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How the 'four types of commuters' are distributed spatially throughout Greater Brisbane

David Hayward[1] Sarah Dewbery[2] Harry Wilson[3] Phillip Shelton[4]

Peer Review: Peter Seamer[5]

[1]Level 3, 52 Merivale Street, South Brisbane, Qld 4101

Email for correspondence: david.hayward@stantec.com

Abstract

In 2019 Peter Seamer, former CEO of Victoria's Planning Authority, outlined the challenges ahead in successfully accommodating the projected population growth of our major cities. Central to maintaining adequate levels of accessibility as cities grow is to ensure they planned with a focus on transforming to a more localised movement system, characterised by urban areas with people living closer to the jobs, services and recreation needs of the future. By achieving this, people and goods will have the ability to move in more efficient and sustainable ways. In turn can ease the burden and need for more expensive large-scale infrastructure.

To assist with planning for such a transformation, Seamer highlighted there are 'four types of commuter' trips in our metropolitan areas being 'inward', 'short', 'circumferential' and 'contraflow'. The initial analysis of these types of trips for Melbourne highlighted the city's work commuter trips move spatially in a polycentric form, yet most of the infrastructure investment has been mostly established in catering for the 'inward' radial trips to the inner-city areas via road and rail. In doing so the transport network prioritises benefits for approximately 58% of commuter trips daily.

Analysis of equivalent Brisbane commuter trip patterns has highlighted similar trends and challenges for the region. This provides insights for areas where there is significant commuter demand for relatively short and circumferential trips across the network with limited supply in the form of attractive active and public transport facilities. To this end, transport infrastructure and technology investments can be assessed and viewed through a different lens with this analysis to support transport network improvements as the city grows to 3.5 million in 2041.

This type of segmentation can support bespoke transport planning strategy to better understand the optimum transportation system infrastructure investments at the local and regional level throughout South East Queensland to ensure projected population growth is accommodated in the most efficient and sustainable form.

1. Introduction

In 2017, the daily travel characteristics of Greater Brisbane (comprising the Local Government Areas of Brisbane, Ipswich, Logan, Moreton Bay and Redland) included 6.54 million trips, at an average trip length of 10.02km and an average journey time of 24 minutes. These daily trips were an increase of 5% for trip lengths and a 10% increase on average journey times compared to 2011 (TMR, 2023a).

The trip purpose that is a primary contributor to overall trip lengths for Greater Brisbane is work commuting trips, with the average trip length being 16.4km in 2017 (TMR, 2023b). Work trips account for approximately 25% of all trip purposes, with the remaining 75% of trip purposes including 'education', 'shopping / personal', 'social / recreation', and 'pickup / drop-off / delivery' ranging between 7.1km to 9.8km in length on average (TMR, 2023c). Greater Brisbane work trip purposes have increased by 7% in length from 15.3km in 2011, while the average time travelled has increased from 30 minutes in 2011 by 13% to 34 minutes in 2017 (TMR, 2023d).

The population of Greater Brisbane is planned to grow from approximately 2.3 million in 2016 to 3.5 million in 2041 (DSDILGP, 2017). A key challenge with this planned population growth is the respective spatial allocation of employment areas. Whereby 69% of the population growth (845,000 people) will occur within the non-Brisbane Local Government Areas of Greater Brisbane, while these areas will only accommodate 33% of the employment growth (215,000 jobs) (DSDILGP, 2017). This planned demographic growth across Greater Brisbane will result in continuing increases in work trip lengths through to 2041. In doing so, this will continue to place additional demand and pressure on the transport system, particularly during the peak traffic periods of the morning and evening where work trips can account for up to 37% of all trip purposes on the network (TMR, 2023e). Historically this type of large-scale urban form with average work trip lengths of more than 15km result in strong levels of car dependency and travel mode choice for residents to access jobs.

These transportation related challenges are not exclusive to Greater Brisbane. As highlighted by Infrastructure Australia's paper in 2018, 67% of Australia's 24 million population in 2016 was located within the four largest cities of Sydney, Melbourne, Brisbane and Perth (IA, 2018). Of the additional 11.8 million people residing in Australia between 2016 and 2046, 8.9 million people will reside in these four cities (75%) (IA, 2018). The paper indicates population growth will have an impact on the function and liveability of these four cities in the future and that it is important "Australia's governments are equipped with the necessary tools and processes to deliver the planning, policy, regulation and funding required to successfully respond to the population growth". A snapshot of the relevant findings from the paper's scenario analysis include:

- "Unplanned growth delivers the worst outcomes for Australia's fastest growing cities"
- "Cars continue to play an important role in our cities. However, across all scenarios, congestion significantly increases, and adding new roads is only part of the solution
- "We need to use existing infrastructure in our cities more efficiently"
- "As demand increases, coordinating and prioritising additional or upgraded infrastructure between and within governments will be a challenge"
- "Land-use and infrastructure planning can help to address inequality of access, but supporting social and economic policies are required"

A range of approaches to support governments managing sustainable population growth for Australia's major cities was outlined by Peter Seamer in 2019. Seamer highlighted the point that for a city like Melbourne, where in 2016 75% of all commuter trips were made by car and 10% by train (Seamer, P. 2019a), even if the train system is doubled with the current urban habitation pattern there is a clear risk road-based congestion will increase with limited change to travel mode shares. Given approximately 20% of workers are employed in the Melbourne CBD (Seamer, P. 2019b), with the remainder scattered across suburbia, Seamer hypothesises the solution of continuing to build and upgrade road and rail infrastructure that lead to the CBD will produce sub-optimal levels of accessibility in the future. Rather, a better solution lies in

embracing the opposite approach to transport infrastructure network upgrades, by way of encouraging the growth of business and jobs closer to where people live, to move the flow of people and goods away from the CBD (Seamer, P. 2019c).

To gain a stronger appreciation for current work travel patterns and demands across Melbourne, Seamer grouped commuting trips into four spatial forms (Seamer, P. 2019d):

1. *Inward* – trips that travel towards the CBD
2. *Short* – trips within their local area of residence
3. Circumferential – trips with a direction that is broadly perpendicular to the radial direction
4. *Contraflow* – trips that are in the opposite direction to the CBD from their place of residence

The analysis of Melbourne work trips highlighted that 58% of trips are 'inward', 9% are 'short', 24% 'circumferential', and 9% 'contraflow' (Seamer, P. 2019e). This highlights that there is a majority of work trips in Melbourne that are radial (while not all of these are job destinations in the CBD) which is likely a significant contributor to peak period congestion. Therefore, there is potential to ease congestion in the future through increasing the proportion of the other three types of commuting trips as they are candidate trips for active travel ('short') and using residual capacity in the transport system and network ('circumferential' and 'contraflow').

This paper seeks to understand the equivalent 'four types of commuters' for the Greater Brisbane area, with the aim to provide insights and analysis that support governments in managing the planned population growth of the region without significantly impacting people's ability to access jobs, services and other activities of the future.

2. Method

The primary data source to analyse the 'four types of commuters' for the Greater Brisbane area is the Australian Bureau of Statistics' (ABS) Interactive Map of 'Journey to Work from Place of Usual Residence' (ABS, 2017) from the 2016 Census. This interactive map summarises journey to work between Statistical Area Level 2 (SA2) regions across Australia, including the provision of aggregated travel mode shares for each SA2.

The definition applied for each of the 'four types of commuters' using the ABS SA2 data set is outlined below and presented in Figure 1:

1. *Inward* – work trips that travel to the Brisbane – Inner City SA3 and the equivalent 'inner north / south / east / west' SA3 between the CBD and subject SA2
2. *Short* – work trips that travel within its SA2 or adjoining SA2
3. *Contraflow* – work trips that are in the opposite direction to the Brisbane – Inner City SA3 from their SA2 place of residence
4. *Circumferential* – sum of all remaining work trips

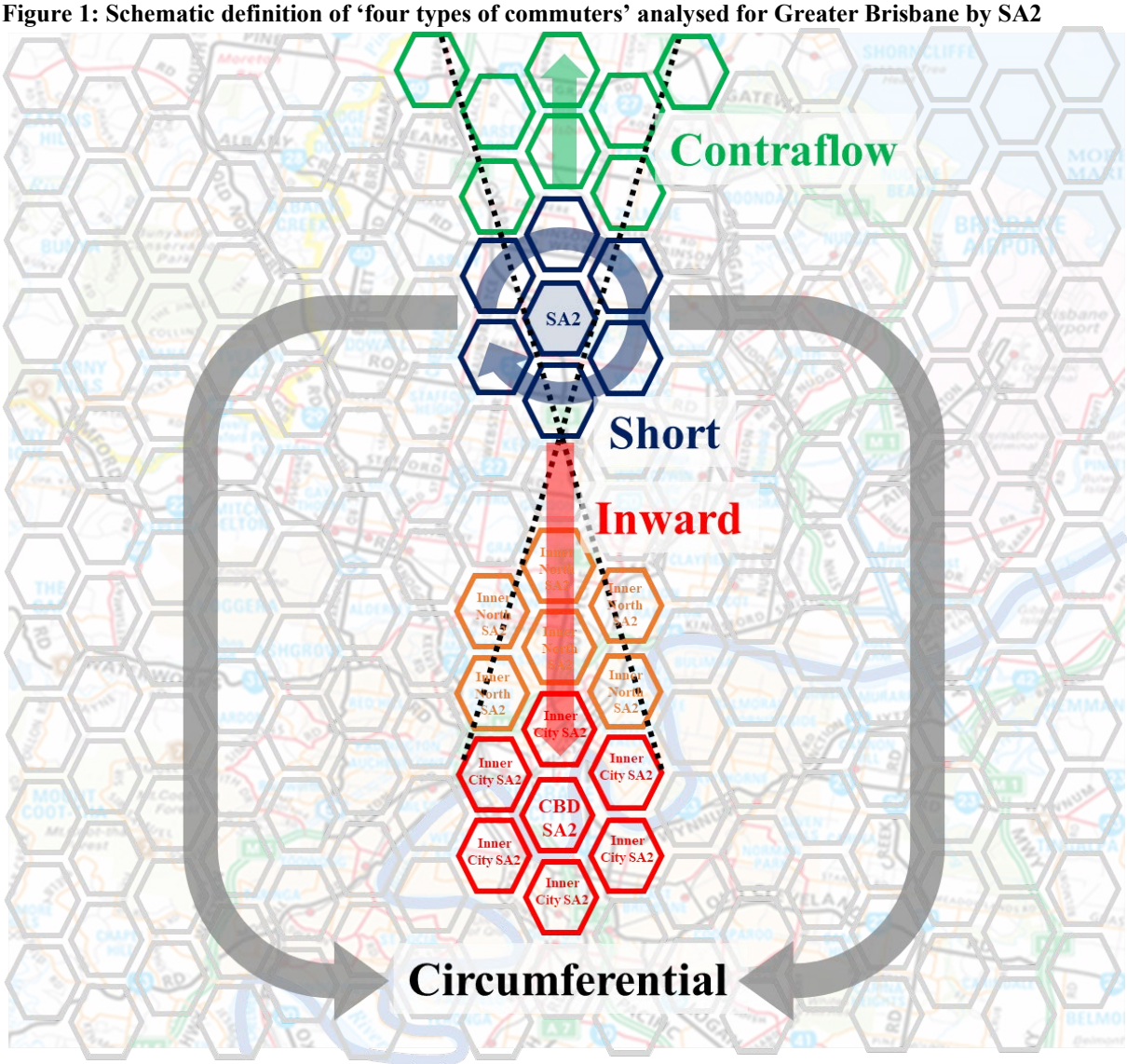
The data was collected from the ABS interactive map and processed within a spreadsheet. Measurements of distance to CBD for each SA2 we conducted using Google Maps referencing the spatial centre of each SA2 and the General Post Office within the Brisbane CBD.

The primary reason for analysing 2016 ABS Census data rather than the more recent Census data set of 2021 is to understand these travel patterns without the impact of the COVID-19 pandemic and associated government lockdown policies at that time. It is intended to complete the same analysis of the 2021 and ensuing ABS Census data sets in the future to understand the effects of the COVID-19 lockdowns and 'new-normal' travel patterns to support transport

planning initiatives. A secondary reason for analysing the 2016 ABS data set was to ensure a more robust comparison of Seamer's analysis of Melbourne's equivalent travel patterns.

It is acknowledged this analysis adopts a different geographic scale compared to Seamer's analysis. The purpose of selecting SA2 as the geographic scale for this analysis was to align it with the available ABS interactive mapping while also to capture a more broader appreciation for commuting trips that occur in the local area to where people reside.

Figure 1: Schematic definition of 'four types of commuters' analysed for Greater Brisbane by SA2



3. Four types of commuters – Greater Brisbane average

Analysis of ABS Journey to Work data from 2016 indicates the Greater Brisbane area has the following breakdown of the 'four types of commuters':

- Inward – 26.4%
- Short – 30.1%
- Contraflow – 9.3%
- Circumferential – 34.2%

The primary difference between the Greater Brisbane 'four types of commuters' and Melbourne's as presented in Seamer's analysis is there are more 'short' and 'circumferential' trips in Brisbane (Melbourne has 9% and 24% respectively). The residual results in Melbourne

having more ‘inward’ trips than Brisbane (58%). These differences are largely due to the difference in definition between the ‘four types of commuters’ for each piece of analysis, with ‘short’ trips in Melbourne being for trips less than 1km (Brisbane analysis can include short trips in the 6km range) and radial trips including all destinations in line with the CBD and beyond (Brisbane analysis includes two Brisbane inner SA3s only).

Regardless, the analysis highlights 2016 commuter travel patterns in Greater Brisbane have as many people working locally within their SA2 or adjoining SA2 as there are in the inner city SA3s where a significant proportion of employment is clustered in SEQ. As a further comparison, 14.1% of workers within Greater Brisbane work within their respective SA2 of residence, compared to 11.6% working within the Brisbane City SA2.

Many of the ‘short’ work trips in Greater Brisbane would be less than 6km, which makes them attractive candidate trips for active transport with the average walk to work trip length in 2017 being 1.0km and work bicycle trip lengths being 6.7km (TMR, 2023f). The proportion of ‘short’ work trips is relatively consistent with Queensland household travel survey analysis which indicated the following proportion of total car trips being less than 6km in length (TMR, 2023g):

- Brisbane LGA – 29%
- Moreton Bay LGA – 44%
- Ipswich LGA – 42%
- Logan LGA – 38%
- Redland LGA – 41%

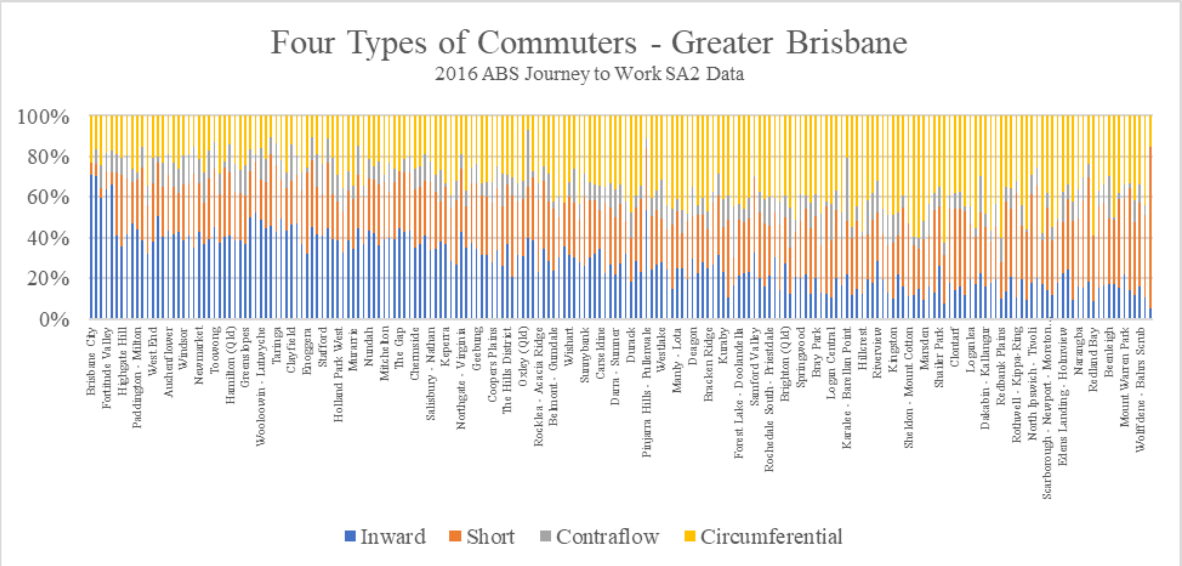
The data is also relatively consistent with the Melbourne ‘short’ work trips of less than 1km totalling approximately 10% of work trips, with almost 16% of total car trips in Greater Brisbane being less than 2km (all trip purposes) [15].

4. Four types of commuters by Greater Brisbane SA2s

In order to gain insights on how travel patterns change from the ‘four types of commuter’ perspective with respect to the SA2 level across Greater Brisbane and distance from the Brisbane CBD, both have been charted in Figures 2 and 3.

The ‘four types of commuters’ for Greater Brisbane by SA2 is presented in Figure 2, sorted by distance to CBD from left to right (shortest from left to longest at right).

Figure 2: 2016 Greater Brisbane area four types of commuters by SA2



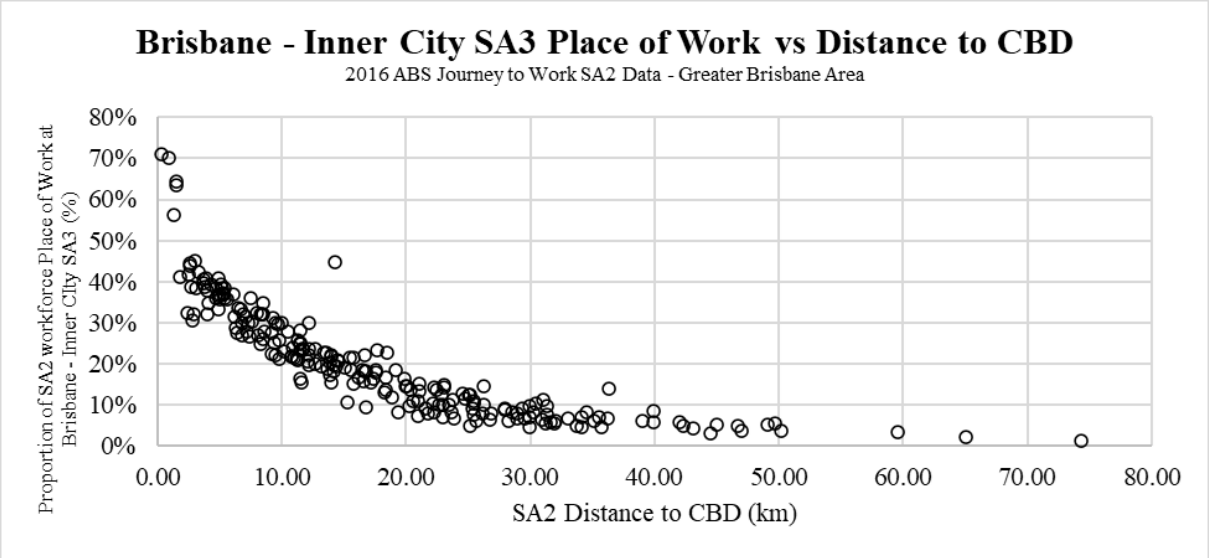
The proportion of ‘inward’ work trips for Greater Brisbane is mostly in the order of at least 40% for SA2s within 9km of the CBD. This reduces to approximately 15% on average for ‘inward’ trips for SA2s between 20km and 40km from the CBD.

There is a general consistency in the proportion of ‘short’ and ‘contraflow’ trips based on distance to CBD, with the main changes occurring for ‘short’ trips for SA2s between 30km to 50km from the CBD increasing to approximately 40% on average.

The highest proportion of ‘circumferential’ work trips in Greater Brisbane occurs for SA2s located between 20km and 30km from the CBD with an average of approximately 44% (compared to 34% overall average).

Presented in Figure 3 is the proportion of workers by Greater Brisbane SA2 whose job is located in the Brisbane – Inner City SA3.

Figure 3: 2016 Greater Brisbane SA2 proportion of Brisbane Inner City SA3 Place of Work



This chart highlights for workers residing in SA2s further than 30km from the CBD, it is likely that less than 10% of the SA2 workforce work in the Brisbane Inner SA3.

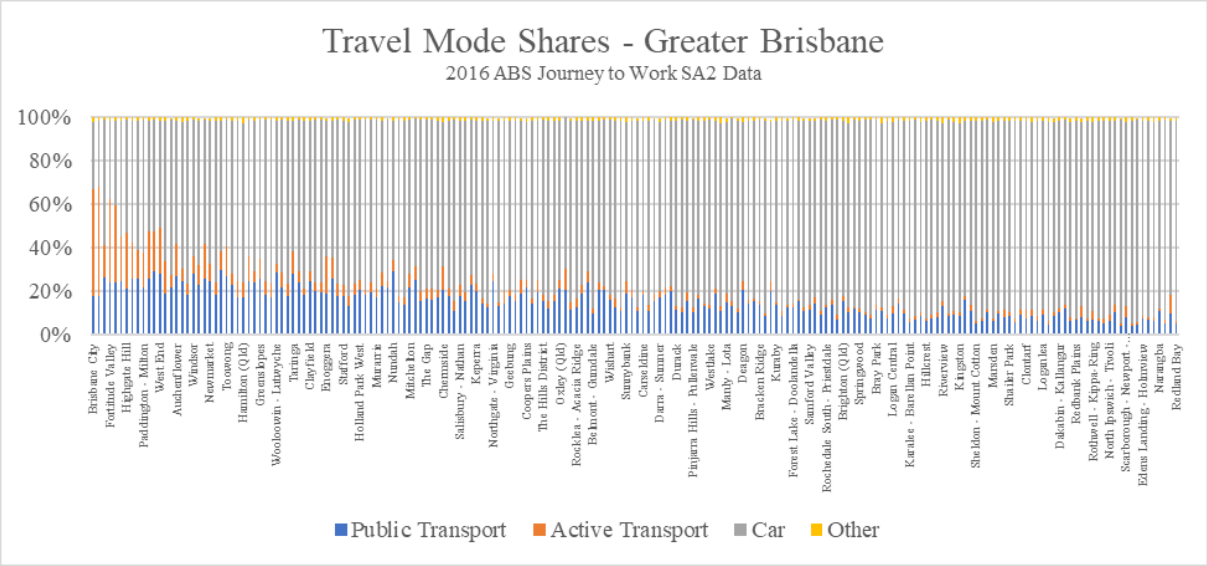
This context highlights a significant challenge for the transport network of the future given a significant proportion (69%) of Greater Brisbane’s population growth is planned for the LGA’s 30km from the CBD, including Moreton Bay, Ipswich and Logan [5].

4. Travel mode share analysis by Greater Brisbane SA2

To better understand the equivalent commuter travel mode choices for Greater Brisbane, Figure 4 presents the travel mode shares by SA2, with data sorted by distance to CBD (shortest from left to longest at right).

Further to this, a more detailed analysis has also been completed for active travel and public transport in isolation to better understand the relationship between the ‘four types of commuter’, surrounding transport infrastructure, and distance to the CBD at the SA2 level.

Figure 4: 2016 Greater Brisbane area travel mode shares by SA2



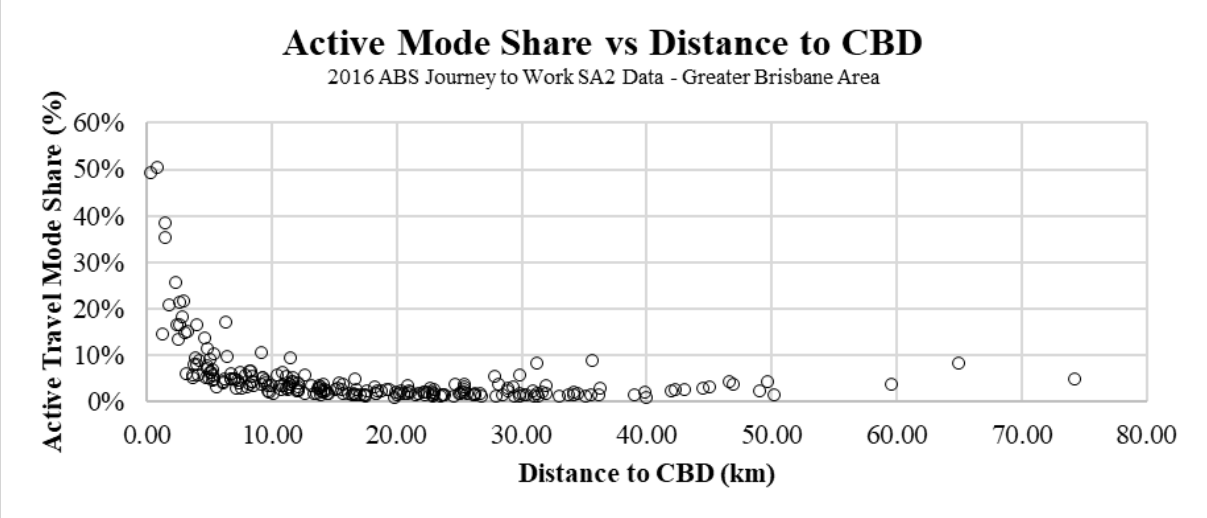
This analysis highlights that combined active travel and public transport mode shares are mostly more than 40% for SA2s located within 3km of the CBD. This proportion reduces to approximately 10% on average for SA2s located between 20km and 40km from the CBD.

Car mode shares are mostly between 80-90% for SA2s located more than 10km from the CBD while active travel mode shares account for approximately 2% of work trips on average. Given 'short' work trips are in the order of at least 20% for these SA2s, this indicates that cars are significantly more attractive to commuters in these areas of Brisbane even when the commuting distance is conducive to active travel.

4.1. Journey to Work active travel mode shares by Greater Brisbane SA2

To further emphasise the above patterns, the active travel mode shares of each Greater Brisbane SA2 by distance to the CBD are summarised in Figure 5.

Figure 5: 2016 Greater Brisbane active travel mode shares by SA2 and distance to CBD



This chart indicates there is a slight increase in active travel mode shares, the further distance beyond 25km from the CBD. This is potentially a reflection of increased 'short' work trips with increased distance from the CBD for SA2s.

4.2. Journey to Work public travel mode shares by Greater Brisbane SA2

Presented in Figure 6 is the public transport mode shares of each Greater Brisbane SA2 by distance to the CBD. Public transport mode shares mostly range between 10-25% for SA2s located between 5km and 20km from the CBD with a gradual decline the further away from the city. This mode share declines to 5-10% for SA2s located between 20km to 40km from the CBD.

Figure 6: 2016 Greater Brisbane public transport mode shares by SA2 and distance to CBD

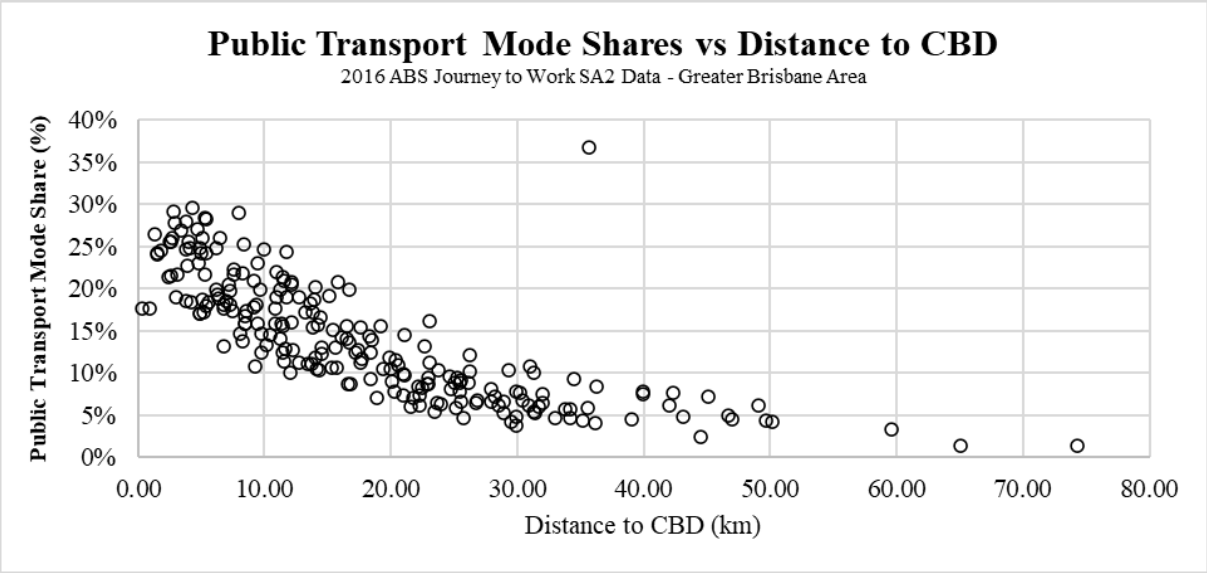
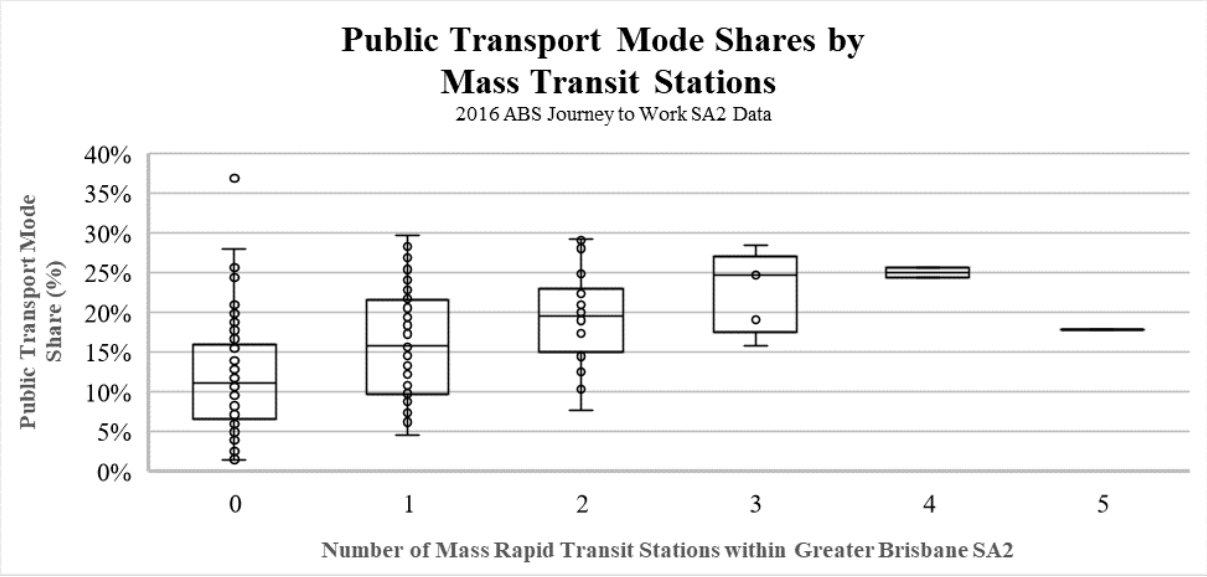


Figure 6 highlights that most SA2s more than 30km from the CBD achieve a public transport mode share for work trips of less than 10%.

Public transport mode shares for SA2s can vary across Brisbane for similar distances to CBD, primarily due to level of access to mass rapid transit stations. Presented in Figure 7 is a summary of public transport mode shares for each Greater Brisbane SA2 compared to respective provision of mass rapid transit stations within the respective SA2 (includes rail and busway stations).

Figure 7: 2016 Greater Brisbane public transport mode shares by mass rapid transit stations within SA2

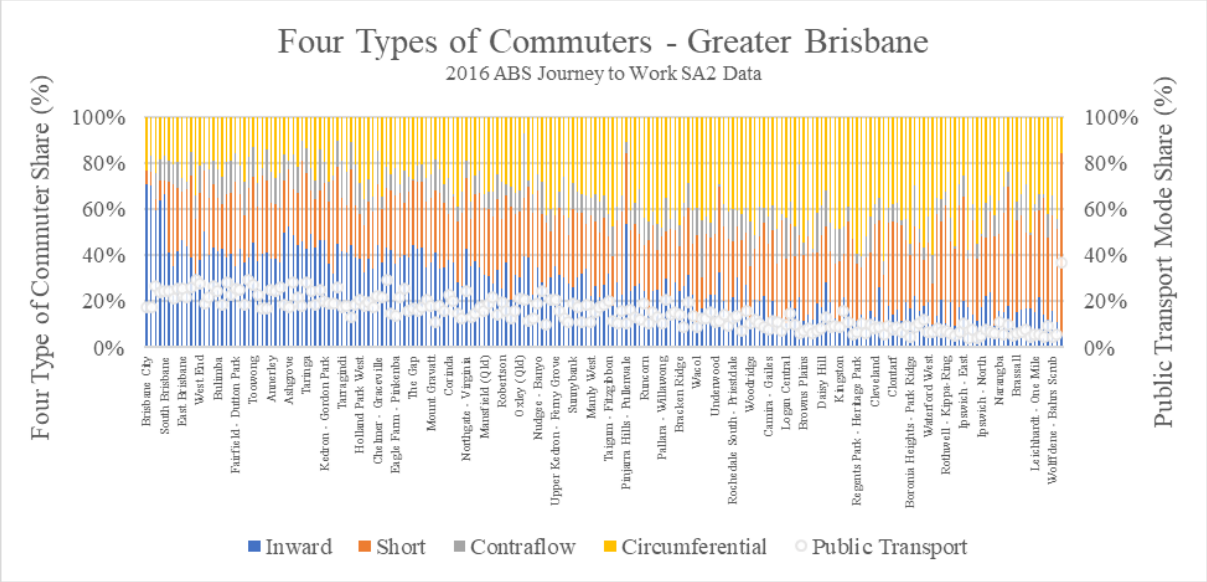


For SA2s located further than 30km from the CBD, and achieving journey to work public transport mode shares of less than 10%, they do have relatively limited access to mass rapid

transit compared to Greater Brisbane. This is highlighted by 10 of Greater Brisbane's 134 mass rapid transit stations located more than 30km from the CBD.

Overlaying the public transport travel mode shares on the 'four types of commuters' for each respective SA2, as presented in Figure 8, highlights how public transport predominately services the 'inward' work trips throughout Greater Brisbane. Most SA2s 'inward' work trip proportions are greater than the public transport mode share, indicating there is potentially limited adoption of public transport for the other 'short', 'circumferential' and 'contraflow' work trips.

Figure 8: 2016 Greater Brisbane SA2 public transport mode shares vs the four types of commuters



Based on the analysis of travel mode shares for commuters of each SA2 across Greater Brisbane, the following trends and patterns existed in 2016:

- Work trip car mode shares are 80-90% for SA2s more than 10km from the Brisbane CBD
- Public transport mode range between 10-30% for SA2s within 10km of the Brisbane CBD, and decline the further the SA2 is located from the Brisbane CBD (at a slower rate of decline compared to the decline of 'inward' work trips)
- Active transport mode shares range between 10-50% for SA2s within 3km of the Brisbane CBD, and decline to mostly under 5% for SA2s more than 5km from the CBD

6. Influences on travel mode share outcomes for Greater Brisbane

The analysis of the 'four types of commuters' and comparison to equivalent travel mode shares indicates there is a significant amount of 'short' and 'circumferential' work trips across Greater Brisbane which are dominated by car travel mode.

This is likely influenced by the Brisbane transport network having high-capacity radial corridors for road and rail connecting the city suburbs to the CBD. Brisbane's transport network and services for jobs located across suburbia is largely characterised by road-based infrastructure, with limited dedicated active and public transport facilities and services. This indicates an inconsistent allocation of active and public transport provisions for 'inward' work trips compared to 'short' and 'circumferential' work trips given the demands are of a similar scale.

The Greater Brisbane public transport system is largely structured for 'inward' work trips. This is evidenced by the fact that all 12 rail lines pass through the CBD, while approximately 90% of over 350 bus routes pass through the CBD.

With regard to active travel, while Brisbane is expanding its dedicated bicycle and footpath network, the entire network is not fully connected, resulting in walkers and bicyclists needing to cross or share major roads with car traffic, posing a safety risk and offering a sub-optimal journey experience.

6.1. Case Study 1 – Comparison of 'short' and 'inward' trips by mode

To highlight the attractiveness of the car compared to active travel (walking or bicycling) or public transport, a case study using Google Maps journey planner directions was conducted for a 'short' work trip (albeit a 'circumferential' work trip by definition of the Melbourne analysis) which has the following characteristics:

- SA2 hypothetical place of usual residence: Stafford Heights
- SA2 hypothetical place of work: Chermside
- Direct distance: 3km
- Distance to CBD: 8.70km

For a 7:30AM period weekday journey departure to Chermside, Google Maps travel times estimates for each travel mode are presented in Table 1.

Table 1: 2023 Google Maps travel time estimates by mode for typical 'short' and 'inward' work trip

	Typical 'short' travel characteristic for Stafford Heights to Chermside		Typical 'inward' travel characteristic for Stafford Heights to Brisbane CBD	
Travel Mode	**Travel time**	**Travel Distance**	**Travel time**	**Travel Distance**
Car	7 minutes	3.9km	22-55 minutes	11.3km
Bus	29 minutes	-	57 minutes	-
Walk	46 minutes	3.6km	135 minutes	10.4km
Bicycle	16 minutes	4.1km	40 minutes	11.3km

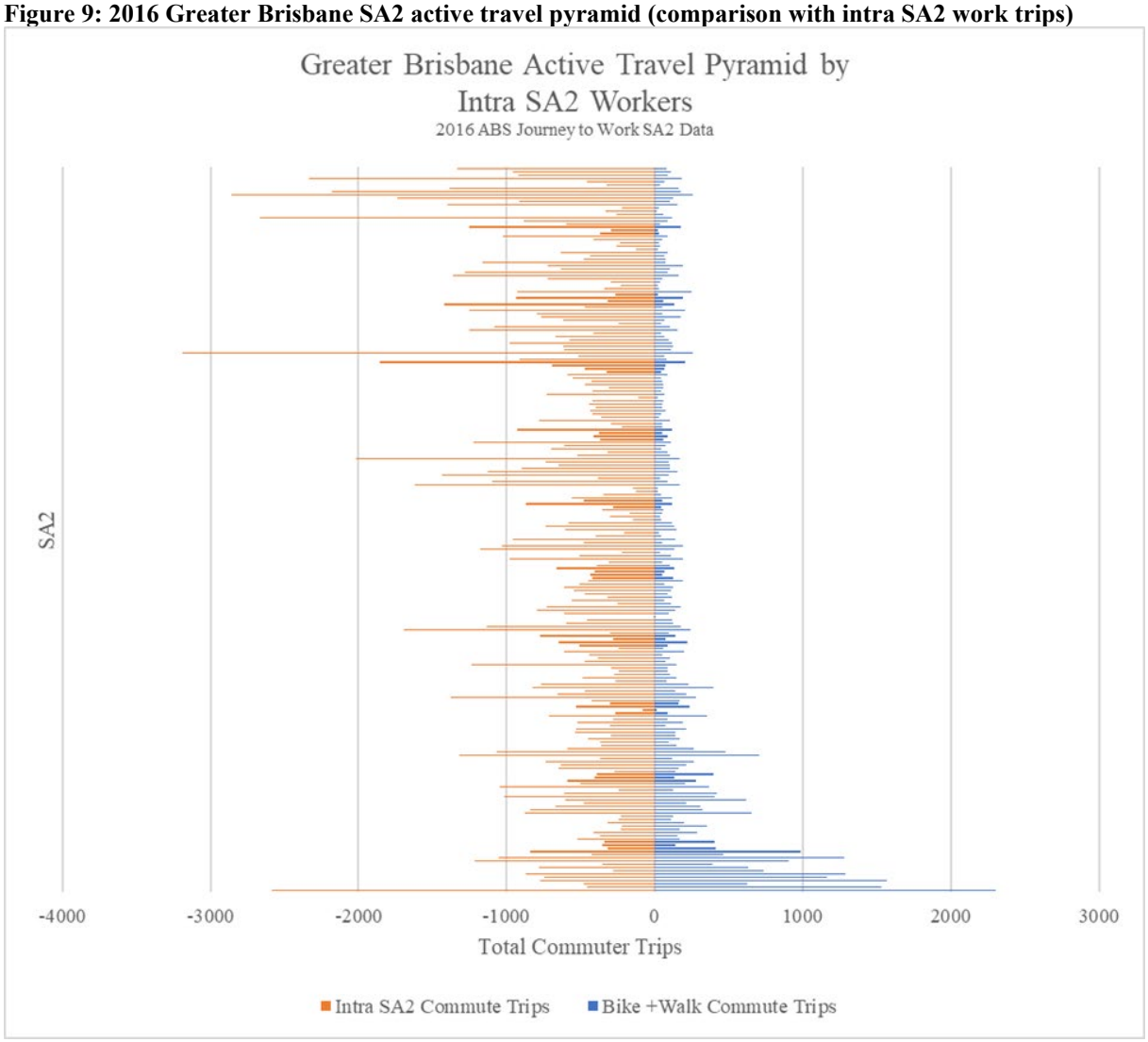
With regard to the level of quality of the walking bicycle paths for both Chermside and Brisbane CBD destinations, less than half the journey distance for bikes is able to use separated bike paths, while there are at least two unsignalised pedestrian crossings of sub-arterial roads for the walk path.

The travel time estimates by mode highlight how cars are more attractive than active transport from a safety and convenience (time) perspective. Further, given the car parking costs in the CBD are significantly higher than the cost of public transport fares, this makes public transport a more compelling option compared to cars for 'inward' work trips. This aspect is not the case for 'short' work trips in suburbia, where car parking costs are significantly lower compared to the CBD, along with car parking supply located adjacent to office buildings adding to the convenience of using cars for 'short' work trips.

6.2. Case Study 2 – Comparison of locally based workers and active travel

Based on the outcomes of Case Study 1, it not surprising that active travel mode shares for work trips decline dramatically the further residents are from the CBD, particularly beyond the 10km CBD ring. This is highlighted in Figure 9 through an active travel pyramid chart comparing the total daily active travel work trips by SA2 with the total daily work trips within the SA2 (sorted by closest SA2 distance to Brisbane CBD at the bottom of the y-axis, to longest SA2 distance to Brisbane CBD at the top of the y-axis).

Figure 9: 2016 Greater Brisbane SA2 active travel pyramid (comparison with intra SA2 work trips)



There is strong adoption of active travel modes within the 5km CBD ring, with approximately 18,900 people working within their SA2 and also 18,900 people commuting to work using active travel modes. However, the 10km to 30km middle ring of the CBD includes approximately 73,500 people working within their SA2, while only 10,800 people electing to walk or ride to work.

7. How four types of commuters can enhance accessibility outcomes

As outlined in the introduction, the current planning for the SEQ region includes significant population growth in the 20km to 40km middle ring of the Brisbane CBD, particularly for the LGA's of Moreton Bay, Ipswich and Logan [5]. The 'four types of commuters' in these areas include more 'short' and 'circumferential' work trips compared to 'inward' work trips. With approximately 67% of the employment growth planned for the Brisbane LGA in the inner 20km ring of the CBD, there will be a continuing increase of average trip lengths beyond the current 11km for the city, placing significant pressure on the radial road and rail network to cater for significant increases in 'inward' work trips during the peak traffic periods.

Given there is a healthy array of areas across suburbia that have in the order of 25-30% 'short' work trips (i.e. mostly less than 6km in length), with most other trip purposes averaging between

7-10km, therein lies a great opportunity to cultivate and embrace 'short' and 'circumferential' work trips in the future which are already at critical mass of candidate trips for active travel and public transport if more attractive facilities and services were available. This can be better achieved by a combination of the following two key elements:

1. increasing employment density at Principal Activity Centres or employment hubs throughout suburbia (i.e. brining jobs closer to where people currently live), and;
2. enhancing the surrounding active travel and public transport facilities and technology for the 'short' and 'circumferential' commuter types which account for approximately 65% of work trips.

This will have a great effect on reducing travel demand at a city-wide level compared to the currently planned growth and provide greater certainty in Brisbane achieving more optimal accessibility outcomes for the future.

Such an approach will also be in alignment with Infrastructure Australia's recommendations in the 2018 paper in "using infrastructure in our cities more efficiently" [7], while also in keeping with Seamer's recommendation of "encouraging growth of business and jobs closer to where people live, to move the flow of people and goods away from the CBD".

With the above in mind, it is acknowledged there are limitations with the analysis comprised in this study in that there are many influences of commuter travel patterns and behaviours. These include attributes of the surrounding land use density and mix; transport network system capacity and connectivity; road pricing; and destination car parking facilities and pricing. Consequently, it is recommended that further analysis of these travel demand pattern influences should accompany this analysis when used to support urban and transport planning initiatives and associated transportation infrastructure investments.

8. Conclusions

The analysis of the 'four types of commuters' for the Greater Brisbane area determined the following breakdown across the region as a weighted average of all SA2s:

- Inward – 26.4%
- Short – 30.1%
- Contraflow – 9.3%
- Circumferential – 34.2%

There is a strong proportion of 'short' and 'circumferential' work trips across Greater Brisbane (65%), which generally increases the further the SA2 is located from the Brisbane CBD. In turn, the further SA2s are located from the Brisbane CBD, the more likely the work trip will be taken by a car. An emerging challenge lies with the planned population and employment growth of Greater Brisbane, with the majority of population growth to be located more than 20km from the CBD, and the majority of employment growth within 20km of the CBD. Consequently, the more investment in upgrading radial CBD focussed transport infrastructure (currently at approximately 25% of work trips) has the potential to exacerbate existing peak period congestion and inequality of access for suburban regions.

As sought by Infrastructure Australia in 2018, the 'four types of commuter' analysis can be utilised as a tool and process that equips governments to deliver the planning, policy, regulation and funding required to successfully respond to the planned population growth for Greater Brisbane. This is also the case for equivalent analysis in other cities as per Seamer's analysis for Melbourne.

For Greater Brisbane, the 'four types of commuter' demands and patterns provide the following insights that can support the planning of sustainable accessibility outcomes for the future:

- The most effective response to infrastructure expense and congestion is by changing employment patterns to allow for a wider spread of travel options, particularly 'contraflow' (e.g. utilising spare road network capacity in peak periods) and active transport (e.g. capturing more 'short' work trips)
- Like other cities in Australia there needs to be the development of CBD-type employment zones over time, throughout the peripheral suburban areas. Infrastructure spend could be concentrated on making these locations transport hubs serving both their local area and other hubs as well as other trip purposes.
- The government can encourage this process by locating their offices to a range of non-CBD locations
- Aligning future transport infrastructure and service upgrades to be more in keeping with the balance of the 'four types of commuters' across Greater Brisbane, has the potential to cultivate active and public transport usage for non-'inward' work trips and in turn ease the burden of large scale transport infrastructure investments for the radial CBD network.

Further, it is acknowledged the analysis of the four types of commuters is for the pre-COVID era of 2016. Given the potential increase of working from home as a result of COVID restrictions during the 2020-2021 period, it is likely the latest 2021 census data will provide insights as to the potential travel pattern changes for the four types of commuters in Greater Brisbane. Conducting the equivalent analysis for 2021 will enhance the understanding of post-COVID four types of commuters and provide insights as to the latest demand patterns for future planning purposes.

Ultimately, there lies a significant challenge ahead for governments in planning for adequate levels of accessibility for cities that will experience the nation's largest population growth. For Greater Brisbane, average trip lengths have increased over the past decade, and work trips will continue to lengthen in the future with planned spatial distribution of population and employment (i.e. 69% of 2041 population growth located in outer suburbia, where only 33% of the employment growth will occur). Currently approximately 30% of work trips Greater Brisbane can be classified as 'short' (i.e. less than 6km) in comparison to the overall average of approximately 16km, and the average trip length of all other trip purposes (totalling 75% of daily person trips) being between 7-10km.

This significant daily travel demand component presents a clear opportunity to address these future transport planning challenges. Two key elements in combination that can contribute to address these challenges are through the better catering for 'short' and 'circumferential' trips by active and public transport infrastructure and services and connecting to strategically positioned employment hubs throughout suburbia. In turn this has the potential to take significant pressure off the vehicle road-based transport network of Greater Brisbane in the future and produce enhanced outcomes in terms of the safe and efficient movement of people and goods.

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