NT Regional Infrastructure Study
Economic Drivers (Output One)

Barkly Region
Economic Drivers Overview

Analysis of the drivers of economic growth in the Northern Territory:

OUTPUT ONE
Economic Drivers

OUTPUT TWO
Infrastructure Audit

OUTPUT THREE
Prioritisation of Regional Infrastructure Projects

OUTPUT FOUR
Regional Infrastructure Project Plan

OUTPUT FIVE
Regional Infrastructure Plan

OUTPUT SIX
Stakeholder Engagement

Northern Territory Regional Infrastructure Study
**Economic** Performance and Outlook – Demographic Characteristics

- Northern Territory has a small population subject to volatile changes.
- Changes are largely driven by changes in net interstate migration associated with the strength of employment opportunities.
- Population growth of 1.7 per cent per annum, slightly higher than the national average.
- Significant issues associated with population measurement due to interstate migration and data collection issues in remote communities.
- Compared with Australia as a whole, the Northern Territory has a higher proportion of residents who are under the age of 50.
- Northern Territory population has a significantly higher share of Indigenous residents (30 per cent) compared to Australia as a whole (3 per cent).
Over half the population are in Darwin and surrounding areas.

Regional distribution of the population outside of Darwin includes a large number of very small communities (e.g. population of less than 100 persons).
Economic Performance and Outlook – Demographic Characteristics

Above average growth surrounding Darwin
Some regions experiencing slow growth and some experiencing population decline.
Northern Territory accounted for 1.3 per cent of total Australian GDP in 2012-13. In 2012-13, the Northern Territory experienced the strongest growth of all Australian states and territories.
Economic Performance and Outlook – Economic Performance and Structure

Largest contributors to GSP:
- Mining
- Construction
- Public Administration and Safety

Industry gross value added

- Agriculture, forestry and fishing
- Mining
- Construction
- Public Administration and Safety
Economic Performance and Outlook – Economic Performance and Structure

Largest employing industries:
- Public Administration and Safety
- Education and Training
- Agriculture, Forestry and Fishing
- Health Care
Unemployment in the Northern Territory is generally lower than the national rate.
Large increase in employment growth in recent quarters.
**Economic Performance and Outlook – Labour Force**

**Regional unemployment rates**

<table>
<thead>
<tr>
<th>Location</th>
<th>Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Territory</td>
<td>4%</td>
</tr>
<tr>
<td>Unincorporated NT</td>
<td>2%</td>
</tr>
<tr>
<td>West Arnhem</td>
<td>14%</td>
</tr>
<tr>
<td>Wagait</td>
<td>12%</td>
</tr>
<tr>
<td>Victoria-Daly</td>
<td>9%</td>
</tr>
<tr>
<td>Tiwi Islands</td>
<td>4%</td>
</tr>
<tr>
<td>Roper Gulf</td>
<td>19%</td>
</tr>
<tr>
<td>Palmerston</td>
<td>15%</td>
</tr>
<tr>
<td>MacDonnell</td>
<td>6%</td>
</tr>
<tr>
<td>Litchfield</td>
<td>2%</td>
</tr>
<tr>
<td>Katherine</td>
<td>6%</td>
</tr>
<tr>
<td>East Arnhem</td>
<td>20%</td>
</tr>
<tr>
<td>Darwin</td>
<td>14%</td>
</tr>
<tr>
<td>Coomalie</td>
<td>8%</td>
</tr>
<tr>
<td>Central Desert</td>
<td>6%</td>
</tr>
<tr>
<td>Belyuen</td>
<td>3%</td>
</tr>
<tr>
<td>Barkly</td>
<td>11%</td>
</tr>
<tr>
<td>Alice Springs</td>
<td>3%</td>
</tr>
</tbody>
</table>

Significant regional variation in unemployment rates.
A significantly higher unemployment rate in Barkly.
A lower participation rate of 51.4% (NT rate of 54.3%)
Economic Performance and Outlook – Economic Performance and Structure

Industries experiencing employment growth included:
- Public administration and safety;
- Construction;
- Finance and insurance; and
- Manufacturing.

Growth in these industries was partially offset by declines in the following:
- Agriculture, forestry and fishing;
- Education and training;
- Information, media and telecommunications; and
- Wholesale trade.
Growth in the Northern Territory is expected to continue to remain stronger than the national average. This reflects continuation of higher than average growth in both population and labour force participation.
Employment growth is expected to continue to increase in the near term. Growth is underpinned by construction activity for major projects. The projected long run unemployment rate is lower than the predicted national average.
Industry Performance, Barriers and Opportunities
# Industry Performance, Barriers and Opportunities - Agriculture

## Output
- $347 million (1.8% of NT total)
- 30.0% growth from 2003-13
- Contributed 1.2% to total NT growth from 2003-13

## Employment
- 1,900 (1.5% of NT total)
- 3.3% growth from 2003-13
- Contributed 0.2% to total NT growth from 2003-13

## Infrastructure Barriers
- Road accessibility and quality
- Port facilities for horticulture exports
- Port facilities for livestock exports
- Port facilities for fisheries exports

## Industry Development Opportunities
- High value horticulture commodity export
- Year-round livestock export trade
Industry Performance, Barriers and Opportunities - Mining and Energy

<table>
<thead>
<tr>
<th>Output</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• $3.7 billion (19.5% of NT)</td>
<td>• 4,400 workers (3.5% of NT)</td>
</tr>
<tr>
<td>• 61.4% growth from 2003-13</td>
<td>• 97.5% growth from 2003-13</td>
</tr>
<tr>
<td>• Contributed to 21.1% to total NT growth from 2003-13</td>
<td>• Contributed to 8.1% to total NT growth from 2003-13</td>
</tr>
</tbody>
</table>

Infrastructure Barriers
• Tanami Road
• Port of Darwin capacity & other port/ barge loading issues
• Rail gauge
• Road and power infrastructure
• Pipeline infrastructure

Industry Development Opportunities
• Expansion of gold mining
• Increase in iron ore exports
• Development of an unconventional gas industry
**Industry Performance, Barriers and Opportunities - Tourism**

### Output
- $821 million (4.3% of NT total)

### Employment
- 8,000 (6.6% of NT total)

### Infrastructure Barriers
- Road access, quality, and consistency
- Ageing interpretive infrastructure
- Telecommunications coverage
- Broadband coverage
- Energy access

### Industry Development Opportunities
- Improved year-round access to existing prominent destinations
- Increased dispersal of visitors to new destinations
- Improved quality of experience
## Industry Performance, Barriers and Opportunities - Transport

<table>
<thead>
<tr>
<th>Output</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• $820 million (1.8% of NT total)</td>
<td>• 1,900 (1.5% of NT total)</td>
</tr>
<tr>
<td>• 23.9% growth from 2003-13</td>
<td>• 1.1% growth from 2003-13</td>
</tr>
<tr>
<td>• Contributed 2.4% to total NT growth from 2003-13</td>
<td>• Contributed 0.3% to total NT growth from 2003-13</td>
</tr>
</tbody>
</table>

### Infrastructure Barriers
- Road design shortcomings
- Year-round access
- Lack of intermodal transport facilities

### Industry Development Opportunities
- Increase in output and profitability for the road transport sector
Opportunities (for discussion)

Potential opportunity

Opportunity 1: Increase horticulture production and exports
Opportunity 2: Increase livestock production and exports
Opportunity 3: Expansion of mining operations and exports
Opportunity 4: Development of onshore gas industry
Opportunity 5: Increase tourism sector growth
Opportunity 6: Increase transport sector output and productivity

- What are the industries with the potential to drive the next wave of economic growth in Alice Springs?
  - Is infrastructure investment required to build on historical local strengths in tourism, resource extraction and agriculture?
- What are the infrastructure enablers that could assist in facilitating this growth?
  Specifically:
  - Transport;
  - Essential Services; and
  - Community Infrastructure.
NT Regional Infrastructure Study –
(Output two)
Transport Infrastructure Audit
Transport Infrastructure Audit

Objectives

Two overarching objectives of audit:

- Determine deficiencies in existing infrastructure – Baseline Audit
- Undertake a gaps analysis to identify upgrading needs – Gap Analysis
Scope of Works

Road
- National highways
- Rural arterial roads
- Secondary local roads

Rail
- All rail between Tarcoola and Darwin in the context of supply chains and passenger movements

Ports
- 14 Government Barge Landings
- Regional ports operated by independent commercial entities
  - Bing Bong
  - Gove (Nhulunbuy)
  - Groote Eylandt (Alyangula)
Aerodromes

- 70 NT Government maintained aerodromes
- Others considered due to mining/tourism impact
  - Jabiru
  - Yulara
  - Groote Eylandt
  - Nhulunbuy
  - Tennant Creek
  - McArthur River Mine
  - Katherine (Tindal)
Baseline Audit – Roads

Key findings:

• National Highways - high degree of compliance, sections (Alice Springs region) carriageway width not met

• Rural Arterial Roads – significant variance in road compliance across regions

• Secondary Local Roads – overall low compliance with the technical standards, compliance varies significantly between multi user routes and local access roads

• Maintenance gap is widening
## Deficiency Assessment

<table>
<thead>
<tr>
<th>Region</th>
<th>Functional Road Class</th>
<th>Total Road Length (km)</th>
<th>Proportion of Roads Meeting current Standard (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>C/W Width</td>
</tr>
<tr>
<td>Tennant Creek</td>
<td>National Highways</td>
<td>971</td>
<td>92%</td>
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<tr>
<td></td>
<td>Rural Arterials</td>
<td>486</td>
<td>33%</td>
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<tr>
<td></td>
<td>Secondary Locals</td>
<td>1625</td>
<td>91%</td>
</tr>
<tr>
<td></td>
<td>Local Roads(1)</td>
<td>85</td>
<td>100%</td>
</tr>
<tr>
<td>Total NT</td>
<td>National Highways</td>
<td>2687</td>
<td>91%</td>
</tr>
<tr>
<td></td>
<td>Rural Arterials</td>
<td>4003</td>
<td>78%</td>
</tr>
<tr>
<td></td>
<td>Secondary Locals</td>
<td>10109</td>
<td>76%</td>
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<tr>
<td></td>
<td>Local Roads</td>
<td>122</td>
<td>82%</td>
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</table>
Maintenance requirements for each road type

National Highways – R&M Budget Comparison with Whole of Life Costs Trend

<table>
<thead>
<tr>
<th>Year</th>
<th>Budget</th>
<th>Whole of Life Costs</th>
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</thead>
<tbody>
<tr>
<td>2010/11</td>
<td>17.54</td>
<td>28.85</td>
</tr>
<tr>
<td>2011/12</td>
<td>19.46</td>
<td>29.47</td>
</tr>
<tr>
<td>2012/13</td>
<td>18.35</td>
<td>31.34</td>
</tr>
<tr>
<td>2013/14</td>
<td>18.35</td>
<td>32.34</td>
</tr>
<tr>
<td>2014/15</td>
<td>15.12</td>
<td>33.12</td>
</tr>
</tbody>
</table>
Maintenance requirements for each road type

Territory Roads – R&M Budget Comparison with Whole of Life Costs Trend

<table>
<thead>
<tr>
<th>Year</th>
<th>Budget ($ million)</th>
<th>Whole of Life Costs ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/11</td>
<td>52.74</td>
<td>111.21</td>
</tr>
<tr>
<td>2011/12</td>
<td>62.23</td>
<td>113.61</td>
</tr>
<tr>
<td>2012/13</td>
<td>56.09</td>
<td>120.81</td>
</tr>
<tr>
<td>2013/14</td>
<td>56.09</td>
<td>124.66</td>
</tr>
<tr>
<td>2014/15</td>
<td>56.09</td>
<td>127.66</td>
</tr>
</tbody>
</table>
Intra-Regional Considerations

- Potential loop road connecting existing road network in Ti Tree and Plenty area, including a linkage between Plenty and Sandover Highways
- A link between Newhaven and Vaughan Springs Road
- A connection between Tennant Creek and Lajamanu
- A link between Numbulwar/Ngukurr and Central Arnhem Road
- A link from Nathan River Road to Bing Bong Port
- Keep River Crossing link from Ord River Stage 3 to Ord River Stage 2 in WA
Inter-Jurisdiction Considerations

- **National Highways** – ok, except flood prone areas
- **Rural Arterial Roads** – Buntine Highway, Tanami Road and Plenty Highway
- **Secondary Local Roads** – Outback Way connects Yulara/Lasseter Highway through to Giles/Wingellina in WA (Tjukaruru Road) and Plenty Highway
Gaps Analysis – Roads

Increases in road network use by volume over 5, 10, 20 and 30-year timeframes

Future traffic growth form inputs to prioritisation. Other factors:

- Network connectivity
- Maintaining all weather access
- Economic development criteria (mining, tourism, agriculture)
- Unlocking demand/productivity suppressed by poor accessibility
- Maintenance and construction cost factors
- Aspirational considerations
Baseline Audit – Rail

Key findings:

• Current data relating to infrastructure standards is not available other than to AustralAsia Railway Corporation in its monitoring and contractual role due to privatised rail operation.
• Access regulatory framework managed by Essential Services Commission of South Australia (ESCOSA)
• Currently 28 return train services weekly.
• Additional potential mining outputs of up to 5-7 mtpa over next 7 years will increase train path requirements on the network.
• Critical issues will be:
  • efficient scheduling of train services
  • line capacity through passing loops on the network
  • Darwin/Berrimah staging infrastructure (available track in yard areas)
  • Port access and unloading capacity.
Baseline Audit – Ports

Review of Barge Landings Against Minimum Standards

- 72% Adequate
- 14% Good
- 14% Poor
Baseline Audit – Aerodromes

Key findings:

• Initial indications based on level of service criteria are that over 40% of NT Government aerodromes will require minor to major upgrade in the next 10 years.
• Emphasis moving to upgrading larger aerodromes for Code 3 compliance for Code 3 aircraft on RPT services
• Increase in sealing of airstrips leading to increased maintenance funding shortfall for resealing and line marking
• Increased requirement for removal of trees /vegetation in the transition and provision of security fencing (camels etc)
Essential Services infrastructure
Essential Services – Scope of Works

Qualitative information used to describe capacity, reliability and design life:

• Power Infrastructure
  – Generation
  – Grid Connection and high/low voltage distribution

• Water Infrastructure
  – Water source
  – Water storage

• Sewerage Infrastructure
  – Sewage Pumping Stations
  – Wastewater Treatment Plants

• Telecommunications Services
  – Fixed and Mobile voice communication
  – Data broadband (ADSL/ADSL2+, WBDSL, Satellite broadband)
  – Specific government services (DRI, GWIP, GBIP, STAR Network)
Major findings Essential Services

► **The current infrastructure gap** across capacity, reliability and asset renewal represents the majority of essential service infrastructure needs for the next 30 years with up to 43% of sites currently requiring upgrades.

► Power infrastructure requirements driven by a **reliance on diesel fuel** (76% of locations) and a large number of small power stations (52 units <78MW).

► **Water infrastructure** represents the majority of required upgrades with 39% currently not having sufficient capacity, 43% currently not providing sufficient reliability and 33% in operation past their economic design life. By the 30 year interval all communities will have a water storage that requires replacement due to end of economic life.

► **Water resource capacity is constrained** at 36% of sites limiting the amount of available water for use and is of poor water quality at 30% of sites.

► **There is a need for an NT Telecommunication Strategy:** There is no legal obligations to serve any location. User preferences are wired solutions to improve reliability and latency.

► The agriculture and mining industries in regional areas self-provide their essential services and are not reliant on public service provider infrastructure.
Power Infrastructure Audit – Assets

Power Stations
• PWC Generation ► 8 Units – 72 MW
• PWC Remote operations ► 52 Units – 78 MW
• Private & Other ► 4 Units – 28 MW

76 % Diesel
19% Dual Fuel
<1% Solar
5% Gas

Average Remaining Life – 18 years

Grid and HV/LV Distribution
• PWC Generation ► 11 Locations – 16,000 people
• PWC Remote operations ► 53 Locations – 31,000 people
• Private & Other ► 2 Locations – 4,500 people

Average Remaining Life – 30 years
## Power Infrastructure Audit – Assets

### POWER STATIONS - PRODUCTION CAPACITY

<table>
<thead>
<tr>
<th>REGION</th>
<th>☑️</th>
<th>☐</th>
<th>☓</th>
<th>REGION TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASP</td>
<td>22</td>
<td>0</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>DRW</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>EAH</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>KTH</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>TCK</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>62</td>
<td>0</td>
<td>0</td>
<td>62</td>
</tr>
<tr>
<td>(%)</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Not applicable: Pine Creek (DRW-KTH System) - Unknown: 3 locations*

### Capacity
- All power stations have the enough capacity

### Redundancy
- All power stations except one have (N-1) redundancy (PWC)

### Fuel Capacity
- Average fuel capacity for diesel power stations 18 wks (6 to 58 wks)
Telecommunications Infrastructure Audit – Services

### Major Town – Major Remote Town
- Fixed Phone (Yes) – ADSL (Yes) – Mobile (Yes) – ISDN (Yes)
- **Remote Communities - Outstations**
- Fixed Phone (Yes) – ADSL (Very Few) – Mobile (Very Few) – ISDN (Very Few)

**Every user comes up with their own solution (VSAT, ADSL, Mobile…)**

<table>
<thead>
<tr>
<th>TELECOMMUNICATION - SERVICES</th>
<th>MOBILE</th>
<th>ADSL</th>
<th>PHONE</th>
<th>NTG</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASP</td>
<td>14</td>
<td>8</td>
<td>43</td>
<td>23</td>
</tr>
<tr>
<td>DRW</td>
<td>16</td>
<td>12</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>EAH</td>
<td>10</td>
<td>9</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>KTH</td>
<td>13</td>
<td>7</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>TCK</td>
<td>3</td>
<td>2</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>56</strong></td>
<td><strong>38</strong></td>
<td><strong>107</strong></td>
<td><strong>73</strong></td>
</tr>
</tbody>
</table>

(%) 39% 27% 75% 51%

Total Locations: ASP (68) - DRW (23) - EAH (15) - KTH (27) - TCK (10)

Northern Territory Regional Infrastructure Study
## Audit Results – Water Infrastructure

### SUMMARY RESULTS 2014

<table>
<thead>
<tr>
<th>WATER INFRASTRUCTURE</th>
<th>bronze</th>
<th>yellow</th>
<th>red</th>
<th>REGION TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE PUMPS CAPACITY</td>
<td>92%</td>
<td>7%</td>
<td>1%</td>
<td>100%</td>
</tr>
<tr>
<td>SOURCE PUMPS RELIABILITY</td>
<td>41%</td>
<td>16%</td>
<td>43%</td>
<td>100%</td>
</tr>
<tr>
<td>STORAGE CAPACITY</td>
<td>43%</td>
<td>18%</td>
<td>39%</td>
<td>100%</td>
</tr>
<tr>
<td>STORAGE RELIABILITY</td>
<td>49%</td>
<td>8%</td>
<td>43%</td>
<td>100%</td>
</tr>
<tr>
<td>STORAGE REMAINING LIFE</td>
<td>67%</td>
<td>0%</td>
<td>33%</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Capacity
- 39% of sites don’t have enough storage capacity

### Reliability
- 43% of sites don’t have reliable water source infrastructure (N-1) redundancy (PWC)

### Design Life
- 33% of sites have water storage that have reached the end of their design life
Audit Results – Sewerage Infrastructure

► The majority of Sewage Pumping Stations (SPS) are adequate both in terms of their capacity and condition.

► Nearly half of the SPSs in the East Arnhem region have capacity issues and are likely to require upgrade to reduce the risk of sewage overflows.

► There are a significant number of SPSs that have key elements more than 30 years old, especially in the Darwin and East Arnhem regions.

► 6% of the waste stabilisation ponds in regional NT present a high risk to public health and/or the environment and require upgrade.

► Over 40% of waste stabilisation ponds pose a moderate risk to public health or the environment and will likely require upgrade in the medium term. The majority of these sites are located in the Alice Springs region. The need for pond upgrades in arid regions may be delayed if effluent disposal is via evaporation or discharge to low risk areas.
# Audit Results – Sewerage Infrastructure

### Sewerage Pumping Station Audit Capacity by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>✓</th>
<th>✓✓</th>
<th>✓✓✓</th>
<th>Region Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASP</td>
<td>24</td>
<td>1</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>DRW</td>
<td>20</td>
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<td>25</td>
</tr>
<tr>
<td>EAH</td>
<td>11</td>
<td>1</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>KTH</td>
<td>10</td>
<td>1</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>TCK</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>CAPACITY TOTAL</td>
<td>67</td>
<td>4</td>
<td>20</td>
<td>91</td>
</tr>
<tr>
<td>% of TOTAL</td>
<td>74%</td>
<td>4%</td>
<td>22%</td>
<td></td>
</tr>
</tbody>
</table>

### Sewerage Pumping Station Audit Condition by Region

<table>
<thead>
<tr>
<th>Region</th>
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<th>✓✓</th>
<th>✓✓✓</th>
<th>Region Total</th>
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<td>TCK</td>
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<td>0</td>
<td>3</td>
</tr>
<tr>
<td>CONDITION TOTAL</td>
<td>61</td>
<td>36</td>
<td>0</td>
<td>97</td>
</tr>
<tr>
<td>% of TOTAL</td>
<td>63%</td>
<td>37%</td>
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### Wastewater Treatment Audit Capacity by Region

<table>
<thead>
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<th>✓✓</th>
<th>✓✓✓</th>
<th>Region Total</th>
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<td>ASP</td>
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<td>10</td>
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<td>CAPACITY TOTAL</td>
<td>32</td>
<td>27</td>
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</tr>
<tr>
<td>% of TOTAL</td>
<td>51%</td>
<td>43%</td>
<td>6%</td>
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### Wastewater Treatment Audit Condition by Region

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<tr>
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<th>✓✓✓</th>
<th>Region Total</th>
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<td>15</td>
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<td>18</td>
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<tr>
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<td>3</td>
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<tr>
<td>CONDITION TOTAL</td>
<td>40</td>
<td>20</td>
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<tr>
<td>% of TOTAL</td>
<td>63%</td>
<td>31%</td>
<td>6%</td>
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- **Asset Capacity**
  - Cap > Req Cap
  - Cap < 85% of Req Cap
  - 85% of Req Cap < Cap < Req Cap

- **Asset Capacity - WWTP**
  - Low Risk
  - High Risk
  - Moderate Risk

- **Asset Condition**
  - RL > 50% of Asset Life
  - RL < 25% of Asset Life
  - 25% < RL < 50% of Asset Life
NT Regional Infrastructure Study – (Output two)
Scope

1. Complete a baseline audit to identify current community infrastructure
2. Develop regional profiles of community infrastructure
3. Assessment of current community infrastructure need based on population size and service type
4. Develop standard unit capital maintenance and recurrent costs for community infrastructure types
1. Education
2. Health
3. Police
4. Housing
5. Vocational Training
6. Community Stores
7. Family infrastructure
8. Communities infrastructure

RIS Community Infrastructure

Sectors and Key Providers/Funders

- NTG
- Regional Councils
- Private Sector
- NGOs
- Australian Government
Community infrastructure encompasses the public, private and non-governmental organisation facilities which accommodate community services, programs and activities.
<table>
<thead>
<tr>
<th>Sector</th>
<th>% of Communities with Services</th>
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<tbody>
<tr>
<td>Stores</td>
<td>92%</td>
</tr>
<tr>
<td>Housing (Social)</td>
<td>92%</td>
</tr>
<tr>
<td>Health</td>
<td>91%</td>
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<tr>
<td>Education</td>
<td>87%</td>
</tr>
<tr>
<td>Families</td>
<td>67%</td>
</tr>
<tr>
<td>Communities</td>
<td>63%</td>
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<tr>
<td>Police</td>
<td>54%</td>
</tr>
<tr>
<td>Vocational Education</td>
<td>36%</td>
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</tbody>
</table>
1. Age of assets

2. Policy drivers informing asset investment

3. Role of NGOs and Regional Councils in service delivery
• 28 communities, 9222 estimated residential population
• Secondary Schools servicing Docker River, Imanpa and Yulara
• 13 police stations
• 10 vocational education facilities
• 27 health clinics
• 1104 social housing assets
• Long distances, small communities
• 3 Regional Service Delivery and/or Growth Towns (Yuendumu, Ntaria, Papunya) with significant investment
• Relatively low levels of overcrowding
<table>
<thead>
<tr>
<th>Community</th>
<th>Santa Teresa (647)</th>
<th>Papunya (485)</th>
<th>Ampilatwatja (424)</th>
<th>Areyonga (274)</th>
<th>Finke (188)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Learning</td>
<td>Child Care/Creche</td>
<td>Child Care/Creche</td>
<td>None</td>
<td>Child Care/Creche</td>
<td>Child Care/Creche</td>
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<tr>
<td>School Age Range</td>
<td>Combined P-10</td>
<td>Combined P-11</td>
<td>Combined P-12</td>
<td>Combined P-7</td>
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<tr>
<td>Vocational Education</td>
<td>Trade Training Centre</td>
<td>Regional/Remote Training Centre</td>
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<td>None</td>
<td>None</td>
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<tr>
<td>Police</td>
<td>Police Station - Themis</td>
<td>Police Complex</td>
<td>None</td>
<td>None</td>
<td>None</td>
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<tr>
<td>Health</td>
<td>Category 2</td>
<td>Category 2</td>
<td>Category 2</td>
<td>Category 2</td>
<td>Category 2</td>
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<tr>
<td>Store</td>
<td>Medium</td>
<td>Large</td>
<td>Large</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Social Housing</td>
<td>99</td>
<td>48</td>
<td>44</td>
<td>32</td>
<td>42</td>
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<tr>
<td>Families</td>
<td>Women's Centre</td>
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<td>Women's Centre</td>
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<tr>
<td>Communities</td>
<td>Art Centre</td>
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<td>Art Centre</td>
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<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>Second Store/Takeaway</td>
<td>-</td>
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</table>
Yuendumu police station
RIS Community Infrastructure

Yarralin police station
RIS Community Infrastructure

Existings vs. new housing
Haasts Bluff Child Care Centre

Ntaria Clinic

RIS Community Infrastructure
Economic Development in the Northern Territory

Transactions in the Regional Economy

**INJECTIONS**
- International and Inter-Regional Exports
- Local, Regional and International Investments

**LEAKAGES**
- Leakage of Business Spending
- Leakage of Consumer Spending
- Dividends
- Saving

**Preconditions that Government can Influence**
- Terrain
- Geography
- Accessible Water Resources
- Arable Land/Soil Quality
- Mineral Resources
- Climate

**Preconditions that Regions are Endowed with**

Skills
Leadership/Governance
Business Innovation

Infrastructure
Urban Form and Function
Connectivity
What are we trying to achieve?

INJECTIONS
• International and Inter-Regional Exports
• Local, Regional and International Investments

LEAKAGES
• Leakage of Business Spending
• Leakage of Consumer Spending
• Dividends
• Saving

Transactions in the Regional Economy

• How do we maximise injections into the economy?
• How do we minimise leakages from the economy?
• How do we maximise the number and value of transactions within our economy?
What are the preconditions that government can influence?

Preconditions that Government can Influence

- Infrastructure
- Urban Form and Function
- Connectivity
- Skills
- Leadership/Governance
- Business Innovation
**Capital Intensive Preconditions**

**Infrastructure**
1. What are the infrastructure constraints currently affecting industry productivity?
2. Which infrastructure investments would unlock the greatest growth in output?
3. How can government best enable infrastructure investment, through both policy and funding mechanisms?

**Urban Form and Function**
1. What are the urban infrastructure requirements that are inhibiting workforce functionality?
2. How do our communities compare to other regions as competitive residential destinations for all demographics of the workforce and community?

**Connectivity**
1. How can infrastructure connect high value industry sectors more efficiently to improve their productivity and output?
2. What are the infrastructure investments that will unlock the greatest economic benefit by bringing supply chains closer together?
3. What are the current deficiencies in our regional transport and communication networks that are limiting greater connectivity?
Human/ Labour Intensive Preconditions

**Skills**
1. How well do local education and training providers suit the skills mix required by industry?
2. What are the key workforce development issues challenging industry growth?

**Leadership/ Governance**
1. How are existing peak body and government structures and policies influencing industry development?
2. How do local, regional and national industry engagement and promotion activities support the development of local economic development opportunities?

**Business Innovation**
1. To what extent are there opportunities for local businesses to expand to service a greater share of high-value supply chains?
2. How do existing industry clusters support industry diversification into new value-adding offerings?
3. How is government supporting/ incentivising innovative activity in key growth sectors?
Natural Environment

Preconditions that Regions are Endowed with

- Terrain
- Geography
- Accessible Water Resources
- Arable Land/Soil Quality
- Mineral Resources
- Climate

- To what extent do terrain and geography influence the relative feasibility of the opportunity?
- To what extent do the natural resources in a region predispose it to differing high-value economic activities?
- To what extent do climactic conditions influence business investment risk/reward?