

1Table S1. Comparison of sample, monitoring duration, setting, travel behavior, and time-activity microenvironments definition across studies
2focused on time-activity pattern.

Author (year)	Sample	Monitoring duration	City	In transit	travel mode	commuting distance and/or duration	Indoor vs Outdoor	Micro-environments	Confusion matrix
Actual Study	162 adults	1 week	Barcelona, Spain; area: 102.15 km ² ; density:15,686.6 hab/km ²	walking, biking, bus, metro, motorbike, car, and others	YES	2.16 h/day	NO	Home; Work/School; Others; In Transit	YES
Nethery (2014)	54 children	10 day period	Montreal,Canada; area: 365.13 km ² ; density:4,439 hab/km ²	walking, car, truck, and bus	not specified	≥ 1.30 h/day ^b	YES	Home; In transit; School; Outdoors; Indoors	YES
Wu (2011)	47 adults	3 week days	Wilmington area of the City of Los Angeles [2,273/km ²] and the western portion of the City of Long Beach [3,500/km ²]	in-vehicle (auto, van, or truck, transit, or other); but outdoors (walking, biking, other) ^a	not specified	1.73 h/ day	YES	Indoor; Outdoor static; Outdoor walking; and in-vehicle travel	YES
Tandom (2003)	45 children	2 preschool days	within a school Seattle, USA;	not applicable	not applicable	not applicable	YES	in-School; out-School	NO
Elgethum (2007)	31 children	1 non-school weekend day	area: 217.2 km ² ; density: 3,077 hab/km ²	all time that is not home, work,school or others.	not specified	1.20 h/weekend day	YES	In-home; In-other; Out-home; Out-other; Transit	YES
Breen (2014)	9 adults	24 hours (7 workdays & 2 non-workdays)	Between central North Carolina [highest density 1425,69 hab/km ²]and EPA campus in Research Triangle Park	in-vehicle (auto, van, or truck, transit, or other) ^a	not specified	> 5 miles; 1.14 h/workdays; 1.82 h/non-workdays	YES	Home-In; Home-Out; Work-In; Work-Out; School-In; School-Out; In-Vehicle; and Other.	YES
Adams (2009)	1 adult	4 workdays	Denver, USA; area: 400 km ² density: 1,561 hab/km ²	not specified	not specified	≥ 1.35 h/day ^c	NO	Home; School; and transit	YES
Kin (2012)	1 technician	18 days	Seoul, Korea; area: 605.21 km ² density: 17,000 hab/km ²	not specified	not specified	0.90 h/day	YES	Home indoors; Others indoors; Transit; and Walking outdoors	NO

^awalking, running, biking or others were not included as in transit

^bTaking only into account those trips longer than 30 minutes.

^cAverage commute in mornings was 29 minute but there is location on 27077 out of 34560 possible observations.