



**A STEP CHANGE TO WIN INVESTMENT AND
CREATE JOBS**

TERRITORY ECONOMIC
RECONSTRUCTION COMMISSION:
FINAL REPORT

The Territory Economic Reconstruction Commission acknowledges and pays respect to the past, present and future Traditional Custodians and Elders of the Territory and the continuation of cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander communities. We are committed to a positive future for the Territory's Aboriginal peoples and communities.



Foreword

Hon. Michael Gunner MLA
Chief Minister of the Northern Territory

Dear Chief Minister,

The Territory Economic Reconstruction Commission is pleased to present to you our Final Report.

In accordance with the Terms of Reference for this Commission, our Final Report outlines recommendations to accelerate the Territory's economic growth with the following goals in mind:

- Create jobs in the near, medium and long term
- Attract private investment
- Support current and emerging industries
- Build on the Territory's competitive advantages, and;
- Unlock the potential of the Territory's regions.

The Northern Territory is not alone in facing challenges to recover from COVID-19.

The strong response in public submissions demonstrates a deeply held belief that the Territory's location, its people and its resources has the capability to shift economic gears.

This Final Report is our blueprint for a Territory-wide step change that will win more private investment and create jobs.

This is our vision of what the Territory can achieve.

Sincerely,



A handwritten signature in dark ink.

Hon Paul Henderson AO
Co-Chair



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Andrew Liveris AO
Co-Chair



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Gail Kelly



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Dr Martin Parkinson AC
PSM



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Prof. Mick Dodson AM



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Gary Higgins



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Romilly Madew AO



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Eytan Lenko

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The Northern Territory Government has an ambitious goal of a \$40B economy by 2030, leading to more jobs and higher living standards for all Territorians

This report details the Territory Economic Reconstruction Commission’s advice on the key strategies, approaches and actions that will increase private sector investment, leading to industry growth, business opportunities and sustained and sustainable jobs growth

The report is a challenging call to action.

Noting the economic situation of the Territory prior to and arising from COVID-19, the Commission focused only on the industries and the enabling factors most likely to significantly shift the economic curve upwards.

As a result, this report deliberately does not cover all sectors of the economy, while acknowledging all will contribute to a diverse economy and vibrant lifestyle.

The Commission also made an early decision to focus on the conditions by which projects can be brought to fruition, rather than attempt to analyse the feasibility of individual projects (over 370 potential projects were identified by stakeholders.

The information on individual projects is a valuable resource for the implementation phase of the Commission's recommendations.

The Commission thanks all those who provided submissions and briefings – 179 submissions with 956 individual recommendations were received.

The Commission particularly thanks Team Territory for their contributions and the valued support of Team Rebound in the creation and delivery of this report.

The efforts of all are greatly appreciated.

The report includes discussion on:

WHY the sector, enabler or approach is important and touches on key opportunities and challenges

WHAT needs to happen

Recommendations on **HOW** it should be achieved

What **SUCCESS** might look like over a **2-, 5-, and 10-Year** time horizon

In reaching their recommendations, the Commission valued input from the public:

179 Public submissions were received and considered by the Commission

956 Recommendations were received within the submissions

300+ Potential projects were identified by stakeholders

196 Briefings, meetings and interviews were held to validate recommendations

The Northern Territory has what it takes to become a thriving place to live, work and play

Significant resources, stunning landscapes, location in a fast-growing region, a strong First Nations culture and greenfield opportunities. Growing the Territory economy benefits all Territorians through improved living standards

New investment creates job opportunities and wages growth, increases retail and construction activity, grows the Territory’s population, and provides tax revenue for government to improve services and reduce debt

Why the Territory



World-class mineral deposits, including critical minerals necessary for modern life



Access to water



A strategic location for defence



A quality solar resource spread across a wide area



A strong agricultural sector



Highly prospective world scale onshore gas resources and proven offshore gas reserves



Deep water harbour and intermodal logistics



Proximity to markets in Southeast Asia

Aboriginal Economic Leadership

Aboriginal leaders will be front and centre of this economic development of the Territory – as land owner, developer, investor and partner, employee and community member

Inherent strengths

The Territory has inherent strengths that provide great opportunity:



17.5%
of Australia’s **land mass** is covered by the Territory¹



>90
national parks and reserves cover 5% of the Territory’s land mass²

The Territory's rate of growth has slowed over the last decade and will fall further without concerted effort

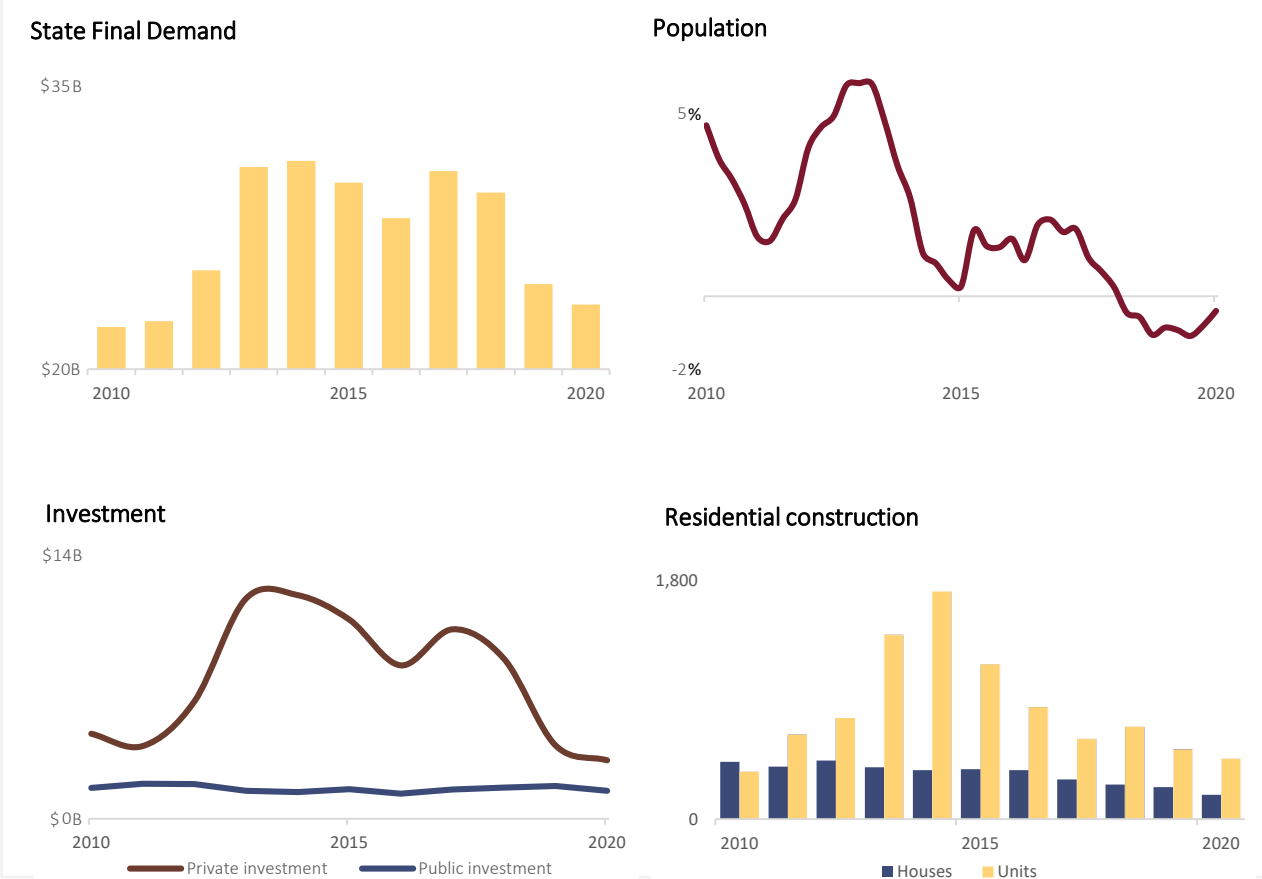
Even before COVID-19, the transition from a major construction boom meant falling private investment, a shrinking population, increasing unemployment and weak growth in living standards

Based on the Department of Treasury and Finance Budget forecasts and the historical five-year average growth rate, a conservative estimate of the future post-COVID-19 is an average growth rate of 1.5%³ per annum.

In addition, the Territory's revenue position is vulnerable. Debt is expected to potentially approach \$16B⁴ – a doubling of current levels – by 2030. With reduced private investment over the past years, stimulus led by the Territory Government has been necessary, however this is not sustainable.

Without sustained and courageous effort to grow the economy, economic decline will continue, resulting in falling relative living standards and challenging social cohesion.

Figure 1: The Territory's historical pace of growth⁵ (2010 – 2020)



Turning this around to achieve a \$40B economy by 2030 requires a sustained average annual Gross State Product growth rate of 3.9%⁶

The Territory is starting from a narrow economic base focused on primary resources and raw materials, with relatively few local value adding activities

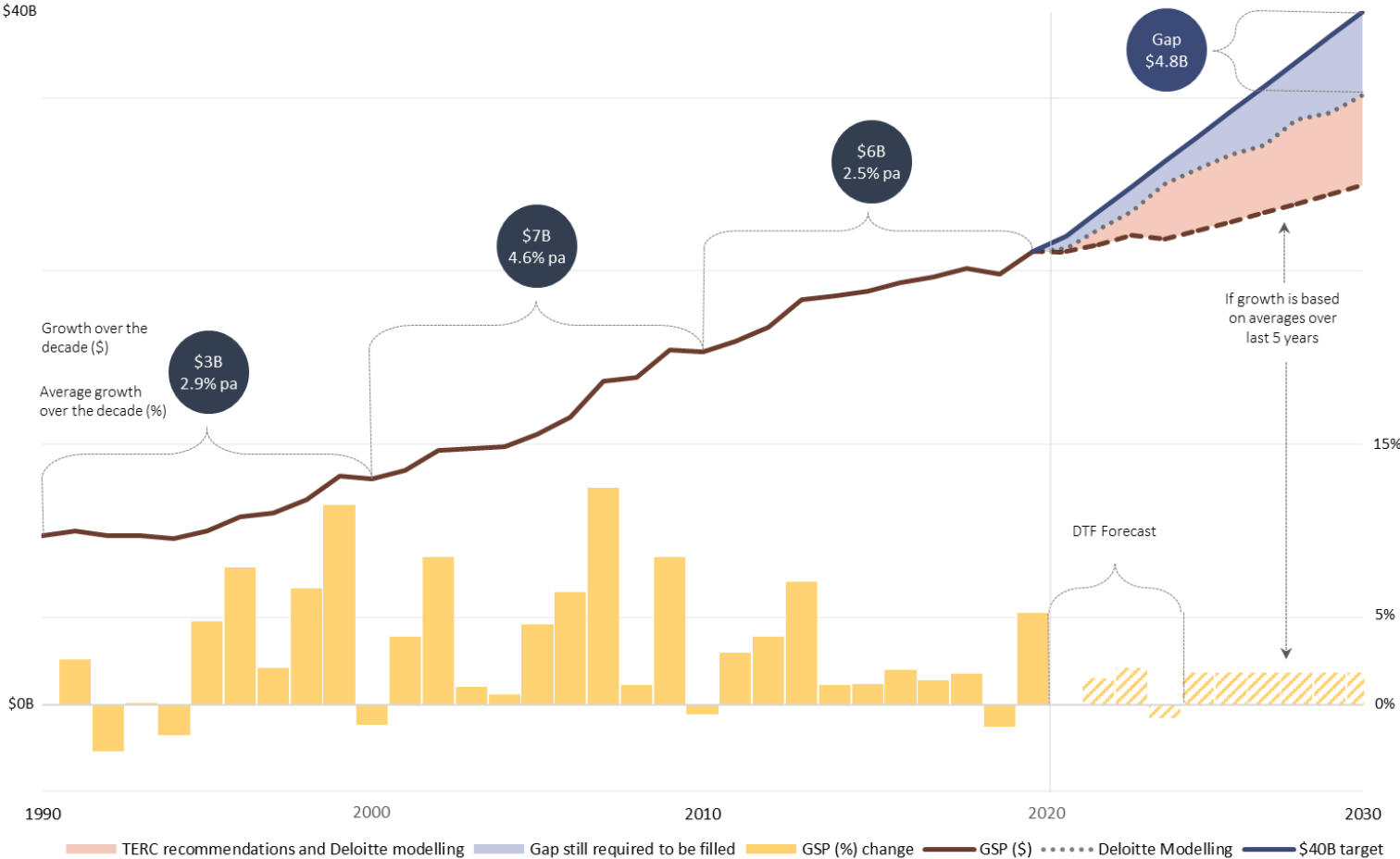
Successful implementation of the Commission’s recommendations will directly contribute to and establish conditions for future growth.

Even with strong post-COVID-19 growth, modelled recommendations only get so far, with the Territory economy forecast to grow to \$35.2B by 2030, falling short of the \$40B target⁷.

Modelling by Deloitte Access Economics expects the Territory economy to outpace the lacklustre performance and average growth of recent years. Yet even this is still well below the growth rate required to achieve the \$40B target.

The same modelling expects jobs to grow from around 132 000 in 2020 to 155 000 in 2030, also falling short of the target of 166 000.

Figure 2: The Territory's historical economic growth and the path to \$40B⁸

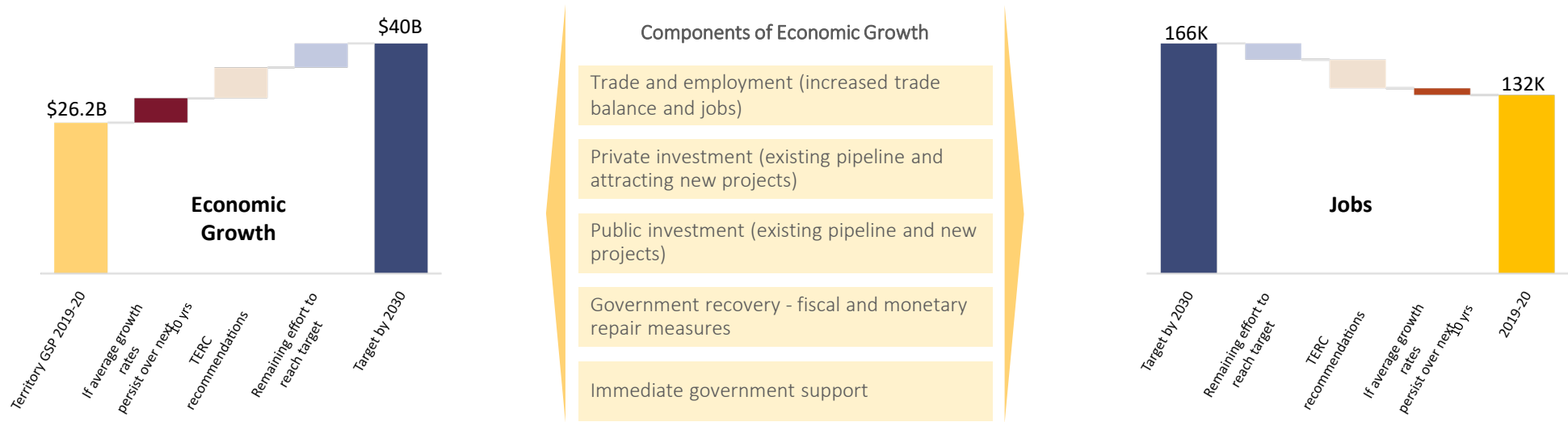


A step change in the level of sustained private investment is required to fuel growth and jobs

Growth above the conservative estimate of the future post-COVID-19 average rate of 1.5% per annum requires an unrelenting laser focus on getting all the required conditions to go right

The Commission’s recommendations are only partially modelled (mainly due to availability of data). The focus of the Commission has been firmly on setting the right conditions to achieve a step change in private investment.

Figure 3: Combination of effort and activating the maximum possibilities at every step is critical for increasing jobs and growth⁹



A combination of private investment and supporting public investment (including economic stimulus) will drive industry growth and exports, which will increase retail, construction activity, broader economic growth and jobs.

Some new investment will come from the existing pipeline of projects and new opportunities actively under consideration, including: mines, minerals processing, agribusiness enterprises, renewable energy exports, further appraisal and potential development of the Beetaloo Sub-basin and other onshore and offshore gas developments and manufacturing, including low emissions petrochemicals.

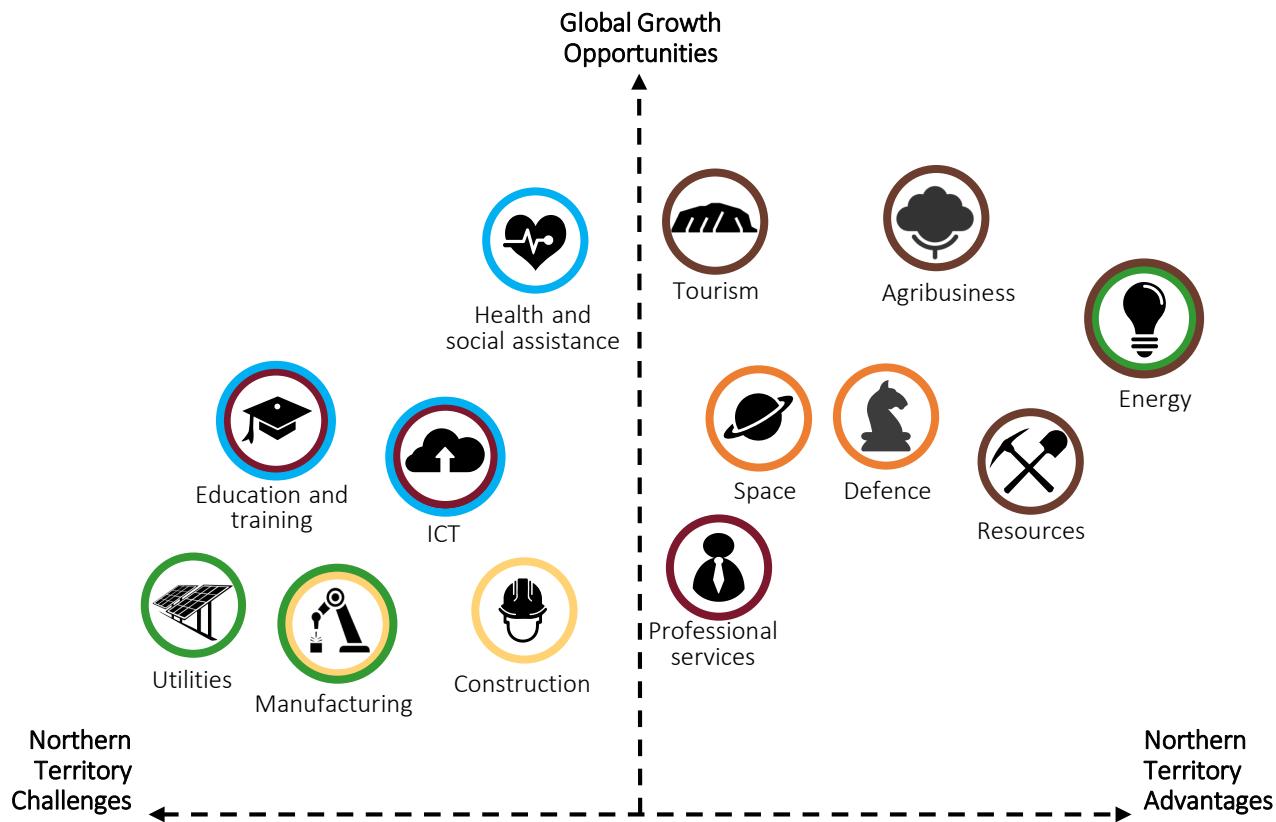
With the current low level of private investment in the Territory and challenging global economic circumstances, activating the maximum possible amount of this pipeline of existing and new projects is critical.

The rates of growth required to develop a \$40B economy have been achieved before when private resource related investment activity was supercharging the economy. With sustained and focused effort that growth along with job creation may be achievable once again.

The Territory must actively channel global forces to create a competitive advantage

The Territory has performed best when aligned with global trends – ignoring these forces could see the Territory fall further behind

Figure 5: The Territory’s sectors and their alignment with Global trends ¹⁰



Global megatrends from which the Territory is well-placed to prosper include:

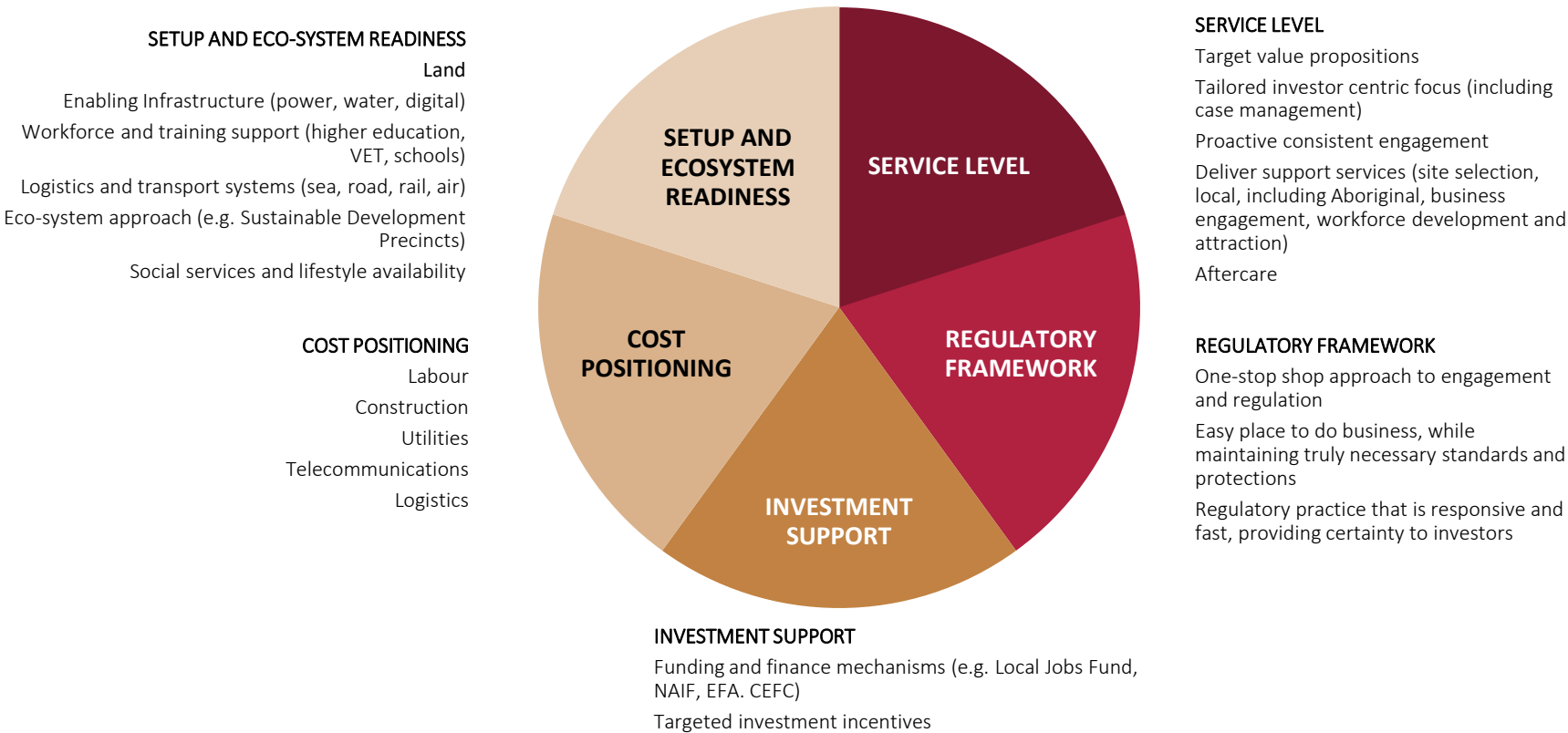
- DIGITALISATION**
Acceleration of technical advances is impacting and disrupting industry sectors, but also helping others overcome the barriers of remoteness – a key opportunity for the Territory
- DEGLOBALISATION**
Shift to increased self-sufficiency in supply chains and manufacturing capacity provides opportunity to grow local manufacturing
- SUSTAINABILITY**
Global commitments to net zero emissions by mid-century provide opportunities for the Territory to benefit from developing and promoting decarbonisation supply chains and pathways
- INCLUSIVE AND JUST SOCIETIES**
The Sustainable Development Goals include a strong focus on inclusive societies and mature relationships with First Nations peoples, providing opportunity for Aboriginal Territorians to economically benefit from a growth agenda
- REGIONALISATION**
Strategic shifts in the global order shine a spotlight on the rise of Asia. The Territory’s proximity to Southeast Asia strengthens the opportunity for trade north, rather than south

Competing nationally and globally for private sector interest requires a bankable investment environment where it is easy to do business

Actively de-risking investment and positioning the Territory to be better than its competition will attract investor interest. It is time to take the red carpet to the investor

Making it easy and attractive to do business is for the benefit of all businesses, existing and new. Importantly rolling out the red carpet does not mean at the expense of society’s values or important protections and means enabling quality investment for the benefit of all Territorians.

Figure 6: Elements of a bankable investment environment



This is not business as usual – it requires a systemic shift in the role of government, from facilitating investment to one of actively pursuing and winning investment for the Territory

In order to compete with national and global markets, this mindset shift must be Territory wide. Business, industry and the community must come together to welcome investment and put forward evidence-based ideas and plans that demonstrate the Territory is prepared, engaged and ready to do business

Business as usual will only lead to a continuation of the Territory’s relative economic decline, with less business, less population, less jobs, lower relative living standards

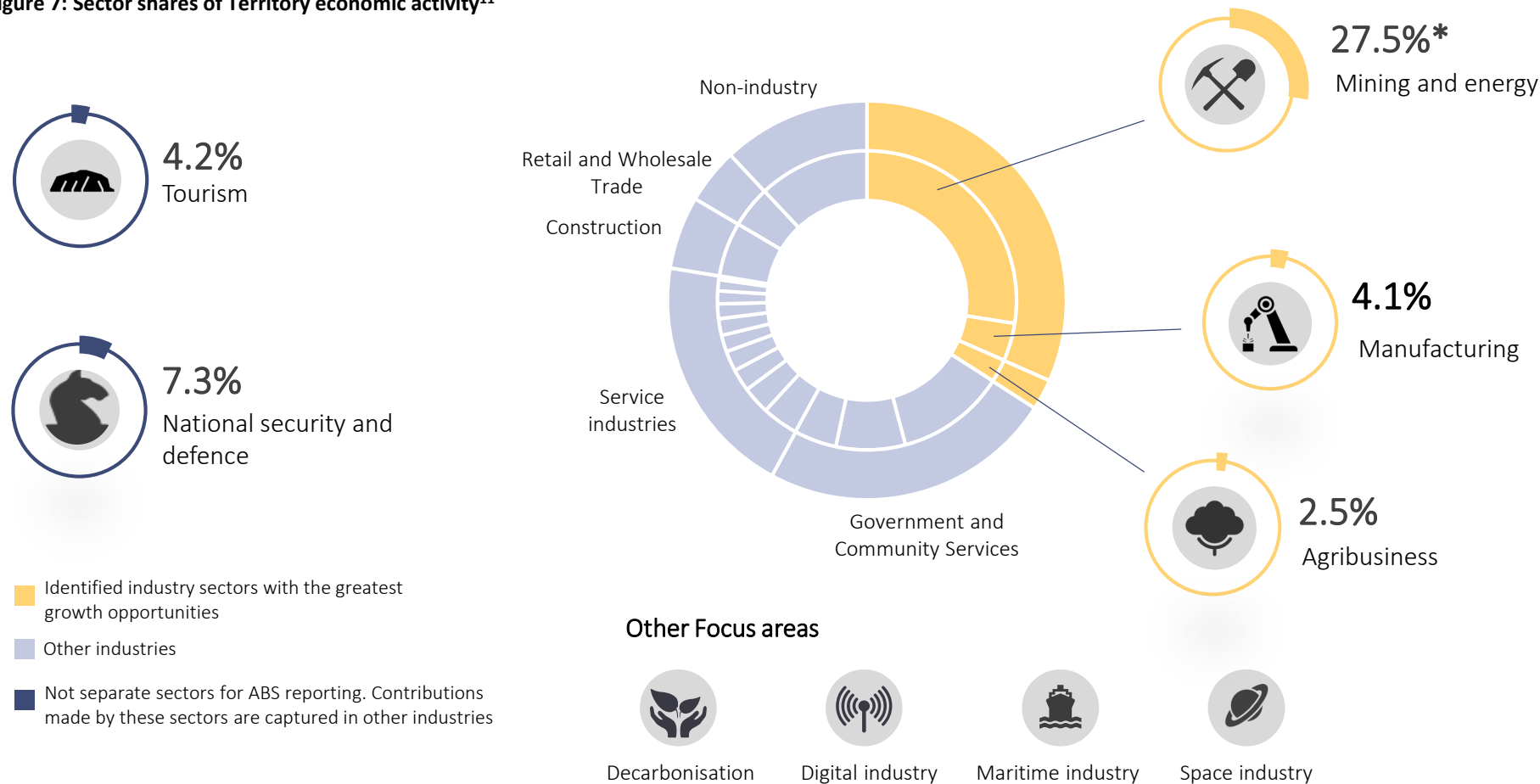
This report outlines the approach required to win investment and deliver on the recommendations, including actions to:



A focus on the following sectors will drive industry growth

By design and necessity, the Commission’s report focuses only on the sectors that will contribute the most to an upward swing in economic growth

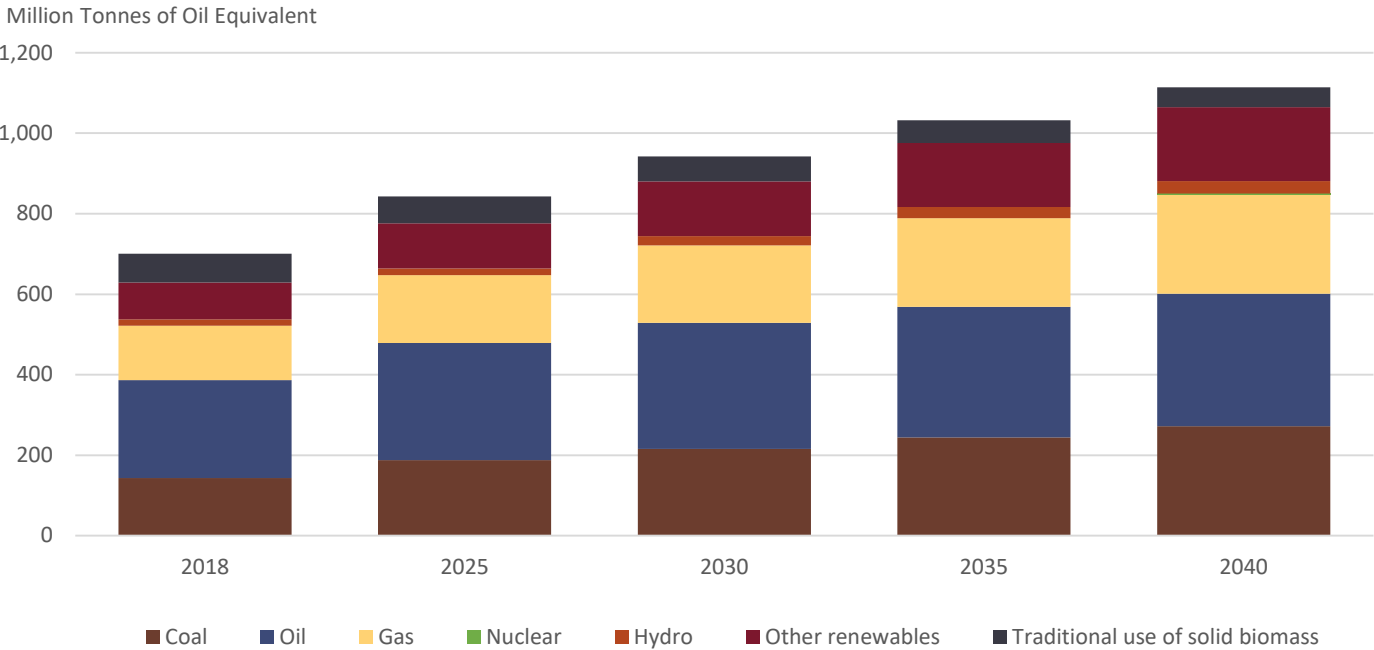
Figure 7: Sector shares of Territory economic activity¹¹



Renewables are the future of energy production, and a focus on harnessing the Territory’s world class energy resources position it for growth in a net zero emissions world

Technological innovations in battery storage and the production of hydrogen are occurring rapidly and quickly becoming more commercial, reducing the dependency on other forms of energy over time

Figure 8: Primary energy demand in Southeast Asia 2018 – 2040¹²



The report recommends

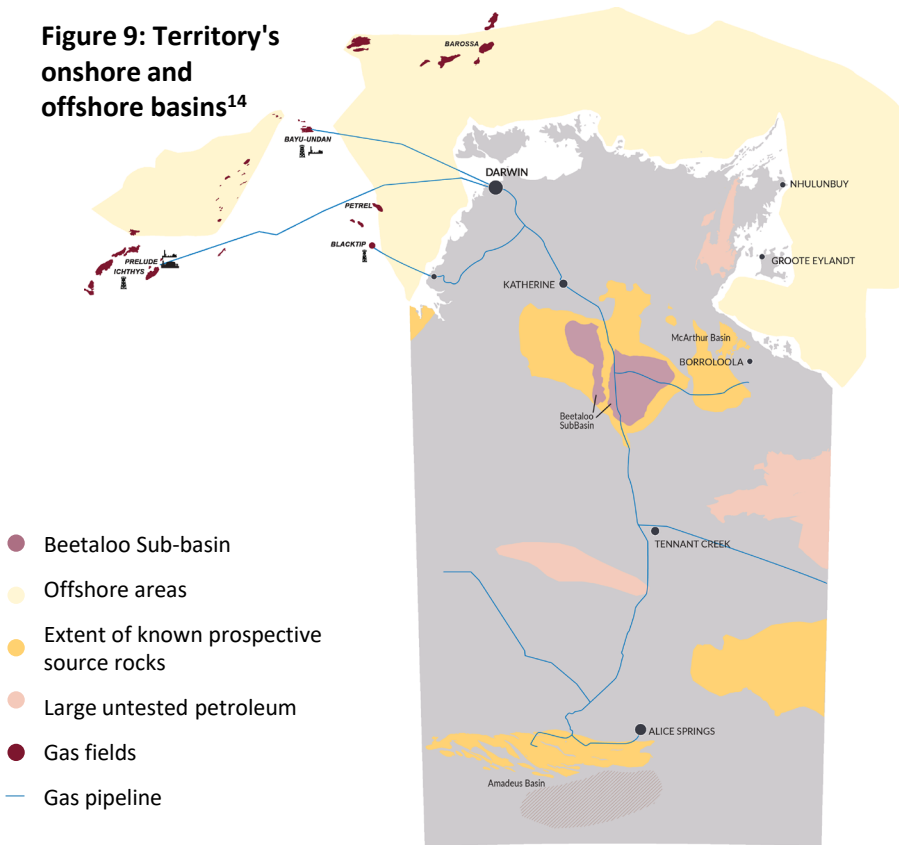
accelerating industry growth to drive demand for competitively priced renewable energy, supporting investment in renewable energy for export, and preparation for the development of hydrogen

Globally, the use of gas is expected to rise both as a feedstock and a source of power¹³, and it is critical the Territory is ready to capitalise on the opportunity the Beetaloo Basin will bring to the economy, once commercial feasibility is proven

With world class offshore and onshore gas deposits, the Territory is already playing a key role in Australia's contribution to global gas supply for energy, notwithstanding it is a transitional fuel until renewable energy storage becomes more competitive

Gas is also an important feedstock for manufacturing, used in the production of a large list of everyday items, and its use for that purpose will continue into the future.

Figure 9: Territory's onshore and offshore basins¹⁴



- Offshore gas reserves > 30 Tcf
- Onshore P50 gas-in-place resource for the Velkerri B-Shale alone of > 500 Tcf across the Beetaloo Sub-basin
- There are further prospective layers in the Beetaloo Sub-basin, including for wet gas (liquids)
- The Beetaloo Sub-basin recognised by the Australian Government as first of 5 key basins to be explored under the national Strategic Basin Plan
- Other areas of exploration interest in the Territory include the McArthur, Nicholson, Georgina and Amadeus Basins

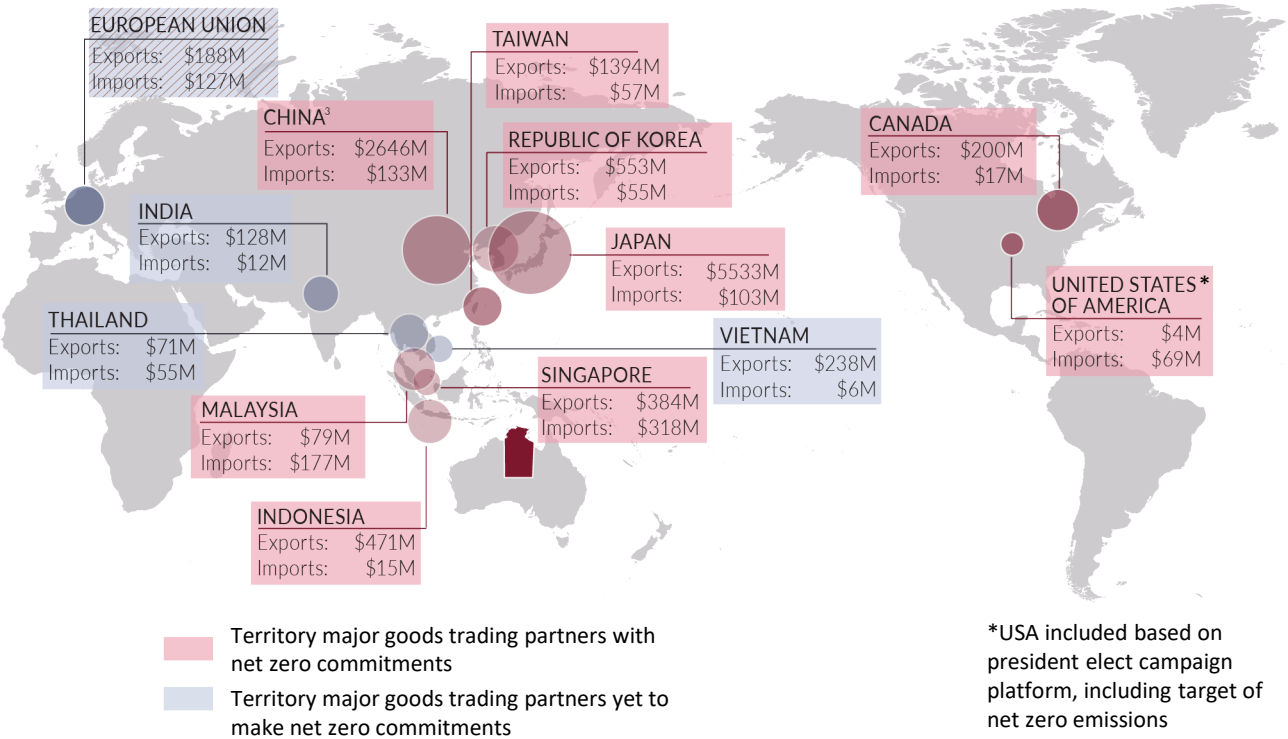
The report recommends

the Territory continues to partner with the Australian Government and industry on gas developments such as the Beetaloo Sub-basin, on the basis that development is subject to commercial feasibility and adherence to legislation, including relating to Aboriginal interests

Initiatives that support decarbonisation and contribute to achieving net zero emissions are an opportunity for the Territory

The Territory Government’s target of net zero emissions by 2050 is aligned with that of many nations and every other state and territory in Australia

Figure 10: The Territory’s Major Goods Trading Partners and commitments to net zero emissions, 2019-20¹⁵:



126 countries globally committed to net zero emissions
Covering **63%** of global emissions¹⁶

The report recommends

the Territory implement a decarbonisation plan, including interim targets, that will deliver growth and net zero targets, position itself as a key research and development location for low emissions technology, facilitate growth of carbon offsets, and look to take advantage of the growing demand for zero emissions supply chains

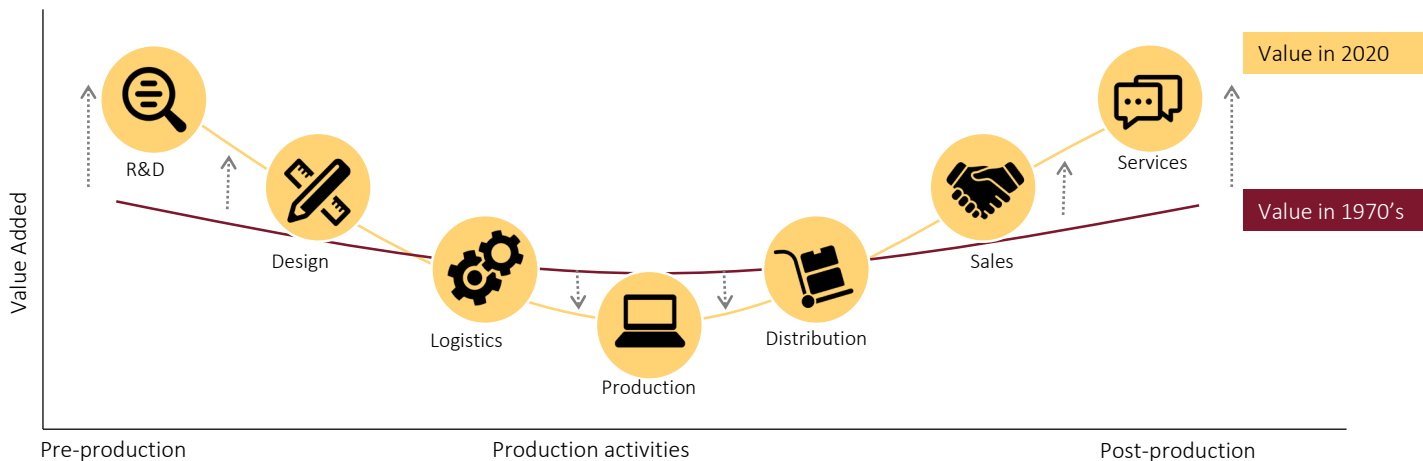
Accelerating the creation of low emissions advanced manufacturing businesses, in particular petrochemicals off the back of onshore and offshore gas, will transform the Territory's economy across all sectors – creating demand for local jobs and supply opportunities

Manufacturing in the Territory is limited (only 4.1% of the economy¹⁷), despite strong solar resources, world class base and critical mineral deposits, significant agribusinesses and world scale gas resources

Moving beyond raw resources to new value-adding endeavours is a step-change opportunity for the economy that will modernise Territory industry, develop and attract a highly skilled workforce, and deliver greater value to the Territory economy.

The modern value of manufacturing is in research, services and high value production jobs.

Figure 11: The manufacturing 'smile curve'¹⁸



The report recommends




the Territory rapidly progresses manufacturing opportunities in low emissions petrochemicals, renewable hydrogen, minerals processing, and food-related processing. Master plans to target low emissions design and electrification, bringing the Territory's resources, renewables and gas assets together

Urgently working with existing operators to open new or expand existing mines will help address the economic impact from the expected closure of three mines by 2030

Although mining is one of the Territory’s largest industries and employers, there has been no new major mines since 2005, while some existing mines are approaching the end of their life

There is a strong pipeline of potential projects in areas with strong global demand that are approaching final approval stage, but finance, scale and access to markets are critical hurdles to future success.

Figure 12: The mining project pipeline¹⁹

	Final approvals/finance 8 projects	Base minerals gold, iron ore	Critical minerals copper, lithium, vanadium, rare earths, tungsten
	Feasibility/Notice of Intent/ Environmental Assessment 8 projects	Base minerals gold, iron ore, zinc, salt, phosphate	Critical minerals lithium
	Resources defined >10 projects	Base minerals gold, zinc, phosphate, potash, uranium	Critical minerals copper, rare earths, cobalt, magnesium,

The report recommends

urgently standing up a Territory Minerals Development Taskforce to target new mines, using the master plan approach to target investors and new demand markets – particularly to activate existing leases; increase exploration to discover new resources and help prove up existing ones; develop minerals processing opportunities

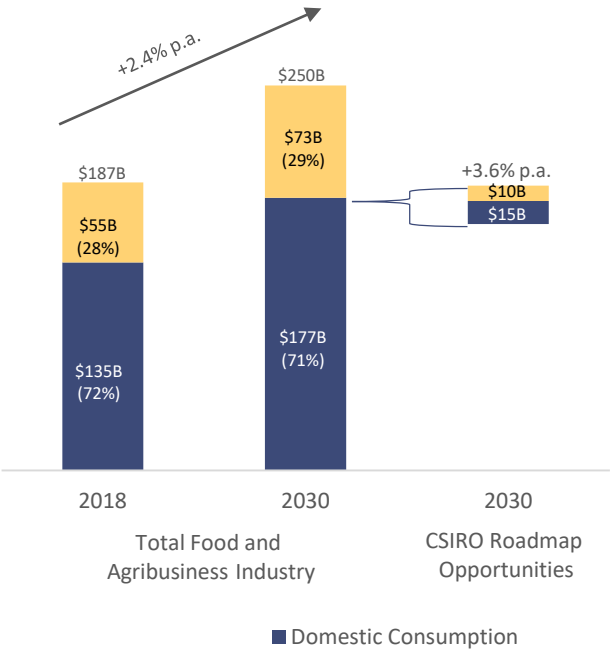
After a number of years of incremental growth, Agribusiness is ready to develop at scale

A coordinated effort using a combination of Sustainable Development Precincts and the Master planning approach as well as value adding opportunities can grow the sector and demand for jobs

Figure 13: Industry roadmaps identify the vision and approach for Agribusiness growth²⁰

- Food and agribusiness markets are evolving rapidly. Growth cannot be sustained through productivity improvements alone
- Over next 20 year Australia’s Food & Agribusiness sector has the potential to strengthen its position as a small but significant, authentic, healthy, high quality and consistent products
- The Agribusiness sector and climate is changing, transitioning world class science into innovative products
- Big data and more ecommerce platforms are driving smarter value chains and new global opportunity
- The Australian Government and the National Farmers’ Federation aim to achieve \$100B in farm gate output by 2030

Figure 14: CSIRO Growth opportunities for Australian Food and Agribusiness 2018 – 2030²¹



Industry is growing: Australian food and agribusiness, measured in terms of domestic consumption and exports, could reach \$250B by 2030 if growth can continue at historical rates (~2.4% p.a.)

Sources of growth: Opportunities identified in the roadmap are projected to grow at around 3.6% per annum between 2018-30, and may contribute to industry growth if domestic and export opportunities are captured locally.

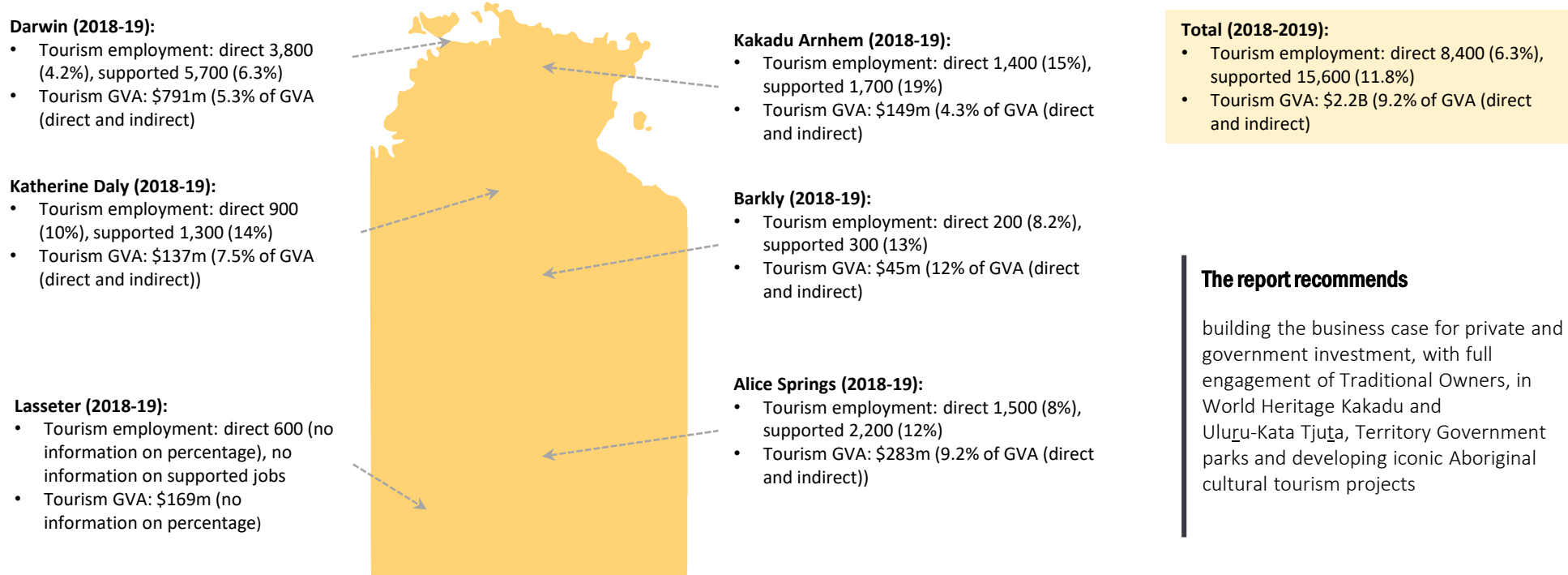
The report recommends

driving Sustainable Development Precincts, integrating strategy across the industry, supporting development of Aboriginal-led Agribusiness enterprises and pursuing opportunities through value add, such as manufacturing

Visitors are attracted to iconic destinations and experiences. Developing world-class tourism icons, based on the natural environment and Aboriginal culture, will provide the focus for national travel and the return of international travel

Tourism has the highest job creation potential of all the sectors across all regions. More visitors means more jobs in accommodation, hospitality, and tourism experiences. While international tourism will take time to recover, opportunities for the domestic market remain strong, in particular the drive market

Figure 15: Tourism employment and total tourism gross value added by region 2018-2019²²



The report recommends

building the business case for private and government investment, with full engagement of Traditional Owners, in World Heritage Kakadu and Uluru-Kata Tjuta, Territory Government parks and developing iconic Aboriginal cultural tourism projects

The Territory can benefit from the following industries that are aligned with global trends and the Territory’s strategic position



National security & Defence

The Territory is a critical part of Australia’s national security and defence architecture. A sovereign local industrial base, strong economy and critical infrastructure are fundamental enablers of national security.

The Territory is playing a central role in humanitarian and disaster relief operations, as shown with the current COVID-19 response at the Centre for National Resilience.



Maritime industry

Darwin is a rapidly growing regional maritime industry hub servicing the fastest growing region globally.



Over 7500 vessels were operating within 850 nautical miles of Darwin over the 12-months to March 2020.²³



Digital industry

Competing in the digital age requires a series of mindset changes in how organisations operate and how the digital industry enables this, and the opportunities this offers to overcome the traditional barrier of remoteness.



Space industry

The new space industry is a globally and nationally growing sector where the Territory can build on its strategic location and existing capabilities.

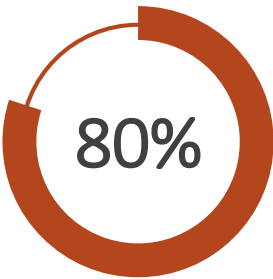
The new space industry has significant potential to enhance the productivity and efficiency of key industries in the Territory, delivering critical technology and enabling digital transformation opportunities.

Growth will occur in the regions, with Aboriginal people pursuing new opportunities

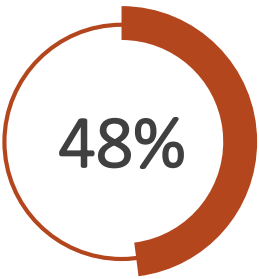
Aboriginal Territorians are actively leading commercial developments on their land, creating opportunities, jobs and wealth

The Commission supports the Land Council’s determination for economic development

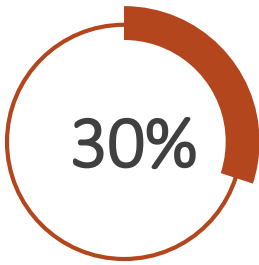
With Aboriginal land such a key part of the Territory’s future, addressing investors’ lack of familiarity with Aboriginal land tenure and how to navigate its processes, will help to open opportunity for Aboriginal people and the wider Territory



of the Territory’s coast line is Aboriginal land



of the Territory is Aboriginal land



of the Territory’s population is Aboriginal

Across the Territory there are:



remote communities



outstations



years is the median age of Aboriginal Territorians (compared to 32-years old)

The report recommends

supporting Aboriginal-led economic developments, establishing more common use of innovative project finance, and streamlining land administration through increased capacity and preparatory work

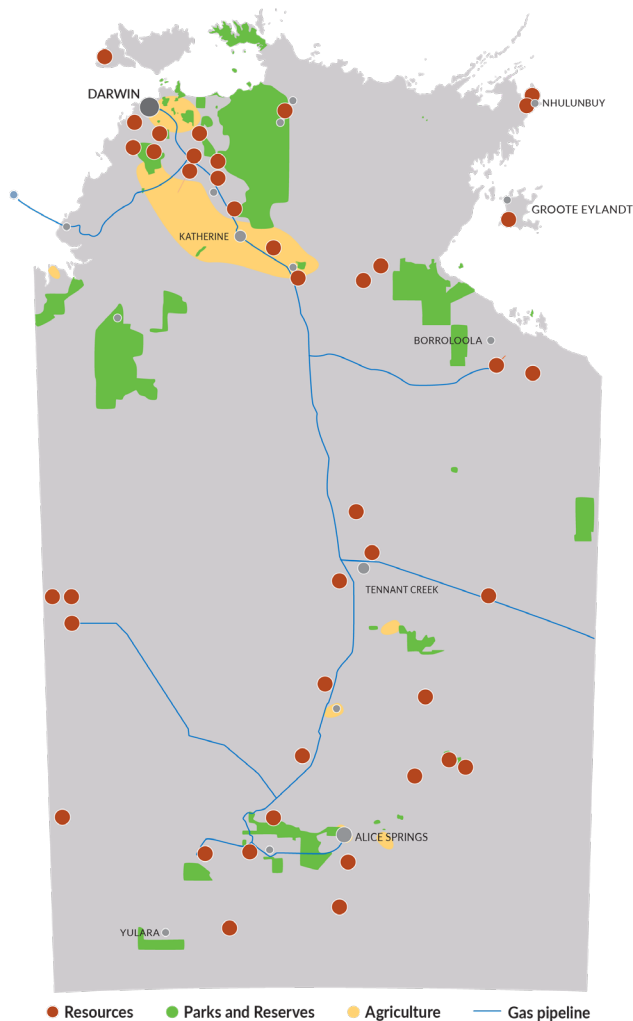
Note: If all outstanding land claims were granted, approximately 52% of the Territory’s land mass and 92% of its coastline would be Aboriginal land

Data sourced from NT Government sources²⁴

Most of the industries discussed in this report are located in the Territory's regions, and a significant strengthening of the regional economic development function can capture more of the benefits locally

Understanding a region's competitive advantages, and then seamlessly linking opportunities to the investment delivery system, will help lift and grow regional economies

As expressed by the Regional Reconstruction Committees, one of the key issues for the regions is how to access funding and decision-makers for projects in their region



The report recommends

a significant strengthening of the regional economic development function with a strong connection to government decision-making, in particular the investment delivery system

The enabling environment is critical for the viability of projects, and in the medium term this requires urgent delivery of a significant program of economic infrastructure

This may require the Territory Government to carefully increase debt levels to finance well-considered infrastructure, supported by robust business cases, that will return real benefit to the Territory and its finances

Investors need:



Access to land

Clarity on how investors can access land in a timely and respectful way will drive growth



Access to water

Improved policies, infrastructure and strategies that address water availability, climate impacts and competing needs will support growth



Access to affordable power

Power demand from economic growth will outpace current forecasts. It is critical that power infrastructure investments and policy are adaptable and deliver competitively priced electricity as the foundation for industry growth



Access to digital connections

Digital transformation is changing the foundation of society and the economy, yet many areas of the Territory still remain without access resulting in lost opportunities for economic and social progress

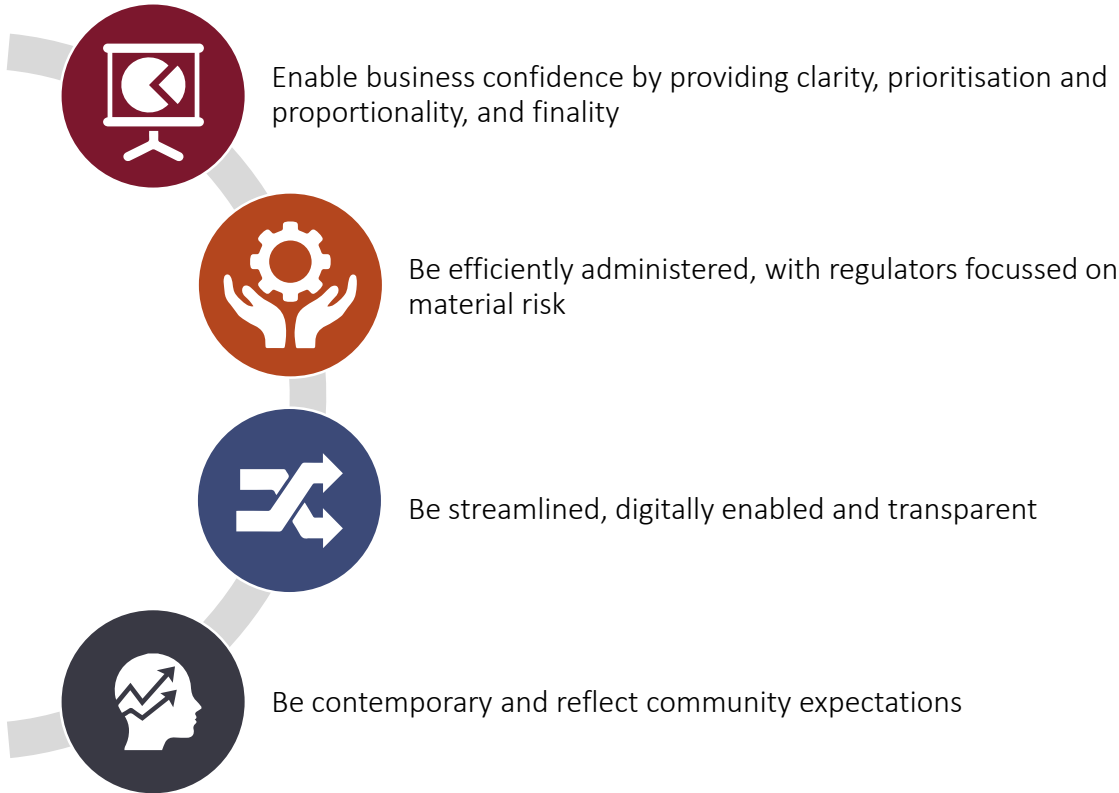


Logistics to manage and connect supply chains

Territory wide collaboration to gain scale will improve efficiency, reduce costs and benefit all. Quality roads are essential for both economic and community equity outcomes

Government must move quickly to make it easy to do business by streamlining the regulatory system

Investors need speed, clarity and transparency, and advice on the information required to streamline assessment. Improving the investor experience in the regulatory process is key to being nationally and globally competitive. This doesn't mean shortcuts, it means efficiency, transparency and digitalisation



The report recommends

Government streamlines regulatory operations and concentrates on material risk

A skilled population is a critical enabler of economic growth, and there is a requirement to grow Territory skills and attract new population linked to industry and business demand

Until such time there is a significantly larger base population, the Territory will continue to rely on interstate and overseas migration to fill ongoing and temporary jobs

Economic growth needs action to build the right skills and attract and retain more people

The Commission focused on the elements most critical: workforce planning and skilling, education pathways, affordable housing, and a liveable and enjoyable environment

Right skills

- The Territory must plan for the future workforce, now
- In partnership with schools, universities and skilling industry to create new workforce solutions
- Education providers must collaborate to build competitive advantage for the Territory



More people

- Meaningful growth needs all Territorians participating
- Improvements must continue to be made to remote Aboriginal education
- Population growth and mobility are both required to achieve aspirations
- Workforce from outside the Territory will still be needed in peak demand periods



Strength of place

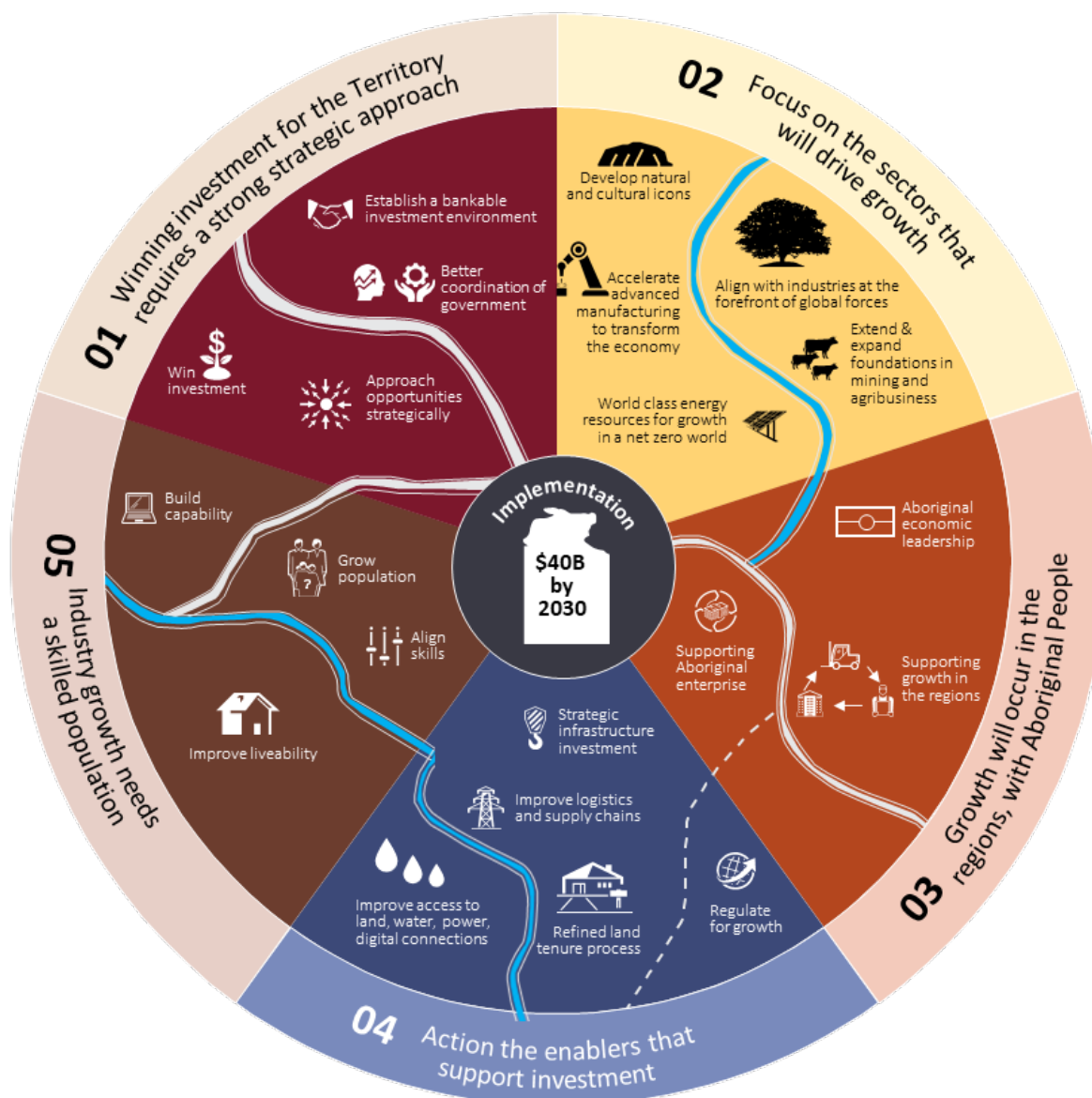
- Strategically plan for future demand
- Improvements to liveability to attract people to move and stay
- Population is supported with access to diverse housing supply

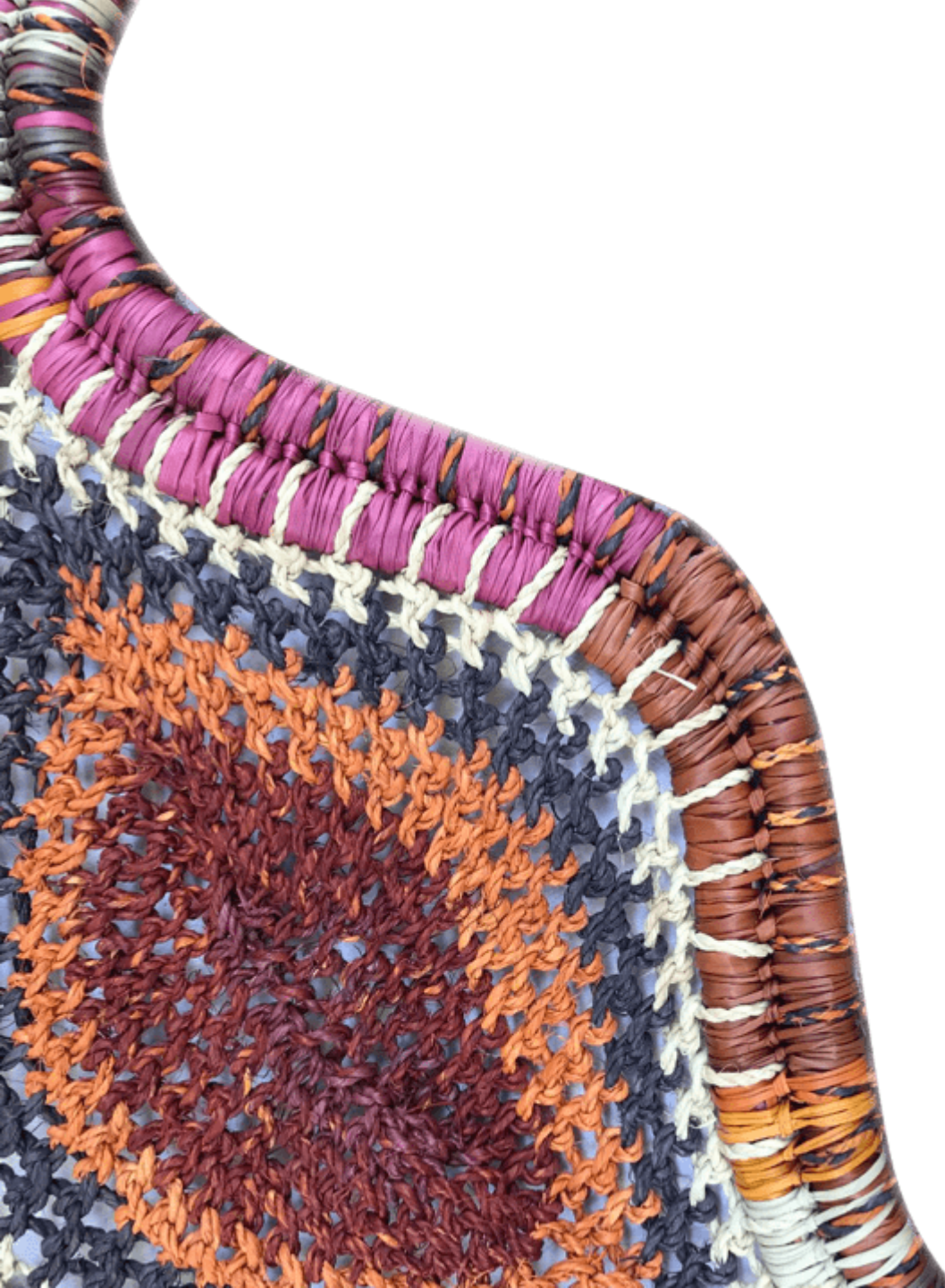
The Territory is at a stage of development where collaborating to win investment will drive the economy upwards

A \$40B economy by 2030 is bold, but within reach if Territorians work together, this report sets out actions to:

1. Establish a strong and strategic approach to winning investment
2. Focus on the sectors that will drive growth
3. Position the Territory for growth in the regions and with Aboriginal economic leadership
4. Action the enablers that support investment
5. Increase the skilled population to accommodate industry growth

Figure 17: The Territory's step change blueprint





1

Winning investment for the Territory requires a strong strategic approach

Private investment has hit its lowest level in nearly two decades. To support the economy, the Territory Government has led with successive years of greater than \$1B²⁶ a year in capital works and economic stimulus programs – this is unsustainable

Prioritising actions to make the Territory the easiest place to do business and invest will substantially contribute to sustainable economic growth

Why the Territory?

- World-class mineral deposits, including critical minerals necessary for modern life
- Access to water
- A strategic location for defence
- A quality solar resource spread across a wide area
- A strong agricultural sector
- Highly prospective world scale onshore gas resources and proven offshore gas reserves
- Deep water harbour and intermodal logistics
- Proximity to markets in Southeast Asia

Growing the Territory economy benefits all Territorians through improved living standards. New investment creates demand for new job opportunities and wages growth, increases retail and construction activity, grows the Territory's population, and provides tax revenue for government to improve services and reduce debt.

Prior to the recent economic transition from a major construction boom, and the once in a century economic shock of COVID-19, the Territory has benefited from a series of major project investments over the past 20-years, starting with the railway and most recently Ichthys LNG. These major projects have seen the Territory economy grow from a \$14B economy in 2000-2001 to a \$26B economy in 2019-2020, with a 25% increase in population and a 40% increase in the workforce.²⁷

The private sector is the engine room for the Territory's growth and repeatedly securing private investment across the Territory's regions and sectors must be the priority if the Territory is to grow its economy in the medium-term.

The challenge is to encourage private investment to take and create investment opportunities in the Territory. To do this, the Territory needs to be more attractive and competitive than its competition for private investment; and answer two questions: why the Territory? why now?

While the private sector is critical to growth, it cannot and does not act alone. The Territory and Australian Governments play a central role in creating the enabling environment that encourages the private sector to invest: the bankable investment environment.

In a world chasing growth to recover from COVID-19, a bankable investment environment is now the baseline entry point for jurisdictions seeking investment.

In a new era of nationalism, there is a different role for the Territory to play in facilitating projects, which is currently largely concentrated on concierge type services and filling in market gaps through creation of Expression of Interest type processes.

The findings of the Investment Delivery Taskforce show that there is an increasingly evident role for the Territory to leverage its power to coordinate parties (project proponents, investors, off-take parties, intermediaries and funders), including beyond state borders.

There is also the role of strategic architect, driving collaboration between parties and different proponents to enable additional value creation along the supply chain.

The priorities for government should include:

1. Securing investment in the near term by engaging those that have, or are considering deferring investment, to jointly map out the pathways to proceed and then advance along them. This includes smaller investments that have received development approvals in recent times
2. Working with proponents to accelerate final investment decisions in projects that could commence construction within the next 24-months, similar to the work of the Investment Delivery Taskforce that stemmed from the Commission's First Report
3. Prioritising the investment pipeline to bring forward projects and identify new projects that align with the strategic objectives of the Territory. The allocation of project development funds by investors is critical to growing the investment pipeline
4. Ensuring investment support mechanisms are fit for purpose, including working with the Australian Government on key financing mechanisms and their role in accelerating investment

5. Prioritising the timely delivery of government-led economic enabling infrastructure in support of the investment pipeline

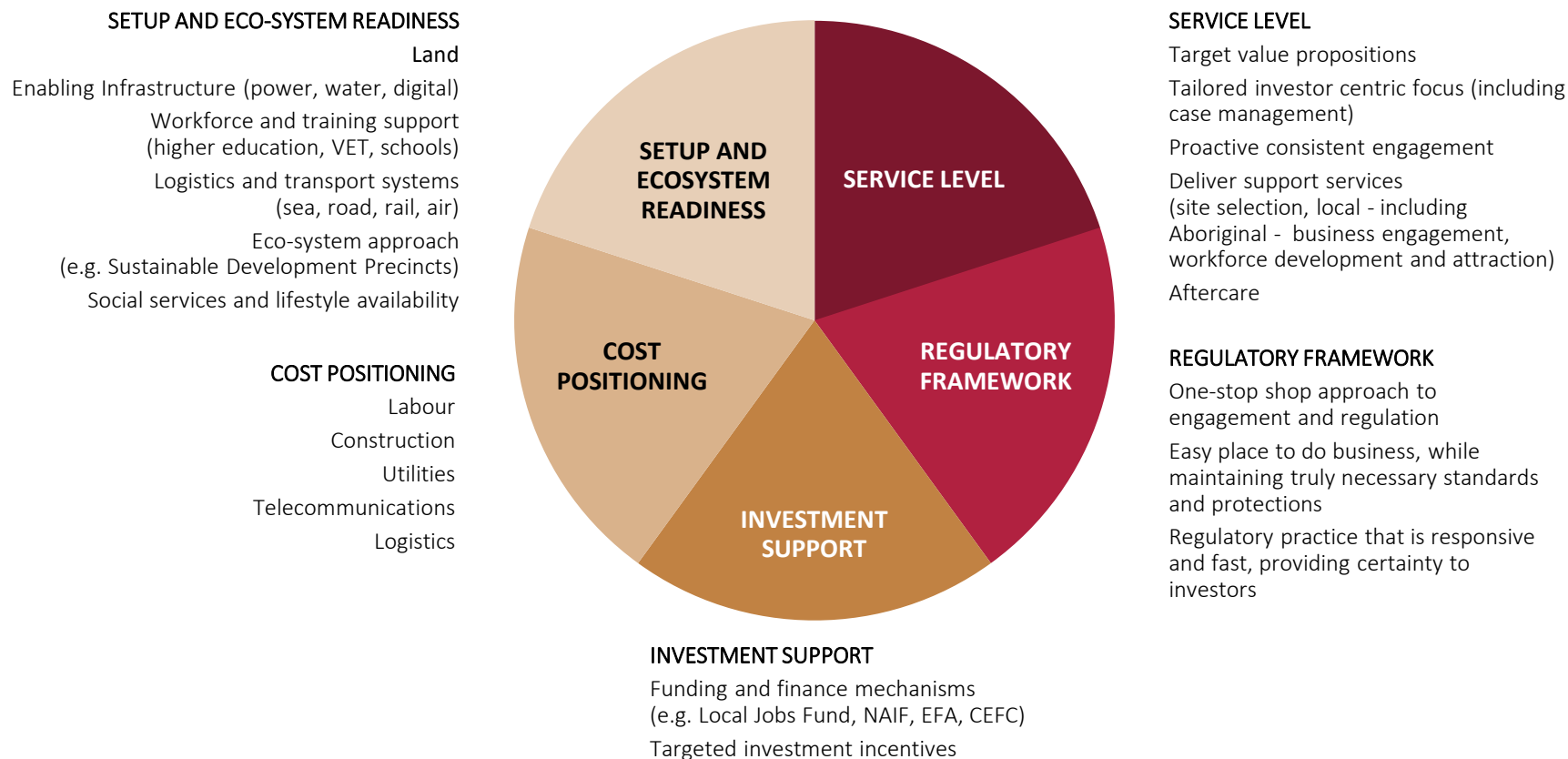
In addition, maintaining competitiveness will require continued work to sustain and improve the bankable investment environment.

Further, monitoring and reporting on performance will be important to maintain focus and measure progress.

A bankable investment environment is critical for attracting new businesses, creating jobs and growing the Territory's economy

Securing investment to drive demand for jobs and grow the economy requires a sustained cultural shift towards welcoming and winning new investment, collaboration, and a determined focus on removing unnecessary impediments to private investment

Figure 18: Elements of a bankable investment environment



To grow the economy to \$40B by 2030 will require an average \$1.4B per annum of additional economic output

A step change in the approach to investor engagement based on clear value propositions and evidence based strategies can increase the success rate of the Territory's efforts to win investment

What needs to be done

Investor centric approach



Investment delivery system



Investment and Major Projects Commissioner

The Territory must put the investor at the heart of its approach, including by:

1. engaging with potential local, national and global investors in a way that understands and seeks to respond to their needs
2. encouraging new, and facilitating expansion of existing (re-investment), businesses
3. developing and marketing investment value propositions, informed by a strong evidence base
4. taking an ecosystem approach, looking at industry supply chains and markets
5. proactively targeting engagement with potential project proponents, investors, off-take parties, intermediaries and funders to supplement broad marketing efforts – the Territory needs to go to the market and investors and make its case: it cannot wait for the market to come to it!
6. delivering key services, such as assistance with site selection, local, including Aboriginal, business introduction, workforce development and attraction
7. actively coordinating project proponents, investors, off-take parties, intermediaries and funders. This coordination should extend to local industry and stakeholders to drive collaboration and enable additional value creation along the supply chain and to governments and their financing and funding mechanism

What needs to be done (cont'd)

Investor centric approach

**Investment delivery system**

Investment and Major Projects Commissioner

To drive the shift to an investor centric approach, government should consider:

- Ensuring that governance structures provide strong whole-of-government coordination and leadership focused on delivery
- Undertaking monitoring and reporting on performance to maintain focus and measure progress
- Appoint an Investment and Major Projects Commissioner as the single point of coordination for major private investment
- Opportunities for collaboration with local, national and industry leaders to provide:
 1. strategic advice on sustainable economic development,
 2. specialist advice on target industries,
 3. insights on market opportunities and trends, and
 4. advice on the attractiveness of the Territory's bankable investment environment

Industry collaboration is a strong feature of successful investment approaches in jurisdictions such as Singapore

- Engaging a strategic advisor to assist in winning investment, to support the cultural shift, to help build capability in the public service and to provide the Territory with access to a global network of potential project proponents, investors, off-take parties, intermediaries and funders
- Actively facilitating a whole-of-Territory approach to winning investment that includes government, industry, Land Councils, research organisations and the community and other stakeholders

- One-stop shop approach to engagement and regulation
- Undertaking strategic planning and development of public infrastructure to build industry confidence and support engagement with the Australian Government
- Accelerating a deep understanding of target industries and supply chains to support productive engagement with potential project proponents, investors, off-take parties, intermediaries and funders
- Strengthening Government's capacity to take a place-based, collaborative and evidence-based approach to growing regions to prioritise the most effective development opportunities for sustainable regional growth
- Undertaking a capability analysis of the investment functions to support capability development and future recruitment actions

What needs to be done (cont'd)

Investor centric approach



Investment delivery system



Investment and Major Projects Commissioner

Investment and Major Projects Commissioner

- To accelerate investment delivery for major private investment, including major projects, a single point of coordination should be established – the Investment and Major Projects Commissioner (IMPC)
- The IMPC should be responsible for taking specific value propositions to targeted investors and markets, case managing the investment pipeline, development and initial management of Sustainable Development Precincts (SDP) and major project delivery
- The IMPC should have the ability to direct prioritisation of resources and decisions. Regulatory oversight and decision-making should remain with agencies and specialist bodies
- The IMPC should be a standalone function with a legislated authorising environment that clearly provides:
 1. that the IMPC reports directly to the Chief Minister
 2. the purpose and functions of the IMPC
 3. governance requirements (including a robust conflict of interest and independence framework)
 4. an ability to seek independent advice and information, and
 5. any specific powers of the IMPC (e.g. to prioritise specific projects, ability to direct prioritisation of resources and decisions)
- The IMPC should have the ability, consistent with best practice, to establish industry advisory groups comprised of private and public sector members
- It is critical that the IMPC has the right skills and capabilities for success. These include: deep commercial experience, major project management experience, sophisticated negotiating skills, strong interpersonal relationships, a track record of getting things done, and someone who is known for taking a common-sense and pragmatic approach
- The IMPC will need to be resourced to buy in technical expertise to rapidly progress master planning, including facilitating development and investment in SDPs, and develop value propositions and proposals to take to investors
- The IMPC will need to collaborate across government including in relation to whole-of-government infrastructure planning and regional economic growth

Actions that lower investment risk and accelerate approval timeframes will position the Territory as the place where doing business is faster and smarter

Integrated and coordinated activity to address up-front key investment thresholds will accelerate decision-making

What needs to be done

Consistent with international best practice the Territory should undertake rapid master planning to create a bankable series of investments that can be taken to market.

Rapid execution of master planning activities will help position the Territory to take advantage of market conditions.

While master planning is a key tool for de-risking investment and accelerating decision-making, there is always a risk that decisions are delayed or the competition for investment is unsuccessful or the market does not respond. In those situations, it is essential to gather industry insights to inform future processes and actions.

Master planning

Master planning can be undertaken at industry or project level and may include the establishment of Sustainable Development Precincts.

Master plans (which are supply-side mechanisms) should target specific local, national and global investors and be strongly connected to demand-side considerations, including cost-benefit and competitive advantages.

Strong consideration should be given to:

1. partnering with specialist advisers to support master planning processes and leveraging global best practices
2. establishing specialist industry advisory groups to bring international and local expertise and market insights to the development of master plans and Sustainable Development Precincts on a time limited and/or sectoral basis. Membership of these groups should draw from local and regional industry leaders

Master plans should include the following elements to reduce risk and support accelerated investment decision-making:

1. Sustainable Development Precinct design, where relevant
2. Critical enabling infrastructure planning, including an outline of staged development pathways. Infrastructure includes roads, utilities and digital connectivity
3. Pre-planning with a level of pre-approval that supports streamlined planning and environmental approvals
4. Tenure planning including, where required, early engagement with Traditional Owners and land councils to establish clear governance arrangements to streamline decision-making processes and timeframes. These governance arrangements and the practical steps to put them in place, would need to be pre-agreed by the Traditional Owners, Land Councils and the Territory Government
5. Pre-investment in the necessary technical studies, base line environmental studies, culture and heritage studies, sacred site clearances and other studies with the purpose of reducing the burden on investors and to support timely approval processes
6. Assessment of, and proposals for development of, workforce availability, supply capability, and logistics
7. Development of strong businesses cases to support investment attraction activity
8. An analysis of the value proposition at the industry and enterprise level to support targeted market engagement
9. Development of an investment prospectus, including an outline of the Territory's cost profile

What needs to be done (cont'd)

Sustainable Development Precincts (SDP)

A SDP is an identified location within a master plan where the proposed industrial activity or activities can be appropriately undertaken.

The starting point for a SDP is its natural comparative advantage supported with a strong evidence base.

Precincts should be designed with key sustainability principles, including:



Contribution to net zero emissions, including through renewable energy use to the maximum extent



Efficient water use, including reuse where possible



Circular economy principles

Development and investment in SDPs should be facilitated by the Investment and Major Projects Commissioner.

Priority should be given to partnering with land councils on the development of SPDs on Aboriginal land.

CASE STUDY – Benefits of pre-competitive information²⁸

Barkly region pre-competitive geological information

A large volume of new pre-competitive geoscience data has been generated in the Barkly region in the past three years through collaboration between the Australian and Territory governments. This work highlighted previously unrecognised potential for copper, zinc, gold and shale gas and led to a substantial increase in industry activity. The prospective rocks are buried more than 100m below the surface and there was previously insufficient geological information to attract explorers into the area.

\$25M

Geoscience Australia and NT Geological Survey co-investment plus in-kind contributions

30 000 km²

New mineral exploration licence applications over previous vacant ground in the Barkly Tableland east of Tennant Creek

\$30-100M

Anticipated exploration related expenditure in the next five years, with discovery success or encouraging results likely to lead to increased levels of investment



Attracted major resource companies including BHP and Newcrest Mining into the Barkly, as well as numerous junior explorers, many of which have invested in the Territory for the first time



If discoveries leads to a mine or development, then long-term economic benefits accrue

With interest rates at record lows, government financing and funding mechanisms need a stronger point of difference to drive investment

Demonstrated government commitment will send strong signals to commercial funders and foreign export credit agencies. By having 'skin in the game' government support can act to 'crowd in' investment

What needs to be done

A substantial and sustained increase in private investment is critical to the Territory's economic recovery and growth.

The Territory should rebalance its spending priorities to prioritise, wherever possible, activities that support private investment and improve the Territory's bankable investment environment.

Notwithstanding its current fiscal position, the Territory should consider additional debt to catalyse private investment. Interest rates are at all-time lows and unlikely to rise in the medium-term.

Additional debt should only be considered in a limited number of circumstances, specifically:

1. where the debt will be used to invest in enabling infrastructure that has a high probability of catalysing private sector investment
2. where the economic return to the Territory is likely to be sufficient to generate a longer-term income stream (taxes, royalties, fees and charges) to the government to repay the debt

The Australian Government has many funding programs, including new programs targeted at national economic recovery efforts. The Territory should actively target these programs with strong proposals – using targeted approaches combining robust business cases, and collaborative political, bureaucratic and industry approaches to decision-makers.

What needs to be done (cont'd)

Government funding and finance mechanisms

A key finding of the Investment Delivery Taskforce is that for the Territory, and Northern Australia, government support needs to be reframed to assist specific projects in key priority sectors as creating a path for future projects. That is, 'path breaking', not winner picking. This enables the creation of new industries and markets, and where a project is aligned with the Territory's strategic objectives all stops should be pulled out. This approach should be reflected in the objectives and incentive structures of key agencies in the Territory and Australian governments.

The Territory should use its position to garner greater collaboration between agencies in the Territory and Australian governments, concessional funders and investors to improve communication and accelerate problem solving.

Territory's Local Jobs Fund

The Local Jobs Fund is an effective tool to crowd-in private sector support to advance feasible projects into bankable projects.

The modest, flexible fund has enabled the Territory to participate and catalyse investment that might not otherwise be achieved by sharing risk and demonstrating support.

To date, projects supported include de-risking technology projects transitioning from research and development into a commercial model that attracts private capital, and infrastructure projects that increase businesses capacity to accelerate inbound revenue to the Territory and create jobs.

There are opportunities to broaden the scope of the fund to target consistent investment barriers and accelerate strategic sectors and projects including: supporting proponents to move from innovator/explorer to developer to fundraiser through access to quality advisors and intermediaries in target markets; offering early conditional term sheets to more aggressively crowd-in finance; and mandating working across stakeholders to more actively broker solutions. The fund is currently time-limited until 30 June 2021.

One of the small number of proposed changes to the North Australia Infrastructure Facility's (NAIF) mandate will allow the establishment of on-lending partnerships. This presents the Territory Government with an opportunity to partner with NAIF to extend the operation of the Territory's Local Jobs Fund, including broadening the forms of support it can offer.

Local Jobs Fund outcomes²⁹

The Local Jobs Fund is a Territory Government initiative that supports economic transformational projects and help high growth potential Territory businesses to (i) increase exports of goods and services both interstate and overseas; or (ii) substantially increase local jobs and outputs to local markets, including where import substitution can be achieved.

\$18M

invested in local Territory businesses

\$40M

applications under assessment

283
Jobs

146 direct jobs and 137 indirect jobs created over five-years

>\$200M

contribution to Gross State Product over five-years

How it needs to be done

Recommendation	Proposed actions
B1 Urgently implement an integrated investment delivery system focused on winning investment for the Territory	<ul style="list-style-type: none"> ❖ Align structures and functions as needed and enact the investment delivery system outlined in the report, including: <ul style="list-style-type: none"> - a strong executive accountability and delivery function - the standalone function of the Investment and Major Projects Commissioner to be the single point of coordination to accelerate investment delivery for significant private investment, including major projects - development of business case and investment product to pitch to investors, including through the use of tools such as master plans (these are not estate plans) and Sustainable Development Precincts – detail around these tools is included in the report - partner with specialist advisers to support this work - nationally recognised strategic infrastructure planning and development function that builds on work to date and raises it to the next level (see Infrastructure System section) - a regular ‘critical friend’ advice from heads of industry and others who understand the global and regional markets for the areas where the Territory is seeking to develop competitive advantages - a stronger relationship with the Australian Government at both the ministerial and departmental levels - expert strategic advice to support decision-makers in the required mindset shift, link to investment networks and to identify otherwise unknown opportunities - rapidly take proposals to market ❖ Support rapid public service capability uplift through recruiting and/or assessing and developing wide-scale commercial understanding, economic and policy analysis and development, up-to-date knowledge of industry and global trends, project management, and agile and active cross-agency collaboration (not only cooperation) ❖ Undertake a review of the competitiveness of the Territory's bankable investment environment
B2 Facilitate active financial support for projects by working with government and industry financing mechanisms to shape or expand their offering	<ul style="list-style-type: none"> ❖ Work with the Australian Government and government financing mechanisms to shape the operation of those mechanisms to ensure they can accelerate investment outcomes, including by operating to be ‘path creating’ and crowd-in investment ❖ Partner with NAIF to establish an on-lending partnership ❖ Extend the operation of and provide additional funding of \$100M for the Territory's Local Jobs Fund, including broadening the forms of support it can offer

What does success look like?

years

2

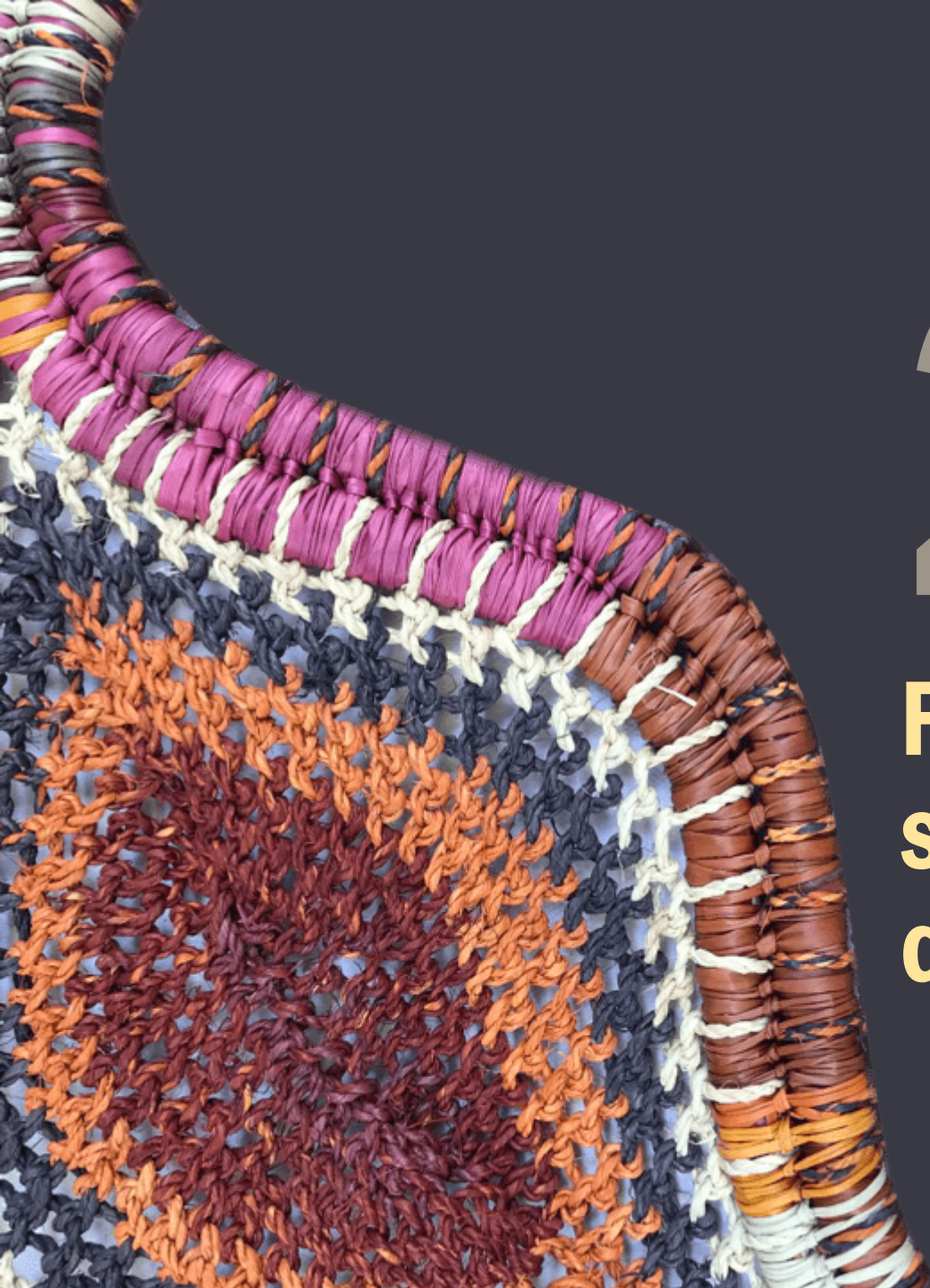
- Integrated investment delivery system focused on winning investment is bedded down, including appointment of the Investment and Major Projects Commissioner
- Strategic infrastructure planning and development function is established
- Final investment decisions in projects that could commence construction within the next 24-months made and projects commenced
- Master planning and development of Sustainable Development Precincts actively taken to market, including identifying in conjunction with Land Councils, a pilot on Aboriginal land
- Territory leading greater collaboration with project proponents, Australian government, investors, off-take parties, intermediaries and funders accelerating investment outcomes
- On-lending partnership with the North Australia Infrastructure Facility in place and Local Jobs Plan continues to support local businesses

5

- Investment confidence in the Territory is growing with a strong pipeline of projects making final investment decisions
- Anchor proponents secured for Sustainable Development Precincts
- New Investment proposals master planned, including where relevant development of Sustainable Development Precincts, and being actively taken to market

10

- Territory is seen as a positive place to invest
- Sustainable Development Precincts have a developing vibrant business ecosystem
- Territory economy reaches \$40B



2

**Focus on the
sectors that will
drive growth**

The Territory has world class energy resources positioning it for growth in a net zero world

Energy transition (renewables)

Energy transition (gas)

Decarbonisation and sustainable industry

Renewables will power the low emissions future. Technological innovations in battery storage and the production of hydrogen are becoming commercially viable. Alongside increasing demand for carbon neutral products and supply chains, renewables will reduce dependency on other forms of energy over time

Energy demand is forecast to grow by 60% to 2040 in the Association of Southeast Asian Nations (ASEAN) region, with much of this demand requiring renewable or carbon neutral energy sources³⁰

Global energy transition is happening at pace and demand for renewable energy is growing

New innovations in renewable energy are altering the way energy is generated, stored, distributed and consumed.

Increasing global commitments to decarbonisation and net zero emissions will continue to drive investment and the pace of this transition.

While it is impossible to forecast precisely what the global energy mix will be in a net zero world, all current feasible scenarios for the Territory, involve increasing demand for carbon neutrality and a dramatically expanded role for renewables, largely through solar and hydrogen.

To date 126 countries have made commitments to net zero, covering approximately 63% of global emissions.³¹

Over 50% of Australia's two-way trade is with countries that have mid-century net zero emissions targets. This is expected to grow as more countries commit to net zero and other emissions mitigation actions in advance of the Glasgow Climate Summit at the end of 2021 (COP26).³²

As part of committing to net zero, many countries have signalled interest in large-scale green hydrogen investment to support emissions reduction. Some of Australia's largest trading partners, Japan, Korea and China, have committed to using hydrogen to decarbonise their energy systems. The size of these markets and their potential demand is contributing to the focus on renewable hydrogen pathways.

The Territory has the resources to meet the growing demand for renewable energy from Australia and the region

With substantial areas of land with high solar irradiance, the Territory is highly suited to large-scale solar and renewable hydrogen developments. Alongside the growth of green hydrogen, "blue" hydrogen based off the Territory's large gas resources is possible, and could be a stepping stone to renewable hydrogen if emissions can be captured economically.

Improvements in battery storage and transmission combined with an abundance of solar resources means the Territory is able to be a market leader in the energy export industry and meet renewable energy demand across Australia and the Southeast Asian region.

For example, using the latest technology in High Voltage Direct Current (HVDC) transmission cables, the Territory could export solar generated electricity to Australia's National Electricity Grid and to other countries in the Region.

This rapidly emerging opportunity has been identified by Sun Cable with its \$20B Australian-ASEAN Power Link Project (AAPL). The proposed AAPL solar photovoltaic plant involves a 10 gigawatt array linked to Darwin and Singapore through a 4,500km HVDC transmission system. The AAPL could provide dispatchable renewable electricity to the Territory and will supply up to 20% of Singapore's electricity demand.³³

Alongside growing regional demand, potential Australian demand is a further opportunity being investigated, including provision of renewable energy to the east coast.

Realising opportunities to increase renewable energy production will be dependent on the Territory's ability to win investment and realise opportunities for businesses to invest in infrastructure and developments on land, including land subject to the provisions of the *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth) and the *Native Title Act 1993* (Cth).

Renewable energy can power new Territory industry

Industry growth is being targeted in a range of energy intensive businesses including low emissions manufacturing, hydrogen ammonia production, data centres and downstream minerals processing. All of these energy intensive industries require bulk and competitively priced dispatchable electricity. Increasingly many industries require 100% renewable electricity for their own operations and supply chains.

As Australia's energy system continues to decentralise and generation moves away from long standing traditional methods, there is also opportunity for growing new industries. Hybrid solar and hydrogen powered micro grids in isolated systems could reduce costs and emissions by displacing expensive and high emissions diesel-fired electricity generation. The expense of diesel-fired generation in remote areas may also incentivise and accelerate the early adoption of hydrogen.

Developing Territory based pilots or demonstration applications, especially for hydrogen and solar power projects is critical to growing a capable and appropriately future ready workforce. Further advances in battery technology also provide opportunities, including to trial and develop solutions for small scale grid applications and different climate conditions.

Globally, the use of gas is expected rise³⁴, alongside rapid growth of consumer demand for carbon neutral products and technological innovations in storage and efficiency of renewables, including the production of hydrogen.

The window for the gas opportunity is now, and the Territory is well placed with world-class onshore gas resources and proven offshore gas reserves

Gas has a central role in supporting the energy transition and as a feedstock for manufacturing

In Australia, the continued development of gas, on a commercial basis, for electricity generation and firming of electricity systems, facilitates greater use of renewables in the Territory, Australia and the region more broadly.

The cost of gas and its emissions intensity will be critical factors influencing investment decisions made by industries going forward. For gas based electricity production to be sustainable in the longer term it is necessary to reduce emissions intensity and fugitive emissions as well as finding offsets to deliver carbon neutrality.

Expand the Liquefied Natural Gas (LNG) export hub

The Territory has a successful energy export industry based on LNG production from offshore gas fields.

Currently generating in exports more than a fifth of the Territory's Gross State Product, this industry has the capacity to grow, the timing of which depends on domestic and international demand and the development of new prospective sources of onshore gas resources and existing offshore gas reserves.

In the absence of local demand, large scale gas projects remain export focussed, looking to meet demand in markets outside the Territory. This means that supplies can be commercialised before local demand is ready.

To secure gas feedstock for businesses in the Territory it is critical to build local demand and to create options to take advantage of gas supplies into the future as new business are created.

World class gas resources are still untapped

Offshore proven gas reserves, such as the Barossa and Petrel gas fields, are capable of being brought into production in the near term. These supplies can be exported through the LNG export hub or transported interstate through gas pipelines or used in the establishment of a low emissions petrochemical industry.

Onshore, the Beetaloo Sub-basin is a world-class shale gas resource. The potential of this basin is nationally recognised and additional appraisal to further define the resource and potential development pathways is underway.

Existing wells drilled by Origin, Santos and Pangaea, and associated discovery reports, indicate a P50 Gas-In-Place Resource of at least 500 trillion cubic feet (Tcf) for the Beetaloo Sub-basin in the Velkerri B shale alone.³⁵ There are further prospective layers in the Beetaloo Sub-basin, such as the Kyalla shale, that companies are targeting for wet gas (liquids).

The Beetaloo Sub-basin has been recognised by the Australian Government as the first of five key basins to be explored under the national Strategic Basin Plan. Other areas of exploration interest in the Territory include the McArthur, Nicholson, Georgina and Amadeus Basins.

In realising the potential of onshore gas, the Territory should engage with industry and the Australian Government to support planning and development with the following key objectives:

1. maximise the competitiveness of Territory gas
2. maximise local opportunities for supply and service
3. minimise investment in 'duplicative infrastructure'
4. ensure sufficient volumes of gas are available to underpin new investment in the Territory

Onshore gas developments require access to land and are subject to the provisions of the *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth) (ALRA) and the *Native Title Act 1993* (Cth).



Each shipment of LNG exported from Darwin has enough gas to power more than 270 000 households for a year³⁶

Global commitments to net zero emissions are increasing in the lead up to COP26 in 2021. Alongside government commitments, businesses are moving quickly to cement and promote market positions delivering carbon neutral products and supply chains

To maximise opportunity, the Territory needs a clear, pragmatic, and collaborative decarbonisation plan, to attract investment for new industries and support existing industries to reduce their net emissions

Decarbonisation brings opportunity for the Territory as part of an Australian economy wide approach

As businesses recover from the impact of COVID-19, they are rebuilding and adapting their business models in ways that aim to be future-proof, including rapid digitalisation and carbon neutrality. Companies and jurisdictions proactively embracing the management of these disruptions as opportunities stand to seize significant long-run returns.

In addition to energy transition towards electrification, meeting a net zero target requires action across the economy to decarbonise, including buildings, transport, industry and land sectors.

The Territory needs to focus effort on reducing emissions to the extent possible based on technological and commercial feasibility. Throughout the transition and where industries or processes cannot be completely decarbonised, offsets will continue to be required to help meet net zero targets. Continued growth of the Territory carbon offset industry will actively support decarbonisation, especially in meeting medium term demand for offsets to enable onshore gas production.

By enabling the establishment of new sustainable industries and commercialisation of technology to decrease the emission intensity of existing industry areas, decarbonisation will support long-term job creation and economic growth.

Growth means proactively managing a changing emissions profile

The Territory is relatively undeveloped compared to eastern states of Australia with correspondingly low greenhouse gas emissions. Growing the Territory economy will mean the Territory's emissions profile will substantially change over the coming decade. The largest variations are expected from the proposed expansion and development of the energy export industry.

Export of energy such as natural gas and electricity from the Territory can contribute to the reduction of emissions elsewhere in the world. Expanding this industry could further reduce emissions on a global scale over time. Intensifying the energy export industry can be balanced with growing the local carbon offset industry as has already occurred in other States.

The Territory needs to win investment to build sustainable industry

Companies, projects and jurisdictions that actively take up decarbonisation opportunities will enjoy access to cheaper and more plentiful capital. Investors and their financiers are already factoring climate-related risks into investment decisions.

Consumer demand is driving business to report on their carbon footprint and demonstrate carbon neutrality. There is increasing demand to understand the source and integrity of offsets. Financial markets are starting to price in risks associated with transitioning to a net zero economy. Many of the largest banks have stopped lending to high carbon industries such as thermal coal. This shift presents an opportunity for the Territory to position itself and win investment by developing low carbon or carbon offsetting industries.

Enabling policy settings and interim targets will be critical to winning growing green investment. Strong partnerships with the Clean Energy Finance Corporation and the Australian Renewable Energy Agency will be critical to success.

New sustainable industry opportunities will continue to be identified through commercialisation of research and development

Accelerated research, development and commercialisation of new technological advancements are critical to developing a decarbonised economy. The Australian Government Technology Investment Roadmap provides opportunities for the Territory to be a 'test bed' for low emissions technology development and commercialisation. The increasing global focus on zero emission supply chains will also continue to drive demand for new technological solutions.

The Territory also needs to future proof existing industries

Some sectors are harder to abate than others. Carbon capture, utilisation and storage, along with the growth of carbon offset opportunities and Emission Reduction Fund methodologies suitable to the Territory environment need dedicated focus to

achieve the Territory's growth and net zero emission targets. Increasing demand for carbon neutral product and environmental markets is a substantial growth opportunity.

Growing the Territory's carbon offset industry will support new and existing opportunities and deliver regional growth and jobs with potential benefits flowing into Aboriginal communities

Increasing carbon offset industry development in the Territory is a key aspect of realising net zero emission goals. Growth of the industry will allow Territory businesses to directly offset production emissions and enable offsetting while industry transitions to renewables. Ongoing method development will provide opportunities for further emission reductions and new offset approaches which are currently not covered by approved methodologies or supported through existing policy settings.

Research, development and trial of new offset methodologies is required to ensure methods are suitable to the Territory's environment and industries. This investment will also benefit economic development in remote Aboriginal communities. For example, since 2015, the Arnhem Land Fire Abatement project has reinvested more than \$30M directly into the remote regional economy of Arnhem Land in support of Aboriginal fire management.

Strong collaboration with the Australian Government and research agencies including CSIRO is needed to accelerate development and accreditation of new methodologies for Northern Australia to realise these opportunities.

How it needs to be done

Recommendation	Related actions
E1 Actively engage with the renewable energy sector to accelerate new renewable energy investment	<ul style="list-style-type: none"> ❖ Actively engage with the renewable energy sector to support planning and development with the following key objectives: <ul style="list-style-type: none"> - maximise competitiveness of Territory energy supplies - maximise local opportunities for supply and service - ensure sufficient volumes of energy are available to underpin and attract new industry growth in the Territory
E2 Position the Territory for the emerging hydrogen industry	<ul style="list-style-type: none"> ❖ Position the Territory for the emerging hydrogen industry by: <ul style="list-style-type: none"> - supporting pilot or demonstration hybrid hydrogen and solar projects, including for remote power micro grids and blending with natural gas in pipelines and generators - integrating infrastructure and regulatory requirements into master planning - engaging with key markets and technology providers to highlight the Territory as a location for future large-scale projects
E3 Advance development of transitional gas supplies	<ul style="list-style-type: none"> ❖ Partner with the Australian Government and industry on the development of onshore gas, in particular the Beetaloo Sub-basin: <ul style="list-style-type: none"> - to accelerate appraisal of the basin to determine commercial feasibility - undertake master planning of critical enabling infrastructure to minimise cost, and environmental and social impacts - to manage emissions - to build local business capability and capacity - undertake workforce development initiatives ❖ Work with the offshore gas operators and owners to secure gas supplies to support industry growth in the Territory ❖ Complete the implementation of the recommendations from the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory

How it needs to be done

Recommendation	Related actions
E4 Develop and implement a pragmatic and credible decarbonisation plan with interim targets, that delivers the Territory's growth and net zero targets	<ul style="list-style-type: none"> ❖ The plan would include: <ul style="list-style-type: none"> - scenario planning and economic modelling to identify pathways for whole economy decarbonisation to inform policy and decision-making - setting interim targets to demonstrate progress, including in relation to government operations - steps to developing the decarbonised economy - education programs and public service, industry and business capability programs
E5 Position the Territory as a key research and development location for low emissions technologies	<ul style="list-style-type: none"> ❖ Position the Territory as a key research and development location for low emissions technologies, including by: <ul style="list-style-type: none"> - creating commercialisation pathways, including through collaboration with the Australian Government and industry to expand Emission Reduction Fund methodologies applicable in Northern Australia - accelerating work commenced to investigate carbon capture, utilisation and storage (CCUS) by collaborating with industry, the Australian Government and CSIRO - positioning the Territory to be a 'test bed' for low emissions technologies identified in the national Technology Investment Roadmap
E6 Facilitate carbon offset industry growth	<ul style="list-style-type: none"> ❖ Facilitate carbon offset industry growth, including by: <ul style="list-style-type: none"> - finalising the NT Carbon Offset Policy by the end of 2021 - collaborating with the Australian Government and securing joint pathways for decarbonisation, including agreeing a collaborative implementation approach for offsetting potential emissions from new projects - ensuring Territory regulatory settings enable the decarbonised economy, including enabling aggregators to facilitate private investment into delivery of projects across different tenure types

What does success look like?

years

2

5

10

- Investment in renewable energy generation, including support for large-scale solar projects to meet Territory demand and export markets
- Microgrid hydrogen and solar pilot commissioned for a remote community
- Accelerated appraisal and planning of the Beetaloo and other onshore gas basins (e.g. Amadeus Basin)
- Collaboration between onshore operators and Traditional Owners and other land holders to support development of Beetaloo and other onshore gas basins
- Engagement with offshore gas field operators to accelerate development options
- Interim targets for decarbonisation set
- New methodologies to enable expanded offset projects in the Territory

- Renewable energy projects deliver competitively priced energy across the Territory's networks, including in remote communities
- Offshore and onshore gas brought into production and supporting Territory based industry, east coast gas security and export to regional partners
- Maximising ERF revenue streams across Territory land estate and demonstrating progress towards net zero through government leadership and strong sectoral collaborations with private sector to deliver on their emission reduction targets
- Multiple projects around the Territory, enabled by low-cost renewable installations

- Large-scale solar projects exporting interstate and overseas
- Onshore gas brought into production improving transitional gas supply, including for Territory domestic use, east coast markets and export to regional markets
- Carbon neutral government operations, delivery against the renewable energy target, significant progress in achieving net zero emissions by 2050
- Territory-based projects integrated with global zero emissions supply chains

Accelerating creation of advanced manufacturing businesses will create demand for jobs and transform the Territory's economy

Manufacturing

An increased focus on national resilience and an ambition to diversify the Territory economy creates opportunities for new value adding businesses

Manufacturing in the Territory is limited, despite strong solar resources, world class base and critical mineral deposits, significant agribusinesses and world scale gas resources. Existing metal fabrication and LNG processing provide a base for future manufacturing opportunities.

What needs to be done

Increasing the capability of Territory businesses to value add or manufacture creates more demand for diverse and high skilled jobs and increases the value of the Territory's raw products (such as food and minerals).

The electrification of manufacturing processes (e.g. process heat) in areas such as minerals processing and petrochemicals, and the adoption of carbon management technologies align with global commitments and the increasing demand for low emissions supply chains.

The Australian Government's Modern Manufacturing Strategy identifies focus sectors that align well with the Territory's natural advantages, specifically, mineral processing, food, petrochemicals, renewable based hydrogen, defence and space.

How it needs to be done

Recommendation	Related actions
M1 Complete the rapid master planning for low emissions petrochemicals manufacturing	<ul style="list-style-type: none"> ❖ Partner with specialist advisers to support master planning processes that can be used to attract relevant private sector enterprises ❖ Use industry advisory groups to shape master planning activity to meet industry expectations (this can be time-limited and sector focused) ❖ Work with upstream gas companies to identify and commercialise feedstock sources to support investment in petrochemical and other gas-based manufacturing projects
M2 Complete the rapid master planning for emerging renewables-based hydrogen manufacturing	<ul style="list-style-type: none"> ❖ Partner with specialist advisers to support master planning processes that can be used to attract relevant private sector enterprises ❖ Use industry advisory groups to shape master planning activity to meet industry expectations (this can be time-limited and sector focused)
M3 Develop manufacturing opportunities in key sectors to establish the capability in the Territory	<ul style="list-style-type: none"> ❖ Establish a fund of up to \$5M over two-years to support studies into manufacturing opportunities, including in partnership with industry. Priorities for this fund include (i) agribusiness, in particular secondary processing of agricultural products and seafood and (ii) minerals processing ❖ Invest up to \$10M over five-years in a partnership with the Advanced Manufacturing Growth Centre to work with Territory businesses to develop new value adding opportunities

What does success look like?

years

2

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- Accelerated development of master plans including designing Sustainable Development Precincts where relevant, and then to take opportunities to market
- Rapid investigation of opportunities to value-add
- Create the capabilities and skills pathways required to support manufacturing businesses
- Greater awareness of manufacturing and value add pathways, technologies and successes to drive greater value-adding of Territory resources

- Active business ecosystems support new business creation
- Strong connection with R&D and innovation partners
- Adoption of low emissions technologies
- Industrial precincts integrating solar energy and hydrogen for both production and export
- Reliable access to gas as a feedstock for petrochemical industry

- Market recognition of the Territory's advanced manufacturing ecosystem drives more investment
- Low emissions technologies and renewable energy options underpin sustainable businesses

Development of large-scale solar generation and prospective new sources of onshore and offshore gas, create an opportunity for the Territory to become a low emissions advanced manufacturing hub

Manufacturing contributes 4.1% to the Territory economy, below the Australian industry share of 6.1%.³⁷ Building manufacturing capability will modernise Territory industry, develop and attract a highly skilled workforce and deliver greater value to the Territory economy

Why is manufacturing important to economic growth?

Advanced manufacturing is critical for national resilience

- Even before the COVID-19 pandemic, the Australian Government had taken steps to rebuild sovereign capability in key areas of defence (e.g. shipbuilding)
- The Australia Government's focus on modern manufacturing as part of Australia's COVID-19 recovery presents opportunities for Territory businesses

Need to identify where the Territory can compete

- Areas of advantage for the Territory need to continue to be investigated and priority areas should be aligned to the national Modern Manufacturing Strategy. These areas should include: renewable hydrogen, mineral processing (in particular critical minerals), petrochemicals, food, defence, space, construction, fabrication and recycling

Advanced manufacturing enables competition on value and not price alone

- The opportunity for the Territory using robotics, automation, AI, and digitalisation in manufacturing requires strong STEM skills and drives demand for high quality jobs. The opportunities are in high value low volume products (mass customisation versus mass production)

Zero emissions supply chains presents opportunities for advanced manufacturing

- With the global trend rapidly moving towards

zero-emissions supply chains, the Territory has an opportunity to develop zero-emissions, renewable powered, energy intensive manufacturing, particularly in critical minerals processing

- Advanced manufacturing covers a broader range of activities than production alone (refer Figure 19: The manufacturing 'smile curve'). Increasing the value in manufacturing is at the ends of the curve in research and development and services and medium to high value production jobs

Electrification through renewables can free up feedstock

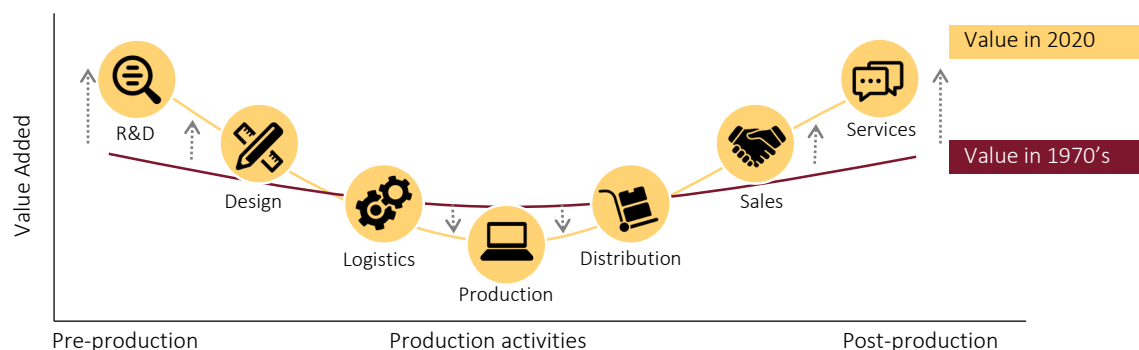
- Electrification of manufacturing processes (e.g. process heat) will deliver more efficient and clean power and free up gas for feedstock and export. Opportunities in these areas should be among the first assessed

- Gas can not only be utilised to expand LNG production capability, it can be a key industrial input for a variety of petrochemical products that can then be transformed into advanced manufactured products

The Territory has shown it has the innovators and the ambition

- For example, SPEE3D has developed the world's fastest and most economical metal 3D printing technology (additive manufacturing)
- Arafura Resources and TNG are both planning to undertake mineral processing in the Territory

Figure 19: The manufacturing 'smile curve'³⁸



The petrochemical industry’s use of natural gas returns multiples of economic benefits and jobs compared to using natural gas for electricity or export³⁹

Natural gas used in manufacturing is an essential non-switchable and non-substitutable feedstock input. It is a critical enabler of almost every value chain in Australia, a key employer of Australia’s valuable STEM capability and a driver of innovation through advanced manufacturing.

Gas feedstock is an essential input

- Gas feedstock is the source of carbon and hydrogen used to produce a range of intermediate and finished chemical products
- The petrochemical industry is diverse and produces essential inputs to nearly every other sector in the economy
- 40% of natural gas consumed in Australia (i.e. not exported) is used as feedstock in manufacturing process⁴¹

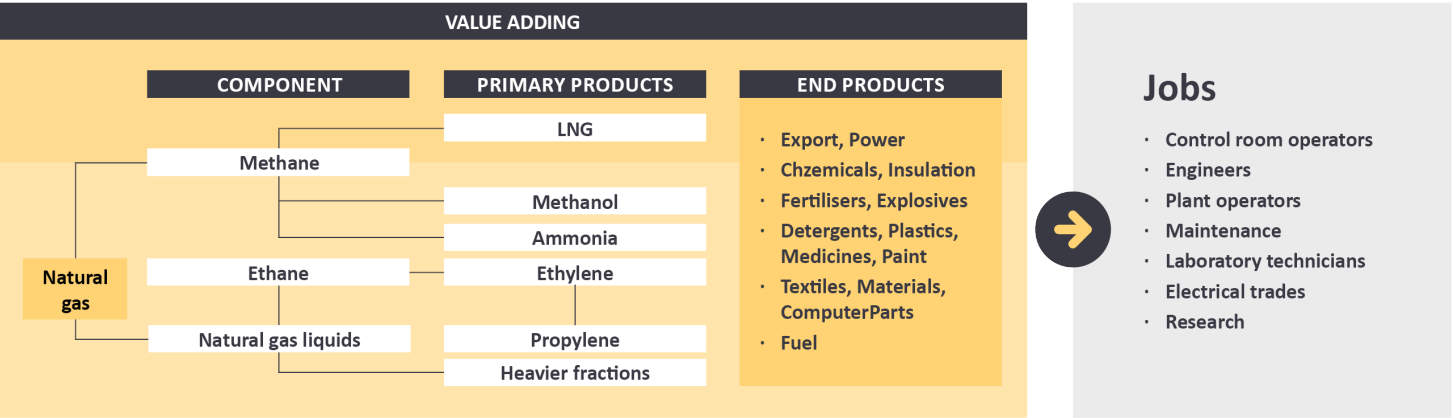
- For some products, gas use for feedstock is 85% of total gas use, with the remainder for energy and heat. This can represent 80% of production costs.⁴² Gas-reliant industries tend to be highly productive and hire highly-skilled workers.

Gas is used in two ways

- Gas is used (1) as energy; and (2) as feedstock
- As energy, gas is used for heating and to drive processes, equipment and facilities. Gas used as energy can be replaced with renewable energy derived from solar and hydrogen. This lowers emissions, creating a competitive advantage if energy prices are affordable and creating new and greater levels of industrial demand that can drive further renewable energy investments

- The use of gas as feedstock is unique to the petrochemical industry and describes the use of various gas, fuels or other materials as a ‘material input’. This is like how iron ore is the input to the iron and steel industry
- Gas feedstock is quantified in energy units because, before use, it is indistinguishable from the same energy products used as fuels
- The carbon and hydrogen atoms in the gas feedstock are the building blocks. The raw Methane (C1) and Ethane (C2) molecules are used to manufacture a broad range of intermediate and finished products that are then used throughout the economy’s supply chains as depicted in Figure 20: Gas value-adding chain

Figure 20: Gas value-adding chain⁴⁰



Solar energy and hydrogen can power the Territory’s Sustainable Development Precincts

Access to base and critical mineral deposits and affordable and reliable renewable energy will deliver a competitive advantage in energy intensive mineral processing and capture benefits further up the value chain as shown in Figure 21: The mineral value chain

Mineral processing adds value

- Exporting of raw minerals or concentrates is the lowest value in the mineral supply chain. Figure 22 shows the increase in value in the production of Lithium batteries
- Processing of raw minerals into higher value products adds value to Territory exports and creates new jobs
- Affordable and reliable renewable energy used in processing can assist overcome other barriers to investment (such as logistics costs)
- Critical minerals, including rare earths, are essential to the global economy and defence because of their crucial role as components in a wide range of products and systems

Mineral processing is energy intensive

- Mineral processing is energy intensive, particularly for process steps requiring heat, for machine drive and electrochemical processes

Supply chains leading on zero emissions

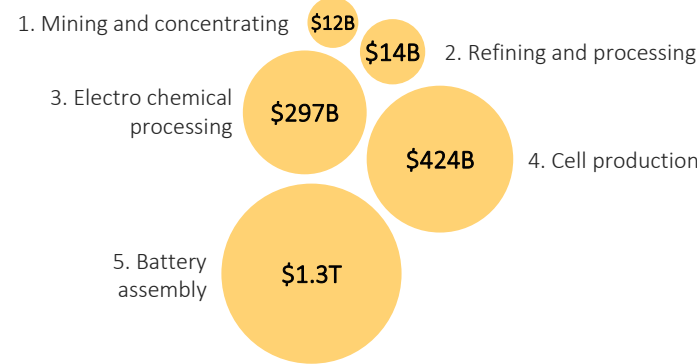
- Investors and businesses that buy processed minerals and metals are seeking to decarbonise their supply chains, including through the materials used (e.g. Apple)
- London Metals Exchange is actively developing a market for sourcing low-carbon aluminium, which is typically produced with hydro power or other forms of renewable energy

Figure 21: The mineral value chain⁴³

VALUE-ADD OPPORTUNITIES	EXPORT OPPORTUNITIES
Mining →	Unrefined minerals
Refining →	Refined minerals
Processing →	Metals
Manufacturing →	Product components
End user products →	Product exports

Figure 22: Processing stages in the production of Lithium batteries⁴⁴

There are five stages of processing in the production of lithium batteries. The world market total in 2025 is projected to be:



Extend and expand the Territory’s foundations in mining and agribusiness

Resources

Agribusiness

Substantial growth in the mining sector is likely given the natural endowment of resources in the Territory, but growth cannot be assumed. Value add processing will be the step change for the industry

Although mining is one of the Territory’s largest industries and employers, a new major mine has not opened since 2005, and three existing mines are due to cease by 2030. There is a strong pipeline of potential projects that are in final approval stage in areas with strong global demand. But finance, scale and access to markets are critical hurdles to future success, all of which need to be overcome

What needs to be done

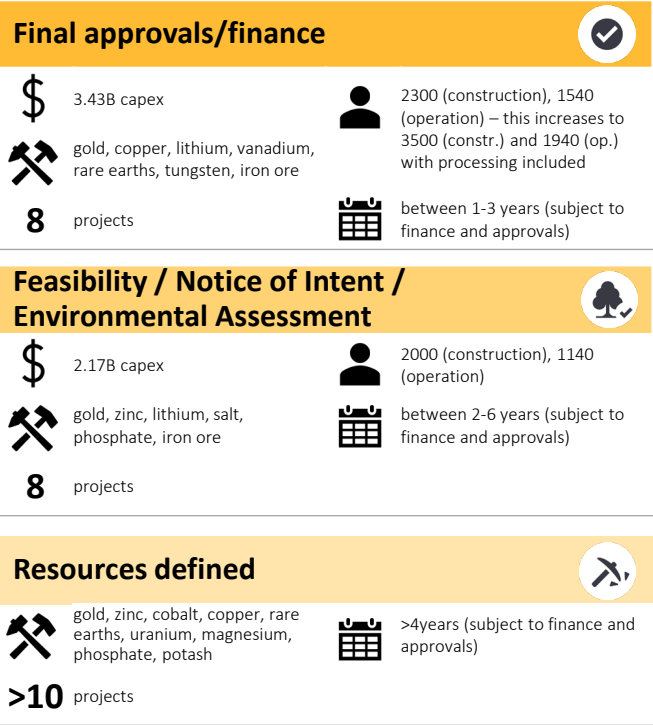
The Territory needs to increase competitiveness in aspects of the mining industry and in home-grown inputs including local/regional job creation, upskilling, a strong mining equipment, technology and services (METS) sector and adoption of digital and technology solutions. Access to cheap energy, including from renewables is pivotal to increase competitiveness in the long run and crucial in the development of value add propositions.

The Territory Government needs to increase industry confidence to invest by providing certainty, clarity and the necessary frameworks for investment, including the acceleration of minerals-related regulatory reform. Government can also provide support through facilitation of innovative finance options that help accelerate viable projects towards final investment decision and clear explanatory materials and engagement strategies to demonstrate the competitiveness of the Territory’s royalty system.

Figure 23 shows the strong pipeline of mining projects in the Territory. Targeted exploration and pre-competitive geoscience is critical to identify new mineral potential, including both greenfield exploration and further exploration of known deposits. The Territory and Australian governments should continue programs to map the Territory’s resource potential in the most prospective areas. Mining, exploration, Aboriginal and pastoral groups need to improve partnerships and engagement to establish productive and mutually beneficial land use practice, respectful of land-holders interests and operating in an optimised regulatory environment.

The **Gulkula Mine project** is the first Aboriginal-owned and operated mining venture on traditional owner land, exporting bauxite from North East Arnhem Land with Yolngu participation across all stages of the mining process. The **Winchelsea Island Mine project**, a joint venture with the Anindilyakwa people, is proposing to mine and export manganese from Winchelsea Island in the Groote archipelago.

Figure 23: The mining project pipeline⁴⁵



How it needs to be done

Recommendation	Related actions
RS1 Urgently stand up a Territory Mineral Development Taskforce to accelerated mining development	<ul style="list-style-type: none"> ❖ Assess mines in the pipeline and work with proponents to assess what's required to get mines operational ❖ Critically review all mineral and exploration leases and create incentives to activate long-held leases, including an assessment of proponent capacity to activate leases within legislated timeframes ❖ Undertake a master plan approach to actively promote, both nationally and internationally, the Territory's mineral opportunities to targeted investors and new markets for demand
RS2 Increase and target exploration activity	<ul style="list-style-type: none"> ❖ Develop a business case to broaden the scope and increase long-term funding to the Resourcing the Territory exploration program, as well as opportunities to increase the Territory's share of the Australian Government's Exploring for the Future scheme ❖ Immediately expand the criteria to make it easier for government to co-fund deep drilling near or below known deposits or drilling to test conceptual targets adjacent to known mineral deposits
RS3 Work with the mining industry to be future ready	<ul style="list-style-type: none"> ❖ Work with peak industry groups to support further opportunities for: <ul style="list-style-type: none"> - growing a skilled local workforce and METS sector - early uptake of digital and technology advances - innovative solutions for low emissions energy production and operations on mine sites
RS4 Assess and then develop low-emissions minerals processing opportunities	<ul style="list-style-type: none"> ❖ Undertake a comprehensive feasibility assessment of all Territory-based value add opportunities for advanced critical minerals projects and down-stream minerals processing ❖ Undertake a rapid master plan process and then take opportunities to market

What does success look like?

years

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- Minimum two additional mines opened
- Local jobs and skills/capability 10% higher
- Handbook and project financing framework established
- Progress towards mineral value add processes
- Exploration activity increased by 2%
- Lift ranking to within top 10 mining jurisdictions of Fraser Institute International survey

- At least five new operational mines, including some associated with value add processing
- Local jobs and skills/capability 30% higher
- Strengthened collaboration and well-established operating practices between miners, explorers, Aboriginal landholders and pastoralists
- Increase pre-competitive data mapping of key commodities by 20% and make accessible
- Exploration activity increased by 5%
- Lift the Territory's ranking to within top five mining jurisdictions of Fraser Institute International survey

- At least 10 new operational mines, including some associated with value add processing on site and some with mineral production linked into established Territory manufacturing hubs
- Local jobs and skills/capability 50% higher
- Increase pre-competitive data mapping of key commodities by 50% and make accessible
- 25% of the Territory effectively explored

The mining industry contributes \$4.4B in production and \$130M in exploration activity, employing around 4400 people directly and many more through supply and service sectors, across the Territory⁴⁶

The benefits of the mining industry are widespread in the economy and community, especially in remote and regional locations. With targeted planning, the Territory can play a critical role in production and in supplying energy resources to the sector through opportunities for renewable energy development

Why are resources important to economic growth?

Economic and community benefits

- New mines bring economic and social benefits to regions, including jobs
- There are currently a total of 17 projects in the development pipeline, worth about \$5.7B in proposed capex, up to 5700 construction jobs, and up to 3400 operation jobs⁴⁷
- There are a further nine projects with defined resource potential that are in the early stages of exploration and approvals
- Existing mines make an ongoing economic contribution through operations, additional exploration and expansion programs along with local community benefit programs

Underpinning the everyday

- Products from mining are integral to many aspects of modern life, including energy, transport, technology, telecommunications, food processing and most items we find in the home and office

Diversity builds resilience

- The Territory has diverse mineral potential for a range of commodities especially base metals, critical minerals and gold
- Commodities with large undeveloped resources include vanadium, rare earths, lithium, tungsten, iron ore, and phosphate

Critical to the nation

- The Territory has an emerging opportunity to support sovereign capability and to be a significant player in the supply of rare earths and critical minerals that support commercial use (battery energy storage, other high technology industries and the emergence of modern manufacturing in Australia) and national security needs

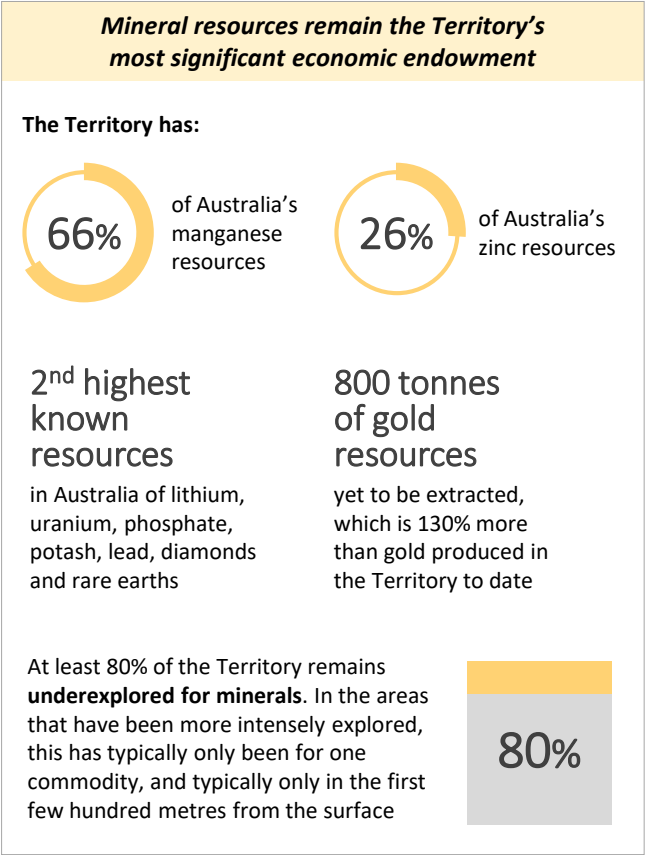
Fossicking for the future

- The Territory is highly regarded for quality geoscience data to support exploration, ranking 5th for most prospective jurisdiction in the world by the global mining industry
- Large areas of the Territory remain underexplored, however improvements in technology and collaborative geo-science programs, including with industry and the Australian Government, offer the most effective methods to promote resource potential and attract new investment

Opportunities for sustainability

- Mining projects require large scale energy resources, providing a potential demand pathway for renewables and progress towards net zero emissions

Figure 24: The Territory’s mining potential⁴⁸



After a number of years of incremental growth, Agribusiness is ready to develop at scale

A coordinated focus using a combination of Sustainable Development Precincts and the master planning approach can grow the sector and demand for jobs

What needs to be done

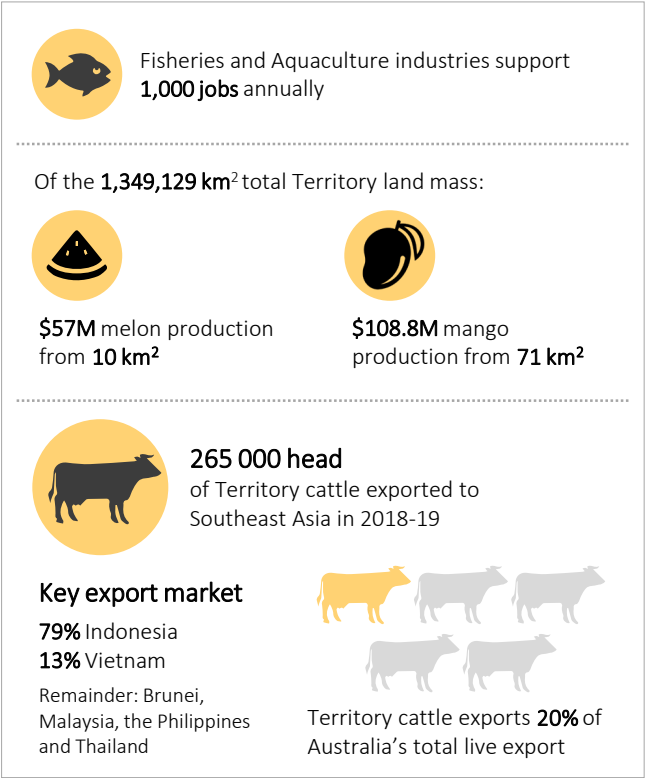
Agribusiness in the Territory needs a clear whole-of-sector strategic direction, co-designed by Territory Government and industry, that draws on synergies and reaches across related services, including new areas of value add processing and manufacturing and prioritisation of biosecurity, including active promotion of provenance to underpin the sustainable growth of the sector from its current 2.5% of Gross State Product.⁴⁹

Building on the success of established agricultural precincts, new agribusiness opportunities on greenfield sites should be pursued through Sustainable Development Precincts, and by targeting anchor investors to provide the commercial investment base to support smaller investors, supply and service businesses, and value add processing opportunities.

Recognising Aboriginal aspirations to develop Aboriginal-led Agribusiness enterprises, support should be provided for Aboriginal groups to lead and develop sustainable ventures, including those that are culture-based, on land and sea, to create new sustainable industries and jobs on country.

Through increased industry engagement and collaboration with Traditional Owners, pastoralists, other land interests, and government there is opportunity to increase the productivity and sustainable development of Aboriginal land and the pastoral estate through a holistic, systems approach.

Figure 25: Agribusiness industries drives economic activity in the regions⁴⁸



How it needs to be done

Recommendation	Related actions
A1 Rapidly identify and develop key Sustainable Development Precincts	<ul style="list-style-type: none"> ❖ Whole-of-government development of Sustainable Development Precincts, that includes and identifies areas to promote: <ul style="list-style-type: none"> - land tenure and administration pathways - information on soil, vegetation, biodiversity, water and sacred sites - streamlined regulatory approvals to reduce timeframes - infrastructure and logistics needs, including multiuser facilities - up and down stream supply chain and value add processing opportunities - community and stakeholder aspirations and cross sector benefits - target anchor investors through a master plan approach ❖ Some early considerations may be in relation to Douglas Daly, Western Davenport Ranges, Katherine Agribusiness and Logistics Hub
A2 Develop and implement an Agribusiness Strategy, focusing on new integrated commercialisation opportunities across the supply chain	<ul style="list-style-type: none"> ❖ Develop and implement an Agribusiness Strategy aligning the vision and actions to meet growth targets with elements that include: <ul style="list-style-type: none"> - enabling infrastructure requirements - sector capability and capacity, including workforce and technology - commercialisation opportunities through new products and emerging industries - market access and supply chains - value adding manufacturing and processing - innovative and targeted research and development approaches - mitigation of risks such as weeds, pests, diseases and a changing climate – prioritising biosecurity as a key market advantage - opportunities for a ‘Territory Provenance’ identity ❖ Undertake a comprehensive feasibility assessment of value add opportunities across the sector, including industry capabilities, options to incentivise Agribusiness processing, manufacturing and innovative technologies and alignment with national strategies (See Manufacturing Section for resourcing) ❖ Leverage technologies to use industry level supply chain data to support collaborative and integrated industry growth - ensure continuous product supply or address disruptions, target new markets along the value chain, and provide quality assurance and provenance of high value products

How it needs to be done

Recommendation	Related actions
A3 Support development of Aboriginal-led industry opportunities	<ul style="list-style-type: none"> ❖ Partner with Land Councils to implement joint commitments, such as the Blue Mud Bay Implementation Action Plan ❖ Engage with the Australian Government to progress Aboriginal Agribusiness industries, including through the development of the National Fisheries Plan
A4 Facilitate sustainable development of the pastoral land estate and Aboriginal land	<ul style="list-style-type: none"> ❖ Facilitate sustainable development of the pastoral land estate and Aboriginal land through:: <ul style="list-style-type: none"> - investment and adoption of research and technologies with commercial benefits - provision of natural resource base information to support new compatible industries on the land - value adding to existing products, improving supply chains - clarity and collaboration on regulation and policy - support of joint ventures and partnerships

What does success look like?

years

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- Sustainable Development Precincts model being applied to attract investment in producing high value horticulture, cropping, beef cattle production in the Douglas Daly and Western Davenport Ranges areas
- Strategic direction for Agribusiness, created by all stakeholders, setting the direction for actions and decision-making, to meet growth targets and attract investments
- Aboriginal communities transitioning to new business ventures from implementation of joint commitments, such as Blue Mud Bay Implementation Plan
- Value adding and the adoption of research and development increasing productivity and sustainability
- Increase in manufacture and processing of agribusiness related product
- Identification and development of an Sustainable Development Precinct on Aboriginal Land

- Lift of sector value resulting from the implementation of strategic growth targets such as; increased enabling infrastructure, skilled workforce and pathways to jobs in regions, value adding creating new products and markets
- Pipeline of identified greenfield sites transitioning to Sustainable Development Precincts and attracting increased investment
- More Aboriginal Agribusiness enterprises and new Aboriginal fisheries and aquaculture ventures
- A more productive pastoral land estate with diverse income streams attracting more investment

- Sustainable, carbon neutral beef cattle production on pastoral and Aboriginal land coexisting with a diverse range of profitable enterprises⁵⁰
- Greenfield sites have turned into productive precincts of sustainable mosaic agriculture systems with new age technology and infrastructure providing jobs and meeting the economic targets of the regions
- Aboriginal communities thriving from benefit realisation from Agribusiness activities aquaculture ventures
- Territory's Agribusiness sector attracting investment and increasing in value

The Agribusiness sector has been a consistent contributor to the economy and collectively to respond to increasing global demand for high quality goods

The combination of the Territory’s geographic position and global demand for high quality food and other commodities, means the Agribusiness sector will be a key growth sector in the medium-term

Why is agribusiness important to economic growth?

Geographic advantages

- The Territory is one sixth of Australia’s land mass with two distinctive climate zones, tropical and arid.⁵¹ The available land, water and coastline of the Territory provides opportunity for agribusiness industries to grow
- The regional differences in temperature, rainfall and humidity allow for optimal growing zones for crops, horticultural products and forestry commodities
- The Territory’s remote location provides a distinct advantage in ensuring strict biosecurity management and natural protection against pests and disease

Demand for food

- Global demand for food and fibre products is growing with consumers drawn to products that are safe and sustainably produced. Australian products are valued for being produced with the highest standards – clean, safe and natural products that attract niche and premium food markets
- The Territory’s geographic position and current agribusiness trade with Asia has national security importance and supports Australia’s geopolitical relations in the region

Sustainable opportunities

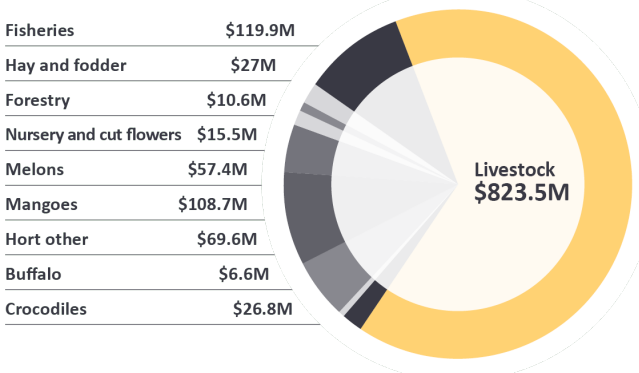
- Fisheries inshore and offshore operations and growing aquaculture and ornamental trade are opportunities for coastal Aboriginal communities to benefit and contribute to agribusiness growth

- Beef cattle production is a well-established, resilient industry managing vast areas of land in supplying beef cattle to mainland states and producing quality animals for the live export trade to Southeast Asian nations. There is opportunity to accelerate the increase in supply to these markets through value add from adoption of better technology and practices, infrastructure and logistics that improve sustainable productivity and profitability
- Government’s investment into research and facilities sets up the Territory to be an epicentre of excellence for agricultural research and development, as well as providing capacity for biosecurity incursion responses beneficial for all of Northern Australia
- Recognising the high capital needed to develop new horticulture ventures, agricultural precincts developed by collaborative regional planning helps regional communities de-risk investment while providing certainty and understanding of the development pathway
- Technology is creating transformative changes to agriculture and an opportunity for more efficient cost-effective production
- The drive for food security and safety, coupled with the COVID-19 restrictions, has made information integrity and real-time availability of information, more important now than ever. Technology can provide organisations with the insights they need to

become dynamic and tightly integrated ecosystems where data sharing is encouraged and incentivised to manage impacts from disruptions and ensure consistent market supply

- Working together, a collective Agribusiness industry will grow scale and market share for the Territory and contribute to the nation’s growth targets
- A focus on value adding to increase the appeal to consumers for a different product, and a higher return, is creating potentially new high-value markets, extended production seasons or new brand identity and loyalty
- Developing industries and new products from food provenance, forestry, and bush foods

Figure 26: Economic contribution of Agribusiness industries in the Territory 2018-19⁵²



Develop and market the Territory’s natural and cultural icons as world-leading destinations

.....

Tourism

A focus on the Territory's tourism icons and rich Aboriginal culture will attract additional domestic and international visitors

Despite more than 80% of visitors to the Territory stating they want a genuine Aboriginal cultural experience, only 40% actually receive one.⁵⁴ This demand gap presents an opportunity to focus on improving access and availability of authentic cultural experiences and products

What needs to be done

Iconic attractions include the world heritage listed Kakadu and Uluru-Kata Tjuta and Aboriginal cultural icons of national significance, such as the proposed National Aboriginal Art Gallery and the Larrakia Cultural Centre. A focus on building and marketing these to national and international renown will put the Territory on the map for tourists and visitors.

The icons provide the basis for additional visitation and experiences, including in the Territory's national parks

Aboriginal cultural tourism presents a significant economic opportunity for the Territory, coupled with invaluable social and economic benefits that will flow directly to Aboriginal Territorians.

To realise the Territory's potential as a world-class tourism destination and the undeniable leader in authentic Aboriginal cultural experiences, the Territory Government

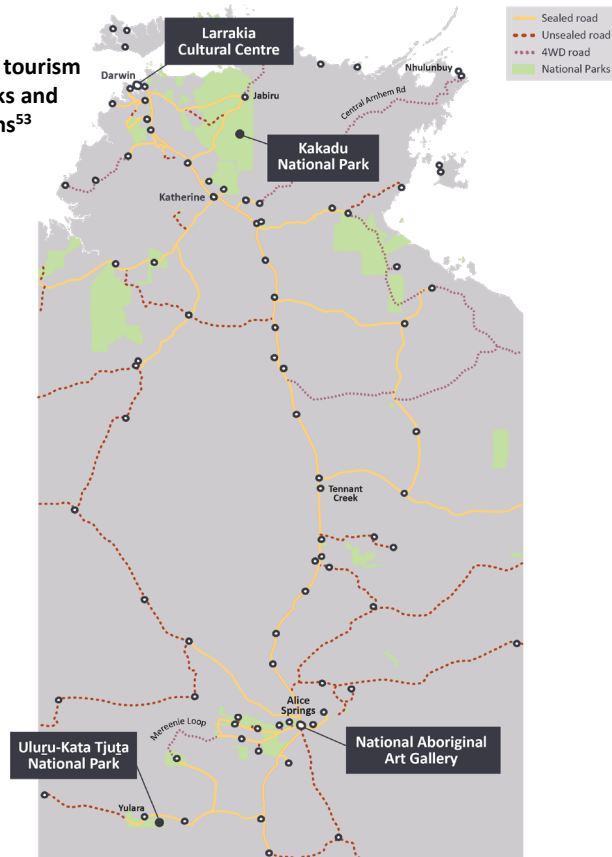
needs to work together in meaningful and effective partnerships with Traditional Owners and the Australian Government.

Prioritising investment in strategic infrastructure will improve access to key tourism sites, allowing visitors to enjoy the Territory's attractions for longer and extending the traditionally short peak tourist season.

Government needs to articulate a clear vision and transparent planning, so that development opportunities are supported by a streamlined investment process. This will build a foundation of confidence and encourage industry to invest in establishing new or expanding existing products.

While all parties are working on the iconic attractions, domestic drive tourism will significantly increase in the immediate years and this opportunity should be seized.

Figure 27: Territory tourism icons, National Parks and regional destinations⁵³



How it needs to be done

Recommendation	Related actions
T1 Prepare business cases for key Aboriginal cultural tourism icons and take projects to the market	<ul style="list-style-type: none"> ❖ Together with Traditional Owners, prepare business cases for key Aboriginal cultural tourism projects, to articulate the economic and social benefits of each project individually, as well as a combined package, to the Territory and the Nation (e.g. proposed National Aboriginal Art Gallery) <ul style="list-style-type: none"> - using the master plan approach, take the projects to market
T2 Work with Traditional Owners and the Australian Government to develop the Territory's World Heritage Icons	<ul style="list-style-type: none"> ❖ Work together in a meaningful and effective partnership with Traditional Owners and the Australian Government, to agree and implement a new 'shared vision' to bring forward investment to truly realise the economic, social and cultural potential of two of Australia's most significant natural and cultural world heritage assets: Kakadu and Uluru Kata-Tjuta National Parks ❖ Prepare a business case for the Kakadu Access Roads upgrades (as identified in the Kakadu Roads Strategy), to articulate the return on investment of fully funding the roads strategy
T3 Develop commercial opportunities in the Territory's National Parks	<ul style="list-style-type: none"> ❖ Develop and implement a 10-year plan to activate the Territory's parks estate ❖ Prepare a practical National Parks development framework and investment toolkit, co-developed with Traditional Owners, designed to attract and streamline investment in the Territory's National Parks ❖ Prioritise the development of and publishing of Destination Management Plans, recognising that a public pipeline of upcoming developments and opportunities in National Parks will provide certainty, choice and confidence to industry
T4 Accelerate Drive Tourism	<ul style="list-style-type: none"> ❖ Prioritise upgrades of critical tourism enabling roads, for example, the Central Arnhem Road, the Mereenie Loop and Kakadu Access Roads, in recognition of their contribution to Drive Tourism, growth of Aboriginal cultural tourism and access to National Parks and other key tourism sites ❖ Prioritise implementation of the Territory Drive Market Strategy (due early 2021) to capitalise on new post-COVID-19 trends and domestic tourism growth

What does success look like?

years

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- Supported by the new shared vision and completed businesses cases, infrastructure investment in Kakadu, particularly Traditional Owner approved key access roads, well underway
- Business cases for key Aboriginal cultural tourism projects completed and taken to market
- Traditional Owners, Territory and Australian governments agree a new shared vision
- National Parks development framework and 10-year activation plan published and accompanied by published Destination Marketing Plans
- Drive Market Strategy completed and implemented to capture domestic tourism from early 2021

- Key Aboriginal cultural tourism projects are either completed or well underway in construction
- Infrastructure investment in key drive tourism roads is completed, for example Kakadu access roads, Central Arnhem Road and Mereenie Loop Road
- Pipeline of new products and experiences in National Parks well underway

- Significant economic and social benefits continue to flow to Aboriginal businesses and communities as the result of tourism
- The Territory's tourism industry has achieved significant and sustained growth

The Territory is home to two of Australia’s most iconic tourism destinations: Kakadu and Uluru-Kata Tjuta. These attractions are an important part of Australia’s brand identity and have the potential to contribute to the national tourism recovery

National Parks in the Territory are an invaluable asset. Investment and development of the National Parks estate has the potential to provide substantial economic and social benefits. Government’s role is to present and protect the National Parks to facilitate industry to invest in the development of new product and experiences

Why is tourism important to economic growth?

Building on the Territory’s strengths

- The Territory is home to world-class national parks, including two of Australia’s heritage listed destinations Kakadu and Uluru-Kata Tjuta, and the world’s oldest living culture
- Tourism directly contributes \$1.2B or 4.2% to gross state product. Total contribution is estimated at \$2.6B or 9.5% of gross state product⁵⁵
- Tourism is a key driver of increased workforce participation and business development opportunities for Aboriginal Territorians, and provides substantial flow on benefits across the broader economy

Establish industry confidence

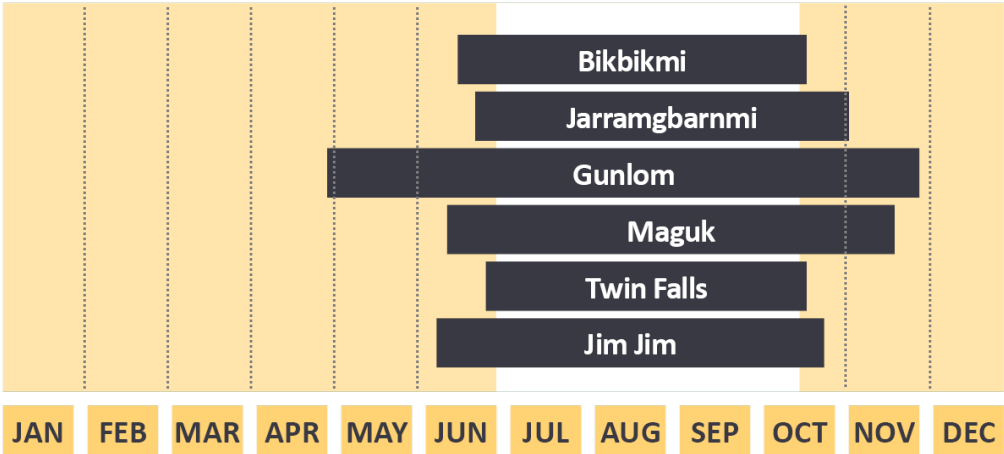
- By providing the foundation of reliable access to key sites, coupled with a streamlined investment process and a clear vision of future development opportunities, the Territory can ‘de-risk’ the investment environment and drive private investment in new products

Meeting gaps in demand and priorities for growth

- Immediate economic recovery for the tourism industry will come from the domestic market. Visitor statistics indicate a strong increase in the numbers of drive tourists, so the Territory needs to capitalise on this demand
- Further opportunities exist to encourage long-term growth by aligning to the priorities of Australian Government agencies and institutions, such as Infrastructure Australia, which identified ‘Indigenous art and cultural facilities’ on its priority list⁵⁷

- Achieving sustained growth targets for total visitors, length of stay and expenditure requires enabling infrastructure, like Traditional Owner approved sealed roads in Kakadu, for visitors to see and experience nature at its wettest. Starting the peak season earlier will build confidence for tourism operators to invest in new product (refer Figure 28: Average opening time of key sites in Kakadu National Park)

Figure 28: Average opening time of key sites in Kakadu National Park⁵⁶



The visitation window for key sites in Kakadu National Park needs to be extended to build confidence in tourism operators and extend the peak season

The Territory can benefit from industries aligned with global trends and the Territory's strategic position

National security and defence

Maritime industry

Digital industry

Space industry

The Territory is essential to Australia's national security and defence architecture. A sovereign local industrial base, strong economy and critical infrastructure are fundamental enablers of national security and defence capabilities

Over \$8B in national security and defence infrastructure is proposed to be constructed in the Territory over the next decade to support future operating requirements. Under half of this investment is approved or undergoing processes for approval⁵⁹

Why are national security and defence important to economic growth?

Push for greater self-reliance, national resilience and security

- Even before COVID-19, the region was increasingly the focus of strategic competition. The Australian Government has responded with a sharp increase in defence expenditure
- The COVID-19 pandemic has driven an even sharper focus on greater self-reliance, national resilience and security. These imperatives increasingly drive economic as well as strategic policy resulting in questioning of 'just-in-time' global supply chains
- National security and resilience is broader than defence force posture and extends to fuel and energy, critical minerals, resilient supply chains, sovereign capability, maritime, border control, biosecurity, economic and trade, immigration, humanitarian and disaster response, cyber-security and data

Territory has a strategic role

- The Territory's strategic role in supporting national resilience and security includes the National Critical Care and Trauma Response Centre, located in Darwin
- This role has extended in recent times to include the Centre for National Resilience in Howard Springs (Manigurr-ma Village), currently providing quarantine services
- In the near future it is expected that new technologies will be able to be rapidly deployed from the Territory to

the region to provide communications and emergency management services, in the event of bushfires and other disasters

Territory business and workforce can support

- National Security and Defence represents over 7.6% of the Territory economy⁶⁰
- Territory industry, by necessity and increasingly by design, is dual focused: (1) civil and (2) national security and defence
- In growing the Territory's industrial capacity in areas such as construction, gas, renewable energy, resources, maritime, data, space and manufacturing, the Territory can support national security and defence
- The development of modern sophisticated, Industry 4.0 ready, businesses in these areas creates a highly skilled workforce with transferable skills. Such interoperability of Territory industry will help underpin national security and defence activity in the north and support a range of operations and contingencies
- In addition, the Territory Government and local industry are investing in key industry capabilities, including the Darwin Ship Lift, the Marine Industry Park and the Arnhem Space Centre, that could also support defence and national security requirements

Maritime industry is a strength

- The Port of Darwin is a busy naval port located at the hinge of the Indian and Pacific oceans and is being

positioned as a regional maritime industry hub for northern Australia and Southeast Asia

- In addition to establishing a strategic ship lift capability that can support the current and future needs of national security agencies and defence, the Territory has established a dedicated precinct for the maritime service industry. The maritime industry hub will support the growing commercial maritime sector and the regional maintenance requirement of the Royal Australian Navy, Australian Border Force and Australia's partner

International training and exercise hub

- World-class large and instrumented training ranges established in the Territory will be increasingly important for Australia and partners to undertake sophisticated and integrated training with new platforms that require low electromagnetic interference and increased data connectivity

Increasing connectivity driving greater digital capability

- The Territory is becoming a digital leader with development of the highly secure, high speed terabit network capable of connecting various facilities and infrastructure within the Territory, and the planned subsea cables that will connect the Territory to Singapore, Indonesia, Timor Leste, Japan and the United States

How it needs to be done

Recommendation	Related actions
N1 Actively partner with the Australian Government and industry to deliver strategic infrastructure	<ul style="list-style-type: none"> ❖ Actively Partner with the Australian Government and industry to deliver strategic infrastructure, including joint user infrastructure and support for: <ul style="list-style-type: none"> - national resilience - future industrial expansion - the upgrade and development of training ranges in the Territory
N2 Partner with Territory businesses and industry associations to continue to improve capability and capacity to win national security and defence work	<ul style="list-style-type: none"> ❖ Partner with Territory businesses and industry associations to continue to improve capability and capacity to win national security and defence work, including sustainment, maintenance and capital works for Australia and its partners ❖ Work with national security and defence agencies to ensure capability and capacity of Territory businesses is incorporated into project design and delivery
N3 Expand engagement with industry, policy leaders and national and defence agencies to position the Territory to support activities in the north and the region	<ul style="list-style-type: none"> ❖ Expand engagement with industry, policy leaders and national and defence agencies to position the Territory's, and Territory industry's, role to support activities in the north and the region

Darwin is a rapidly growing regional maritime industry hub servicing the fastest growing region globally

Over 7500 vessels were operating within 850 nautical miles of Darwin over the 12-months to March 2020⁶¹. This catchment area represents three-days sailing for a medium to slow vessel and provides a distinct locational advantage

Why is maritime important to economic growth?

Port of Darwin is Australia's most northern port and the nearest port to Asia

- With sizable commercial traffic, Darwin is the key supply and service hub for offshore oil and gas fields in the Timor Sea, Arafura Sea and waters off the coast of Western Australia
- The Port of Darwin is a busy naval port supporting regional operations and training

The maritime industry is diverse

- The maritime industry is characterised by a broad range of services businesses such as welding, engineering, fabrication, corrosion control, mechanical, electrical, plumbing and logistics
- Darwin has a strong maritime service and supply sector with considerable experience in sustainment across several industry sectors - driven by decades of oil and gas and resource industry growth and expertise and the current sustainment work carried out in Darwin on Royal Australian Navy and Australian Border Force vessels

Maintenance and expansion of maritime infrastructure will be critical to support industry growth

- There are important investments in maritime infrastructure along the Territory's coast, from barge landings, to fuel storage, wharves and loading facilities
- The Territory Government's investment in the \$400M Darwin ship lift will establish strategic industry capability in the region from 2023, bringing \$260M into the Territory economy every year and generating 400 direct and indirect ongoing jobs during operations⁶²



Common user ship lift facility will include:

- a ship lift 26m wide, 103m long and capable of all tide lifting of a 6m draft vessel
- lifting capability of 5000 tonnes
- wet berths (wharves)
- additional hard stand area for ship repair and maintenance works



From Darwin, it is:

- 2349 nautical miles to Singapore (up to 10 days*)
- 2258 nautical miles to Perth (up to 10 days*)
- 1287 nautical miles to Cairns (up to 6 days*)

* travelling at 10 knots



505 businesses in the Greater Darwin Region identified as servicing the marine industry including:

- East Arm Logistics Precinct, with more than 100 businesses, including large international operators such as Cummins, MTU Detroit Diesel and Austal Australia
- Darwin Marine Supply Base, operated by ASCO
- Multi User Barge Ramp Facility
- Marine Industry Park

Reference: ⁶³

How it needs to be done

Recommendation	Related actions
MR1 Develop and implement a Maritime Industry Development Plan to grow the maritime industry, including to activate the Darwin Ship Lift facility	<ul style="list-style-type: none">❖ The Maritime Industry Development Plan should include:<ul style="list-style-type: none">- a holistic approach to the Port of Darwin and other Territory ports- as an immediate priority, a master plan for the Marine Industry Park to support marketing to local, national and international businesses- consideration of additional infrastructure that supports maritime industry development (e.g. berths for super yachts)- a capability gap analysis and strategy to grow and attract businesses- a comprehensive workforce strategy, noting the Naval Shipbuilding Strategy, Regional Maintenance Centres and the wider regional training opportunities and the potential for the establishment of a maritime industry skills academy- strong industry and stakeholder collaboration

Competing in the digital age requires a series of mindset changes on how organisations operate and how the digital industry enables this

The Territory must go digital! The digital industry needs to pivot towards emerging service opportunities

Why is digital industry important to economic growth?

The digital age is upon us, industry in the Territory needs to rapidly evolve to benefit and not be left behind

- Across the globe, technological advancement is changing the way we do business and driving efficiency and productivity gains. The World Economic Forum suggests the value of digital transformation for both society and industry could reach \$100 trillion by 2025.⁶⁴ In the Territory, it is expected that 92% of future jobs will require some level of digital skills. The Territory could see 2.9% annual jobs growth in the ICT sector based on pre-COVID-19 forecasts⁶⁵
- Digital technologies enhance and disrupt traditional business models and require all participants in the value-chain to rethink their roles. To remain competitive in a digital age of rapidly expanding technologies (e.g. Robotics, drones, 3D printing, AI, automation, data analytics and block chain) companies need to recognise, assess, and take action early on upcoming disruptions
- 21st century customers are quick adopters of the latest technological developments and reward companies that deliver superior service

The Territory needs to actively position as Australia's digital gateway into Asia

- Google estimates that around 3.8M⁶⁶ new Southeast Asian users will come online every month, making it the fastest growing internet market in the world. There is great potential to capture market share in digital services given the Territory's natural geographic

'middleman' advantage between Australia's major cities and ASEAN as the world's fastest growing regional economy

- Darwin's strategic location, application of the rule of law and secure power, provides an opportunity for the creation of a data centre industry to provide digital services to Asia. Development of the highly secure, high speed terabit network within the Territory and new subsea cable links will accelerate the development of data centres in Darwin for defence, gas industry, edge computing and cloud-based services

Improved connectivity and a growing base of strategic assets will assist to drive ICT and digital industry growth in the Territory

- Data centres are at the heart of digital ecosystems and provide key enabling digital infrastructure. The global data centre market is expected to reach \$174B by 2023.⁶⁷ Data centres need to be considered as critical utilities, similar to roads and transport systems, which underpin general economic activity
- The Territory's growing space sector also has a strong role to play in supporting digitalisation across the Territory, especially as a mechanism for data capture and use
- With these assets comes the opportunity to import capability through anchor tenants, new businesses and further grow industry and workforce capability

A strong digital services industry located in the Territory underpins the growth potential across the economy

- The digital industry has a key role in providing services which improve capability across other sectors, enabling them to realise the benefits of technological advancements
- The Territory had 4331 technology workers in 2019, compared to 3186 in 2018, a 36% increase, which is small compared to national figures.⁶⁸ Most Territory technology positions are in ICT management operations and ICT technical and professional streams

The local ICT industry can expand their service offerings by going beyond traditional ICT support roles and becoming valuable and trusted business partners, providing expertise and digital know-how to transform Territory business

- There is a growing and diverse local digital industry that extends from digital design and communications through to tech start-ups using drones, sensors and apps. This sector has capacity to grow and mature, including by setting its sights on future trends, such as big data analytics through high performance computing, and services export
- Continuing to grow and mature the local digital industry including broadening service offerings away from a government services focus will underpin productivity improvements in other sectors and help to improve service delivery and economic participation, especially in regional and remote areas

How it needs to be done

Recommendation	Related actions
<p>D1</p> <p>Undertake master planning of digital precincts</p>	<ul style="list-style-type: none"> ❖ Actively determine strategic directions for the digital economy in the Territory, using evidence to identify niche areas ❖ Determine optimal industry capability mix to develop the opportunities and target national and global companies to help fill local industry gaps ❖ Secure strategic anchor tenant to crowd-in capability and deepen industry capability statement ❖ Identify digital service growth areas within the Asia Pacific region ❖ Develop regional service clusters around existing strategic assets in Central Australia
<p>D2</p> <p>Pursue strategic partnerships to grow the industry in the Territory</p>	<ul style="list-style-type: none"> ❖ Pursue strategic partnerships with leading digital thinkers, such as CSIRO and the Australian Cyber Security Centre focusing on niche pathways that leverage the Territory’s natural advantages ❖ Some ideas for strategic partnerships include: <ul style="list-style-type: none"> - actively seek ways to support, including co-funding, projects that attract global talent and new business investment in high-tech opportunities, such as data centres and low-earth-orbit space satellites - developing a remote digitalisation technology testbed to attract and facilitate the testing of new technologies - assisting existing businesses to pilot and scale new ideas and business areas on the edge of their existing business

The new space industry is a globally and nationally growing sector where the Territory can build on its strategic location, existing capabilities and proven partnerships

Space-related products and services can deliver technology, connectivity and enable digital transformation that can enhance the productivity and efficiency of key industries in the Territory

Why is the space industry important to economic growth?

Space enables digital business transformation

- Digital transformation relies on space technology, from communication and remote sensing, to positioning and management of key industries such as mining and agriculture. The productivity and efficiency of nearly every sector can be enhanced through space-related products and services. Accelerating the digital transformation of space technology across the Territory has the potential to enhance growth throughout the economy

The space industry is rapidly growing

- The space industry is worth USD\$350B today and is forecast to grow to over USD\$1.1 trillion by 2040.⁶⁹ In Australia, the strongly growing space economy was estimated to be worth AUD\$5.1B in 2018-19, and before COVID-19 was expected to grow at an annualised 7.1% over the five-years through to 2023–24.⁷⁰ The industry value added over the decade to 2023–24 was also expected to grow at an annualised 8.6%, compared to an expected growth in Australian GDP over the same period of 2.7%.⁷¹ Since then, the demand for data and digital products has increased significantly

The new space industry is a fast-paced, competitive, and innovative sector

- Investment in the new space industry is reliant upon pockets of high net worth investors, high-value early stage investments, highly skilled individuals, and the shouldering of risk
- Public demand for data contributes to the sectors increasing commercialisation. New Space applications include: Earth Observation (EO), Space Situational Awareness (SSA), provision of satellite communication services, and Position, Navigation and Timing (PNT), including Global Navigation and Satellite Systems (GNSS)
- The Territory space industry emerged from COVID-19 with momentum, with two new ground stations, at the Centre for Appropriate Technology in Alice Springs, being built and commencing operations

The Territory has competitive advantages that cannot be substituted

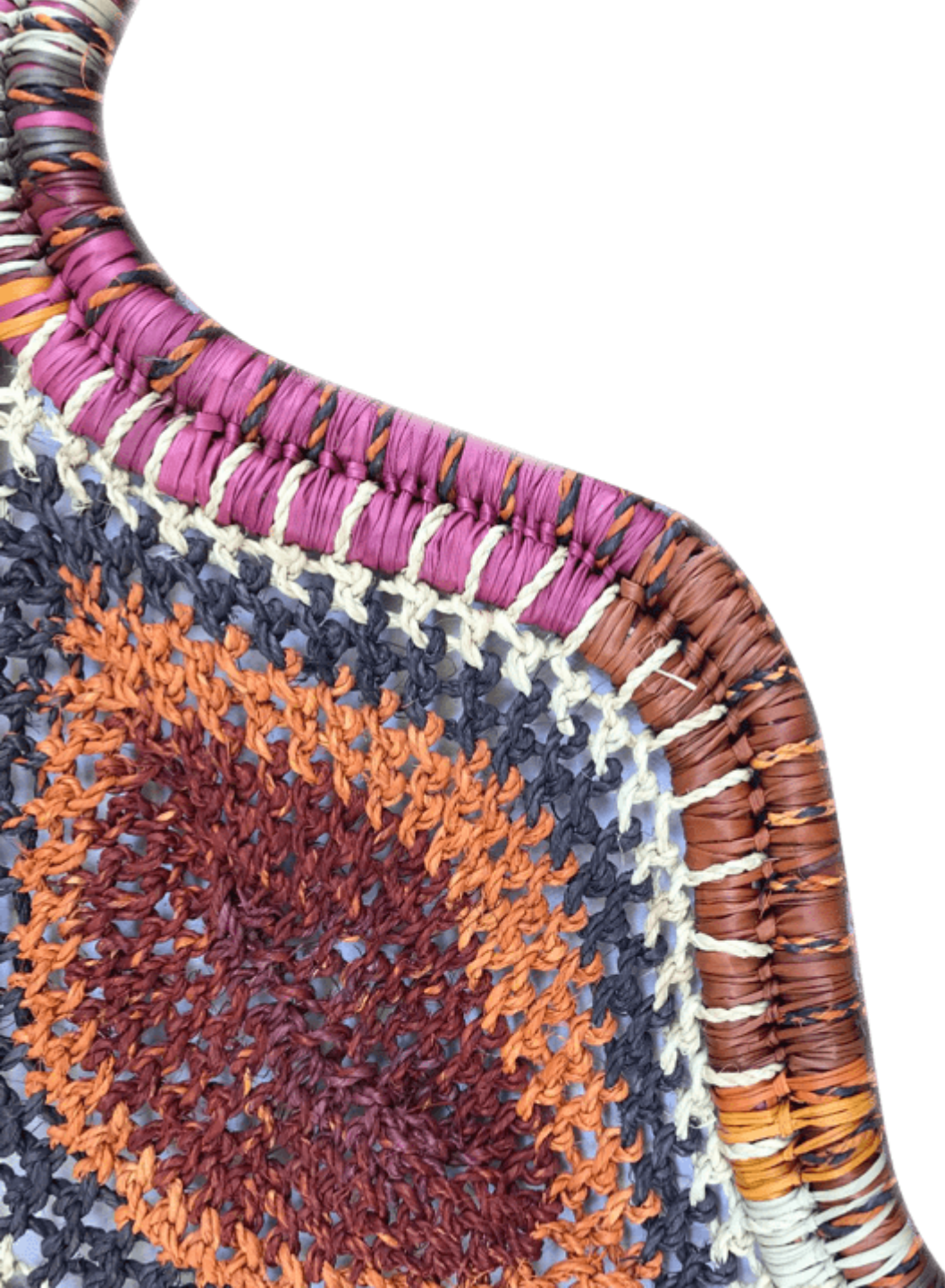
- The Territory has the geographical and climatic conditions ideal for ground stations, rocket and high altitude pseudo-satellites (HAPS) launch. It also has

globally significant space infrastructure including NASA's Alice Springs Ballooning Facility, Geoscience Australia's Landsat ground station, the Bureau of Meteorology's Shoal Bay and Middle Point ground stations (the latter supporting a 2019 SpaceX launch), among others.⁷² The Arnhem Space Centre is under construction and will be offering sounding rocket and equatorial launch services next year

- The Territory Government and Australian Space Agency established an MoU in 2020 outlining the Territory's strength in space launch, ground station, HAPS and downstream space industries operations. Continuing to build on the Territory's strong industry foundations and climatic and geographical advantages will provide growth opportunities and assist to improve the digital transformation of the Territory

How it needs to be done

Recommendation	Related actions
SP1 Capitalise on Top End's competitive advantages for equatorial launch services	<ul style="list-style-type: none"> ❖ Position the Top End as the location for equatorial launch services, research and development ❖ Collaborate with Australian and international rocket launch companies, launch service providers, satellite developers and payload aggregators, and the Australian and international research community to establish a thriving launch services ecosystem in the Top End
SP2 Capitalise on Central Australia's competitive advantages for stratospheric ballooning/high altitude pseudo-satellite (HAPS) launch and recovery	<ul style="list-style-type: none"> ❖ Position Alice Springs as the 'global headquarters for HAPS launch, research and development' ❖ Collaborate with HAPS operators, HAPS Alliance and the Australian and international research community to establish a thriving HAPS ecosystem in Central Australia
SP3 Support development of ground station precincts	<ul style="list-style-type: none"> ❖ Co-fund the development of a ground station precinct master plan for the Centre for Appropriate Technology ❖ Provide site matching services for ground station investors seeking southern hemisphere locations to enhance their networks ❖ Position the Territory as the location for ground station systems, including establishing key requirements in planning systems
SP4 Leverage space technology for Territory industries	<ul style="list-style-type: none"> ❖ Work with industry to: <ul style="list-style-type: none"> - drive the adoption of earth observation-driven solutions in the Territory's key industries - demonstrate the productivity and efficiency improvements available to Territory businesses through the use of earth observation technology



3

**Growth will occur in
the regions, with
Aboriginal People**

Traditional ownership of the land and economic growth in the Territory can and must co-exist

Aboriginal Territorians are actively leading commercial developments on their land, creating opportunities, jobs and wealth

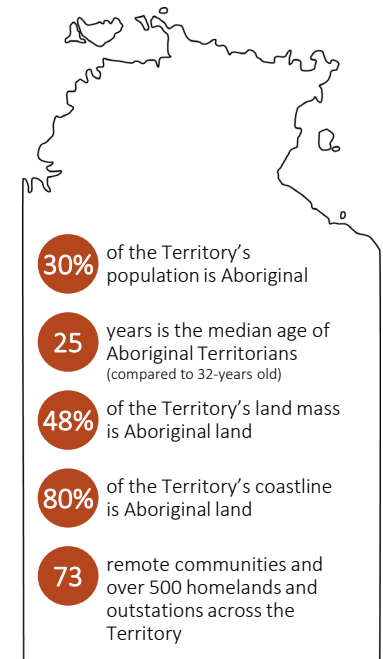
Why is Aboriginal economic leadership important to economic growth?

There are two main considerations: (1) Aboriginal people pursuing successful commercial ventures and (2) potential investors having clarity when navigating an unfamiliar form of land tenure

- Traditional Owners and Aboriginal Territorians want to drive economic growth for the Territory and to capture the benefits and opportunities for their people. To do this, they need effective and respectful engagement and relationships with investors and government, and to have the opportunity to invest themselves
- Secure land tenure underpins commercial developments. Aboriginal land tenure can be unfamiliar to interstate and international investors. Providing clarity around land tenure and resourcing land administration processes can help grow regional and remote economies
- In other countries where treaties have been successful, the economic benefits of local determination have been demonstrated with positive flow on impacts at a regional level, as evidenced in the Treaty Commission Treaty Discussion Paper.

Case studies include:

- The Harvard Project in the United States found that “When Traditional Owners make their own decisions about what development approaches to take, they consistently out-perform external decision-makers on matters as diverse as governmental form, natural resource management, economic development, health care and social service provision”⁷³
- In the United States, the Lolo Forest is managed by the US Forest Service and the Flathead Indian Reservation is managed by the Traditional Owners. While there were some differences, the forests shared much in common and when comparing returns it was found that the forest owned by Traditional Owners averaged USD\$2.04 in gross annual revenues for every dollar spent, whereas the US Forest Service owned averaged USD\$1.11 in gross revenue for every dollar spent. It was concluded that the Traditional Owners have a vested interest in continuing the viability of their natural resources – as they either stand to benefit from responsible forest stewardship or bear the burden of mismanagement⁷⁴



Note: If all outstanding land claims were granted, approximately 52% of the Territory's land mass and 92% of its coastline would be Aboriginal land

Data sourced from NT Government sources⁷⁵

How it needs to be done

Recommendation	Related actions
AE1 Collaborate to build opportunities for Aboriginal-led economic development, including access to project finance	<ul style="list-style-type: none"> ❖ Collaborate with key stakeholders to pursue and deliver innovative approaches to project financing to stimulate investment on Aboriginal land, for example, creating a targeted guarantee program or setting aside a funding pool to provide equity, not grants, to organisations to help demonstrate viability to financial institutions for lending purposes, including Aboriginal-led proposals to the ABA ❖ Build the capability and capacity of Traditional Owners, Aboriginal organisations and enterprises to lead and participate in co-designed projects on their land for economic development, for example, including through such projects as auspiced by the Aboriginal Land Economic Development Agency – and through Sustainable Development Precincts on Aboriginal land
AE2 Support Land Councils to facilitate and streamline land administration	<ul style="list-style-type: none"> ❖ Support the Land Councils' in seeking additional funds to streamline land administration for economic development and investment projects, including: <ul style="list-style-type: none"> - a special purpose, time limited (five years), direct allocation from the ABA - knowledge sharing through secondment placements to build strong partnerships between the Land Councils, the Territory and Australian governments ❖ For defined areas identified for development, establish clear governance arrangements with Traditional Owners to streamline decision-making processes and timeframes. These governance arrangements and the practical steps to put them in place, would need to be pre-agreed by the Traditional Owners, Land Councils and the Territory Government
AE3 Continue to support the Treaty Process and self-determination	<ul style="list-style-type: none"> ❖ Active engagement of agencies, industry, business and the community to understand and support the process
AE4 Implement the Aboriginal Contracting Framework for Territory Government procurement	<ul style="list-style-type: none"> ❖ Finalise and implement the Aboriginal Contracting Framework, including shared definition and register of Aboriginal businesses, targeted procurement approaches, and wrap around supports for business and workforce development

What does success look like?



Growth in regions will come from a focus on existing strengths and emerging industries aligned with global demand trends

Competitive advantage for regional industries will require a clear vision, strong collaboration, strategic prioritisation and coherent decision-making mechanisms

Why is regional prioritisation important to economic growth?

The Territory's regions are in a state of transition

- In some regions industry closures and wind-downs are occurring which will see considerable changes to these regions within the next decade. Other regions are on the cusp of new industry creation, largely centred around industries of the future
- To pursue economic reconstruction in the new paradigm where competition for investment is even more fierce, business models and service delivery are increasingly digitalised, and logistics and supply chains are disrupted, regions will need to prioritise and focus local effort, ingenuity and investment around core growth outcomes

Despite best efforts there has been a coordination failure in linking regions with strategic planning

- Engagement with Regional Reconstruction Committees and submissions received clearly outlined coordination challenges
- The Territory's growth sectors are based in the regions. Regional planning needs to connect strongly

back into the Territory's overall growth strategy, planning and funding priorities to enable progress

Strong evidence based prioritisation of economic growth opportunities and collaboration will underpin success

- The Territory land mass is vast, and resources are constrained, all stakeholders need to focus on priorities that will bring the greatest benefits and go after these collaboratively and deliberately
- Looking across sectors within a region and across regions can be transformational to overcome constraints in common, such as enabling infrastructure, access to markets and digital connectivity
- The Territory Government has a clear role to ensure that the institutional arrangements and governance mechanisms in place provide a platform for this collaboration and clear pathways for regional plans to be connected through into Territory wide planning and investment attraction approaches

Figure 29: Employment industries in regional areas⁷⁶

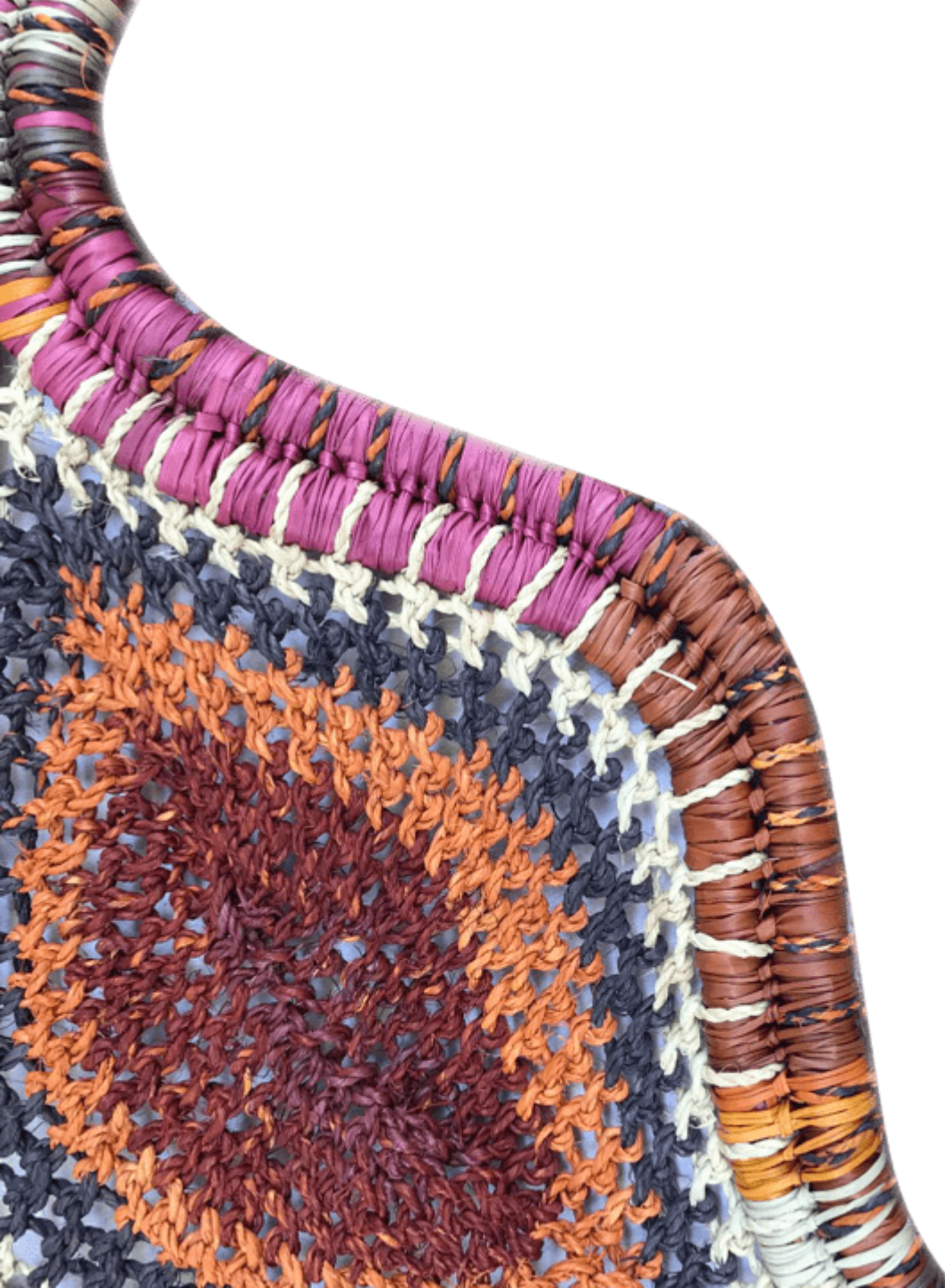


How it needs to be done

Recommendations	Related actions
R1 Strengthen the regional economic growth function of government to better drive economic development across regions	<ul style="list-style-type: none"> ❖ A strengthened regional economic function should include: <ul style="list-style-type: none"> - clear and strong connection to government decision-making – in particular the investment delivery system discussed in Section 1 - a centrally based analytics team to support evidence based regional growth prioritisation, including regional data analytics, showcased through an online portal to assist regionally based organisations to access the same data - realignment of existing resources in regions focussed on economic growth - expansion of the criteria and amount of funding for the Regional Economic Development Fund to include allocations for specialist expertise to develop project feasibility studies and regional value propositions - support for the Regional Reconstruction Committees as key industry and community reference groups whose role is to provide advice on the regional context and potential growth opportunities and drive engagement across the region - strategic collaborations and knowledge-based partnerships across government, industry, tertiary and vocational sector, and community to stimulate regional development opportunities
R2 Develop or update regional economic growth plans as a precursor to negotiating regional deals	<ul style="list-style-type: none"> ❖ This preparation should include: <ul style="list-style-type: none"> - articulation of value propositions of identified regional growth priorities, including their connection and contribution to the Territory's economic reconstruction and overall growth strategy - the enablers required to underpin these areas of regional growth priorities, including how they need to be prioritised and pathways to secure investment - Importantly, pathways for implementation, including financing pathways for identified priority projects and Sustainable Development Precincts

What does success look like?





4

**Action the enablers
that support
investment**

Government needs to strategically target investment in the right infrastructure, in the right place, at the right time to enable economic development

Why are infrastructure systems important to economic growth?

The key enabler for industry growth

- Infrastructure is critical to creating jobs, addressing disadvantage, enhancing the liveability of communities and preparing for the future needs of the Territory with better logistics, utilities and essential services, social services and community facilities
- Industry and communities require
 - access by road, air, sea and rail
 - digital connectivity
 - water infrastructure
- Well targeted priority projects can deliver ongoing productivity, improvements across multiple sectors, enhance connectivity, greater sustainability, build resilience and support liveability

The Government cannot meet the infrastructure needs on its own

- The Territory's land mass is 1.3M square kilometre including 11,000 km of coastline⁷⁷
- For the medium-term it is critical that our resources are invested in infrastructure that enables industry growth

Strategic planning and development

- Quality decision-making in relation to infrastructure should be based on sound analysis and evidence-based planning
- Coordinated strategic planning and agreed infrastructure priorities will:
 - provide business and industry the long-term certainty they need to invest
 - enhance the Territory's engagement with the Australian Government around infrastructure priorities and funding

Focus on accelerating infrastructure delivery

- While infrastructure programs can provide a pipeline of employment for classes of assets, such as roads, the 'right time' to enable economic development is critical. For example, the benefits of the Central Arnhem Road and Melville Island Arterial Road, for economic development (and community access) won't materialise until such time the roads are complete, end-to-end

Figure 30: Contribution of Infrastructure projects in the Territory⁷⁸

12%

of the Territory's GSP is contributed by infrastructure projects

\$4.5B

average turnover per annum

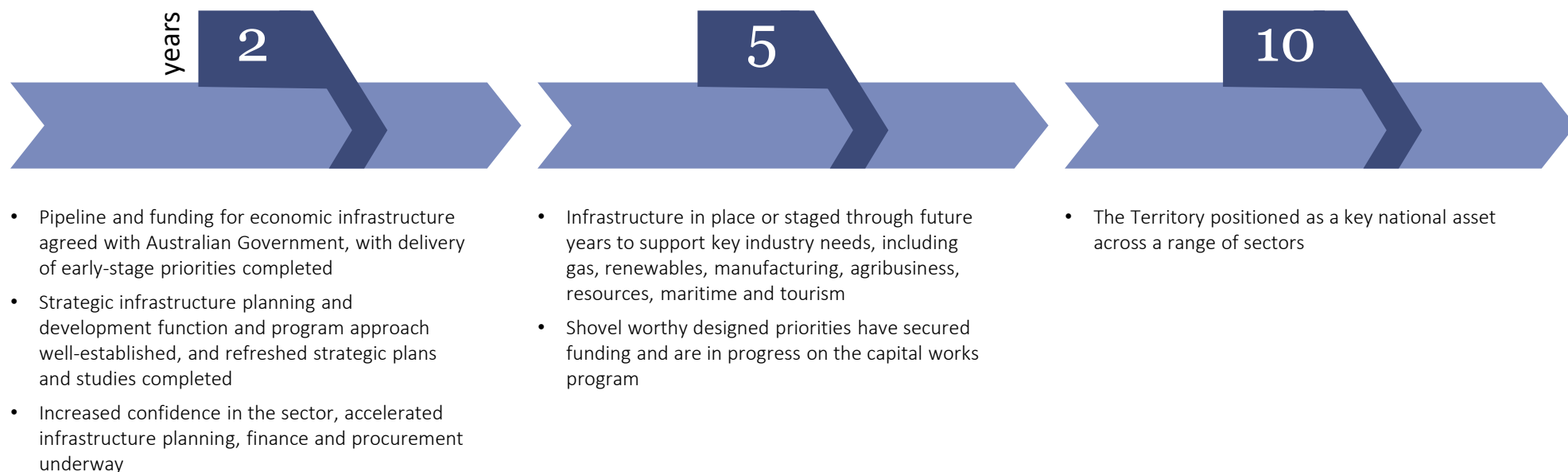
\$1.5B

per annum invested through the Territory Infrastructure Program, as a major asset owner, on new infrastructure to enable developments in key target areas

How it needs to be done

Recommendations	Related actions
I1 Urgently deliver a significant program of infrastructure that enables industry growth	<ul style="list-style-type: none"> ❖ Prepare and negotiate a ten-year economic infrastructure package with the Australian Government, quarantined from the Commonwealth Grants Commission assessment, and <ul style="list-style-type: none"> - prioritised to deliver economic benefit and equity of access - with accelerated delivery to quickly realise benefits - with a particular focus on roads, digital and water related infrastructure ❖ For the medium-term re-prioritise the Territory Government's infrastructure program towards economic infrastructure that enables industry growth <ul style="list-style-type: none"> - this may need to be supplemented by increased government debt where a strong business case exists ❖ Rapidly complete economic infrastructure to ensure the benefits from the infrastructure are quickly realised, including key roads ❖ Increase planning and design of priority projects over the next three-years to accelerate projects to ensure a pipeline of 'shovel ready' strategic projects are prepared to proceed commensurate with finance
I2 Rapidly establish a strategic infrastructure planning and development function that plans for, coordinates and aligns infrastructure needs with industry and population growth	<ul style="list-style-type: none"> ❖ Establish a strategic infrastructure planning and development function that: <ul style="list-style-type: none"> - provides a coordinated, proactive, Territory-wide approach to strategic (economic and social) infrastructure planning, development and prioritisation, in collaboration with industry (building on the existing Infrastructure Strategy and 10-Year Plan) - establishes an ongoing financing and investment framework, including sources such as public and private partnerships, strategically aligned Australian Government programs, and philanthropic and corporate interests, to help secure investment in a pipeline of critical infrastructure - strengthens coordinated strategic planning and agreed infrastructure priorities with the Australian Government on programs of national and Territory significance to help secure long-term infrastructure funding - reviews legislation and regulation, addressing any complexity, clarity and timeframe issues for industry and the public, along with best practice for sustainability, resilience and natural disaster mitigation, energy efficiency, technology improvements, and innovative and creative design principles - keeps abreast of technology, industry and societal changes that are brought about by global trends

What does success look like?



Secure land tenure underpins commercial development. Types of Territory land tenure can be unfamiliar to interstate and international investors

Providing clarity around land tenure and resourcing land administration processes in partnership with Traditional Owners will help grow regional and remote economies and jobs

Why is access to land important to economic growth?

In the Territory there are three main types of land tenure, each have their own specific access pathways and different timeframes and negotiation costs involved

- Project and business development in the Territory often requires the navigation of multiple tenure types such as Aboriginal land, Native Title and Pastoral
- Confusion regarding processes to appropriately and respectfully access land can delay timeliness of project approvals and, in some cases, halt projects all together
- The institutional arrangements that govern land access can also be difficult to navigate, with multiple government organisations, statutory authorities and land councils involved in decision-making

About 2% of land in the Territory is freehold or crown land⁷⁹

- The vast majority of land in the Territory is Aboriginal land or pastoral estate which is subject to Native Title

- *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth) and the *Native Title Act 1993* (Cth) provide the legislative foundations of Aboriginal land and sea ownership in the Territory
- Around 48% of the Territory's land mass and 80% of its coastline is Aboriginal land⁸⁰ subject to the *Aboriginal Land Rights Act 1976* (Cth)
- The majority of the remaining land and waters are, or are likely to be, subject to native title
- Most pastoral leases in the Territory are, or will be, subject to non-exclusive native title, which means that the rights of a pastoralist (granted under the pastoral lease) co-exist with the rights of native title holders

Pastoral estate is a key area for further development opportunity

- There are 224 pastoral leases in the Territory. The pastoral estate equates to 45% of the Territory's total land mass (or 596 310 km²)⁸¹

- Pastoral leases administered by the *Pastoral Land Act 1992* are for the purposes of grazing stock and associated purposes. Plans to diversify activity away from this requires a non-pastoral use permit
- A proponent needs to work with the Territory Government to determine whether it is lawful and appropriate for its operation to be conducted on a pastoral lease. Relevant factors include: size, scale and nature of proposed operation, and whether the balance of the lease would remain a viable pastoral enterprise
- The 'non-pastoral use permit' approved by the Pastoral Land Board, a statutory authority, has no prescribed timeframes, and is conditional on compliance with the *Native Title Act 1993* (Cth) (NTA). The permit can be issued for a maximum of 30-years
- Ensuring clear and time bound processes for the administration of land is key to attracting investors to the Territory

How it needs to be done

Recommendations	Related actions
L1 Clarify and provide guidance on land access negotiation pathways, focussing on Sustainable Development Precincts	<ul style="list-style-type: none"> ❖ Working collaboratively with industry, evaluate and prioritise potential precincts to provide a basis for shared planning and give certainty for proponents and regulators regarding growth opportunities ❖ Implement precinct plans by undertaking coordinated approval and land tenure/land planning processes ❖ Provide a clear, staged regulatory process map with supporting checklists and guidance statements ❖ Build in optionality as part of access conditions with a use it or lose it approach
L2 Collaborate with stakeholders to introduce statutory timeframes for negotiation on land access, where possible	<ul style="list-style-type: none"> ❖ Develop a co-designed brokering model to improve relationships and ensure clear pathways to bring relevant stakeholders to the table ❖ Work with key stakeholders to develop timeframe rules for negotiation of Non-Pastoral Use Permits ❖ Develop appropriate principles and improvement strategies via MOUs and agreed best practice to negotiating land access between all relevant parties and government ❖ Partner and support Aboriginal land interests to streamline processes for leasing Aboriginal land (see Aboriginal Economic Leadership section)
L3 Invest in land capability assessment as part of ensuring access to good precompetitive data	<ul style="list-style-type: none"> ❖ Partner with the Australian Government and relevant research organisations to prioritise and coordinate precompetitive data, focusing on Sustainable Development Precincts and master planning priorities across the Territory ❖ Make precompetitive data publicly available via digital platforms, including data collated historically where this isn't currently accessible digitally ❖ Work with Aboriginal Areas Protection Authority to digitise and streamline processes

What does success look like?



A step change in the Territory's approach to water is needed to support the Territory's aspirations and plans for investment and economic growth

The Territory needs policies, infrastructure and strategies which reflect water availability, climate impacts and competing needs

Why is access to water important to economic growth?

Water sustains life and is vital for maintaining the Territory's environment, wellbeing and economic prosperity

- Water security, including the delivery of safe and secure drinking water to urban and remote regions of the Territory, is fundamental for health, livelihood and production
- Water management must ensure consideration of competing users and conservation of water resources

A bankable investment environment requires clarity of water availability for economic use

- Most projects and businesses need access to water as a fundamental input and the cost of securing, transmitting and in some cases ensuring water is fit for its intended use impacts project economics and investment decisions
- Larger-scale projects often need to secure long-term, large volume water licences for extracting and using water to secure project finance

- All Territory growth sectors have requirements for water. For example, water availability is critical to ensuring the development of agricultural precincts and plant-based agriculture and horticulture in the Territory

Water policy is limited in the Territory

- The Territory has an immature water market where trading is limited. Current legislative and policy settings have been designed to deliver in this context
- As the demand for water continues to grow across competing users, and across different water control districts, policy and legislative settings need to be modernised to reflect contemporary context and ensure water is used for its greatest economic benefit while protecting environmental flows

Understanding water supply enhances good decision-making

- Water is abundant in the Top End though not always reliable or available, because it relies on rainfall that varies from year to year. The arid centre has stores of

water with limited reliable surface water, sporadic recharge and extreme temperatures

- Ground water is not an abundant resource in the Territory and there are large areas where ground water sources and their volumes are unknown. There are also many areas where ground and surface waters are interconnected
- Continued water resource investigation to understand existing resources is needed, as more water plan areas are fully allocated (some with limited recharge) and demand for water is growing

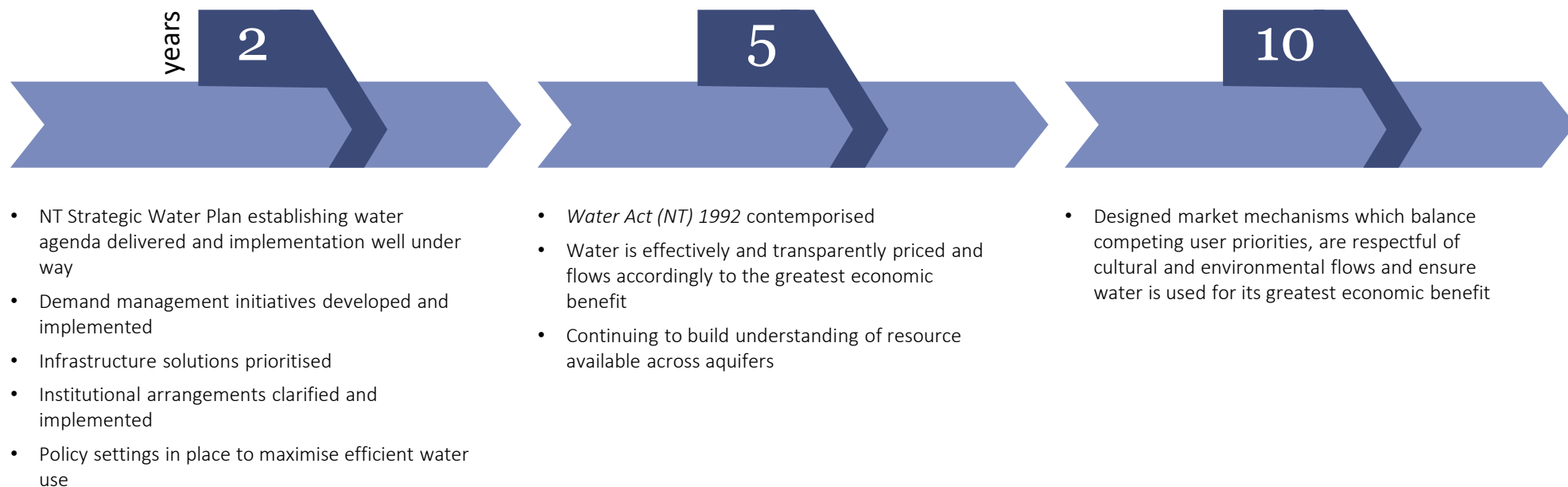
Territorians need to value and stop wasting water

- Territory Household water consumption is the highest in Australia. Territorians use twice the volume of water as other Australians (per capita)
- Water availability should be optimised through policies, infrastructure and institutional arrangements that facilitate efficiencies

How it needs to be done

Recommendations	Related actions
W1 Accelerate work to deliver infrastructure solutions for future water demand	<ul style="list-style-type: none"> ❖ Continue momentum to accelerate Manton Dam return to service and delivery of the Adelaide River Off-stream Water Storage project ❖ Investigate and develop business cases for regional disaggregated supply options, including regional off-stream water storage projects and managed aquifer recharge ❖ Invest in research and development to develop fit for purpose, affordable technological solutions to address water quality challenges, especially for arid zone
W2 Undertake continued water exploration and targeted water resource investigation	<ul style="list-style-type: none"> ❖ Align prioritisation and investment in further water resource investigation with needs of Sustainable Development Precincts and growth sector master plans, as well as critical community needs ❖ Undertake continued water exploration to understand and document aquifer recharge and discover new aquifers ❖ Undertake water economic productivity assessments to identify highest value uses of water for water control districts and precincts
W3 Continue to modernise legislative, policy and institutional settings	<ul style="list-style-type: none"> ❖ Ensure institutional governance arrangements for water establish effective coordination across different entities and authorities with clear roles and responsibilities ❖ Accelerate development, consultation and delivery of the NT Strategic Water Plan, including prioritisation of ‘water for making’ issues paper ❖ Develop and implement key policies, including: <ul style="list-style-type: none"> - surface water harvesting and capture policy - water reuse policy (for industrial and household users) ❖ Develop a comprehensive water demand management strategy to reduce water waste in the Territory

What does success look like?



Electricity demand will outpace current forecasts as the Territory’s economy rebounds. It is critical that power infrastructure investments and policy are adaptable and support the delivery of competitively priced electricity, as the foundation for industry growth

The Territory has a target of 50% of electricity consumed in 2030 to be from grid connected renewable installations⁸²

Why is access to power important to economic growth?

Electricity must be affordable and reliable to support Territory businesses

- The Territory exceeds most of the country in wholesale electricity prices. This places cost pressure on all businesses, especially on sectors with a reliance on electricity
- The Territory Government subsidises the Power and Water Corporation and electricity retailers for provision of services for electricity supply to households and small business customers across the Territory at uniform tariffs. This costs the Territory Government, and ultimately Territorians, about \$82M annually (based on estimates for 2021)⁸³
- The Territory also subsidises delivery of electricity, water and sewerage to remote Aboriginal communities through Indigenous Essential Services Pty Ltd (IES), a subsidiary of Power and Water Corporation. Annually this costs about \$15.2M⁸⁴

Planning for an agile, future focused electricity system in the Territory needs to be timely, transparent and underpinned with hard economic analysis to guide decision-making

- Territory comprises a large number of stand-alone power systems, each needing to be reliable and secure. There are three regulated systems: Darwin-Katherine, Tennant Creek and Alice Springs

- The Territory’s electricity system is different in scale and concentration to the National Energy Market on the east coast
- Increasing renewable generation from residential and commercial PV generation is driving the need for market reform and strategic infrastructure investment. For example the \$30M 35MW Battery Energy Storage System (BESS) procurement currently underway
- In addition, key decisions are rapidly approaching on the pathway for retirement of existing government owned gas fired generation and access to future storage and firming options

Economic growth objectives imply increased demand

- Potential new electricity demand will come from both industry growth and decarbonising existing industry, including LNG processing facilities, petrochemical plants, mining operations, mineral processing plants, data centres, hydrogen production and remote communities. Based on publicly available reports, this growth could be more than 2000MW over the next decade.⁸⁵ This demand is multiple times the existing demand in the Darwin-Katherine Integrated System.
- If the Territory’s economic growth target is to be achieved, existing systems will need to be augmented to meet new demand. The Territory’s energy policy needs to be more closely aligned to economic development priorities

Remote power systems

- Diesel wholesale prices in the Territory exceed those of the rest of Australia, which has consequences for generation costs, mainly in the Territory’s remote communities and regionally and remotely located businesses
- Integration of renewables technologies into 72 remote communities serviced by IES is targeting an average of 70% renewable power generation
- Benefits include reduction of greenhouse emissions through diesel displacement (21 million litres consumed in 2018-19)⁸⁶, reduced government subsidies required for the cost of supplying power, and job creation benefits
- Strong community engagement is critical to the pace of transition

How it needs to be done

Recommendations	Related actions
AP1 Accelerate the steps to ensure the Territory's energy systems are agile and support economic growth	<ul style="list-style-type: none">❖ The Renewable Energy Target Least Cost Implementation Plan must be delivered within the nominated timeframes or earlier. In particular:<ul style="list-style-type: none">- finalisation and publication of the Darwin-Katherine Integrated System and Alice Springs network plans- completion of the regulatory and energy market reforms- the retirement pathway for existing government owned gas fired generation <p>are critical in supporting greater levels of renewables generation connecting to the electricity grids, while maintaining acceptable system security and reliability and therefore should be prioritised, adequately resourced and actively monitored, including public reporting</p>
AP2 Transition remote power systems for the 72 remote communities serviced by the Indigenous Essential Services program, to renewables-based systems by 2030	<ul style="list-style-type: none">❖ Accelerated development of frameworks to support private sector delivery and financing of remote power systems infrastructure and services❖ Options to partner with the Australian Government and industry to establish renewable micro grid trials, in particular a renewables-based hybrid hydrogen and solar trial
AP3 Accelerate energy intensive industry development	<ul style="list-style-type: none">❖ Develop an investment attraction strategy to target energy intensive businesses and renewable generation investment (see Energy transition and decarbonisation section)

What does success look like?

years

2

5

10

- Darwin-Katherine Integrated System (DKIS) network system plan published
 - Alice Springs integrated system plan published
 - Battery Energy Storage System for DKIS operational
 - Market reform for Essential System Services and Stage 2 of the Interim Northern Territory Electricity Market (I-NTEM)
 - Remote Power Systems Strategy for communities serviced by the Indigenous Essential Services program developed, and implementation commenced
 - Complete the study into an 'electricity highway', including assessment of the potential for a link from the Territory to the National Electricity Grid
 - Energy intensive businesses and renewable generation investment strategy developed
- New energy intensive businesses established
 - Renewable generation supply, supports increased industry growth
 - Renewable energy target progressing
 - Remote Power Systems transitioning to renewables
- All remote power systems transitioned to renewables
 - Renewable energy target met or exceeded

Digital transformation is changing society and the economy, but many areas of the Territory still remain without access, creating a digital divide

Connectivity is required to enable digital transformation, increase business productivity, improve health and education outcomes and provides access to global supply chains

Why is access to digital connections important to economic growth?

Digitalisation is here to stay, we must transform and capture the benefits

- Adoption of digital technology added \$126B to the Australian economy in 2019.⁸⁷ COVID-19 has meant many businesses have undergone a digital transformation, further driving growth of the digital economy
- The stock of data is doubling every two-years and is continuing to grow. The events of 2020 have left Australian companies more risk averse, seeking options for failover, redundancy and geographic separation. Data centres, transmission, space base stations, a changing NBN and digital hubs are all opportunities for the Territory to actively participate in Australia's thriving digital economy

To transform, the Territory needs reliable connectivity

- Access to digital infrastructure is critical to improve economic, social, health and educational outcomes.

- Equitable access to digital technology and telecommunications can create new economic opportunities in regional and remote areas, foster connection and access to services
- Connectivity is also a key requirement to enable digital ecosystems, such as Industry 4.0, Advanced Manufacturing, Farming 4.0 and Supply Chain 4.0. It further enables productivity gains by providing a platform for using firms to develop and introduce innovations in their own products and processes

Digital infrastructure in the Territory is limited but growing

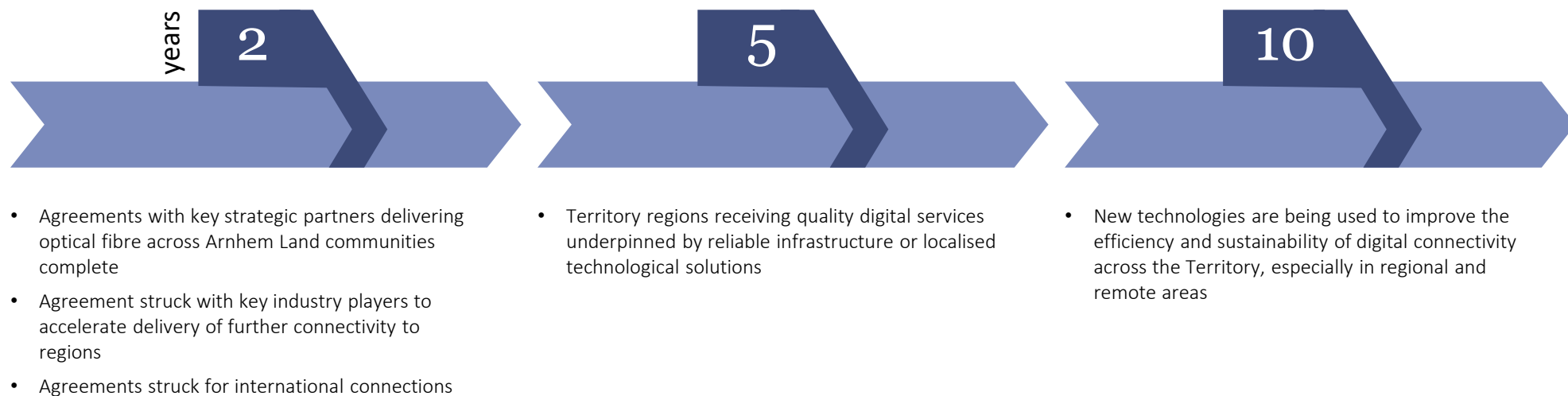
- Australia's high capacity telecommunication connection lines are an arc that stretches from Brisbane to Perth. Building the Territory's connectivity should continue to be aggressively pursued

- Some major centres in the Territory are connected by fibre optic cables which largely run along the Stuart and Barkly highways. There are also several undersea cables connecting the Tiwi Islands and Groote Archipelago. Large remote areas of the Territory rely on satellites
- Delivering infrastructure in the Territory is challenging due to its vast size and small population. It requires substantial upfront and ongoing investment to maintain and upgrade physical infrastructure needed to enable digital connectivity. Through necessity, the Territory Government has been co-investing over a number of years to try and address significant infrastructure gaps
- Enabling the right conditions and supporting new and innovative digital technology to overcome the tyranny of distance will help to improve digital connectivity in regional and remote areas of the Territory

How it needs to be done

Recommendations	Related actions
DC1 Accelerate the expansion of telecommunication services (mobile and internet) to increase the digital connectivity in regional and remote areas of the Territory	<ul style="list-style-type: none">❖ Engage the Australian Government to develop and implement a plan to ensure a minimum standard of reliable 4G broadband to all regional and remote communities❖ Collaborate with telecommunication network service providers to increase network redundancy, strengthening network fault tolerance and establish high availability levels across the Territory❖ Facilitate the acceleration of upgrading optical fibre across the Arnhem land communities to improve digital access❖ Partner with the Australian Government and industry to develop digital connectivity solutions for regional and remote areas

What does success look like?



Logistics infrastructure connects the Territory’s resources and produce to people and places, while providing regional food and fuel security

COVID-19 exposed local and global supply chain vulnerabilities. Now is the time to reframe and revisit the Northern Australia agenda through a new partnership

Why are logistics and supply chains important to economic growth?

Logistics creates access to markets

- Logistics and supply chains are critical to sustaining populations and lifestyle with food and fuel security, and for taming the tyranny of distance for freight, to and from the Territory
- Competitive and productive logistics from transport to cold-chains, to digital routes and robotic management of integrated logistics chains, are all key to growth and Territorians living well

Priority logistical infrastructure

- Key logistical enabling infrastructure such as roads are of national importance to propel the Territory’s productivity and contribution to multiple industries, including agribusiness and energy, defence and tourism

- Efficient logistical management of people and freight at key visitor point of entry terminals (air, sea, rail and road) that supports industry growth can attract and maintain carriers
- Due to technical program definitions, for a period of 10-years, the Territory was ineligible for local roads funding provided to other States, leading to a marked deficit in road access, affecting industry, business
- Logistical developments, including roads and ports, will significantly increase regional development for Northern Australia, while helping to close the gap on remote disadvantage, which in turn will benefit the nation

Strategic alliances

- Leveraging a competitive advantage occurs where built assets such as roads and warehousing have multiple benefits and support common industry goals
- Coordination across sectors and jurisdictions will realise greater prosperity and security for Australia, with the distribution of productivity, population and infrastructure aligned with a renewed focus on regional trade



How it needs to be done

Recommendations	Related actions
LS1 Build a coalition between industry, business and government to collaborate to improve market connections	<ul style="list-style-type: none">❖ Establish new institutional arrangements based on best practice collaborative governance for industry logistics and supply chains business leaders and government, to:<ul style="list-style-type: none">- set objectives to explore, develop and advocate for public and industry policy and practice to improve supply chain economics through costs, efficiency, synergies, technology and infrastructure, strategically aligned to industry growth- undertake a detailed study and business case to investigate logistics and the case for possible government action- undertake comprehensive supply chain mapping across sectors, precincts and regions, linked to the future market of the Territory’s growth industries- collaborate between industry and government to foster shared data and information coordination- optimise multi-user logistics for greater efficiencies of intermodal use of rail and roads, sea and exports, warehousing and processing

What does success look like?



Moving to an integrated risk-based regulatory system that provides a seamless experience, will contribute to the Territory's competitiveness

Investors seek speed, clarity and transparency. They concurrently assess multiple jurisdictions and projects. Improving the investor experience in the regulatory process is key to being globally competitive. This doesn't mean shortcuts, it means efficiency, transparency and digitalisation

Why is regulation important to economic growth?

Clarity and certainty are key to investment decisions, and visionary private investors are needed to realise the Territory's potential

- Proponents are looking for clarity, prioritisation and proportionality, and finality. They also rely on the independence and accountability provided by transparent regulatory processes to assist them to build social licence
- A project specific focus is also required to accelerate job creation in targeted growth sectors
- The Territory is competing globally for investment. It must ensure regulatory best practice that is investor centric

Industry and businesses need confidence to invest and grow

- Regulatory compliance costs time and money, for business and government alike. An efficient regulatory system must focus on material risks

- Reducing regulatory barriers for business and reducing the cost of complying with regulation will lift competitiveness
- The Territory Regulation Making Framework (RMF) must be effective in driving consideration of costs and ensuring efficient regulation

Contemporary regulation needs to reflect community expectations, be efficiently and transparently implemented and digitally enabled

- The online non-commercial interaction between government and the business sector – Government-to-Business (G2B) – reduces the time required for businesses to interact with the government
- e-Government is an effective means to improve effectiveness, efficiency and transparency, to elevate the quality of service, and to promote active public participation in governance

- Moving the Territory to an e-government approach will require consistent investment to build architecture that is fit for purpose

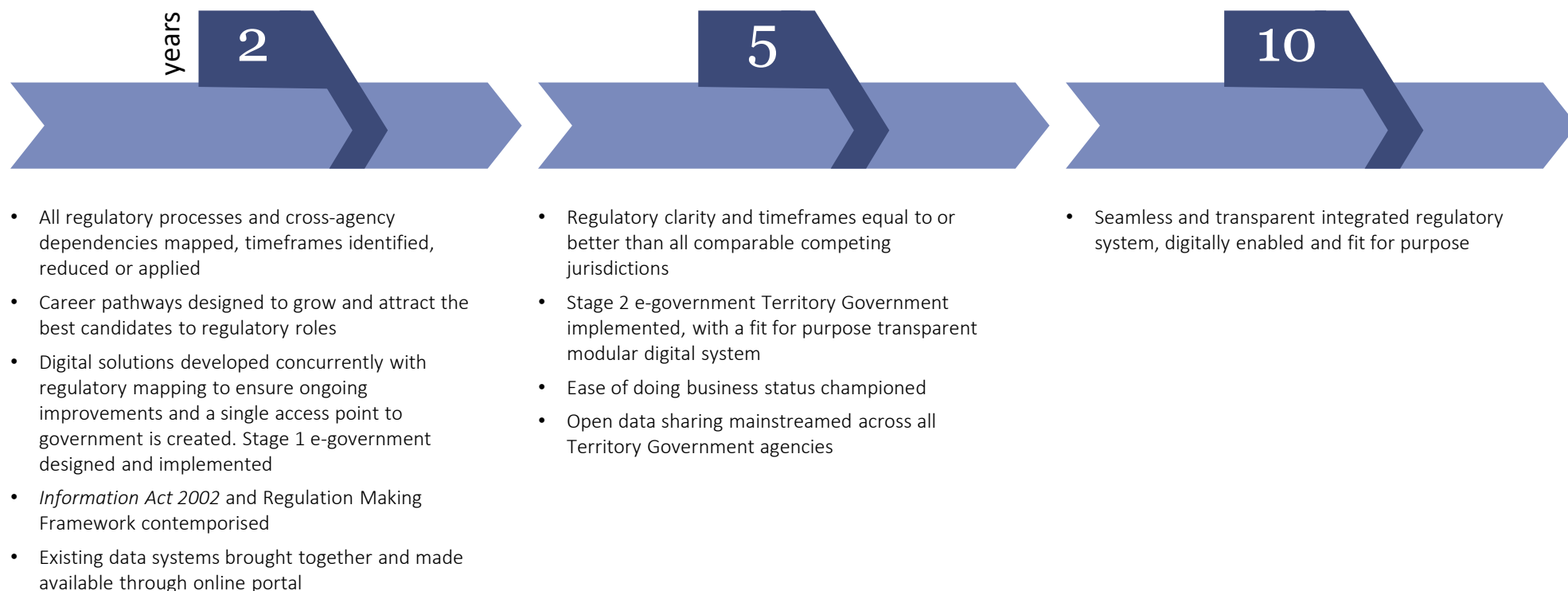
Open data sharing and improved transparency can facilitate efficiencies in regulatory compliance

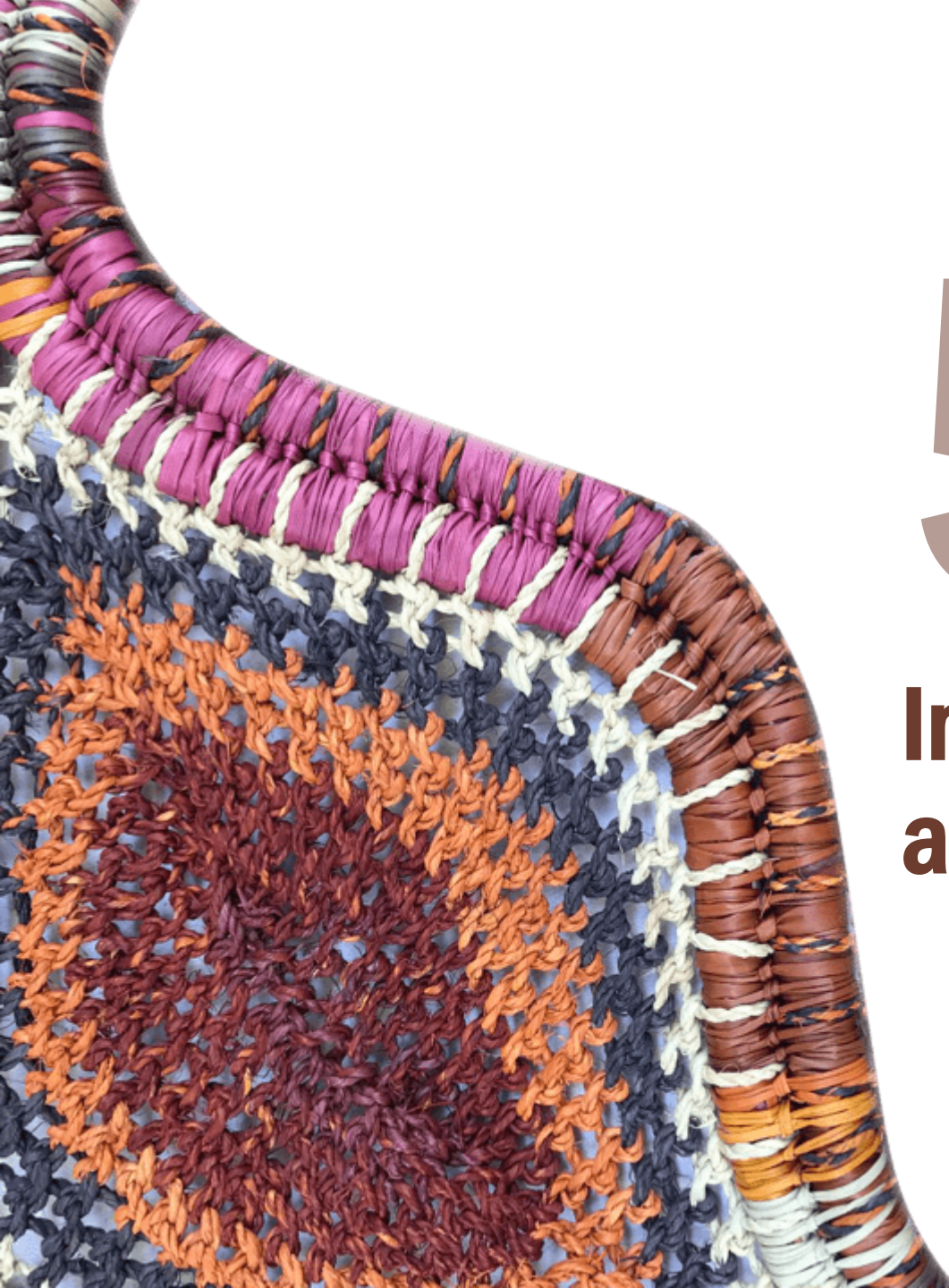
- Open data access and re-use of data will increase the quality, efficiency, and transparency of public services
- Access to public sector data will enable private sector development of digital products and services and inform better decision-making of individuals, businesses and governments

How it needs to be done

Recommendations	Related actions
RG1 Quickly streamline regulatory processes to make it easy to do business in the Territory	<ul style="list-style-type: none"> ❖ Map all regulatory processes, ensure they are time bound and identify opportunities for improvement ❖ Streamline and reduce timeframes by identifying opportunities to enable concurrent regulatory processes, e.g. public notifications ❖ Ensure accountability by requiring public reporting on standards with overarching responsibility and coordination assigned to a single agency to ensure continued focus and momentum ❖ Publish regulatory impact statements within appropriate timeframes ❖ Develop products that provide clarity and support proponents to navigate the regulatory system ❖ Empower regulators to make risk-based decisions, delegate responsibility down throughout hierarchy in a clear and accountable way ❖ Audit capability and resource to develop and recruit against capability gaps ❖ Build strategic partnership to improve regulatory efficiency, including with the Australian Government in relation to the <i>Environment Protection and Biodiversity Conservation Act 1999</i>
RG2 Invest in modern digital architecture which is easy to use	<ul style="list-style-type: none"> ❖ Invest in modern digital architecture which is easy to use and delivers a central Territory Government online portal (OnePortal) for all government applications and approvals to be lodged and tracked in real time ❖ Develop new data sharing legislation to better facilitate the sharing of data across Territory Government agencies, non-government organisations and the public ❖ Build Territory data sharing framework interfaces between existing data systems to enable open and transparent sharing of information and data

What does success look like?





5

**Industry growth needs
a skilled workforce**

The Territory must continue to grow local workforce capability while continuing to attract and retain the best and brightest

A lifecycle approach to continuous skills development – through early childhood, school, higher education, vocational training and on the job – is key to enabling participation and growth, especially for jobs of the future

Why is building capability important to economic growth?

A skilled and economically engaged population is fundamental to support sustainable growth and deliver long-term industry development at a pace that lifts the regional and national prominence of the Territory.

Retention of a skilled local workforce is important. Attracting workers from outside the Territory has historically helped to fill key skills gaps and enable project opportunities to be delivered.

A high-quality skilling industry which delivers contemporary education and training aligned with future workforce gaps – both anticipating, driving and responding to demand – can help to ensure the Territory workforce is future-ready. Before this, a highly capable workforce needs the benefit of a high performing, fit for purpose early childhood through to school years education system that delivers foundational skills and pathways to employment and higher education.

The Territory needs to sustainably grow its population, both through attracting new skilled workers to call the Territory home and through ensuring greater participation of existing residents.

Aboriginal people represent about 30% of the Territory's population, compared to 3% nationally.⁸⁸ For the Territory to realise its economic potential, especially in remote and regional locations, it is critical to lift the Aboriginal employment rate and grow Aboriginal workforce skills and capacity. The July 2020 Closing the Gap targets specifically refer to increasing Aboriginal skills, training and employment rates, presenting an opportunity and clear pathway to align with national priorities.

Rapid digitalisation is changing business models and capabilities required in the workplace now and for workforces of the future. Widespread coverage of high-speed mobile internet; artificial intelligence; adoption of big data analytics; and cloud technology are non-negotiables in a modern world. To capture benefits of new digitally enable industries, the Territory's workforce must keep pace with the competencies. There is a clear role for the Territory's digital industry to support capability development and for a dedicated focus across all learning approaches.

Right skills

- The Territory must plan for the future workforce, now
- In partnership with schools, universities and skilling industry to create new workforce solutions
- Education providers must collaborate to build competitive advantage for the Territory



More people

- Meaningful growth needs all Territorians participating
- Improvements must continue to be made to remote Aboriginal education
- Population growth and mobility are both required to achieve aspirations
- Workforce from outside the Territory will still be needed in peak demand periods



Strength of place

- Strategically plan for future demand
- Improvements to liveability to attract people to move and stay
- Population is supported with access to diverse housing supply

Keeping workforce skills contemporary in an era of rapid technological advancement requires a focus on future skills development. It also requires getting the fundamentals right and ensuring relevant education and training is accessible for all Territorians

Sustainable growth needs more skilled people and all Territorians actively participating in the economy in a meaningful way. The relatively small Territory population hasn't always been able to keep up with demand for skilled workers. Targeted efforts to retain a local workforce and attract new Territorians will be crucial

What needs to be done

The Territory needs to embed mapping future workforce demand as part of its master planning, feasibility work and industry development. Where new capabilities are required, early engagement with education partners, communities and the skilling industry is needed to allow time to prepare and grow capability. Anticipating, and even creating demand for new skills, will require agile and forward-looking system.

Alongside identified growth opportunities, a highly-skilled digitally capable workforce is vital. Accelerating the uptake of skills in the areas of Science, Technology, Engineering, Arts and Mathematics (STEAM) is needed as an incubator for jobs of the future and to capture innovative industry opportunities.

Charles Darwin University (CDU) is an important institute for the Territory. Globally, competition in the higher education and training sector is fierce. However, the trend to knowledge sharing and increased public value, particularly for vulnerable and First Nation people, underpinned by relentless digital transformation and regionalisation is an opportunity that CDU must grasp.

CDU's challenge is to evolve into a strong research and learning institution for the Territory and the region. It is time to go beyond delivery of Higher Education and Vocational Education and Training and see itself as an economic enabler. To do this CDU needs to be more outward focused and proactive in response to the rapidly changing global economy and society.

Like the Territory itself, this will require an understanding of

its competitive advantages, a shift into an outward facing commercial and economic space, and an unrelenting focus on delivery using new methods and thinking. This includes a commitment to collaboration (rather than competition) and digitalisation.

A capable local workforce requires focus on how the Territory can better engage its population by linking education to real employment opportunities as close to home as possible. More opportunities for Aboriginal employment and participation need to be collaboratively identified through supporting Aboriginal economic leadership. At the same time, capability development should focus on existing strengths and opportunities in remote areas where there are clear linkages with real economic opportunities.

While continuing to optimise local workforce capability, population growth sourced from outside the Territory will continue to be needed, including attracting interstate and international migrants, and using temporary workforces where supply gaps are critical. Both population growth and mobility will be needed to achieve aspirations.

Post-COVID-19, regional and remote areas are becoming more attractive for Australian and International workers alike. A migration campaign targeted at attracting skilled workers to relocate to the Territory is an opportunity. Global competition for skilled migrants will increase post-COVID-19 and the Territory will need to review and refine policy settings to attract and retain skilled migrants and work collaboratively with the Australian Government who have responsibility for migration policy settings.

How it needs to be done

Recommendations	Related actions
SK1 Embed workforce planning for the future, now	<ul style="list-style-type: none"> ❖ Enhance existing workforce planning with collaboration between government and the private sector to identify the long-term demand needs across the next five to 10 years, including consideration of: <ul style="list-style-type: none"> - What – the breadth and depth of skills and workforce capabilities needed to support industry, including specific large-scale projects, and to set clear signals to the skilling industry to be future ready - When – prepare forecasts of expected demand for skills and workforce capabilities so that investments are strategically targeted and there is sufficient lead time for preparation - Where – identify locations of required skills and workforce capabilities that are ready to mobilise matched with needed improvements to social infrastructure, housing and liveability to help retain workers in the Territory long-term ❖ Undertake a strategic realignment of skills delivery partners (schools, public and private providers) in line with Territory economic development priorities ❖ Industry to work with government collaboratively and with flexibility on key actions such as investigating common-user education and training precincts, delivery methods, timetables and opportunities for VET reform
SK2 Collaborate with CDU to build its competitive advantage and its relevancy to the Territory and Australia by determinedly pursuing new models of engagement and delivery	<ul style="list-style-type: none"> ❖ CDU to build its competitive advantage and its relevancy to the Territory and Australia by determinedly pursuing new models of engagement and delivery: <ul style="list-style-type: none"> - building its delivery and research proficiency to become a global world class centre of excellence on what works to accelerate closing the gap in Aboriginal disadvantage, anchored in best practice expertise in Aboriginal engagement - driving its intellectual, delivery and research focus to support growing the Territory economy, in line with the economic agenda, including by: <ul style="list-style-type: none"> • anticipating and responding to economic demand (e.g. through partnering with existing and new industries and supporting emerging new business models) • developing the right skills and knowledge in the Territory's existing and new population to align with that demand • developing centres of excellence in those areas to attract research funds and students - maintaining a laser focus on ensuring a competitive advantage in digital learning, including a specific focus on pathways for disadvantaged learners - forming collaborative and mature partnerships with other higher education and training institutions (global, national and local), industry, business and the not-for-profit sectors, to create increased public and commercial value

How it needs to be done

Recommendations	Related actions
PE1 Establish a Territory Careers Pathway	<ul style="list-style-type: none"> ❖ Clear Pathways to Territory Jobs: <ul style="list-style-type: none"> - Establish a Territory Careers Pathway marketplace/broker to connect all Territory schools to Territory industries, to facilitate real pathways for every student from school to training and ultimately a job - Similarly, vocational education delivery needs to be part of a real pathway into industry and matched with future industry requirements
PE2 Expand key programs that improve remote Aboriginal education	<ul style="list-style-type: none"> ❖ Ensure that every Territory school has a minimum level of internet access (reliable 4G equivalent), so that effective education outcomes for all students in remote Territory schools can be delivered (See Access to Digital Connections Section) ❖ Support the Families as First Teachers (FaFT) program, ensuring this highly successful program is continued and expanded across all Territory communities ❖ Expand the 'Learning on Country' program in a staged approach across all Territory regions and Land Councils
PE3 Review and target national and international migration programs and settings post-COVID-19	<ul style="list-style-type: none"> ❖ Using contemporary research on post-COVID-19 migration, undertake targeted migration campaigns aimed at attracting and retaining people in the Territory's regions, including opportunities for 'after care' for new residents ❖ Use the lessons learnt through COVID-19 and in working with industry and the Australian Government to establish longer term demand planning and structured programs for temporary workers (e.g. seasonal agribusiness needs and international students) and improvements to migration programs such as the Designated Area Migration Agreement

Liveability is a key consideration for people in choosing where to settle

Liveability outcomes vary across the Territory. Targeted improvements that lift liveability are needed to make the Territory's growth hubs attractive to retain population

Why is liveability important to economic growth?

- Liveability plays a strong part in attracting and retaining people to live in the Territory, which affects the Territory's ability to provide the skilled workforce to grow sustainably. Put simply a liveable community is one in which it is easy and comfortable to carry out day to day life.
- Although livability can mean different things to different people, it often includes core considerations such as ensuring quality of public spaces, valuing the natural environment, access to services, safety, sense of community and social and recreational opportunities.
- Ensuring liveability requires participative long-term planning approaches to enable balanced decisions that deliver effective and efficient city and regional development.

This includes using place-based approaches to build thriving communities.

- In the Territory, liveability also requires active consideration of heat mitigation and energy efficient design to both improve comfort and amenity from public places to residential housing design.
- Liveability requires all Territorians to have to access to safe and affordable housing. In recent years the Territory has made progress in improving the availability of remote housing, but there is still a long way to go.
- While this work continues, the Territory also needs to ensure that the availability of quality affordable urban housing keeps pace with the needs of a growing economy.

Both the perception and the reality of the Territory can improve. All Territorians should have access to a connected, sustainable community where liveability is among the best in the nation

What needs to be done

As part of attracting and retaining people to live in the Territory there is a need for broad based improvements to liveability, including effective land use and planning, quality of public spaces, valuing the natural environment, access to services, health care, education, safety, community services and social and recreational opportunities.

There has been significant work done to date to enhance the Territory’s liveability, including city and regional deals, heat mitigation strategies and transforming public spaces. This has included street art projects, arts trails, investment in sporting infrastructure and Aboriginal cultural experiences, increased digital connectivity and growth of creative industries.

Maintaining this momentum to improve the Territory’s liveability, linked to a regional prioritisation approach, is important for implementing effective attraction and retention strategies.

Ensuring that all Territorians have access to safe and affordable housing is a crucial factor in achieving economic goals. Diverse supply that caters for all parts of the housing continuum is key to supporting growth in the Territory’s population and mobility around the Territory, especially to remote and regional locations.

There are notable gaps in the supply of housing in the Territory, both in urban locations and in the availability of housing in remote/regional locations. Diversifying supply of affordable housing through the community housing industry can deliver economic growth outcomes, while also delivering additional social housing.

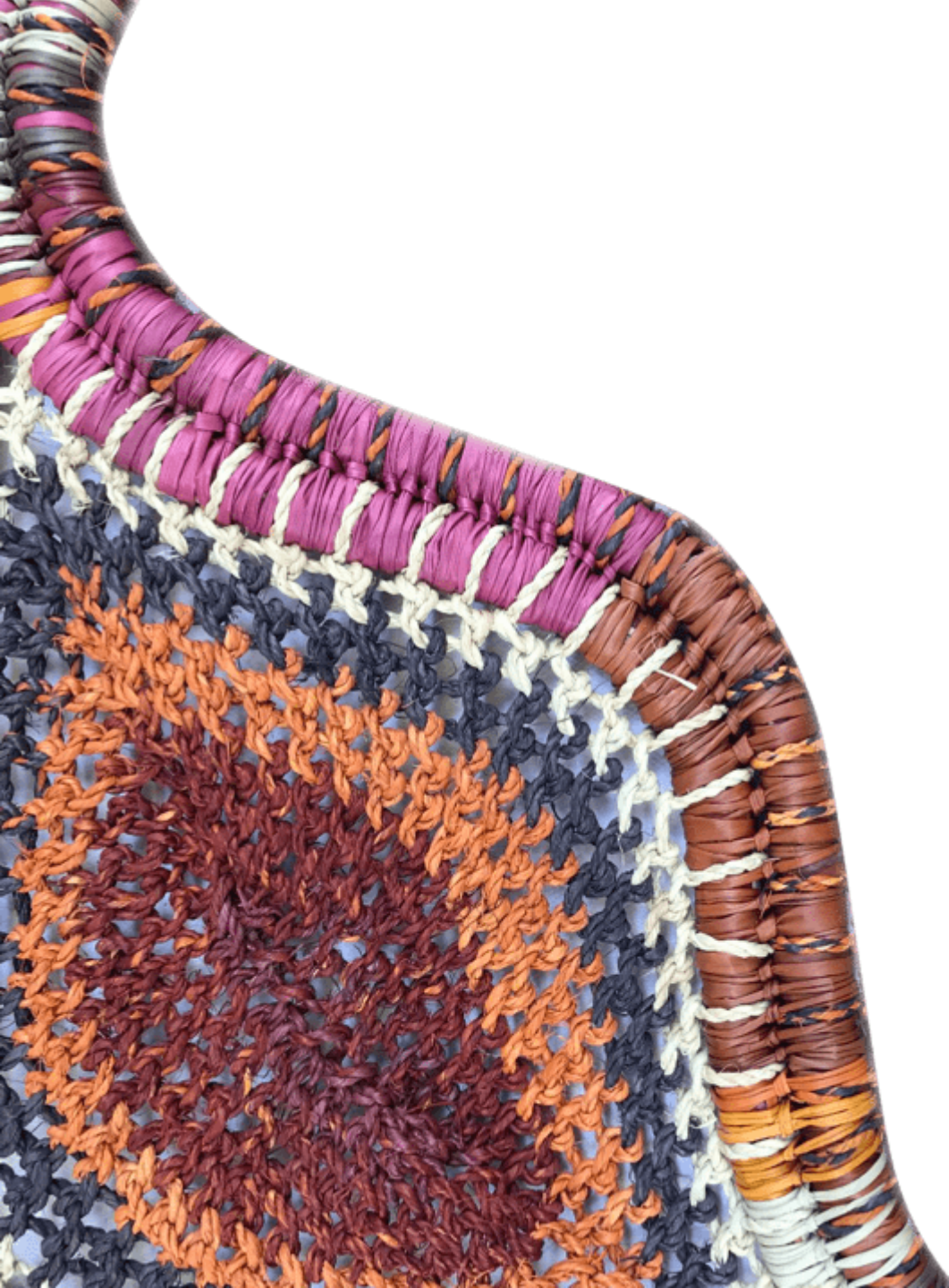
Creative industries have broad impacts across the economy by improving liveability and lifting visitor attraction and experiences.

Creative industries generate real social, economic and cultural benefits for Aboriginal Territorians, including workforce participation and business development opportunities, and are key to supporting and fostering future growth potential.

The diversity of the sector, from visual arts and digital design, to screen production and broadcasting, contributes substantially to liveability for all Territorians, by enriching communities alongside supporting tourism and population retention.

How it needs to be done

Recommendations	Related actions
PL1 Plan for future population demands	<ul style="list-style-type: none">❖ In line with establishment of a strategic infrastructure planning and development function (see Infrastructure Systems Section), extend existing planning practices to:<ul style="list-style-type: none">- more proactively plan land releases and town planning across the Territory, aligned with population projections, to ensure infrastructure and affordable housing is always available (stay ahead of demand)
PL2 Establish a sustainable community housing industry in the Territory to deliver affordable and available housing	<ul style="list-style-type: none">❖ Small scale pilot of social housing model in an urban area to build confidence in the community housing industry, while working towards housing renewal❖ A similar demonstration project outside of Darwin to fill in the gaps in the housing continuum that support regional workforce capacity❖ Proactively identify regional economic/project housing needs and highlight the role that the housing sector can play in the economic development of the Territory❖ Following assessment of the pilot programs, develop a rolling ‘investor prospectus’ for community housing providers, identifying public housing stock for transfer and land offers
PL3 Maintain a focus on improving liveability for existing and new Territory residents	<ul style="list-style-type: none">❖ Holistically plan large population centres to improve liveability and create a sense of place. For example, Darwin’s connectivity from waterfront to waterfront or Alice Springs architecture to reflect its significance as the in-land capital and creative culture❖ Adopt innovative planning solutions for climate adaption, heat mitigation, environmentally sustainable design, energy efficiency, cultural aesthetic and adaptive spaces❖ Develop and expand projects that will help attract and retain a skilled population



Appendix

APPENDIX 1

Reference list



Reference number	Page number	Reference
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