

# Walk the Talk

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# Talk the Walk

## THE GLOBAL WALKABILITY INDEX

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**Velo Mondial -- March 2006**



# Introduction

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- Although a significant number of trips are made by foot in developing cities, pedestrian infrastructure, amenities, and services are often neglected in municipal planning and budgets.
- Helping city planners understand the scope and extent of local pedestrian conditions, relative to other cities, would be a positive step in the right direction, as would helping them identify specific countermeasures and costs associated with improving pedestrian conditions.



# Introduction

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- Project Objectives
  - Generate awareness of walkability as an important issue in developing cities;
  - Provide city officials with an incentive to address walkability issues;
  - Help city planners understand scope and extent of local pedestrian conditions, relative to other cities.



# Project Organization

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## PHASE I

- Step 1**      Conduct background research and literature review
- Step 2**      Draft survey methods and survey implementation guidebook. Test survey materials in developed and developing countries to refine methodology.
- Step 3**      Use refined survey materials to conduct full-scale pilot in a select developing city. Analyze results.
- Step 4**      Finalize survey methodology and implementation guidebook.

## PHASE II

- Step 5**      Complete rough method for data aggregation – that is, transforming the data into index rankings (to be further refined as data is collected).
- Step 6**      Promote widespread implementation of Index survey materials. Begin to construct Global Walkability Index.
- Step 7**      Develop generic counter-measure guidebook that outlines steps (additional studies, resources that may be consulted, etc.) city planners and leaders can take to improve upon areas deemed insufficient by the Index
- Step 8**      Analyze Index data and produce final report. Establish mechanism for on-going implementation.



# Index Development

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- Evaluation of more than 20 different established methodologies for evaluating urban non-motorized transport.
- Evaluation of three different econometric methods for compiling indices.
- Consultations with experts from a multitude of fields, including urban planning, pedestrian planning, transportation engineering, urban transport policy, pedestrian safety, accessibility for disabled persons, urban design, and economics.
- Comments from field testers in Washington, Chicago, Ahmedabad, Manila, Beijing, and Delhi.



# Index Components

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## Component 1: Safety and Security

- What are the odds a pedestrian will be hit by a motor vehicle? What safety measures are in place at major crossings and intersections? How safe from crime do pedestrians feel along walking paths?

## Component 2: Convenience and Attractiveness

- Do pedestrians have to walk a kilometer out of their way just to cross a major road? Is there sufficient coverage from weather elements along major walking paths? Are paths blocked with temporary and permanent obstructions, such as parked cars or poorly placed telephone poles?

## Component 3: Policy Support

- Is there a non-motorized planning program? Is there a budget for pedestrian planning? Are pedestrian networks included in the city master plan?



# Index Components

Component	Variable	
Safety and Security	1	Proportion of road accidents that resulted in pedestrian fatalities (most recent year avail.)
	2	Walking path modal conflict
	3	Crossing safety
	4	Perception of security from crime
	5	Quality of motorist behavior
Convenience and Attractiveness	6	Maintenance and cleanliness of walking paths
	7	Existence and quality of facilities for blind and disabled persons
	8	Amenities (e.g., coverage, benches, public toilets)
	9	Permanent and temporary obstacles on walking paths
	10	Availability of crossings along major roads
Policy Support	11	Funding and resources devoted to pedestrian planning
	12	Presence of relevant urban design guidelines
	13	Existence and enforcement of relevant pedestrian safety laws and regulations
	14	Degree of public outreach for pedestrian and driving safety and etiquette



# Data Collection Materials

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The quality of the data collection methodology will largely determine the overall quality and usefulness of the Walkability Index. That said, while it is desirable that the data collection methods are thorough, they should also be very simple to ensure widespread, error-free implementation. With this in mind, two surveys have been developed for collecting data: a public agency survey and a field survey





# Data Collection Materials

## GLOBAL WALKABILITY INDEX FIELD SURVEYS — DATA COLLECTION GUIDELINES

### Disability Infrastructure

The following diagrams provide some guidance on how to judge disability infrastructure. The pedestrian signals might also be considered.



- 1 No infrastructure for disabled persons is present.
- 2 Limited infrastructure for disabled persons is available, but is not in usable condition.
- 3 Infrastructure for disabled persons is present but in poor condition and not well placed.
- 4 Infrastructure for disabled persons is present, in good condition, but poorly placed.

### Effective Width

Use a 1-meter piece of string to determine whether effective width (net of obstruction)

### Maintenance and Cleanliness

Maintenance of pedestrian infrastructure is just as important as having any infrastructure, for example, poorly maintained sidewalks can be completely unusable. A environment is not only more pleasant and convenient for pedestrians (no need piles of rubbish, for example), but it also shows the city's respect for the pedestrian.

### Maintenance and Pavement Quality



- 1 Separate paving for walking path is not present.
- 2 Paving is mostly dirt, covered with mud, very poorly maintained.
- 3 Some paving is present and provides a somewhat smooth walking surface in some areas. Not particularly well-maintained.
- 4 Walking path is paved and walkable but not very well maintained. Tile missing, very uneven surface, etc.

## GLOBAL WALKABILITY INDEX FIELD SURVEYS — DATA COLLECTION GUIDELINES

### Exposure to Other Modes

- | Points | Description   |
|--------|---|
| 1      | Very dangerous – there is significant risk of accident with other modes |
| 2      | Dangerous – pedestrian faces some risk of being hurt by other modes     |
| 3      | Difficult to ascertain dangers posed to pedestrian                      |
| 4      | Safe – pedestrian is mostly safe from accident with other modes         |
| 5      | Very safe – other modes present no danger to pedestrian                 |

### Exposure Time

- | Points | Description   |
|--------|---|
| 1      | Maximum – Extremely long waiting period, crossing time greater than 40 seconds        |
| 2      | Relatively long – Long waiting period, crossing time between 20 and 30 seconds        |
| 3      | Difficult to ascertain dangers posed to pedestrian                                    |
| 4      | Relatively short – Reasonable waiting period, crossing time between 10 and 20 seconds |
| 5      | Minimal – Virtually no time spent waiting, crossing time less than 10 seconds         |

### Sufficient Time to Cross at Signalized Intersections

- | Points | Description  |
|--------|--|
| 1      | Not enough time – No pedestrian has sufficient time to cross                         |
| 2      | Not quite enough time – Barely enough time for most people, insufficient for elderly |
| 3      | Sufficient time for most pedestrians to cross, not quite enough time for elderly     |
| 4      | Just enough time – Just enough time for elderly or persons with children to cross    |
| 5      | Ample time – More than enough for elderly or persons with children to cross          |

### Motorist Behavior

Motorists (drivers of cars, buses, motorcycles, auto-rickshaws, etc.) pose the greatest danger to pedestrians. Thus, the degree to which cities can manage motorist behavior will largely determine the safety of the pedestrian environment. The following table may be used as a guide for

- | Points | Description   |
|--------|---|
| 1      | Motorized travel is totally chaotic; vehicles never yield to pedestrians.               |
| 2      | Most motorists cannot be expected to obey traffic laws and rarely yield to pedestrians. |
| 3      | Motorists sometimes obey traffic laws and may yield to pedestrians.                     |
| 4      | Motorists usually obey traffic laws and sometimes yield to pedestrians                  |
| 5      | Motorists obey traffic laws and almost always yield to pedestrians.                     |

## GLOBAL WALKABILITY INDEX PUBLIC AGENCY DATA COLLECTION

City: \_\_\_\_\_

### Survey Team Names:

- 1) Please rate degree of municipal funding and resources devoted to pedestrian planning.
  - ☐ Enough to sustain a high-quality program in long-term
  - ☐ Sufficient for short term, but not the long term
  - ☐ Neutral
  - ☐ Insufficient to achieve meaningful goals
  - ☐ Nonexistent

- 2) Please check the pedestrian-related urban design guidelines that are already well-established. Feel free to add any relevant guidelines that are not included in the list.
  - ☐ Sidewalk pavement type
  - ☐ Placement of benches and similar amenities on walk paths
  - ☐ Sidewalk widths
  - ☐ Design for disabled persons
  - ☐ Other \_\_\_\_\_
  - ☐ Other \_\_\_\_\_
  - ☐ Other \_\_\_\_\_

- 3) Attach available data on pedestrian fatalities and injuries to survey materials. Enter estimated proportion of traffic fatalities involving pedestrians in 2004. \_\_\_\_\_ %
- 4) Have there been public outreach efforts (by this or other agency) to educate pedestrians or drivers on road and pedestrian safety?
  - ☐ Yes
  - ☐ No

- 5) Is there a law or regulation for any of the following items? If so, is the law or regulation enforced? Feel free to add any relevant laws or regulations that are not included in this list.

Is there a law or regulation for:	Enforced?		
	Usually	Sometimes	Rarely
<input type="checkbox"/> Jaywalking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Vendors on sidewalks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Parking on sidewalks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Driving / riding on sidewalks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Drunk driving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



# Survey Area Selection

- **Random Spatial Sample**

This method is advantageous in that: 1) the random component mitigates some bias from the results, therefore making the survey data more readily comparable across cities; and 2) surveying a square area rather than a selection of single streets ensures issues such as connectivity can be captured in the data – that is, surveying whole areas give is a sense of general walkability for a whole neighborhood, as opposed an isolated road that may or may not be of import. One drawback is that a random spatial sample, inherently, will not cover all areas in the city and may miss important corridors.





# Extended Survey Materials

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While the Global Walkability Index serves to raise awareness of walkability as an important issue, it is too general for use in devising an investment or policy strategy. Supplemental *Extended Survey Materials* have been developed that enable cities to pinpoint specific infrastructure and policy needs, in addition to deriving the simple Index ranking.



# Further Information

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Please refer to conference proceedings for full copy of paper.