Northern Territory ICT Industry Strategic Plan to 2010
Establishing a vision for the ICT Industry is one of the cornerstones of the work that the Northern Territory Branch of the Australian Information Industry Association (AIIA) has been engaged in over the past few years. Developing growth amongst our young industry requires a plan, a plan that considers the complex nature of the economy within which the ICT Industry forms a part.

Among the issues, which require better understanding, are the drivers and barriers facing the local industry. These include business issues such as research & development, commercialisation, incentives for early stage investors, venture capital availability, access to appropriate skills, assessment of market and trade export opportunities, government procurement, partnering/clustering potential and general information on types of government export assistance and grants to support market access.

Working with the NT Government, as not only a major consumer of ICT goods and services, but a partner in the ICT industry, AIIA members have considered not only the unique challenges, but the unique opportunities those challenges provide. Though small in size, the ICT industry in the Northern Territory has a tremendous capacity to innovate, communicate and collaborate. It is through the use of these skills that the ICT Industry can develop the drive and dedication to see a plan through.

I am encouraged by the enthusiasm that has brought this plan to reality. Successive ICT Forums have at every stage progressed the ideas, challenged directions and established new ones. In a sense, this plan is the result of several years of extensive consultation and testing.

Nevertheless, unless a plan is established it will be hard to measure and realise its success. This plan represents the tangible output of a desire to achieve. It establishes the leadership direction, which will enable the eventual success of this industry.

Economic growth and opportunity are clear hallmarks of the Northern Territory business landscape. ICT forms a substantial part of that growth and opportunity, both as an enabler and a product in its own right.

If the enthusiasm for this plan is indicative of the NT ICT Industry’s desire for success, we are in good hands. I look forward to the adoption of this plan, and sharing in the successes of its implementation.

Finally, I congratulate those that have taken an active part in its creation. To have established this plan, is a milestone in of itself for which we should all be rightly proud.

Andrew Hodges
Chairman – Northern Territory
Australian Information Industry Association
Foreword by the Minister for Communications, Northern Territory Government

It’s an exciting time to do business in the Northern Territory.

The Territory’s economy has enjoyed healthy growth over the past few years, creating jobs and a positive outlook for the future.

In that time Information Communication Technology (ICT) businesses have emerged and developed into a young thriving industry capable of servicing the demands and challenges of the Territory.

The Northern Territory Government has worked closely with the ICT industry and utilised many of their services. We proudly stand in partnership with the ICT industry in the Territory today, and the development of this strategic plan for the industry demonstrates signs of promising things to come.

This strategic plan will establish a vision for the ICT industry over the next five years, and create a path forward to achieve their goals.

The focus on industry growth within the Northern Territory by increasing involvement through major projects such as oil, gas and defence will benefit Territorians as ICT businesses increase their skills and capabilities.

This strategic plan will create a strong platform for growth and development for ICT in the Territory, and I encourage industry members to embrace this opportunity.

The rewards of growth and development will mean local business can provide more services and expertise to their customers, which will inject money into the local economy and increase employment and training opportunities for Territorians in this exciting industry.

Growth of six to eight per cent annually within the Territory’s ICT industry is certainly ambitious, but with careful planning, strong leadership, industry support and enthusiasm I am sure it will be achieved.

The Northern Territory Government looks forward to continuing our work with the ICT industry and watching you fulfil your vision over the coming years.

Elliot McAdam
Minister for Communications
How this plan has been prepared
This document has resulted from a substantial effort by the NT ICT industry to agree goals and to develop strategies for their achievement over five years. The project was initiated at the December 2003 NT ICT Industry Forum, and involved extensive consultation, analysis, strategy development and a workshop held in November 2004. The following organisations have made significant contributions to the formulation and development of this document; Australian Information Industry Association (NT Branch), Australian Computer Society (NT Branch), the Department of Business, Economic and Regional Development, Charles Darwin University and the Department of Corporate & Information Services.
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1 EXECUTIVE SUMMARY

This Strategic Plan, prepared by the Northern Territory (NT) Information and Communications Technology (ICT) industry, establishes a vision and goals as agreed by the industry for the next five years and proposes the strategies required for their achievement.

The NT ICT industry

The industry is relatively small and maturing, predominantly centred in Darwin, and heavily focused on servicing the NT market.

The industry comprises approximately 200 businesses, dominated by the NT branch offices of a small number of national and multinational companies (NCs and MNCs) and medium size small to medium enterprises (SMEs). The remainder is made up of small SMEs. The industry includes hardware, software and services providers as well as telecommunications and internet service providers. A few SMEs are successfully marketing products and services outside the NT. The NT Government (NTG) constitutes the largest segment of the market.

Over the next five years, growth in the industry’s traditional market segments in the NT market is unlikely to exceed the predicted annual growth in the overall economy of 5.2%. Achievement of faster growth will require:

- ongoing maintenance of activities in current markets
- increased penetration of ICT opportunities in major development projects within the NT
- substantially increased activities in markets outside the NT, in other parts of Australia and overseas.

Vision for the next five years

A vision for the next five years has been agreed by the industry to:

- grow the industry in the range 6%-8% annually,

with supporting goals:

- improve capability of the local industry
- increase participation in supply of ICT products and services to major developments in the NT
- substantially increase revenues from outside the NT.

Strategies to achieve the vision

To achieve this vision, strategies are proposed that will:

- Support companies growing the industry
• Ensure availability of skilled resources
• Develop collaboration and clustering
• Ensure maximum share of opportunities in NT market
• Encourage creation and commercialisation of intellectual property (IP)
• Enhance telecommunications services throughout the NT.

A total of 13 actions to implement these strategies are outlined in Section 5 of this Plan.

Implementation

Implementation of the Plan will require significant commitment and a collaborative partnership of industry stakeholders, including the NTG, the industry itself and the education and training sector. A formal governance and management structure is proposed, including:

• a joint NTG/Industry board with governance responsibility and management oversight
• a Program Office with a full time Program Manager to initiate and manage approved strategies.

Regular monitoring of the outcomes of the Plan will be required as implementation progresses, so that strategies can be reviewed and modified if required.
WHERE TO NOW? THE NEXT TWO YEARS

This Northern Territory (NT) Information Communications Technology (ICT) Industry action plan is a summary of the NT ICT Industry Strategic Plan 2006. This document highlights the NT ICT industry’s priorities for the next two years.

The Priority Actions for the Next Two Years

2.1.1 Fully Funded Program Office

Industry and government agreed that an independent body was needed to drive and manage the initiatives of the NT ICT Industry Strategic Plan.

- The Australian Information Industry Association NT (AIIA NT) and Department of Corporate and Information Services (DCIS) have committed to matched dollar for dollar funding of the NT ICT Industry Program Office for two years.
- The independent Program Office will initiate and manage approved projects from the NT ICT Strategic Plan.
- The Project Office will report to the NT Industry Development Group (NT IDG).
- The NT IDG will provide overall governance, prioritise projects, confirm goals and objectives and key measurable outcomes will be agreed.

2.1.2 Creation & Commercialisation of Intellectual Property

New and commercially ready ICT products and services that exploit identified opportunities for NT and export markets will significantly boost NT ICT business revenues. The commercialising of NTG owned IP could extend solutions to NT business as well as provide competitive advantages in export markets.

- The NTG will provide industry with access to NTG IP for commercialisation.
- DCIS will create and publish the NTG IP register.
- The Program Office will assist the NT ICT industry to understand the potential value of IP and the steps required to successful commercialisation.
- Programs will include the AIIA Business Skills Program for emerging NT ICT companies.
- Key measurable outcomes will be agreed.
2.1.3 Development of Skilled ICT Resources

The strength of the ICT industry, and its potential for growth, is dependent upon the availability of skilled resources to fulfil the requirements of the NT market place. Development needs to be focused on areas of need especially in relation to major project requirements.

- ACS NT and AIIA NT to survey NT ICT industry and create skills register and gap analysis.
- The IDG to liaise closely with CDU via The Business Engagement Group to ensure collaboration of Charles Darwin University (CDU), Industry and NTG in the provision of skills development & training.
- The Program Office will disseminate information on funding opportunities to industry for training programs and will coordinate collaborative recruitment and employment programs.
- Key measurable outcomes will be agreed.

2.1.4 Maximising the NT Industry’s ICT Share of Major Developments in the NT

The local industry needs to ensure the maximum possible local ICT content in major NT developments and projects, including Defence.

- AIIA NT to promote active participation of NT ICT industry in AIDN NT.
- The Program Office in conjunction with Department of Business, Economic and Regional Development (DBERD) and Trade and Major Projects Division in the Department of the Chief Minister will provide the industry with early identification of major projects to allow promotion of NT ICT capability to prime contractors.
- The Program Office to develop a program for the NT industry to collaborate, cluster and engage with identified major project prime contractors and other industry bodies.
- Key measurable outcomes will be agreed.
2.1.5 Development of capability and “World’s Best Practice “ of our industry

The NT ICT industry’s goal is to be the benchmark for ICT capability and a leader in e-Business with wide community acceptance for its use.

- An SME development task force to be established, with DCIS, DBERD, and AIIA representation, to develop plans for support services for early stage NT ICT SMEs.
- The NTG to continue with its current requirements for industry development activities as part of NTG ICT outsourcing contracts.
- The Program Office to prepare an annual ICT industry promotional plan.
- The Program Office will identify interested industry members, convene forums and investigate opportunities and specific actions aimed at electronic delivery of government services.
- Key measurable outcomes will be agreed.

2.1.6 Export Growth

The goal of the NT ICT industry is to have a 30% growth in export revenues per annum, predominantly by NT SME’s.

- The industry will utilise Federal and NT government linkages into export markets.
- The NTG will encourage the industry to utilise NTG IP for commercialisation through seminars and briefings.
- Industry and government will foster an export-focused culture with early identification of projects that have possibilities for commercialisation.
- The industry will collaborate in its export activities and where possible present under a single banner and will focus on relevant market areas not just Asia.
- The industry needs to create marketable solutions for export, utilising the NT’s experience and capabilities in the delivery of rural and remote services.
- Key measurable outcomes will be agreed.
INTRODUCTION

This Strategic Plan (the Plan) has been prepared by the Northern Territory (NT) Information and Communications Technology (ICT) industry. It establishes an agreed vision and supporting goals for the industry for the next five years and sets out the strategies required to achieve them.

A vibrant ICT industry located in the NT is important to the economy because:

- ICT is a necessary input to all sectors of the NT economy
  ICT products and services represent a significant input to all sectors of the NT economy, so a locally-based industry is vital to ensure that NT businesses, government and community organisations have access to the most cost effective ICT inputs to meet their requirements.

- ICT is a valuable wealth creating sector in its own right
  ICT is amongst the fastest growing industries globally, and in many jurisdictions it has been accepted that appropriate participation in this industry is a strategic imperative for balanced economic development and employment.

This Strategic Plan provides a framework for coordinated future action to enhance the NT industry's capabilities and capitalise on its strengths.

The preparation of the Plan was initiated in December 2003 at the NT ICT Industry Forum, and subsequently involved extensive stakeholder consultation, analysis, strategy development and a workshop held in November, 2004. The Forum agreed objectives for the development of the industry, covering: industry growth; market development outside the NT; remote area solutions; skills, training and research and development; industry development resources, funding and investment; and Northern Territory Government (NTG) and industry relationships.

Consistent with these objectives, the Plan has been developed as a set of strategies to achieve a shared vision for the industry. It is a plan for the industry as a whole, with actions for implementation that will require commitment from all sectors of the industry in the NT.
4 NT ICT INDUSTRY IN CONTEXT

4.1 Australian ICT industry

Compared to most other countries, Australia has a reputation as having a relatively advanced ICT industry. The industry’s overall revenues of nearly $90 billion in 2002/03 rank it 11th in the world (and 3rd on the basis of share of GDP, at 8%), and recorded a growth of 44% over the 4 years to 2002/03\(^1\). While exports have grown substantially in recent years to reach about $3.3 billion, they were overshadowed by $19 billion in ICT imports\(^2\).

The Australian ICT industry is largely centred in Sydney and Melbourne, with 75% of businesses and 70% of employment located in either New South Wales or Victoria. However, significant activities are also established in other states and the ACT.

Of the total of 25,516 businesses comprising the national ICT industry, 94% (23,950) identified themselves as ICT Specialist companies, as defined by the Australian Bureau of Statistics (ABS)\(^3\). The following table outlines some of the structural components of the major sub-categories of ICT Specialist companies.

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of Businesses</th>
<th>All Employees</th>
<th>Total Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer consultancy services</td>
<td>18,524</td>
<td>77% 99,574</td>
<td>$15,935 m 20%</td>
</tr>
<tr>
<td>Computer wholesaling</td>
<td>1,831</td>
<td>8% 29,016</td>
<td>$28,463 m 36%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>956</td>
<td>4% 67,750</td>
<td>$31,796 m 40%</td>
</tr>
<tr>
<td>Other</td>
<td>2,639</td>
<td>11% 39,356</td>
<td>$3,700 m 5%</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>23,950</strong></td>
<td><strong>100% 235,696</strong></td>
<td><strong>$79,894 m 100%</strong></td>
</tr>
</tbody>
</table>

4.2 The NT economic environment

4.2.1 Population growth

Notwithstanding inconsistent trends, the NT population recorded a 1% increase overall during the last 4 years, as shown in the Table below.

\(^{1}\) “A Statistical Snapshot of Australia’s ICT Industry”, Australian Information Industry Association, October, 2004

\(^{2}\) “Developing Australia’s ICT Industries – Where to from here?”, Phil Singleton Research Pty, Ltd, 2004

\(^{3}\) ABS 8126.0 “Information and Communication Technology, Australia”, September 2004
Exhibit 2 - Northern Territory Population

<table>
<thead>
<tr>
<th>Period</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>June, 2001</td>
<td>197,768</td>
</tr>
<tr>
<td>June, 2002</td>
<td>198,665</td>
</tr>
<tr>
<td>June, 2003</td>
<td>198,400</td>
</tr>
<tr>
<td>June, 2004</td>
<td>199,900</td>
</tr>
</tbody>
</table>

However, the population is expected to increase at a rate of only about 0.9% pa over the next 5 years.

4.2.2 NT economic and market characteristics

Economic growth in the Territory tends to be volatile from year to year, as a result of its size and dependence on resource-based projects. The major sectors of the NT economy are mining and energy (20% of Gross State Product or GSP), tourism (12% of GSP), construction (7% of GSP) and retail and wholesale trade (6% of GSP).

Forecast economic growth for the Territory over the next five years is generally positive, with Access Economics estimating that Gross State Product will grow by 5.2% pa over the next 5 years to 2008/09.

This growth will be driven by a number of committed projects in the oil and gas sector, as well as several major projects awaiting confirmation. Of 73 resources projects worth $24 billion recently committed across Australia, some 20% are in the NT.

Other indicators of future growth trends in the NT are shown in the Exhibit below.

Exhibit 3 - NT Economic Growth Indicators

<table>
<thead>
<tr>
<th>Sector</th>
<th>Growth Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining and Energy</td>
<td>The short term outlook for the mining and energy sector is negative, awaiting the Joint Petroleum Development Area in the Timor Sea to come on-stream which will provide a major turnaround in this sector.</td>
</tr>
<tr>
<td>Tourism</td>
<td>Expected to grow an average over 5% pa for the next few years.</td>
</tr>
<tr>
<td>Construction</td>
<td>Expected to grow at 15% pa in the next year of two, largely as a consequence of the Wickham Point liquefied natural gas plant</td>
</tr>
<tr>
<td>Retail and Wholesale Trade</td>
<td>Territory real retail turnover growth of 4.2% is forecast for 2004-05</td>
</tr>
</tbody>
</table>

---

4 ABS Cat 3101.0 Australian Demographic Statistics  
7 Budget papers, 2004-05, NT Economy Overview.
Such a growth scenario provides a foundation upon which the NT ICT industry should be able to make substantial progress.

One of the key characteristics of the NT market is its isolation from the main population centres. This presents a number of challenges in terms of transportation of goods, accessing goods and services and communications. However, while these barriers are steadily reducing with improved transport infrastructure and telecommunications services, close proximity or rapid response times are still required by a range of services to meet the market demands. These service demands represent potential opportunities for local providers. Examples of these opportunities including equipment and infrastructure maintenance, service and support.

It is also noted that the business use of ICT based services is below the national average in most areas, as shown in the Exhibit below.

![Exhibit 4 Business Use of Selected ICT Services](chart)

The projected growth rate for the NT economy, which while it is favourable from a national perspective, is unlikely to be sufficient to sustain the growths rates desired for the local ICT industry. The comparatively small size of the NT and the difficulties faced by the incumbents to remain viable, suggest that in order to establish the critical mass needed for a sustainable market, an outward, export focus is appropriate. The alternative is an unstable industry that expands and contracts with the ‘boom-bust’ cycle typical of the NT economy.

---

8 Source: “Northern Territory ICT Industry Snapshot 2004”, Steven O’Donnell, senior Economist, Economics Division, DBIRD. Based on analysis of ABS 8129.0 data.
4.3 NT ICT industry characteristics

4.3.1 Industry scope

This section presents a brief overview of the key characteristics of the NT ICT industry, which is a small proportion of the Australian industry, with employment estimated at 2,500, representing about 1% of the national ICT employment, but less than 1% of the total number of businesses.

For the purposes of this Plan, the NT ICT Industry comprises the following sectors:

- software and applications development
- applications service providers
- internet service providers
- internet service providers
- hardware manufacturing and assembly
- systems integration
- facilities management
- consultancy
- telecommunications service providers and carriers.

The ICT pure retail sector is not included within this definition of the ICT industry.

4.3.2 Industry structure

The industry is relatively small and maturing, predominantly centred in Darwin and heavily focused on servicing the NT market. It comprises approximately 200 businesses, dominated by a small number of national and multinational companies and 3 – 4 large (greater than 50 employees) SMEs. The remainder is made up of small SMEs and micro businesses.

Few organisations are involved in IP development and commercialisation, with little focus on markets in other states or overseas. Growth and development is presently closely aligned to growth in the NT economy and domestic demand.

Government accounts for over 30% of the overall market in the NT, and probably over half of the business market.

Organisations comprising the industry include the following:

- Multinational Corporations (MNCs) with NT presence
- National Companies (NCs) with NT presence
- A small number of large size SMEs (over 50 employees)
- Medium SMEs of between 10 and 50 employees
- Small SMEs/micro businesses of less than 10 employees

---

9 Estimate provided by DCIS, December, 2004
• Approximately 18 Internet service providers (ISPs) of varying sizes, including national and multi-national companies.

A representation of the ICT service and product providers is presented in the Exhibit below.

Exhibit 5 Structure of the NT ICT industry

The above is a representation of the number of participant organisations in each segment, rather than revenue or market share.

As a small but developing economy, NT requires a broad range of services and skills which can not be provided by smaller, local companies alone. The NT ICT industry includes a number of highly capable national and multinational ICT companies that have invested in the local market, employed local staff and contributed to the local economy.

It is critical therefore to recognise that each sector has a role in the continued growth and development of the NT ICT industry and as such the ICT Strategy must address the needs of each sector.

Local ICT companies comprise a broad range of SMEs, who have generally developed to address the needs of the evolving local market. These companies are also significant employers within the Territory.

Currently available figures indicate that the employment within the ICT sector in NT is split approximately 40/60% between the MNC/national corporations (about 10
organisations) and approximately 200 local SME organisations\(^\text{10}\). On the other hand, revenues are split approximately 65/35\%, for MNC/NCs and SMEs respectively.

The broad range of the local ICT industry is reflected to the following mapping of those ICT service and product providers interviewed in terms of their size (comprising consideration of the number of employees and revenues) and the organisational capability (a measure of the organisations technical, marketing and management capability).

Exhibit 6  NT ICT industry mapping

From this mapping, the relative position of the MNC/NCs (top right quadrant), the larger SMEs (centre) and the smaller SMEs (bottom left quadrant) are evident.

In order to meet the demands of the local market and achieve ICT growth, the industry participants will need to move from the lower left hand quadrant towards the right and upper-right.

\(^{10}\) Based on analysis of ABS 6291.0.55.001 data undertaken by DBIRB in “Northern Territory ICT Industry Snapshot 2004”, Steven O'Donnell, senior Economist, Economics Division, DBIRD and data provided by DCiS.
4.3.3 Industry size

The size of the NT ICT industry, by market segment, is estimated in the following Exhibit.

Exhibit 7 Revenues by NT ICT market segment (estimated 2005)\(^1\)

<table>
<thead>
<tr>
<th>Market segment</th>
<th>Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTG</td>
<td>$160 m</td>
</tr>
<tr>
<td>NT commercial</td>
<td>$205 m</td>
</tr>
<tr>
<td>NT major developments</td>
<td>$ 20 m</td>
</tr>
<tr>
<td>Markets outside the NT</td>
<td>$ 20 m</td>
</tr>
<tr>
<td>Residential</td>
<td>$130 m</td>
</tr>
<tr>
<td>Total company revenues</td>
<td>$535 m</td>
</tr>
<tr>
<td>Less subcontract within the industry</td>
<td>($ 35 m)</td>
</tr>
<tr>
<td><strong>Total market</strong></td>
<td><strong>$500 m</strong></td>
</tr>
</tbody>
</table>

Note that the “Subcontract” component, comprising subcontracting mainly by SMEs to MNCs and NCs, has been subtracted from the aggregate industry revenues to compensate for the double counting of this activity that would otherwise occur.

The distribution of these estimated 2005 revenues by industry group is presented in the Exhibit below.

Exhibit 8 Revenues by NT ICT industry group (estimated 2005)

<table>
<thead>
<tr>
<th>Industry Group</th>
<th>Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMEs</td>
<td>$167 m</td>
</tr>
<tr>
<td>Telstra/ Optus</td>
<td>$228 m</td>
</tr>
<tr>
<td>Other NC/MNCs</td>
<td>$140 m</td>
</tr>
<tr>
<td>Less sub-contract by SMEs</td>
<td>($ 35 m)</td>
</tr>
<tr>
<td><strong>Total market</strong></td>
<td><strong>$500 m</strong></td>
</tr>
</tbody>
</table>

\(^1\) These estimates are based on data provided by DBERD and DCIS and have been extrapolated by projected growth rates.
4.4 Prospects for growth

As already highlighted, the predominant focus of development of the NT ICT industry has hitherto been to service the local market, which is unlikely to show growth significantly greater than that of the NT economy. If the industry is to achieve more substantial growth than will result from evolution of its current activities in the NT, substantial commitment from all stakeholders will be needed. A partnership involving the industry, the NTG and others will be required to work to develop the industry though:

- sustaining and where possible increasing its supply to the local market, though enhancing capability and competitiveness to deliver ICT goods and services in the NT;
- replacing goods and services traditionally supplied into the local market from outside the NT, with the major focus being on opportunities to supply ICT services to major development projects in the NT;
- developing markets in other regions of Australia and internationally, particularly for niche products and services;
- some small to medium SMEs growing into large SMEs or even NCs, achieving substantial turnover outside NT.

In looking specifically at the potential areas of growth, it is useful to consider the NT ICT industry as currently comprising two broad sectors:

- Infrastructure/Facilities Management Sector comprising approximately 80% of the total industry (turnover and employment) and is almost entirely focussed on the local NT market.
- Software/Applications Development and Management Sector While this sector is smaller, its activities are typically based to a greater extent on IP, from which the majority of opportunities outside the NT can be expected to be developed.

Growth by SMEs in NT major developments would therefore be led predominantly by the infrastructure/facilities sector. This would necessitate collaboration with MNCs as much of the work could be expected to be subcontracted rather than primed by local SMEs. On the other hand, growth outside the NT would be led predominantly by SMEs in the software/applications sector. This could be assisted by collaboration with business and government stakeholders who could help facilitate market access.

In order to deal with the imperative for growth, the following issues will need to be addressed:

- The NT ICT industry faces the need to maintain and increase its capabilities and provide greater justification for specialised resources.
- Many local firms in the industry are still maturing, and will benefit from collaboration with others to attain critical mass for competitive value propositions. They will need continued support if they are to develop their capabilities and achieve sustainable business models.
- Given the size of the industry, maximum advantage needs to be taken of all reasonable opportunities for growth, whatever their source, and different companies
will address different opportunities according to their products, markets and competitive position.

- Penetration of markets outside the NT requires competitive advantage over local competitors – this usually (but not exclusively) derives from products or services based on intellectual property (IP) created or licensed by the exporter.

- The industry currently undertakes limited IP creation and commercialisation, so an increased focus on such activities will improve its basis for competitive advantage both locally and in markets outside the NT.

- Several embryonic initiatives already underway, such as in remote area solutions and Desert Knowledge, have the potential to provide IP and competitive advantage in markets outside the NT. It is too early to assess the extent that resulting commercialised solutions will generate significant revenues.
5 A VISION FOR THE NT ICT INDUSTRY

Consistent with the objectives for the Plan outlined in Section 2, and to address the industry issues and economic and market environment highlighted in Section 3, the NT ICT industry has adopted an agreed vision for the five year Plan:

Vision

Grow the industry in the range 6%-8% annually
... by taking greater advantage of opportunities in addressable market segments.

Supporting goals

- **Improve capability of the local industry**
  ... in order to maintain its success in existing markets, and provide a sound platform for growth, by strengthening essential inputs such as skilled resources, affordable telecommunications and best practice within the industry.

- **Increase participation in supply of ICT products and services to major developments in the NT**
  ... by targeting large organisations expanding in NT and their ICT supply chain for collaboration with local industry.

- **Substantially increase revenues from outside the NT**
  ...by targeting activities to penetrate markets in other Australian states or overseas.

To achieve this vision, industry stakeholders have agreed a scenario for growth as a framework for the strategies presented in Section 5. A number of scenarios incorporating a range of assumptions regarding the sources of potential growth in revenues in each market segment were considered, from which the following agreed assumptions were developed:

- NT government and commercial segments will show modest growth, at an average of 4% annually, and the shares of revenues going to the various industry sectors will be maintained;

- NT residential markets will show modest growth at an average of 6% annually;

- major developments in the NT (many of which in resources, minerals processing and defence are already committed) will grow at an average rate approaching 30% annually in response to market demand, and local SMEs and MNCs/NCs will share equally in increased penetration of these markets;

- revenues from outside the NT will grow by an average of up to 30% annually, with the major part of this growth achieved by the SME sector;

- resulting overall industry growth will be in the range 6 - 8% annually, leading to revenues growing by up to 50% over five years.

Implications of this scenario for the industry are:

- revenues from outside the NT will increase up to 12% of overall industry revenues, or about 15% of business (non-residential) revenues

- SMEs and MNCs/NCs will need to make a major collaborative commitment to achieve penetration in development projects
in addition, SMEs will need to make a major commitment to activities in markets outside the NT over the five years, as well as participating in major developments.
6 STRATEGIES TO ACHIEVE THE VISION

To achieve the vision outlined in Section 4, strategies are proposed covering the following areas:

- Support companies growing the industry
- Ensure availability of skilled resources
- Develop collaboration and clustering
- Ensure maximum share of opportunities in NT market
- Encourage creation and commercialisation of IP
- Enhance telecommunications services throughout the NT

These strategies support the vision goals as outlined in Exhibit 9.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Vision goals</th>
<th>Improve capability of NT industry</th>
<th>Increase participation in NT major developments</th>
<th>Substantially increase revenues from outside the NT</th>
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<tbody>
<tr>
<td>Support companies growing the industry</td>
<td>✓ ✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Ensure availability of skilled resources</td>
<td>✓ ✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Develop collaboration and clustering</td>
<td>✓ ✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Ensure maximum share of opportunities in NT market</td>
<td>✓ ✓</td>
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<td>✓</td>
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<tr>
<td>Encourage creation and commercialisation of IP</td>
<td>✓</td>
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<tr>
<td>Enhance telecommunications services throughout the NT</td>
<td>✓ ✓</td>
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✓ = impact  ✓ ✓ = major impact

The strategies are described in the following sections. Under each strategy, specific actions to initiate their implementation have been suggested, with responsibilities attached. It is assumed that a Program Office, with a full time Program Manager, will be established to manage implementation of the Plan, as described in Section 6.
6.1 Provide support for the local industry

6.1.1 Foster SME development

As the NT based SME sector of the industry consists mainly of relatively immature companies, a supportive environment is required to maximise their success rate in growing sustainable businesses. This strategy should be supported by activities described below.

A range of services should be provided for early stage ICT SMEs, including business planning, mentoring, networking, marketing (both locally and externally to NT), administrative and business support, etc. As establishment of an incubator in the NT faces considerable barriers, relationships with ICT incubators in other states should be explored, whereby services could be offered on a “virtual” basis, although it may be appropriate for some administrative services to be sourced locally. Funding of support services could be provided on a shared cost basis direct to SMEs who would pay commercial rates for the services. In addition to any funding that can be made available from NT ICT industry development sources, consideration should be given to an NT angel investor network and to relationships with interstate venture capital funds as sources for SME investment.

Also important will be facilitation of access to programs of Commonwealth and Territory agencies, including Department of Business Industry and Resource Development (DBERD), AusIndustry and Austrade programs, by dissemination of information and assistance in preparing applications.

Through company profiles, trade missions, targeted ministerial visits and other approaches, the NT ICT industry is already coordinating its promotional activities for greater impact. Some promotional activities are undertaken through organisations such as Austrade and AusIndustry. An example is the Australian Technology Showcase (ATS), which comprises both web and physical promotional programs to showcase a company’s technology to prospective business partners, potential customers, licensees, investors and joint venturers around the world. In addition, an ICT component of NT capability promotions targeted at specific industry sectors should be considered, for example DBERD activities in major development projects.

The ability to list reference sites is critical for promotion of ICT solutions, particularly by SMEs. As the largest ICT user in the NT, it is suggested that a program that encourages the NTG to trial and demonstrate ICT products, and be available as a reference site, would be valuable.
### Actions

1. An SME development task force to be established, with DCIS, DBERD, DCM and AIIA representation, to develop plans for support services for early stage ICT SMEs including:
   - preparation of an inventory of Commonwealth and Territory programs relevant to all aspects of ICT SME support, for example R&D, IP commercialisation, business development and development of markets outside the NT
   - consideration of relationships with interstate ICT incubators and venture capital funds for provision of a range of SME support services
   - encouragement of an NT based angel investor network
   - DCIS, DCM and DBERD consideration of availability of funding for SME support, on the basis of any funding for approved activities being matched by the recipient
   - a forum of industry members interested in participating in coordinated promotional programs to be arranged by the Program Office, to prepare an annual ICT industry promotional plan
   - feasibility and implementation of an NTG reference site program.

### 6.1.2 Use NTG policies to encourage ICT companies to develop activities in the NT

National and multinational companies’ motivation to base activities in the NT has so far been predicated largely on doing what is needed to secure and service their share of the NT ICT market. NTG procurement policies are a major factor in the delivery of this result. To attract investment, and encourage this sector to consider the NT as a location for development of products and services to address other markets will require additional incentives, and could be linked to initiatives such as the Desert Knowledge CRC. Examples of such activities attracted to locations other than Sydney and Melbourne include the broadband trials by Telstra in Launceston and Motorola’s software development centre in Adelaide.

Since inception of the major outsourcing contracts, the NTG has had a policy that requires in-scope and out-of-scope industry development (ID) activities as part of these tenders. There is broad acceptance that this policy should be continued, as in-scope ID has been successful in delivering increased activity as well as stronger capability in the NT by national and multinational organisations and local SMEs. Out-of-scope activities have mostly been longer term investments in the industry, and while industry benefits will continue to flow in the future, there is a view that better coordination is needed within an overall ID framework as proposed in this Plan.
2. **DCIS to collaborate with DBERD and DCM to coordinate policies to encourage ICT companies to develop activities in the NT (in conjunction with consideration of SME support funding under Action 1), including:**

   - the feasibility of incentives (including generic investment attraction programs) to attract ICT SMEs, national and multinational companies to establish export related activities in the NT
   - continuation of current requirements for industry development activities as part of NTG ICT outsourcing contracts, subject to industry best practices being attained, requiring:
     - contract revenue to be generated by NT-based operations (this could include NT operations of nationals/multinationals as well as local SMEs);
     - contract revenue to be subcontracted to local SMEs
   - review by DCIS how out-of-scope initiatives can be better coordinated and managed under this Plan, primarily focusing on NT businesses developing and commercialising IP, and taking account of other industry development programs from Commonwealth and Territory sources

### 6.2 Ensure availability of skilled resources

The strength of the ICT industry, and its potential for growth, is dependent upon the availability of the skilled resources required. The strategies recommended in this plan can only succeed through sufficient numbers of qualified people with the appropriate education, training, skills and experience. This requires an adequate supply of relevant education and training courses, and take up of places by the market.

There is a widespread view that limited availability of skilled staff is a constraint to growth of the NT ICT industry. Nearly every organisation consulted stated that they believed a major factor affecting growth in their business and the ICT industry generally, was a shortage of skilled resources. This appears to manifest itself in a number of ways such as:

- A lack of trained staff
- Staff generally inexperienced in working in the ICT industry for example a shortage of technically oriented staff for general business administration and planning
- A shortage of staff with specific technical skills
- Educated or trained staff from within NT lack industry experience
- Retaining highly skilled staff who are often lured away to greater opportunities and higher paid positions elsewhere.

Notwithstanding, it should be acknowledged that no evidence has been seen that the shortage is significantly impacting the NT economy. It does not appear, for example, that remuneration rates for ICT staff in NT have risen in response to these shortages. However, this does not invalidate the generally accepted position that there is a shortage of appropriately skilled ICT staff in many categories.
Closely associated with these factors, frequent feedback from interviews was that there are an insufficient range and number of ICT education and training places available in the NT, and that existing courses were not always appropriate to particular sectors of the NT ICT industry. Some organisations attempt to remedy this situation by running in-house training courses or by sending staff interstate for training.

There is also a view that the investment in education and training of staff in ICT by both NTG, companies and other non-government organisations has reduced in recent years.

To address the above the following strategies are proposed:

**6.2.1 Improve ICT education and training**

The supply of appropriate education and training programs should be improved by: increasing the supply of education and training courses; matching programs to industry needs; and working with Charles Darwin University (CDU) and other education and training suppliers to meet ICT industry requirements. The demand for, and enrolment in education and training courses by ICT industry members and individuals can be encouraged by promotion of funding opportunities for ICT courses, such as the AusIndustry Graduate Program and the ACS Foundation scheme, and supporting take up of education and training courses through activities such as promotion of basic computer skills training, and inclusion of education and training requirements in NTG tenders.

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<tr>
<td>3. CDU to reconvene the Business Engagement Group, with DCIS and DBERD included as members, to</td>
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<tr>
<td>• survey education and training requirements of the industry, and on the basis of the results liaise between industry and education/training suppliers to ensure reasonable requirements are met as far as possible</td>
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<tr>
<td>• disseminate information on education and training funding opportunities to the industry and coordinate appropriate collaboration arrangements.</td>
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**6.2.2 Establish ICT industry and NTG collaborative recruitment programs**

Interested organisations from the industry and NTG should collaborate on recruitment and retention processes. This would be beneficial particularly where an organisation cannot justify the cost of employing a full time person, or where even just the search and recruitment costs could be shared. Further development of current programs might include advertising a range of ICT skill sets where job vacancies exist in NT across industry and government. Programs should be developed promoting the advantages of moving to NT, for example climate, lifestyle, tourist destinations, low cost living compared to southern cities, pollution free environment, closeness to S. E. Asia, etc. Incentives could be offered such as subsidised accommodation, return airfares (for a minimum period contract), relocation expenses etc. Collaboration by interested organisations should occur in any one or all of activities such as advertising, recruitment process, interviewing and selection, negotiation of employment conditions, and appointment.
### Actions

4. DCIS to review with the VC the option to disseminate IT graduate roster to SMEs and establish program guidelines. The Program Office to liaise and coordinate with industry members interested in collaborative recruitment and employment programs.

## 6.3 Develop collaboration and clustering opportunities

The economic and geographic environment of the NT contributes to a number of characteristics highlighted in Section 3 that are drivers for collaboration in the NT ICT industry. Collaboration can add value in addressing NT requirements, and in expanding into interstate and overseas markets, by:

- involving a combination of industry, tertiary education, and research initiatives
- encouraging NTG to use its leverage to facilitate collaborative arrangements
- developing links with interstate ICT organisations
- enhancing strengths and competitive advantage
- facilitating investment in research as a basis for competitive advantage
- encouraging development of more complete solutions for interstate and international markets.

Within this area there are two priority strategies essential to development of collaboration and clustering opportunities within the NT ICT industry:

- develop general collaboration opportunities
- develop ICT clusters around specific themes.

### 6.3.1 Develop general collaboration opportunities

To deliver this added value, the Plan needs to offer a platform for general collaboration within the industry. Consultations with industry stakeholders highlighted specific examples of opportunities for collaboration (some of which are relevant to strategies described elsewhere in this Plan):

- dedicated resources responsible for marketing and business development in NT, interstate and overseas markets
- developing and commercialising IP.

The ability of a number of SMEs to exploit opportunities both within and outside NT is inhibited because they cannot justify employment of dedicated marketing and business development staff. At the same time there is interest from companies to share such resources to assist in developing business growth plans for NT, interstate and/or overseas markets. While some NT ICT SMEs have the desire and product potential for overseas market development, they are limited by a shortage of marketing resources,
skills and experience to carry this out. Austrade expressed enthusiastic interest in collaborating with appropriate NT companies to support sharing of resources for an export program.

Local SMEs may need to consider alliances with larger organisations to exploit opportunities to develop and commercialise IP. This may cover commercialisation and marketing interstate or overseas, and possibly leading to further collaboration to exploit other IP opportunities. However, the Plan does not intend to limit the scope of such collaboration where there are potential benefits. Therefore a range of regular networking events needs to be offered to encourage general collaboration between NT SMEs and national and multinational members of the industry to develop strategic alliances that combine the required skills and experience to address specific opportunities. The Program Office would liaise with firms interested in collaboration, to specify requirements and foster clustering of businesses around key growth opportunities.

**Actions**

5. The Program Office to establish forums to provide networking opportunities between interested NT ICT industry stakeholders to facilitate collaboration and alliances. The Program Office will liaise with ICT industry members and other stakeholders (such as the Darwin office of Austrade) in specific areas such as the following:

- marketing and business development collaboration, in NT, interstate and overseas markets
- IP development and commercialisation

6.3.2 Develop ICT clusters around specific themes

A number of options for collaboration or clusters to be pursued around specific themes have been identified below. The objective is to develop solutions that may not only meet needs in the NT market, but which potentially have applications in export markets in other parts of Australia or overseas. For each option, a review of opportunities and planned specific actions needs to be developed. The aim is to create competitive advantage to the NT industry based on a range of factors, including unique IP, comprehensiveness and quality of the solution in meeting a niche need, associated management processes, timing, etc. Competitive advantage does not always require highly sophisticated technology.

Clusters could include R&D organisations (including tertiary education), the ICT industry, major users and the general community, depending on the nature of the opportunity to be pursued. It is envisaged that in some areas, involvement of organisations in other states and possibly overseas may be desirable.

The strategy needs to recognise that not all cluster themes will be successful. While a cluster program should ensure that candidate clusters have every chance of success, a review process needs to be in place so that resources are not wasted supporting clusters after reasonable efforts suggest achievement of meaningful outcomes is unlikely. Equally, new themes for clusters will be suggested from time to time, so there
needs to be a process by which new cluster proposals are considered and implemented. It is suggested that DCIS could provide administrative support for the initial establishment of clusters. Efficient models for support and management of such collaborations have been implemented in organisations such as Standards Australia and the Australian Communications Industry Forum.

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<tr>
<td>6. DCIS and DBERD to develop with AIIA standardised procedures for the establishment and support of an ICT clusters program, and provide administrative support for clusters for an initial development period.</td>
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</tbody>
</table>

Initial themes for clustering include those suggested below.

**ICT delivery and support in rural and remote areas**

The challenge of providing cost effective IT and telecommunications solutions to rural and remote communities is an area of competitive advantage for the NT ICT industry, with potential in other parts of Australia and overseas countries with similar requirements.

Over the medium term, improving the level of ICT competence of Territorians will facilitate deployment of ICT solutions, allowing basic problems such as virus infestations, minor configuration problems, etc to be solved locally. Access to support services, such as a user help desk facility, will also improve the level of ICT effectiveness in both businesses and households. The provision of ICT training for school students will also serve to improve ICT capability of future generations of Territorians.

Solutions to these issues of ICT delivery and support in rural and remote areas in the NT can be developed for markets elsewhere in Australia and overseas. Examples of marketable products and applications are:

- design and customisation of hardware for reliability in harsh environmental and operational conditions (for example solar power supply modules, equipment housing, etc);

- system design for the less sophisticated user base in remote areas (for example software systems required for the health sector to ensure that robust, simple terminal devices, with intuitive user interfaces can be used at remote health outposts);

- logistics and business models for implementation and ongoing support activities (for example establishing efficient practices for gaining access to remote locations, resource pooling, technology support, training, regular visit schedules, alternative delivery and shipping facilities, installation practices, etc.).

In some cases it will be appropriate for solutions to be developed in collaboration with other Australian jurisdictions in order to achieve meaningful critical mass. For example, NSW has indicated interest in collaboration on a business model for ICT connectivity into remote areas.
**Actions**

7. The Program Office to convene a forum of NT industry stakeholders interested in remote area IT and telecommunications solutions delivery and support, including CDU, DCIS and other NTG agencies, with the objective of investigating opportunities and planning ongoing specific actions, including:
   - building on the work of the NTG and industry with interactive distance learning projects;
   - initiation of a dialogue with organisations in NSW and other states;
   - initiation of a dialogue between interested NTG agencies (particularly DCIS, Health, Education and Police) and industry stakeholders regarding ICT support in remote areas.

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**Electronic delivery of government services**

Because of the great productivity benefits from electronic delivery of government services there has been a significant incentive for agencies to develop services within the NTG’s Connect:NT and Transact:NT portals. Such developments provide an opportunity for the local NT industry to develop solutions that not only deliver services, but are able to do so effectively and reliably in a range of telecommunications environments. For most governments, a major driver of ICT demand, particularly in remote areas, are the requirements of the health, education and law enforcement sectors. Innovative solutions to these requirements would provide opportunities for the industry in other markets in Australia and overseas. For example, the NT Department of Health and Community Services (DHCS), in conjunction with the Commonwealth Department of Health and Ageing (DoHA) is currently planning to extend the NT HealthConnect program. This involves the interconnection of health records systems in hospitals, health services and GP practices across the NT. Consideration is being given to procurement of the software and hardware components of this system under a common tendering program in 2005, combining the requirements of SA and Tasmania. Some of the particular issues facing the NT, and to some extent SA, include establishing reliable, broadband connections to the remote community health services. This may present an opportunity for NT SMEs to collaborate with other national and MNCs to provide a solution.

**Actions**

8. The Program Office to identify interested industry members, convene forums and investigate opportunities and specific actions aimed at electronic delivery of government services, including
   - developing approaches that may have application in other jurisdictions in Australia or overseas;
   - initiation of a dialogue between interested NTG agencies (particularly DCIS, Health, Education and Police) and industry stakeholders regarding ICT in remote areas;
   - keeping the NT industry informed of progress towards the next stage of the HealthConnect project, and facilitation of collaboration of companies interested in pursuing their participation.
Desert Knowledge

The Desert Knowledge initiative, centred in Alice Springs, is a cooperative arrangement between a range of organisations from the NT and across Australia. Several components to the Desert Knowledge program are based in a Desert Knowledge Precinct, a 130-hectare site located within the Alice Springs area.

This initiative is based on the premise that one third of the earth is desert, and that Australia is 70% arid/semi-arid lands. Using this as a competitive advantage, the Desert Knowledge program has drawn together a network of organisations from across Australia to develop opportunities within areas including: tourism, mining industry collaboration, bush products, renewable energy and house designs. Underpinning the successful operation of this program is the role of ICT. In addition, it is recognised that ICT will be a significant factor in the realisation of the opportunities under development. The lessons to be learned from this include:

- The benefit of networking, across both the Territory and the nation, in the development of the NT areas of competitive advantage;
- The potential role of the ICT industry in supporting the development of new NT based business opportunities.

**Actions**

9. The Program Office to initiate a dialogue with the Desert Knowledge project team and convene forums involving interested ICT industry members, to investigate ICT opportunities and specific actions for ICT companies to support the activities of the Desert Knowledge project.

6.4 Ensure maximum share of ICT inputs to major developments in NT

The NT economy is characterised by a number of high profile development projects, undertaken by large organisations from outside the Territory. Within such projects there is potential for supply of ICT products and services by the NT ICT industry. Examples of recent or planned projects can be seen in Defence, railways, offshore oil and gas, minerals resources, ports and tourism. In the past, the local ICT industry has been largely locked out of these types of projects, as their ICT needs have been predominantly sourced from outside NT. It is generally perceived that these areas of industry are difficult for local ICT suppliers to penetrate, but given the scale of investments in these sectors, even a small breakthrough may bring major returns.

The local industry, including both SMEs and MNCs/NCs, needs to find new ways, including partnering approaches and subcontracting to incumbent interstate vendors, to increase its share of ICT supply to organisations undertaking major developments. DBERD has a general program to promote local industry participation in such projects and the ICT industry needs to ensure it achieves appropriate visibility in these programs.

In the Defence sector, current Commonwealth policy is to include 5% SME support for prime contractors in all new contracts. It is also understood that Defence is
undertaking national market testing to explore options for regional provisioning of services and equipment.

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<tr>
<td>10. The Program Office to liaise with DBERD and ICT industry members interested in seeking increased business in major developments</td>
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<tr>
<td>• identify organisations planning major projects,</td>
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<tr>
<td>• engage with target organisations to seek business development opportunities</td>
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<tr>
<td>• foster clustering of businesses around key growth sectors</td>
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<tr>
<td>• identify interstate MNC/NC vendors providing ICT input to major projects for subcontract opportunities</td>
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<tr>
<td>• investigate whether the 5% local SME support target for Defence projects is being met in the NT and identify business development opportunities and contacts.</td>
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6.5 **Encourage creation and commercialisation of IP**

An element of the strategy needs to focus on commercialising intellectual property (IP) that could extend solutions to NT customers as well as provide competitive advantage in markets external to the NT.

Relevant IP can arise in a number of ways, for example:

- **ICT industry led**
  An ICT company identifies a market need, and develops a solution that is commercialised and offered to the market (company principals often have a background in the relevant sector)

- **User client led**
  A user client engages an ICT company, or applies in-house resources, to develop a solution, which is subsequently commercialised for the general market

- **Research led**
  R&D results in new technology that can be commercialised for application in specific opportunity areas.

Support for creation and commercialisation of IP may potentially be of benefit to all sectors of the ICT industry, as such activities may be undertaken by NT based branches of national or multinational organisations, as well as larger and smaller SMEs.

As a major client of the industry, the NTG has contracted development of many solutions that potentially could be commercialised and offered to a wider market. This has been recognised by the proposed initiative to develop a catalogue of IP held by the NTG. However, the NTG should also be realistic about the value of its IP, so that reaching agreement on licensing (and indeed associated administrative processes)
should not be a barrier to firms seeking commercialisation. The difference in investment to produce a custom developed software application for a single client, and a commercialised general market product can be very significant. Rather than any significant financial return to NTG, its long term goal in exploiting the catalogue of IP should be to benefit the NT economy as a whole.

Strategies for creation and commercialisation of IP are described below.

### 6.5.1 Encourage strengthening of research capability and activities by CDU

Although it currently undertakes only limited ICT related research, CDU has undertaken quality R&D in ICT technologies such as web-based service delivery that could provide the basis of potential competitive advantage. Enhancement of CDU’s research capability needs to be coordinated with development of its education and training activities, but can provide input for graduate programs and added incentive to attract teaching staff. Promotion of research capability to national and multinational ICT organisations, particularly those operating in the NT, may identify opportunities for contract R&D.

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<tr>
<td>11. <strong>CDU to plan and implement strengthening of its ICT research capability, in consultation with the VC, by</strong></td>
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<tr>
<td>• identifying niche ICT expertise</td>
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<tr>
<td>• building on expertise and research interests of its ICT teaching staff</td>
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<tr>
<td>• establishing postgraduate programs with research components</td>
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<tr>
<td>• including modules on IP commercialisation and capital raising in its ICT related courses</td>
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<tr>
<td>• promoting its identified ICT research capability to national and multinational ICT companies.</td>
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### 6.5.2 Facilitate commercialisation of IP

The skills and resources required for recognition of the value and commercialisation of IP are not always the same as for creation of the IP in the first place. A strategy is required to ensure the maximum chance for successful commercialisation of IP once it is developed.
12. The Program Office to arrange workshops, forums or other programs (with inputs from DBERD, DCIS, DOJ) to:

- assist the NT ICT industry understand the potential value of IP and the steps required to successful commercialisation (for example AIIA SME business growth development program for small enterprise professionals provides one model);
- disseminate the proposed NTG catalogue, and encourage the NT industry to commercialise IP that resides within the NTG;
- provide a network between organisations undertaking R&D and other NT ICT industry stakeholders with commercialisation capability.

6.6 Enhance telecommunications services throughout the NT

Efficient, cost effective telecommunications are fundamental to the development of the ICT industry. There should be a concerted approach to ensure that the telecommunications services available within and between the main centres in NT, as well as interstate, are equivalent in capability and price to those in other capital cities and main population centres in Australia.

Options to promote the development of telecommunications infrastructure, such as maximising the effectiveness of the range of government programs by coordination of NTG initiatives should be actively pursued. Commonwealth funding programs (for example Telstra 3, Broadband for Health Program, etc.) and other funding sources should be explored to maximise the possible benefits that can be achieved for the NT. Opportunities to utilise alternative technologies for provision of services should be fully explored, along with the opportunity for NT publicly owned infrastructure to be used to support provision of cost effective telecommunications infrastructure and services.

13. DCIS to review with the successful NTG Telecommunications contractor and Commonwealth Government to maximise the potential investment in developing telecommunications infrastructure throughout the NT.
7 IMPLEMENTATION OF THE PLAN

Ongoing governance and management of the Plan is an essential part of its implementation and operation. This should include monitoring the outcomes of the Plan to ensure that the goals and objectives are achieved. The Plan should be revised, as necessary, to respond to future changes in the environment in which the NT ICT industry operates.

7.1 Establish a governance and management framework

This should involve:

- A joint NTG/Industry board with governance responsibility and management oversight, representative of all key NT ICT industry stakeholders, including the tertiary education and research sectors. The current Industry Development Group could form the core of this body, or indeed take on this role, with adjustments to its membership if required.

- A Program Office with a full time Program Manager plus additional resources to initiate and manage approved projects under the strategy. Day-to-day administration support could be provided within DCIS, with close links with DBERD on general industry support programs.

The appointment of a Program Manager should be undertaken by the board. Funding and resourcing of the Program Office should be undertaken jointly by the industry and the NTG, with budgets approved and expenditure monitored by the board. Specific projects would be resourced as required by industry stakeholder staff participating on a voluntary basis, with project and administrative support from the Program Office.

7.2 Industry metrics and achievable KPIs

In the ICT Industry Audit Findings Report of June 2003, some generic characteristics and metrics were identified for application to ICT organisations, and included:

- NT ICT business revenue ranges
- Employee category
- Competency spread
- Industry breakdown by ICT companies
- ICT industry strategic alliances
- Workforce education levels
- Business plans
- Methods of business growth.

In addition, ABS and the Commonwealth Department of Communications Information Technology and the Arts (DCITA) provide reports on the ICT industry, some of which are in sufficient detail to allow analysis of activity in the NT. While such statistical data
provides a valuable base, specific ongoing monitoring by regular annual surveys will be required to provide feedback on the industry’s development and growth, and on the impact of agreed strategies.

There is a need to develop achievable Key Performance Indicators (KPIs) compatible with the Plan. The Audit Findings Report provides some basis for a set of suitable KPIs, but they must be identified, agreed and “owned” by the ICT industry.

The KPIs should be monitored, as the NT businesses should be exceeding the national averages for both these indicators if real progress towards the growth goals is to be achieved.

7.3 A partnership between the NTG and the ICT industry

For an agreed set of strategies to be adopted and pursued there must be a partnership between the NTG and ICT industry with an agreed sharing of resourcing and funding responsibilities. For some strategies an agreed split of shared resourcing and funding will be necessary, for some it may require the ICT industry to take sole responsibility, and for others responsibility may fall solely to NTG. For each agreed strategy to be followed, NTG and the ICT industry should come to an agreement upon the following:

- Governance arrangements
- Management structure
- Responsibility
- Funding sources
- Actions
- Measurement, KPIs and reporting
- Process for modifying the strategy

The above approach, or something similar, should be formalised in letters of intent, or a memorandum of agreement.