## Mobility Snapshots

A Mobility Snapshot is data collected at a specific intersection in your local community. Mobility Snapshots help NGOs and other civil society advocates demonstrate the reality of people's journeys and the risks they face every day. They demonstrate how evidence-based, low-cost interventions including $30 \mathrm{~km} / \mathrm{h}$ limits, pedestrian facilities such as footpaths and crossings, and traffic calming can make a big difference.

This tool can be used to collect the data needed to do a Mobility Snapshot.
Start by selecting an intersection where people and motorised vehicles mix. The intersection you choose should meet ALL of the following criteria.

1. It is a place that is widely known and recognisable near a popular train/bus station or public transport hub or shopping/market area;
2. It is a place that has plenty of pedestrian traffic mixing with motorised vehicles; AND
3. It LACKS at least one of the following:

- Formal pedestrian crossing/s
- Segregated footpath/s
- Traffic calming features, such as speed hump/s on approach to the intersection
- Traffic lights for motorised vehicles, and/or
- A speed limit of $30 \mathrm{~km} / \mathrm{h}$ or less.

Complete this form to share your data with us, use it to advocate for change locally or nationally, and join us as we build a global picture of what pedestrians and other road users face every day.

The responses in this form should be input online at https://bit.ly/StarRatingMobilitySnapshot. If you have difficulty uploading images or other information using the form, please contact admin@roadsafetyngos.org.


#### Abstract

About this tool This tool has been created by the International Road Assessment Programme (iRAP) for the Global Alliance of NGOs for Road Safety (the Alliance). The information collected in this form will be used to calculate road safety Star Ratings and may be published by the Alliance as part of its Mobility Snapshots initiative.

All personal information collected in this form (name, organisation and email address) will be handled strictly in accordance with GDPR regulations. It will be used solely for the purpose of the Mobility Snapshot and not be shared outside of iRAP or the Alliance.

The street images and data submitted in this form, the safety Star Rating, and the name of your organisation may be used by the Alliance and iRAP in presentations, publications, and webpages as part of global advocacy for safer intersections. They may appear, for example, on a map showing all the Mobility Snapshots around the world.

Organisations may choose to remain anonymous and can indicate this by checking the box below. Enquiries can be directed to admin@roadsafetyngos.org.


This tool, or any part of it, must not be copied without prior permission of iRAP. Enquiries may be directed to Greg Smith at greg.smith@irap.org.

For more information about iRAP or safety Star Ratings, see www.irap.org.

I consent to my personal details being collected and stored by iRAP and the Global Alliance of NGOs for Road Safety, and acknowledge that I may withdraw this consent at any time by contacting admin@roadsafetyngos.org.

| What is your name? |  |  |
| :--- | :--- | :--- |
| What is your organisation's name? |  |  |
| Are you/your organization a member of <br> any of the following (select all that <br> apply)? | $\square$ <br> Global Alliance of NGOs for <br> Road Safety | $\square$ Global Youth Coalition for <br> Road Safety |
| Can your organisation name be <br> published in association this Mobility <br> Snapshots? | $\square$ Yes | $\square$ No |
| What is your email address? |  |  |

## Before you start...

This form requires information about the physical characteristics of an intersection, as well as how many road users are present and the speed of traffic.

The form should be completed at the intersection during daylight hours and when it is easy to see the around the intersection. Avoid bad weather and times when traffic congestion may limit visibility.

There is additional (optional) guidance to assist with measuring traffic speed and counting road users in parts 6 and 7.

NOTE: if you are doing actual speed measurements and road user counts, these may need to be at different times to the main survey. As a general guide, counting road users should be done during the busiest time of the day (not on a weekend or holiday), while speed measurements should be taken at the least busy time of the day (weekends and holidays are ok).
**IMPORTANT**
Using this form may require you to stand close to traffic. NEVER STAND IN A LOCATION WHICH PUTS YOU AT RISK. Please take care of your safety and wear clothing which can be easily seen.

Do you agree to the publication of this Mobility Snapshot, associate images and data collected for the intersection, and the Star Rating, by the Alliance and iRAP for the purpose of global advocacy?


## Part 1 About the Intersection

## 1. Where is the intersection?

Copy the GPS coordinates or provide a location link from Google Maps or similar below. For e.g. "23.782105509267602, 90.41680064000369".
$\square$
1a. Please provide a short description of your location.
Please include the names of the main and side streets, the name of the city, town, village and the country. For example, "The intersection of Gulshan Avenue and Road 130, Dhaka, Bangladesh."

## 2. What kind of intersection is it?

If the intersection does not match the available options, select the ' $X$ ' intersection.A ' $T$ ' intersection (with three legs)
A ' $X$ ' intersection (with four or more legs)

$\square$ A roundabout


A merge or diverge lane

3. Are there traffic signals present?
$\square$ No


## 4. Are there any lanes for turning vehicles at the intersection?

For example, is there a lane with a turn arrow but no straight arrow?
No
5. Does the intersection surface have large cracks, bumps or holes in the road surface?Yes, a lot (similar or more than the picture)NoYes, some (less than the picture)

6. Does the intersection surface have loose gravel, sand or metal plates on it?
$\square$ Yes, a lot $\square$
Yes, someThe road is unsealed (that is, it is a dirt or gravel road)
7. Does the intersection have good lines on the road and road signs?

For example, lines to show separation of road lanes, where the edge of the road is, arrows for turning lanes, stop lines etc. Examples of signs are stop or give way signs, signs showing turning lanes or pedestrian crossing locations.

Yes, signs and lines are clear and correctNo, signs and lines are absent or not clear (e.g. they are faded) or not correct
8. Does the intersection have streetlights?

$\square$ No
9. Are there design or infrastructure features that make this intersection unsafe for pedestrians?
$\square$
Yes $\square$ No

9a. [Optional] Please explain your answer:

## Part 2 Around the Intersection

10. What can you see around the intersection? Select all that apply.


Shops and/or offices $\square$ Factory, building site or warehousesHouses, apartments or other residential buildingsSchools or universitiesEmpty land
Parks, hospitals, libraries or other popular venues
11. If there is a school present, please note if any of the following are present: Select all that apply.School warning signs or markings on the roadThere is a school but no features are present

Flashing lights
Not applicable - there is no school presentCrossing supervisor/s
12. Is the intersection in a village, town or city?
$\square$ Yes
$\square$
13. Is there car parking, or can you see cars parked, on one or both sides of the road?
$\square$ One side $\square$ Both sides
$\square$ None
14. Is there anything obstructing the view of a driver around the intersection?

This could include trees or branches, buildings close to the road (such as the example shown below) or a sharp corner close to the intersection. No

15. Is the intersection on the slope of a hill?No or it is a gentle slope (less than the picture)Yes, a moderately steep hill (similar to the picture)Yes, a very steep hill (more steep than the picture)

16. Is the intersection located on a curved road (where a pedestrian may struggle to see an oncoming vehicle and vice versa)?

For example, one or more of the intersection approaches is curved or goes around a corner.
No, both intersecting roads are straight

正, there is a moderate curve on one or more of the roads (less sharp than the picture)Yes, there is a sharp curve on one or more of the roads (about the same as the picture)Yes, there is a very sharp corner on one or more of the roads (more sharp than the picture)

16a. If there is a moderate, sharp or very sharp curve, are there signs or lights warning approaching cars of the intersection?

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\square \mp@code { Y e s }
\(\square\) No Not applicable (no curve present)
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## Part 3 About the Roads

In this section, we refer to the 'main road' and the 'side road'. For the main road, base your answer on the bigger of the two roads. If the roads are of similar size and amount of traffic, then just pick one.

## 17. How many lanes does the main road have?

If there are more lanes in one direction than the other, select the higher number. Do not count additional turning lanes.
If there are no lane markings, make an estimation based on how many cars can be observed travelling next to each other in one direction.
$\square$ One lane per direction
$\square$ Three lanes per direction

Two lanes per direction
Four or more lanes per direction
18. How many lanes does the side road have?

If there are two or more side roads, select the next busiest after the main road.
If there are more lanes in one direction than the other, select the higher number. Do not count additional turning lanes.
If there are no lane markings, make an estimation based on how many cars can be observed travelling next to each other in one direction.
$\square$ One lane per direction
$\square$ Three lanes per direction

Two lanes per direction
Four or more lanes per direction
19. Does the main road have traffic going both ways or one-way only?


Both ways
One way

## 20. Does the main road have a barrier or median strip

 (such as grass or a garden) separating traffic travelling in different directions?Select 'No' if any of the following apply: the road is one-way, the median barrier or strip is on one side of the intersection but not the other, or if the median island is very short (e.g. a pedestrian crossing refuge).
 No

## 21. How wide are the traffic lanes on the main road?

If the lanes vary, choose the narrowest lane for regular traffic. If you cannot measure exactly, use the relative width to a standard city bus as a guide (similar to one pictured).

If there are no lane markings, make an estimation based on the total road width divided by the estimated number of lanes in both directions (based on how many cars can be observed travelling next to each other in one direction).

Less than 2.75 (narrower than the picture where both sides of the bus are on or very close to the lane markings)

Between 2.75 m and 3.25 m (similar to the picture - where a bus comfortably fits in the lane)

More than 3.25 m (wider than the picture - where there is ample space on each side of a bus)
22. Is there a road shoulder on the main road, that is, a space between the traffic lanes (as shown with a line) and the edge of the tarmac?

As shown in the diagram, this may be wide enough for a car to stop or for bicyclists may ride (as either a formal bike lane or not).

If there is no painted line along the edge of the traffic lane, answer ' $N o$, the traffic lane is at the edge of the road surface' even if the traffic lane is very wide. If there is any kind of line (single, double or coloured), record it as 'yes' with the corresponding distance.

Record this for the bigger of the two roads. If it is different for each side of the selected road, select two options.


No, the traffic lane is at the edge of the road surface without a line (similar to picture)


Yes, and there is a medium space between 1 m and 2.4 m (similar to picture)


Yes, and there is a narrow space of less than 1 m to the road edge (or there is an outer lane line as in the picture).


Yes, and there is a wide space of more than 2.4 m (similar to picture)


## Part 4 About the Footpaths

In this section, focus on the footpaths along the same road as in the previous section.

## 23. Are there footpaths for pedestrians?

Note the presence of any formal footpath, whether or not pedestrians are using it. Question $23 b$ will ask for more detail about its condition.

There are footpaths along both sides of the road


There are no formal footpaths, but people do not walk on the road or road shoulder (there is space to walk next to the road similar to the picture shown)


There are footpaths, but not on both sides of the road


There are no footpaths, and people must walk along the road or road shoulder (similar to picture)


## 23a. Where a footpath is present, is there...?

Select one per footpath. You may select more than one option if the footpaths on each side of the road are different. For barriers, do not count small sections of fence which do not extend along the footpath (e.g. on either side of the pedestrian crossing).


A gap between the road and the footpath of less than 1 m from the road

A gap between the road and the footpath of 13 m from the road

Bicycles sharing the path

A gap between the road and the footpath of more than 3 m from the road

A barrier between the road and the footpath (or something else which would prevent a car hitting a pedestrian)
$\square$ Not applicable (there are no footpaths)

23b. Where footpaths are present, are they free of obstacles and well maintained?
Obstacles may include parked cars on the footpath, too much street furniture (such as signs, poles or bus shelters or cycle parking), or surface problems such as large puddles, narrow points which are hard to get through (especially for someone with a child carriage or wheelchair, tripping hazards (such as tree roots) or any other issues that may prevent people from using the footpath easily. Select one option per footpath. You may select more than one option if the footpath on each side of the road are different.The footpaths are clear and well maintainedThe footpaths are mostly clear and well maintained, with a few minor issuesThe footpaths are partially blocked and/or not well maintained
24. Are there any driveways (vehicle entries) to shops, offices, carparks or housing which cross footpaths or places where people are walking?No

## Part 5 About the Pedestrian Crossings

This section relates to pedestrian crossing facilities at the intersection.
25. On the main road (or bigger of the two roads), is there a pedestrian crossing? No

25a. If yes, does this crossing have any of the following? Select all that apply.Road markings (e.g. zebra crossing or similar)A refuge island in the middle of the roadPedestrian signalsRaised surface (so that the crossing is level with the footpath)A bridge or tunnel for pedestriansNone of the aboveNot applicable (there is no crossing)
26. Would you consider this pedestrian crossing to be safe for people crossing the road?
$\square$ Yes $\square$ No $\square$ Not applicable (there is no crossing)

26a. [Optional] Please explain your answer:
27. On the side road/s (or smaller of the two roads), is there a pedestrian crossing?

If there are two or more side roads, select the next busiest after the main road.
$\square$ Yes $\square$ No

27a. Does this crossing have any of the following? Select all that apply.Road markings (e.g. zebra crossing or similar)A refuge island in the middle of the roadPedestrian signalsRaised surface (so that the crossing is level with the footpath)A bridge or tunnel for pedestriansNone of the aboveNot applicable (there is no crossing)

## Part 6 About the Speed of the Traffic

For this section, focus on the same main road as in previous sections.

## 28. What is the speed limit of the road?

Enter number only. If you don't know what the speed limit is, say "unknown".

28a. Is the speed limit in miles or kilometres per hour?


Kilometres per hour (km/h)
Miles per hour (mph)
29. How fast is the traffic going relative to the speed limit when there is the least traffic congestion?

Base the answer to this question on the observed speed of the cars and motorcycles travelling straight through the intersection on the main road (those not turning or stopping for traffic lights or stop signs). This should be done during offpeak times when there is the least traffic congestion.

If unsure, select 'About the same'.

| $\square$ Much slower | $\square$ A bit faster |
| :--- | :--- |
| $\square$ A bit slower | $\square$ Much faster |
| $\square$ About the same |  |

29a. [Optional] Can you provide the operating speed of the traffic when there is the least traffic congestion?

This can be done using a speedometer or measuring the time it takes for vehicles to travel between two points of a known distance apart. Base the answer to this question on the speed of the cars and motorcycles travelling straight through the intersection on the main road (those not turning or stopping for traffic lights or stop signs). This should be done during offpeak times when there is the least traffic congestion.

If possible, measure the speed of a sample of vehicles (e.g. 20), and then calculate the average. Enter a number only using the same unit (km/h or mph) as in 28a. See this guidance note for more information: Measuring traffic speed
30. Are there traffic calming features on the approaching roads or at the intersection that encourage slower traffic speeds?

Traffic calming includes features such as speed bumps and raised crossings, which are designed to reduce speed. For more information on these features, see https://www.roadsafetyngos.org/toolkit/priority-interventions/traffic-calming/


## Part 7 Number of Road Users

This section can be completed based on existing local data or by counting the number of road users.
If you need to count road users, you can use road user count template and guidance provided.
Answer for the same main road and side road as in previous sections.

## 31. How many pedestrians use the intersection per hour during peak times?

Enter number. Count the pedestrians crossing or walking along the main and side roads for a minimum of 15 minutes during peak time. Then multiply that number to equate to 60 minutes. For example, if there are 112 pedestrians in 15 minutes, then $112 \times 4=448$.
$\square$
32. How busy is the main road, in terms of overall traffic?

Congestion is where traffic is significantly slowed or stopped because of overcrowding. For example, if vehicles are stopped even where there is a green signal.
$\square$ The traffic is heavily congested for several hours or more each day

The traffic is briefly congested for short periods (1 hour or less) throughout the day

The road has a constant flow of vehicles but does not get congested
33. How busy is the side road, in terms of overall traffic?

The traffic is heavily congested for several hours or more each day

The traffic is briefly congested for short periods (1 hour or less) throughout the day

The road has a constant flow of vehicles but does not get congested
34. Relative to total traffic, how many motorcycles and/or powered two-wheelers (PTW) are passing through the intersection (all directions)?

If you have access to existing local traffic count data, you can use it to answer this question.
If not, you can either:

1) Use the road user count template to count different vehicle types and calculate the proportion of motorcycles, or
2) Use the following method: Count a given number of passing vehicles (at least 30) and mark which are motorcycles/PTW, then record the percentage. For example, if out of 30 vehicles, 13 are motorcycles/PTW, then 13 divided by 30 is 0.43 (43\%).Nearly all (80\% or more)
$\square$ Less than half (20-40\%)
$\square$ More than half (60-80\%)
$\square$ Some (5-20\%)
$\square$ Approximately half (40-60\%)
$\square$ Very few (less than 5\%)
35. Relative to total traffic, how frequently do trucks and buses pass through the intersection (all directions)?

Similar to the previous question, you can use existing local data, the road user count template, or calculate this based on a given number of passing vehicles.
$\square$ Very frequently (they make up 30\% or more of total traffic)

Frequently (15-30\% of total traffic)

Somewhat frequently (5-15\% of total traffic)
36. [Optional] How many bicyclists use the intersection per hour during peak times?

This question is not required for the Mobility Snapshots or for the Star Rating, but you can choose to collect the number if it is of value for your advocacy.

Enter number. Similar to counting pedestrians in question 31, this may be done by counting the number of bicyclists in a given period during peak times, and multiplying that number to equate to 60 minutes. For example, if there are 54 bicyclists in 15 minutes, then $54 \times 4=216$.
37. How did you answer the questions in this section?Based on local data (e.g, official data, previous surveys or data collection)

Road user counts without the template (i.e. the simple methods described in the questions above)

## Part 8 Upload Documents and Images

How to take photos of the intersection using your mobile phone:

- Take at least six high resolution photos in good lighting conditions.
- This should include at least two portrait pictures and two landscape pictures of the whole intersection.
- Photos should capture the main features of the intersection, sidewalks and crossings, and any other particular issues you noticed.
- If possible, capture pictures from an elevated position (such as a pedestrian bridge or building) as this provides a better perspective.
- Make sure the pictures cover all 'legs' of the intersection, so the whole road and roadsides are visible.
- Take at least one photo of key areas where improvements could be made.


## Upload photos and sketches/drawings of the intersection to https://bit.ly/StarRatingMobilitySnapshot.

Notes may be provided in the text box below. You must have permission from the owner of these images to use them.
A maximum of ten images can be uploaded.
Are you the owner of the photos/images provided?
The owner is typically the person who took the photo or made the image.
$\square$
Yes
If no, please specify who is the owner and if they must be credited.
Provide the name and organisation of the owner.
$\square$
Can the Alliance use these images in non-commercial public documents, websites and social media?
$\square$
$\square$ Yes No

Can the images be used without alteration if identifiable features (such as people's faces) are present?Yes (identifiable features not present, permission given by people shown, or permission is not required for this usage in my country)No (identifiable features must be removed prior to publication)
Do you have any further notes or comments?
$\square$

## Mobility Snapshots Guidance Note

## Measuring traffic speed

Part 6 asks for the operating speed of the traffic travelling along the main road. This input is optional, but we encourage you to try to get this information.

Measuring the traffic speed can be done using a speedometer. If you don't have one, the speed of vehicles can be measured by timing how long it takes for cars and motorcycles to travel between two points of a known distance apart.

To do this, pick two locations (such as light poles) along the main road on either side of the intersection. Using Google maps or a measuring device, record how far these two objects are apart. Then, using a stopwatch, record how long it takes for vehicles to travel between one and the other.


Only record vehicles travelling straight ahead. Do not record speed limited vehicles (such as small motorcycles), vehicles which are turning or stopping at the intersection or pedestrian crossing.

This should be done during off-peak times when there is the least traffic congestion.
If possible, measure the speed of a sample of vehicles (e.g. 20), and then calculate the average.
Note if the unit is kilometres per hour ( $\mathrm{km} / \mathrm{h}$ ) or miles per hour ( mph ). The following examples assist with the conversion from seconds into $\mathrm{km} / \mathrm{h}$ and mph .

## IMPORTANT

NEVER STAND IN A LOCATION WHICH PUTS YOU AT RISK. Please take care of your safety and wear clothing which can be easily seen.

## Example for km/h based on sample of 10 vehicles:



## Example for mph based on sample of 10 vehicles:



## Mobility Snapshots Guidance Template

## Counting road users

## Instruction page

This template is provided to help with counting road users entering the intersection along the main road and from the side road/s. Using this template is optional.

We recommend the count be done for 15 to 30 minutes during peak time (the busiest time of the day).
The longer the count is, the more accurate it will be. Counts should not be done for less than 15 minutes. However, they may last up to one hour.

The count should categorise road users into:

- Pedestrians (those walking or using mobility aids, such as wheelchairs), who cross the road and do not cross the road (noted separately on the count sheet)
- Cyclists (including pedal and powered bicycles, tricycles, scooters and other micro mobility with speeds of up to $25 \mathrm{~km} / \mathrm{h}$ ),
- Motorcyclists (motorised or powered 2 or 3 wheelers with speeds of over $25 \mathrm{~km} / \mathrm{h}$ ),
- Cars, vans, small delivery trucks and minibuses, and
- Large buses and trucks.


For busy or multi-lane intersections, we recommend placing one person at the entry to each leg of the intersection to count all road users entering the intersection (this avoids double counting). For example, on a three-leg intersection, there would be three 'counters' as positioned below.

For smaller and less busy intersections, this can be done by one or two people covering two or more intersection entries.

Print and use the Road User Counting Sheet attached. Each person should have their own counting sheet for the intersection entry/entries they are responsible for counting. For example, if there are three people counting as shown above, there will be three counting sheets completed for one entry each.

The tallies from each sheet can then be used to fill in the Upload Page.

## IMPORTANT

NEVER STAND IN A LOCATION WHICH PUTS YOU AT RISK. Please take care of your safety and wear clothing which can be easily seen.

## Road user counting sheet

## Intersection description (street names, city, country):

Date and time of count: $\qquad$
Duration: $\qquad$

## Road entry name:

| Pedestrians |  | Cyclists | Motorcyclists | Cars, vans etc. | Buses, trucks etc. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Not crossing | Crossing |  |  |  |  |
|  |  |  |  |  |  |

## Road entry name:

| Pedestrians |  | Cyclists | Motorcyclists | Cars, vans etc. | Buses, trucks etc. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Not crossing | Crossing |  |  |  |  |
|  |  |  |  |  |  |

## Upload page

Once the counts have been completed, complete this table and upload a copy to the Google Form (Part 8): https://bit.ly/StarRatingMobilitySnapshot or email with the completed form to admin@roadsafetyngos.org.

| Intersection description (street names, <br> city, country): |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Date and time of count: |  |  |  |  |
| Duration: | Pedestrians | Cyclists | Motorcyclists | Cars, vans etc. |
| Number of road users |  |  |  | Buses, trucks etc. |
| Main road entry 1 |  |  |  |  |
| Main road entry 2 |  |  |  |  |
| Side road entry 1 |  |  |  |  |
| Side road entry 2 (if applicable) |  |  |  |  |
| $\ldots$ |  |  |  |  |
| $\ldots$ |  |  |  |  |

