DEPARTMENT OF
INFRASTRUCTURE, PLANNING AND LOGISTICS

Darwin Regional Transport Plan

NORTHERN TERRITORY GOVERNMENT

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NORTHERN TERRITORY GOVERNMENT

INTRODUCTION

Movement and access are fundamental to all cities. Planning for efficient and sustainable transport is an essential element of the ongoing development of a liveable and economically vibrant Darwin Region.

The Darwin Regional Transport Plan (the Transport Plan) sets out the Northern Territory's strategic vision, key issues and priorities for transport within the Darwin Region. For the purposes of the Transport Plan, the boundaries of the Darwin Region mirror the boundaries of the Darwin Regional Land Use Plan 2015, incorporating the administrative boundaries of Darwin, Palmerston, Litchfield, Coomalie, Cox Peninsula and Finniss.

The Transport Plan was originally released in 2016 and was developed following consultation and feedback from key stakeholders and the community. In this 2018 update, minor updates have been made to the Transport Plan to ensure that the document remains current. Key objectives, goals and the strategic direction have remained unchanged.

SCOPE

The Transport Plan focuses on integrating transport and land use planning for public transport, roads, cycling and walking across the Darwin Region. Although other modes of transport such as aviation, rail and sea transport are key components of the regional transport system, planning for these modes extends across the Territory, interstate and internationally and is being addressed in detailed mode specific strategies.

Vehicle parking is an integral component of most urban transport systems. Within the Darwin Region, local government manages parking on Council land and within Council road reserves. Elsewhere, parking is managed by the Northern Territory Government or the private sector.

This Plan acknowledges the interaction of regional transport planning and local parking strategies. The Northern Territory Government will continue to work with local government to manage the strong links between parking, reducing the reliance on private vehicles and increased use of cycling, walking and public transport.

There has been a long history of transport planning for the Darwin region and this Plan acknowledges past events and planning which have influenced the development of the region's transport networks. This plan will be updated to reflect the ongoing changes that occur within Darwin and the transport system.

VISION

An integrated regional transport system which is safe, reliable and sustainable, connects people and places and supports the continuing economic growth of the region, the Territory and Northern Australia.

OBJECTIVES

To provide a regional transport network which responds to economic and residential growth strategies over the next 10-15 years and is:

Integrated

Strengthening the integration of land use and transport planning and integration of transport modes to manage and respond to transport demand.

Efficient, to support economic development

Ensuring the transport system and transport infrastructure is efficient and supports economic and future growth opportunities.

Accessible and provides choice

Ensuring the region's transport system provides a range of transport options to meet community, business and industry demands while supporting economic and social inclusion.

Safe

A safe systems approach across all modes of transport (including public transport) which prioritises the safety of vulnerable road users.

Sustainable and active

A sustainable transport system which is responsive to the environment and innovative technologies and encourages walking, cycling and public transport use, creating a liveable, people-focused city.

GOALS AND ACTIONS

These guiding objectives shape four key strategic goals, with a number of actions identified under each goal:

1. Integrating Transport and Land Use
2. Strategic Road Network and Freight
3. Public Transport
4. Active Transport

BACKGROUND

What is a transport system?

A transport system includes infrastructure (such as roads), services (such as public transport) and modes of transport (such as bicycles and vehicles) which enable people and goods to move from one point to another.

Why do we need a regional Transport Plan?

The Darwin Region is growing and with the shared Northern Territory and Australian Government visions to develop Northern Australia, there is a need to effectively plan now for land use and infrastructure to support this growth. Transport infrastructure and services are an essential component of planning for city and regional growth.

This Transport Plan represents a transport framework for the long term development of transport networks to support future population, employment and economic growth in Darwin over the next 10 to 15 years. The Plan is fundamentally linked to and integrated with, the Darwin Regional Land Use Plan 2015 which provides a foundation for long term land use and development of the Darwin Region.

The Darwin Regional Land Use Plan has identified land requirements to accommodate a short term population of 150 000 and a longer term (40-50 year) population of 250 000. This Transport Plan provides a framework for the efficient planning of transport networks to meet the demands of economic, industrial and residential growth strategies in the short term, over the next 10-15 years.

Regional transport roles and responsibilities

The regional transport system is complex, with a mix of roles and responsibilities between the Northern Territory Government, local governments and private operators. The Northern Territory Government manages and maintains the arterial road network (including the arterial cycle path network) throughout the Darwin Region, while local government manages the local road network.

The Northern Territory Government is also responsible for managing transport infrastructure assets within the region such as ferry terminals and bus infrastructure.

The public bus service, Darwinbus, and the school bus network are managed by the Northern Territory Government which contracts private operators to provide services. Bus infrastructure including bus interchanges and bus stops are managed by the Northern Territory Government. The Mandorah and Tiwi ferry services are provided by a private operator, however the Northern Territory Government subsidises the service to primarily provide for transporting school children.

The Northern Territory Government has a policy and regulatory role in other transport issues and modes of transport including vehicle registration and compliance, taxis, ridesharing, long distance coaches, freight, rail, air and sea transport. However, these services are provided by private operators.

Land use planning is integral to the management and development of regional transport and the Northern Territory Government and the NT Planning Commission have a key role in planning for urban land use and design.

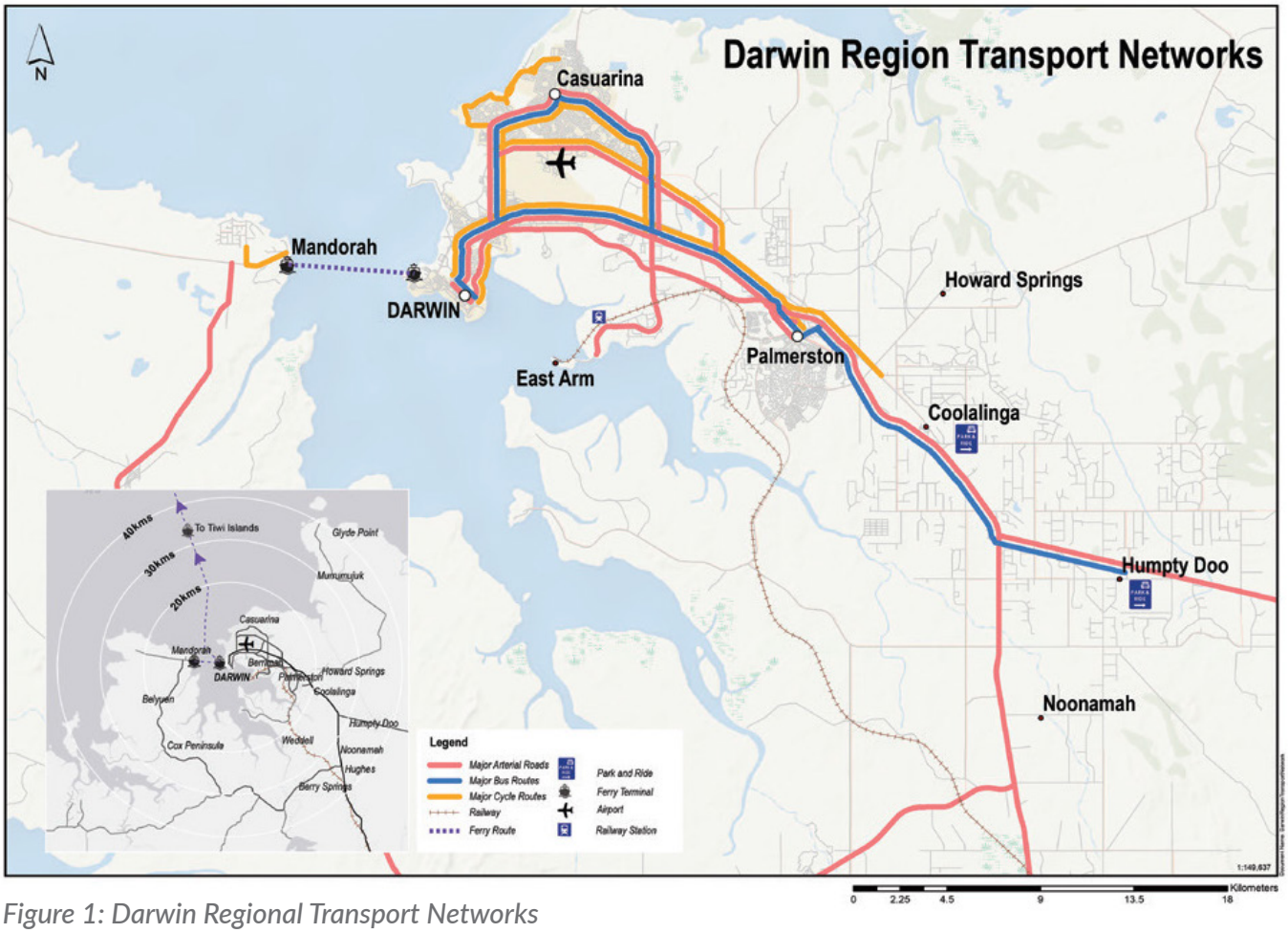


Figure 1: Darwin Regional Transport Networks

HOW WE TRAVEL

An overview of the regional transport system

The Darwin Region covers an area of 419 500 ha and in 2017 has a total population of around 140 000 people, just over half of the total Northern Territory population.

The existing regional transport network includes a network of major (arterial) roads and shared paths, the Adelaide to Darwin Railway, Darwin International Airport, the Port of Darwin's East Arm Wharf and the Cruise Ship facility at Fort Hill Wharf. Transport services include a modern and efficient public and school bus service and passenger ferry services to Mandorah and the Tiwi Islands from Cullen Bay. Commercial passenger vehicles including taxis, minibuses, ridesharing and private hire cars contribute to regional transport options as well as community transport and specialised commercial transport services. Figure 1 shows existing regional transport networks.

Current traffic volumes in the region peak on Bagot Road (36 805 annual average daily traffic in 2016).

Transport in the Darwin Region is dominated by motor vehicles, particularly for key trips such as the journey to work. Australian Bureau of Statistics 2016 census data indicates that private vehicles dominate the journey to work in Darwin.

Although mode share for the journey to work by motor vehicle is high in Darwin, levels of cycling and walking for the journey to work are also relatively high compared with other Australian capital cities.

There are over four million boardings on the Darwin Bus Network per year. However, at around five per cent mode share, public transport use is relatively low in the Darwin region for the journey to work compared with other Australian capital cities.

REGIONAL TRANSPORT CHALLENGES AND DRIVERS

As the Darwin Region grows from a regional centre to a major urban area, the demand for travel will increase and the way people and vehicles move around the region will change.

Major new greenfield residential sites beyond Palmerston identified in the Regional Land Use Plan will increase the demand for travel on the Stuart Highway and Tiger Brennan Drive. Development of identified infill sites in the inner urban suburbs is likely to increase demand for, and support the development of, improved public transport services. Development of the Middle Arm Industrial Area will require development of supporting transport infrastructure including arterial road connections. Key regional transport challenges and drivers include:

- Regional geography
- Congestion
- Freight demand
- Transport safety
- Long term regional land use
- Changing demographics
- Housing and transport affordability
- Social inclusion
- Community health and wellbeing
- Environment and sustainability

TRENDS AND OPPORTUNITIES FOR CHANGE

Like most Australian cities, Darwin has developed as a relatively low density, car dependant city. Australian Bureau of Statistics 2016 census data indicates 75 per cent of people drive to work in Darwin. However, the region is changing and evolving with increasing residential densities in the Darwin CBD, Casuarina and Palmerston that change the demands for transport infrastructure and services. Although it can be difficult to envision a future where there is a significant mode shift in the region's transport, planning now for alternative transport choices in the future could help to avoid some of the transport challenges currently faced by larger, more established Australian cities.

There is evidence internationally that amongst younger people, there is a shift away from driving and increasing demand for walkable neighborhoods with a range of alternative transport options including walking, cycling and public transport. There is also an increasing interest in flexible work practices and working remotely. While these trends may not be evident as yet in Australian cities, the potential for alternative transport in Darwin is evidenced by the relatively high levels of walking and cycling for the journey to work.

The Transport Plan considers future transport demands including a potential decline in car use, technological innovation in transport and improved communications reducing the need for travel. Planning for transport in the future needs to be flexible and respond to changing and uncertain scenarios.

While very significant shifts in mode of transport may not occur in Darwin within the timeframe of the Transport Plan (10-15 years), it is important to monitor shifting transport demand, remain flexible, plan ahead and encourage and support future travel behaviour change.

THE STRATEGIC CONTEXT

This Transport Plan sits within a framework of national, regional and local plans and strategies which influence the Plan and which the Plan will be linked to.

The National context

The Darwin Region holds a strategic position of national and international importance. Close proximity to the South-East Asian economic and transport hubs of Singapore and Jakarta continues to support the expansion of the region's role as a major service, tourism and trade centre. The region has a growing strategic role in national and regional defence.

This Transport Plan has been developed within the context of national strategic policy agendas which have been adopted by all jurisdictions such as the National Port Strategy, the National Land Freight Strategy and the National Road Safety Action Plan.

The Northern Territory and Australian Governments share a vision to develop Northern Australia to boost Australia's prosperity by increasing exports and employment. Northern Australia has a geographical advantage given its proximity to Asia along with natural advantages relating to agriculture, mining, energy and tourism. The Northern Australia Development Office is working with the Australian Government to unlock the full potential of Northern Australia.

Northern Territory Framework

The Economic Development Framework and the 10 Year Infrastructure Plan provide a strategic context for the Darwin Regional Transport Plan.

Darwin Regional Land Use Plan

The Darwin Regional Land Use Plan provides a broad foundation for the long term use and development of land within the region. Ensuring effective integration of transport and land use planning, the Transport Plan is informed by, and will inform, ongoing implementation of the Land Use Plan.

Regional context

At the regional level, the Transport Plan links with key strategic local government policy documents including urban master plans and mode specific plans and strategies, such as:

- Darwin City Centre Master Plan
- City of Darwin CBD Parking Strategy
- City of Darwin Bike Plan
- Palmerston City Centre Master Plan
- Palmerston City Centre Parking Strategy
- Palmerston City Centre Public Realm Strategy

PLAN DEVELOPMENT PROCESS

A comprehensive transport study was undertaken by the then Department of Transport during 2012/13. The study aimed to develop a strategic framework for managing future transport network development in the Darwin Region and to inform ongoing land use planning for the region. A key outcome of the study was the development of a regional multi modal travel demand model. The model was integrated with land use planning for the Darwin Region including population and employment projections and provided the basis for the development of the Transport Plan.

A consultation draft Transport Plan was exhibited for consultation in November 2015. 28 written submissions were received with strong support for the Plan's overall vision and general support for many of the Plan's goals and actions.

Submissions raised a wide range of issues for consideration including:

- Public transport and road access in rural areas
- Freight routes and haulage of extractive materials
- Public transport connections for health facilities and tourist destinations
- Support for reservation of corridors for future rapid transit (including potentially light rail)
- Integrating bike and bus travel
- Support for developing cycling and walking networks, particularly around the inner suburbs and extension of networks in the rural area.

Where appropriate, the Transport Plan has been updated to acknowledge and reflect the issues raised through consultation. Some of the feedback received concerned detailed operational comments rather than higher level issues relevant to the strategic directions outlined in the Transport Plan. However, the feedback received included many valid comments and suggestions and these more detailed comments are being considered at an operational level as well as in mode specific strategies and plans.

INTEGRATING TRANSPORT AND LAND USE

GOAL:
LAND USE SUPPORTING SHORTER TRIPS AND SUSTAINABLE TRANSPORT CHOICES

Land use and transport are fundamentally linked and the Transport Plan responds to the Darwin Regional Land Use Plan 2015. The Land Use Plan provides an indication of where growth in population, jobs and other key elements of urban structure will be in the shorter and longer term. The Transport Plan responds by highlighting key transport routes and corridors which will serve the expected land use pattern. The Land Use Plan may subsequently be reviewed to further reflect the transport network, for example, concentrating higher density land uses closer to frequent public transport.

Land use significantly influences transport networks by determining where homes, jobs and other destinations are located, potentially reducing the need to travel, increasing the ease of travelling between these destinations and providing access to affordable travel choices. The Darwin Regional Land Use Plan presents a land use structure which provides a range of future residential development opportunities. This includes meeting continued demand for traditional low density housing on individual lots, while increasing housing choice both on higher density, more compact urban lots and a range of rural lifestyle options. The land use structure provides for infill development which supports higher frequency public transport and shorter trips achievable by cycling and walking, urban and peri-urban development and more remote greenfield sites which will require longer travel times and be more dependent on private vehicle travel.

Supporting the Darwin Regional Land Use Plan, the Northern Territory Compact Urban Growth Strategy encourages higher density residential development and integration with public transport and cycling and walking networks in urban areas.

At the sub regional level, the NT Planning Commission has developed a number of Area Plans within the Darwin Region, such as the Darwin Inner Suburbs Area Plan, which provide a land use framework for the future development of an area. Consideration of transport issues and planning for transport corridors is a fundamental element of the area planning process.

Integrating public transport and land use planning is essential to ensure that residents and workplaces have a reasonable level of access to public transport. The Darwin Regional Land Use Plan highlights that the demand for public transport is likely to grow in the region. This is expected to increase the viability of introducing new modes of public transport in the longer term, including potentially bus rapid transit and light rail, along established bus routes. In the short to medium term, it will be important to identify and plan for future rapid transit corridors where public transport priority is likely to be required.

INTEGRATING TRANSPORT AND LAND USE
(CONTINUED)

A review of Darwin's public transport network recommended providing public transport services to the majority of the region's urban population within a 600 metre walk of residences and jobs (400 metre in the Darwin CBD). However, more remote and rural greenfield residential sites in the Darwin Region such as Hughes, Noonamah and Murrumujuk (which have been identified in the Land Use Plan) are unlikely to support frequent, all day, public transport services. It is likely that rural park and ride facilities on key public transport routes (serviced during peak periods) would provide the most efficient public transport services in these greenfield locations. At the local level, good urban design can support connectivity, shorter trips, walking, cycling and access to public transport.

There is also potential for innovative local transport solutions, such as car share schemes, to contribute to the transport options in the region. It is essential that the arterial and local transport networks are effectively integrated to provide a seamless connection between communities.

Looking to the future, should opportunities for development of the Cox Peninsula emerge, improving transport connections to the Peninsular in consultation with local communities will be an essential enabler of development. Potential for the development of a vehicle ferry, including the development of supporting infrastructure and reservation of suitable land, will need to be investigated.

ACTIONS

Continue to integrate Regional Land Use and Transport Plans – the Transport Plan responds to the Darwin Regional Land Use Plan. The Transport Plan will be reviewed as the current land use plan evolves and Darwin's population increases.

Update the Darwin Region Transport Model to reflect current population, employment and land use projections – continue to update the multi-modal transport model to reflect the Darwin Regional Land Use Plan to provide a basis for ongoing planning of transport networks.

Investigate and plan for future transport connections – guided by the Darwin Regional Land Use Plan, development of infill and greenfield sites will require new and upgraded transport connections. Transport corridors will be investigated and planned to support land use planning objectives including potential future rapid transport corridors and future passenger and vehicle ferry infrastructure sites.

Support the development of safe, healthy and liveable communities – transport networks can shape communities by providing well connected and accessible transport options. Good urban design and streetscapes can encourage more walking and cycling for short trips and contribute to the development of well connected, liveable neighbourhoods. Area planning for new and existing suburbs and communities will include provision for transport choice, with good connections for cycling, walking and public transport.

Improve the regional public transport network to support land use objectives – frequent, reliable and comfortable public transport can support the transformation of urban areas into vibrant, mixed use activity centres. Improvements to the existing regional public transport network has the potential to significantly improve transport choice and affordability in identified urban infill sites and the rural area.

STRATEGIC ROAD NETWORK AND FREIGHT

GOAL:
DEVELOPING THE ROAD NETWORK TO SUPPORT A DYNAMIC ECONOMY AND THE REGION'S PIVOTAL ROLE IN DEVELOPING THE NORTH

Private and commercial vehicles are an integral part of the Region's transport system and will continue to be the primary mode of transport in the region in the short, medium and most likely, longer term. With a growing population and a vibrant economy, the number of vehicle trips will continue to increase. Transport modelling has been undertaken to utilise land use, population and employment projections to predict where there is likely to be increased traffic demand and the capacity of the road network to respond to this demand. The modelling assists in identifying areas in the road network where there may be a need for additional road capacity.

Although at present road congestion is limited in the region, levels of congestion are increasing at key points across the network. Emerging congestion issues have been identified on the Stuart Highway through Stuart Park, Bagot Road, Stuart Highway through Pinelands, Berrimah Road and Elrundie Avenue. Potential for future congestion has also been identified on Chung Wah Terrace, McMillans Road, Wishart Road, Vanderlin Drive, Trower Road, Lambrick Avenue, Stuart Highway through Livingstone, Channel Island Road, McMinn Street and Goyder Road. The growth in traffic rates varies on different roads and traffic modelling has applied different growth scenarios for arterial roads across the Darwin Region. Without careful planning and consideration of alternative transport options, congestion is likely to become an increasing feature of Darwin's transport network. Although the dominant role of private and freight vehicles in the transport system is recognised, prioritisation of alternative modes including walking, cycling and public transport potentially reduces the number of individual private trips and improves access to the transport system for all modes.

The Darwin Region transport model forecasts future patterns of travel demand across the Region and is based on land use planning for the Darwin Region. Transport modelling can be used to identify incremental improvements to road network capacity to reduce network congestion and accommodate growth in residential and economic development. The regional network is designed to enable efficient traffic movements at most times of the day, with low to moderate levels of congestion. The road network is designed to a high level of service with sufficient road capacity to accommodate forecast traffic demand.

The modelling process has also included a number of incident management scenarios to better plan for major incidents, such as serious accidents and flooding events and reduce the short term impacts on the road network.

STRATEGIC ROAD NETWORK AND FREIGHT
(CONTINUED)

The 10 Year Infrastructure Plan 2017-2026 nominates a number of priority road projects for the Darwin Region. Planned improvements to the road network will focus on:

- Incremental network capacity improvements
- Extensions in the network to improve network connectivity and accessibility
- Strategic new road links to support new residential and mixed use developments, economic activity and rural lifestyle and greenfield developments

Longer term arterial transport corridors identified in the Darwin Regional Land Use Plan include links to the Middle Arm Industrial Area, links around the harbour and the Weddell arterial.

More detailed transport planning will be required at the sub-regional level, particularly in rapidly growing areas such as Palmerston and the Northern Territory Government is working with local government to effectively integrate the arterial and local road networks.

A separate Territory Wide Logistics Master Plan is in development. Within the Darwin region, a Transport Industry Precinct is proposed between Wishart Road, Berrimah Road and Tiger Brennan Drive. Plans for the precinct include 86 lots and a nine hectare site for a 'Truck Central' transport hub. Truck Central will be a major road transport facility for refuelling, fatigue management and servicing. The precinct will provide large lots to accommodate transport depots and vehicle servicing with easy access to major road transport links and the East Arm Logistics Precinct.

Darwin International Airport is expected to maintain its role as a primary international and domestic passenger terminal into the future, however, increasing cargo transport and general aviation demands may see the need for a second airport within the region to cater specifically for this demand.

The Darwin Regional Land Use Plan identifies a site for a second airport on the Blackmore Peninsula to the west of Middle Arm. The identification of this site for future use as an airport will assist with ongoing land use planning and enable the site to be protected from the potential encroachment of incompatible land use in surrounding areas.

Planning for the region's road and freight networks will need to be continually responsive to emerging technologies and innovations including intelligent transport systems and autonomous vehicles.

ACTIONS

Working with local government, continue to maintain and develop the region's road infrastructure - the existing road network is essential to the social and economic development of the region. Effective operation of the system requires ongoing maintenance of the network and planning for new and upgraded infrastructure and effective integration with the local road network.

Update transport modelling for the Darwin Region - in response to the Darwin Regional Land Use Plan, continue to update transport modelling for the region to confirm short to medium term road network improvements and develop incident management scenarios.

Consistent with the 10 Year Infrastructure Plan - improve capacity and connectivity on major arterial road links throughout the region.

Support freight movements on key arterial routes - the movement of goods and produce is essential to the ongoing development of the region and the Northern Territory. Road connections to the major East Arm logistics precinct (including the Port, Rail terminal and Business Park), Darwin International Airport and the Transport Industry Precinct will facilitate and support freight movement.

Consider all transport modes in the allocation of road space - recognising private and freight vehicles as the primary transport mode in the region, consider how increases in capacity may also be achieved by improvements to alternative modes of transport.

Integrate transport and land use planning on the approaches to the Darwin CBD and preserve freight corridors - monitor transport and traffic demand on the approaches to the CBD and along freight corridors and integrate with land use planning.

Deliver the Transport Industry Precinct - the Land Development Corporation will oversee the development of this major transport facility incorporating the 'Truck Central' transport hub.

Deliver the Territory Wide Logistics Master Plan - including freight and logistics strategies for the Darwin Region.

PUBLIC TRANSPORT

GOAL:
FAST, FREQUENT, RELIABLE, ACCESSIBLE AND COMFORTABLE PUBLIC TRANSPORT

Public transport has the potential to contribute significantly to the region's transport network. A fast, frequent, reliable, comfortable and safe public transport network, supported by urban planning and design, can contribute to an efficient transport system. For the purposes of the Transport Plan, public transport is restricted to bus and ferry services. Commercial passenger vehicles, sometimes considered as a form of public transport (including taxis, minibuses, rideshare and private hire vehicles) are being planned for separately through the Northern Territory taxi industry reform process.

Public transport systems need to be accessible, supportive of an efficient economy, promote a healthy community and operate within a sustainable environment.

Public transport is a critical enabler for many in the community including seniors and Aboriginal people for access to health services, education and employment.

Currently public transport use for the journey to work in the Darwin Region is relatively low. At around five per cent, Darwin has the lowest

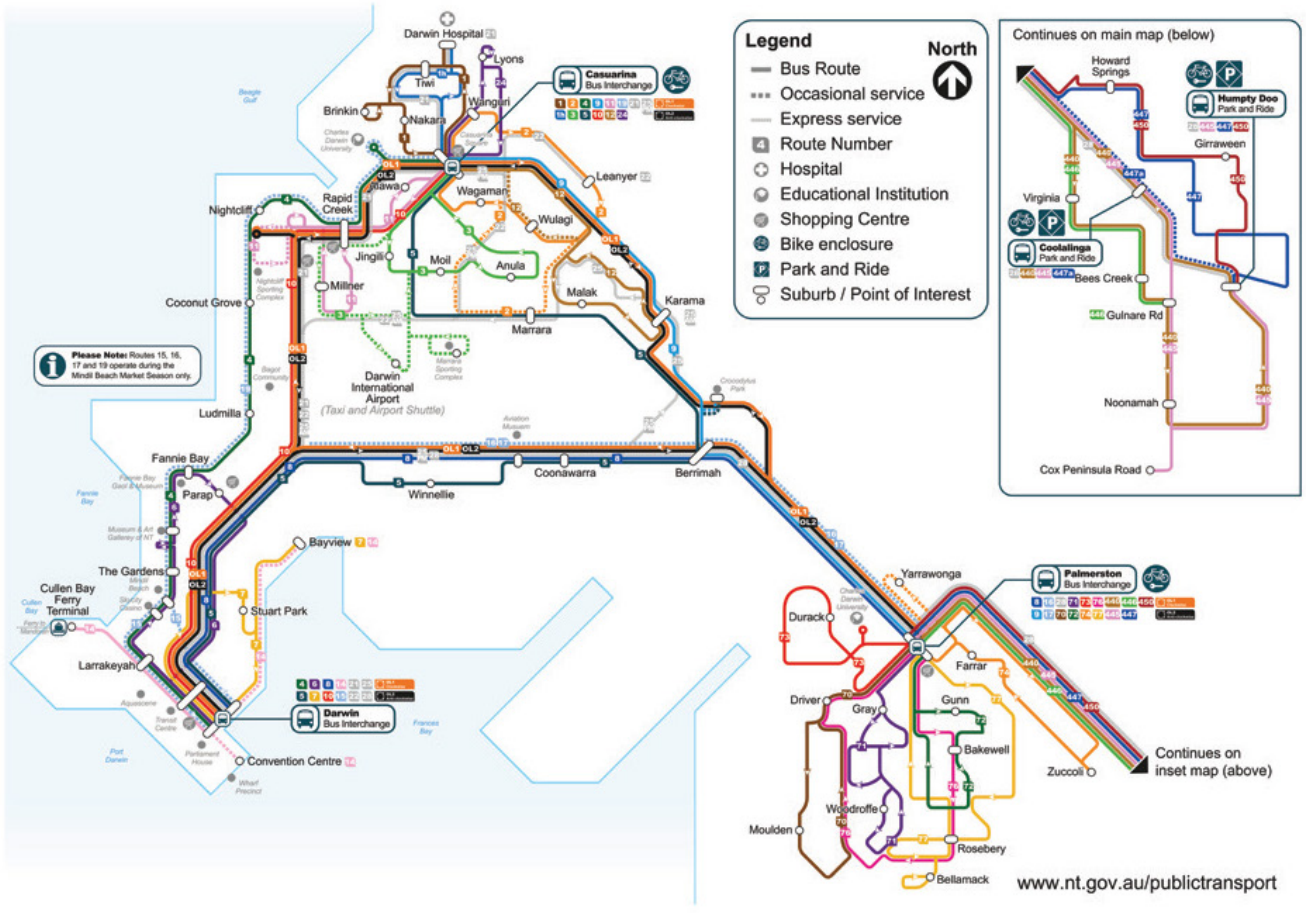


Figure 2: Darwin Bus Network

PUBLIC TRANSPORT
(CONTINUED)

public transport mode share of any Australian capital city. The existing public transport network in Darwin is based on the Darwinbus service with a privately operated ferry service providing a link between Darwin and Mandorah and the Tiwi Islands.

The existing bus network (figure 2) has grown incrementally and in response to changing demands over time. Although residential densities are relatively low in many areas of Darwin (like most Australian urban areas), densities are high enough in some areas of Darwin, Casuarina and Palmerston to support efficient public transport. The relatively dense mix of residential and employment land uses on the Darwin peninsular, in Casuarina and in Palmerston have the potential to support mixed use, commercial-retail-residential precincts which are typically strong drivers of public transport patronage.

Bus patronage varies considerably across the region and ranges from relatively high levels in Darwin, Casuarina and Palmerston and along the corridors between these centres, to minimal boardings on some rural routes.

The Department of Infrastructure, Planning and Logistics has been reviewing the current Darwinbus network. This work has identified potential future improvements including the introduction of 30 minute bus services throughout the day, seven days a week, improvements to timetabling and 15 minute services in higher density residential areas on the approaches to the Darwin CBD. There are also opportunities to improve services to major destinations such as Royal Darwin Hospital and Charles Darwin University.

Investigations have confirmed that buses are likely to remain a key feature of public transport in the Darwin Region in the short to medium term. Although the Darwin City Centre Master Plan envisions the development of light rail and feedback from consultation has also expressed a community aspiration for light rail, it is likely that light rail or other forms of rapid transit will be longer term options for regional public transport. However, it is important to plan for future rapid transit now by investigating and reserving public transport corridors as part of the land use planning process.

Bus access in and around the Darwin CBD currently uses Mitchell Street inbound and Cavenagh Street outbound. The existing CBD bus network is constrained by competing road and land uses in Mitchell Street and is not easily legible to users. A detailed study of bus movements in and around the Darwin CBD has been undertaken which is informing the planning for CBD bus and passenger access including potential city loop services.

A new ticketing regime was introduced across the bus network in 2014 which provides greater flexibility for passengers and provides an incentive to purchase multi-ride tickets. A 'bus tracker' app has also been introduced to provide 'real time' arrival and departure times and assist in journey planning.

Rural communities have highlighted local demand for public transport services to connect rural centres such as Batchelor and Adelaide River with urban activity centres including Palmerston, Casuarina and Darwin. Efficiently servicing rural, low density populations with regular public transport services can be challenging. The Department of Infrastructure, Planning and Logistics will continue to work with local communities to explore opportunities for improving transport connections for rural centres.

Enabling access to public transport requires integration with other modes, particularly cycling and walking. Well connected pedestrian access to bus stops is essential to the operation of the bus network. Good cycling connections and bicycle parking at public transport nodes can expand the catchment of bus stops and interchanges to

PUBLIC TRANSPORT
(CONTINUED)

more than a kilometre. Major bus interchanges and park and ride facilities in the Darwin Region provide secure bicycle parking to support bike/bus commuting. In the rural area, park and ride facilities at Coolalinga and Humpty Doo support combined car and public transport commuting. A policy has been introduced which allows folding bikes to be carried on buses in the Northern Territory.

National standards prescribe requirements for improving public transport accessibility. The Northern Territory is progressively complying with accessibility standards with 100 per cent of the Darwin and Alice Springs public bus fleet meeting accessibility standards. There is an ongoing program to upgrade bus stops to reach full compliance. Bus stop information has also been significantly improved with the introduction of compliant bus totems which are gradually being implemented across the network. The totems provide timetable information and maps and braille section provides a phone number for further information. Significant improvements have been made to major bus interchanges in the region and 100 per cent compliant park and ride facilities have been developed at Coolalinga and Humpty Doo. An interactive voice response system for bus information is also available.

The current passenger ferry between Cullen Bay and Mandorah is privately operated and is expected to continue to provide an alternative transport route between the Darwin CBD and the Cox Peninsula. The Darwin Regional Land Use Plan has highlighted that longer term, there may be potential for further development of harbour ferry services, depending on the ability of these services to compete with alternative modes of commuter transport. The viability of additional harbour ferry services will increase with population growth.

In the future, it is likely that additional or alternative ferry terminal infrastructure will be required in addition to the existing Cullen Bay facilities. Planning for potential additional infrastructure is required in the medium to long term to support the development of harbour ferry services.

There are a number of passenger transport terminals in the region including the Ghan's Railway Station, the Darwin International Airport and the Cruise Ship Passenger Terminal. These key tourism and travel destinations are currently serviced by the commercial passenger vehicle industry rather than scheduled public transport services. The irregular demand for services from these destinations will continue to be best serviced by taxis, minibuses, ridesharing and shuttle services in the short to medium term.

ACTIONS

Improve the Darwin public transport network -

- **Consult with the community regarding potential improvements to the Darwin Bus network** - including potential improvements to frequency, span of service and timetabling.
- **Engage with key stakeholders** - such as Seniors groups, Accessibility groups and Aboriginal communities regarding specific needs and services to major destinations such as health facilities.
- **Provide easily accessible public transport information** - improve the legibility of the public transport network by providing clear and accessible timetabling and journey planning information.
- **Review CBD public transport access** - to investigate improvements in CBD public transport access and movement including a potential city loop service.
- **Investigate demand and potential for public transport priority on the arterial road network** - to maintain the frequency and reliability of public transport, priority measures for public transport (such as queue jumps, signal priority and bus lanes) will be investigated at specific locations.
- **Improve public transport accessibility** - continue to improve network accessibility through the ongoing bus stop and shelter replacement program and ensure all new infrastructure is compliant with national accessibility standards.

Integrate public transport with other modes - continue to integrate bus stop and interchange facilities with a well-connected shared path network and provide bicycle parking at major stops and interchanges. Continue to develop park and ride facilities in rural areas as demand develops.

Integrate public transport and land use planning - planning for infill and greenfield residential development will continue to support easy access to public transport, aiming for a walk of no more than 600 metres from residences and jobs to public transport for majority of the urban population and 400 metres in the Darwin CBD.

Plan for future public transport corridors - identify and reserve future transport corridors for rapid transit.

Work with local government to integrate parking policies and public transport planning - continue to work with local government to manage the strong links between parking, reducing the reliance on private vehicles and increased use of public transport.

Respond to local demand for public transport connections between rural and urban activity centres - continue to work with local communities to explore opportunities for improving rural transport connections.

Plan for future ferry facilities - continue to identify opportunities to support the future development of ferry services.

Work with tourism groups to investigate transport options – work with Tourism NT and key stakeholders to investigate transport options to support tourism development.

ACTIVE TRANSPORT

GOAL:
SAFE, CONVENIENT CYCLING AND WALKING TO SUPPORT HEALTHY, CONNECTED COMMUNITIES

Darwin has the potential to be a great walking and cycling city. The region is already leading the way in relation to many other Australian cities and there is significant scope to go much further.

Active transport refers to all forms of transport which include some form of physical activity, particularly cycling and walking. Public transport is often included as a form of active transport as most public transport journeys involve some form of active transport at the start and end of a trip.

There is substantial evidence regarding the potential for active transport to provide significant health and environmental benefits and to contribute to more liveable, connected communities.

Cycling and walking have enormous potential to contribute to the transport system in the Darwin Region. The Region has an extensive network of off road cycling and walking paths. With generally flat terrain, relatively short distances between activity centres and a good climate for most of the year, cycling and walking provide realistic options for local short trips. In addition, cycling and walking can easily be combined with public transport for longer distance journeys.

Levels of walking and cycling in the Darwin Region for the journey to work are relatively high compared to other Australian capital cities. The Australian Bicycle Council's 2017 Cycling Participation Survey showed that more people cycle in a typical week in the Northern Territory (per capita) than in any other state. These participation figures are a good basis to work from in the Australian context, but are still far below international examples in Europe, such as in the Netherlands and Denmark where cycling mode share consistently exceeds 40 per cent.

The Department of Infrastructure, Planning and Logistics is monitoring levels of cycling throughout the region through a series of annual visual bike counts which have been undertaken since 2011. In addition to visual bike counts, two permanent bike counters have been installed at two key locations on the path network to provide continuous data on where and when people are cycling in the Darwin Region. Subject to effective operation of the counters, additional permanent counters will be installed to assist in planning and developing the network.

Increasing safety and convenience for pedestrians and cyclists and realising the potential for active transport requires a comprehensive approach across multiple areas including infrastructure, urban design, policy, road safety, behaviour change, education and awareness. The most successful walking and cycling cities have focused on providing separated, well connected cycling and walking path networks. In the Northern Territory, all paths are shared paths which means that cyclists and pedestrians can use all paths. 'Footpaths' can be used by cyclists and 'cycle paths' can be used by pedestrians, effectively extending the active transport network of paths. Except for a restricted number of high use, recreational paths, the shared path network currently meets existing levels of demand. However, as Darwin's population grows and the number of people cycling and walking increases, the shared path network may need to evolve to provide separately for cyclists and pedestrians.

ACTIVE TRANSPORT
(CONTINUED)

The extensive off road shared path network across the Darwin Region is reviewed and upgraded in response to community identified priorities. In the Darwin Region, recent projects have included widening and resealing the high use path from Rapid Creek to Trower Road in Brinkin, providing cycle access to major employment and study destinations at Charles Darwin University, Royal Darwin Hospital and Casuarina, a new path on Lambrick Avenue in Palmerston to connect existing paths on Roystonea Avenue with Farrar Boulevard and continuing across the Stuart Highway to the existing Howard Springs path, a new off road path on Henry Wrigley Drive providing access to airport workplaces and the Marrara sporting complex, and a nine kilometre off road path adjacent to Tiger Brennan Drive.

Other short and medium term cycling infrastructure priorities for the region include:

- Improving provision for cyclists on Bagot Road and Trower Road to link the northern suburbs with the Stuart Highway
- Extending the existing Howard Springs path to Coolalinga

Effective wayfinding and signage is an essential element of active transport networks. Following the development of national guidelines and a new Australian standard, wayfinding and signage within the Darwin region has been updated.

Cycling and walking infrastructure needs to be supported with good end of trip facilities which includes secure bicycle parking, showers and lockers for residents, visitors and employees. The NT Planning Scheme requires the provision of end of trip facilities for major new commercial and CBD developments, and national guidelines are being developed to provide guidance on the type of facilities provided.

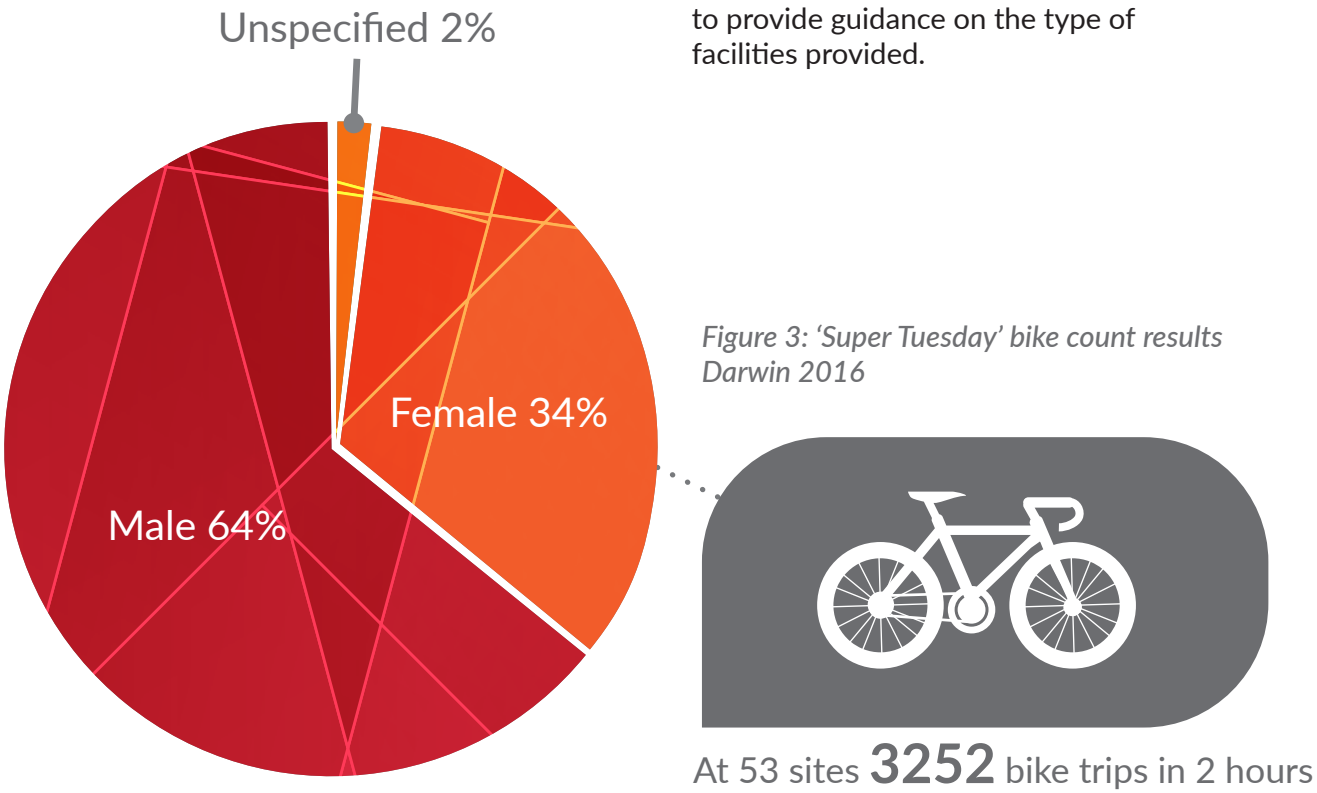


Figure 3: 'Super Tuesday' bike count results Darwin 2016

ACTIVE TRANSPORT
(CONTINUED)

Many new development applications for commercial developments now routinely include provision of bicycle parking facilities conveniently located near major access points. The Northern Territory Government has worked with a number of key employment work places within the Darwin region to plan for and encourage active transport for the journey to work.

To ensure connectivity between local and arterial cycling networks, the Northern Territory Government contributed to the City of Darwin Bike Plan. The five year Bike Plan identifies priorities for infrastructure, education, encouragement and evaluation actions. The importance of cycling and walking to the Darwin Region has been recognised in other local government plans and strategies including the Darwin City Centre Master Plan, the City of Darwin's Community Wellbeing Plan and the City of Palmerston Master Plan. In addition to infrastructure provision, education and awareness can support cycling and improve safety. The Northern Territory Government provides bicycle education to school and other community groups through the Parap Road Safety Centre in Darwin, which is a unique community resource for promoting cycling and road safety skills. Over 1000 students and other participants attend cycling safety sessions at the centre each year.

With increasing numbers of cyclists using the road network, there has been community feedback from all road users regarding the need to share the road. The NT Road Users' Handbook has been updated to include a new section 'Sharing the road with cyclists'. The Handbook highlights that bicycles are classed as vehicles, have the same rights and responsibilities as all road users and deserve the same respect and courtesy. At the same time, cyclists are required to abide by all the relevant rules and regulations that govern the drivers of other vehicles.

ACTIONS

Ensure all new major road infrastructure includes provision for cyclists and pedestrians - design and construction of all new arterial roads and major upgrades in the region will include consideration of cyclist and pedestrian demand and provision of appropriate infrastructure.

Continue to maintain and develop the shared path network - responding to community priorities, continue to develop the shared path network in consultation with local government to ensure integration of local and arterial networks.

Review and update wayfinding and signage across the region's active transport networks - working with the City of Darwin, City of Palmerston and other key stakeholders, review and enhance wayfinding and signage in accordance with national guidelines and standards.

Continue to promote the provision of end of trip facilities - provide guidance and advice for the provision of end of trip facilities in major new developments.

Monitor and analyse cycling across the region - continue to implement annual visual bike counts and expand the permanent counter network to measure and analyse regional cycling demand and assist in planning and prioritising cycle network upgrades and development.

Continue to implement walking and cycle safety education programs – continue to deliver pedestrian, road safety and bicycle education programs through the Parap Road Safety Centre, in schools and at other venues.

Implement a vulnerable road user awareness campaign - guided by peak cycling advocacy groups, work with local cycling and other interest groups and local government to deliver a road safety campaign to raise awareness of vulnerable road users.

Integrate cycling and walking with other modes of transport - continue to integrate bus stop and bus and ferry interchange facilities with well-connected shared path networks and provide bicycle parking at major stops and interchanges.

Work with major employers to encourage active transport - continue to work with major employers and industry groups to develop Work Place Travel Plans and other tools to encourage the uptake of active transport for the journey to work.

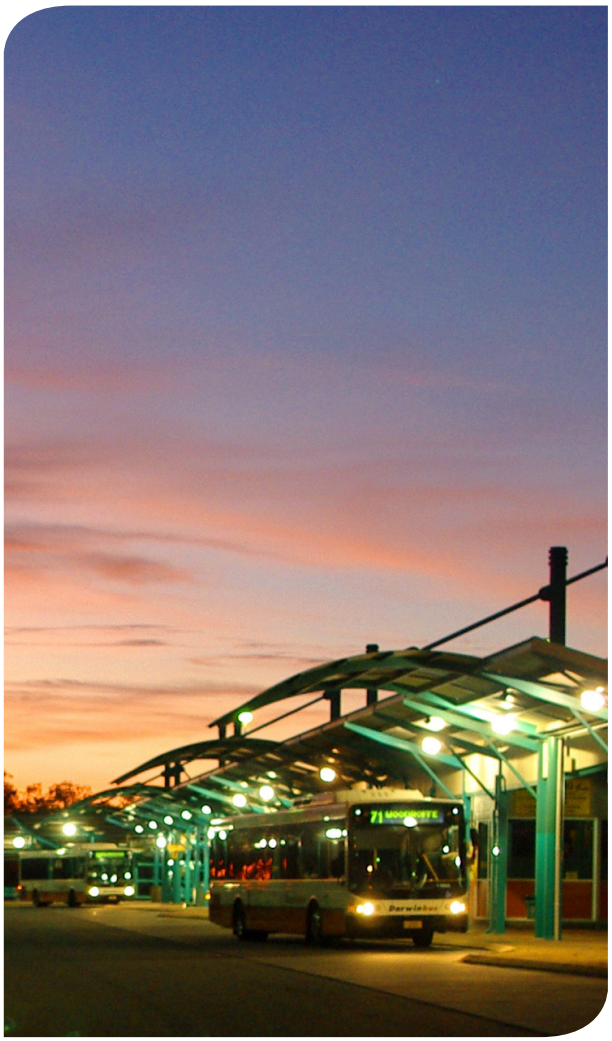
PLAN IMPLEMENTATION, MONITORING AND REPORTING

The Transport Plan will guide the ongoing development of the Darwin Regional transport network over the next 15 years. Working with key stakeholders and the community, the Northern Territory Government will implement the Transport Plan progressively.

Many of the actions identified in the Transport Plan require further investigation and development. Other actions demonstrate an ongoing commitment to guiding principles and priorities. The Transport Plan is flexible. It identifies priorities for investment in transport infrastructure and services, however these priorities will change and evolve over the next 15 years reflecting the availability of funding and the local, regional, national and international climate.

Integration of transport and land use planning is a key goal. The Transport Plan responds to the Darwin Regional Land Use Plan and will inform ongoing development and implementation of the Land Use Plan.

The Transport Plan is not a static document. The goals, priorities and actions will continue to evolve in response to changing social and economic demands. Implementation of the Transport Plan will be monitored and continually updated to reflect changing priorities.



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NORTHERN TERRITORY GOVERNMENT