

MyCiTi Bus Services in Cape Town

Capstone Project for Applied Data Science by IBM/Coursera

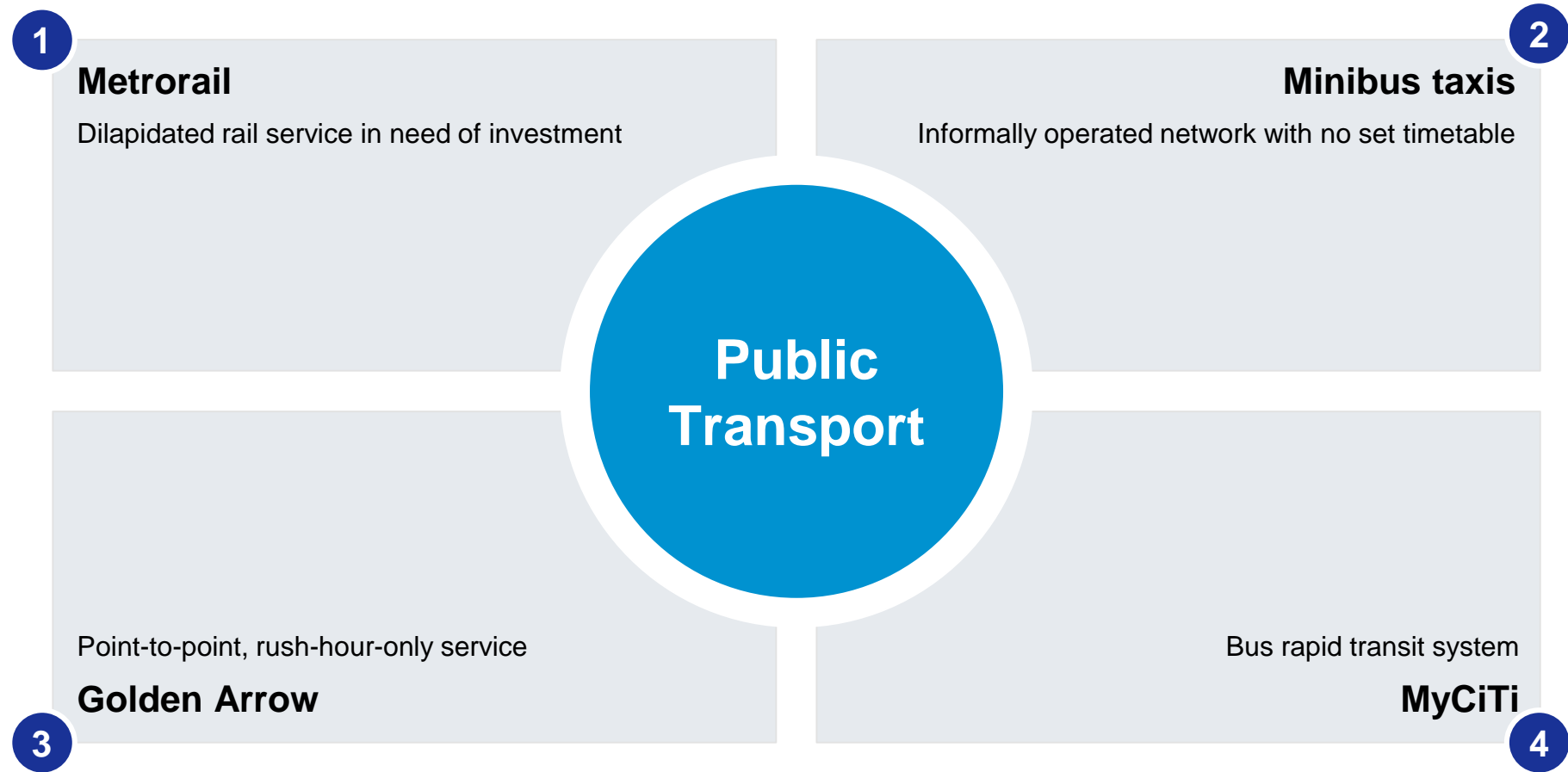
Traffic Congestion in Cape Town...

Some Facts:

162 hours	per year people lose to congestion
80%	of daily congestion consists of private vehicles
95%	of public transport users are in the low to low-middle income brackets
95%	of people in high-income communities own a car

Solution: improve shared public transport!

What modes of public transport are currently available?



MyCiTi is a robust alternative to private vehicles.

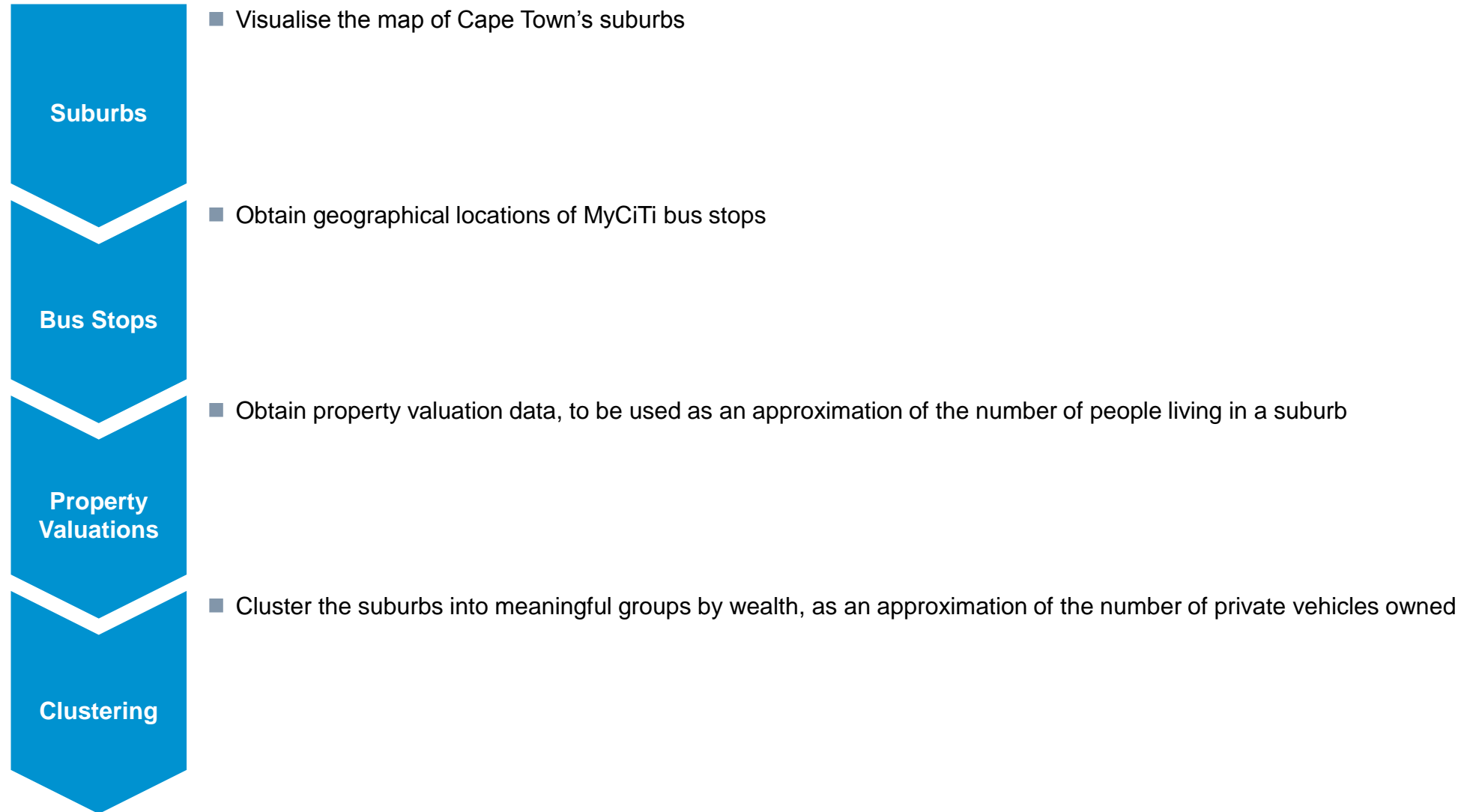
How shall we expand the MyCiTi service?

What data do we need for analysis?

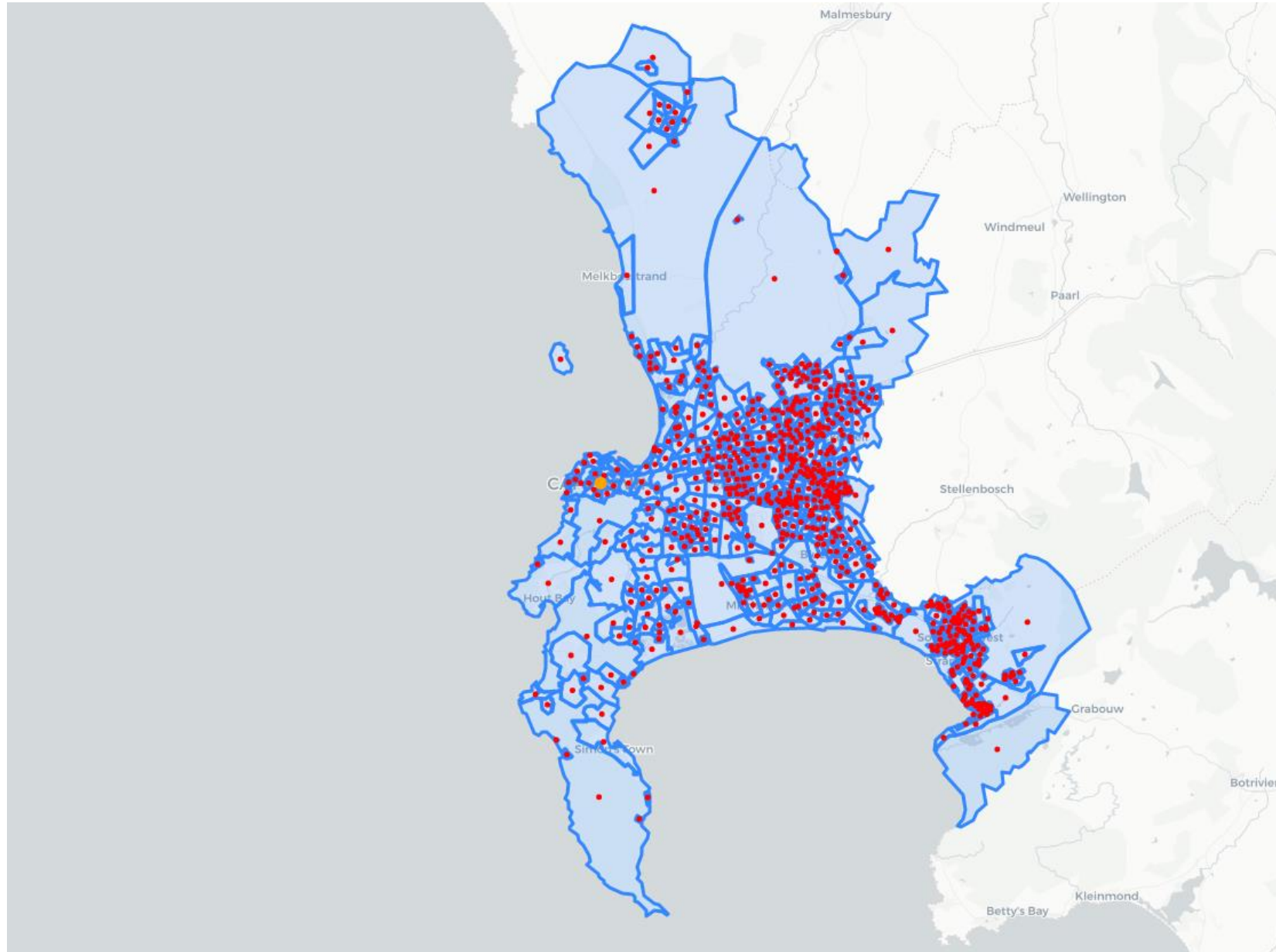
Data Required:

	Coordinates of Cape Town's suburbs
	Locations of MyCiTi bus stops
	Number of residents per suburb
	Some indicator of suburb wealth

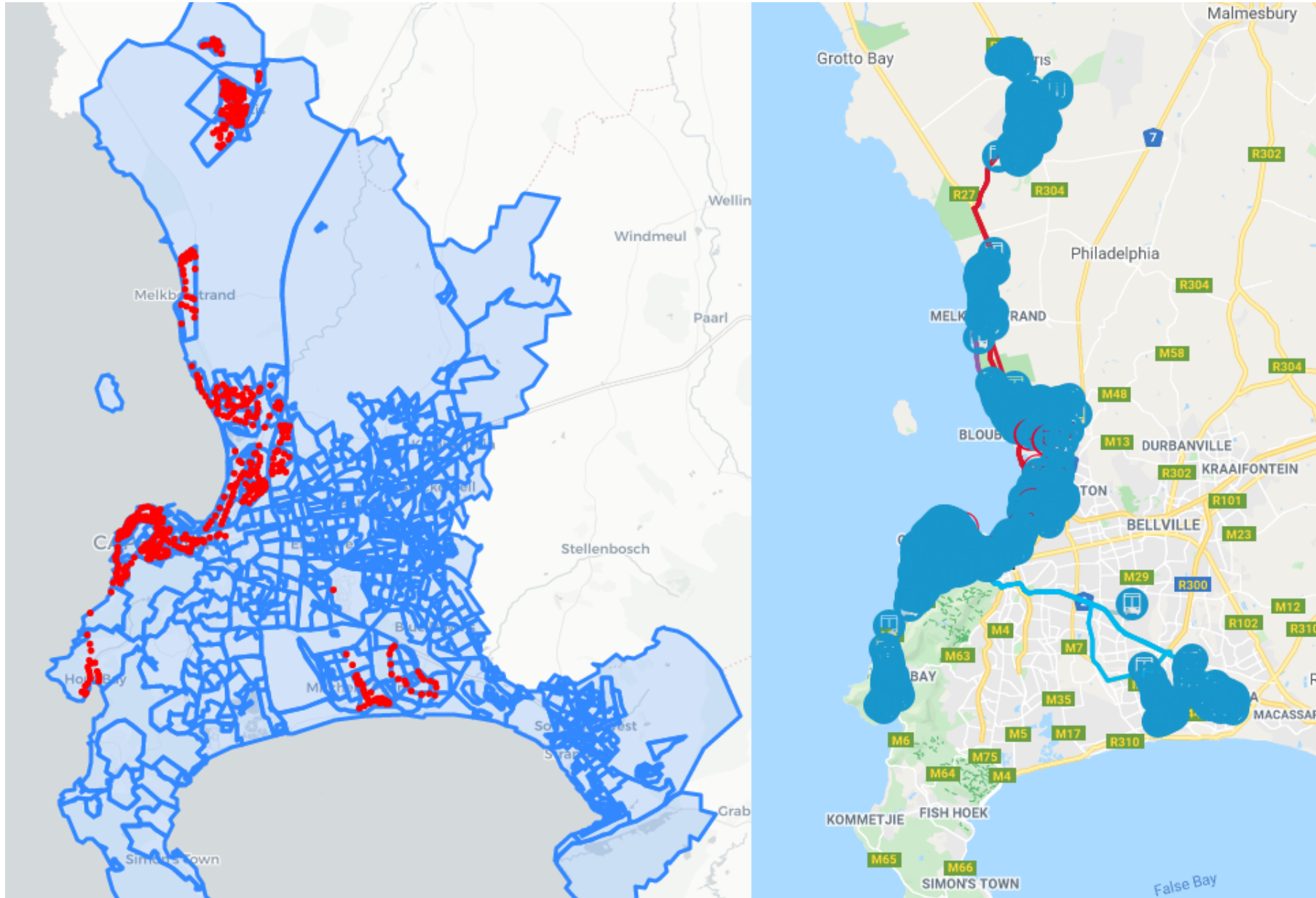
How do we approach the problem?



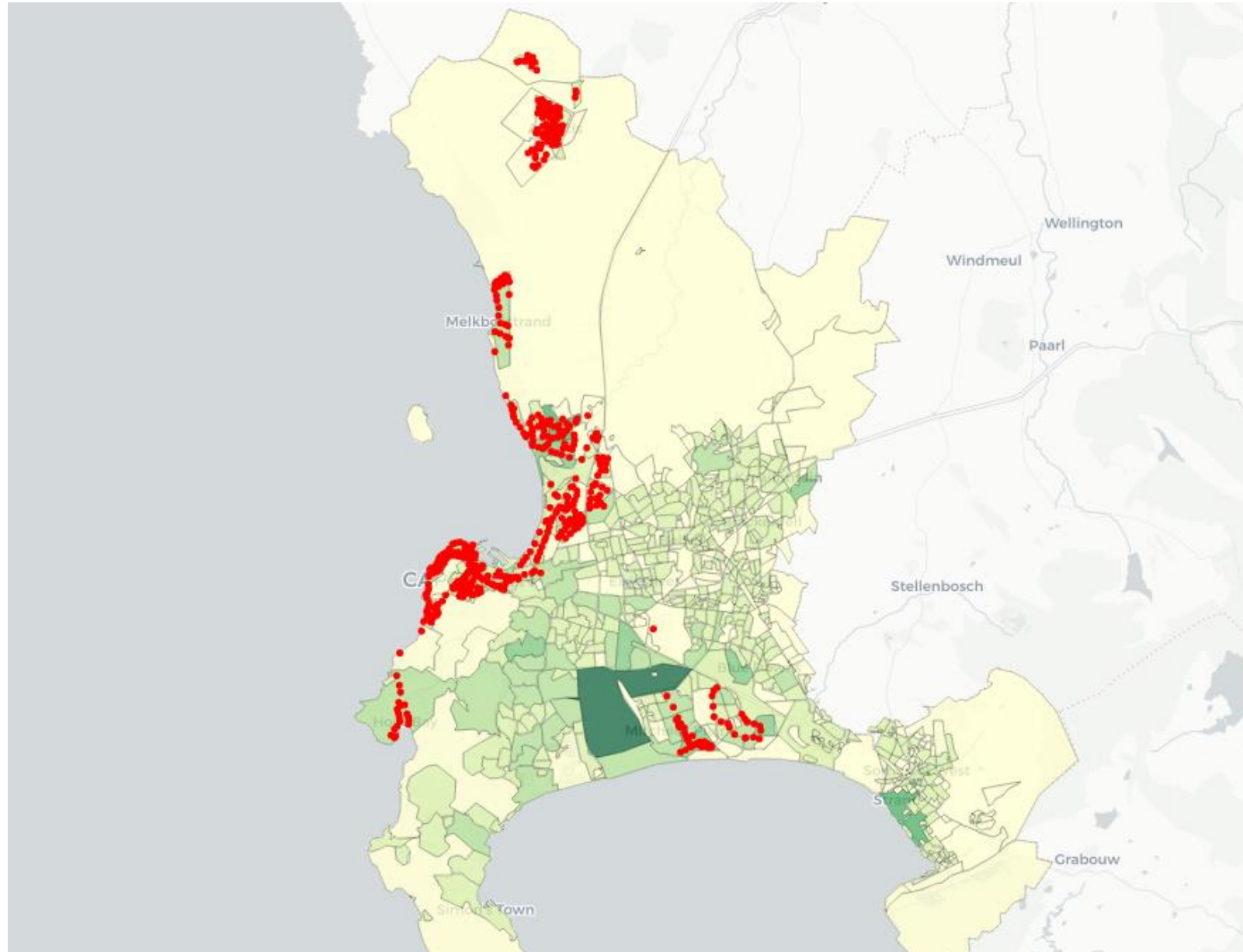
There are 776 suburbs, including farms and industrial areas



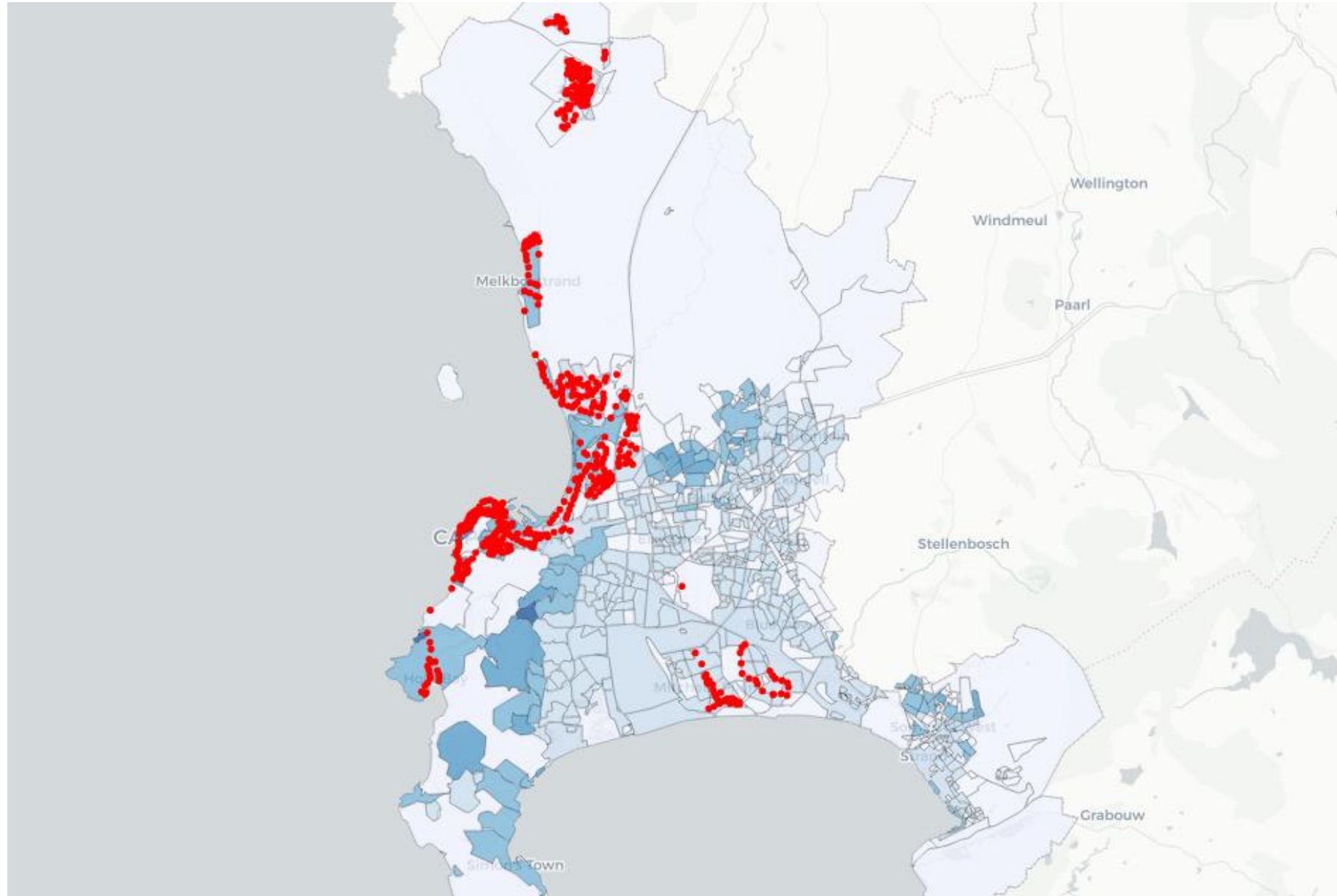
There are 518 bus stops in the MyCiTi network



Suburbs by Number of Properties (Population)



Suburbs by Wealth



Details on most populous suburbs in each cluster

Most prosperous:

suburb	total number of properties	cluster	number of bus stops
BANTRY BAY	822	3	2
CLIFTON	683	3	5
BISHOPSCOURT	580	3	0
LLANDUDNO	331	3	0

suburb	total number of properties	cluster	number of bus stops
CONSTANTIA	4,327	2	0
NEWLANDS	3,168	2	0
CAMPS BAY / BAKOVEN	2,933	2	20
NOORDHOEK	2,158	2	0
WESTLAKE	1,724	2	0
FRESNAYE	1,083	2	2
WELGEMOED	957	2	0
SUNSET BEACH	876	2	1
BARONETCY ESTATE	662	2	0
WELGEDACHT	591	2	0

suburb	total number of properties	cluster	number of bus stops
SEA POINT	12,326	1	20
CAPE TOWN CITY CENTRE	10,325	1	21
CLAREMONT	9,695	1	0
RONDEBOSCH	7,056	1	0
HOUT BAY	6,963	1	19
GARDENS	5,348	1	16
FISH HOEK	5,302	1	0
DURBANVILLE	4,947	1	0
PINELANDS	4,738	1	0
GREEN POINT	4,451	1	14

Less prosperous:

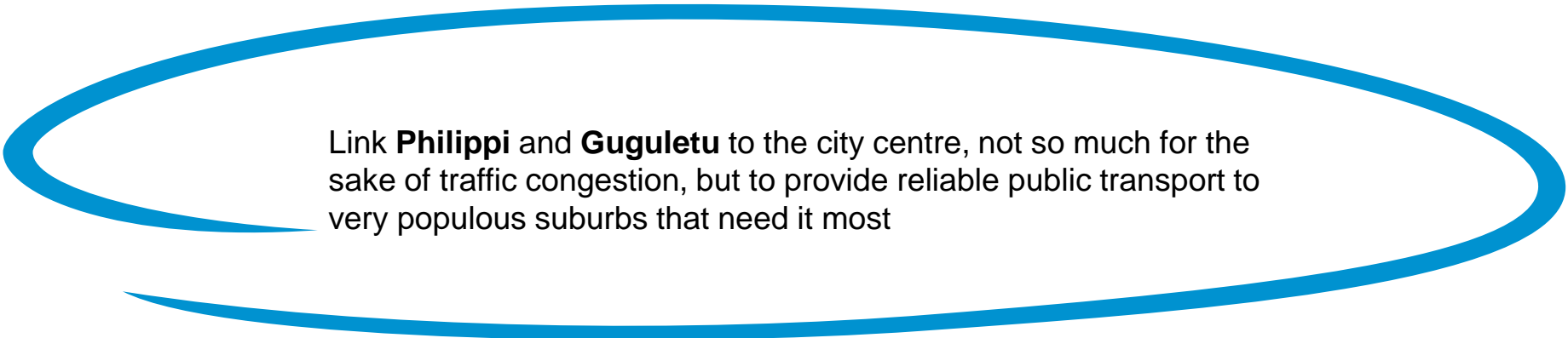
suburb	total number of properties	cluster	number of bus stops
PHILIPPI	21,318	0	0
STRAND	13,300	0	0
PARKLANDS	11,225	0	21
TABLE VIEW	10,025	0	14
UMRHABULO TRIANGLE	9,288	0	2
GUGULETU	8,932	0	0
WALLACEDENE	8,131	0	0
TAFELSIG	7,994	0	19
MFULENI	7,603	0	0
NYANGA	7,056	0	0

Recommendations



Introduce new, safe and reliable MyCiTi service from Cape Town's centre to the suburbs of **Constantia, Newlands, Claremont** and **Rondebosch**

Given the existing culture and lifestyle of these suburbs, some effort would be required to motivate people to use buses instead of cars



Link **Philippi** and **Guguletu** to the city centre, not so much for the sake of traffic congestion, but to provide reliable public transport to very populous suburbs that need it most