

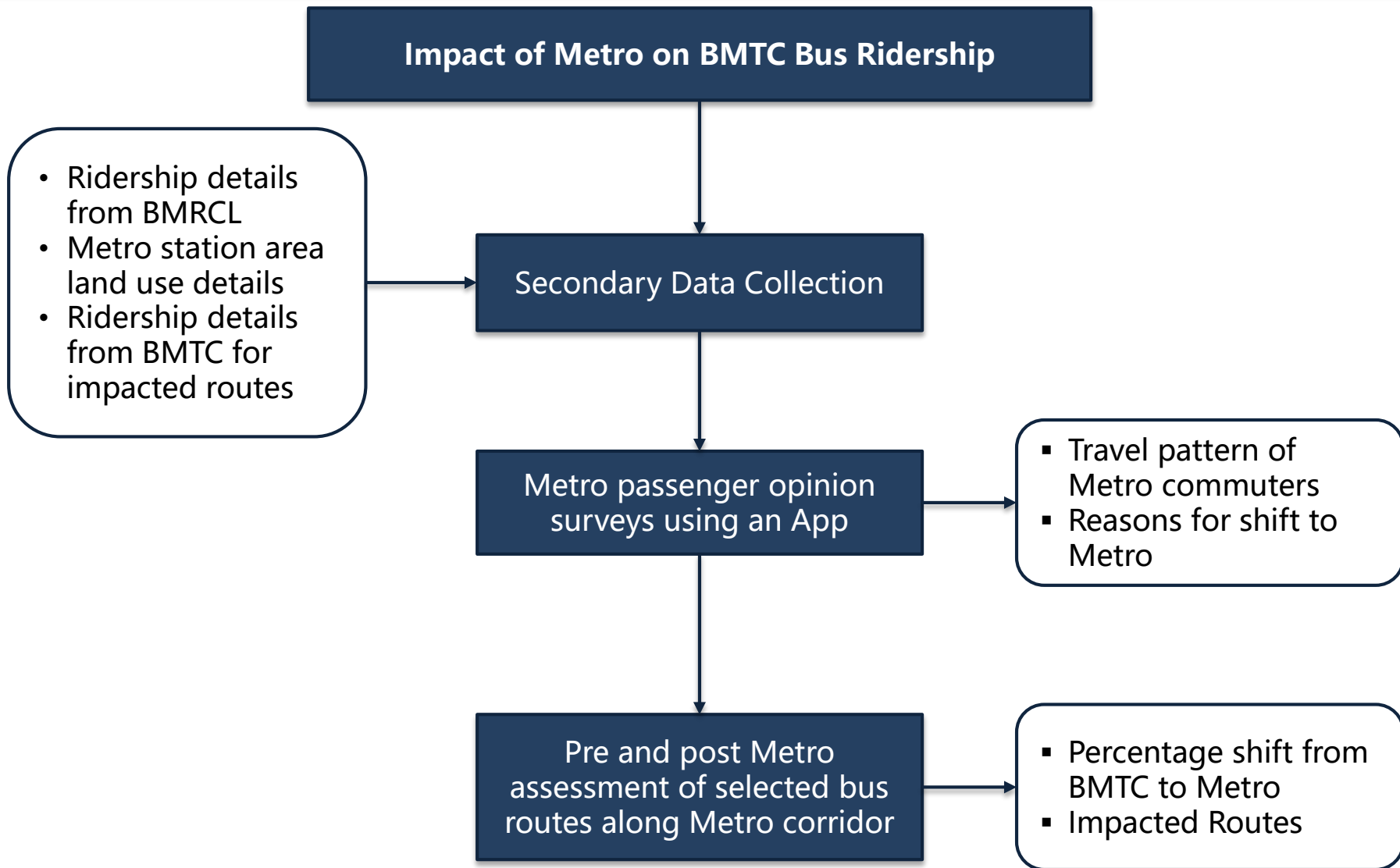


Impact of Metro on Bus Ridership

Objectives

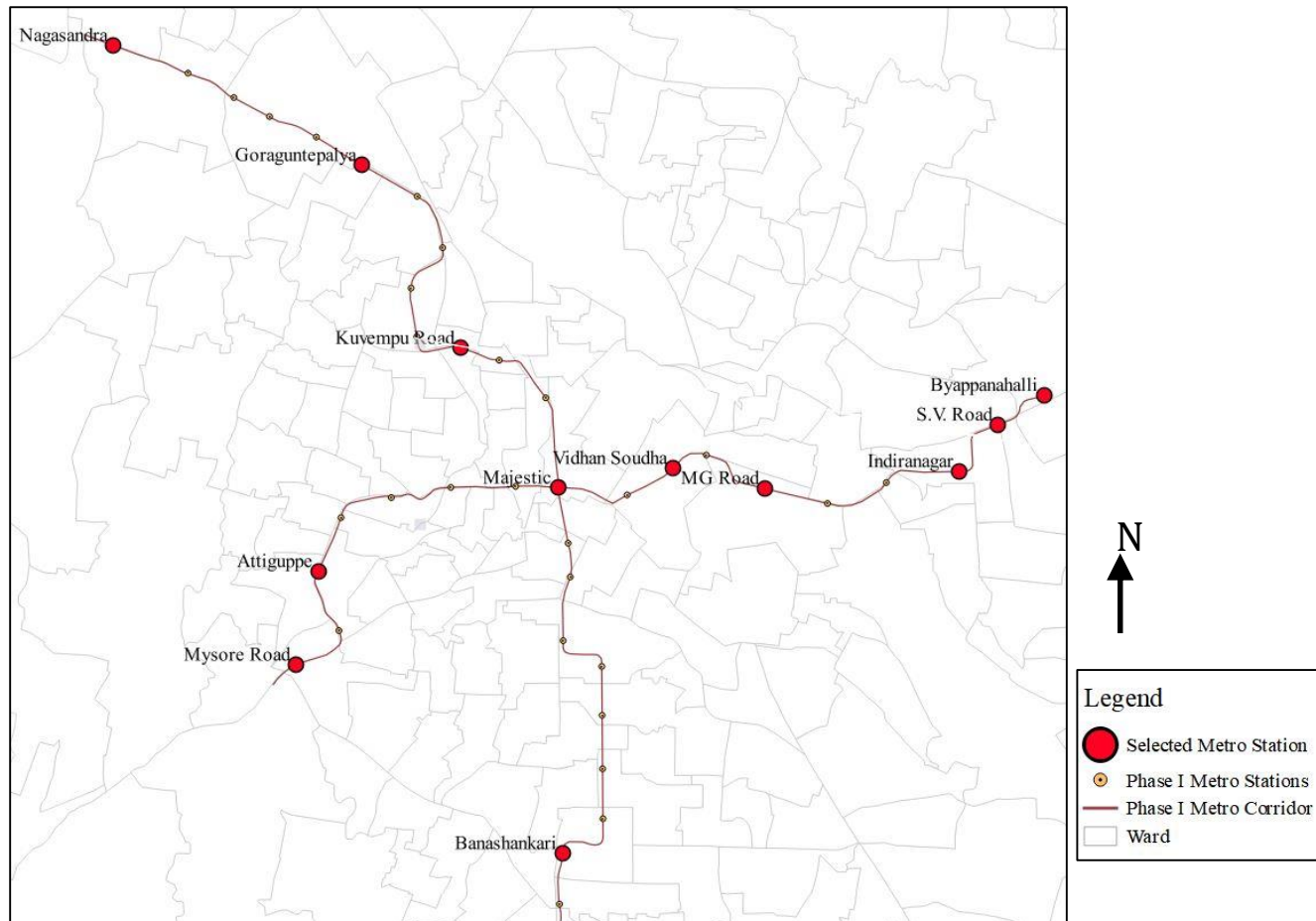
- Assess potential impact of Metro operations on BMTC bus ridership
- Identify the impacted routes due to shift from bus to Metro.

Methodology



Survey Locations and Sample Size

Type of Survey	No. of Locations and Sample Size	Mode of Data Collection	Date of Survey
Metro passenger opinion survey	12 Locations 2,312 Samples	Open Data Kit (ODK) App based survey	24 th January - 09 th February 2018



App Interface for Survey

3:00 PM 0.80KB/s 49%

Metro Passen...

Journey Details

Purpose of travel

- Education
- Work
- Leisure
- Social
- Other

How often do you make this trip

- Daily
- Weekly
- Monthly

How long have you been using metro?

- Less than 3 Months
- 3 to 6 Months
- 6 to 9 Months
- More than 9 Months

3:00 PM 0.53KB/s 49%

Metro Passen...

What was your previous mode of travel

- Cycle
- Two wheeler
- Auto
- Bus
- Private Car
- Taxi/Cab
- Commuter rail
- Others

12:21 PM 0.32KB/s 70%

Metro Passen...

Reason to Shift to metro

What Promot you to shift to Metro? (Multiple Choice Question)

- Travel Time
- Comfort
- Low BMTC bus frequency/High waiting time for BMTC
- Reasonable Metro fare
- Avoid traffic jams and pollution

List of Impacted Routes

Route No.	Origin	Destination
258	Nelamangala	KR Market
215	Amruth Nagara	KR Market
317	Hosakote	KR Market
335	Sai baba hospital	KR Market
315	KBS	KR Puram
210	Uttarahalli	KR Market
252	KBS	Peenya 2nd stage
61A	KBS	Chandra Layout
138	Jeevan Bhimanagara Bus stand	KBS
304	Arehalli	KR Market
225	Channasandra	KR Market
314	Shivajinagar Bus Station	CGHS Nagavar Palya
250	Chikkabanawara Railway Gate	KR Market
253	Krishnarajendra Market	Hesaraghatta Indo Danish Farm
401K	Yelahanka	Kengeri
201	Domulur TTMC	Srinagara

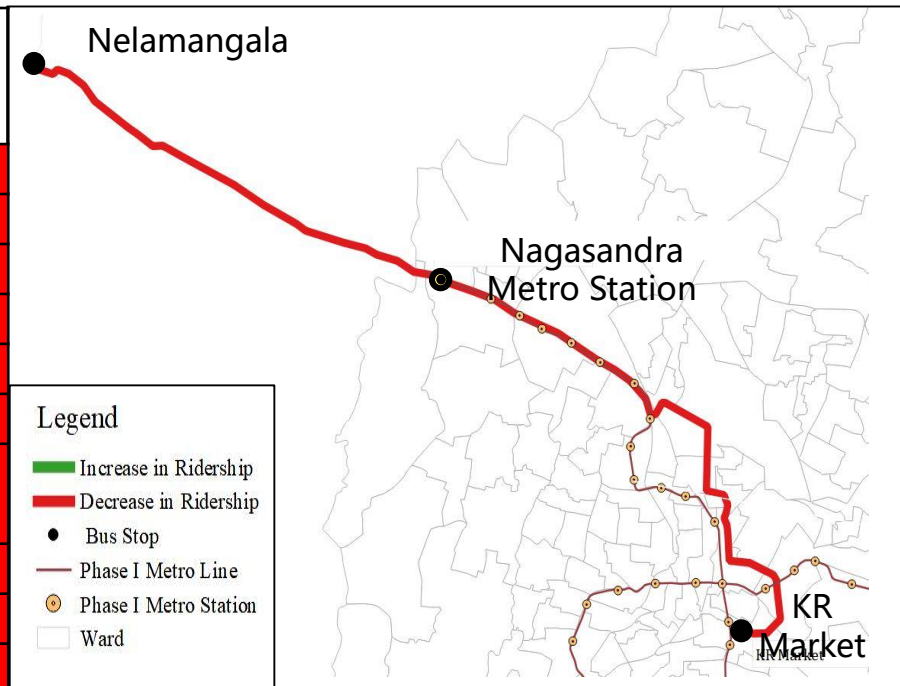
For the selected impacted routes, monthly ridership data, stage-wise, was collected for the following period:

- Before commencement of Metro (pre Metro operations) – Jan, Feb 2017
- After commencement of Metro (post Metro operations) – Aug, Sep 2017

Impacted Route – 258 UP

Stretch-wise Analysis (KR Market to Nelamanagala)

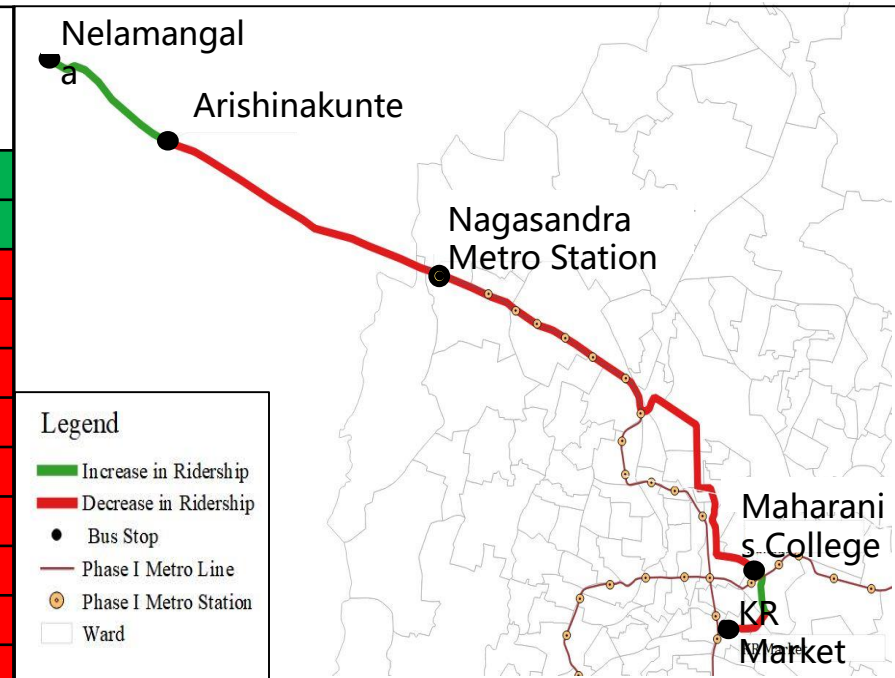
Sl. No	Stage	% difference in boarding ridership
1	KR Market	-68%
2	Kempegowda Bus Station	-35%
3	Corporation	-68%
4	Central	-15%
5	11 th Cross Malleswaram	-50%
6	Yeshwanthpur	-48%
7	RMC Yard (Yeshwanthpur New Railway Station)	-22%
8	SRS Peenya	-13%
9	Jalahalli Cross	-27%
10	Marison Factory	-28%
11	Anchepalya (Towards Nelamanagala)	-6%
12	Madanayakanahalli	-25%
13	Makali	-67%
14	Adakimaranahalli	-100%
15	Dasanapura (Towards Nelamanagala)	-65%
16	Arishinakunte (Towards Nelamanagala)	-49%
17	Binnamangala (Towards Nelamanagala)	-58%



Impacted Route – 258 DN

Stretch-wise Analysis (Nelamangala to KR Market)

Sl. No.	Stage	% difference in boarding ridership
1	Nelamangala	14%
2	Binnamagala	21%
3	Arishinakunte	-38%
4	Dasanapura	-12%
5	Adakimaranahalli	-76%
6	Makali	-17%
7	Madanayakanahalli	-20%
8	Anchepalya	-13%
9	Marison Factory	-16%
10	Jalahalli Cross	-13%
11	SRS Peenya	-24%
12	RMC Yard	-23%
13	Yeshwanthpur TTMC	-19%
14	8th Cross Malleswaram	-25%
15	Swastik Sheshadripuram College	-49%
16	Ananda Rao Circle	-52%
17	Maharanis College	45%
18	Corporation (Towards KR Market)	-6%



Findings and Recommendations

Findings

- 38% of all the respondents - previous BMTC users
- 30% - drop in BMTC ridership post Metro introduction
- 64% - access trips and 70% - egress trips (less than 2km)
- Major shift - Banashankari, Kuvempu road, MG road and Mysore road.

Recommendations

- Route rationalisation on Metro Phase I and Phase II corridors.