

Nationally significant projects, programs and proposals

With private investment and partnership between the Australian and Northern Territory governments, industry and the community, the Territory has opportunities to grow its economy and contribute to the national agenda.

The number of nationally significant projects in the Territory is increasing with opportunities that will see future investment in renewable energy exports, critical minerals processing and export, agribusiness and tourism enterprises, and onshore and offshore gas developments.

Australian Infrastructure Plan

In 2021, Infrastructure Australia released the Australian Infrastructure Plan with a vision for “*Infrastructure that improves the sustainability of the country’s economic, social, environmental and governance settings, builds quality of life for all Australians and is resilient to shocks and emerging stresses.*” As part of the Australian Infrastructure Plan 2021, Infrastructure Australia identified 9 areas of reform to achieve the vision:

Place-based outcomes for communities	Sustainability and resilience	Industry productivity and innovation
Transport – delivering an integrated network	Energy – enabling an affordable transition to net zero	Water – prioritising safety and security
Telecommunications and digital – ensuring equity in an era of accelerating digitisation	Social infrastructure – supporting economic prosperity and quality of life	Waste – accelerating Australia’s transition to a circular economy

The Northern Territory’s Infrastructure Framework aligns with these reform agendas, which streamlines business case development to include significant Territory projects on the Australian Infrastructure Priority List.



Above: NT rail line. Credit: Department of Infrastructure, Planning and Logistics.



Above: Carpentaria Highway. Credit: Department of Infrastructure, Planning and Logistics.

Infrastructure Australia's Infrastructure Priority List Assessment Framework

Infrastructure proposals that require \$250 million or more of Australian Government funding are required to be submitted to Infrastructure Australia for assessment.

The Infrastructure Priority List Assessment Framework is designed to help proponents develop high quality infrastructure proposals to submit to Infrastructure Australia. It provides a national standard for best practice infrastructure development and explains Infrastructure Australia's requirements and process for assessing proposals.

While Infrastructure Australia uses a cost-benefit analysis, it also considers strategic, social and deliverability benefits that assists the Northern Territory where projects in regional and remote areas can be difficult to justify on economic merit alone due to population scale and a lack of data. Proposals can be assessed more holistically, which means that Infrastructure Australia can support proposals where the benefit cost ratio is less than one (subject to strength of other evidence). Consideration will be given to non-economic benefits including unquantified quality of life benefits and equity and distributional effects.

The assessment framework is divided into an overview and 4 main volumes, reflecting the 4 stages of project development and submission and is supported by detailed technical guidelines.

The 4 key stages for Northern Territory proposals are:

Stage 1 – Potential Investment Options – Clearly identify the problems seeking to be solved and the opportunities seeking to be realised

Stage 2 – Potential Investment Options – identify, analyse and filter options to respond to the problems and opportunities identified in Stage 1

Stage 3 – Investment Ready Proposal – undertake a detailed assessment of options that respond to problems and opportunities identified in Stage 1 and Stage 2, and document the business/economic case for an infrastructure proposal, demonstrating options have been assessed in detail to identify a preferred option based on merit. This includes a cost benefit analysis

Stage 4 – Post project delivery review.

The Australian Infrastructure Priority List is a list of prioritised nationally significant projects that are seeking investment. Every proposal on the priority list is expected to contribute to national productivity or to be otherwise socially beneficial within the next 15 years. The priority list provides decision makers with advice and guidance on specific infrastructure investments that will underpin Australia's continued prosperity.

The current Territory projects listed on the Priority List and their relative stages are shown in the next table. One new project was included in 2023.

Current Territory projects listed on the Infrastructure Priority List

NT Project	Submitted by	Stage 1 Early Stage Proposal	Stage 2 Investment Options	Stage 3 Investment Ready
Northern Territory freight rail and logistics capacity improvements	Territory Government	✓		
Darwin region water supply infrastructure upgrades (AROWS)	Territory Government			✓
Enabling infrastructure for developing the Beetaloo Sub-basin	Territory Government	✓		
Common user infrastructure at the Middle Arm Precinct	Territory Government		✓	
Northern Territory remote community power generation program	Territory Government	✓		
Australia-Asia Power Link	SunCable			✓

The aim of the nationally significant projects, programs and proposals section of the NT Infrastructure Plan and Pipeline is to identify and articulate the infrastructure investments that will impact the national economy or achieve national policy objectives and outcomes. Infrastructure Australia assesses all proposals against 3 criteria:

- ✓ Strategic Fit – is there a clear rationale for the proposal?
- ✓ Societal Impact – what is the value of the proposal to society and the economy?
- ✓ Deliverability – can the proposal be successfully delivered?

1 Central Arnhem Road upgrade

The Central Arnhem Road is a critical piece of infrastructure that enables social and economic development in the East Arnhem region and the Northern Territory.



Transport and Logistics



Tourism

The Central Arnhem Road is located predominantly on Aboriginal land, it spans 685 kilometres including the Central Arnhem (645 kilometres), Dhupuma Road (17.3 kilometres) and Melville Bay Road (23.2 kilometres).

The Central Arnhem Road links the Stuart Highway (national network) to Nhulunbuy and communities in East Arnhem Land, connecting over 12 000 residents and supporting multiple industries including agriculture, tourism and mining.

Nhulunbuy remains the only large regional centre in the Northern Territory not connected to the National Highway network via a sealed road. The road quality is poor, with over 568 kilometres (88%) of the road unsealed. Road users experience frequent restrictions or closures throughout the wet season from December to May each year. Although 77 kilometres (12%) is sealed, the majority of this seal is narrow and only 4 metres wide (old Beef Road standard).

Upgrading and sealing the Central Arnhem Road will further help unlock the economic potential of the region and open a range of new long term economic and social opportunities. This will be achieved through reduced transit times, improved reliability of supply chains, safer road conditions and overall improved accessibility to and in the region. It will contribute to Closing the Gap by improving access to health and educational services, facilitating social and cultural connections and reducing barriers to development, including operating costs for business.

Additional benefits to sealing the Central Arnhem Road include:

- increased liveability
- economic development
- increased tourism and trade
- land tenure
- access to gravel
- access to water
- Aboriginal employment.

Although not included on the National Infrastructure Priority List, the Australian Government committed \$180 million in its 2019-20 Budget to upgrade the Central Arnhem Road. This funding is matched by a 20% co-contribution of \$45 million from the Northern Territory Government. The Northern Territory Government also invested a further \$5 million to upgrade approximately 4 kilometres near Bulman, taking the initial funding to \$230 million to upgrade the Central Arnhem Road over 10 years.

The Australian Government committed a further \$100 million in its 2023-24 Budget, with the Territory co-contributing \$25 million. This brings the total current funding program to \$355 million.

To date, a total of 24.7 kilometres has been upgraded for sections near Beswick, Goyder and Bulman.



Above: Central Arnhem Road. Credit: Tourism NT and Aaron Avila.

2 Darwin region water supply infrastructure upgrades – Adelaide River Off-Stream Water Storage (AROWS)

As the Territory grows, having enough water for the future is critical for people, agriculture and industry. In the Darwin region we are facing challenges because our supply system is operating at its capacity.



Water

New water supply infrastructure is needed to help our population grow in the Territory and to meet our goal of becoming a \$40 billion economy by 2030. Having access to reliable water will help sustain our lifestyle, expand agribusiness and industry development and provide economic growth opportunities for the Territory.

The Adelaide River Off-stream Water Storage (AROWS) project is the Northern Territory Government's long term solution to supply more water to the Darwin region.

Located north of Lake Bennett, the project will take advantage of a naturally occurring basin next to the Adelaide River created by a ridge formation that can hold water. Two main containment barriers will be constructed at low points of the basin so that water can be stored within the basin.

As an off-stream storage, AROWS does not require infrastructure to be built across the Adelaide River, reducing its impacts compared to an in-stream dam. Adelaide River will supply AROWS with water via a controlled pump system during Darwin's wettest months. Water will then be pumped from the

AROWS basin, stored, and then piped to the new Strauss Water Treatment Plant. A new pipeline will be installed adjacent to Stuart Highway to transfer water to the Darwin region.

A rigorous 3 to 4 year planning and approvals phase is underway before a commitment can be made to construct and commission the AROWS project by 2031. The Australian Government, through the National Water Grid Fund, has committed \$18 million to support development activities for the AROWS project, such as environmental assessment and design and engineering.

The Northern Territory Government awarded a \$2.4 million tender to undertake the necessary scientific, stakeholder and regulatory processes required to deliver an Environmental Impact Statement for the project.

The Northern Territory Government is releasing a tender to market, seeking a lead engineering consultant to undertake engineering and design work, and produce a Concept Design report for the project.

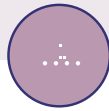


3 Darwin Ship Lift Facility

The defence industry is a key stakeholder and potential future user of the ship lift facility to support naval operations in northern Australia.



Marine



Defence

The Territory Government is building the largest ship lift in Northern Australia. The Darwin Ship Lift Facility will enable the maintenance and servicing of Defence and Australian Border Force vessels, along with commercial and private vessels, including from the oil, gas and marine industries.

The Darwin Ship Lift Facility will be a common user facility that will enable vessel owners to choose and manage their own service and maintenance providers. This will enable multiple providers to operate concurrently at the facility. The common user ship lift facility will include:

- a ship lift 26 metres wide, 103 metres long
- lifting capability of 5500 tonnes
- wet berths (wharves)
- additional hardstand area for ship repair and maintenance works.

The ship lift will operate on a commercial basis. There will be a legislated open access regime to ensure fair and equal use for all customers. The independent Utilities Commission will oversee pricing and access.

The Darwin Ship Lift project has progressed early works, design and procurements. The head contract to build the ship lift has been awarded to Clough-BMD Joint Venture.

The ship lift is anticipated to be operational by early 2025 with the remaining works for the overall facility completed in 2025–26.

The Territory Government has awarded a design consultancy contract to progress the design and the construction of the ship lift, which will begin this year.

The ship lift will support more than 100 direct jobs during construction and 400 ongoing jobs as Darwin takes its place as a new maritime hub servicing Defence, Australian Border Force, and oil, gas and marine industries across the entire region.



Above: Darwin Ship Lift Facility concept. Credit: Department of Infrastructure, Planning and Logistics.

4 5 6 7 Digital industries

Connectivity in northern Australia will be faster and more reliable and resilient following the launch of Darwin's first ever direct connection to the global network of high-capacity subsea telecommunications cables.



Digital



Education



Health



Lifestyle

Vocus' Darwin-Jakarta-Singapore Cable (DJSC) system is a major leap forward in Australia's global connectivity, bridging the digital divide and unlocking new opportunities for growth, innovation and development in the Northern Territory.

The 7700 kilometres DJCS cable system was completed following deployment of a final 1000 kilometre cable, which linked Vocus' existing North-West Cable System, running from Port Hedland to Darwin, to its Perth-based Australia-Singapore Cable – resulting in the first international submarine cable connection into Darwin.

The cable was supported by a \$7.9 million investment from the Northern Territory Government as part of its Terabit Territory strategy.

The project is a significant milestone towards Darwin becoming a major digital hub for the region. It will provide substantial direct and indirect benefits for northern Australia by supporting the connectivity needs of local businesses and communities with more reliable communications. This will benefit a wide range of stakeholders from remote Indigenous communities through to resource operators in the Pilbara by providing low-latency connectivity directly into Asia and enable locals to connect on a global scale.

The cable will also enhance the resilience and security of Australia's international cable network, ensuring uninterrupted and reliable connectivity, including during natural disaster and faults on other cables. This will provide businesses, governments, and individuals with greater confidence and assurance that their communication needs will be met – even in challenging circumstances.

The launch of the Darwin-Jakarta-Singapore Cable will deliver 40 terabits per second of internet capacity between Australia and Asia and pave the way for new data centres in Darwin to put us on the map as a key digital hub.

Further large scale networks are in development.

HyperOne's \$1.5 billion data super highway will be Australia's first hyper scale national fibre network, currently proposed to incorporate 3 routes connecting Darwin to:

- Adelaide, stage 1, (through the spine of the Northern Territory)
- Brisbane (along the Barkly Highway via Townsville)
- Perth (via a subsea connection).

HyperOne's planned network, once complete, will comprise over 20 000 kilometres of new high speed fibre cable across Australia including approximately 2200 kilometres through the Territory, capable of carrying over 10 000 terabits per second.

Hawaiki Nui is a 26 000 kilometre submarine cable connecting New Zealand, Australia, Indonesia, Singapore and the United States.

With a design capacity of 240 terabits, the Spatial Division Multiplexing (SDM) cable system will include up to 20 fibre pairs and link Singapore, Jakarta, Darwin, eastern Australia, the South Island of New Zealand, Hawaii and Los Angeles. The cable is intended to be ready for service in 2027.



Inligo Network Asia Connect (ACC-1) Cable 1 is a privately funded international subsea cable connecting Darwin to South East Asia (Singapore, Medan, Jakarta, Makassar, Dili, Manado and Guam), Japan and the United States. The ACC-1 Cable has 16 fibre pairs with a combined capacity of circa 256 terabits per second. The network will support a minimum of 40x400 gigabit per second wavelengths per fibre pair. This new system will provide an alternate, low latency, high capacity transmission service path between customers in Sydney, Canberra, Melbourne, Adelaide and Darwin with connections into South East Asia and the north Pacific, all delivered on a unified optical platform across the terrestrial and subsea cable systems.

Inligo Network Unite Cable System (Unite) is a private terrestrial fibre network, which will provide additional links:

- Phase 1 is a new link between Darwin and Adelaide
- Phase 2 will extend links from Adelaide to Melbourne, Canberra and Sydney
- Possible subsequent phases are a branch connecting to Papua New Guinea (with potential opportunities to connect Nhulunbuy and Groote Eylandt).

Unite will connect directly into Inligo's ACC-1 Cable system.

The total integration between the international ACC-1 Cable system and the domestic Unite terrestrial system will provide customers seamless connectivity between Darwin, South East Asia, Japan and the United States while also enabling connectivity to the southern capitals, all on the one, fully integrated platform. This functionality will provide Darwin based data centre operators and their customers the shortest routes available into South East Asia and southern Australia, opening up new industries supported by the leading edge connectivity provided by ACC-1 and Unite.

NEXTDC will construct its \$80 million premium grade (D1) data centre in the Darwin CBD. This centre is the key enabler of the Territory Government's Digital Territory Strategy that is aimed at positioning Darwin as a highly competitive location to maximise growth and investment in the local digital economy.

DCI is developing a TIER-Ready III, secure cloud edge data centre, called DRW01, able to support an IT load of up to 10 megawatt with the initial development on a 2.7 hectare site in the Darwin, Palmerston and Litchfield region with an option to expand to 5 hectares. DCI recognises the Northern Territory's position as the digital gateway to Australia's forward-facing defence and space industries, as well as Asia to the north. Darwin is a strategic location in Australia and has already created a digital ecosystem with key elements such as a renewable energy, international and Australia-wide network connectivity.

“All digital highways lead into or through Darwin and that will equal jobs of the future, while growing our digital industry. Driving digital investment in the Territory will open the door to new opportunities for advanced manufacturing, data-centres and cloud-based computing services for Territorians and investors.”



Above: Wutunugurra communications tower. Credit: Telstra.

8 Enabling infrastructure for developing the Beetaloo Sub-basin

The Beetaloo Sub-basin is one of the most prospective areas for shale gas and liquids in Australia.



Resources



Transport and Logistics

Beetaloo onshore gas has the potential to be one of the lowest cost gas sources in the country. It could reduce Australia's dependency on petroleum product imports, facilitate downstream processing and manufacturing industries in the Northern Territory and potentially support energy security and provide gas to the east coast gas market.

Developing the Beetaloo basin will require public and private investment in new infrastructure to get gas to market. This will include pipelines and additional compression facilities to increase existing pipeline capacity, waste and waste-water treatment facilities, upgrades to roads and an aerodrome.

Supporting infrastructure will also include road, rail aviation and utility infrastructure that could also benefit other users in the region.

We have over 500 trillion cubic feet of gas in place in one layer of the Beetaloo Sub-basin, which is currently being appraised.

The Beetaloo Sub-basin is situated in a very remote and sparsely populated area of the Territory which has a very low standard of infrastructure, with little capacity to support new industry development and provide reliable supply chains to market.

Early infrastructure investment is required to capture the potential for the Beetaloo Sub-basin to be a new globally significant gas resource. This infrastructure investment will target supporting a multi-user environment, not only for the development of the basin but also for potential downstream manufacturing in northern Australia and other industries in the Territory.

The public road network within the Beetaloo Sub-basin consists of the Stuart Highway, Carpentaria Highway, Buchanan Highway, Western Creek Road and Gorrie Dry Creek Road.

The Australian and Northern Territory governments have jointly committed \$367 million to plan and deliver priority road upgrades throughout the Beetaloo Sub-basin. The road upgrade projects will provide crucial enabling infrastructure for the growing gas sector and support existing road users, industry and communities by providing more reliable transport and freight links. This in turn will improve safety and travel times, reduce vehicle operating costs and improve flood immunity to increase year round access.

The Northern Territory Government is currently upgrading the Carpentaria Highway, which will be a key road that services the Beetaloo Sub-basin as it moves through exploration, appraisal and development.

Investment in road upgrades will unlock significant job creation and economic potential for the Northern Territory.



Above: Workers camp for Carpentaria Highway.
Credit: Exact Contracting.

○ Marine Industry Park

The Marine Industry Park is strategically located on premium waterfront land at East Arm with connections to road, rail and sea transport and other supporting infrastructure.



Land



Marine

The Marine Industry Park is 16 kilometres by road from Darwin CBD and adjoins East Arm Wharf. It provides opportunities to enhance support for the marine and offshore industries, complementing services already available within the region.

Centrally positioned on Australia's northern coastline, the Marine Industry Park is the only significant vessel servicing point between Cairns in Queensland and Perth in Western Australia. Located within Darwin's deep water harbour, the Marine Industry Park provides a new opportunity to effectively service vessels operating across northern Australia and the Indo-Pacific region.

The first stage of the Marine Industry Park included an all tide barge ramp that is an accredited first point of entry for the Darwin Port. This is supported by 9 hectares of secured hardstand with 24-hour access for storage and fabrication activities. The barge ramp and hardstand are available for use on a commercial basis. Stage 2 of the Marine Industry Park will comprise a further 4 hectares of land for marine maintenance workshops and supporting services.

Establishing vessel maintenance workshops on serviced lots within the Marine Industry Park is an essential component to fulfil the economic activity and job creation opportunities expected to be enabled by the Darwin Ship Lift Facility.

The Darwin Ship Lift Facility will provide the capability to undertake major maintenance of Defence, Australian Border Force and commercial vessels, including from the oil, gas and marine sectors.

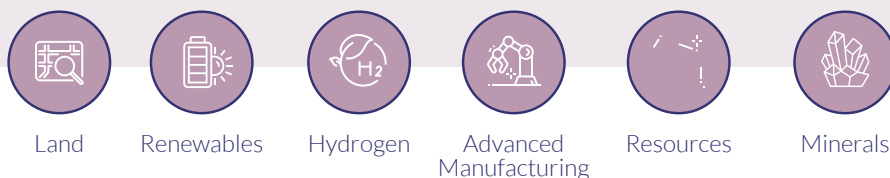
Once operational, the Darwin Ship Lift Facility will be a catalyst for developing a marine maintenance and servicing industry. It will create 100 direct jobs during construction and it is anticipated approximately 400 ongoing full time jobs will be created in the marine services industry during the operational phase.



Above: Stage 1 Marine Industry Park.

10 11 12 13 14 Middle Arm Sustainable Development Precinct

The Middle Arm Sustainable Development Precinct will provide a strategic, sustainable and high-tech blueprint for the future of Australian industrial hubs.



The Middle Arm Sustainable Development Precinct (the Precinct) is strategically located at the intersection of key existing enabling elements such as water, gas, power, rail and road infrastructure, with potential for deep water export port facilities.

It is home to a globally significant liquefied natural gas (LNG) export hub with the Darwin LNG and Ichthys LNG projects supplying over 10% of Japan’s annual global gas imports.

The Precinct represents an ambitious and transformative project aimed at establishing a globally competitive and sustainable industrial precinct. With a primary focus on low emission hydrocarbons, renewable hydrogen, carbon capture, use and storage, advanced manufacturing and minerals processing, this visionary endeavour is aligned with the Australian Government’s commitments to sustainability, decarbonisation and fostering economic growth.

Sustainable outcomes and protecting Darwin Harbour’s environmental values are at the core of planning for the Precinct.

The essential elements and opportunities of a sustainable development precinct as it relates to Middle Arm include:

- maximising renewable energy use
- maximising economic outcomes while minimising environmental and social impacts
- efficient water use including reuse where possible

- circular economy principles including reusing waste streams (such as using waste as a feedstock) and carbon capture
- efficient use of infrastructure.

The Northern Territory Government is committed to meaningful engagement, led by Traditional Owners and in consultation with all stakeholders, to inform the design, delivery and management of the Precinct, ensuring preservation of values associated with the site and providing the potential for economic opportunities into the future.

The Strategic Environmental Assessment of the Precinct is a first for the Northern Territory and is aimed to deliver certainty for both business and community, outlining the types of development activity approved to occur, and the conditions under which they may operate. The community has an opportunity to provide feedback to inform decisions on proposed activities throughout the life of the project, including the next formal feedback point, which is the public exhibition of the draft Environmental Impact Statement (EIS).

In 2023, the Common User Infrastructure at the Middle Arm Precinct Stage 2 Business Case was provided to and accepted by Infrastructure Australia. Work is underway to develop the Stage 3 Business Case.

The Precinct is a key economic enabler that leverages the Northern Territory’s significant endowment of natural resources and strategic minerals. Growth in the downstream gas processing industry in Darwin will bring broader and deeper benefits for the national economy and contribute to Australia’s energy security.



The Northern Territory can use these abundant resources to manufacture on an international scale, competing with other countries for both high volume and high value commodity markets.

The Precinct will also provide the opportunity to capitalise on the Northern Territory's proximity to large Asian markets.

The Precinct is attracting significant interest and will enable the development of an interconnected hydrogen industry and utilise carbon capture to accelerate low emission industry development. In June 2023, the Northern Territory Government took the next big step towards developing the Precinct as a new clean energy, investment and jobs powerhouse.

To give interested companies certainty as they develop projects at the Precinct the Territory Government provided 5 proponents a commitment 'not to deal' over specific parcels of land. These commitments mean that their preferred sites in the Precinct will be set aside for up to 12 months to provide each proponent confidence and certainty to continue developing their proposals.

These companies will now progress their facility designs, engineering work and pre-feasibility studies and environmental approvals. They will be required to comply with all conditions set by the NT Environment Protection Authority as part of the Strategic Environmental Assessment process for the Precinct which is currently underway.

10 Avenira Limited's Lithium Cathode Battery Manufacturing Project



Resources

Advanced
Manufacturing

In September 2023, Avenira executed 2 agreements with its technology partner Advanced Lithium Electrochemistry Ltd ('ALEEES') granting Avenira the right to use ALEEES intellectual property for the manufacture and distribution of Lithium Ferro Phosphate (LFP) active cathode material.

These formal agreements follow the signing of a non-binding memorandum of understanding with the Northern Territory Government and ALEEES in September 2022 to work together to develop and operate the Territory's first battery cathode manufacturing project at the Middle Arm Sustainable Development Precinct.

ALEEES is a global leading supplier of high-end cathode materials and one of only 2 producers of battery-grade lithium iron-phosphate (LFP) cathode active material outside of mainland China. They have partnered with Avenira to develop a new facility to meet expected orders from electric vehicle and stationary storage battery suppliers.

In June 2023, Avenira received a commitment to a 9 hectare site at the Middle Arm Sustainable Development Precinct to develop and operate the Territory's first battery cathode manufacturing project. Avenira consider the precinct well suited

to LFP manufacturing with proximity to key logistics infrastructure for access to raw materials and to planned renewables for low emission energy.

The LFP plant will initially import all feedstock to produce an initial 10 000 tonnes, increasing to 30 000 tonnes per annum (tpa) of precursor battery cathode material exported to battery cell manufacturers in Japan, Korea and Malaysia. It is estimated the LFP plant will initially create 100 jobs, growing to 300 jobs and generating up to \$1.5 billion average annual revenue to the Territory economy.

The proposed second stage of the project will increase capacity to 100 000 tpa and include a plant to convert yellow phosphorous metal to thermal phosphoric acid. The yellow phosphorous metal will be sourced exclusively from Avenira's Wonarah phosphate project once upstream development is complete.

11 Fortescue Green Hydrogen Hub



Renewables



Hydrogen

Fortescue is a global metals and green energy company focused on developing a green hydrogen hub, comprised of green hydrogen and green ammonia production and export facilities at the Middle Arm Sustainable Development Precinct.

Green hydrogen is a zero-carbon fuel that, when used, produces primarily water. It is a practical and implementable solution that can help revolutionise the way we power our planet and help to decarbonise heavy industry and create jobs globally.

Fortescue is planning to use green hydrogen to power hydrogen fuel-cell electric vehicles and to decarbonise the company's mining fleet including light vehicles, trucks, trains and drill rigs.

Green hydrogen can also be used for a number of other purposes, including to create synthetic aviation fuels to replace aviation kerosene or as hydrogen in fuel-cells, replace fossil fuel based hydrogen in industrial processes, make it into green ammonia for use as fuel for shipping and rail and to create green fertilisers for the agriculture industry.

Tamboran is an ASX listed (TBN) natural gas company with a vision of supporting the energy transition in Australia and the Asia-Pacific region by developing low reservoir CO₂ unconventional gas resources in the Northern Territory.

Tamboran's pure focus is the Beetaloo/McArthur Basin in the Northern Territory. Tamboran is one of the largest acreage holders in the Territory with an estimated 1.9 million net prospective acres in the Beetaloo Sub-basin, held through 100% owned properties and two joint ventures – one with Santos and the other with Falcon Oil & Gas and Daly Waters Energy LP (Sheffield).

The Beetaloo Sub-basin is located approximately 600 kilometres south of Darwin, which has the potential to grow into a major industrial hub linked to the Beetaloo via key infrastructure such as roads, gas pipelines and rail.

Tamboran and its joint venture partners are proposing a staged development of the Beetaloo Sub-basin. Stage 1 will involve supplying natural gas into the NT gas market, with first gas expected in early 2026. Stage 2 will supply gas into Australia's east coast gas market, and Stage 3 will deliver LNG to our regional trading partners via a new LNG export facility located in Darwin.

In May 2023, the Northern Territory Government provided Tamboran 12 months exclusivity over 170 hectares (420 acres) of land within the Middle Arm Sustainable Development Precinct (Middle Arm) for a proposed LNG development, Northern Territory LNG (NTLNG).

Gas from Tamboran's proposed NTLNG facility will play an important role in the decarbonisation plans of our trading partners in Asia and beyond.

To support Tamboran's vision to developing the Beetaloo Basin, the company has entered into several strategic partnerships and agreements with major international energy corporations and infrastructure companies.

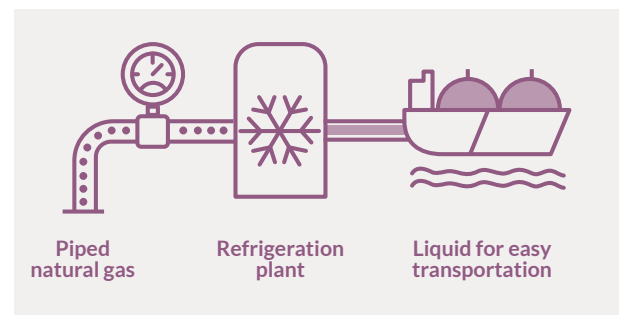
- In April 2023, Tamboran welcomed the arrival of Helmerich & Payne's super-spec FlexRig® Flex Rig 3 in Australia from the United States and the new rig has already delivered significant improvements in drilling efficiency. H&P has invested directly into Tamboran and is a significant shareholder. The rig allows Tamboran to drill longer horizontal sections within the

shale, which is expected to reduce Tamboran's environmental footprint in the basin.

- Tamboran has selected APA Group as its preferred transmission pipeline partner for its Beetaloo Sub-basin development, with the intent of connecting the Beetaloo to Australia's east coast gas market and the proposed NTLNG development.
- Tamboran has signed six non-binding Letters of Intent with Australia's largest gas and energy retailers for 220 – 320 petajoules per annum for up to 10 – 15 years into Australia's east coast gas market.
- Tamboran has entered into two non-binding memorandums of understanding with BP Singapore and Shell Eastern Trading regarding the potential purchase of 4.4 million tons of LNG from NTLNG. Tamboran is targeting formal execution of the LNG Sale and Purchase Agreements in 2025.

Important to the overall integrated development, Tamboran aspires to deliver a Net Zero Scope 1 and 2 project at the commencement of commercial production through the integration of renewable energy, carbon capture and storage, and carbon offsets.

Low Co₂ energy transition





Above: Middle Arm Sustainable Development Precinct concept. Credit: Department of Infrastructure, Planning and Logistics.



13 Tivan Limited

In January 2023, Tivan Limited changed its name from TNG Limited and has since announced it is relocating its corporate headquarters to Darwin.

In February 2023, Tivan acquired the Speewah Vanadium Titanium-Iron Project near Wyndham, WA, and announced its plans to construct the TIVAN Processing Facility at the Precinct. Tivan is proposing to produce vanadium oxides at Speewah in support of the development of a large-scale renewable value chain across northern Australia.

As part of its revised development pathway, Tivan is committed to 2 near term initiatives in Darwin, each involving advanced renewables technologies:

A large-scale Vanadium Electrolyte Facility, with phased-in capacity of 500 megawatt-hours per year (MWh/yr), to be located at the Middle Arm Sustainable Development Precinct. This initiative was announced on 31 October 2023, in conjunction with an agreement with Larrakia Energy to provide up to 30MW of solar energy to power the facility.

A Pilot Plant, developed in conjunction with CSIRO, for the TIVAN+ critical minerals processing technology, provisionally located at East Arm, in cooperation with Investment Territory and Land Development Corporation.

The TIVAN+ technology is capable of processing hard rock vanadium ore bodies to produce 3 commercial grade products: vanadium, titanium and iron.

In April 2023, Tivan entered into a letter of intent with SunCable for the potential provision of 200-300MW of dispatchable renewable energy to the planned TIVAN Processing Facility.

In May 2023, Tivan entered into a memorandum of understanding with Charles Darwin University to further collaborative pathways in critical minerals and renewable energy.

In October 2023, Tivan retained Hatch for an engineering review of its development pathway, in advance of an expected pre-feasibility study to be completed in 2024.

Tivan is also actively exploring the Sandover Project, located near Ti Tree in Central Australia. In October 2023 Tivan announced that targets had been identified in copper and lithium, confirming a next phase of exploration, ahead of a potential drilling program in 2024.

14 Total Eren Australia H2



Resources



Electricity



Renewables



Hydrogen

Total Eren Australia H2 (TEH2) is a joint venture between Total Energies and Eren Groupe focused on the development, investment and ownership of global renewable hydrogen (H2) projects. Total Energies is a leading multi-energy company with a presence across 130 countries and revenue exceeding USD \$263 billion in 2022.

Eren Groupe is dedicated to natural resources efficiency with a strong track record in renewable energy development and investment. Since 2020, TEH2 launched pioneering green hydrogen projects in North Africa, Latin America and Australia.

TEH2 is developing the Darwin H2 Hub, which is a proposed renewable green hydrogen production facility located at the Middle Arm Sustainable Development Precinct with an associated solar farm and transmission assets. The initiative will produce approximately 75 000 tonnes of green hydrogen a year and other decarbonised products such as green ammonia and e-methanol. Development commenced in 2021 and the Darwin H2 Hub will contribute to the Territory's energy transition and enable domestic and international companies to move towards sustainability and decarbonisation.

The Northern Territory Government signed a Memorandum of Understanding in August 2022 to fast-track the proposed Darwin H2 Hub. Significant environmental and technical studies are currently underway.

TEH2 anticipates that the Darwin H2 Hub will deliver approximately 800 jobs during construction and 175 ongoing operational jobs.

TEH2 identified early in the process that the Precinct is a suitable location for hydrogen processing and export with the company values aligning with the vision for the Precinct.

Carbon capture, utilisation and storage at Middle Arm

Carbon capture, utilisation and storage (CCUS) is a proven process that captures carbon dioxide emissions, preventing entry into the atmosphere. CCUS is a critical emissions reduction technology that supports clean energy transitions.

Carbon captured and transported to the proposed hub at Middle Arm will either be stored or used. Storage at the Precinct would entail carbon being sent via a pipeline to geological storage outside of Darwin.

There will also be opportunity for industries to utilise carbon captured at Middle Arm to produce other valuable products. An example of carbon being utilised, or reused, is to make urea, a common fertiliser.

Another example is cement where manufacturers are developing technologies to inject carbon into their manufacturing process. This improves product performance and offsets emissions.

15 National Aboriginal Art Gallery

The National Aboriginal Art Gallery project is an exciting and transformative endeavour to create a world-class destination celebrating the artistic traditions and cultural expressions of Australia's Aboriginal and Torres Strait Islander peoples. It will be a space that honours the stories and truth-telling of First Nations people nationally.



Tourism



Lifestyle

The National Aboriginal Art Gallery continues to progress, with the Territory Government acquiring Anzac Oval and the design well advanced. The gallery is part of the Anzac Hill precinct, which includes a new Tourism Central Australia visitor information centre, realigning Schwarz Crescent and landscaping, featuring the Kwatye (water) play initiative.

The Northern Territory Government has committed approximately \$69 million to deliver the precinct, and the Australian Government has committed a further \$80 million to support the gallery.

The gallery will be First Nations led and governed, and include:

- expansive public spaces
- public amphitheatre green space
- healing gardens protecting sacred sites
- Kwatye (water) play

- cultural welcoming circle
- an event space and café
- a 4 level atrium.

The gallery is a project of national significance and will position Central Australia as a key destination for cultural tourism. Construction is expected to commence in 2024 and be completed in 2027.

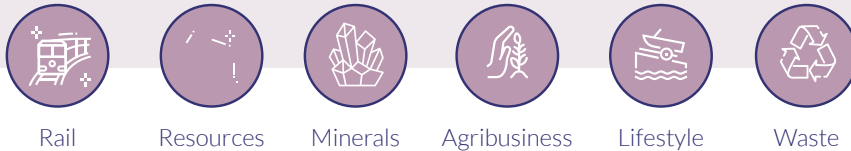
The National Aboriginal Art Gallery will generate economic benefits for the community with up to 260 full time jobs created during construction and once operational, is expected to attract visitors from around Australia and the world.



Above: Concept of National Aboriginal Art Gallery. Credit: BVN Architectural and, Susan Dugdale & Associates.

○ Northern Territory freight rail and logistics capacity improvements (Regional logistics hubs)

Logistics and supply chains are fundamental to supporting the viability of projects key to the Northern Territory’s economic growth. They also have significant employment and investment impacts in local communities.



Community resilience and social benefits will result from improved local supply chains for consumer and essential goods. This will support the living standards in remote and regional towns needed to support growth and the delivery of private projects.

Improving rail efficiency and intermodal capacity in supply chains will support the NT Government’s objective to achieve a \$40 billion economy by 2030 by developing mining, agriculture and energy projects.

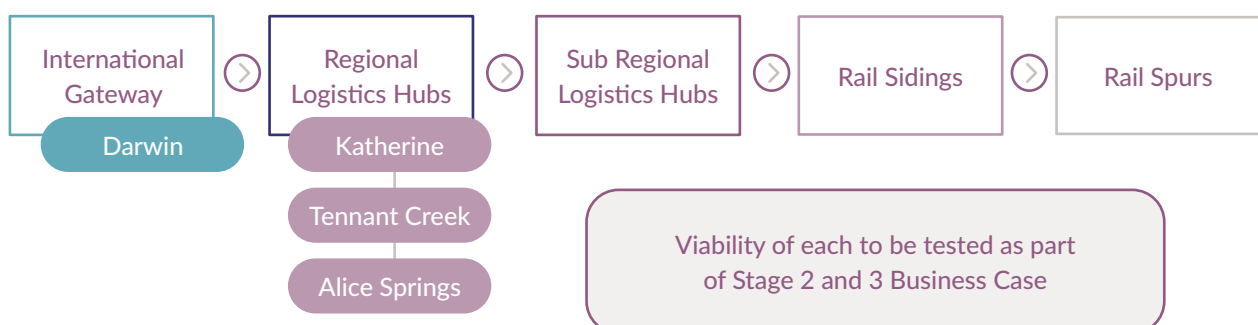
The Northern Territory Government is implementing actions to ensure logistics support rather than constrain industry and economic growth.

The Northern Territory Government has established a solid evidence base of demand for freight and supply chain capacity across agribusiness, minerals and energy, manufacturing, defence, digital and social sectors and is working with the Australian Government and the private sector to meet this demand.

Increases in capacity of port, rail, road, storage and warehousing will be needed to facilitate the growing freight task.

In the Northern Territory’s larger communities across the main freight corridor, regional logistics hubs will be developed to consolidate, store and transfer freight between road and rail networks between project and port. These regional logistics hubs will include:

- community distribution facilities to increase resilience in supply chains to distribute food and essential supplies across remote Northern Territory
- skills training facilities to provide real employment opportunities in these communities
- waste recycling facilities, which are essential to enabling a circular economy across the Northern Territory
- strategic staging facilities to enable laydown areas at strategic sites and more capacity and flexibility across the National Land Transport Network
- fuel facilities to enable hub and spoke logistics arrangements to reduce constraints on the road transport industry.



These regional logistics hubs will create the focal points for an increasingly efficient and resilient supply chain to foster a range of benefits.

- **Economy:** every project and development across the Northern Territory relies on transport of goods for construction, production and trade. The time and cost efficiency of this transport flows through to every sector of the economy.
- **Community:** a resilient transport network results in less frequent and less impactful disruption of supply chains. Increasing the proportion of freight that can travel by rail reduces the interface between private road users and heavy freight vehicles.
- **Environment:** reducing the distance freight travels and utilising the optimal freight mode contributes to reducing greenhouse gas emissions.

The Australian Government committed \$440 million in October 2022 in planned equity to support the delivery of the network of regional logistics hubs. The Northern Territory and Australian governments recognise the significant opportunity to grow the freight catchment area and increase the proportion of freight transported internationally via Darwin.

The Northern Territory freight rail and logistics capacity improvements Early Stage Proposal (Stage 1) Business Case was provided to and accepted by Infrastructure Australia in 2023 for inclusion on the Australian Infrastructure Priority List. Work is underway to develop the Potential Investment Options (Stage 2) Business Case.

The estimated total investment proposed from projects in mining, minerals and energy industries across the Northern Territory is over \$38 billion. This investment is estimated to support more than 6 000 construction jobs. Much of the investment and employment increase will occur in remote and very remote regions with higher proportions of First Nations people.



Above: Railway crossing. Credit: Department of Infrastructure, Planning and Logistics.

NORTHERN TERRITORY REGIONAL LOGISTICS HUBS

KEY

- Regional Logistics Hubs
- Sub Regional Logistics Hubs
- Rail Sidings
- Rail Spurs
- Highways
- - - - - Rail Line
- · - · - · Rail Spur being considered

Disclaimer: This map is to be used as a guide only.



Northern Territory remote community power generation program



The Northern Territory Government, through the Power and Water Corporation's not-for-profit subsidiary Indigenous Essential Services (IES), provides electricity to 72 remote communities and 66 outstations across the Northern Territory.



Renewables



Solar



Lifestyle

Power and Water delivers these services through the Department of Territory Families, Housing and Communities on behalf of the Northern Territory Government. This network includes 9093 customer connections across 51 power stations.

Diesel engines are the main technology used to generate electricity for regional and remote communities, with about 25 million litres of diesel used each year.

With the operating costs of transporting diesel to remote communities continuing to increase, the Office of Sustainable Energy is working on strategies to deliver 70% renewable energy penetration to all 72 remote communities.

As the largest isolated off-grid solar program in remote communities, the Solar Energy Transformation Program (SETuP) is a world-first.

Delivery of this strategy is also an action under the Territory Government's Climate Change Response and a recommendation of the Territory Economic Reconstruction Commission to transition Indigenous Essential Service communities to renewable-based systems by 2030.

The strategy builds on the success of the Solar Energy Transformation Program (SETuP). The \$60 million program is co-funded by the Territory Government and the Australian Renewable Energy Agency (ARENA) and delivered 10 megawatts of solar generation to 25 remote communities.

Planning activities are underway to facilitate external investment in renewable remote power systems in communities to maximise opportunities for local industries, create jobs for Territorians and strengthen local skills and expertise.

The Northern Territory Government is progressing detailed analysis of each community to map the optimal renewables development pathway, considering existing energy assets, community aspirations, electricity demand profiles and forecast growth.

In addition to the community focused detailed analysis, the project will identify available land for solar development in each community. It will also include pilot projects and studies to facilitate greater levels of distributed energy supplies and emerging technologies, such as hydrogen and microgrids.

SunCable – the Australia-Asia Power Link



SunCable is developing the Australia-Asia Power Link (AAPowerLink), a world-leading project harnessing Australia’s abundant land and solar energy. AAPowerLink will be one of the world’s largest solar farms and battery systems, which will harness solar energy from the Barkly region in the Northern Territory, for 24/7 dispatch to Darwin and Singapore via a 5000 kilometre high voltage direct current (HVDC) transmission system.



Renewables



Solar

SunCable’s energy projects will position the Northern Territory as a world leader in intercontinental transmission of renewable electricity. The AAPowerLink will stimulate the growth of a renewable infrastructure industry in the Northern Territory.

The AAPowerLink will initially provide 800 megawatts (MW) of electrical capacity to the Darwin region and will facilitate the electrification of new and existing industries, supporting large-scale economic development, while reducing greenhouse gas emissions.

The AAPowerLink is a \$35 billion project that will deliver significant strategic, economic and social benefits to the regions in which it will operate.

It has the potential to create thousands of jobs, opportunities for local businesses and suppliers, as well as innovation and investment in Australia, Singapore and Indonesia.

Benefits include an estimated \$8 billion in investment in Australia during the 4 year construction period, with most of that spent in the Northern Territory and an estimated 1750 direct construction jobs and approximately 350 long term operational jobs for the 70 year life of the project.

19 Tanami Road upgrade

Reliable road connections support the movement of freight for existing and emerging economic activities such as mining, agriculture, tourism and defence. For remote parts of the Northern Territory, reliable road connections also improve a range of social indicators such as employment, health and education outcomes.



Resources



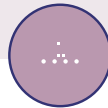
Agribusiness



Lifestyle



Tourism



Defence

The Tanami Road is a 1014 kilometre direct link from Halls Creek, Western Australia to the north of Alice Springs in the Northern Territory. The road condition along the 703 kilometre Northern Territory section of Tanami Road, from the Stuart Highway turn off 19 kilometres north of Alice Springs to the Western Australia border, comprises 330 kilometres of sealed and 373 kilometres of unsealed road.

Under the current conditions, the Tanami Road is closed or restricted to all traffic for long periods during the wet season – up to 60 days per year in some sections. This limits mobility and access to communities along the Tanami Road and prevents inter-regional tourist and freight traffic from using the Tanami Road all year round.

Sections of the road are closed to heavy vehicle traffic for longer periods. During these seasonal events, there are safety issues for road users due to poor road geometry, excessive corrugations and poor visibility as a result of dust.




















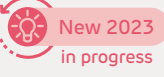
Although not included on the National Infrastructure Priority List, the Australian Government committed to upgrade the Tanami Road as it is strategically important to the Northern Territory and Western Australia. It is also recognised as being nationally significant, due to its importance to developing northern Australia. The Australian and Northern Territory governments have committed \$262.5 million on an 80:20 co-funding basis to upgrade the Tanami Road within the Northern Territory under the current Roads of Strategic Importance (Alice Springs to Halls Creek) program. The Western Australian Government has also received funding for its portion of the road.

The October 2022 Federal Budget committed \$350 million of additional Australian Government funding on the same 80:20 basis, to continue upgrading the Tanami Road and the Central Arnhem Road. The funding split allocates \$250 million to the Tanami Road and \$100 million to the Central Arnhem Road.



Implementation pathway

The suggested implementation pathway are actions that can be taken to respond to anticipated economic and population growth challenges and opportunities.

Implementation pathway	Prioritisation action	Progress
Nationally significant projects, programs and proposals		
Progress Stage 2 submission (Potential Investment Options) to Infrastructure Australia for enabling infrastructure to develop the Beetaloo Sub-basin (as all road upgrades are now funded, this will be for the remaining infrastructure required)	 Reform	 In progress
Progress Stage 2 submission (Potential Investment Options) to Infrastructure Australia for common user infrastructure at the Middle Arm Sustainable Development Precinct	 Reform	 Achieved
Progress Stage 3 submission (Investment Ready Proposal) to Infrastructure Australia for common user infrastructure at the Middle Arm Sustainable Development Precinct	 Reform	 In progress
Submit Stage 1 submission (Early Stage Proposal) to Infrastructure Australia for Northern Territory freight rail and logistics capacity improvements	 Reform	 Achieved
Progress Stage 2 submission (Potential Investment Options) and Stage 3 submission (Investment Ready Proposal) to Infrastructure Australia for Northern Territory freight rail and logistics capacity improvements	 Reform	 In progress
Submit Stage 1 submission (Early Stage Proposal) to Infrastructure Australia for the Marine Industry Park	 Reform	 In progress
Submit Stage 1 submission (Early Stage Proposal) to Infrastructure Australia for Central Arnhem Road	 Reform	 In progress
Remove and strengthen the Infrastructure Australia Priority List proposal "Enabling infrastructure and essential services for remote Northern Territory communities in Wadeye, Tiwi Islands, Jabiru"	 Reform	 Achieved
Accelerate planning for and delivery of residential, commercial and industrial land	 Reform	 In progress
Support job creation and business growth across the economy through developing waste recycling facilities in the network of regional logistics hubs, reducing the reliance on interstate waste processing and waste going to landfill	 New	 New 2023 in progress

Territory-wide significant projects, programs and proposals

The Northern Territory holds the heart of the nation and is linked by a central spine to our northern capital of Darwin at the top of Australia. With a view to our Asian neighbours and bordered by 6 states, the Territory is in an enviable economic and environmental position.

The Territory's location and natural assets are our biggest opportunities as well as our biggest challenges.

The Territory is seen as one region but its size, physical remoteness, small population and 2 starkly different climates create a variety of challenges and opportunities.

Its natural landscapes are formed from tropical wet and dry seasons in the north and from winter through to summer in its desert centre.

The Stuart Highway and Adelaide to Darwin Railway link our centres from Alice Springs in the south to Tennant Creek, Pine Creek and Katherine in the north. Darwin sits on the edge of the Arafura Sea while our other coastal centre Nhulunbuy lies on the East Arnhem coast.

The Territory is one of the most linguistically diverse areas of the world with more than 100 different Aboriginal languages and dialects spoken, including Arrernte in Central Australia, Yolngu in Arnhem Land and Tiwi in Tiwi Islands near the Timor Sea, to name a few.

Each of the Territory's regions are distinct, including connection to travel and transport routes, local industry opportunities, infrastructure challenges, climate and environment, the people and areas they service, their natural landscape and man-made attractions.

Sustainable workforces, biosecurity, digital connectivity, water security, land tenure, housing availability and transport infrastructure gaps are common challenges across our regions.

Our opportunities include the history and culture embedded in our remote areas and regions. It is in the regions where population growth, improved lifestyle and culture and economic opportunity will spread as major projects create jobs and local business growth.

Our regions are the Territory's growth hubs and include:

- Darwin, Palmerston and Litchfield
- Top End
- Big Rivers
- Central Australia
- Barkly
- East Arnhem

This Plan and Pipeline explores the strengths, gaps and growth opportunities for our regions including major industries and growth sectors, challenges and opportunities and key infrastructure priorities.

Investment portfolio

The Territory-wide total investment portfolio has a direct impact on economic and population growth. It is important to understand the magnitude of economic and population growth to inform the enabling infrastructure plan.

Infrastructure NT has worked closely with Investment Territory to determine the total investment portfolio. This analysis determined the following total investments anticipated for the Territory-wide region, subsequent jobs, accommodation needs and population growth.

Analysis is based on Investment Territory 2022–2023 Progress and Outlook: May 2023



Note 1: Includes direct and indirect where provided by proponents

Note 2: Includes direct and indirect where provided by proponents in the NT only

Note 3: Based on 2.6 multiplier (ABS average persons per household NT regional)

Note: Numbers are approximate over 10 years. Further refined analysis is ongoing.

Aurizon – Railway service expansion 20

Aurizon, an Australian company with more than 150 years of rail experience, is the nation's largest rail freight business and transports about 250 million tonnes for customers each year. Aurizon brings its scale and capability to the Northern Territory and looks forward to contributing to the NT Government's goal of building a \$40 billion economy by 2030.

In mid-2022, Aurizon invested \$1.4 billion to acquire the One Rail business in the Northern Territory and South Australia, including the Tarcoola to Darwin rail corridor. This investment recognises the strategic value and potential of the business in serving rapidly growing markets for resources, agribusiness, renewable energy and general freight.

The 2240-kilometre Tarcoola to Darwin railway is a nationally significant corridor with direct connection to the Port of Darwin, the closest port to Australia's largest trading partners in Asia. Aurizon is committed to improving the efficiency and capacity of this corridor, with targeted investment to benefit existing customers and to boost the viability of adjacent agricultural, mineral and energy projects under development.

In the first 12 months of operation, Aurizon has committed investment of more than \$50 million in new assets for the region, as well as preparing plans to increase the number of services along the railway as we respond to increasing customer demand. This also includes the potential opportunity to construct additional passing loops on the rail corridor and to build additional capacity in the Darwin/Berrimah rail terminal at the port.

As well as supporting customer growth and development of regional projects, these investments have the flow-on benefits of increasing local employment and supporting local communities and business. More than 80% of Aurizon's nationwide workforce of 5800 employees live and work in regional communities.









Above: NT railway near Alice Springs. Credit: Department of Infrastructure, Planning and Logistics.

Enabling infrastructure plan

The enabling infrastructure plan for across the Territory lists the infrastructure proposals that are not yet funded, are in the planning phase and have been identified as enabling an outcome.

Proposals listed respond to economic and/or population growth or address the cross cutting objectives in the NT Infrastructure Strategy 2022 – 2030.

Proposals	Estimated Total \$m	Challenges/opportunities	Timeframe (Years)
Access road upgrades to barge landings and all-weather aerodromes	50	Improve all weather air and sea access to support accessibility, visitor growth and community safety	0-15
Across the Territory upgrade and new bores	•	Support improved water management	0-10
Aerodrome and airstrip upgrades	30	Support connectivity and improve all weather access to improve community safety, accessibility and support future growth	0-15
AFLNT facilities upgrade to support growth in girls and womens football	1	Strengthen a healthy, active lifestyle by improving recreation opportunities and enhance visitor experience	0-5
Barge landing upgrades	150	Support economic development by improving all weather access and goods handling facilities	0-15
Football ovals install lighting	4	Strengthen a healthy, active lifestyle by improving recreation opportunities and enhance visitor experience	0-5
Logistics Network continued expansion	•	Enable economic development by improving supply chains and transport	0-10
Mobile and/or broadband services	33	Enable connectivity and create digital opportunities	0-10
National highways bridge upgrades	40	Improve flood resilience and support accessibility, connectivity and amenity	0-10
Network of fast charging points for electric vehicles at key tourist and rural locations	5	Enable economic development and population growth through tourism led economy	0-10
Park facilities to enhance experience and access for visitors with limited mobility	•	Support accessibility, connectivity and amenity for all visitors	0-10
Public Transport upgrade bus stops	20	Support accessibility, connectivity and amenity for public transport passengers	0-15

Timeframe	
 0-5 Years	 0-10 Years
 5-10 Years	 10-15 Years
	 0-15 Years
	 15+ Years

• indicates value is either commercial in confidence or to be confirmed.

Proposals	Estimated Total \$m	Challenges/opportunities	Timeframe (Years)
Rail passing loops		<ul style="list-style-type: none"> Enable economic development by improving supply chains, processing and transport 	0-10
Remote Infrastructure Fund upgrade 40+ community facilities to support AFL	200	Strengthen a healthy, active lifestyle by improving recreation opportunities and enhance visitor experience	0-10
Tennant Creek to Darwin common user infrastructure corridor		<ul style="list-style-type: none"> Support the continued development of our regions by providing an infrastructure corridor to enable future services including gas, water, communications and other utilities 	0-5
Territory Parks develop new visitor hubs in the Top End, Savannah Gulf, Barkly and Central Australia regions		<ul style="list-style-type: none"> Value, preserve and expand access to parks, increase visitation opportunities and visitor experience 	0-15
Territory Parks two-wheel drive access improvements		<ul style="list-style-type: none"> Value, preserve and expand access to parks, increase visitation opportunities and visitor experience 	0-15
Territory Parks water security projects		<ul style="list-style-type: none"> Ensure water security to enable commercial opportunities 	0-10
Territory Schools air-conditioning mechanical and electrical upgrades	50	Upgrade ageing infrastructure to support the continued delivery of quality education	0-15
Upgrade roads to communities		<ul style="list-style-type: none"> Improve all weather access to support accessibility, growth and community safety 	0-15

Implementation pathway

The suggested implementation pathways outline actions that can be taken to respond to anticipated economic and population growth challenges and opportunities.

Implementation pathway	Prioritisation action	Progress
Territory-wide		
Plan for regional waste facilities	Reform	In progress
Develop options to ensure that entry level and affordable housing are in the market, including options to accelerate market participation by community housing providers	Reform	In progress
Complete Infrastructure Audit	Reform	Achieved

Infrastructure pipeline

The following is a list of committed Territory-wide projects, funded by either government or the private sector.

Project	Estimated \$m				Challenges/opportunities
	Total	2023-24	2024-25	Outer Years	
Across all regions upgrade critical water tanks	15.2	1.5	6.0	•	Support population growth by improving access to quality water
Across all regions water main replacement	14.4	2.9	4.5	•	Support population growth by improving access to quality water
Across all regions water services minor works	33.0	26.4	32.4	•	Support population growth by improving access to quality water
Alice Springs to Darwin corridor (Stuart Highway) road safety improvements	62.3		50.0	•	Increase road capacity, safety, support accessibility, connectivity and amenity
Community Housing Provider housing projects	7.0	•			Provide safe, secure and affordable housing for people on low incomes
Community Housing Provider redevelopment projects	4.4	4.4			Provide safe, secure and affordable housing for people on low incomes
Darwin-Katherine Transmission Line (DKTL) secondary systems upgrade	9.0	6.0			Asset renewal to support growth, compliance and improve service efficiency
Digital Connectivity Program	7.5	•	•	•	Enabling connectivity and creating digital equality
Government Employee Housing Build Program	186.0	48.0	30.0	•	Provide Government employees with safe, secure and appropriate housing while performing duties in remote locations
Government managed Remote Women's Safe House upgrades and remote play equipment	1.4	1.0			Support vulnerable people by improving community service facilities
Homeland housing and infrastructure upgrade program	77.0	•	•	•	Capital grant to upgrade ageing infrastructure to support communities
Homeland Learning Centres infrastructure upgrades	1.0		1.0		Upgrade ageing infrastructure to support the continued delivery of quality education
Indigenous Essential Services asset replacement	84.0	21.0	21.0	•	Support remote communities by improving essential services efficiency

A lesser figure in the 2023-24 and 2024-25 columns than in the Total column indicates either previous year expenditure or expenditure in outer years.

• indicates value is either commercial in confidence or to be confirmed.

Project	Estimated \$m				Challenges/opportunities
	Total	2023-24	2024-25	Outer Years	
Indigenous Essential Services capital improvements	21.0	7.0	7.0		Support remote communities by improving essential services efficiency
Indigenous Essential Services headworks to support development	70.0			•	Support population growth by increasing land availability
Information communications technology (ICT) cabling upgrades in schools	8.0	1.0			Enable connectivity and create digital opportunity
Infrastructure to support Territory Families, Housing and Communities remote services expansion	11.3	11.2			Improve outcomes for children and families
Mobile oral health dental unit replacement	0.7	0.7			Strengthen liveability by improving infrastructure to support oral health services
Planning works to support the development of land infrastructure planning, concept development and detailed design	41.0	4.0	4.0	•	Enable economic development and population growth by increasing land availability
Power Networks augmentation and capital projects	164.0	43.0	36.0	•	Asset renewal to support growth, compliance and improve service efficiency
Public Housing new builds	8.5	•			Provide safe, secure and affordable housing for people on low incomes
RAAF Base Darwin and Mt Bunday Training Area – National Airfields Works	351.0			•	Maintenance to maximise existing infrastructure
Rail upgrades to support growth	•	25.0	25.0	•	Maintenance to maximise existing supply chain and transport infrastructure
Regional Logistics Hubs	440.0	10.0	50.0	•	Enable economic development by improving supply chains and transport
Remote Women's Safe House upgrades managed by Non-Government Organisation (NGO)	1.6	•			Capital grants to support vulnerable people by improving community service facilities
Replace critical asset elements in various hospitals, remote health clinics, schools and police stations	20.0	•	•	•	Ensure a safe and healthy work environment and best practice in the delivery of government services
Road Safety Program, including intersection upgrades, improvements for pedestrian safety, street lighting, truck parking bays, rest areas	267.0	15.0	80.0	•	Support connectivity, regional development and safety by improving key arterial and secondary roads

Project	Estimated \$m				Challenges/opportunities
	Total	2023-24	2024-25	Outer Years	
Roads to Recovery Program targeted local road upgrades	24.7	•	•		Enhance road infrastructure to support accessibility, connectivity, safety and amenity
Security enhancements to police facilities	9.0	2.0	2.0	•	Support the continued delivery of quality police services
Targeted road safety projects, local roads and community infrastructure shovel ready projects	67.5	20.0	7.6		Australian and Northern Territory governments supporting infrastructure construction jobs across the Territory
Territory Schools air-conditioning mechanical and electrical upgrades	4.0	2.0			Upgrade ageing infrastructure to support the continued delivery of quality education
Training areas and ranges – United States Force Posture Initiative	711.0	•	•	•	Upgrade infrastructure to enhance defence capability and operations

NT Infrastructure Audit

Reliable infrastructure is a vital part of maintaining and improving our quality of life. It provides us with the essential services we rely on, such as transport, energy, water and telecommunications, as well as social infrastructure such as hospitals and health centres, schools, policing and parks, and access to goods and services.

In 2022 and 2023, Infrastructure NT conducted a strategic audit of Territory infrastructure to provide an evidence base to guide future infrastructure investment decision making. The outcomes of the audit focus attention on the investments and reforms that will improve our living standards and local and national productivity.

The audit, as discussed in chapter 3, revealed several potential infrastructure needs. Where these needs were already in the planning phase, they have been included in the Enabling Infrastructure Plan or Infrastructure Pipeline tables in the regional sections of this document. The remaining Territory-wide audit items are listed below. These potential infrastructure needs could be considered for possible inclusion in the Plan and Pipeline over time as scoping, feasibility analysis and business case development determines viability. Industry, business and community stakeholders are encouraged to let Infrastructure NT know if they progress with planning and delivery of their ideas and proposals.



Transport and Logistics

- 1600 kilometre rail corridor east to west through Ti Tree (total Australian corridor 3700 kilometres)



Utilities

- Remote telecommunications and digital co-investment program
- Remote communities essential services infrastructure to support remote Aboriginal community development



Social Infrastructure

- Aged care facilities
- Asbestos management of unidentified asbestos prior to Northern Territory Government infrastructure development
- Child care centre upgrade program
- Education facilities to support Learning on Country
- Government and industry housing
- New and improved (shaded) recreational facilities



Above: Exploring Nawurlandja Lookout. Credit: Tourism NT / Helen Orr.



Top End

The Top End region is steeped in culture and natural beauty boasting tropical islands, untouched coastlines and one of the world's heritage listed national parks, Kakadu.

The Top End region:

- > has Aboriginal cultures that date back 65 000 years
- > boasts strong and distinctive cultural heritage values with many diverse Aboriginal cultural groups present
- > has a diverse natural environment and provides resources and raw material of economic benefit like timber, minerals, water and solar
- > is home to Kakadu National Park, one of only a few dozen sites in the world listed on the UNESCO World Heritage List for its outstanding natural and cultural values.

Major industries and growth sectors in the Top End



Tourism



Agribusiness

Located in the northern most section of the Territory, the Top End Region is made up of over 112 295 square kilometres. It encompasses the West Daly and West Arnhem regional councils and the Tiwi Islands (made up of two main islands – Bathurst Island and Melville Island, which is the second largest Australian island after Tasmania). Extending from Wadeye in the west to Maningrida in the east, the region includes the town of Jabiru inside Kakadu National Park.

The sparsely populated area is home to approximately 18 000 people, of which approximately 69% of residents are Aboriginal or Torres Strait Islander people. The Top End has the highest portion of Aboriginal people living in the Territory.

Approximately 67% of the region's land mass is classified as Aboriginal land. There are 12 major and 5 minor communities, and 135 homelands across the Top End.

The region benefits from a range of key industries including resources, agribusiness and tourism.

The Top End region's economic output comes largely through the mining sector, with its unique geology making it abundant with natural minerals including lithium and gold. The Finnis Lithium Project, located 30 kilometres west of Berry Springs, is the first new Territory mine in more than 10 years and the first lithium mine to open in the Territory. Gold production will also recommence with the Mt Bundy Gold Project at its 3 mines – Tom's Gully, Rustlers Roost and Quest 29 – located about 100 kilometres south-east of Darwin via the Arnhem Highway.

The rehabilitation of mines within the region is a growing opportunity that supports improvements to the natural environment, contributes to the economy and provides long term job opportunities. Works commenced on the rehabilitation of the Ranger mine site in 2021, and stage 3 works on the Rum Jungle uranium mine site commenced in late 2022.

The Territory and Australian governments are investing \$411.5 million to transform Jabiru from a mining town into a vibrant and sustainable tourism hub and service centre for Kakadu National Park and the West Arnhem region.

Tourism is a significant contributor to economic activity in the region which boasts spectacular natural wonders and world renowned attractions such as Litchfield and Kakadu national parks, the Daly River for recreational fishing and camping, and Tiwi Islands, Gunbalanya and Maningrida for arts and textiles.

There is significant, untapped tourism potential and numerous Indigenous economic, social and cultural development opportunities in the Top End including agribusiness, bush foods and traditional medicines, fishing and aquaculture, and caring for country. For example, there is an opportunity to expand the scale of production of the Kakadu plum, which is a native bush food harvested within Kakadu National Park. In 2019, approximately 50 tonnes of Kakadu plum was produced for commercial supply chains in Australia, and an estimated 80% came from the Northern Territory.

The Top End climate, land and aquatic resources makes it ideal for supporting agribusiness. The region currently contributes \$204 million to the economy and provides employment for 489 people. There is an opportunity to grow a number of subsectors within agribusiness including the pastoral industry, including beef and buffalo, horticulture, fisheries and aquaculture and forestry.



Aquaculture



Hydrogen



Minerals

Aquaculture is an emerging industry with the Top End delivering significant commercial fishing operations that contributed \$53 million to the Territory economy in 2021. The region can contribute to future growth of the fisheries industry, with commercial production trials of Blacklip rock oysters, black jewfish, prawns and sea cucumber underway from West Arnhem to the Tiwi Islands.

Challenges and opportunities

- Addressing the lack of enabling infrastructure in the region could potentially transform life in the Top End.
- Provide access to reliable, safe and affordable water, energy and telecommunications services that are vital to the economic development of the region.
- Improve physical access and connectivity between communities and regional centres to enable essential economic and social development in the region year-round.
- Increase housing supply to attract and grow new industry and supporting existing private sector employers to grow or diversify.
- Increase staff accommodation to allow organisations to offer existing housing to local Aboriginal employees to reduce the reliance on and overcrowding in social housing.
- Increase bandwidth and redundancy in the network, which are essential to ensure sufficient regional digital connectivity to support economic growth across a broad range of industries.
- Improve social infrastructure in the communities to attract workers and visitors to the communities.
- Continue refurbishing and replacing outdated service buildings that are not fit for purpose.



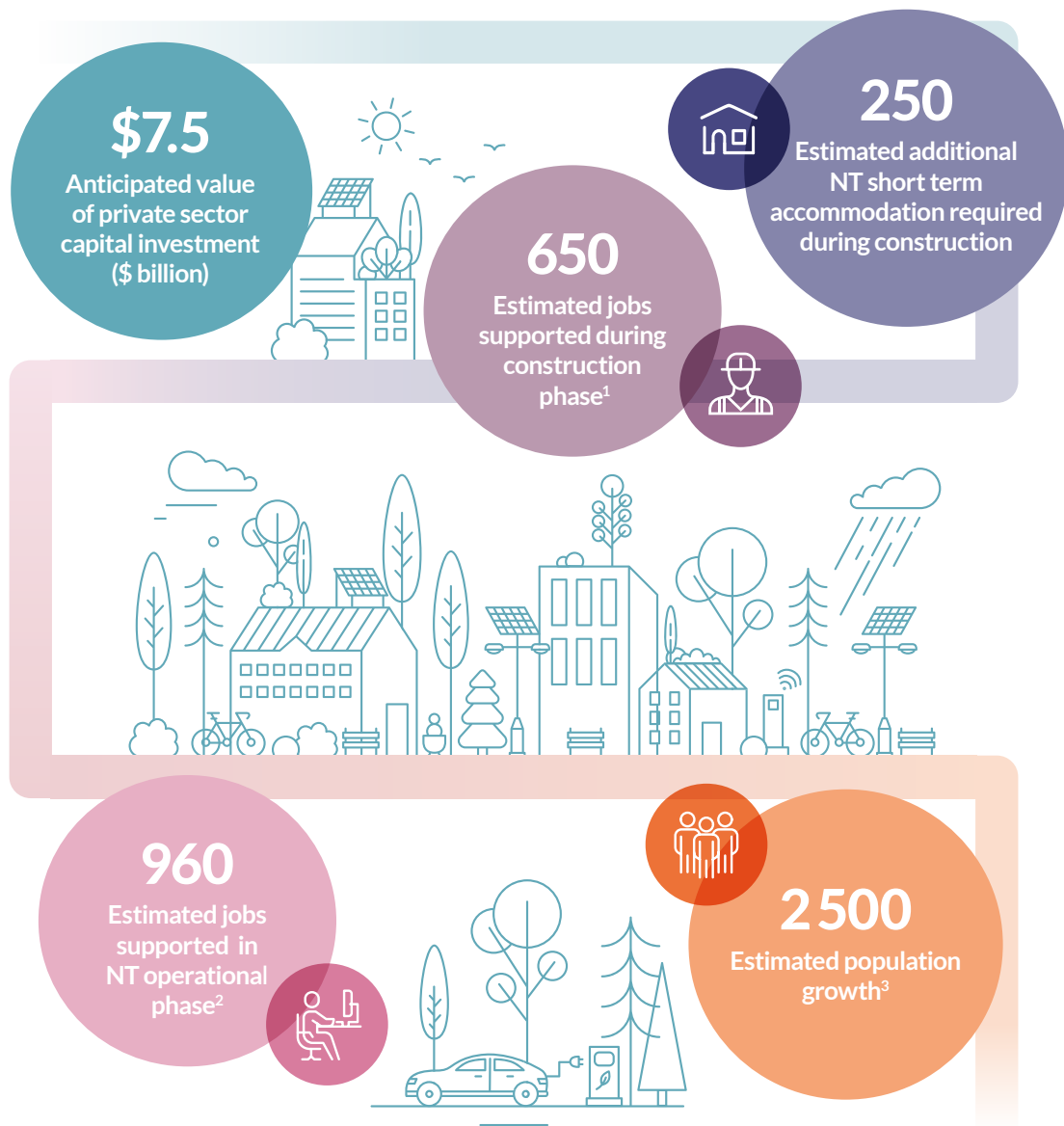
Above: Pontoon at Bathurst Island. Credit: Department of Chief Minister and Cabinet.

Investment portfolio

The total Top End investment portfolio has a direct impact on economic and population growth. It is important to understand the magnitude of economic and population growth to inform the enabling infrastructure plan.

Infrastructure NT has worked closely with Investment Territory to determine the total investment portfolio. This analysis determined the following total investments anticipated for the Top End region, subsequent jobs, accommodation needs and population growth.

Analysis is based on Investment Territory 2022-2023 Progress and Outlook: May 2023

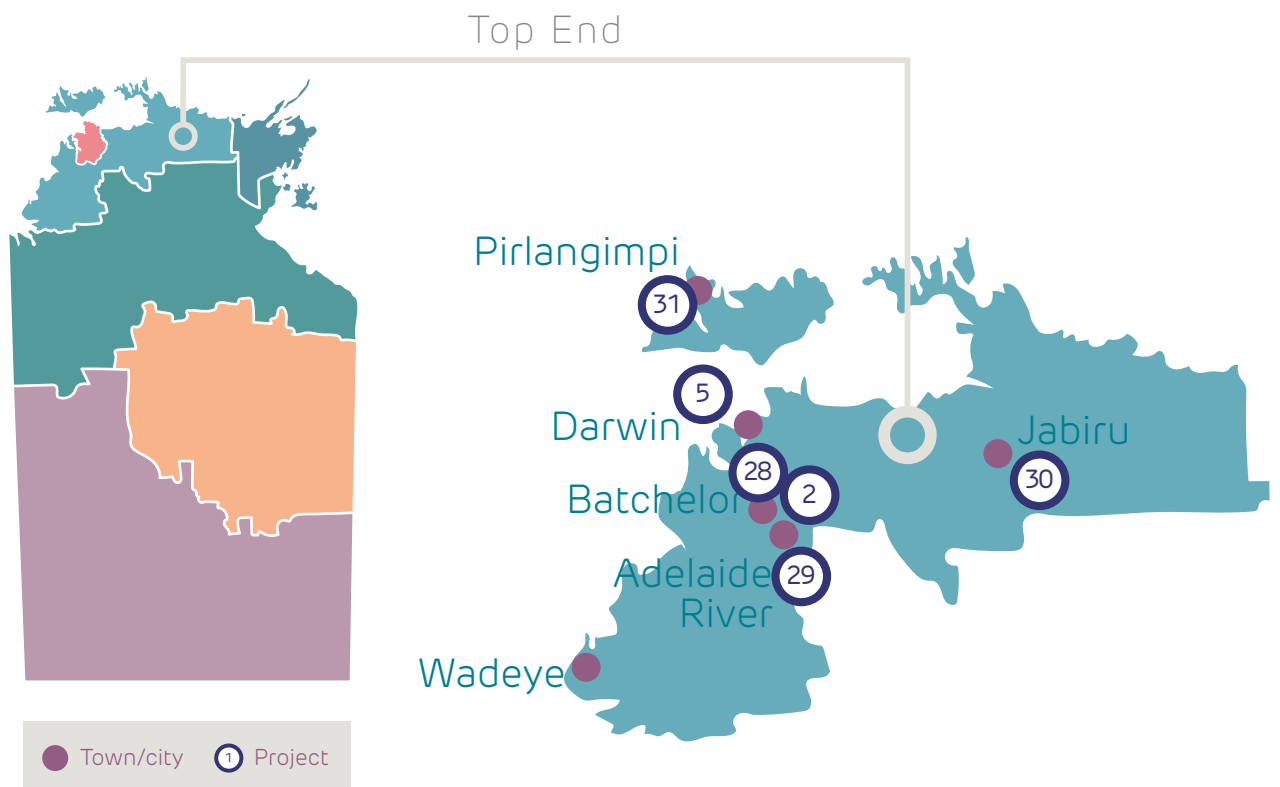


Note 1: Includes direct and indirect where provided by proponents

Note 2: Includes direct and indirect where provided by proponents in the NT only

Note 3: Based on 2.6 multiplier (ABS average persons per household NT regional)

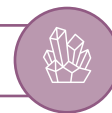
Note: Numbers are approximate over 10 years. Further refined analysis is ongoing.



Key projects, programs and proposals

The following nationally significant project located in the Top End region is detailed in Chapter 8.

- Darwin region water supply infrastructure upgrades – Adelaide River Off-Stream Water Storage (AROWS)

Core Lithium – Finniss Lithium Project 28

Core Lithium owns 100% of the Finniss Lithium Project, located 88 kilometres' trucking distance by sealed road to Darwin Port.

The flagship Finniss Project lies within one of the most prospective areas for lithium in the Territory – the Bynoe Pegmatite Field – and covers over 500 square kilometres of granted tenements.

Core Lithium made the Final Investment Decision on Thursday 30 September 2021 to proceed with the Finniss Lithium Project on the Cox Peninsula. First production is anticipated at the Grants Lithium open cut mine and processing plant before the end of 2022.

The BP33 Project, which also forms part of the overall Finniss Lithium Project, is currently undergoing its environmental impact assessment process. If approved, this stage of the Finniss Lithium Project will start once mining at the Grants site finishes.

This is the first new significant mine in the Northern Territory in more than a decade and will create 250 jobs during construction and operation.

Mt Bundy (Toms Gully, Rustlers Roost and Q29) 29

Mt Bundy Gold Project proposes to restart 3 mines – Tom's Gully, Rustlers Roost and Quest 29 – and construct a 4.5 million tonnes per annum processing plant at Rustlers Roost (proposed largest new gold processing plant in

the region). Rustlers Roost and Q29 are both open pits and Tom's Gully is an underground mine. The proposed plant and mining operation will produce gold doré ingots.

Sustainable future of Jabiru and Kakadu 30

Lifestyle

Tourism

Health

Education

Solar



The Territory and Australian governments are committed to a strong and sustainable future for Jabiru and are investing \$411.5 million to support its transition from a mining town to a vibrant and sustainable tourism hub and service centre for Kakadu National Park and the West Arnhem region.

The Territory Government continues to work towards delivering priority projects identified in its \$135.5 million commitment to the Future of Jabiru.

- Work has commenced with assessment and upgrades to essential services infrastructure, including power, water, sewerage and waste management.

- A contract has been awarded and work has commenced to design the Bininj Resource Centre. This is scheduled to be completed in 2023 with construction to commence in 2024.
- A new solar hybrid power station has been completed and has been powering Jabiru since January 2022.
- Construction of the new Jabiru medical centre is well underway with completion expected in late 2023.

The Northern Territory Government has continued to maintain government service levels in Jabiru and is into its fourth year of commitment.

Tiwi H2 Project 31

Renewables

Solar

Hydrogen

Major Project



Provaris Energy Ltd (Provaris) proposes to develop the Tiwi H2 Project, which is a green hydrogen production and export facility located on Melville Island within a 30 kilometre radius of Port Melville. Project works include construction of a solar precinct, overhead electricity transmission infrastructure, electrolyser facility, desalination plant, battery storage facilities, hydrogen compression and loading facilities, high pressure pipelines (for hydrogen ship loading) and expanded accommodation facilities at Port Melville.

Provaris will use its innovative compressed hydrogen ships to transport hydrogen to the South East Asia region and is targeting first production in late 2027 with operations expected to continue for approximately 30 years.

The project will scale up to 2.6 gigawatt solar generation to produce up to 90 000 tonnes per annum of green hydrogen for export to the South East Asia region.

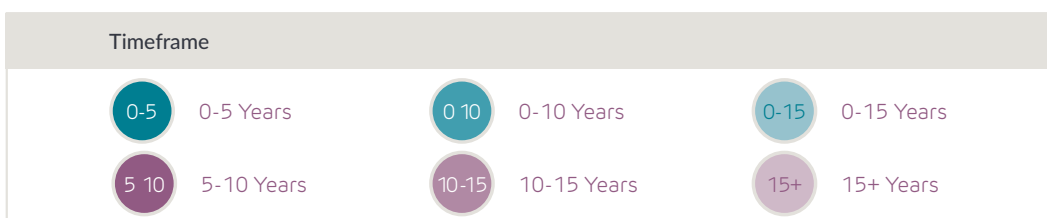
Enabling infrastructure plan

The enabling infrastructure plan for the Top End region lists the infrastructure proposals that are not yet funded, are in the planning phase or have been identified as enabling an outcome.

Proposals listed respond to economic and/or population growth or address the cross cutting objectives in the NT Infrastructure Strategy 2022 – 2030.

Proposals	Estimated Total \$m	Challenges/opportunities	Timeframe (Years)
Across the region accommodation cabins	1	Support council operations, community services, generate local jobs and skills training	0-5
Across the region new or refurbished health clinics	•	Strengthen liveability by improving infrastructure to support health services	0-15
Across the region Remote School Renewal Program	•	Upgrade ageing infrastructure to support the continued delivery of quality education	0-15
Across the region upgrade access road network to Homelands	2	Enhance infrastructure to support accessibility, connectivity, safety and amenity	0-5
Adelaide River Off-Stream Water Storage (AROWS)	2000	Support economic and population growth through a secure, reliable and cost-effective water supply	0-10
Adelaide River Showground develop Equestrian Centre of Excellence	4	Develop Adelaide River as the equestrian centre for the Top End	15+
Adelaide River tri-services hub	24	Support the continued delivery of quality police, fire and emergency services in communities	0-10
Adelaide River War Cemetery construct car park and upgrade Memorial Terrace	2	Improve recreation opportunities and enhance visitor experience	0-10
Adelaide River waste transfer station	1	Support council operations and community services	5-10
Arnhem Highway upgrades (other than Adelaide River Floodplain and road duplication)	20	Support economic development of the tourism, defence, mining, extractive and livestock industries	5-10
Arnhem Link Road improve road standard	•	Improve regional and remote community connectivity	0-15
Batchelor aged care accommodation facility independent and assisted living	2	Provide a variety of contemporary, affordable and sustainable housing options for older Territorians	15+

• indicates value is either commercial in confidence or to be confirmed.



Proposals	Estimated Total \$m	Challenges/opportunities	Timeframe (Years)
Batchelor Airport upgrade	•	Support connectivity and improve all weather access to improve community safety and to support future growth	0-5
Batchelor Area School upgrade camp dormitories	2	Upgrade ageing infrastructure to support the continued delivery of quality education	0-5
Batchelor to Darwin River construct sealed arterial roads	5	Enable economic development through improved road infrastructure	5-10
Batchelor Township Resilience and Adaptation Master Plan support and recreational infrastructure and night lighting	10	Support council operations, community services, generate local jobs and skills training	0-10
Batchelor waste minimisation and recycling facility	1	Support improved waste management and recycling processes	5-10
Cox Peninsula bike path/boardwalk from Mandorah Jetty along beachfront and Wagait Tower Road	4	Strengthen a healthy, active lifestyle by improving recreation opportunities and enhance visitor experience	0-5
Cox Peninsula new extension and upgrades to council Office, Chambers and Library buildings	1	Enhance infrastructure to support development	0-5
Cox Peninsula new NT Emergency Services (NTES) volunteer and storage facilities	2	Strengthen emergency support services in rural communities	0-15
Cox Peninsula re-seal all sealed roads in the estate	3	Road improvement to increase safety, support accessibility, connectivity and amenity	0-5
Cox Peninsula upgrade beach access points at end of Erickson Crescent, Baluria Road and Wagait Tower Road	2	Strengthen a healthy, active lifestyle by improving recreation opportunities and enhance visitor experience	0-5
Dundee Beach multi-purpose sporting complex/cyclone shelter	8	New recreational infrastructure to support liveability and resilience	0-15
Finniss Valley new roads within Chin Estate	2	Enhance infrastructure to support accessibility, connectivity, safety and amenity	0-10
Future of Jabiru and Kakadu Jabiru luxury lodge precinct 90 rooms	50	Support growth in luxury tourism, visitor and corporate travel markets	0-10
Gapuwiyak (Lake Evella) multi-purpose sporting complex/cyclone shelter	10	New recreational infrastructure to support liveability and resilience	0-10
Gunbalanya asbestos removal in council buildings	1	Support council operations, community services, generate local jobs and skills training	0-5

Proposals	Estimated Total \$m	Challenges/opportunities	Timeframe (Years)
Gunbalanya council plant shed workshop	2	Support council operations, community services, generate local jobs and skills training	0-5
Gunbalanya council sporting oval facilities	4	Strengthen a healthy, active lifestyle by improving recreation and youth facilities	0-5
Gunbalanya council staff accommodation and asbestos remediation	10	Support council operations, community services, generate local jobs and skills training	0-10
Gunbalanya multi-purpose hall/cyclone shelter	10	New recreational infrastructure to support liveability and resilience	5-10
Gunbalanya new NT Emergency Services (NTES) volunteer and storage facilities	2	Strengthen emergency support services in remote communities	0-15
Gunbalanya new police complex	15	Support the continued delivery of quality police services in remote communities	10-15
Gunbalanya police housing	5	Support the continued delivery of quality police services in remote communities	0-10
Gunbalanya reseal internal roads	3	Road improvement to increase safety, support accessibility, connectivity and amenity	0-10
Gunbalanya School replace administration building and upgrade ageing infrastructure	3	Upgrade ageing infrastructure to support the continued delivery of quality education	0-15
Gunbalanya waste transfer station	8	Support council operations, community services, generate local jobs and skills training	0-5
Haynes Road realignment and seal	1	Develop and support the cattle industry	0-15
Heathers Lagoon Road upgrades	1	Enhance infrastructure to support accessibility, connectivity, safety and amenity	0-15
Jabiru multi-purpose sporting complex/ cyclone shelter	10	New recreational infrastructure to support liveability and resilience	0-10
Jabiru new grandstand at Brockman Football Oval	2	Strengthen a healthy, active lifestyle by improving recreation and youth facilities	0-5
Jabiru upgrade pool/gym facilities	1	Strengthen a healthy, active lifestyle by improving recreation and youth facilities	0-5
Jabiru waste transfer station	7	Support council operations, community services, generate local jobs and skills training	0-5
Kakadu Road upgrades stage 2	70	Improve year round accessibility, supporting the tourism industry	5-10

Proposals	Estimated Total \$m	Challenges/opportunities	Timeframe (Years)
Litchfield National Park upgrades improve access, camping facilities and amenity	2	Value, preserve and expand historic, cultural meeting places, increase visitation opportunities and visitor experience	0-10
Maningrida additional police housing (stage 2)	13	Support the continued delivery of quality police services in remote communities	0-10
Maningrida asbestos removal in council buildings	4	Support Council operations and generate local jobs and skills training	0-5
Maningrida council staff accommodation	2	Strengthen liveability through improved infrastructure to support council services	0-5
Maningrida council visitor accommodation	2	Strengthen liveability through improved infrastructure to support council services	0-5
Maningrida council workshop	2	Strengthen liveability through improved infrastructure to support council services	0-5
Maningrida cyclone shelter	15	Build resilient communities and enhanced liveability by improving community facilities	0-10
Maningrida Football Oval new grandstand	4	Strengthen a healthy, active lifestyle by improving recreation and youth facilities	0-5
Maningrida new NT Emergency Services (NTES) volunteer and storage facilities	3	Strengthen emergency support services in remote communities	0-10
Maningrida reseal internal roads	4	Road improvement to increase safety, support accessibility, connectivity and amenity	0-10
Maningrida School new early years classrooms and play areas and upgrade and extend middle years buildings	4	Master planned infrastructure to provide contemporary educational facilities to support growth in early years learning enrolments	0-10
Maningrida School refurbish upper primary buildings	2	Upgrade ageing infrastructure to support the continued delivery of quality education	5-10
Maningrida swimming splash pool shade	1	Strengthen a healthy, active lifestyle by improving recreation and youth facilities	0-5
Maningrida Top Camp Road storm water drainage	3	Road improvement to increase safety, support accessibility, connectivity and amenity	0-5
Maningrida waste transfer station	9	Support council operations, community services, generate local jobs and skills training	0-5
Milikapiti (Snake Bay) multi-purpose sporting complex/cyclone shelter	10	New recreational infrastructure to support liveability and resilience	0-10
Milikapiti council workshop renovations	1	Support council operations, community services, generate local jobs and skills training	5-10

Proposals	Estimated Total \$m	Challenges/opportunities	Timeframe (Years)
Milikapiti police housing	3	Support the continued delivery of quality police services in remote communities	0-15
Minjilang (Mamaruni) School replace preschool	2	Contemporary educational infrastructure to support growth in early years learning enrolments	0-10
Minjilang council staff accommodation	1	Strengthen liveability through improved infrastructure to support council services	0-10
Minjilang council visitors accommodation	2	Strengthen liveability through improved infrastructure to support construction in the community	0-5
Minjilang reseal internal roads	3	Road improvement to increase safety, support accessibility, connectivity and amenity	5-10
Minjilang waste transfer station	9	Support council operations, community services, generate local jobs and skills training	5-10
Murganella Road upgrade including drainage upgrade	9	Generate local jobs and skills training to enhance liveability, health and community outcomes	0-5
Naiyu (Daly River) multi-purpose sporting complex/cyclone shelter	10	New recreational infrastructure to support liveability and resilience	0-10
Naiyu (Daly River) regional town development residential and commercial/ industrial land release	3	Enable economic development and population growth by increasing land availability	5-10
Naiyu (Daly River) tri-services hub	18	Support the continued delivery of quality police, fire and emergency services in remote communities	5-10
Peppimenarti community hub	6	Support council operations, community services, generate local jobs and skills training	0-5
Peppimenarti multi-purpose sporting complex/cyclone shelter	8	New recreational infrastructure to support liveability and resilience	0-10
Pirlangimpi council workshop renovations	1	Support council operations, community services, generate local jobs and skills training	5-10
Pirlangimpi new NT Emergency Services (NTES) volunteer and storage facilities	2	Strengthen emergency support services in remote communities	0-15
Pirlangimpi pontoon ferry service between Wurrumiyanga and Pirlangimpi	1	Support connectivity and improve all weather access to improve community safety and to support future growth	0-5
Pirlangimpi replace police housing	4	Support the continued delivery of quality police services in remote communities	0-5
Port Keats Road upgrade complete unsealed sections of Port Keats Road and widen Daly River Bridge	150	Economic enabler for the extractive industry and key national freight route between the Territory and the rest of Australia	0-15

Proposals	Estimated Total \$m	Challenges/opportunities	Timeframe (Years)
Robin Falls Recreation Area day visit eco-infrastructure	3	Develop tourism product while protecting the local environment	5-10
Strickland Road upgrades	1	Enhance infrastructure to support accessibility, connectivity, safety and amenity	5-10
Tiwi Islands develop greenfield sites for aquaculture, agriculture, tourism and industrial purposes	•	Support the development of local industry and create a sustainable economy	0-10
Tiwi Islands reseal all community and outbound roads in Wurrumiyanga, Milikapiti and Pirlangimpi	2	Support economic development of the region, improving safety and connectivity	0-10
Tiwi Islands road upgrades stage 2	100	Support economic and social development of the region, improving connectivity	5-10
Tiwi Islands visitor accommodation and supporting hospitality facilities	•	Enable economic development and population growth through tourism	0-10
Top End Parks upgrade and new gauging stations	•	Support improved water management	0-10
Wadeye multi-purpose sporting complex/cyclone shelter	20	New recreational infrastructure to support liveability and resilience	0-10
Wadeye new NT Emergency Services (NTES) volunteer and storage facilities	3	Strengthen emergency support services in remote communities	0-10
Wagait Beach Cloppenburg Park Master Plan new skatepark, rebuild pump-track, resurface tennis courts and new shade roof	2	Strengthen a healthy, active lifestyle by improving recreation opportunities and enhance visitor experience	0-5
Wagait Beach multi-purpose sporting complex/cyclone shelter	10	New recreational infrastructure to support liveability and resilience	0-10
Wagait replace Centre Yard Zone Substation	•	Asset renewal to support growth, compliance and improve service efficiency	10-15
Warruwi asbestos removal in council buildings	1	Ensure a safe and healthy work environment and best practice in managing asbestos containing materials for council controlled buildings	0-5
Warruwi construct council office	4	Support council operations, community services, generate local jobs and skills training	0-5
Warruwi construct council visitors accommodation	2	Support council operations, community services, generate local jobs and skills training	0-5
Warruwi council amenities	1	Strengthen liveability through improved infrastructure to support council services	0-5

Proposals	Estimated Total \$m	Challenges/opportunities	Timeframe (Years)
Waruwi reseal internal roads	2	Road improvement to increase safety, support accessibility, connectivity and amenity	0-10
Waruwi waste transfer station	9	Support council operations, community services, generate local jobs and skills training	0-5
Wildman River Agricultural Precinct	20	Develop production area to take advantage of good quality agricultural land and available water resources	0-5
Woodycupaldiya Road upgrade	8	Improve all weather access to support accessibility, growth and community safety	0-5
Wooliana Road realign, upgrade and seal local fishing and tourist roads	2	Enable all weather access to improve recreation opportunities and enhance visitor experience	10-15
Wurrumiyanga additional housing for council staff	5	Support continued delivery of council services in remote communities	0-5
Wurrumiyanga airstrip terminal welcome and meeting place	1	Support economic development of the region, improving connectivity and tourism opportunities	0-5
Wurrumiyanga council workshop renovations	1	Support council operations, community services, generate local jobs and skills training	0-10
Wurrumiyanga police complex	16	Support the continued delivery of quality police services in remote communities	0-15

Implementation pathway

The suggested implementation pathway outlines action that can be taken to respond to anticipated economic and population growth challenges and opportunities.

Implementation pathway	Prioritisation action	Progress
Top End		
Progress Kakadu road upgrades	 New	 In progress

Infrastructure pipeline

The following is a list of committed projects, funded by either government or the private sector, for the Top End region.

Project	Estimated \$m				Challenges/opportunities
	Total	2023-24	2024-25	Outer Years	
Across the region culvert repairs at Peppimenarti, Emu Point and Namarluk access roads	0.3	•			Enhance infrastructure to support accessibility, connectivity, safety and amenity
Across the region HomeBuild new homes	•	•	•	•	Reduce overcrowding and improve health outcomes while providing employment and training opportunities for local Aboriginal people
Across the region land servicing headworks scoping, design and construction	7.0	•			Enable economic development and population growth through expanded utilities networks for new land development
Across the region residential infill lots, design and construct power and water infrastructure, upgrades and network extensions to service nominated infill lots	5.9	•			Enable economic development and population growth through expanded utilities networks for new land development
Across the region residential subdivision planning, design and construction	42.3	7.7			Enable economic development and population growth through expanded utilities networks for new land development
Across the region Room to Breathe home extensions	41.4	16.1	12.0	•	Reduce overcrowding and improve health outcomes while providing employment and training opportunities for local Aboriginal people
Across the region upgrade internal road network	2.0			•	Enhance infrastructure to support accessibility, connectivity, safety and amenity
Adelaide River water source augmentation and treatment	2.3	•			Support population growth by improving access to quality water
Archer waste transfer facility cardboard compactor	0.2	0.2			Support improved waste management and recycling processes
Arnhem Highway Adelaide River Floodplain stage 2 (Beatrice Hill)	31.6	9.3			Improve flood immunity at the Adelaide River crossing
Arnhem Link Road improve road standard	16.0	9.5		•	Improve regional and remote community connectivity
Bathurst Island mortuary upgrade	0.3	•			Improve infrastructure for essential services
Cocos (Keeling) Islands airfield upgrade	567.0	•	•	•	Enhance defence capability and operations

A lesser figure in the 2023-24 and 2024-25 columns than in the Total column indicates either previous year expenditure or expenditure in outer years.

• indicates value is either commercial in confidence or to be confirmed.

Project	Estimated \$m				Challenges/opportunities
	Total	2023-24	2024-25	Outer Years	
Coomalie Community Government council solar installations	1.0	•			Improve liveability and improve energy efficiency by increasing renewable energy
Darwin River Dam new pump station	36.3	15.3	0.1		Support population growth by improving access to quality water and providing resilience to Darwin's water supply
Dundee Beach recreational fishing infrastructure	7.0	0.5	6.5		Enhance recreational fishing and the Territory's reputation as a world class fishing destination
Finniss Lithium Project Core Lithium Ltd stage 2 – BP33 early works package – underground mine	45.0	45.0	•		Part of Core Lithium's Finniss Lithium project developing lithium and diversified metals used for new and emerging technologies
Future of Jabiru and Kakadu health, education, roads, government, NBN and tourism facilities	411.5	50.0	50.0	•	Position Jabiru, post-mining, as a tourism and regional services hub
Gunbalanya football oval lights	1.6		1.5		Capital grant to strengthen liveability through improved sporting infrastructure
Gunbalanya health centre and morgue	20.0	10.0	10.0		Strengthen liveability by improving infrastructure for health support services
Holtze glass reprocessing plant	0.7	0.7			Support improved waste management and recycling processes
Jabiru distribution network upgrade	•	•			Asset renewal to support growth, compliance and improve service efficiency
Kakadu Mobiles Co-investment Program	7.5	•	•	•	Enabling connectivity and creating digital opportunity
Kakadu National Park various road upgrades	68.6	5.0	30.0	•	Improve access to iconic tourism product to grow visitation, the economy and increase liveability
Mandorah new marine facilities	85.5	40.0	40.0	•	Enhance infrastructure to support connectivity and development
Maningrida Arts and Culture and Djomi Museum upgrades	5.0	5.0			Value, preserve and expand art and cultural places, through the Arts Trail Gallery Extension Program
Maningrida new police station, housing, visiting officer quarters, multifunction room/ court house, associated boat and storage sheds, communications tower and backup generator	17.1	16.7	•		Support the continued delivery of quality police services in remote communities

Project	Estimated \$m			Outer Years	Challenges/opportunities
	Total	2023-24	2024-25		
Maningrida School undercover walkways	0.6	•			Contemporary educational infrastructure to support growth in population and student enrolments
Maningrida Top Camp Road reconstructions	0.9		0.9		Road improvement to increase safety, support accessibility, connectivity and amenity
Manton Dam return to service including Strauss to Middle Arm pipeline project to support industry development and provide water security to the Darwin region	189.0		46.2	•	Support economic and population growth by improving access to quality water
Manton Solar Photovoltaic Station connection	•	•			Expand and diversify the Territory's power grid to improve efficiency and to meet Northern Territory renewables target of 50% by 2030
Marindja Road flood immunity improvements lift pavement through floodplain and upgrade to 2 lane seal for priority sections	6.2		5.0	•	Support economic development of the cattle industry and improve community connectivity
Marrakai Road seal between Stephen Road and Arnhem Highway	7.5		7.5		Enhanced liveability through improved roads
Milikapiti water park	0.8	•			Strengthen a healthy, active lifestyle by improving recreation and youth facilities
NT Bullion Frances Creek operations reopen the iron ore mine to extract remnant ore from existing open cut pits	7.0	•			Meet global demand for minerals
Palumpa School refurbish canteen and staff ablution facility	0.6	•			Contemporary educational infrastructure to support growth
Peppimenarti library and community space	0.4	•			Support community services
Peppimenarti multi-purpose police complex, including associated housing, multifunction room/court house and supporting site infrastructure	19.0		19.0	•	Support the continued delivery of quality police services in remote communities
Peppimenarti upgrade waste management facilities	0.2	•			Support improved waste management and recycling processes
Port Keats Road upgrade between Wadeye and Palumpa	75.0		30.0	•	Economic enabler for the extractive industry and key national freight route between the Territory and the rest of Australia

Project	Estimated \$m				Challenges/opportunities
	Total	2023-24	2024-25	Outer Years	
Primary Gold Mt Bundy Gold Project to develop Toms Gully, Rustlers Roost and Quest 29 sites	412.0	100.0	100.0	•	Meet global demand for minerals
Ranger mine rehabilitation remove infrastructure	1600.0	•	•	•	Rehabilitate the Ranger mine in consultation with stakeholders
Rum Jungle rehabilitation	500.0	100.0	100.0	•	Rehabilitate the area in consultation with stakeholders
Tiwi Islands road upgrades	75.0	15.0	12.0	•	Support economic and social development of the region, improving connectivity
Wadeye aerodrome airstrip pavement and seal widening	2.0			•	Support connectivity and improve all weather access to improve community safety and to support future growth
Wadeye Airport Road upgrade and seal	0.8	•			Enhance infrastructure to support accessibility, connectivity, safety and amenity
Wadeye Government Business Centre fitout	1.0	1.0			Enhance services and liveability, health and community outcomes in regional towns and remote communities
Wadeye pedestrian bridge and walkway	1.3	•			Enhance infrastructure to support accessibility, connectivity, safety and amenity
Wadeye renal facility	1.4	1.4			Strengthen liveability by improving infrastructure for health support services
Wadeye upgrade barge landing and hardstand	2.5			•	Improve all weather access to support accessibility, growth and community safety
Wadeye upgrade waste management facilities	0.7	•			Support improved waste management and recycling processes
Wagait Beach Cloppenburg Park Master Plan repurpose existing compound for community recycle and re-use program	0.1	•			Support improved waste management and recycling processes
Wurrumiyanga child and family centre (Starting Early for a Better Future)	0.5	•			Strengthen early years learning and engagement of students and parents
Wurrumiyanga swimming pool redevelopment	0.8	0.8			Strengthen a healthy, active lifestyle by improving recreation and youth facilities
Wurrumiyanga waste management and recycling hub	2.0		2.0	•	Support improved waste management and recycling processes

NT Infrastructure Audit

Reliable infrastructure is a vital part of maintaining and improving our quality of life. It provides us with essential services we rely on like transport, energy, water and telecommunications, as well as social infrastructure such as hospitals and health centres, schools, policing and parks and access to goods and services.

In 2022 and 2023, Infrastructure NT conducted a strategic audit of Territory infrastructure to provide an evidence base to guide future infrastructure investment decision making. The outcomes of the audit focus attention on the investments and reforms that will improve our living standards and local and national productivity.



Transport and Logistics

- Cold storage facilities
- Improve roads to industry
- Jabiru collection and packing hub for Kakadu plum
- Regional industry hubs
- Wadeye commercial infrastructure to develop new supermarkets and food businesses



Utilities

- Cox Peninsula waste transfer station

The audit, as discussed in chapter 3, revealed a number of potential infrastructure needs. Where these needs were already in the planning phase, they have been included in the Enabling Infrastructure Plan or Infrastructure Pipeline tables in the regional sections of this document. The remaining Top End region audit items are listed below. These potential infrastructure needs are for projects that could be considered for possible inclusion in the Plan and Pipeline over time as scoping, feasibility analysis and business case development determines viability. Industry, business and community stakeholders are encouraged to let Infrastructure NT know if they progress with planning and delivery of those needs and proposals.



Social Infrastructure

- Belyuen upgrade recreation centre
- Gunbalanya youth centre and basketball facility upgrades
- Milikapiti community sports facilities and oval upgrades
- Milingimbi new sporting lights
- Minjilang community basketball courts
- Nganmarriyanga improve recreation facilities
- Peppimenarti sport hub upgrades
- Pirlangimpi community sports facilities upgrades
- Regional Training and Employment Hub
- Tiwi Island sporting hub
- Wadeye facilities upgrades at hall and BMX track
- Wurrumiyanga community sports facilities and oval upgrades



Land

- Agriculture and pastoral developments
- Aquaculture developments
- Storm water drainage improvements