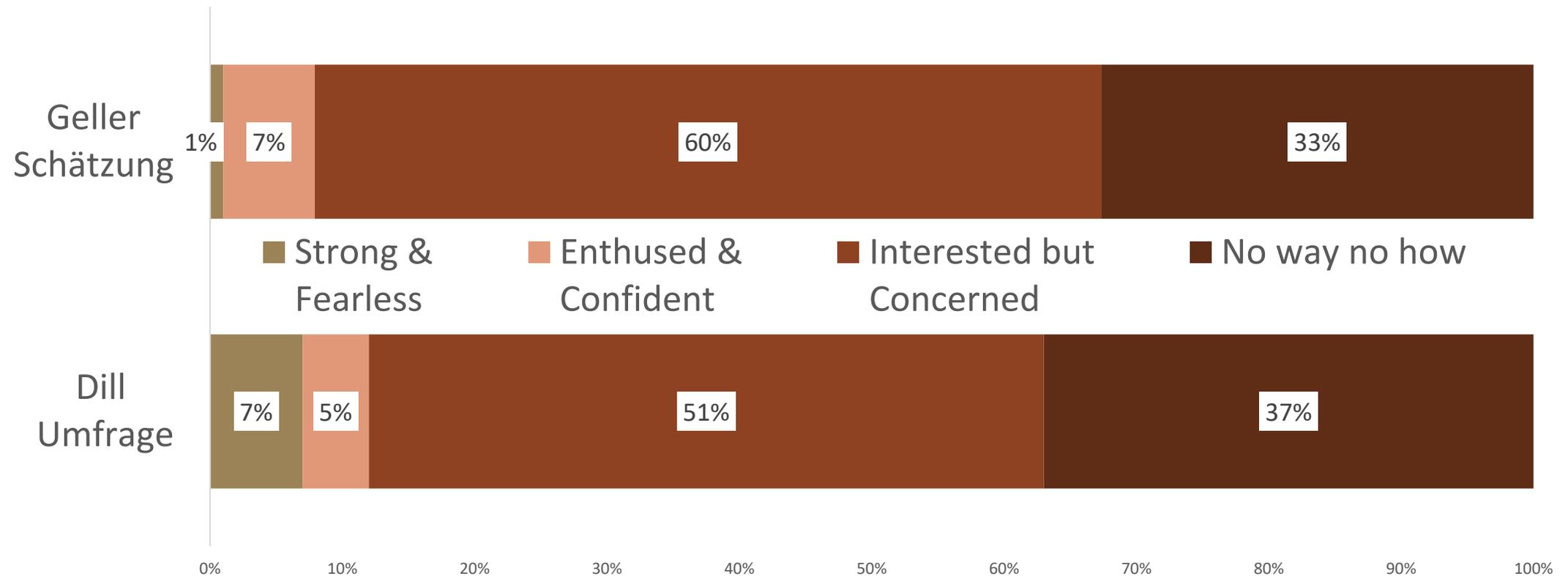


Source: Pucher, J., Buehler, R. (eds.) *City Cycling*. Cambridge, MA: MIT Press, 2012; Source: Data collected directly from national travel surveys and national statistical offices. Note: Differences in data collection methods, timing, and variable definition across countries and over time limit comparability of the modal shares shown.

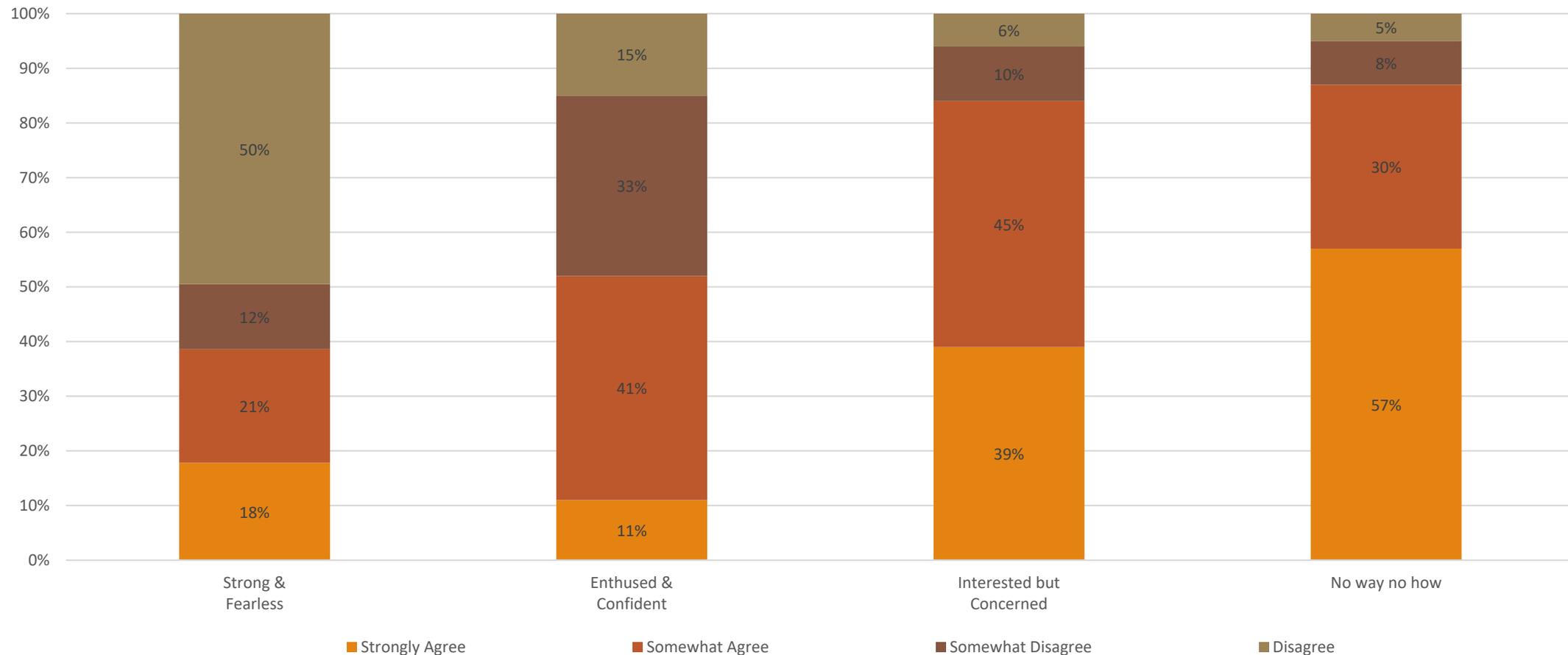
Radwegeanteil für Arbeitswege in US Großstädten, 1990-2016



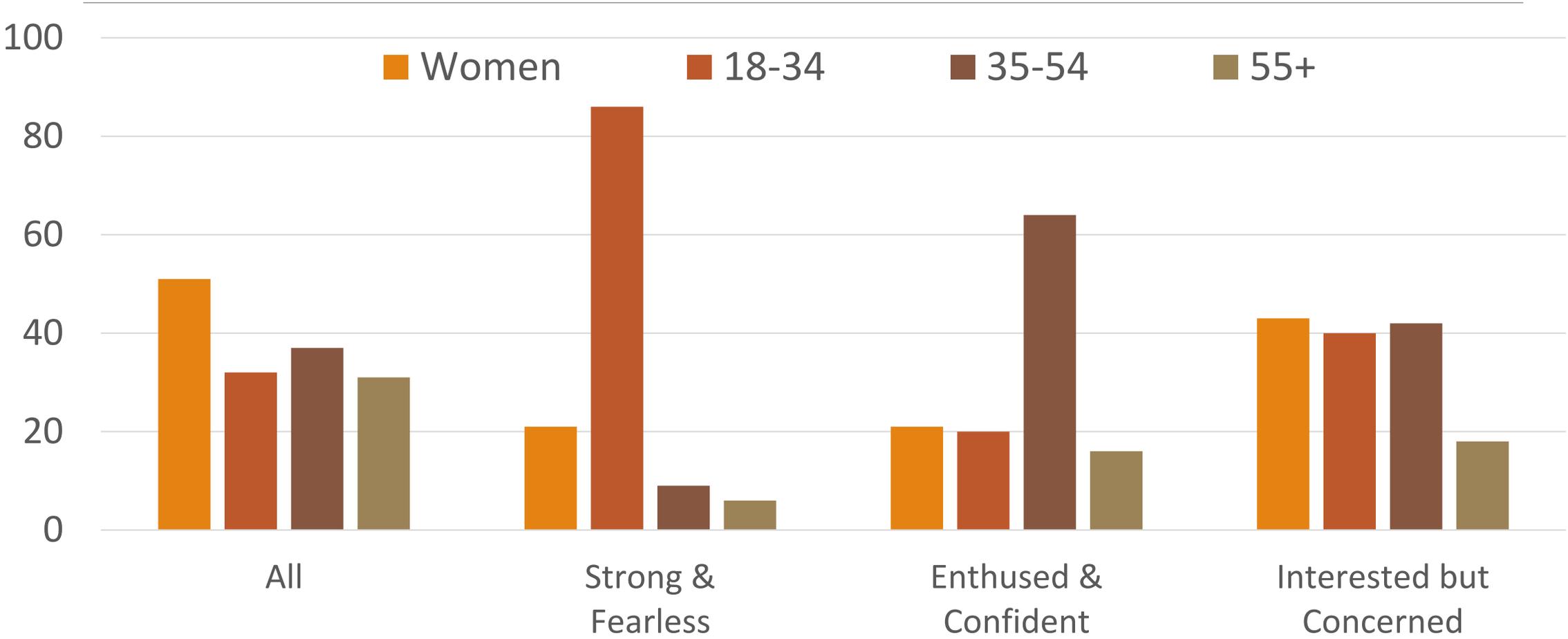
Radplanung für wen? (Geller/Dill Typologien)



„Wenn ich Fahrrad fahre, habe ich Angst von einem Auto angefahren zu werden“



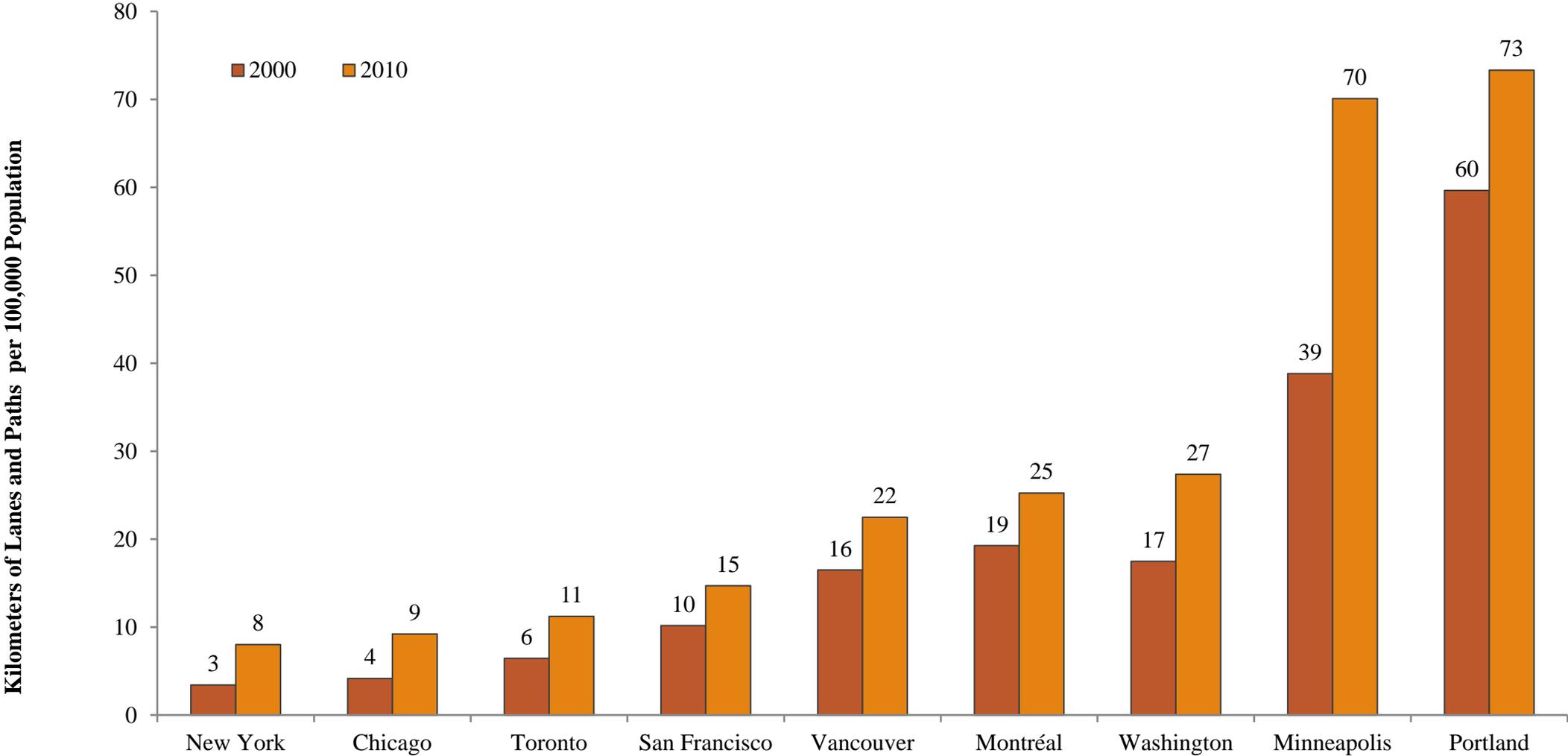
Percentage Shares of Women and Age Groups in Portland for the Population and Geller's Typology



Wahrgenommene Sicherheit und Qualität

- Rad- und Autofahrer in SF bevorzugen separate Einrichtungen (vs. gemischten Verkehr)—insbesondere mit physischer Trennung (Radspuren wurden auch positiv bewertet, aber schwächer) (Sanders, R. 2016)
- 80% von 1605 Radfahrern aus Texas bezeichneten ihre Radeinrichtungen als unzureichend oder absolut ungenügend (Sener et al. (2009).
- 37% in von 566 Einwohnern Portlands bezeichneten fehlende Radeinrichtungen als einen Grund nicht (noch) mehr zu radeln (Dill & Voros (2007)
- Eine GPS Studie aus Portland zeigt, dass Radler längere Wege in Kauf nehmen um auf Radeinrichtungen zu fahren (164 Radler, Broach 2012).
- ‘Near misses’ kommen öfters vor als Unfälle und spielen eine grössere Rolle in der Wahrnehmung (Sanders, 2015)
- Viele Studien zeigen die Sicherheit von ‘cycle tracks.’ Z. B. Teschke: “Of 14 route types, cycle tracks had the lowest risk.” (oder auch (Lusk et al., 2013; Lusk et al., 2011; NYCDOT, 2014; Winters et al., 2013))

Trend in Bike Paths and Lanes per 100,000 Population in Large North American Cities, 2000-2010



Problems with Bike Lanes



Bike lanes used for car parking



Bike lanes used for truck deliveries



Dooring of cyclists



New York

Photo: Nick Klein



Chicago

Photo: Chicago Bicycle Program / Flickr

Buffered bike lanes offer some additional separation from motor vehicle traffic but without physical barriers



Photo: Buehler

Protected Bike Lanes on Pennsylvania Avenue in Washington, DC



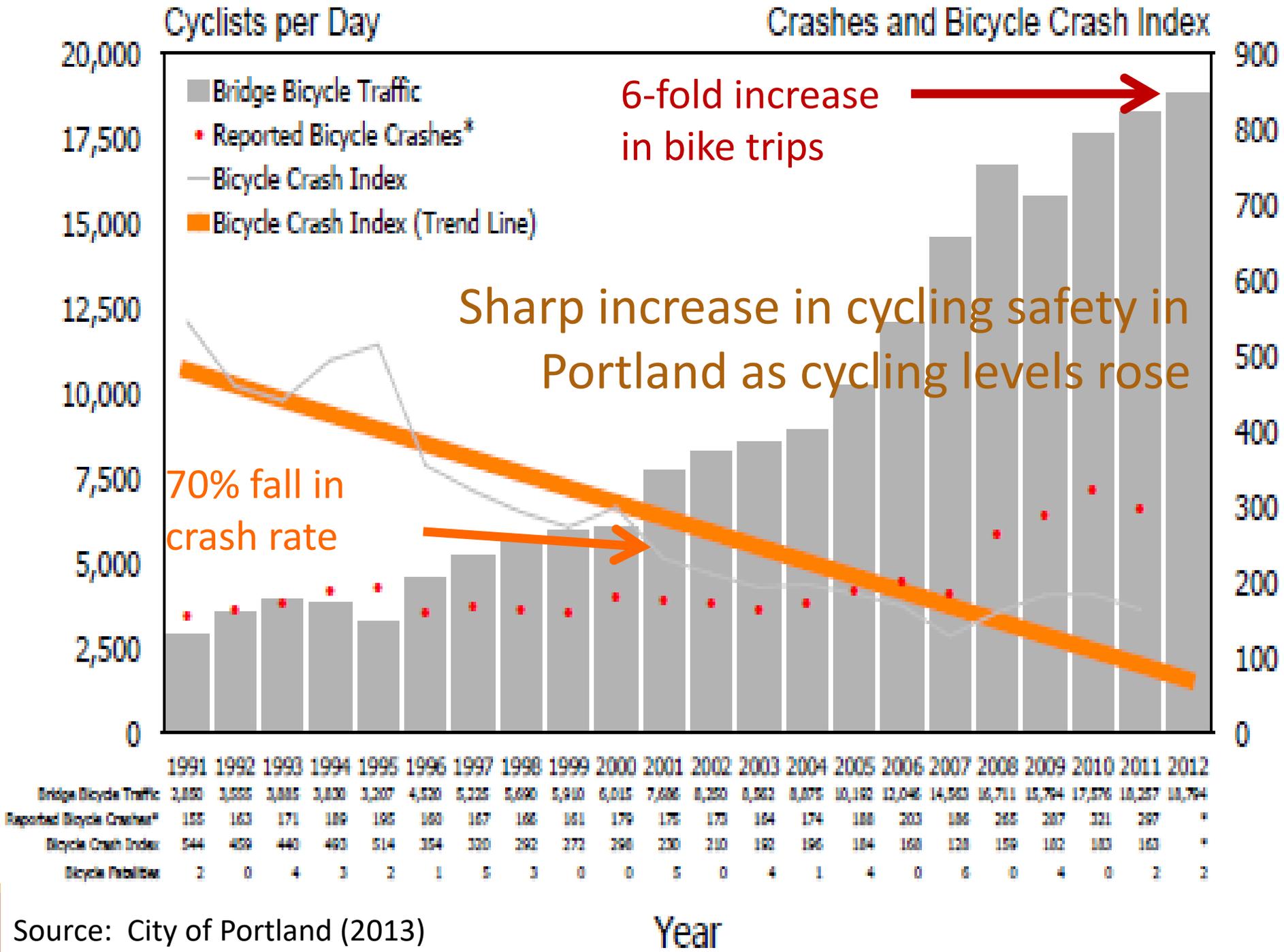
- 250 mi of new bike lanes and paths since 2005
- doubling in bike trips
- halving of cyclist fatalities from 28 to 14

Photo: NYCDOT

Traffic-Protected Cycle Track on 9th Avenue, NYC



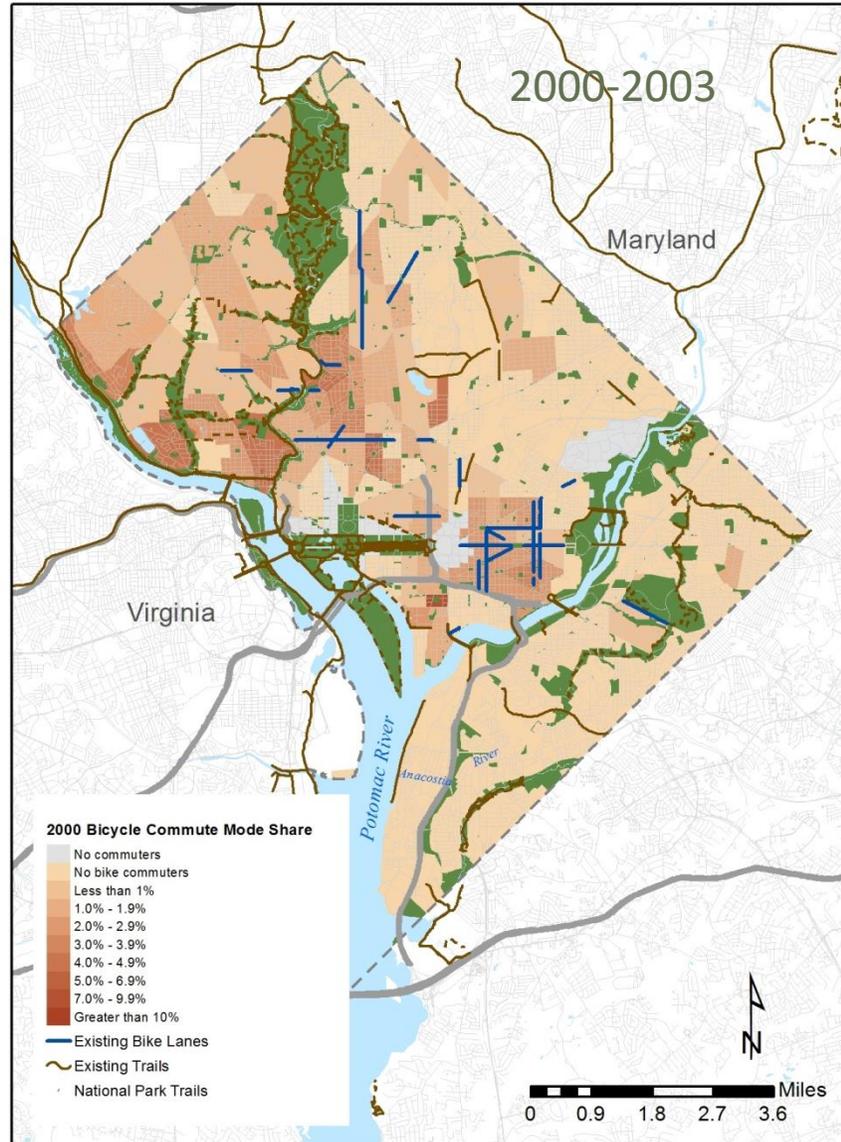
Almost 20,000
daily bike trips
over Portland
bridges



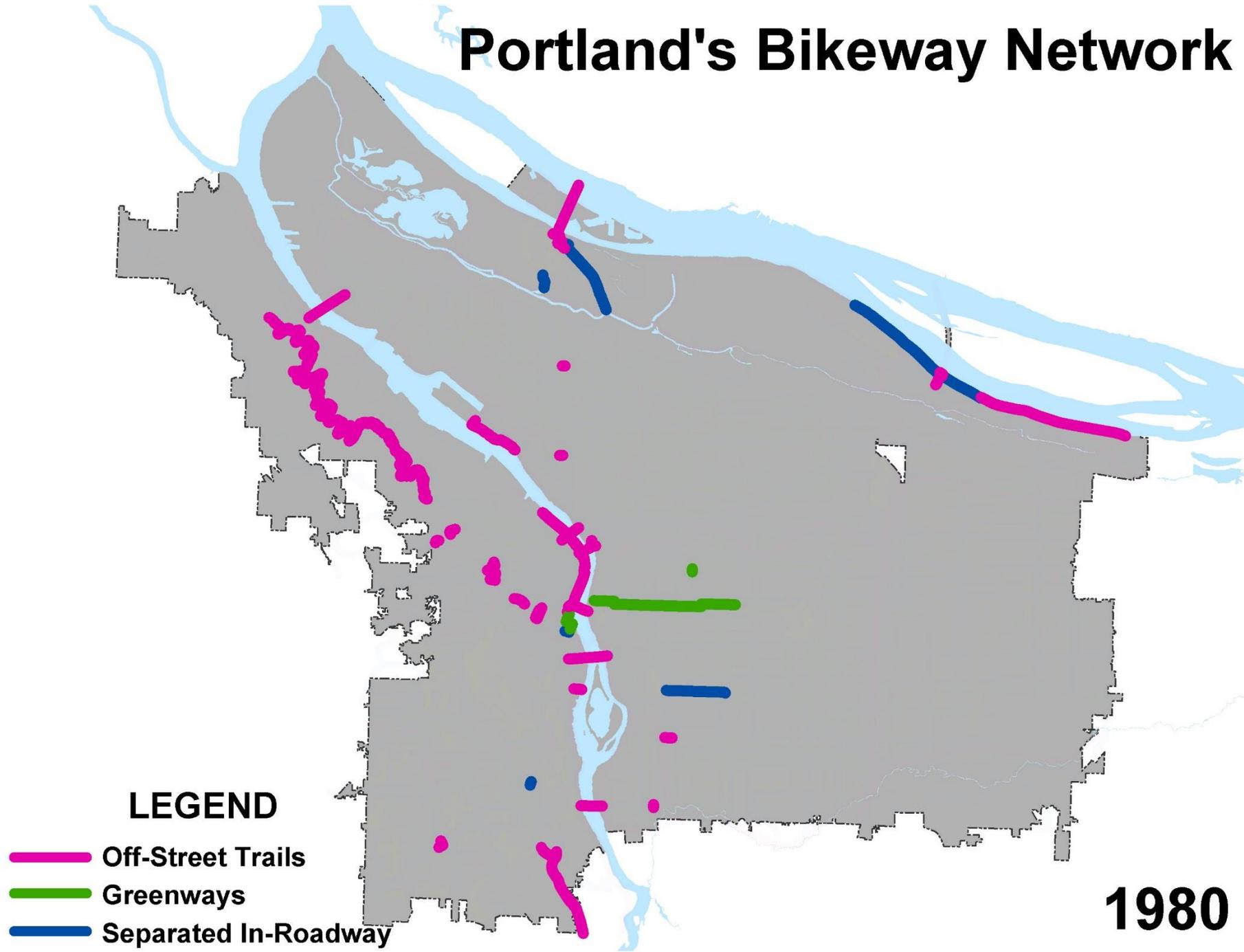
Source: City of Portland (2013)

Year

Bike Lanes and Paths & Bike Commute Levels in DC

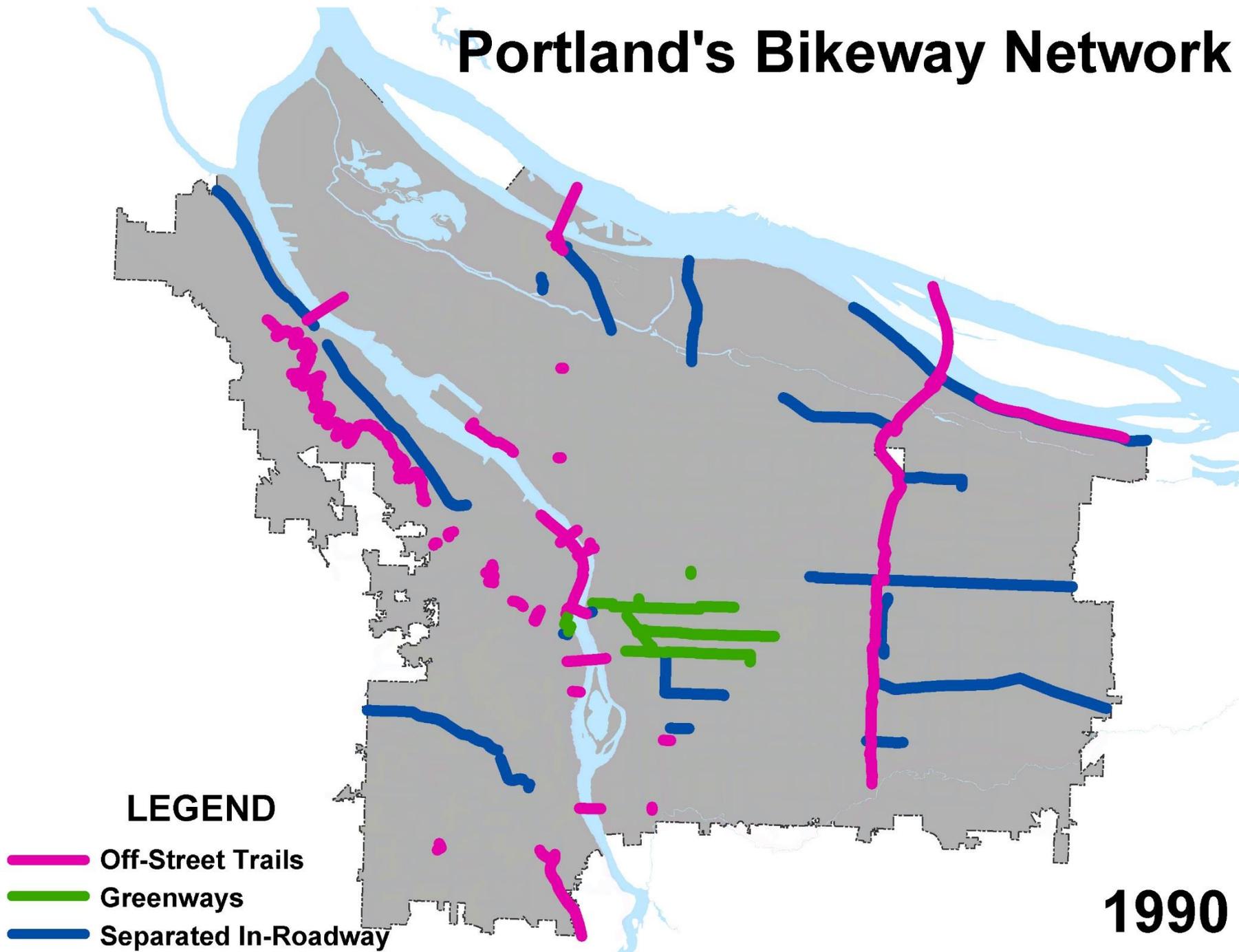


Portland's Bikeway Network

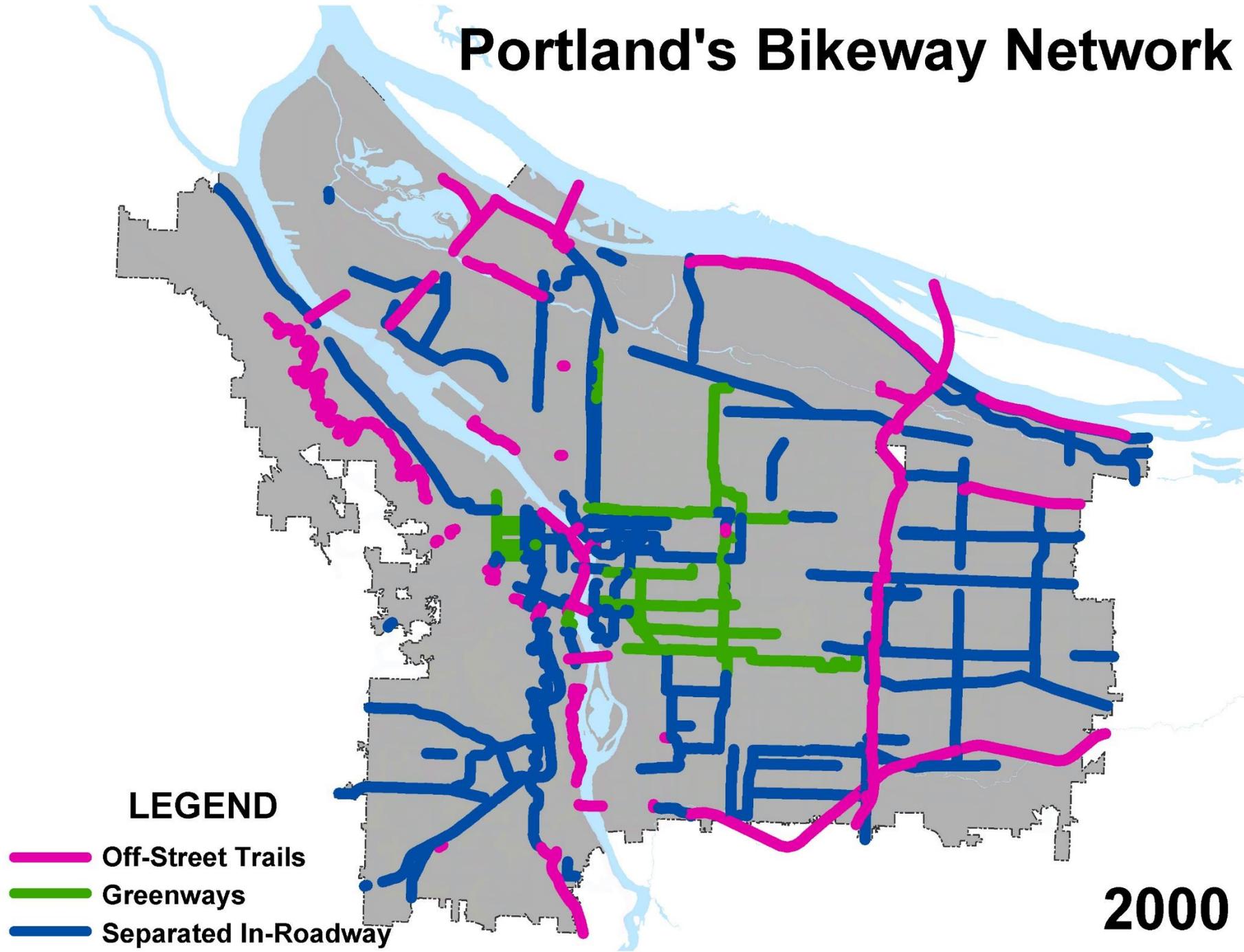


1980

Portland's Bikeway Network



Portland's Bikeway Network

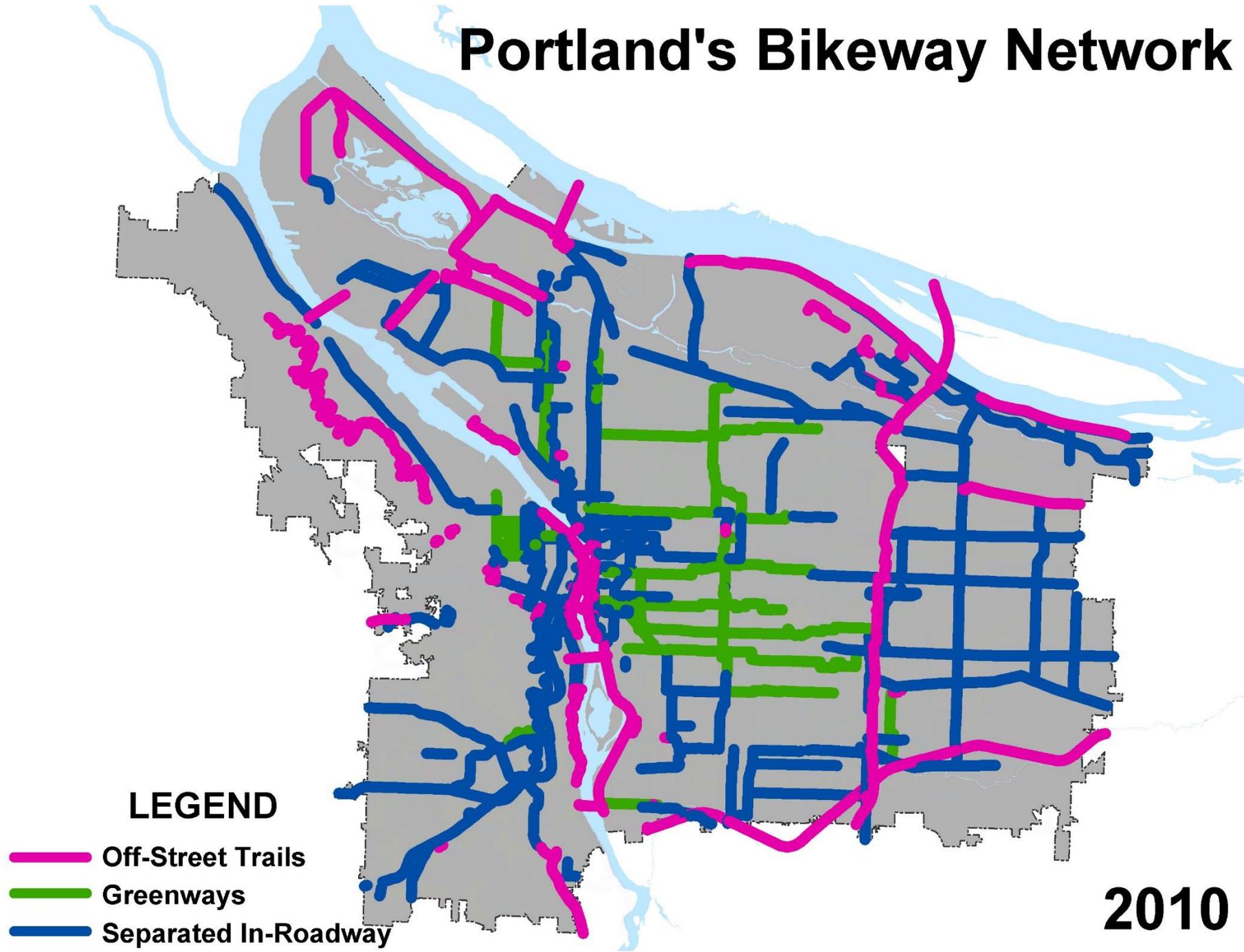


LEGEND

- Off-Street Trails
- Greenways
- Separated In-Roadway

2000

Portland's Bikeway Network

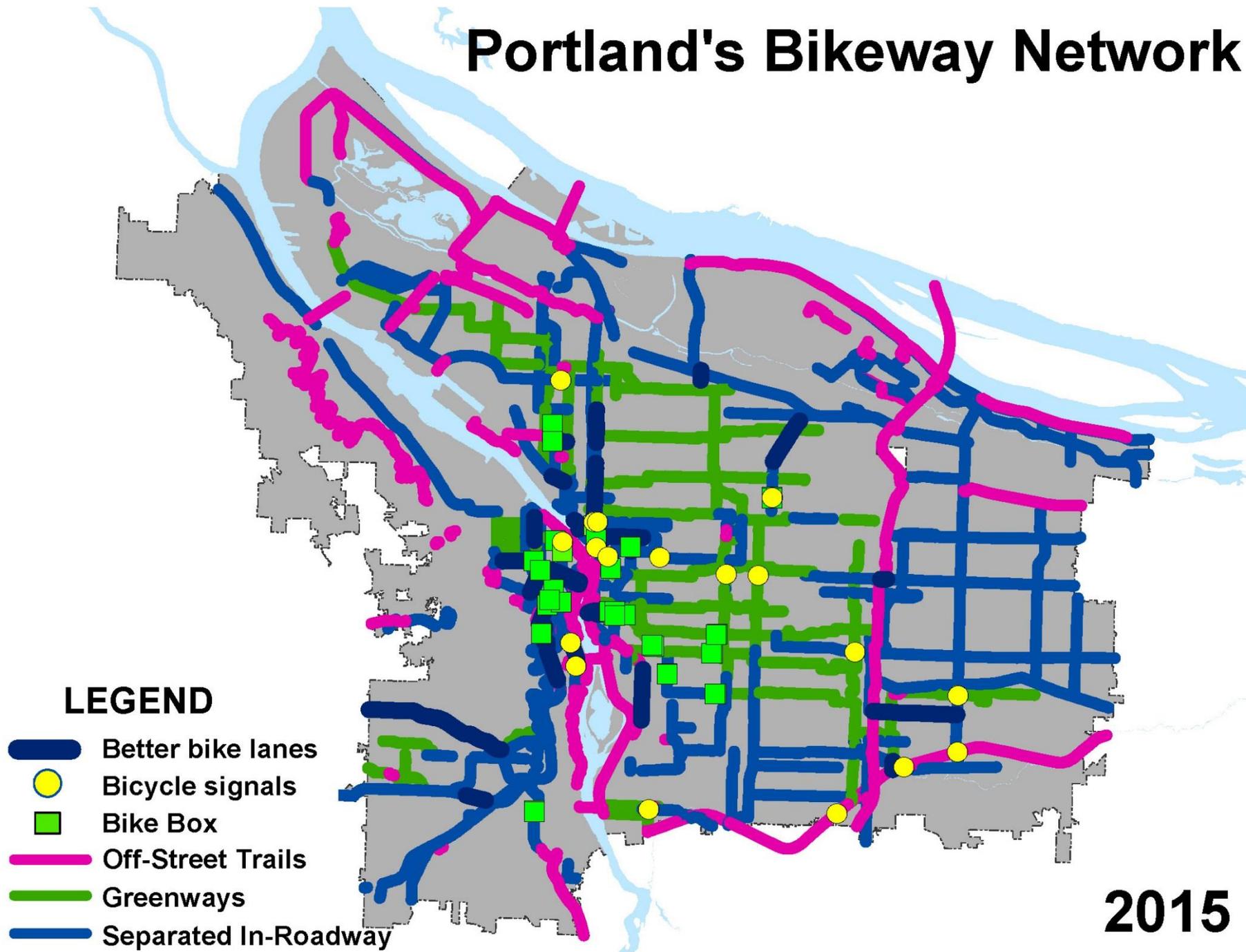


LEGEND

- Off-Street Trails
- Greenways
- Separated In-Roadway

2010

Portland's Bikeway Network



2015

Standards



Memorandum

SENT BY ELECTRONIC MAIL

Subject: **GUIDANCE:** Bicycle and Pedestrian Facility Design Flexibility Date: August 20, 2013

From: Gloria M. Shepherd *Gloria M. Shepherd*
Associate Administrator for Planning,
Environment and Realty

In Reply Refer To:
HEPH-10

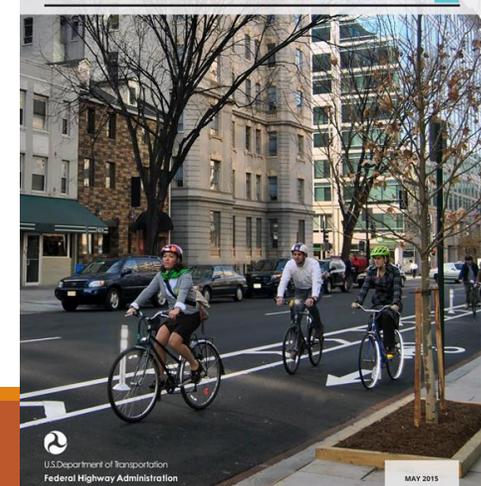
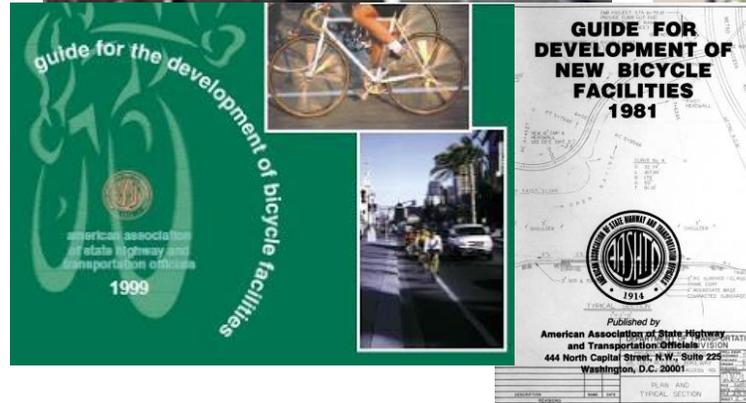
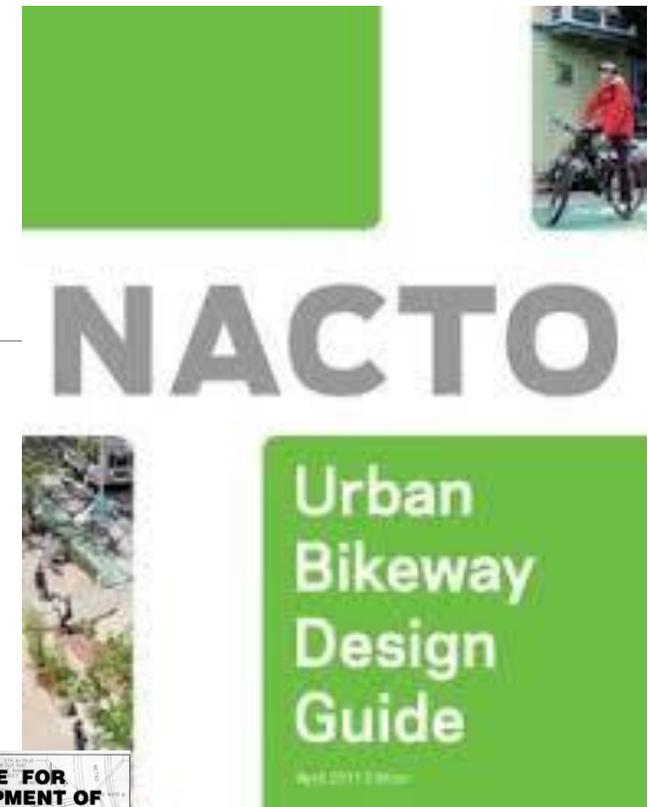
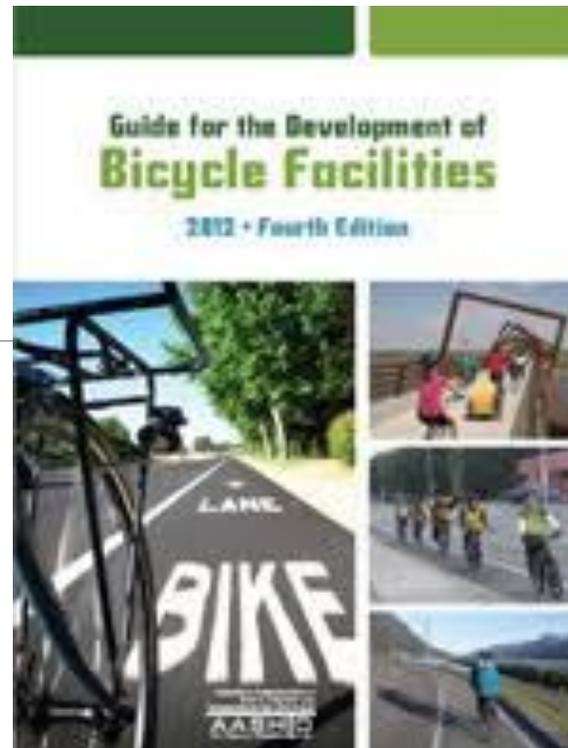
Walter C. (Butch) Waidelich, Jr. *Walter C. Waidelich, Jr.*
Associate Administrator for Infrastructure

Jeffrey A. Lindley *Jeffrey A. Lindley*
Associate Administrator for Operations

Tony T. Furst *Tony T. Furst*
Associate Administrator for Safety

To: Division Administrators
cc: Directors of Field Services

This memorandum expresses the Federal Highway Administration's (FHWA) support for taking a flexible approach to bicycle and pedestrian facility design. The American Association of State Highway and Transportation Officials (AASHTO) bicycle and pedestrian design guides are the primary national resources for planning, designing, and operating bicycle and pedestrian facilities. The National Association of City Transportation Officials (NACTO) [Urban Bikeway Design Guide](#) and the Institute of Transportation Engineers (ITE) [Designing Urban Walkable Thoroughfares](#) guide builds upon the flexibilities provided in the AASHTO guides, which can help communities plan and design safe and convenient facilities for pedestrian and bicyclists. FHWA supports the use of these resources to further develop nonmotorized transportation networks, particularly in urban areas.



Cycle Tracks (Protected/Buffered Bike Lane)



Cycle Tracks
One-Way Protected Cycle Track with Parking Buffer

Raised Cycle Tracks



Cycle Track at Intersection



NACTO

Intersections
Cycle Track Transition to Bike Lane



Foto: Gord Price



Bike boxes in US and Canada



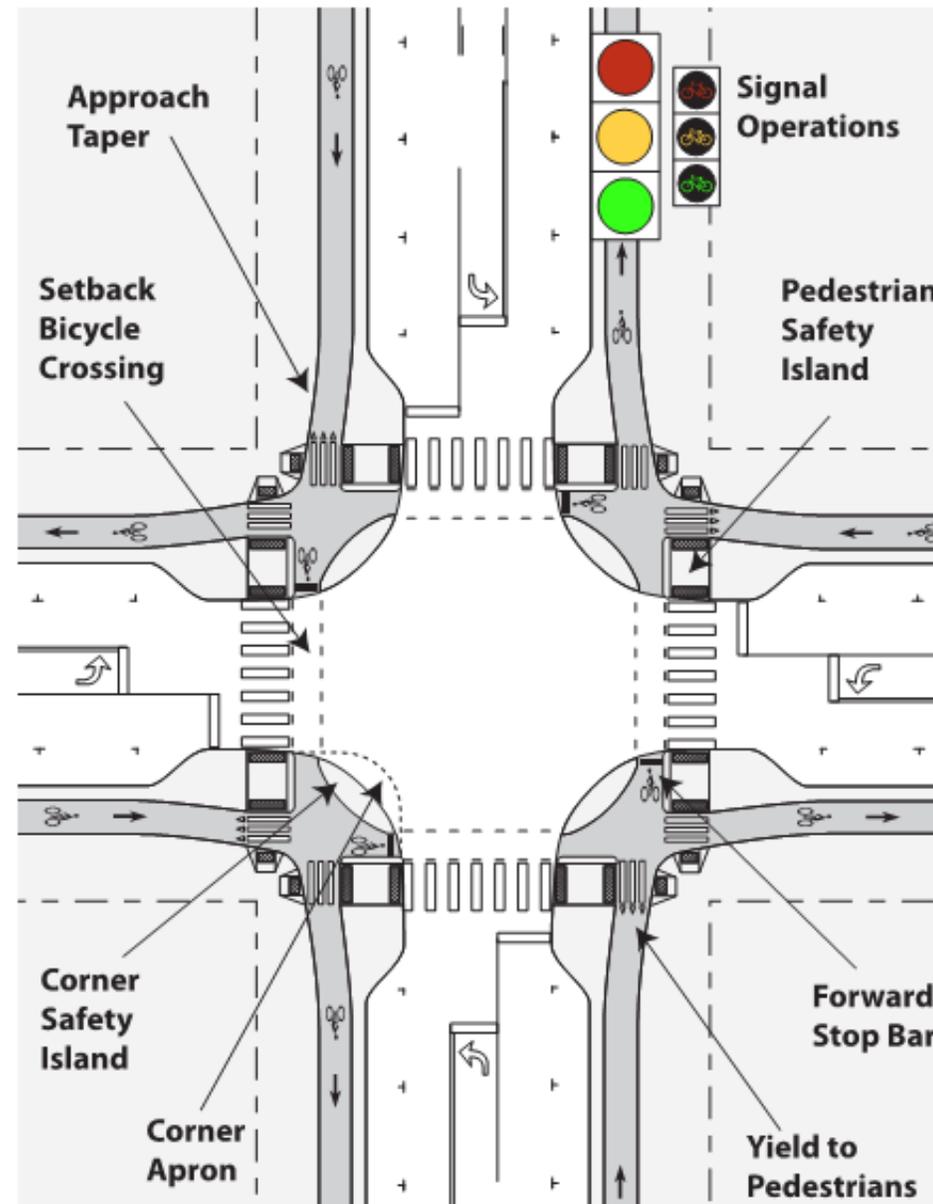
Protected Intersection

Exhibit 8

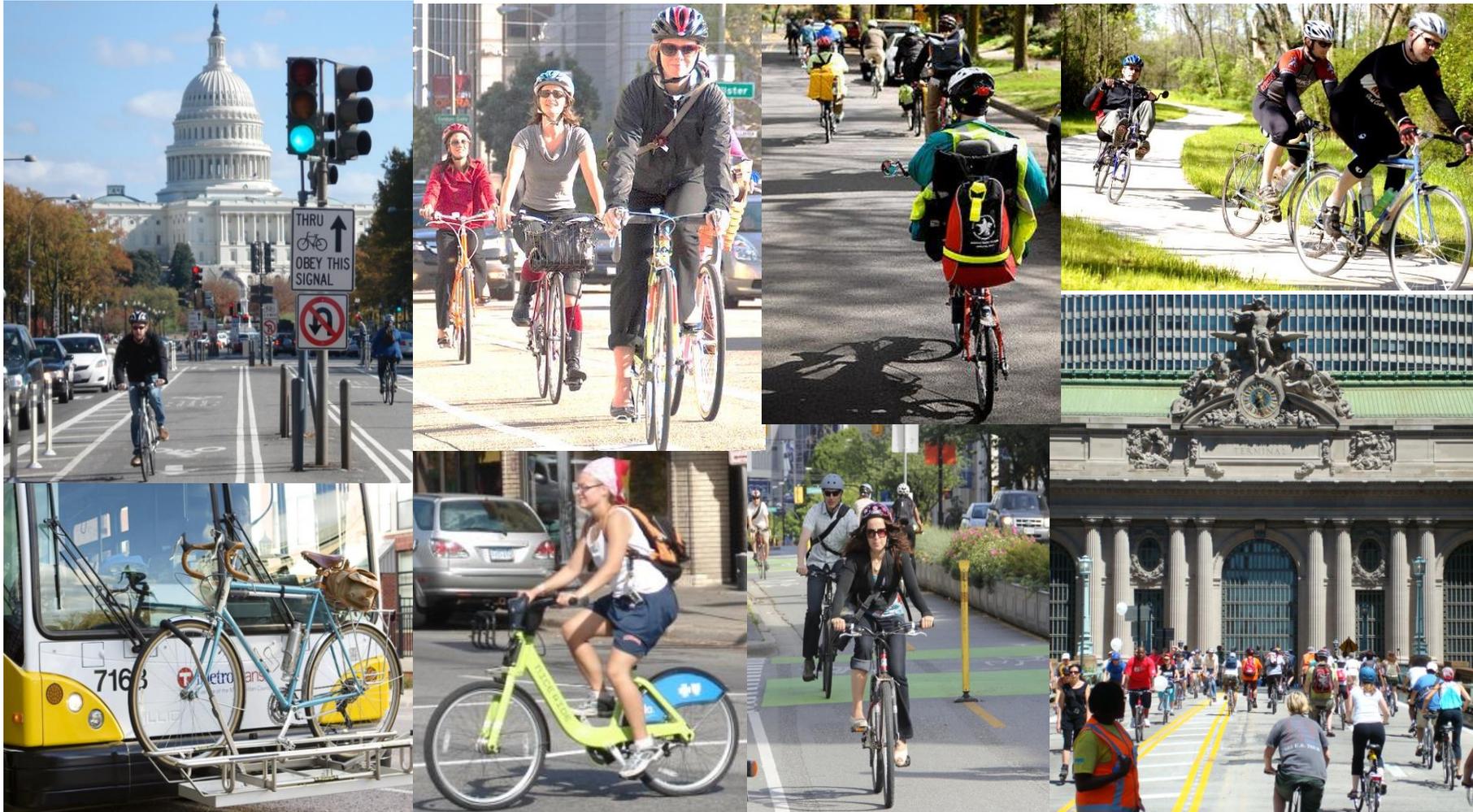
Visual illustration of key protected intersection features

Corner safety islands have multiple roles: offering a protected place for bicyclists to queue when crossing and turning, and managing the speed of turning vehicles when permitted turn conflicts are allowed.

Special attention should be paid to the amount of deflection required for both pedestrians and bicyclists in advance of the intersection.



Radfahren in den USA !



US Radboom: Lehren für Deutschland

- Auch unter widrigen Bedingungen ist es möglich das Radfahren erfolgreich zu fördern;
- Umdenken bei Radplanern und Umschreiben der Regelwerke war/ist notwendig;
- Bau von Radinfrastruktur um eine grössere Gruppe möglicher Radler anzusprechen;
 - nicht nur die 'Strong and Fearless'
- Lehren aus dem Ausland (Erfahrungen in NL, DK (Copenhagen)) waren hilfreich
- Starkes Wachstum der Radforschung begleitet diesen Prozess;
- Deutschland hat viel radfreundlichere Rahmenbedingungen;
 - Radpolitik, Verkehrspolitik, Raumordnung, Verkehrsberuhigung etc.



Einige meiner Publikationen zum Thema Radfahren

- Pucher, J., **Buehler, R.** 2017. [Cycling towards a more sustainable transport future](#), *Transport Reviews*, 37:6, 689-694, (invited editorial).
- **Buehler, R.**, Dill, J. 2016. “[Bikeway networks: A review of effects on cycling](#),” *Transport Reviews*. Vol. 36, No. 1, pages 9-27.



- Pucher, J., Buehler, R. (eds.) 2012. [City Cycling](#). MIT Press, Cambridge, MA, 395 pages.
- **Buehler, R.** 2012. “[Determinants of Bicycle Commuting in the Washington, D.C. Region: The Role of Bicycle Parking, Cyclist Showers, and Free Car Parking at Work](#),” *Transportation Research Part D: Transportation and Environment* Vol. 17, No. 7, pp. 525-531.
- **Buehler, R.**, Pucher, J. 2012. “[Cycling to Work in 90 Large American Cities: New Evidence on the Role of Bike Paths and Lanes](#),” *Transportation*, Vol. 39, 2, pp. 409-432.
- Pucher, J., **Buehler, R.**, Seinen, M. 2011 “[Bicycling Renaissance in North America? An Update and Re-Assessment of Cycling Trends and Policies](#),” *Transportation Research A*, Vol. 45, No. 6, pp. 451-475.
- Pucher, J., **Buehler, R.** 2008. “[Making Cycling Irresistible: Lessons from the Netherlands, Denmark, and Germany](#),” *Transport Reviews*, Vol. 28, No. 4, 2008, pp. 495-528.

