

**Department of Agriculture,
Forestry and Fisheries**

**Evaluation of the New
Industries Development
Program**

Report

May 2002

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Executive Summary

This is the Report of an evaluation of the New Industries Development Program – Mark I. The evaluation was required to assess the impacts, efficiency and effectiveness of the program.

The Program was a key element in the Prime Minister’s Supermarket to Asia Strategy and the Federal Government’s efforts to support agribusiness development and the revitalisation of regional Australia.

The NIDP has supported funding for 36 Pilot Commercialisation Projects between November 1999 and June 2001. Recommendations for project approval were made by a Working Group initially established under the Supermarket to Asia Council. The Group considered that it can best meet its terms of reference by supporting quality Pilot Commercialisation Projects combined with an active communication program.

The NIDP is a program that supports the creation and growth of a “portfolio of opportunities and options in agribusiness”. In effect, such a portfolio targets new business development projects at three levels¹:

- Ideas – concepts that may have a commercial application
- Experiments – ideas that have merit but need to be “validated” as business opportunities
- Ventures – experiments that look promising that could advance to a commercial venture stage.

There are substantial gaps and discontinuities in taking an idea (or a scientific discovery) to market. The NIDP has been addressing these gaps by providing funding together with information, advice and access to expertise to assist in bringing something that is a technical possibility to something that has sustainable market potential.

The NIDP Working Group brings together a broad range of professional knowledge and specialised experience in agribusiness product development and commercialisation. This has been critical to the success of the program.

The NIDP Working Group is a genuine *working group*. Members are involved in the work of the program and make a strong time commitment. This is similar to the *modus operandi* of the Boards of the Rural Research and Development Corporations – and in contrast to many other Government Councils and Committees which simply review and comment on material handed to them by third party assessors, either from within or by consultants to Government.

During our consultations, Working Group Members complimented program staff for the professionalism in preparing the documentation, the completeness of the briefing material and their knowledge of the proposals and projects in responding to queries during meetings and less formal occasions.

The Program is managed with a very tight budget framework. There is a view from the Working Group that, to the greatest extent possible, funds should be allocated to projects – not administration. The Working Group closely monitors the budget and detailed

¹ The concept of ideas, experiments and ventures is drawn from the business innovation literature and particularly Gary Hamel, *Leading the Revolution* (Boston: Harvard Business School Press, 2000). It also relates to the strategy underlying *Backing Australia’s Ability*. The approach is addressed a little further in Section 10: The Institutional and Policy Environment.

reports have been presented to each meeting. The budget provided for 82.7 percent of funding to be allocated to program activities (\$2.5m) and 17.3 percent for management and administration (“overheads”).

Our consultations indicated that the applicants (rather than business advisers and consultants), in general, completed the application form. Applicants who had a science or research background found the form and information requirements very straightforward. In most other cases, applicants also considered that the application form and process to be straightforward.

There were a few applicants who found it difficult to translate their ideas into a project proposition. We were also advised, however, that NIDP staff have been helpful in explaining and assisting in filling out the details. There was a strong message from people who had run successful projects that applicants should approach NIDP program staff directly for advice.

Our overall conclusion is that the business processes are sound and represent a firm basis for expanding the program under NIDP Mark II. They also provide a model for application in other grant and funding programs that target commercialisation of science and new and emerging technologies.

The knowledge created through the development of processes and procedures in the NIDP would be of value for existing and new programs being developed in the Department of Agriculture, Fisheries and Forestry, and across Government. The processes involved are comprehensive and thorough and fully meet the standards of accountability and probity that are appropriate to the management of public funds.

The process of completing the application form and participating in the selection process has clearly benefited a number of businesses by creating a discipline on potential recipients to address issues that they had not previously considered. The process assisted in the preparation of a more detailed business plan.

With an increase in the number of projects under NIDP Mark II we consider it necessary to develop a more sophisticated tracking system. However, this should be kept simple and should use packaged software or a Microsoft Access application.

Our understanding is that an NIDP project is something that a business would not undertake in the normal course business. That is, it must be truly entrepreneurial and innovative.

The implied cycle time between lodgement and approval (rejection) of a project application is two months. Given the steps and tasks involved in the assessment process (Section 5.3 below), we do not regard this timeframe as excessive. The timeframe extends where additional information is sought.

What is important in this context is that applicants are aware of the process and the time frame and seek to provide the necessary information to enable assessments to be made.

As indicated, communication has been a critical aspect of the NIDP. Development and implementation of a comprehensive communication strategy was a high priority from the outset. Promotion has been targeted through business and rural networks and State regional development agencies.

A great deal of effort has gone into promotion and dissemination of the NIDP to ensure that applications that meet the criteria of the program are solicited. State development agencies in a number of States have been very supportive of this process and have acted as “brokers” in managing the applications process.

Our analysis of material and consultations indicate the communication strategy has been substantially executed over the last two and a half years with the result that there is a very high level of awareness among the target audiences of the NIDP program. There were, however, a number of people with whom we spoke from the financial sector who indicated that the Program could be more actively promoted through banks and related financial institutions.

Feedback from recipients about the NIDP program has been exceptionally positive. Comments have included:

- Allowing projects to proceed earlier than would have been possible
- Enabled projects to proceed at a much faster rate than would otherwise have been possible
- In many cases, provided the motivation for the project
- Enabled knowledge sharing and skills transfer between producers and other participants of the supply chain
- Enabled market research and development opportunities
- Provided networking opportunities with other grant recipients who were experiencing similar project issues
- The sharing of ideas and knowledge transfer between recipients was highly valued
- Enabling participation in seminars that provided information and learning about finance and supply chain management.

Overall, the feedback has been that the NIDP has encouraged entrepreneurship and innovation and has helped to foster a change in culture through seeding enterprising recipients, who in turn, influence those around them.

Information on the expected economic benefits of the Pilot Commercialisation Projects, in terms of expected annual sales over the medium term (3-7 years) is summarised below.

Expected economic benefits	Number of projects)
Greater than \$100m	1
\$50m-\$100m	1
\$25m-\$49m	3
\$10m - \$24m	10
\$5m - \$9m	9
Under \$5m	12
Total projects	36

We have not been able to validate the claims made about expected economic benefit. In several cases we regard the estimates as highly speculative. We are not, however, in a position to revise those estimates.

In looking at the 35 active projects during the course of the review one of the most critical factors involved in achieving success related to the development and implementation of a marketing strategy. These factors related to:

- Understanding the nature of competition and the *cost* of establishing a market presence
- The effort required to change customer perceptions, attitudes and behaviour to accepting a new product

- Addressing issues of “market pull” through the value chain
- A deep appreciation of the attributes, costs and commitment required for product promotion and marketing in the processed food sector.

In effect, the NIDP has supplemented the limited resources of entrepreneurs with additional limited resources as an incentive to devote more time to planning and research and to address and adapt to unanticipated problems and opportunities in their businesses. Capital constrained entrepreneurs cannot generally afford to sacrifice short-term cash for long-term profits. The NIDP assists in changing the balance in this relationship.

The availability of support under the NIDP has also helped entrepreneurs overcome the problem of convincing customers, employees, credit and other resource providers to “take a chance” on the business. Having received NIDP funding is seen by investors, potential alliance partners and customers as a “credential” of some value. The NIDP “brand” is used widely.

The Program has performed an important role in demonstrating what specialised companies operating in niche markets can achieve. It has provided the stimulus for entrepreneurial people to begin the path to commercialisation of a project they had been contemplating, yet which was either too uncertain or costly for them to start immediately. It has also enabled projects to progress at a significantly faster rate than would otherwise have occurred

NIDP grant recipients often commented on the change in attitude of the people they work and collaborate with (particularly suppliers) towards meeting customer demands – demonstrating that the Program was instrumental in nurturing a culture of entrepreneurship and innovation.

Our discussions and interviews also indicated that the NIDP:

- Facilitated knowledge transfer through gaining first hand experience and a greater understanding of their niche markets, which in turn impacted on how they addressed market need
- Stimulated and consolidated a high degree of business-university/research institute collaboration and cooperation with resultant knowledge transfer and sharing
- Provided the impetus to invest in machinery, equipment, know how and specialist staff as well as establishing valuable relationships with key members in the supply chain.

In our view much more should be done to raise the awareness of the results and outcomes of NIDP projects through Departmental publications. Whilst “publication” on the Internet is important, it is only one channel of communication. There can be no certainty that Internet publication will reach, and be received by, target audiences.

An important aspect of the NIDP has been the organisation and delivery of a series of “capital raising” workshops. Our feedback is that participants had gained a good understanding of what investors in a business are looking for – for example:

- Strong and accountable management
- A platform technology or wide product range
- Sustainable competitive advantage over the competition
- Sound understanding of the market (including customers, competitors, costs and broader economic factors)
- Clearly defined and profitable market niche that has potential for strong growth

- Demonstrated paths to market such as collaborative relationships with distributors and end users
- Ability to supply consistent, reliable and high quality product.

Our discussions and interviews with recipients indicated that the Program has provided valuable networking opportunities with others going through a similar experience. Recipients commented about their ability to share experiences and learn from each other. Members of the Working Group and Program staff have been supportive and helpful throughout the process and have played a role in keeping projects on track and introducing them to contacts.

The NIDP Scholarships have also added substantially to improvement in management skills and capabilities.

In many respects the institutional environment created by the NIDP – one that encourages and supports entrepreneurship and innovation – is the most significant medium to long-term benefit.

Recipients often commented on the change in attitude of the people they work and collaborate with (particularly suppliers) towards meeting customer demands – demonstrating that the Program was instrumental in nurturing a culture of entrepreneurship and innovation.

On the basis of the information and knowledge gained by undertaking this Review, Howard Partners has formed the view that the NIDP has had an important role not only in supporting entrepreneurs but also in building the institutions of entrepreneurship through support for the development and maintenance of alliances and networks.

In our view, and supported by the NIDP Working Group, the NIDP should continue to be run within the Department of Agriculture, Fisheries and Forestry under provisions of the Public Service Act, the Departmental Enterprise Agreement and the Financial Management Act.

Recommendations

The following recommendations have been made by the Review Team and are referenced to the place in the report where they arise.

The commitment and obligation of Working Group and Program staff to commercial-in-confidence and other confidentiality provisions relating to their appointment and employment should be communicated to potential applicants. This principle should apply to all Commonwealth programs that target research and technology commercialisation. 14

The issue of providing mentoring support for NIDP supported projects be reassessed in the planning for NIDP Mark II. 18

As the NIDP increases in scale and scope, the Department of Agriculture, Fisheries and Forestry undertake more formal reference checks including references for accountant/tax agent..... 21

The NIDP be seen as a seed-funding program that supports and encourages the creation and growth of a portfolio of business opportunities in the agribusiness sector. In building that portfolio, an appropriate balance be maintained between support for the development of ideas, support for experiments and support for new ventures. 25

The management function for the NIDP be related to a benchmark of 20 percent of program costs. 35

A process be established for capturing and sharing the “common knowledge” generated in the course of managing the NIDP within the Department of Agriculture, Fisheries and Forestry and in particular, in the design and delivery of new programs. This process should be extended to include other Commonwealth programs targeted at the commercialisation of scientific research and technology. 36

NIDP Program staff be given an opportunity to develop policy and strategic skills as a basis for contributing to the design and delivery of Department of Agriculture, Fisheries and Forestry entrepreneurial development programs 37

Applicants be required to declare the extent to which they have paid a commission or success fee to a consultant for assistance provided in preparing their application. 46

NIDP staff visit project sites after project commencement and prior to sign off on the final report..... 47

Newly assigned project officers familiarise themselves with projects through a site visit 47

Pilot Commercialisation Projects that consistently fail to meet milestones should be terminated in order to allow funds to be allocated to other projects..... 47

As NIDP Mark II comes on stream, investigations be made to develop a Microsoft Access based project tracking system for the NIDP 48

The assessment process be able to fully ascertain the capacity of applicants to resource projects and the level of personal commitment to developing the business opportunity .. 53

The NIDP application process include positive input from people skilled in strategic marketing and product promotion in the processed food sector from a global perspective. 60

Every effort be made to ensure that NIDP Mark I projects receive coverage on the Agribiz site and in the numerous Department of Agriculture, Fisheries and Forestry magazines..... 67

Where possible and practical, NIDP Mark I projects be reported and published as case studies – if not through “Made in Australia” then through a separate booklet and disseminated widely. The Department and the NIDP support a publication “Seeds of Success” that covers the experience of projects supported by NIDP Mark I. 68

NIDP grant applications include a communication strategy in their proposal. 70

The time frame for NIDP projects not be extended beyond two years..... 78

The NIDP continue to be managed as a Unit within the Department of Agriculture, Fisheries and Forestry. (This view is supported by the NIDP Working Group). 79

The Evaluation relates to NIDP Mark I

The evaluation is to focus on technology transfer, management capacity building, institutional change and building investor confidence

The project involved an extensive process of research and consultation

1 Introduction

The New Industries Development Program (Mark I) was a key element in the Prime Minister's Supermarket to Asia Strategy and the Federal Government's efforts to support agribusiness development and the revitalisation of regional Australia.

The Government approved funding for 36 projects under the program between November 1999 and June 2001. Recommendations for funding were made by a Working Group initially established under the Supermarket to Asia Council.

1.1 Terms of reference

The project brief requires that the evaluation of the New Industries Development Program will comprise:

- An assessment of the NIDP's (intended or unintended) impacts on:
 - Positively contributing to the medium to long term commercial outcomes for Australia
 - Stimulating innovation within the agribusiness sector by demonstrating the benefits of effective technology and knowledge transfer
 - Promoting understanding amongst small to medium agribusiness enterprises (SMEs) of the need for, and improve access to, quality information, commercial skills, experience and in-market contacts
 - Facilitating a change in the culture and structures within Australian agribusiness to promote cooperation across state and regional boundaries and along the potential supply chains for new products and services
 - Building investor confidence in Australia's ability to develop new high value products and services and improve the usage of venture finance and risk management strategies by SME's involved in new ventures, and
- An assessment of the NIDP's effectiveness and efficiency, including its management processes.

1.2 Approach to the project

The project was undertaken on the basis of a number of discrete areas of work activity:

- Project planning
- Development of an evaluation framework
- Review of documentary material, including Working Group agenda papers, project files², management reports, newspaper and magazine articles regarding NIDP projects

² The Review Team was not given permission to access Cabinet documents.

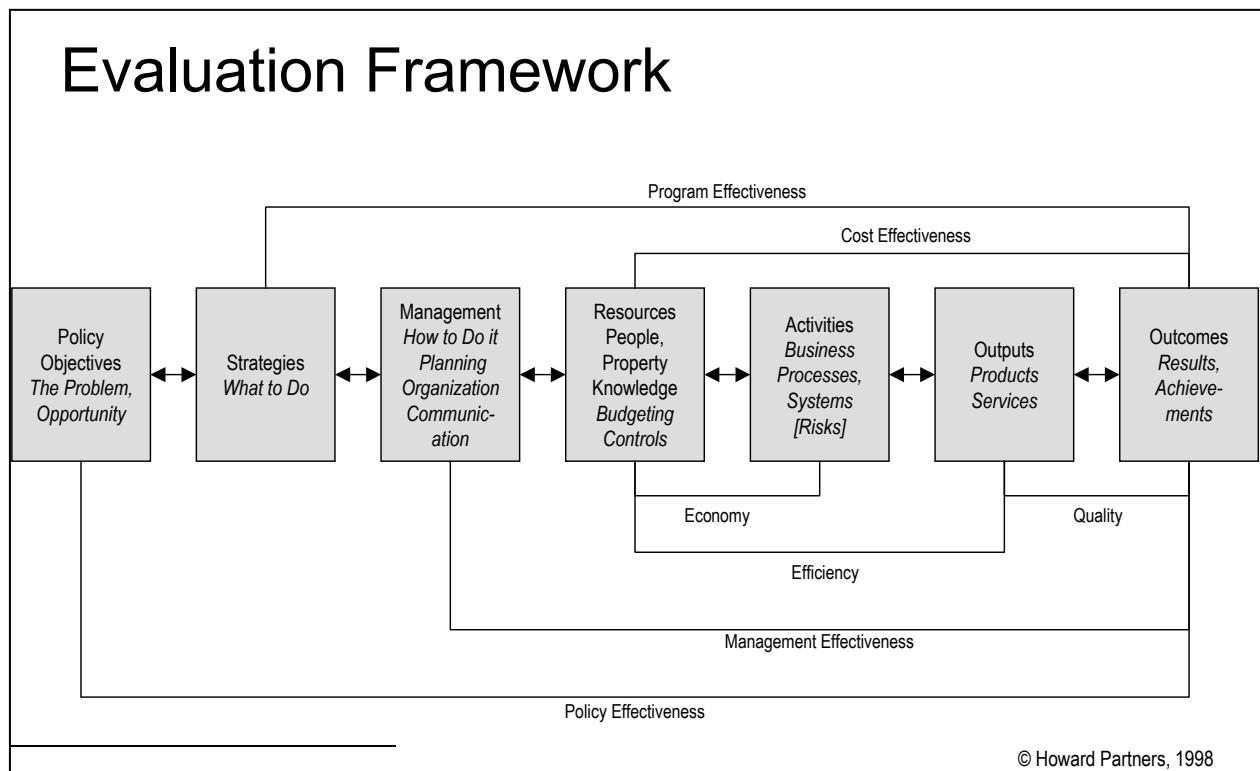
- Literature review, including reports and papers covering public policy for the “entrepreneurial economy” and publications regarding entrepreneurship and financing growth for technology based businesses
- Internet search - a search of the Internet for all 35 active projects (10 companies have web sites)
- Consultation and interview with:³
 - Members of the Working Group
 - Panellists from the June 2001 Canberra Capital Raising day
 - Program staff in the Department of Agriculture, Fisheries and Forestry
 - NIDP Mark I recipients - contact was made or attempted with all of the 35 active projects; 25 interviews and seven site visits resulted
- Report writing.

This Report will provide input to an Overview Report on the NIDP and Food and Fibre Chains Program

Material in this Report is available for use in preparing an *Overview Report* of the NIDP and the Food and Fibre Chains Programs. Ernst & Young has accepted responsibility for preparing the Overview Report.

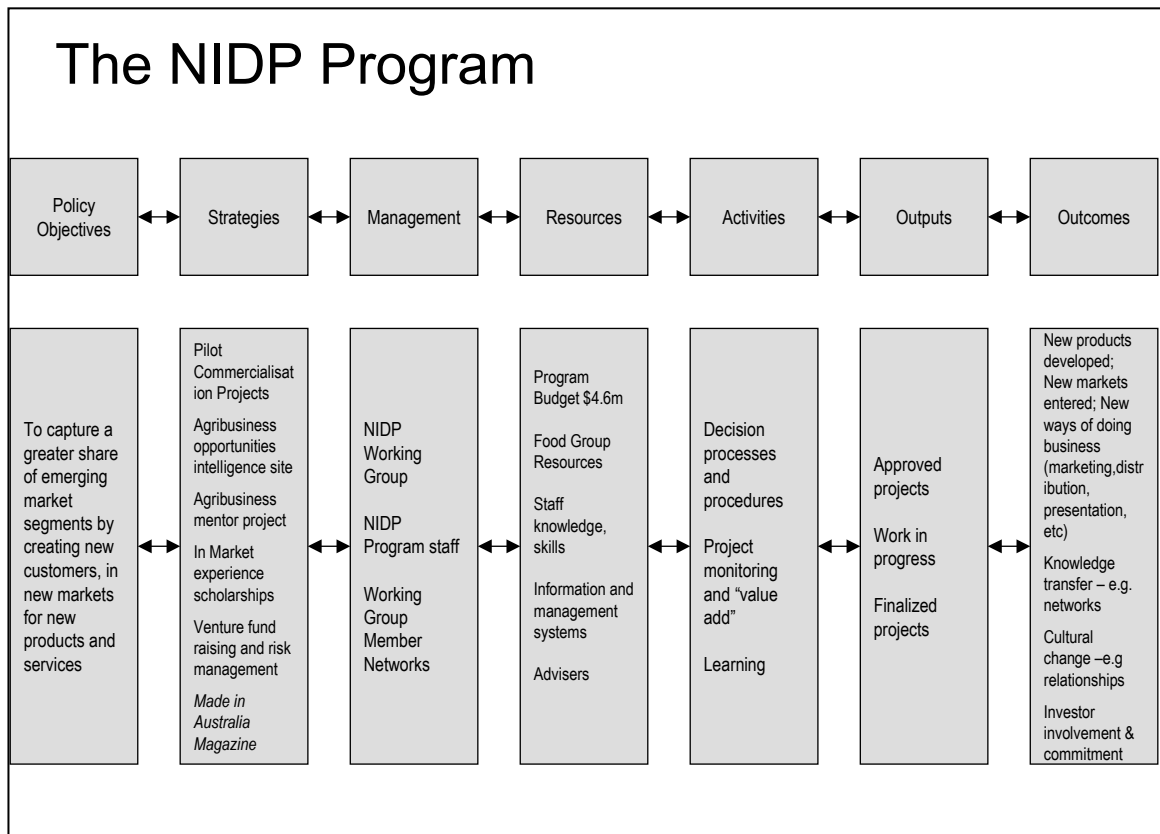
1.3 Approach to evaluation

Our approach to evaluation involves a framework represented in the following diagram.



³ A full listing of people and organisations consulted is set out in Attachment 4.

The framework draws attention to economy, efficiency and effectiveness relationships. It also points to several dimensions of effectiveness and assists in identifying the planning, organization, resource allocation and delivery arrangements for the program and the way in which these contribute to program outputs and outcomes. This is indicated below:



The framework assists in identifying the *evaluation questions* relevant to the review. These questions can be couched in terms of economy, efficiency and the several dimensions of effectiveness.

The framework also draws attention to the fact that program outcomes can be influenced by program design and management practices as well as resources and the activities undertaken.

1.4 Assessment of efficiency and effectiveness

Assessment of efficiency and effectiveness is undertaken by reference to performance indicators.

Efficiency indicators relate inputs to outputs

1.4.1 Efficiency indicators

Efficiency indicators typically measure the input to output relationship.

Inputs are the resources, including funds, people, time and knowledge utilised in the program.

Outputs are characterised by a discrete definition of the service provided, or by a proxy measure that represents the service. In the case of the NIDP Pilot Commercialisation Projects element, an output is a grant or funded project.

A grant or funded project is a focus of attention for the purposes of allocating and applying the funds that have been made available. In this context, efficiency is concerned with the amount of time and effort that it takes to identify projects, approve/reject, fund and monitor.

Outputs are not, of course, ends in themselves. The issue of how much work is done to approve a project is different from whether the project will achieve a particular result that is relevant and appropriate to the overall purposes of the program.

Efficiency is also concerned with ensuring that all funds are allocated – subject to projects meeting milestones and their own performance targets.

It is axiomatic that if funds are not allocated to projects in an efficient manner it will be very difficult to achieve the outcomes from the program as a whole.

Efficiency indicators can be grouped broadly as follows:

- Cost per unit of output – cost of processing an application through to approval
- Work measurement- the ratio of time spent to a standard or benchmark
- Productivity – ratio of outputs to inputs (hours/FTES) to outputs
- Cycle time – for example, the elapsed time between the initiation of a funding round to the signing of a contract and draw down.

Cost per unit of output is a primary efficiency measure. A cost based efficiency measure should ensure that managers assess all of the costs of producing outputs. The most significant component of cost is staff time.

To the extent that evaluation is concerned with assessing the results achieved, outcome measures are superior to output measures.

Nonetheless, there is interest in outputs as an indicator of what has been done with the resources and how extensively/intensively they have been allocated.

Allocation of program funds is an important efficiency indicator

Effectiveness is indicated by quantity, timeliness, quality and client satisfaction

1.4.2 Effectiveness indicators

Effectiveness is a measure of output conformance to specified characteristics – sometimes referred to as “doing the right thing”. Indicators fall into one or more of the following

- Quantity – projects approved that meet guidelines and criteria
- Timeliness
- Quality
- Client satisfaction

Effectiveness indicators should identify the critical characteristics of the output of an activity that meets a client need. They should provide information on the final product as it is received – as distinct from the process used to achieve the output.

For the NIDP effectiveness indicators would include:

- The number of projects supported that meet the program guidelines – according to location, industry and business category
- The timeliness of the project in terms of being able to address a business and market opportunity
- The quality of the new product being supported by reference to the objectives of the program
- The level of client and stakeholder satisfaction.

Work process indicators can be related to efficiency and effectiveness

1.4.3 Work process indicators

Work process measures assess the way that work gets done in producing the outputs at given levels of resources. Measures are a direct by-product of the work process, but do not measure the attributes of the final product per se.

A process is a specific ordering of activities, across time and place, with a beginning and end and clearly defined resource inputs and product service outputs.

Processes have elements of time, cost, quality and customer satisfaction (process effectiveness)

Key processes include:

- Applications, assessment and approvals
- Project monitoring and reporting
- Accountability and program reporting

The key issue in relation to work process measures is to identify and codify measurement techniques and to assist managers in how to use these instruments in

combination with efficiency and effectiveness measurers as a way of achieving improvement.

1.5 Assessment of impacts and outcomes

Outcomes measures describe the direct results achieved by a product or service being produced – for example, what is done with a NIDP grant – and the way in which this contributes to achieving the goals and objectives of the program.

The outcomes sought are set out in the terms of reference (Section 1.1 above). Our observations and conclusions on these outcomes is reported in later sections of this Report.

The NIDP *Program Strategy and Working Group Terms of Reference* identifies 15 performance indicators relating to program outcomes. These are identified in Attachment 1 together with the observations of the Review Team in relation to levels of achievement.

The indicators provide a basis for the development of indicators for NIDP Mark II,

It is important to note that it is not possible to make unequivocal conclusion about the indicators as the Program has not yet run its full course and impacts may take several more years to be fully measurable.

1.6 Recent developments

Under “Backing Australia's Ability” the current NIDP has been expanded from a three-year program with funding of \$4.6 million to 30 June 2002 to a five year program with funding of \$21.7m to June 2006.

The expanded NIDP will deliver a set of integrated strategies to support and showcase innovative Australian agribusiness enterprises developing a position of key advantage in the marketplace that is focused on developing the skills and aptitude necessary for rural and regional businesses to capture new market opportunities.

Our experience is that expansion of the scope of the program will require a disproportionately greater administrative and management effort. *There are few economies of scale in management.* It is nonetheless important to ensure that program resources are allocated to the greatest extent possible to program delivery, but within a framework of effective project management, monitoring, and governance - including effective controls.

Outcome indicators refer to results achieved

Backing Australia's Ability has extended the NIDP to Mark II

The experience gained in the delivery of Mark I projects will be of particular value in the delivery of NIDP Mark II.

Investment in management infrastructure involves a greater investment in areas such as:

- Business and project tracking systems
- Strengthening, and possibly formalising, networks to screen applications
- Development of management skills and capabilities among key program staff.

***The NIDP commenced
with an initiative in
1997-98***

2 The NIDP program and strategy

2.1 Purpose

The NIDP is the successor to the Supermarket to Asia Delicatessen Program. The initial program was a 12-month initiative (\$1 million in 1997–98) to identify organizations or collaborative groups trying to develop new Asian-style products and to market these in Asia.

The NIDP was established in 1999 with funding of \$3.1 million over the three years 1999–2002. A further \$1.5m was re-allocated in November 2000 from the Food and Fibre Chains Program.

The purpose of the Program is to work towards accelerating efforts to improve Australia's performance in the development and commercialisation of new innovative agribusiness products, services and technologies.

Through initiatives supported under the program, it is intended that Australian agribusiness will build up business skills and resources required to successfully commercialise new agribusiness products, services and technologies, thereby generating significant and measurable business and job growth over the medium term, particularly in rural and regional Australia.

2.2 The NIDP Strategy

The NIDP strategy has five components or elements. These elements were endorsed at the first meeting of the NIDP Working Group in Canberra in August 1999.

These are:

- Pilot Commercialisation Projects (\$3.2m allocated⁴)
- Agribusiness Opportunities Intelligence Site (\$150,000)
- NIDP Mentor Project (\$215,000, but not proceeded with)
- NIDP Scholarship Project (\$107,500)
- Venture Capital and Risk Management Project (\$125,000)

The focus of each program element is described below.

⁴ Includes \$1.5m transferred from Food and Fibre Chains Program in November 2000.

2.2.1 Pilot Commercialisation Project Grants

Pilot Commercialisation Projects have been the main focus of the NIDP.

Purpose

The main focus of the Pilot Commercialisation Project grants under NIDP Mark I was to provide funding assistance for new agribusiness products and services that involve small to medium enterprises (SME).

For the purposes of the program “new” was defined as “where no significant export or industry capability currently exists in Australia for the specified product, service, or technology (less than \$1million total sales to date from Australian sources and the potential for around \$5m in sales within 3 to five years)”.

An SME was defined as:

- An individual or rural producer
- A group of rural producers
- A manufacturer of food or fibre products with fewer than 200 employees
- An agribusiness service provider with less than 50 employees
- Having a turnover of less than \$25m p.a.⁵

It was envisaged that pilot commercialisation projects would take products from the R&D lab or trial crop stage through initial chain relationships to full scale commercial investment proposals and business strategies. The projects would also develop approaches that might be adopted more widely to “incubate and hatch” new agribusiness ventures.⁶

It was envisaged that the Pilot Commercialisation Projects would:

- Seek to capture identified potential competitive business opportunities for *new* Australian products or services for export or import replacement, that will have a measurable trade impact within three years⁷
- Encourage through-chain approaches to new agribusiness industry development through involvement of *at least two enterprises* at different levels of the value chain

The NIDP is targeted at small businesses

Pilot Commercialisation Projects have a number of specific objectives

⁵ New Industries Development Program Working Group, *First Meeting - August 1999: Agenda Papers* (Canberra: 1999).

⁶ New Industries Development Program Working Group, *Second Meeting - November 1999: Agenda Papers* (Canberra: 1999).

⁷ Reference to export promotion was subsequently removed from program descriptions to accord with WTO agreements.

- Involve *at least one* partner that is a small to medium enterprise with the necessary skills and resources (current or potential) to participate in the “pilot commercialisation” of a new, high value, niche agribusiness product or service
- Advance understanding of best practice in new industry and product development and provide demonstration value for other Australian businesses.

These objectives were included in Pilot Commercialisation Project Guidelines agreed by the Working Group at the first meeting in August 1999.

Size of grants

The Working Group agreed that the size of the grant be limited to \$100,000 giving a total project investment of \$200,000 (50 percent sourced from applicants). It was thought that \$200,000 should be sufficient in most cases to prove the commercial merit of a proposal.⁸ This would not, of course, limit the overall contribution of the applicant.

Specific provisions

The Pilot Commercialisation Project Guidelines discussed at the first meeting also included a number of specific provisions:

Specific provisions are contained in application guidelines

- Applicants were required to demonstrate that the expected outcomes of their project are *additional* - in that the project would not proceed, or in the desired manner or timeframe without Pilot Commercialisation Project funding
- Management and professional support contracted to undertake activities under the project had the necessary skills and would do so under reasonable conditions
- Definition of the costs that NIDP funds can be used to cover
- That grants are provided on a matched dollar for dollar basis – of which half of the applicant’s contribution must be in cash
- Advice that average grants will be about \$80,000
- All activities associated with the project must be completed before 30 June 2002
- Allowable in-kind contributions

⁸ New Industries Development Program Working Group, *Second Meeting - November 1999: Agenda Papers*.

- The criteria for project assessment– which are used by the Working Group in project selection
- Accountability guidelines.

The Guidelines encouraged applicants to discuss proposals with program staff prior to submitting a formal application and full proposal. They also provided that applications could be made at any time.

Examples of Pilot Commercialisation Projects were attached to the Guidelines. These were projects supported under the Delicatessen Program.

Application Process

The Working Group was involved in designing the application process

An application form was agreed to by the Working Group at the August 1999 meeting, as was a set of protocols for application assessment including roles of the Working Group and Department of Agriculture, Fisheries and Forestry program staff.

The protocols included time frames-

- For issue of acknowledgement of the proposal (10-15 days)
- For Working Group assessment of proposals between \$80,000 and \$100,000 – distributed to all members for comment with a response required from four members within three (later changed to five) working days
- For Working Group assessment of proposals between \$30,000 and \$80,000 – distributed to a subgroup of two members for comment within three (later changed to five) working days.
- Department of Agriculture, Fisheries and Forestry staff would review input and develop a recommendation for funding to be put to the NIDPWG subgroup for endorsement (or otherwise)
- NIDP recommendations would be endorsed by a second senior Departmental staff member as approval for funding
- Applicants would be advised by Departmental staff on the final decision – to be sent within 30 working days of lodgement.

A number of recipients commented that completing the application process was a valuable experience in forcing them to think about business issues and present them in a form that could be understood, and acted upon, by a person making an investment decision.

Further discussion of the application and assessment process is included in Section 4.

Initially, applications were sourced on a continuing basis

Intellectual property

Intellectual property rests with project companies, with the Commonwealth having a right to use the demonstration value of the projects in dissemination activities

Sourcing applications

The initial idea was for projects to be sourced through targeted advertising and proactive identification of possibilities in consultation with State departments and industry. The Papers for the first meeting of the Working Group included a list of 17 projects.

During September and October 1999 a “road show” was undertaken to promote the program across a wide cross section of agribusiness.

State and industry consultations have been an ongoing feature of the program. Working Group Members have volunteered to use their industry and government networks to promote the NIDP and its funding programs. Accountability for actions in this regard has been assured by inclusion of “promises” in Working Group minutes.

In April 2000 a decision was made to introduce a “rounds-based” approach due to the increasing number of proposals coming forward.

The Working Group noted in its meeting of 10 November 2000 that:

Support continued for the move to a rounds-based assessment process for Pilot Commercialisation Project applications. The meeting agreed the development of such a framework has greatly assisted in the merit-based selection and the Working Group agreed it has assisted in streamlining the selection process⁹

During the consultation process we asked recipients how they had heard about the NIDP program. There were a wide variety of responses. They included:

- Through State Government Development agencies
- Referral from other programs – including R&D Start and COMET case officers
- Members of the Working Group and NIDP Program staff encouraging businesses to register interest
- Talks given by NIDP program staff
- Consultants in agribusiness

⁹ New Industries Development Program, "Working Group Meeting No. 6, Agenda Papers," March 2001., Minutes of Meeting of 10 November 2000.

- Press advertisement.

Approvals

The Working Group recommended approval to 36 projects on the following occasions

- 21 January 2000 – 1
- 14 February 2000 - 1
- 21 – 23 May 2000 – 6
- 18 July 2000 – 1
- 17 August 2000 - 7
- 15 December 2000 – 8
- 30 March 2001 - 3
- 9 - April 2001 - 1
- 16-20 April 2001 – 6
- 30 May 2001 – 1
- 14 June 2001 – 1

One project was terminated giving a total of 35 “active” projects under NIDP Mark I.

Confidentiality and conflicts of interest

The issue of protecting the confidentiality of projects has raised a number of difficult issues.

As members of the Working Group have, as a basis for their appointment, a high level of expertise in a particular area, members felt they might find themselves with a conflict of interest with projects in their main area of business. They may have a great deal of useful information and advice, but this conflict might prevent them from using it.

It was agreed at the first meeting that all Working Group members would only see a brief summary of projects so that conflicts of interest and/or special interest could be identified. If a conflict was identified the members would have no further role.

In addition, the Working Group recognised that in order for the program to deliver grants effectively, there would be a need to gain expert comment from industry referees. Members would inevitably confer with others in their networks, but in doing this, careful consideration needed to be given to confidentiality.

The Working Group view has been that applicants should be aware of the rigour of the assessment process, especially in the use of industry and government sources for reference checking. They should also be made aware that every effort will be made to ensure confidentiality.

Confidentiality and conflict of interest issues have been important

Reference checking is an important aspect of the approval process

At the same time, reference checking, and by implication discussion of a project with the flow on risk of potential for leakage of IP, may discourage applicants with highly innovative projects from seeking support under the NIDP and, for that matter, other government programs. The extent of this influence is unknown.¹⁰

The principles of rigour in assessment and confidentiality in the application and assessment process should generally be applicable to all Commonwealth programs that target the commercialisation of research and technologies.

In many ways, however, the operation of the NIDP Working Group and Program staff in the public sector environment should give applicants greater confidence in the assessment process than if applications were assessed by people who do not operate under the confidentiality provisions of the *Public Service And Merit Protection Act*¹¹ and who may not be fully aware of the provisions of the *Privacy Act*.

Recommendation

The commitment and obligation of Working Group and Program staff to commercial-in-confidence and other confidentiality provisions relating to their appointment and employment should be communicated to potential applicants. This principle should apply to all Commonwealth programs that target research and technology commercialisation.

Synergies with the Food and Fibre Chains program

The NIDP and the Food and Fibre Chains program were initiated as part of the Government's ongoing commitment to agribusiness development and to improve export competitiveness through the development of through chain relationships.

There are synergies between the NIDP and the Food and Fibre Chains Program

Both programs had been developed under the auspices of the Supermarket to Asia Council to ensure that synergies are recognised and exploited. The Chains program was designed to facilitate the adoption of world best practice in supply chain management and enhance the competitiveness of existing chains and develop new chain relationships for existing Australian exports.

The NIDP, by contrast, was targeted to assist pilot commercialisation of new agribusiness products and

¹⁰ We are aware, through previous assignments, that companies do not apply for AusIndustry programs because they do not want to have government involved in their business – particularly the Tax Office (in the case of the R&D concession).

¹¹ The Act includes specific Guidelines in relation to ethics and codes of professional conduct.

services that have the potential to create additional exports. The NIDP has the potential to incubate new products that could later be fully commercialised through the Food and Fibre Chains program.

There was cross-membership of the NIDP Working Group and the Food and Fibre Chains Program. There were also procedures for referrals of projects between the two programs.

At the Third Meeting of the Working Group on 8 March 2000 it was noted that the system was working well.

Ongoing capital raising

At the Fifth Meeting of the Working Group (November 2000) Members agreed that NIDP staff would work with the CEO of the Australian Enterprise Market (Dr Barry Westlake) to identify existing Pilot Commercialisation Projects that would potentially benefit from participating in the ASX Enterprise Market initiative.

Consideration was to be given on a case by case basis to providing financial support for those interested in covering fees associated with listing, including additional documentation.

NIDP staff were to work with Dr Westlake to prepare a set of three to five questions to ask future Pilot Commercialisation Project applicants about their interest in securing additional capital as part of project development.

The ASX decided to close the Enterprise Market for commercial reasons in early 2001. However, and we argue in Section 10, there has been a substantial development in the scale and scope of financial intermediation and a broadening of the form and availability of “venture capital” since the start of the NIDP in 1999. The NIDP, through the capital raising awareness initiatives, has facilitated this process.

WTO Considerations

At the Fourth Meeting of the Working Group the issue of WTO compliance with the NIDP and the Food and Fibre Chains program was raised. Both programs had been identified as possibly constituting export subsidy programs as defined under both the WTO Agreement and the Agreement on Subsidies and Countervailing Measures.¹²

***WTO obligations
changed the export focus
of the NIDP***

¹² New Industries Development Program Working Group, *Fourth Meeting: August 2000: Agenda Papers* (Canberra: 2000).

The Government had decided to change the export focus of both NIDP and Food and Fibre Chains Program. That is, export can no longer be an overt or covert strategic priority of the programs and that domestic programs are now eligible for support and need to be considered fully on their merits.

Performance indicators

The Working Group agreed to a set of Program Outcomes and Performance Indicators. These are set out in Attachment 1 together with Review Team comments on progress in achieving outcomes.

Approved projects

A total of 36 projects were approved under NIDP Mark I. Summary details are provided in the Appendixes to this Report.

2.2.2 Agribusiness opportunities intelligence site

The purpose of the site was to further the development of up-to-date ‘quality’ information to be used by agribusinesses based on ‘demonstration’ projects that showcase successful market driven innovation and communicate the lessons and best practice business strategies used.

It was intended that the project would design and pilot an Internet based “knowledge bank” that would integrate market, trade and product intelligence from a wide variety of national and international sources and facilitate dissemination to industry and government stakeholders.

It was also to provide a single access point for market and scientific research on new agribusiness industries and developments and facilitate electronic network of research, industry development and commercial players.

Specific features were to include:

- Information to assist SMEs determine the commercial merit of possible new agribusiness initiatives
- Information on the NIDP
- Facility for lodgement of applications
- Case studies and progress reports on NIDP initiatives
- A communication facility for teams/alliances working on NIDP Pilot Commercialisation Projects.

Plans for the Agri-business opportunities intelligence site were very ambitious

The site is operating as <http://www.affa.gov.au/agribiz>. The communication facility is not as yet operating.

The site does not reflect the ambitions of the initial NIDP planning, but is highly informative and links well to other agribusiness sites.

2.2.3 New agribusiness initiatives mentor project

The project was intended to identify and sponsor individuals to champion innovation and development of new product and services within Australian agribusiness and encourage an entrepreneurial culture through leadership, inspiration and provision of workable solutions and advice.

It was envisaged that there would be a limited number of “pilot” NIDP mentors appointed to work for a set period with an individual agribusiness SME and their through chain networks.

It was expected that mentors would have experience in new business development and would provide practical guidance and advice in the initial stages of the research and development for a new product or assist others to meet the practical challenges of full commercialisation of a new venture.

In developing the project, the Department of Agriculture, Fisheries and Forestry would seek to learn from the experiences of similar projects undertaken for other industries, such as the ISR business facilitators network. Some of these facilitators could become NIDP mentors.

The Working Group discussed the project on a number of occasions but eventually decided, at its Fifth Meeting, not to proceed on the grounds that there are many other services of this nature and that resources available could be best targeted at the Pilot Commercialisation Projects. However, the Working Group agreed that mentoring services would be provided if needed.

The Working Group agreed that the NIDP would monitor closely developments within the capital markets as it was anticipated that projects that are successful in securing additional funding through the Enterprise Market process will also have advisers with the skills and experience necessary to help businesses at their early stages of growth.¹³

The agribusiness initiatives mentor project did not proceed

¹³ New Industries Development Program.

It has become increasingly clear with the experience of NIDP supported projects and also with many other public programs in this area, that the needs of small, early stage businesses are not just money – they require sound business management advice, access to networks, introductions to contacts in the value chain and a “sounding board” for ideas.

A recent study sponsored by the US Advanced Technology Program provides support for the proposition that:

The most critical factor in the support of technology entrepreneurs is not financial capital, but human capital and time – in particular, the time of those few individuals with the skills to simultaneously assess both technological and market opportunities.¹⁴

Recommendation

The issue of providing mentoring support for NIDP supported projects be reassessed in the planning for NIDP Mark II.

2.2.4 NIDP scholarships

It was intended that NIDP scholarships would assist agribusiness SMEs gain experience in an overseas market and to fully participate in overseas alliances.

Three in-market experience scholarships have been awarded

The Scholarships would allow managers from SMEs to work in a market for an extended period (three months to one year) to fully determine opportunities and potential customers, as well as undertake other in market research related to the commercialisation of new opportunities.

A total of three scholarships were awarded under NIDP Mark I. The Prime Minister and the Chairman of the NIDP announced these on 1 September 2000. They were awarded to:

- Simone Tully, OBE Beef – to complete a Graduate Certificate in Business Administration at Deakin University¹⁵
- Rick Martin, Australian Cartilage Company - to extend project development work, visit potential importers and distributors in key markets, build his presentational and negotiating skills and develop an export marketing plan¹⁶.

¹⁴ United States. Advanced Technology Program, *Between Invention and Innovation: Mapping the Funding of Early Stage Technology Based Innovation* (Washington: Project Working Paper, 2001).

¹⁵ AFFA, "How Is She Doing?," *Made in Australia* 2, no. 1 (2002).

¹⁶ AFFA, "Liquefying Bovine Cartilage to Treat Cancer and Arthritis," *Rural Vision*, no. February 2001.

- Stephen Jeffers – to be in a position to successfully produce and market the cut foliage of *Caustis blakei* and *Stickerus flabellatus* by building working relationships with key participants in a supply chain, researching production technology of crops of a similar nature and undertake studies in the area of business and market development.

2.2.5 Venture fund raising and risk management seminars

The project was intended to investigate the current and potential new agribusiness development participants' knowledge and use of venture capital sources, understanding of requirements for accessing these funds and the effective use of appropriate financial instruments to reduce the inherent risk in development and commercialisation of new products and services, particularly for SMEs.

In the NIDP Mid Term Review, the Working Group reported that due to the demand on resources to manage the other elements of NIDP, work in this area would commence in the second year of the program¹⁷.

One workshop was held on June 28, 2001 that was facilitated by Michael Pascoe from the Nine Network. The seminar was recorded and material used in the program *On the Land* broadcast through WIN TV.

Five more workshops have been held to date – with very positive feedback. The format has concentrated less on the formal venture capital sector and more on the general issue of obtaining support for “business ventures”.

2.3 Implementation

The role of the Working Group was defined as providing strategic direction and “vital input to the development of projects and communication activities undertaken through the program”. A major role of the Working Group was to assess, agree and sign off on Pilot Commercialisation Project proposals.

Department of Agriculture, Fisheries and Forestry program staff, together with Working Group Members, had a responsibility to undertake State and industry consultation meetings to discuss possible Pilot Commercialisation Project proposals and joint action on other initiatives endorsed under the program.

The Working Group is actively involved in implementation and works collaboratively with program staff

¹⁷ New Industries Development Program, "Working Group Meeting No. 5, Agenda Papers," November 2000. Agenda Item 3.

Under the arrangements for continuous assessment, the Chair of the Working Group had requested that an individual group member be nominated to “speak for the group” in discussions with Program staff and at working group meetings in matters relating to individual projects under assessment. This provides for a form of “sponsorship” for individual projects.

The final decision to fund a project rests with the Department of Agriculture, Fisheries and Forestry.

Further discussion on the role of the Working Group and Department of Agriculture, Fisheries and Forestry program staff is included in Section 3.

2.4 Due diligence

Our understanding of the NIDP is that the major focus is investment in new products and services rather than in a business *per se*.

While in many instances there is a robust business infrastructure, it is also the case the NIDP supports innovative projects that are intended to be the basis for building a business. Due to imperfections in the flow of information between users and suppliers of capital (financial frictions), these projects do not attract funding from established financial intermediaries.¹⁸

The Working Group was aware that it is very hard to apply commercial means of valuation to most of the businesses applying for Pilot Commercialisation Project grants. Many applicants had come together for the particular project or have a very short track record¹⁹. Balance sheets can show negative net worth and P&L statements can show losses as companies finance working capital from a range of sources (personal savings, other jobs, credit cards). Family owned companies also mix business and family expenses.

The Working Group took the view that the focus in assessment should be on checking and testing the assumptions made in the application regarding the future performance²⁰. The Group agreed that the following issues be taken into consideration in undertaking the assessment:

Financial statements are not a good indicator of capacity for innovation

¹⁸ This issue is discussed in Section 10..

¹⁹ New Industries Development Program, "Working Group Meeting No. 5, Agenda Papers."

²⁰ Ibid.

- NIDP Pilot Commercialisation Project grants are aiming to make strategic investments by helping to reduce the commercial risks associated with the venture rather than straight “venture capital” returns
- First and foremost, emphasis is placed on assessing the value and size of the market opportunity and how well the applicant’s proposed product meets the opportunity, and the applicants ability to manage the necessary processes
- Having said that, it is anticipated that the level of internal procedures for some of the earlier stage businesses are not as sophisticated as those in more mature businesses and as such, discussions/meetings with potential applicants are very important
- As these projects focus on “new” products, technologies and services, changes in direction can be expected, as this is one of their competitive advantages.

It is clear from this guidance that the NIDP is investing in the innovator/entrepreneur – rather than a specific business.

It is also important to recognise that many small businesses are run as incorporated family businesses where the separation of business and family affairs is not complete. It is only as businesses increase in size, and external equity is taken on, that the separation between family and business affairs is forced.

In NIDP Mark I it has been possible for the Working Group and program staff to keep relatively close to the investments and investees. Regular contact has been maintained through program staff.

As the NIDP expands in scale and scope it would be useful to check in further detail the financial credentials of the applicants through more formal channels to ensure that they will be able to meet their obligations and not misallocate with grant proceeds.

This is common practice in negotiating procurement contracts with the Department including contracts for consultancy services. References from an accountant are also sought.

In the future, more robust checking of financial credentials should be undertaken

Recommendation

As the NIDP increases in scale and scope, the Department of Agriculture, Fisheries and Forestry undertake more formal reference checks including references for accountant/tax agent..

The NIDP has been interpreted in a number of ways

The NIDP should be seen as supporting a “portfolio of opportunities”

2.5 Interpretations of the role and operation of the NIDP

In our discussions and consultations there were a number of interpretations of the purpose of the program. These included

- As a “seed funding” program – in terms of support for the development of new products and services based on assessment processes and procedures similar to public support for research and development where there is a *probability* of a commercial outcome
- As an “investment” program - a government initiative to “invest” in innovative businesses to support development and growth and contribution to the economy – where there is a high *expectation* of a commercial outcome
- An investment fund – based on a “portfolio approach” seeking very high returns – and where there will be winners and losers, but hopefully the overall result will be positive – in a manner similar to the Innovation Investment Fund (IIF)
- An “award” for innovation – a recognition and “prize” for innovation success that can be used in subsequent marketing and capital raising efforts – a number of NIDP recipients use the NIDP logo on their Internet site as a testimonial to their business success
- As a “bucket of money” – one of many programs that can be accessed by small businesses to inject working capital into their operations and support their routine business development opportunities.

Our preference is to regard the NIDP as a program that supports the creation and growth of a “portfolio of opportunities and options in agribusiness”. In effect, such a portfolio targets new business development projects at three levels²¹:

- Ideas – concepts that may have a commercial application
- Experiments – ideas that have merit but need to be “validated” as business opportunities
- Ventures – experiments that look promising that could advance to a commercial venture stage.

²¹ The concept of ideas, experiments and ventures is drawn from the business innovation literature and particularly Hamel. It also relates to the strategy underlying *Backing Australia’s Ability*. The approach is addressed a little further in Section 10: The Institutional and Policy Environment.

This approach also avoids thinking in terms of a “linear flow” of a commercialisation process. There are substantial gaps and discontinuities in taking an idea (or a scientific discovery) to market.

That is, not all ideas are robust enough to proceed to experiments and not all experiments will end up as commercial ventures. Alternatively, some ideas after concept testing may well proceed to the venture stage without the need for experimentation.

The existence of gaps means that it will always be difficult to accurately predict a commercial outcome from an ideas and experiments portfolio²². A range of possible outcomes and actions arising from exploring each opportunity category is provided below. These are indicative and illustrative only.

Opportunity category	Objective	Possible outcomes (examples)	Possible actions/results of each stage
Ideas	To test credible but untried new business concepts	The idea is a “blockbuster” and will generate substantial revenues and profits	Look for development partners
		The idea is robust but needs testing in an experimental context.	Proceed to experiment on the basis of a clearly identified “project”
		The idea is practical, but cannot be developed further by the innovator	Seek IP protection and licensees Hold for further development Sell/transfer idea to other parties, including overseas partners
		The idea is workable but cannot meet production and quality standards	Hold idea for further development and revisit when new technologies and resources become available
		The idea has potential, but needs further developmental work	Look for associated/enabling technologies
		The idea is impractical	Dismiss idea as interesting but unworkable. Document findings
Experiments	To validate business ideas through low cost market incursions	Product is demonstrated to be commercially viable	Proceed to venture
		Product viable, but cannot be produced in sufficient scale	Develop alliances with suppliers; proceed to venture
		Product cannot be produced at competitive price	Review cost algorithms. Hold for further development.
		Technical barriers to market entry discovered	Encourage Government to negotiate market access.
		Technology problems in scaled up environment	Undertake further technology development
		Project demonstrated to be commercially unviable	Dismiss as impractical. Write off experiment

²² A more relevant metaphor for commercialisation is perhaps the game of “snakes and ladders”.

Opportunity category	Objective	Possible outcomes (examples)	Possible actions/results of each stage
		Cost of market entry is too high	Hold as an “option” for future investment when market conditions change
Ventures	To establish a profitable business model; identify strategic business partners (including financiers).	Sustainable product/service line created	Venture integrated with an existing business or “spun out” as a new business venture.
		Effective through chain linkages created – suppliers, manufacturers, distributors	Robust business network and alliance established and operating
		Business partners identified to provide capital, assist with marketing	Product assists in company being floated
		Product fails due to market, distribution factors	IP sold to another investor

The NIDP supports institutional change as well as commercial outcomes

In our view all of the 35 active NIDP Mark I projects will result in the full range of outcomes identified above. Our discussions and interviews indicate that only a handful of projects will develop quickly and easily to sustained commercial viability.

For most other projects the route to success is indirect and hazardous, with many barriers to be overcome. The commitment and passion of the entrepreneurs and innovators in this regard cannot be over-stated. Without NIDP support many projects would not start and more would fall by the wayside.

The contribution of the NIDP to supporting institutional change (including change in culture and attitudes to innovation and entrepreneurship) exists alongside objectives of commercial outcome. Projects address this issue through “learning by doing”. The Working Group addresses institutional change through the communication strategy.

At the same time, NIDP support should not be open ended as to both resources and time and commercial imperatives should not be regarded as of any lesser importance.

The NIDP should continue to invest in “ideas”

Clearly, the scope for commercial return is greatest in the venture category. There has been a tendency in other government programs (for example, the IIF) to focus more on this end of the portfolio as the prospect of meeting evaluation criteria that stress commercial outcomes is greater.

The risk is, of course, that if programs are evaluated only on measured economic return, program implementation will move away from supporting the development of ideas – which is where market and

*institutional failures tend to be the greatest and where policy interest has been directed.*²³

The framework identified above also points to the difficulty that grant recipients may encounter in meeting project milestones as a result of unforeseen or unexpected events and circumstances.

That said, however, it is critical that applicants commit to a sound project management discipline and where it is apparent that milestones might not be met this is communicated at an early stage.

In our view, it is important that the NIDP achieve a balance in its “portfolio of opportunities” between support for ideas, experiments and ventures.

Recommendation

The NIDP be seen as a seed-funding program that supports and encourages the creation and growth of a portfolio of business opportunities in the agribusiness sector. In building that portfolio, an appropriate balance be maintained between support for the development of ideas, support for experiments and support for new ventures.

The Working Group should consider the make up and allocation of resources of the portfolio in the planning for NIDP Mark II.

²³ The Chief Scientist in his Report was strongly focussed on the ideas end of the portfolio. Australia. Chief Scientist (Dr Robin Batterham), *The Chance to Change: Final Report By the Chief Scientist* (Canberra: 2000).

3 Management and Organisation

The NIDP is managed by the Department of Agriculture, Fisheries and Forestry under the guidance of a Working Group initially established under the Supermarket to Asia Council.

3.1 Working Group

The role of the Working Group is to provide strategic direction and input to the projects and communication activities undertaken through the program.

The Terms of Reference for the Working Group are:

1. Improve access of SMEs in Australia's agribusiness to quality information on new product development opportunities by
 - a. Identifying and supporting pilot commercialisation projects that define commercial parameters for success and communicate information on new business development models
 - b. Supporting research and pilot projects that improve information access and dissemination mechanisms and technology
 - c. Facilitation of alliances between Australian agribusiness and overseas industry players interested in mutual development of new products and sources of supply
2. Stimulate innovation within the agribusiness sector by demonstrating the benefits of effective technology and knowledge transfer by:
 - a. Ensuring that the lessons and business models developed through the NIDP activities, the Delicatessen Program and Supply Chain Program are made known to Australian Agribusiness with the potential to develop new products and services
 - b. Consult with key government, industry and research groups involved in technology and information transfer relevant to the sector to identify useful models and linkages
3. Promote understanding among all small to medium agribusiness enterprises of the need for, and improve access to, quality information, commercial skills, experience and in market contacts via;
 - a. Advising on NIDP initiatives that will facilitate the acquisition of in-market knowledge, experience and contacts
 - b. Creating opportunities for interchange between those who have been successful in developing new industries and products and those who are currently undertaking new opportunity research, development and commercialisation
4. Facilitate a change in the culture and structures within the Sector to promote cooperation across state and regional boundaries and along the potential supply chains for new products and services via:
 - a. Support for pilot commercialisation projects that involve through chain approaches to new agribusiness industry development
 - b. Networking and consultation with research and development organisations, Commonwealth and State Government agencies and industry to identify new industry development projects, which are consistent with the creation of sustainable competitive advantage
5. Undertake activities to build investor confidence in Australia's ability to develop new high value products and services and improve the usage of risk management strategies by agribusiness SMEs involved in new ventures by"
 - a. Contributing to understanding of venture capital raising issues and models and financial risk management strategies
 - b. Developing appropriate approaches to enhance the ability of SMEs to access finance and implement risk reduction strategies
 - c. Building links with the venture capital sector.

The tasks of the Working Group are quite demanding

The Working Group represents expertise in new product development and commercialisation

The Working Group brings together a broad range of professional knowledge and experience in new agribusiness product development and commercialisation. This has been critical to the success

of the program. The members of the Group for NIDP Mark I were:

- Malcolm Irving, STA Council, and Working Group Chair, Beerworth and Partners (now O'Connell Street Associates)
- Peter Shelley, Asia Pacific Pty Ltd (later Aquaculture Services Australia)
- Keith Gordon, General Manager, Wesfarmers Dalgety Seedtech (later John Corby)
- Ray Collins, School of Natural and Resource Management, Gatton College, University of Queensland
- Tony Byrne, General Manager, New and Emerging Products, Rural Industries Research and Development Corporation
- Wendy Morgan, Goodman Fielder
- Dr Barry Westlake, National Manager, ASX Enterprise Market (now Geophysical Technology)
- Lyndel Jack, National Manager, Agribusiness, Austrade
- John Sainsbury, Assistant Secretary, Food and Agribusiness Development, (later, Margaret McKinnon,) Department of Agriculture, Fisheries and Forestry

Supermarket to Asia Limited originally had observer status in the Working Group. Mr Jim Kennedy, CEO of Supermarket to Asia Limited, was appointed to the Working Group in February 2001.

The Group considers that it can best meet its terms of reference by supporting quality Pilot Commercialisation Projects together with an active communication program.

With the introduction of NIDP Mark II in March 2001, the responsibilities of the Working Group in relation to the completion of NIDP Mark I activities were assumed by the Advisory Committee established for the new program. There is substantial continuity in membership.

Howard Partners has formed the view that the NIDP Working Group has performed exceptionally well in project selection and in communication of program information through a wide a wide range of communication initiatives. This view is based on interview and discussion with nearly all of the 35 active recipients of NIDP Mark I funding²⁴.

During consultations Working Group Members complimented program staff for the professionalism in preparing the documentation, the completeness of the briefing material and their knowledge in responding to queries during meetings.

There is continuity of membership between NIDP Mark I and Mark II

The Working Group has been well supported by Program staff in the Department of Agriculture, Fisheries and Forestry

²⁴ One of the 36 approved projects has been terminated.

The NIDP Working Group is a genuine *working group*. Members are involved in the work of the NIDP and make a strong commitment. This is similar to the *modus operandi* of the Boards of the Rural Research and Development Corporations – and in contrast to many other Government Councils and Committees which simply review and comment on material handed to them by assessors from within government or by contractors.

Communication has been one of the strongest points of the NIDP. It is driven by a well-developed communication strategy. This was discussed in Working Group Meeting 1 and revisited at Meeting Five. Highlights of the communication strategy have included:

- The *On the Land* Profiles of the NIDP in respect of capital raising and Pilot Commercialisation Projects
- Supplement in *The Australian* newspaper on 27 July 2001
- Publication of seven issues of *Made in Australia*
- Publication in other Department of Agriculture, Fisheries and Forestry media
- Speeches, papers and strong relationships with stakeholders – particularly State development agencies.

An effective communication strategy has been a strong point of the NIDP

The performance of NIDP communication is addressed elsewhere in the Report.

The initial program guidelines provide that the Working Group will not meet more than four times a year and that only two of those meetings will be held on a “face to face” basis. This was later changed to include three face to face meetings when the Pilot Commercialisation Project approvals process moved to a rounds based arrangement.

Ongoing input from individual Working Group members on Pilot Commercialisation Projects proposals is conducted via e-mail. Working Group Members maintained constant communication with Departmental program staff.

The committee members rank each project according to a weighting scale that covers the following factors:

- Competitive
- Substance
- Management
- Support
- Wider benefits

These factors are articulated in further detail in the Appendixes accompanying this report.

Ratings are made by members prior to a Working Group meeting. *Results are discussed among members with a view to reaching a consensus about the progress of an application.*

There were six meetings of the Working Group under NIDP Mark I

The Working Group met on the following occasions:

1. 11 August 1999 - Parliament House, Canberra
2. 30 November 1999 – video conference
3. 8 March, 2000 – telephone conference
4. 17 August 2000 - Sydney – O’Connell Street Associates
5. 10 November 2000 – Sydney, Australian Stock Exchange
6. 29-30 March 2001 - Launceston.

The meeting in Launceston was scheduled to enable site visits prior to the meeting in the north of Tasmania.

Participation of members together with attendance of Program staff in each meeting has been as follows.

Meeting No	1	2	3	4	5	6
Malcolm Irving	✓	✓	✓	✓	✓	✓
Peter Shelley		✓	✓		✓	✓
Keith Gordon (Resigned March 2000)	✓	✓				
Ray Collins	✓	✓	✓	✓		✓
John Corboy (Appointed November 2000)					✓	✓
Tony Byrne	✓	✓	✓	✓	✓	
Wendy Morgan		✓		✓		✓
Barry Westlake	✓	✓	✓		✓	✓
Lyndel Jack	✓	✓	✓	✓	✓	✓
John Sainsbury	✓		✓	✓	✓	✓
Observers						
Jim Kennedy/Andrew Combe	✓	✓			✓	✓
Bev Clarke					✓	
NIDP program staff						
Merryn Kennedy				✓	✓	✓
Deborah Gifford	✓	✓				
Nick Jackson	✓	✓	✓	✓	✓	✓
Wayne Ryan	✓					
Phillip Fitch		✓				
Linda Pahl		✓			✓	
Stuart Cardell				✓		
Rob Millington						✓
Lucy Ball						✓

Documentation for the meetings is very well prepared and minutes and records well kept.

It appears from the minutes that members have been at pains to declare potential conflicts of interest.

The quality of meeting documentation has improved progressively over the life of NIDP Mark I

Over the course of the meetings the format of the documentation, and particularly Pilot Commercialisation Projects proposals has become more complete and rigorous in their assessment.

3.2 Department of Agriculture, Fisheries and Forestry program staff

A Section within the Food Division of the Department of Agriculture, Fisheries and Forestry manages the NIDP. Staff are employed under the *Public Service Act* and the enterprise agreement covering the Department of Agriculture, Fisheries and Forestry.

The staffing profile, from the initiation of the Program to the completion of approvals under NIDP Mark I is set out below.

Time frame	Grade
July 1999 - Start of program	SOG B (20%)
	SOG C
	ASO 6
	ASO 5
From April 2000	SOG B
	ASO 6 x 2
From December 2000 to March 2001	SOG B
	ASO 6 x 3
	ASO 6 (50%)

There were in addition two Graduate Trainees working under NIDP Mark I for periods of three months.

Thus, staffing for NIDP Mark I increased from approximately 3.2 positions at the start of the Program to 4.5 in March 2001. This was an increase of 45.2 percent. Funding under the program increased from the initial \$3.1m to \$4.6m with the transfer of funds from Food and Fibre Chains Program – an increase of 48.4 percent.

Our observation is that the level of staff support for the Program has been at a minimum level, with work being concentrated on processing PCP applications, implementing the communication strategy and preparing material for the Working Group.

The view of the Working Group is that staff have developed a disciplined approach to preparing advice and have worked well with the Working Group.

In similar assignments we have undertaken an analysis of time spent by staff in nominated activities. This was not possible in this project as the activities of staff are now related to NIDP Mark II.

Discussion of issues relating to staff development and training is addressed in Section 4.

3.3 Implications for NIDP Mark II

With an increase in funding under NIDP Mark II, an expansion in support for Pilot Commercialisation Projects and greater commitment to other activities, there will be a need to strengthen the management infrastructure.

In this context we are referring to systems for planning, coordination and control of program activities as well as commitment to staff development and training. These systems include:

- Planning
- Support for the Advisory Committee
- Budgeting and reporting against budget
- Communication with applicants (potential and successful) and other stakeholders
- Project management
- Payments and acquittals
- Evaluation and review

Inevitably this will require some addition in staffing. There is a need, however, to ensure that the substantial increase in resources is effectively managed.

It is important for the efficient and effective delivery of the Program that management is seen as a function that adds value to outcomes – rather than be viewed as a cost. Nonetheless, the importance of tight budgetary control over administrative overheads should be continued.

A significant proportion of time that is classified as administrative overhead is in fact project management undertaken by project staff. Provision should be made to formally allocate time for project management, and record it, in order to ensure that the costs is regarded as part of running the program rather than an administrative support overhead.

Recommendation

As the NIDP expands in scope, appropriate investments be made in management infrastructure, including training and support systems to support project management. Time allocated for project management should be regarded as a cost of the program rather an administrative overhead..

4 Resources

4.1 Funding

Funds are administered under the provisions of the *Financial Management Act*.

The NIDP is managed on a very tight budget

4.1.1 The Budget

The initial budget for the NIDP, as agreed at the first Working Group Meeting in August 1999 is as follows.

Program Element	1999-2000	2000-2001	2001-2002	Total	Proportion
	\$	\$	\$	\$	%
Program Administration Overheads	157,226	158,785	213,978	529,989	17.3
NIDP Working Group Costs	33,600	33,600	33,600	100,800	3.3
Pilot Commercialisation Projects	333,000	806,500	550,000	1,689,500	55.0
Agribusiness Opportunities Intelligence Site	70,000	65,000	15,000	150,000	4.9
NIDP Mentor Project	25,000	110,000	80,000	215,000	7.0
NIDP Scholarship Project	5,000	52,500	50,000	107,500	3.5
Venture Capital and Risk Management Project	25,000	100,000	0	125,000	4.1
NIDP Dissemination Funds and Evaluation		25,000	129,902	154,902	5.0
Total	648,826	1,351,385	1,072,480	3,072,691	100.0

The Program is managed with a very tight budget framework. There is a view from the Working Group that, to the greatest extent possible, funds should be allocated to projects – not administration. The Working Group closely monitors the budget and detailed reports have been presented to each meeting.

The budget provided for 82.7 percent of funding to be allocated to program activities (\$2.5m) and 17.3 percent for management and administration (“overheads”).

One year into the Program NIDP staff reported that project expenditure for approved projects and those under consideration at the August 2000 meeting was \$1.2m. By this time management and administration funds had been fully expended. Additional resources required to manage the program were absorbed within the Department of Agriculture, Fisheries and Forestry Food Group.²⁵

The same budget was presented to the Working Group in November 2000. At that time commitments for Pilot Commercialisation Projects amounted to \$1,276,437 – leaving a balance for new commitments for the remaining half of the program of \$263,000.

²⁵ New Industries Development Program Working Group, *Fourth Meeting: August 2000: Agenda Papers*.

NIDP funding was supplemented by a transfer from the Food and Fibre Chains Program

The Working Group had been so successful in approving projects that met criteria that it would have little to do in this area for a period of 18 months.

The Working Group was advised at the November 2000 meeting that agreement had been reached with the manager of the Food and Fibre Chains Program to transfer \$1.5m to the NIDP program to support Pilot Commercialisation Projects at the November 2000 round and provide for a further round in March 2001.

The Working Group was advised at the Sixth Meeting that:

- Total funds allocated for Pilot Commercialisation Projects amounted to \$3.2m over the three years of the program
- Funds available for commitment in the March 2001 round was \$1.1m.

Based on information presented to the most recent, meeting of the NIDP Advisory Committee (March 2002) there is a potential underspend of \$505,500 as a result of approved projects not being able to be finalised by 30 June 2002.

Analysis of the financial report presented to the NIDP Advisory Committee in March 2002 indicates the following:

Period	\$	%
Payments made 1999-2000	102,000	2.6
Payments made 2000-2001	1,410,076	47.8
Payments made 2001-2002 (to end March)	505,687	17.1
Payments likely to be made 2001-2002 (to end June)	363,010	12.3
Payments that might not be made by 30 June 2002	505,500	17.1
Total active project funding	2,886,273	97.8
Project terminated	64,240	2.2
<i>Total Pilot Commercialisation Project approvals</i>	<i>2,950,513</i>	

As NIDP Mark I concludes on 30 June 2002, any funds not spent by that time will be lost to the Program. There is no provision for carry-over. This is placing substantial pressure on applicants approved in March 2001, and the Department, to complete projects by this time.

Awareness of poorly performing projects was too late to allow termination and re-allocation of funds to new projects due to the ending of NIDO Mark I in June 2002. It is important that when it becomes apparent that

Management must be seen as an activity that adds value to program outcomes – not a cost.

milestones are not being met action be taken to ensure that a project is on track. Where necessary, changes in project expectations should be made.

4.1.2 Support for management

With the expansion of the program in NIDP Mark II it may be necessary to revisit the level of funding for program administration.

The initial budget allocated 17.3 percent of program funds for administration. Funds were fully expended by November 2000. The allocation was not increased when \$1.5m was allocated for Pilot Commercialisation Projects in November 2000.

With increases in the size and scope of the program in NIDP Mark II, together with additional staffing and the requirement for internal and external reporting, management costs tend to increase disproportionately in relation to program costs.

There are significant risks in not adequately resourcing management – ranging from lack of coordination through to errors, mistakes and misallocation. Managers also provide leadership, undertake essential people management responsibilities and ensure that essential planning and control systems are in place.

The Program Manager for the NIDP has a critical role in ensuring consistency in strategic direction, and promoting and coordinating program activities with a wide range of stakeholders. It is much more than a consulting and project management role.

It is a little regrettable that the NIDP Budget implies that management is an “overhead” and, by implication, a cost.

In our view, and supported by the Working Group, effective program management adds substantial value to program outcomes. It has been, and will continue to be, vital to the success of the NIDP. It must, therefore, be adequately resourced.

A common benchmark for management expenses in public programs is 20 percent of program expenditure²⁶. This covers not only management salaries but also costs of management systems, communication, reporting and professional development. Many of these costs are essential for effective program performance – and

²⁶ This figure has been used as a benchmark by the NSW Council on the Cost of Government. A Budget for NIDP Mark II presented at the 6th Working Group Meeting placed “Administration” at 18.9 percent of program expenditure.

should be distinguished from “back office” costs of processing and general administration.

Comparisons of administrative costs between the NIDP and investment programs such as the IIF and venture capital funds are inappropriate – for example:

- Venture capital investors may receive “consultancy fees” from their investee companies for advice provided
- The 17 Business Advisers for the COMET program receive a base fee of \$100,000 plus \$10,000 for expenses; a further “success fee”, set at between two and five percent of venture capital raised within two years of assistance, is also provided.

Recommendation

The management function for the NIDP be related to a benchmark of 20 percent of program costs.

This does not imply that management costs be *set* at 20 percent of program costs. A performance indicator for management should be to try and work below this benchmark as a way of directing additional funds to projects.

Information and knowledge about the NIDP and the environment in which it operates are key resources available to the Department.

4.2 Information and knowledge management

Staff in the NIDP have generated a substantial amount of knowledge about the program and its operations through a process of “learning by doing”. Much of this is reflected in processes and procedures that are applicable to the ongoing management of the program.

Over the last three years a substantial amount of explicit and tacit knowledge has been built up by Program staff that will be of ongoing benefit to future staff and Working Group members. This knowledge is also of benefit to grant applicants in preparing their applications.

The knowledge about the operation of the program is what can be termed “common knowledge” - what people learn from doing the organization’s tasks – it is to know how rather than know what. A number of members of the Working Group observed that Program staff have become so expert in undertaking assessments that it would be a pity if that knowledge and skill base were lost through promotion and transfer to other parts of the Public Service.

Organizations have demonstrated the tremendous cost savings that can be achieved through sharing knowledge. But unless the transfer system is

appropriate for the kind of knowledge and the task, it may end up being ignored – and abandoned.²⁷

The common knowledge that is generated by staff in the process of accomplishing the Program's tasks, particularly having developed new and innovative methods and processes, is where knowledge sharing can pay off.

To this extent the knowledge created through the development of processes and procedures in the NIDP would be of value for existing and new programs being developed in the Department of Agriculture, Fisheries and Forestry, and across Government.

Transfer of common knowledge involves a process of:

- Creation and documentation
- Finding a method for transferring it to a group or individual that can reuse it
- Translating what has been learned into a form that others can use
- Making it possible for a receiving team or individual to adapt the knowledge for use in a particular context.

Recommendation

A process be established for capturing and sharing the “common knowledge” generated in the course of managing the NIDP within the Department of Agriculture, Fisheries and Forestry and in particular, in the design and delivery of new programs. This process should be extended to include other Commonwealth programs targeted at the commercialisation of scientific research and technology.

4.3 Professional development

There is an associated issue concerning the career paths of program staff in the NIDP. Given the small size of the Unit there are limited opportunities for career advancement. We note, of course, that being expert in one job is not a basis for promotion to a more senior managerial role. Management roles require a different range of skills and capabilities. It is important, however, that functional skills be retained and passed on.

Nonetheless, we see professional development as an important issue and, as a basis for career advancement

²⁷ Nancy M Dixon, *Common Knowledge: How Companies Thrive by Sharing What They Know* (Boston: Harvard Business School Press, 2000).

within the Department of Agriculture, Fisheries and Forestry, NIDP program staff should be given an opportunity to work on a short term basis in a policy environment in another agency with a view to returning to the Department to contribute a greater policy and strategic role in relation to the design and delivery of entrepreneurial support programs.

Recommendation

NIDP Program staff be given an opportunity to develop policy and strategic skills as a basis for contributing to the design and delivery of Department of Agriculture, Fisheries and Forestry entrepreneurial development programs

4.4 Efficiency indicators

Efficiency is concerned with cost and productivity in the management of the program. The most relevant indicators are:

- Cost of processing an application through to approval
- Productivity
- Cycle time.

These categories of performance indicators are applied in many government programs and are consistent with efficient process management. Information should be collected on a systematic basis through a project tracking system in order to “benchmark” and assess performance on a regular basis.

4.4.1 Cost of application and approval

The average cost of “producing” a successful Pilot Commercialisation Project grant application is in the region of \$8,100. This cost includes time responding to queries, application processing – including for unsuccessful applications.

This is an indicative figure only, but serves as a basis for making comparisons.

The estimate is derived by:

- Allocating administration costs to Pilot Commercialisation Project activities in proportion to their significance in the Program (55 percent, or \$291,495)
- Dividing by the number of successful grant applications (36)

The lower costs in the NIDP reflects the greater number of project approvals which, in turn reflects better

The cost of processing an NIDP application under Mark I was in the region of \$8,100

targeting of prospective grant applicants. It also reflects high levels of efficiency in processing and cost control.

4.4.2 Productivity

A typical productivity indicator is the number of applications processed in a given time frame.

Information about project approvals under NIDP Mark I is provided in the following table²⁸.

By December 2000, one year into the Program, the NIDP Working Group had approved 23 projects with a value of \$1.9m. Total allocations for the program for Pilot Commercialisation Projects have been \$2.9m.

Month Approved	Number of Approvals	Cumulative Approvals
<i>Continuous assessment process</i>		
January 2000	1	1
February 2000	1	2
May 2000	5	7
July 2000	1	8
<i>Rounds based assessment process</i>		
August 2000 ²⁹	7	15
December 2000	8	23
March 2001	3	26
April 2001	8	34
May 2001	1	35
June 2001	1	36

The time frame for processing an application is in the order of two months.

4.4.3 Cycle time

The “benchmark” for application processing at the commencement of NIDP Mark I was set at 30 days. This was based on a continuous assessment process. With the introduction of the rounds based approvals process, there was a fixed time frame between the closing of applications and subsequent consideration at a Working Group Meeting. That is:

- Applications closing in May were considered at the August meeting
- Applications closing in September were considered at the November meeting
- January applications were considered in March.

On a number of occasions the Working Group deferred approvals pending clarification and receipt of additional information. A further period, generally a month, was required for preparation and execution of contracts. Thus, the time between lodgement of an application and

²⁸ New Industries Development Program Advisory Group, *Third Meeting: Agenda Papers* (Canberra: 2002).

²⁹ Includes approval for a project that was terminated. The amount “lost” was \$30,000.

an agreement to proceed with the project is up to three months.

The implied cycle time between lodgement and approval (rejection) for this process is two months. Given the steps and tasks involved in the assessment process (Section 5.3 below), we do not regard this timeframe as excessive. The timeframe extends where additional information is sought.

What is important in this context is that applicants are aware of the process and the time frame and seek to provide the necessary information to enable assessments to be made.

5 Business Processes

There are a number of discrete business processes involved in the management of the NIDP. These are:

- Dissemination of program information
- Project inquiry
- Project assessment
- Project approval
- Monitoring and review

A number of these processes have been mapped in some detail. Process maps are included at Appendix 1.

Under NIDP Mark I a total of 255 information packs were mailed out in response to mail, telephone, fax and Internet enquiry. A total of 85 applications that went to the Working Group of which 36 received funding. (One project has been terminated.) NIDP Mark II will have a broader scope that needs to be kept in mind in looking at business processes.

Program promotion has used a well-integrated communication strategy

5.1 Program promotion and dissemination

Communication has been a critical aspect of the NIDP. The initial communication strategy for the program included the following actions.³⁰

- Develop a clear and distinctive logo and colour theme for the program
- Establish an NIDP Internet site which will become part of the New Agribusiness Opportunities Internet Site (NAOIS) project
- Develop a program of joint activities with STA and Agri-Chains Solutions to ensure that as far as practical these programs are jointly promoted as complementary STA initiatives
- Use major State and rural press to cost effectively promote awareness of the program and encourage potential clients to seek information on the program
- Use sponsorship arrangements to establish displays and provide program representation at key industry conferences and seminars which have a significant attendance by agribusiness managers and advisers

³⁰ Source: NIDP Working Group Meeting Papers, 11 August 1999.

- Piggy back NIDP information in case study articles, etc on successful projects from the Delicatessen program to raise awareness of the NIDP program (as a follow on from the Delicatessen program), promote understanding of the key program messages and stimulate proposals for Pilot Commercialisation Projects funding
- Promotional kit to be developed to include A4 flyer, guidelines and poster
- Through AFFA PR send radio “grab interview tapes” to ABC regional radio. This will include short interviews with NIDPWG members and Deli project people
- Arrange key meetings in each State with key government and industry advisers to discuss the aims of the program, Pilot Commercialisation Projects guidelines and possible joint development initiatives
- Meeting with staff in other areas of Department of Agriculture, Fisheries and Forestry, ISR and Austrade to explain the program.

The communication strategy to promote the NIDP has, in general terms, been highly successful

Our analysis of material and consultations indicate that these activities have been substantially executed over the last two and a half years with the result that there is a very high level of awareness among the target audiences identified above of the NIDP program.

Promotion has been targeted through business and rural networks and State regional development agencies.

A great deal of effort has gone into promotion and dissemination to ensure that applications that meet the criteria of the program are solicited.

State development agencies in a number of States have been supportive of this process and have acted as “brokers” in managing the applications process.

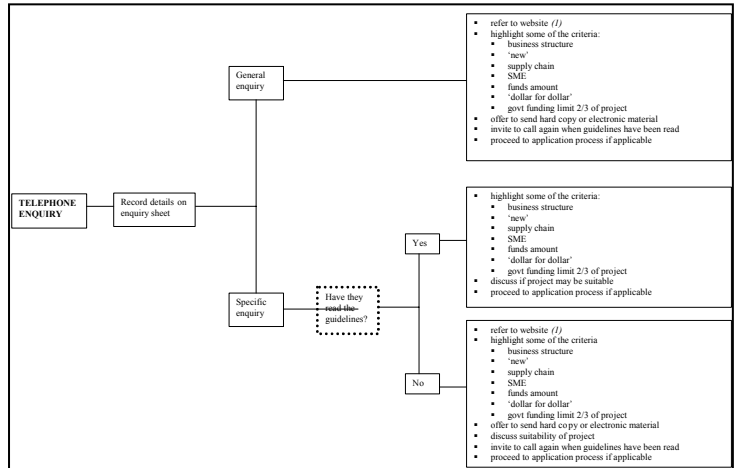
There were a number of people with whom we spoke from the financial sector who indicated that the Program could be more actively promoted through banks and related financial institutions.

Detailed process maps have been developed for the enquiry process

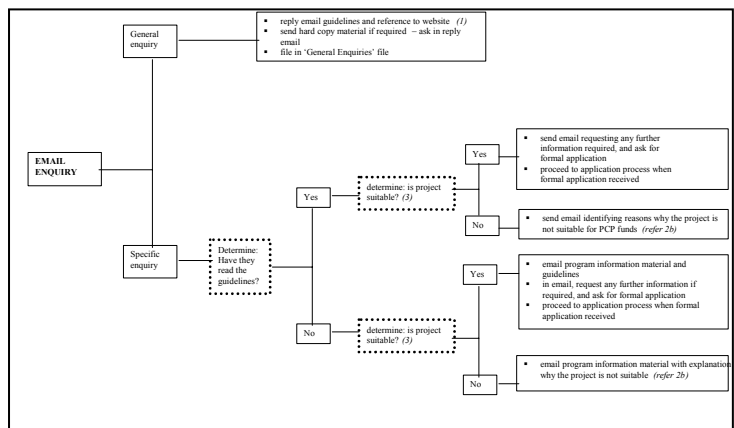
5.2 Project enquiry

The program staff have defined three processes for responding to program enquires. These are represented below. Larger scale maps are provided in the Appendixes to this Report.

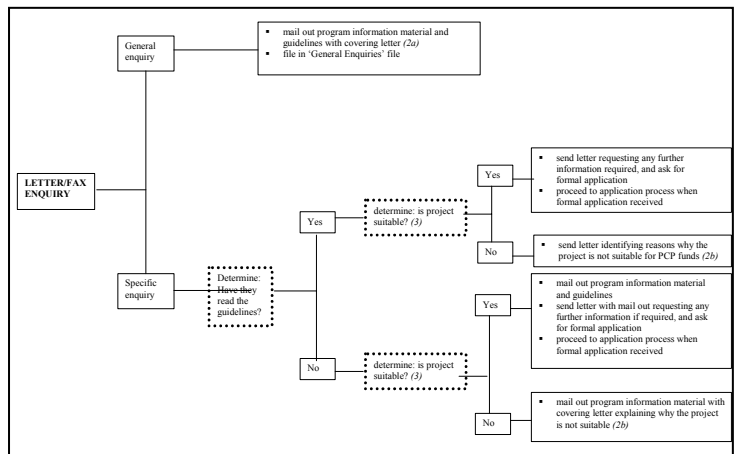
Telephone inquiry



E-mail inquiry



Letter/fax inquiry



Application and assessment procedures have been extensively documented

The Mark I process involved an extensive checklist

5.3 Application assessment

The last round of applications under NIDP Mark I were processed in the March 2001 round. The Mid Term Review of the Program reported to the Working Group at its fifth meeting in November 2000 on application and assessment procedures.³¹ The following comments are based on that Review.

Under NIDP Mark I the application form requested a basic set of business related information, where available. This included:

- Business structure
- Number of employees or members in group
- Total annual turnover
- Total sales
- Total tangible assets
- Total liabilities
- Net profit for the last three financial years
- P&L and Balance Sheet for the last three financial years.

The proposal form required the applicant to identify the financial contribution of chain partners, the feasibility of the product and expected financial returns.

Applicants generally provide information about resources they have put into the project and how much over and above the “project budget” they will be contributing to the commercialisation process.

The Project Assessment Checklist used for NIDP Mark I includes the following:

- Create a summary document
- Prepare the summary for distribution to the Working Group
- Prepare COI Declaration. Send to WG members
- Coordinate replies from WG
- Prepare draft assessment document
- Undertake consultation process – Department of Agriculture, Fisheries and Forestry, other Commonwealth and State Departments, industry association contacts, nominated referees, other relevant people, special involvement of a WG member, legal and financial advice
- Research and investigate claims made in application and the people and companies made in the project
- Scrutinise the work plan and budget

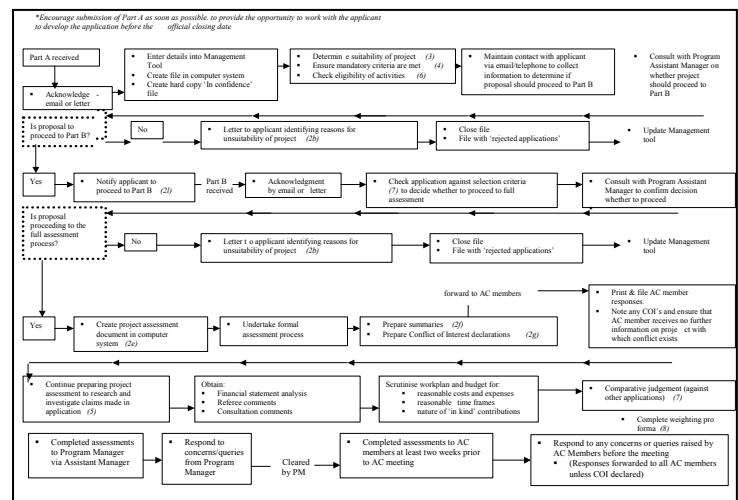
³¹ New Industries Development Program, "Working Group Meeting No. 5, Agenda Papers."

- Ensure project activity commences after next WG meeting and completed before June 2002
- Request if necessary further information from applicant including technical specifications, Bank Audit Certificate
- Have draft assessment checked in Branch
- Complete the weighting pro-forma
- Assessments sent to the WG members
- Provide additional information in response to WG requests
- WG recommendation for approval, rejection or additional assessment
- Prepare draft contract
- Contracts agreed
- Purchase order raised
- Payments made on receipt of tax invoice.

Process documentation is being developed continuously

Over time the process documentation has become more refined.

A detailed process map for the application assessment process has been prepared by the program secretariat reflecting the activities that are now carried out under the Program. This is reproduced in Appendix 2. The level of detail involved in the process is represented below.



Pro-forma letters have also been prepared to cover aspects of the application and approval process.

A description of the current selection, assessment and weighting scales are located at Appendix 5. In addition to documentation of criteria, the criteria also point assessors to a number of reference points including State government agencies, industry associations, special comments from Advisory Committee members, legal and financial advice and other documentation.

A diagnostic is currently being developed by *Fast Trac* to assist in the assessment process. The diagnostic is

The NIDP processes have been documented in detail

sourced from the Kaufmann Institute for Entrepreneurship – now known as the National Commission for Entrepreneurship.

Our observation is that the processes involved are comprehensive and thorough, and represent a model for other programs. They fully meet the standards of accountability and probity that are appropriate to the management of public funds.

Our consultations indicated that the applicants, in general, completed the application form. Applicants who had a science or research background found the form and information requirements very straightforward. In most other cases, applicants also considered that the application form and process to be straightforward.

Some applicants found the process of completing the form time consuming (approximately 20 hours) but this was considered acceptable - as the successful applicant would be receiving a (non repayable) grant from the government.

In general, applicants completed the application form themselves

There were a few applicants who found it difficult to translate their ideas into a project proposition. We were also advised, however, that NIDP staff have been helpful in explaining and assisting in filling out the details. There was a strong message from people who had run successful projects that applicants should approach NIDP program staff directly for advice.

There was some surprise expressed during consultations that NIDP staff do not always undertake site visits as part of the application process. This is due to resource constraints. We note, however, that State and regional networks have a role in assisting in the submission process and that some applicants took the initiative and went to Canberra to meet program staff.

Our overall conclusion is that the business processes are sound and represent a firm basis for expanding the program under NIDP Mark II. They also provide a model for application in other grant and funding programs.

We were concerned, however, to hear that consultants were approaching businesses and seeking to prepare applications on a “success fee” basis. In our view, this defeats the purpose of the NIDP, which is to direct resources to the projects.

Recommendation

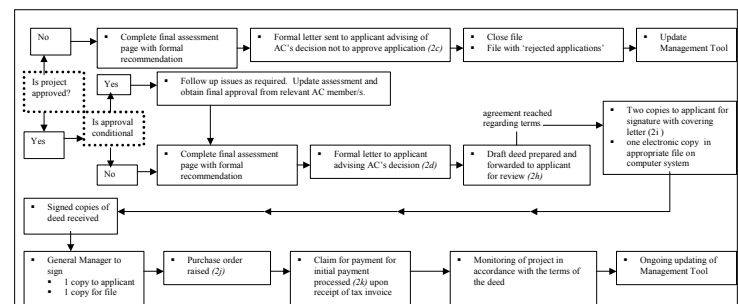
Applicants be required to declare the extent to which they have paid a commission or success fee to a consultant for assistance provided in preparing their application.

Notwithstanding the comprehensiveness of the process, detailed adherence to process will not guarantee that a project will achieve the outcome intended. There are many factors that will occur in the economic, technology and business environment that will impact on success. But a quality process will ensure that process risks are minimised.

There are established processes for project monitoring

5.4 Follow on and monitoring processes

The post approval and monitoring process is mapped at Appendix 3. Its scope is indicated below.



During the consultations process recipients were asked about their reaction to the ongoing monitoring arrangements. In general, recipients found the program staff to be helpful and cooperative and thoroughly professional in their approach.

There were only two broad concerns:

- Delays in responding to progress and milestone reports
- A site visit at the beginning and end of the project.

Recipients are, of course, very often late in preparing milestone reports.

We understand that delays are caused by workload pressures and would be reluctant to recommend more staff be allocated, as these pressures are generally uneven.

We do, however, support at least two site visits for the purposes of meeting the applicant in the first instance and seeing how the project has performed prior to final sign off. This would meet accountability as well as knowledge objectives. It would also establish a first hand understanding of the project and establish relationships between the recipient and program staff.

Recommendation***NIDP staff visit project sites after project commencement and prior to sign off on the final report***

With the increase in staff under NIDP Mark II there has been of necessity some reallocation of project responsibilities. A number of applicants commented that they had to “re-train” new project officers and bring them up to speed about their projects.

Whilst this is a concern, we do not see it as a major issue. Again, we see it as important for project staff to visit the site at least twice during the project life-cycle.

Recommendation***Newly assigned project officers familiarise themselves with projects through a site visit******Projects should be closely monitored to ensure that milestones are met.*****5.5 Project tracking**

Under current arrangements project progress is tracked using a manual system based in Microsoft Word. This has served the program well and is capable of producing management reports that meet Working Group and management needs. Reminders to contact recipients are programmed into officers’ Microsoft Outlook diary systems.

Information about current project status as at 8 March 2002, drawn from the management report prepared by NIDP staff for the Working Group is detailed in Section 6.1.3 below. The management report also includes information about the progress of projects and follow up action required. A total of 10 projects are identified that might not be completed by the end of June 2002 when funding terminates.

Although some of the projects that may not be completed were approved following the march 2001 Working Group Meeting, the Working Group and NIDP staff should carefully monitor milestones and move to terminate projects if these are not met. This would allow funding to be diverted to other projects.

We have argued elsewhere in the Report that, as a matter of course, project timeframes should not be allowed to extend beyond two years – except in exceptional circumstances.

Recommendation***Pilot Commercialisation Projects that consistently fail to meet milestones should be terminated in order to allow funds to be allocated to other projects***

At the commencement of the Program a tracking system was implemented - referred to as the *Management Tool*. This was intended to track information from inquiries

through to approved projects and ongoing monitoring. Unfortunately, it suffered a number of limitations – such as an inability to input more than 500 words of text – and the system is no longer used.

With an increase in the number of projects under NIDP Mark II we consider it necessary to develop a more sophisticated tracking system. However, this should be kept simple and should use packaged software or a Microsoft Access application.

Recommendation

As NIDP Mark II comes on stream, investigations be made to develop a Microsoft Access based project tracking system for the NIDP

6 Program activities and results to date

In this Section of the report, attention is focussed on the indicators of program effectiveness.

6.1 Pilot Commercialisation Projects

Effectiveness indicators relate to program “outputs” – that is, a tangible product or service provided to an individual or organisation³². For the Pilot Commercialisation Projects effectiveness indicators relate to:

- The “quantity” of projects supported, their location and industry sector
- The “timeliness” of projects in relation to completion within scheduled time frames
- The “quality” of the projects in terms of addressing technology, market and business needs
- The level of client/customer satisfaction.

These indicators are addressed below

6.1.1 Location of projects

The State location of projects approved under NIDP Mark I are listed below.

State	Number of Projects	Funding \$	Proportion %
NSW	8	690,100	23.4
Victoria	9	746,490	25.3
Queensland	4	320,500	10.9
South Australia	6	491,611	16.7
Western Australia	2	150,600	5.1
Tasmania	6	479,750	16.3
External territories	1	71,462	2.4
	36	2,950,513	100.0

We note the relatively high number of approvals in NSW, Victoria, South Australia, and Tasmania.

The allocation reflects a number of factors:

- Absence of a “notional” State allocation or “quota”
- The importance and significance of the food industry in the Victorian industrial base
- The involvement in State development agencies in soliciting applications and ensuring that they meet program guidelines

Approvals do not reflect a State “quota”

³² This definition is consistent with the Commonwealth’s Outputs and Outcomes Framework Australia. Department of Finance and Administration, *The Outcomes & Outputs Framework: Guidance Document* (Canberra: Department of Finance and Administration, 2000).

- The commitment of the Tasmanian Government in particular to seeking business opportunities in the depressed economy of the State – and the commitment of the Department of State Development to facilitating the process of finding good projects

6.1.2 Industry Sector

Projects approved by industry sector are detailed below.

Twenty One percent of projects are for horticulture

Sector	Projects Number	Funding (\$)	Proportion (%)
Ag services	2	170,435	5.8
Aquaculture	5	422,062	14.3
Dairy	1	85,000	2.9
Fishing	1	82,000	2.8
Game meat	1	96,000	3.3
Grain	2	150,000	5.1
Horticulture	8	620,000	21.0
Ingredient manufacture	4	380,000	12.9
Meat	1	100,000	3.4
Natural Products	5	285,576	9.7
Other (Mining application for ag)	1	95,500	3.2
Red meat small goods	1	99,700	3.4
Seafood processing	2	194,240	6.6
Seed	1	100,000	3.4
Vegetable	1	70,000	2.4
	36	2,950,513	100.0

The analysis indicates a concentration of projects in horticulture and aquaculture. This reflects a number of factors:

- The pattern of applications
- A lack of funding from other sources for horticulture ventures
- The small business and market “niche” focus of horticulture ventures
- The opportunities in other areas for innovation in grains (GRDC) and dairy (DRDC, ADC) and State government agencies – particularly Victoria.

The data do not reflect the high commitment to projects that support natural products and ingredients as these activities do not have tight industry definitions.

In terms of the allocation of funds between program elements, the concentration has been very much on products.

	Projects Number	Funding \$	Proportion %
Process Technology	3	264,240	9.0
Products	26	2,175,588	73.7
Product & process	3	200,000	6.8
Technology and product	4	310,685	10.5
	36	2,950,513	100.0

NIDP staff advised the Working Group at the Sixth Meeting that

Due to the limited human and financial resources available to the NIDP, it has not been possible to actively target sectors and opportunities. This is an area that will be further developed in the expanded program.³³

6.1.3 Timeliness

Indicators of timeliness relate to:

- The completion of projects within the expected timeframe.
- Outputs meet scheduled completion dates and milestones
- Projects are undertaken where opportunities can be quickly acted on.

Data on project status in NIDP Mark I, as at 8 March 2002, is provided below.

Project Status	Number of Projects	Proportion of projects (%)
Completed	5	13.9
Terminated	1	2.7
Due for Completion March 2002	9	25.0
Due for Completion June 2002	11	30.6
Projects with concerns or issues	10	27.8
Total	36	100.0

The data indicate that over 70 percent of projects will be completed by June 2002.

Of the 10 projects that have “issues and concerns”

- Two were approved in August 2000 (4th Meeting)
- Three were approved in December 2000 (5th Meeting)
- Five were approved in March 2001 (6th Meeting)

The reasons for projects not meeting their scheduled completion date include³⁴:

There are several projects that may not meet their scheduled completion dates

³³ New 2001).

ing Group, *Sixth Meeting - Friday 30 March 2001: Agenda Papers* (Canberra:

³⁴ These summary conclusions are based on our consultations and notes prepared for the Working Group by Program staff.

- Change in market circumstances – 1 project
- Unanticipated pressure of other business activities – 2 projects
- Insufficient level of commitment to the project – 6 projects
- Unexpected events and occurrences – 1 project.

As at 8 March 2002, the amounts outstanding on these projects total just over \$500,000 – with four months to go.

Of the five approved at the March Meeting, it may have been unreasonable to expect that the projects would have been completed in just over 12 months. At the same time, applicants would have been aware that funding was for that period only. If that was the case they should not have had any expectation that funds would carry over if the project were to be delayed for whatever reason.

It is important that in the assessment process the Working Group and Program staff are convinced that there is a high level of commitment to the project and a demonstrated capacity to resource it. These resources not only come from business reserves, but also from second jobs, free time, short-term borrowing, and expected cash flow. Cash flow estimates always require close analysis and validation.

This may require further interview and discussion with applicants to uncover the true extent of commitment – including the extent to which the applicant really wants to do the project (the level of “passion”) and requirements to balance other business (and personal) commitments.

The Working Group and Program staff must be convinced of the level of applicant commitment

It is also the case that commitments to projects that will not be completed involves an “opportunity cost” in terms of funds not being available for projects that met requirements but were assessed as being of a lower priority or relative merit. It is therefore important that realistic assessments of “time to complete” are made and, following from previous comments in the report, progress is effectively monitored through milestone reporting.

This will also require the support, assistance and commitment of State government and regional development agencies performing their roles as “gate-keepers” for NIDP applications and funding. This requires the ongoing development of a partnership approach between the NIDP and State and regional organizations and a strategy that involves getting good

projects supported – not just projects that are going to bring “Commonwealth money” to a region.

Our understanding is that an NIDP project is not something that would be done in the normal course of business development. That is, it must be truly entrepreneurial and innovative.

Recommendation

The assessment process be able to fully ascertain the capacity of applicants to resource projects and the level of personal commitment to developing the business opportunity

6.1.4 Quality

Indicators of the quality of projects reflect their contribution to addressing a technology, business or market opportunity.

Projects, which appear to have successfully addressed a technology, market and business need, in terms of progress to commercialisation, include³⁵:

- Toyonoka strawberries – more grower partners and increased trade to Japan
- C Probe – company has raised capital
- Baby Leaf Lettuce – processing line opened
- Pluots – company has raised additional capital
- Beef Wellington – success at greater level than expected
- Coopers Wine Kits – positive market development
- Organic Milk – facility established and demand increasing
- Mediterranean Onion Seeds
- Functional Wheat Protein
- Japanese Cherries – active market development
- Gelair – sales negotiated
- Christmas Bush – markets developed

Projects that have a substantial potential, but where commercialisation is subject to other considerations (including capacity to manage delays in project management) are as follows³⁶:

- Skin on (Possum) Meat – volume of trade can vary according to Chinese government approval arrangements

There are many projects with significant business potential

³⁵ These observations are based on notes and discussions with NIDP program staff and our discussions and interviews with applicants.

³⁶ As above

- Liquid Cartilage – awaiting TGA approvals
- APEP – awaiting NRA approval
- E-Nose Detector – undertaking further trials
- Dental Powder – undergoing market testing
- Meat Log Machine – market testing
- Processed Fish Products – technology licensing issues
- Queensland Sea Cucumber – other business pressures

Projects that are still in the experimental stage and are, in reality “options” for further business development are:

- Kyoho Table Grapes – grapes not yet produced in substantial quantity
- Echinacea – further product development to produce value added product.

There are also a number of projects that may not be completed due to delays and the termination of funding on 30 June 2002.

6.1.5 Client/customer satisfaction

Client feedback is very positive

Our feedback from recipients about the NIDP program has been exceptionally positive. Comments have included:

- Excellent working relationships with Program staff
- Program staff were helpful, understanding and encouraging
- Allowing projects to proceed earlier than would have been possible
- Enabled projects to proceed at a much faster rate than would otherwise have been possible
- In many cases, provided the motivation for the project
- Enabled knowledge sharing and skills transfer between growers and other members of the supply chain
- Enabled market research and development opportunities
- Provided networking opportunities with other grant recipients who were experiencing similar project issues
- The sharing of ideas and knowledge transfer between recipients was highly valued

- Organised seminars that provided information and learning about finance and supply chain management

Overall, the feedback has been that the NIDP has encouraged entrepreneurship and innovation and has helped to foster a change in culture through seeding enterprising recipients, who in turn, influence those around them.

6.2 Agribusiness opportunities intelligence site

An Agribiz site at www.affa.gov.au/agribiz was developed in partnership with industry and launched on 27 March 2001.

The site provided access to up to date quality information and assistance to people who are interested in establishing new agribusiness ventures, or reinvigorating existing ventures. In the three months to end June 2001 the site had received 24,000 visits³⁷.

In late 2001 the AFFA Internet Section moved the site, changed the rules about style and design, modified the format, and incorporated it into the overall AFFA site.

The AFFA website has been strongly criticised in a number of forums. Those criticisms relate essentially to its structure as a database rather than as an interactive channel of communication.

It follows that NIDP program staff must ensure that the Internet services group in the Department understand the requirements of the program and are committed to meeting the needs of the program.

There is a great deal of useful information on the site about business development and linkages to other relevant sites. However, access is difficult due to its fragmented structure and, in particular, the difficulty of reading and downloading complete documents.

For those agribusiness enterprises without access to the Internet, information on the NIDP and its initiatives is distributed through a network of 280 Combined Rural Traders stores located throughout rural Australia.

The Department's Internet Section frustrated the development of the agribusiness opportunities intelligence site

³⁷ Department of Agriculture, Fisheries and Forestry Australia. Department of Agriculture, *Annual Report* (Canberra: Austinfo, 2001), p. 117

6.3 NIDP scholarships

The experience of one of the recipients of the NIDP scholarship, Simone Tully has been reported in *Made in Australia* in March 2002³⁸ and in *Supermarket to Asia*.

As far as we are aware, the experience of other recipients has yet to be reported publicly.

6.4 Venture fund raising and risk management

The venture fund raising forum held in June 2001 was regarded as highly beneficial

A panel discussion was held on 28 June 2001 in Canberra, involving NIDP Pilot Commercialisation Project grant recipients and key industry leaders from the finance sector, including private business investors, investment houses, agri-business bank advisers and contract investment managers.

The aim of the forum was to bring attention to important capital raising issues currently impacting on the growth of the agri-business sector. This was intended to be a first phase in an initiative aimed at changing attitudes among the venture capital industry and building a better understanding of the needs between investors and agribusiness firms.

Grant recipients who attended the forum commented that the forum was beneficial in a number of ways as it clarified that:

- Banks are reluctant to lend to their type of businesses
- Venture capitalists look for very fast growing and preferably cash positive business rather than “ideas”
- That relationships with other members of the supply chain are crucial

The recipients also commented that a highly beneficial outcome from the forum was the opportunity it gave them to network with other grant recipients and members of the panel.

Five additional forums have been held at major locations throughout Australia over the last several months funded under NIDP Mark I. The aim of the workshops has been to better understand business development issues associated with capital raising.

The workshops perform a very important role in the developing process of financial intermediation – linking providers to users of capital - as an increasing range of

³⁸ AFFA, "How Is She Doing?."

people and organisations enter the capital market with funds to invest in new products and emerging technologies. This issue is addressed again in Section 10.

There has been exceptionally positive feedback from NIDP recipients in relation to the opportunities the forums provided for networking and to make new contacts.

7 What has been achieved?

The Program Logic for the NIDP identified 15 Performance indicators

7.1 Overall impacts

The NIDP *Program Strategy and Working Group Terms of Reference* identifies 15 performance indicators relating to program outcomes. These are at Attachment 1.

The Department has not collated information in relation to these indicators. Many relate to the performance of the Program over a three to five year time horizon, which has not yet been reached.

These represent a “top down” approach to assessing impact. There is a concern, however: it is by no means clear whether a change in these indicators can in any way be linked to the NIDP.

The Review Team believes it would be more appropriate to use a “bottom up” approach by looking at activities and seeing how they have contributed at the business level and whether this can be generalised. This is reflected in the Terms of Reference for this Review.

In the remainder of this section we provide information drawn from review and analysis of documentary material, discussions, interviews in relation to the specific matters raised in the Terms of Reference. Our interpretation reflects earlier discussion and analysis in the Report, particularly in Section 2 and Sections 4 to 6.

7.2 Contribution to long range commercial outcomes

The Terms of Reference require a report on the contribution of the NIDP to:

Positively contributing to the medium to long term commercial outcomes for Australia

This requires two things:

- The contribution to commercial outcomes by the performance of individual projects – a business development issue
- Creation of a business culture that encourages business entrepreneurs – in medium and small businesses – to commercialise novel ideas with limited endowments.

Expected economic benefits are \$520m in sales and 600 jobs.

7.2.1 The contribution of individual projects

In the Mid Term Review prepared for the fifth meeting of the Working Group it was reported that 15 Pilot Commercialisation Project applications had been supported and that these would realise medium term outcomes in the vicinity of \$275m and create over 475 extra jobs.

In a report prepared for the NIDP Advisory Committee Meeting in March 2002 these estimates had been increased to approximately \$520m and 600 jobs. These estimates have been based on material provided by applicants.

Information on the expected economic benefits of the projects, in terms of expected annual sales over the medium term (3-7 years) is summarised below.

Expected economic benefits	Number of projects)
Greater than \$100m	1
\$50m-\$100m	1
\$25m-\$49m	3
\$10m - \$24m	10
\$5m - \$9m	9
Under \$5m	12
Total projects	36

Applicants have provided the estimates of economic benefit

There are several features of the estimates of economic benefit that are of note:

- One single project accounts for nearly 30 percent of the total expected sales
- Four projects account for 52 percent of the total
- Approximately \$100m of expected benefits are in projects identified by the NIDP program staff as having “concerns and issues”

We have not been able to validate the claims made about expected economic benefit. In several cases we regard the estimates as highly speculative. We are not, however, in a position to revise those estimates. A number of companies advised that *actual* sales data are commercial-in-confidence.

There may well be a “blockbuster” project in the portfolio, but research has indicated that the unusually resourceful, hardworking or lucky entrepreneurs who start businesses in an uncertain field have only a small chance of securing a large payoff. If they do not succeed, these bootstrapped entrepreneurs have little to lose financially. It is a case of “heads I win and tails I don’t lose too much”.³⁹

³⁹ Amar V Bhidé, *The Origin and Evolution of New Businesses* (New York: Oxford University Press, 2000). pp17-19.

It is nonetheless important, that in the process of including estimated benefits in performance monitoring systems that expectations are realistic and some basic “reality checks” are undertaken. It follows that estimates of future benefit should be on the conservative side.

In looking at the 35 active projects during the course of the review one of the most critical factors involved in achieving success related to the development and implementation of a marketing strategy. These factors related to:

- Understanding the nature of competition and the *cost* of establishing a market presence
- The effort required to change customer perceptions, attitudes and behaviour to accepting a new product⁴⁰
- Addressing issues of “market pull” through the value chain
- A deep appreciation of the attributes, costs and commitment required for product promotion and marketing in the processed food sector.

Recommendation

The NIDP application process include positive input from people skilled in strategic marketing and product promotion in the processed food sector from a global perspective.

The projects that appear to have achieved *a sustainable* commercial outcome at this stage are:

- Toyonoka Strawberries
- The Panda Ranch Pluots project⁴¹
- The Agri-link Holdings C Probe Detector
- The Bell River Beef Wellington Project
- Coopers Wine Kits
- Organic Milk
- Gelair

Commercial success is most likely to be associated with projects at the “venture” stage

In our interpretation, these projects were funded at the “venture” stage. They were also well aware of the markets they were entering and operating in – in terms of customer preferences, trends, strategic partners and pricing. It is of some interest that these projects have more modest expectations about future economic benefits.

⁴⁰ Recent management thinking has pointed to the risks of moving too far ahead of the market. See Rosabeth Moss Kanter, *Business 2.0*,

⁴¹ This company was also funded under the Delicatessen Program

Whilst other projects have been completed, the realisation of commercial potential is some time off. This relates particularly to projects that were funded as ideas and experiments.

Many of these projects have the potential to succeed, given the right economic, business and market environment. There are a number of projects that will become “options” for further development in a broader context.

Whilst NIDP Mark I concludes on 30 June 2002, the funded projects will continue with the commitment and vision of the innovators. The NIDP was a “kick start” that got projects going. In all reality, however, calculations of economic benefit at this stage can only be tentative.

Some projects will become “options” for future business strategies

In many respects the institutional environment created by the NIDP – one that encourages and supports entrepreneurship and innovation – is the most significant medium to long-term benefit.

This issue is addressed below.

7.2.2 The contribution of the program

The NIDP has supplemented the limited resources of entrepreneurs with additional limited resources as an incentive to devote more time to planning and research and to address and adapt to unanticipated problems and opportunities in their businesses. Capital constrained entrepreneurs cannot generally afford to sacrifice short-term cash for long-term profits. The NIDP assists in changing the balance in this relationship.

Cash injection has been an important benefit

The availability of cash support under the NIDP has helped entrepreneurs overcome the problem of convincing customers, employees, credit and other resource providers to “take a chance” on the business.

The Program has performed an important role in demonstrating what specialised companies operating in niche markets can achieve. A number of these achievements relate specifically to other issues raised in the terms of reference and will be addressed in that context.

Our observations from talking to recipients indicates that:

- The program provided the stimulus for entrepreneurial people to begin the path to commercialisation of a project they had been contemplating, yet which was either too uncertain or costly for them to start immediately

- The program enabled the projects, in most cases, to progress at a significantly faster rate than would otherwise have occurred.

7.3 Development of “clusters” and “strategic alliances”

The terms of reference for this Review require report on the contribution of the NIDP to:

Facilitating a change in the culture and structures within Australian agribusiness to promote cooperation across State and regional boundaries and along the potential supply chains for new products and services

The NIDP projects support the importance of clusters in agribusiness

The development of clusters in the agribusiness sector has been demonstrated in a number of analyses of the Australian wine industry.⁴² Our observations drawn from discussions and consultations with NIDP grant recipients, government and industry organizations are:

- There has been substantial knowledge transfer to participants in the supply chain with beneficial effects in meeting customer needs – for example, in supporting and communicating with grower networks
- The process of regular reporting has ensured that grant recipients stay focussed on the project. This was important in maintaining the enthusiasm and energy levels required to continue, particularly at those times when challenges and hurdles seemed high and other business pressures were mounting
- A majority of recipients commented that the experience had taught them a great deal about commercialisation of ideas. For example, that it is not a “linear flow” and sometimes not logical, straightforward or easy. Rather, commercialisation is hard work that takes much more time and money than expected.⁴³
- The Program facilitated the development of excellent working relationships with staff in State government agencies and regional organizations.

Recipients often commented on the change in attitude of the people they work and collaborate with (particularly suppliers) towards meeting customer demands – demonstrating that the Program was instrumental in nurturing a culture of entrepreneurship and innovation.

⁴² Ian Marsh and Brendan Shaw, *Australia's Wine Industry: Collaboration and Learning as Causes of Competitive Success* (Sydney: Australian Business Foundation, 2000).

⁴³ There is an expression in business to the effect that “if it was easy, everyone would be doing it”.

The NIDP facilitated strengthening of linkages between business, universities and research organisations

Made in Australia has been produced to communicate results of NIDP projects

7.4 Technology and knowledge transfer

The terms of reference require report on the contribution of the NIDP to:

Stimulating innovation within the agribusiness sector by demonstrating the benefits of effective technology and knowledge transfer.

7.4.1 Results of interview

Our discussions and interviews indicated that:

- The program facilitated knowledge transfer through gaining first hand experience and a greater understanding of their niche markets, which in turn impacted on how they addressed market need
- Recipients commented favourably on the unexpected promotion they received from the Program, which generated discussion within their community and elsewhere
- The Program stimulated and consolidated a high degree of business-university/research institute collaboration and cooperation with resultant knowledge transfer and sharing
- Many recipients commented that the Program had provided them with the impetus to invest in machinery, equipment, know how and specialist staff as well as establishing valuable relationships with key members in the supply chain. As a consequence they were now keen to find other potentially successful projects that could utilise these key strengths

NIDP Mark I also addressed technology and knowledge transfer through a targeted communication strategy. This has involved:

- Production of *Made in Australia* magazine
- TV and mainstream media coverage of financial and management issues
- Case studies (or equivalent) on grant recipients.

7.4.2 *Made in Australia* Magazine

The New Industries Development area of the Department of Agriculture, Fisheries and Forestry produces *Made in Australia* magazine.

The magazine features innovation in agribusiness enterprises and includes case studies of agribusiness initiatives that have been supported under the Supermarket to Asia Delicatessen program and the New Industries Development Program.

The Magazine is full colour, 295mm x 230mm, and 20 pages. It is produced by Mirrabooka Marketing and Design on behalf of the NIDP.

The magazine is distributed free to agribusiness and food industry clients who have interests in developing or supporting innovative products, technologies or services in agricultural enterprises.

The magazine has been produced in two series, the first with a focus on the Delicatessen program and the more recent with a focus on NIDP. Comments on each series follow.

Made in Australia Series 1 - Issues 1 to 7

The initial print run was 5000 with an additional 2000-3000 produced, making a total production of 8,000. The distribution of the magazine has been as follows.

- Minister / Departmental Executive/ AFFA internal and Road show (2000 copies)
- 40 MIA Subscriber list
- 7 NIDP Advisory Board
- 100 NIDP PCP applicants and grantees
- 2000 to Food Group Contact List - includes federal government trade and industry development agencies, Countrylink / State government agencies including Departments of Agriculture and Trade and Development and Regional Development, Local Government Regional Development and Agribusiness advisory networks, CSIRO and agribusiness development agencies /individual producers
- 20 Agricultural Universities
- Balance - 3000 copies - distributed through Combined Rural Traders (CRT) network to all rural outlets (over 200 stores).

The contents of each issue have been as follows:

Issue No	Date	Company/ies Featured	Project	Program
1	February 2000	OBE	Organic Beef	Delicatessen
2	September 2000	Panda Ranch	White Nectarines	Delicatessen
3	December 2000	Ito En	Green Tea	Delicatessen
4	March 2001	Rubicon Mountain Pty Ltd	Wasabi production	Delicatessen
5	June 2001	Agrilink Asia Pacific	Myoga production	Delicatessen
6	July 2001	Special report on the agribusiness environment		
		Nature's Way	Lettuces	Other program
		Panda Ranch	Second story	Delicatessen
		OBE	Second story	Delicatessen
		Beef Wellington	Prepared product	NIDP
		Capital Raising and "Wooring Investors"		NIDP
7	December 2001	Australian Fresh Corporation	Export of Live Lobsters	Delicatessen

In our view the magazine has been well written and presented. The seven issues included promotional material for the NIDP but reported on only one company under NIDP Mark I.

The early issues had a focus on one company per issue. Accordingly, content tended to be somewhat "wordy" with extensive commentary. Companies have been using the magazine for their own marketing strategies.

The magazine has made an important contribution to communicating the purpose, activities and results of the Delicatessen program as it moved into NIDP Mark I.

Made in Australia Series 2 Issue 1 (March 2002)

A total of 10,000 copies of the magazine have been produced. The distribution of the first issue of the second series has been as follows.

- 1680 food producers (including supply chain partners),
- 1470 state and federal government agribusiness advisors,
- 1400 private agribusiness advisors including financial institutions
- 1540 exporters and importers including overseas interests
- 910 media / public relations.
- 2,500 copies Distributed in packs of 9 or 10 to agribusiness advisory centres in 265 major CRT Ruralco stores in rural and regional Australia
- 500 copies distributed directly by NIDP - to PCP/AFFA internal/subscribers
- Global Supermarket to conduct a phone poll evaluation of 250 Global Supermarket subscribers.

A new distribution strategy has been developed for further issues of *Made in Australia* magazine.

The contents of this issue cover:

- Grandiflora – Christmas Bush – NIDP I
- Gateway Products – baking ingredient – NIDP II
- Qew Orchards – apricots NIDP II
- Dry Ideas and Scientific Horticulture – dried sour cherries – NIDP II
- SD Reid – Japanese Cherries – NIDP Mark I
- Three projects involving Mike Nunn -
 - Biostarch - high quality calf milk replacers – NIDP I
 - Phoscal Holdings – dental additive - NIDP I
 - Krebs Unique Engineering – “log machine” – NIDP I

The stories in the most recent edition are more focussed and directed at the key issues involved in business development.

Layout has also improved by going from two to three columns. Improved colour and graphics have increased readability.

There has been, as with much of the NIDP management and program delivery, an important process of “learning by doing”.

7.4.3 Internet

Reference to NIDP projects on the AFFA Agribiz website refer only to projects approved under Mark II. There are no NIDP Mark I projects featured as case studies.

The site includes the content of three *Made in Australia* magazines covering projects supported under the Delicatessen Program.

7.4.4 Other Department of Agriculture, Fisheries and Forestry Magazines and Journals

The Department of Agriculture, Fisheries and Forestry produces a large number of magazines for distribution to segments of the Australian farming and agribusiness industry. Comments on the exposure of the NIDP in some of those magazines are provided below.

Rural Vision

We are aware of one article concerning the NIDP having been published in *Rural Vision*, a magazine

Greater reference to NIDP Mark I should be on the Internet

The NIDP is not well covered in other Department of Agriculture, Fisheries and Forestry Magazines

produced by the Innovation Group in the Department of Agriculture, Fisheries and Forestry in connection with the Action Plan for Australian Agriculture, Food and Fibre.

The article covered the awarding of an in-market scholarship to Rick Martin from the Australian Cartilage Company.

AFFA News

There has been no coverage in this publication.

Food and Fibre News

There has not been recent coverage in this publication.

Supermarket to Asia

Two articles relating to NIDP have been published in *Supermarket to Asia* since the current production company took over in March 2000. These covered:

- NIDP Scholarship winner, Simone Tully
- OBE Beef.

Conclusion

In our view much more should be done to raise the awareness of the results and outcomes of NIDP projects through Departmental publications.

Whilst “publication” on the Internet is important, it is only one channel of communication. There can be no certainty that Internet publication will reach, and be received by, target audiences.

Recommendation

Every effort be made to ensure that NIDP Mark I projects receive coverage on the Agribiz site and in the numerous Department of Agriculture, Fisheries and Forestry magazines.

7.4.5 Television

Aspects of the NIDP program and a number of recipients of NIDP funding were profiled on the *On the Land* program broadcast by WIN TV. The programs included:

- An overview segment
- NIDP – Capital Raising – five programs
- Beef Wellington
- Panda Ranch
- Shoalhaven Starches

- Jarit Seeds
- Greenwheat Frekah
- Australian Cartilage Company
- C Probe.

The program not screened in metropolitan areas.

7.4.6 Mainstream media coverage

A four page special advertising supplement on the NIDP was published in *The Australian* on Friday 27 July 2001.

This followed a panel discussion in which 28 agribusiness entrepreneurs met with representatives from the finance sector to discuss accessing capital for agribusiness ventures.

7.4.7 Case studies

As indicated, some NIDP projects have been reported as case studies in the *Made in Australia* magazine, *On the Land*, and the supplement in *The Australian*

We consider it to be important, as an element of the NIDP strategy, that all supported projects be written up as case studies and disseminated, if not through the *Made in Australia* magazine, through a booklet in the manner of previous case studies prepared by the Department of Agriculture, Fisheries and Forestry Food Industry Group.

We are conscious that it may be up to six or 12 months after the completion of a project before a meaningful analysis of outcomes can be undertaken.

Recommendation

Where possible and practical, NIDP Mark I projects be reported and published as case studies – if not through “Made in Australia” then through a separate booklet and disseminated widely. The Department and the NIDP support a publication “Seeds of Success” that covers the experience of projects supported by NIDP Mark I.

7.4.8 Recipient communication and dissemination

We have undertaken an analysis of communication performance for individual projects involving effort and commitment by grant recipients. With the exception of the Department of Agriculture, Fisheries and Forestry sponsored media, most applicants have not actively communicated their projects in the wider media. Some recipients managed to achieve local press coverage.

The Chart below identifies the Pilot Commercialisation Project recipients and applicants who have their own Internet sites.

Project Title	Applicant Name
Toyonoka Strawberries	Ichigo Australia
E-Nose Detector	Tasmanian Truffle Enterprises
C-Probe	Agrilink Holdings
Echinacea	BRA Manufacturing Services
Functional Wheat Protein	Shoalhaven Starches
Kyoho Table Grapes	Field Fresh Tas
Wine Kits	Coopers Brewery
Christmas Bush	GrandiFlora
Greenwheat Freekeh	Greenwheat Freekeh
Gelair	Gelair

Two of the Scholarship recipients, Simone Tully and Stephen Jeffers, work in companies with an Internet site.

The most prominent reference among Internet “hits” is the Minister’s press statements

The Review Team searched the Internet for all NIDP Mark I projects using the Google search engine. In every case the search located the Minister’s press statements. In a large number of instances there was no other “hit” for the project. Copies of the Internet search results can be made available upon request.

Given the focus of the NIDP on dissemination of information and experience in applying new technologies and approaches to change in the form, presentation and delivery of traditional products and services, it should be a condition of a grant that this obligation is accepted on the part of grant recipients.

In our view applicants must make a greater commitment to communicating the progress and results of the projects supported with NIDP grants. This should include a communication strategy submitted with the application and a commitment to disseminating material through the Internet.

In the current business and entrepreneurial environment, an Internet presence is essential for an innovative and growing business.

Recommendation

The NIDP has assisted applicants understand what investors are looking for

Establishing an Internet presence is not expensive and is now a very straightforward process.

NIDP grant applications include a communication strategy in their proposal.

7.5 Investor confidence

The terms of reference require a report on the contribution of the NIDP to:

Building investor confidence in Australia's ability to develop new high value products and services and improve the usage of venture finance and risk management strategies by SME's involved in new ventures.

Our discussions and interviews indicated that applicants had gained a good understanding of what investors in a business are looking for – for example:

- Strong and accountable management
- A platform technology or wide product range
- Sustainable competitive advantage over the competition
- Sound understanding of the market (including customers, competitors, politics, costs and broader economic factors)
- Clearly defined and profitable market niche that has potential for strong growth
- Demonstrated paths to market such as through collaborative relationships with distributors and end users
- Ability to supply consistent, reliable and high quality product.

We have indicated in Section 10 the evolutionary pattern in the Australian venture-financing sector – substantial change has occurred over the four years since the NIDP was initiated. An extended range of financial entrepreneurs and “deal makers” has emerged, all involved in a variety of forms of intermediation between the providers and users of funds.

While the “formal” venture capital sector has evolved to focus mainly on information technology communication and the life sciences, our discussions with recipients of NIDP funding has indicated a wide range of intermediaries are involved in supporting a new venture.

7.6 Management capacity improvement

The terms of reference require report on the contribution of the NIDP to:

Promoting understanding amongst small to medium agribusiness enterprises (SMEs) of the need for, and improve access to, quality information, commercial skills, experience and in-market contacts

Our discussions and interviews with recipients indicated that the Program has provided recipients with valuable networking opportunities with others going through a similar experience. Recipients commented about their ability to share experiences and learn from each other

Members of the Working Group and Program staff have been supportive and helpful throughout the process and have played a role in keeping projects on track and introducing them to contacts.

The process of completing the application form and participating in the selection process has clearly benefited a number of businesses by creating a discipline on potential recipients to address issues that they had not previously considered. The process assisted in the preparation of a more detailed business plan.

The NIDP Scholarships have also added substantially to improvement in management skills and capabilities.

8 “Seeds of Success”: The experience of grant recipients in building and sustaining new business ventures

In this Section of the Report we have sought to document the experiences of grant recipients in developing their business ideas, undertaking experiments aimed at developing those ideas into commercial options and embarking on new ventures aimed at sustaining commercial viability.

The material is sourced from our interviews and consultations with 25 grant recipients and seven site visits. There are many messages, which have broader application about new business development.

The characteristics of the NIDP grant recipients are as follows:

8.1 Passion, commitment and persistence

One of the most striking attributes that stood out among the group of NIDP recipients was their level of passion and commitment to the project they were undertaking.

Whether the project involved developing a new table grape for the Japanese market or a uniquely Australian range of quality smallgoods based exclusively on beef and sheepmeat, grant recipients were overwhelmingly optimistic people, and had displayed high levels of enthusiasm, perseverance and determination for their particular project.

It is interesting to note that this high degree of passion is a general trait that has been found to be common among all successful entrepreneurs. An idea will remain a mere idea if it lacks a champion that has vision, passion and commitment to see the project through, and pull other players along with them in the process. Developing an idea through to the stage where it becomes a profitable business and potentially a budding new industry takes entrepreneurs who will not easily be beaten.

It is well known that embarking on a novel business project will require a high degree of tolerance for ambiguity. Entrepreneurs have to confront fluid, rapidly changing situations where they cannot always anticipate the outcomes. It seems that a high tolerance for financial loss does not, however, significantly influence the propensity to start new ventures where

Passion and commitment are key criteria for success

***Successful entrepreneurs
“manage” their luck***

entrepreneurs do not invest much capital or face a high opportunity cost for their time.⁴⁴

The entrepreneurs in the NIDP Program, whilst not investing much capital in their projects certainly did allocate a substantial amount of time, commitment interest and nurturing to their projects.

Entrepreneurs who effectively adapt to unexpected problems and opportunities, and persuade investors to “take a chance” (eg the NIDP) can influence their luck. Personal traits such as open-mindedness, the willingness to make decisions quickly, the ability to cope with set backs and rejection, and skill in face-to-face selling are of vital importance.

Successful entrepreneurs are less prone to irrational ambiguity aversion. They require exceptional self control in dealing with difficult customers and require a focus on winning orders rather than winning arguments.⁴⁵

***Trust based relationships
are a foundation for
business success***

8.2 Trust, trust, trust

Trust is a subject that was mentioned in a majority of the interviews. It was interesting to note that the recipients who were progressing well also had well-developed trust-based relationships with suppliers, distributors, and manufacturers.

In some cases, recipients had experienced quite a search for trustworthy people with whom they could collaborate, while in other cases, relationships were well established.

Developing trust was closely aligned to peoples’ ability to deliver on promises. In other words, recipients believed they could trust those parties that worked in partnership with them, and who were also prepared to place their own reputation on the line.

In the current business environment, built on networks, alliances and loosely structured joint ventures, the ability to establish and maintain trust-based relationships is a critical variable.

Three components of trust can be identified:

- Communication trust – trust of disclosure – the extent to which people are prepared to share information

⁴⁴ Bhide., p. 19

⁴⁵ Ibid.

Trust takes time to establish

- Contractual trust – trust of character – peoples’ faith in another’s integrity and ability to keep agreements
- Competency trust – trust of capability – peoples’ employees respect for on another’s abilities⁴⁶.

The scope of innovative business ventures that, by their nature, involve high levels of uncertainty that cannot be fully documented in formal contracts and agreements. Trust takes time to establish and can be very quickly eroded.

Small businesses can expose themselves to high levels of risk by entering into strategic alliances and other business relationships with people and organizations they know little about. Even where a relationship is established with one part of a large business that commitment may not be valued – and honoured – by other parts.

Much is written about strategic alliances and value networks and “virtuality” as the organisation model of the 21st century. But the reality is that businesses move slowly and with caution due to the risks to the business as a whole if things go wrong.

8.3 “Don’t give up the day job”

Most businesses are started using an old idea and an old technology. Very few businesses are started on the basis of new technologies and targeting new markets. Innovative and novel projects take a long time to get up and running.

Many of the grant recipients sourced income from other sources or had significant personal financial backing wealth to keep them going. This was an important element of the NIDP program as in nearly every case, the project would not proceed exactly as the recipient had expected.

In many cases, results of early tests or experiments fell short of what was required to proceed to the next step. In these cases, recipients had to try again, and in many cases the funding for these second and third attempts was taken directly from recipients own resources.

⁴⁶ “Trust: How To Build It, Earn It – And Re-establish It When It’s Broken”, *Harvard management Update*, September 2000

In the present business environment businesses do not have to be big to be global

8.4 Focus on the “global niche”

In our view, only a few of the NIDP projects will emerge into global production and distribution companies, at least in the immediate future. Scale of operations and capacity to source regular, consistent and reliable supply is a major constraint. Many of the NIDP projects address these issues specifically.

Perhaps more significantly, however, the NIDP is making a major contribution to encouraging small companies with specialised and innovative products to become competitive at the global level. Good examples of this are the “Skin on Meat” and the “Gelair” projects. The NIDP projects demonstrate that a company “does not have to be big to be global”.

On their own these projects will not add a great deal of value to the Australian economy. But if there is a large number of these projects, they can collectively make a major contribution.

This issue is discussed again briefly in Section 10.

It is critical for the Program that project milestones are met

8.5 Keeping projects on track

Being in business requires that client, customer and other stakeholder expectations are met. This involves committing to a discipline of meeting commitments and obligations. Slippage of commitment can place whole projects – and businesses - at risk.

While there has been some criticism of the NIDP monitoring process from recipients for insisting that milestones be met, and the need to take into account a range of unforeseen and unexpected events, we consider it as vital for the success of the Program that there be an expectation that milestones will be met for the purpose of efficient project management – as well as accountability.

It is also important that milestones be maintained in order to keep the momentum of a project going. Entrepreneurs can be easily distracted, but in accepting public funding there is an obligation to make a commitment to the process and ensure that time and resources are managed effectively.

But this is more than an accountability issue. Meeting milestones requires effective project management and capacity to resource a project. If there is any uncertainty about capacity to meet milestones along the way, applicants should reconsider their projects and the

level of commitment required - and the projects should not be funded.

8.6 Positive attitudes towards the business environment

We found it significant that the companies contacted and interviewed had a very positive attitude towards their business environment. In particular, they did not voice complaints commonly emanating from the small business lobby about the costs of “red tape”, workers’ compensation and other regulatory regimes.

9 Issues to consider in the future development of the NIDP

The purpose of this Section is to address two issues that arose in the Review that may assist the NIDP Advisory Committee in consideration of matters related to the development of strategy, management and organisation in NIDP II.

9.1 Project time frame

A number of recipients argued that three years was not a sufficient time to develop a new idea or venture.

We have provided a table drawn from a recent paper on corporate venturing that provides a profile of phases in new venture development⁴⁷.

Stage	Idea Generation	Concept Development	Business Plan Development	Incubation and Commercialisation	Value Capture
Objective	Unleash creativity	Refine	Define	Establish a freestanding organization	Unleash value
Timing	3 hours – 1 day	1 week	3 weeks – 4 months	3 months – 3 years	1-4 years
Elements	Internal development External sourcing Idea capture Idea screening	Concept refinement	Business model development Potential partner identification Evaluation framework Target market and customer value proposition validated	Prototyping, trials Launch planning Resource acquisition Business plan refinement Technology product development Management team	Determination of exit strategy Preparation for liquidity event Public relations and marketing
Output	High potential ideas	Two page elaboration of each idea with recommendation	Business plan	Independently operating company	Value/liquidity event
Decision	Good ideas	Feasible idea Worth investment in further development	Business economics feasible Worth investment to launch	Readiness to launch Readiness to wean from core	Timing of liquidity event Nature of liquidity event

Source: Albrinck, Jill, et al., “Adventures in Corporate Venturing”. *Strategy+Business*, 22, First Quarter 2001, p. 125

According to this diagnostic it is during the *incubation* phase that seed funding is applied and dedicated advisers, mentors and sponsors are allocated. This is, in effect an important role of the NIDP.

⁴⁷ Jill Albrink, "Adventures in Corporate Venturing," *Strategy+Business* 22, no. 1 (2001).

It is also at this stage that implementation speed is critical

Any longer than three years for the NIDP would risk the venture losing commercial focus and the sense of urgency that is associated with innovation in new product development.

On this basis we cannot see merit in extending the life of a NIDP project beyond two years

Recommendation

The time frame for NIDP projects not be extended beyond two years.

9.2 Accountability and commerciality

During the consultations phase of the project comments were made by a number of consultants to the effect that management of the NIDP in a Departmental environment could not be commercial

Being “commercial” does not mean an absence of corporate controls

Many comments were made during the consultation and interview process about the need for government assistance programs to be “commercial” in their orientation. This was asserted as a comparison between the NIDP and the Food and Fibre Chains Program.

We understand commercial to mean adopting a business focus, which in turn, means meeting the needs of customers and, in turn, ensuring that sales are generated and income is secured in a way that meets performance criteria – including margins and overall profitability⁴⁸. It does not mean the single-minded pursuit of making money.

Being businesslike is also about building trust-based relationships with financiers, suppliers and distributors throughout the value chain.

A “business focus” can be adopted in both the public and private sectors.

In our view, being commercial does not mean ignoring or circumventing rules, procedures and routines associated with accountability and probity in the use of public (or shareholder) funds or ignoring the ground rules of professional and ethical conduct.

It is a misrepresentation of business reality to assert, as some have during the Review, that the difference between the public and the private sectors is reflected in differences in the need to follow rules of responsibility and accountability. Sound corporate governance and quality assurance, for example, is based on adherence to rules, routines and procedures. Accountability of

⁴⁸ We see the primary purpose of a business as being “to create a customer” rather than “making a profit”. It is not possible to make a profit unless a business has customers!

managers to Boards and shareholders is a significant contemporary issue.

We found no evidence to support assertions that the NIDP Working Group and Program staff are not commercial in the way in which they manage the program. On the contrary, a number of recipients complemented staff on the way in which they had developed their understanding of business issues as well as their professional approach to management of the program.

In our view, and supported by the NIDP Working Group, the NIDP should continue to be run within the Department of Agriculture, Fisheries and Forestry under provisions of the Public Service Act, the Departmental Enterprise Agreement and the Financial Management Act.

Recommendation

The NIDP continue to be managed as a Unit within the Department of Agriculture, Fisheries and Forestry. (This view is supported by the NIDP Working Group).

Attachment 1: Program Performance Indicator Assessment

The program structure for the NIDP includes a number of performance indicators. Many of these indicators will not be achieved for some time into the future. For the purposes of the Review, the Team has made comments about progress in achieving the standards specified.

Outcome	Indicator	Standard	Progress
Positively contributing to the medium to long term commercial outcomes for Australia	Proportion of pilot commercialisation projects that proceed to full commercialisation	Minimum of 60% of projects progress to full commercialisation within five years of Pilot Commercialisation Projects funding	Requires that 20 projects achieved commercial outcomes. This is likely to be achieved.
	Total sales of PCP projects	Potential for at least \$5m in sales within five years (cumulative)	Likely to be achieved
	Number of new product or services proposed for commercialisation that can be linked to NIDP activities other than PC projects	At least one new product and service is identified for pilot or full commercialisation as a result of other NIDP activities	Achieved -
Stimulating innovation within the agribusiness sector by demonstrating the benefits of effective technology and knowledge transfer	Establish New Agribusiness Opportunities Intelligence Site (NAOIS)	Initial site established by end December 1999 Site fully operational by end June 2000	Achieved – established as www.affa.gov.au/agribiz
	Consultative mechanisms established with key government, industry and research groups involved in technology and information transfer relevant to the sector	Dialogue established with representatives of those organisations by program staff members by end June 2000	Achieved
	Case studies developed to demonstrate effective methods for identifying and using new technology and knowledge from R&D to develop business capabilities	At least two case studies developed and made available through NAOIS by end of year three	Likely to be achieved
Promote understanding among small to medium agribusiness enterprises (SMEs) to quality information, commercial skills, experience and in-	Awareness and usage of the NIDP Internet site	Number of hits on the NIDP site is equivalent to other sites with similar target groups and level of promotional support 80% of key stakeholders involved in new agribusiness development are aware of and use the site by year 3 of the program	<i>This issue is being addressed with the re-development of the Agribiz Website</i>

Outcome	Indicator	Standard	Progress
market contacts	Exposure and feedback from conferences, case studies and other materials developed from or using information from NIDP related activities	Case studies developed from NIDP projects to be used by at least two agribusiness educational institutions	Substantial progress has been made. This is reflected in publication and distribution of the <i>Made in Australia</i> magazine and uptake by education institutions.
		By the end of year 3 at least 10 industry newspapers, journals and or newsletters have picked up information from case studies, etc in articles as free editorial	We have recommended that a book be prepared entitled <i>Seeds of Success</i>
		1500 copies of an NIDP case study publication (video or book) distributed by the end of the program	Achieved
		A minimum of 80% of comment received on case studies and other material distributed are positive	
		At least 100 industry and government delegates to attend the second new industries conference to be held at or before the end of 2000/2001	Conference not held
	Participants' level of satisfaction with NIDP projects – Pilot Commercialisation Projects, mentor projects and scholarships	100% of NIDP project participants rate the contribution of the NIDP as valuable or extremely valuable in project evaluations	Achieved
	Feedback from participants in NIDPO activities regarding contribution and skills and knowledge through their involvement	100% of NIDP participants rate NIDP contribution to their commercial skills as positive in project evaluations	Achieved
	Media coverage of NIDP projects and events that reinforce these messages	At least five additional features/articles/segments in industry electronic media, newspapers, journals or newsletters as result of NIDP sponsorship or other activities	On the Land Program featured seven NIDP projects during 2001
Facilitating a change in the culture and structures to promote cooperation across state and regional boundaries and along the potential supply chains for new products and services	Proportion of NIDP projects that involve participants from more than one State of Australia	At least 20 percent of projects involve participants from two or more states	Seven of the 35 active projects involved participants from two or more States.
	Level of state and industry consultation and joint initiatives	STA, State and industry consultation carried out in the development phase of all NIDP initiatives At least two States actively participate in the development of NAOIS and the NIDP Mentor and Scholarship projects	Achieved State Internet sites reference NIDP

Outcome	Indicator	Standard	Progress
	Attendance and feedback from a second New Industries conference held during 2000-01	80% of delegates at the second New Industries Conference rate it as a valuable event in promoting dialogue and cooperation on new industry development issues (survey of participants)	Conference not held. Anticipated collaborating partners did not commit.
Build investor confidence in Australia's ability to develop new high value products and services and improve the usage of venture finance and risk management strategies by SMEs involved in new ventures	Usefulness of information and models on venture capital raising and financial risk management from NIDP projects to national, state or industry organizations and agribusiness enterprises	At least two educational institutions use NIDP information (case studies, etc) for course material or other information for agribusiness students Minimum of 20 attending workshops (at least two) on financing and managing risk in new agribusiness development conducted (in partnership with a university and/or industry group by year 3 of the program)	<i>Made in Australia</i> is being used in at least two courses. Additional exposure will follow with a book format publication as <i>Seeds of Success</i> Five workshops were held with a total of 70 attendees. These workshops will continue as standalone events.

The NIDP has been important in facilitating institutional change

Attachment 2: The NIDP in the broader institutional and policy context

The purpose of this section of the report is to provide an overview of changes and developments in the institutional and policy environment that impact on the planning, organisation and delivery of the NIDP program.

This environment is undergoing rapid change as ideas and innovation become central to industrial development, accompanied by the emergence of new forms of financial intermediation and a renewed interest in public policy in fostering the “entrepreneurial economy”.

Our view is that the NIDP has played an important role in facilitating institutional change and development as well as supporting individual projects and new business opportunities.

Our purpose in writing this section is to provide a context for *how* the NIDP has contributed to the facilitation of institutional change and, in the process, has worked towards achieving the outcomes and impacts sought by the initiative.

Supporting ideas is critical for business and industry development

Ideas and innovation

Recent Reports of the Chief Scientist and the Innovation Summit Working Group and *Backing Australia's Ability* have stressed the importance of encouraging and supporting the generation and application of ideas as a basis for creating new businesses and improving the performance of existing ones.⁴⁹ NIDP Mark II is an initiative supported under *Backing Australia's Ability*.

Prominent US business writer Gary Hamel has argued that business and industry development should be seen in terms of a portfolio of opportunities⁵⁰. The portfolio should consist of the following components:

- *A Portfolio of ideas* of credible, but untested new business concepts – referred to as business concept innovation, to capture the ideas that are in the heads of participants
- *A Portfolio of experiments* – ideas that have particular merit where they are validated through low cost market incursions

⁴⁹ Australia. Chief Scientist (Dr Robin Batterham)., Australia. Innovation Summit Implementation Group, *Innovation: Unlocking the Future* (Canberra: 2000)..

⁵⁰ Hamel., p.297

***Innovation is an outcome
of pursuing ideas through
“experiments” and
“ventures”***

- Importantly, most companies do not have a way of handling experimental stage business development or for radical or under-developed ideas that could dramatically transform the core business
- Many companies have biases against small experiments – they need to “see the oak tree in the acorn” (and plant lots of acorns)
- There is also value in failed experiments
- A *Portfolio of new ventures*⁵¹ – experiments that look promising that could advance to the new venture stage but with a goal to:
 - Identify customer interest, establish market risk, technical feasibility, the feasibility of the profit model and the operating model
 - Search for strategic partners
 - Integration with existing business or spin out.

We prefer to think about commercialisation and business development in this context rather than as a “linear flow” of an idea through to a situation where it attracts the interest of a venture capitalist.⁵² There will always be many ideas that will not make it to experiments and experiments that will not become business ventures⁵³.

From the perspective of the NIDP, it is important to note that the portfolio of opportunities can be developed on a business, industry or regional basis. A regional focus creates further opportunities for business alliances throughout the value chain – particularly in production, processing, marketing and market access into overseas markets.

The development of alliances and other forms of business relationship are occurring through *leadership and commitment* to ideas, experiments and ventures rather than through cooperation and collaboration – rather than through a formal organisation and

⁵¹ Our reference to ventures is not restricted to business opportunities that would be supported by the formal venture capital sector - as represented by the Australian Venture Capital Association. The concept of business venture, in an entrepreneurial sense, is much broader than the interests of the formal venture capital sector and covers any business opportunity that is commercially robust.

⁵² There are many models of this “linear flow” process in science, popular management and consulting material. At best it misrepresents the way business is done and at worst attempts to “structure” innovation as something that can be directed and controlled – like taking the “innovativeness” out of innovation.

⁵³ This representation is also reflected in the “stage gate” and “stairways to growth” approaches. See for example, Mehrdad Baghai, Stephen Coley, and David White, *The Alchemy of Growth: Practical Insights for Building the Enduring Enterprise* (Cambridge (Mass.): Perseus, 1999), Vijay K. Jolly, *Commercializing New Technologies: Getting From Mind to Market* (Boston: Harvard Business School Press, 1997).

management structure that has been characteristic of many regional and community development initiatives. Some of these business arrangements are conducted without a formal written contract.

Industry's chance of creating new wealth is directly proportional to the number of ideas it fosters and the number of experiments it starts. A portfolio may have some stars and some dogs. Spectacular opportunities never start out as "sure things"⁵⁴.

The NIDP has performed a crucial role in building a portfolio of experiments and new ventures for the agribusiness sector.

Business is being conducted through alliances, agreements, standards and protocols in the value chain

New businesses in the global context

A recently published McKinsey study, *Race for the World*,⁵⁵ suggested that in 20 years the forecast \$US50 trillion of globally integrated economic activity will allow for an extraordinary degree of specialisation – allowing, perhaps, for 5,000,000 tightly defined "global nanostructures" representing \$US10m of production each.

These nanostructures are referred to as "slivers" – a specialised product, or service, that is economically viable at the global level. McKinsey suggest that companies that are successful in delivering slivers to an ever widening market do so by developing infrastructures specifically geared to the task.

These structures are different from traditional industry structures. Whereas traditional industry structures have been built by integrated companies that controlled or owned every aspect of the value chain, micro industry structures are complex webs of alliances, counter party agreements, standards and protocols that allow companies to participate in a discrete element of the value chain without owning the whole thing.⁵⁶

Innovation is about exploiting change as an opportunity

Innovation and entrepreneurship

Innovation is about opportunity and change. In his classic work *Innovation and Entrepreneurship*, Peter Drucker observes

Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a

⁵⁴ Hamel.

⁵⁵ Lowell Bryan and others, *Race For the World: Strategies to Build a Great Global Firm* (Boston: Harvard Business School Press, 1999)., Lowell Bryan and Jane Fraser, "Getting to Global," *McKinsey Quarterly* (1999).

⁵⁶ Addressing this issue is relevant to the Food and Fibre Chains project.

different business or a different service. It is capable of being presented as a discipline, capable of being learned, capable of being practised⁵⁷

Entrepreneurs search purposefully for the sources of innovation, the changes and their symptoms that indicate opportunities for successful innovation. Entrepreneurs also need to know how to apply the principles of successful innovation.

Entrepreneurship “goes behind” the market to find trust-based relationships

The traditional role of the entrepreneur has been as intermediary between suppliers and buyers of goods and services. The entrepreneur may be the supplier or the buyer, but the function is different from simply selling and buying in an open market.

The functions of an entrepreneur are:

- Coordination of sellers and buyers - from simply providing information to carefully translating customer needs to educating producers about what is required to meet those needs
- Arbitrage – seeking gains through superior market knowledge (or perception), or bridging the gap between one person’s insight and another’s
- Uncertainty bearing – to spread and where possible transfer risk
- Innovation – looking for new products to serve new markets in new ways (but at the same time not getting “too far ahead” of the market)

Successful entrepreneurs are continually innovating, but at the same time they are attending to the other functions identified above.

Entrepreneurship has had a critical role in industrial development in the context of “market capitalism”. It is often overlooked, however, that behind the market is a network and business alliances that build trust and provide the basis for what is seen as the effective operation of markets.

This “institutional” feature of a market economy is commonly ignored by conventional wisdom in neo-classical economics.⁵⁸ The absence of these relationships, networks and alliances amounts to an *institutional* failure.

The NIDP has supported the institutions of entrepreneurship

On the basis of the information and knowledge gained by undertaking this Review, Howard Partners has formed the view that the NIDP has had an important

⁵⁷ Peter F Drucker, *Innovation and Entrepreneurship: Practice and Principles* (Melbourne: Butterworth Heinemann, 1985), p.17

⁵⁸ Bhide.

role not only in supporting entrepreneurs but also in building the institutions of entrepreneurship through support for the development and maintenance of alliances and networks.

Financial intermediation and financial entrepreneurship

Over the last 10 years there has been a substantial growth in funds available for investment in existing and new businesses. These funds have come from the rapidly accumulating financial assets of superannuation funds, banks and high wealth individuals.

Funds managers are increasingly looking beyond the traditional investment portfolio of financial assets (public and private debt instruments) and fixed assets (land and buildings) to taking equity in growing businesses.

Investors are also looking towards investing in “knowledge capital” reflected in intellectual property held within existing companies and new and emerging small businesses, sometimes referred to as “new technology based firms” (NTBFs).

The growth of institutional investors has brought a new scope to financial relationships – multi-tiered arrangements involving institutional investors, trust bankers, large commercial banks, investment bank underwriters and venture capitalists in a wide variety of shapes and forms.

With the growth in funds available for investment we are now seeing the emergence of what has been termed financial capitalism and a role for a “financial” intermediary or *financial entrepreneur*.⁵⁹

An intermediary is a financial agent that specialises in the transfer of funds and acts to reduce net incentives and control problems in investment decisions by screening applicants, monitoring managerial performance and firm profits and designing and enforcing specific contractual covenants.

The growing importance of institutional investors in the capital market and venture capitalists that invest on their behalf, are the two important developments that have helped reduce financing costs associated with asymmetrical information problems and potential conflicts between suppliers and users of capital.

With the massive increase in funds for investment in businesses, we are now seeing the emergence of a financial entrepreneur

⁵⁹ A venture capitalist is a particular form of financial entrepreneur.

The financial entrepreneur has a role to smooth out the “frictions” that prevent a business from getting funding for a worthwhile project.⁶⁰ These frictions arise because:

- Suppliers of funds may not be able to identify “good” firms as an investment proposition
- Businesses may not have incentives to keep investing in a project once they receive funding
- Businesses may exploit the fact that it is costly to verify the outcome of a project in which the financial claims of funds suppliers are based
- Businesses can do damage by “ex post” absconding
- There are a number of barriers between savers and investors that can prevent efficient transfer of funds occurring.

If these behaviours were unlikely to occur there would be no role for financial intermediaries, such as merchant banks, investment banks, venture capitalists and, more recently, government supported seed and start-up funds and programs. *More particularly, there would be no role for the NIDP.*

The NIDP, through the Venture Fund Raising and Risk Management Project, and follow up actions, has raised awareness of the roles and diversity of financial entrepreneurs

The NIDP has performed an important role in communicating the role and expectations of financial entrepreneurs – including venture capitalists - to new and growing agri-businesses. More importantly, however, the NIDP has been able to increase the awareness and access of these businesses to other forms of venture finance.

The venture capital investment model

The venture capital investor has become perhaps the best-known form of financial entrepreneur.

The venture capital investment model has a number of distinct features:

- Discontinuity – an investment time frame of three to five years
- Portfolio investment – a number of investments to balance gains and losses
- Minority stake – capacity to exercise control, but not ownership
- Sharing/spreading risk – investment with other parties

⁶⁰ Charles W Calomiris and Carlos D Ramirez, "Financing the American Corporation: The Changing Menu of Financial Relationships," in *The American Corporation Today*, ed. Carl Kaysen (New York: Oxford University Press, 1996).

The standard venture capital model has limited application outside the ITC and life sciences sectors

- Fast value creation rather than income growth – capital gains rather than dividends
- Staged investment - on the basis of milestones being achieved
- Exit strategy – knowing how to “get out” of the investment.

It is now being acknowledged that the “standard venture capital model” – the Silicon Valley model - may not be well suited for starting non-technology companies. This is due to the nature of the VCs themselves and the businesses they have tended to fund. That is:

The prototypical start-up that has flourished in the VC setting has a technological solution to a mass problem. It produces something that has a high average selling price, high margins and an expectation of being profitable enough to fly solo in a very short amount of time – say, two to three years⁶¹.

Many of the start-ups funded in the VC boom had none of these characteristics. Business to consumer companies, for example, had characteristics of retailers – low margins, low average prices and a slow road to growth. Much has been learned in the fall out.

The start-ups that are getting funding now are building technologies that help other companies run their businesses more efficiently.

Many entrepreneurs have seen a link between venture capital and “taking bets” on a “good idea” or a “hot prospect”. A mantra has developed in Australia that venture capitalists are gamblers. They are not. They are business people who *invest* in well-managed businesses developing new and innovative products with other peoples’ money to whom they are highly accountable.

There have been, nonetheless, some significant venture capital investments in food and agri-business by the Australian venture capital sector over the last four years. Investments have, however, been at the expansion stage⁶². These investments have characteristics more closely aligned to investment banking.

The NIDP, as a seed funding initiative, plays a role in assisting in the development of projects to the “venture” stage where they may attract interest of financial

⁶¹ Rob Norton, "The Decline (But, Trust Us on This, Not the Fall) of the American Venture Capitalist," *Business 2.0* (2001).

⁶² This is indicated in our analysis of venture capital investing included at Attachment 2.

The last five years has seen the application of the “venture model” as a basis for investment decisions by a broad range of investors

intermediaries down the track – including investment banks.

Extension of the “venture” investment model

With the growing sophistication of financial intermediation, venture investors are coming from a broad range of institutions outside the formal venture capital sector⁶³. These investors use the “venture investment model” as a basis for investment decisions.

Investors using the venture model include corporations (as an alternative to the traditional capital investment decision process)⁶⁴, high wealth individuals acting individually or in syndicates and superannuation funds. These investors do not seek the rates of return characteristic of the formal venture capital sector.

Investments tend to be made after a personal and trust based relationship has been established. The importance of establishing high levels of trust between the users and providers of funds under the venture model cannot be over emphasised.

The NIDP, through networking events supported under the program, the involvement of State government agencies and regional organisations, and initiation of ongoing contacts, has had an important role in increasing the potential deal flow to new venture investors through the creation of trust-based relationships between investor and investee.

Relationships matter

As the entrepreneurial economy develops, the scale and scope of financial intermediation will increase. More particularly, firms facing the greatest frictions in capital markets rely the most on close relationships with intermediaries.

The ability to raise funds with tight (or zero) cash flow depends importantly on whether there is a pre-existing relationship with an intermediary and the strength of that relationship – banks, etc have access to special information – “insider” lenders.

A large number of companies with new ideas with high commercial potential do not have pre-existing

Firms facing the highest level of “financial friction” rely most on financial intermediaries

⁶³ For ease of reference, the formal venture capital sector covers fund managers and investors covered by membership of the Australian venture capital Association.

⁶⁴ Richard Foster and Sarah Kaplan, *Creative Destruction: Why Companies that are Built to Last Underperform the Market - and How to Successfully Transform Them* (New York: Currency Doubleday, 2001). Many companies manage new investments through a separate venture fund – but the model can be applied without a separate funding pool.

relationships with a financial intermediary. They find it difficult, if not impossible, to obtain financial support for the development of an idea, conducting “experiments” to test the idea or launching new ventures.

Where these relationships do not exist there is a role for the public sector, in addressing this “institutional failure” to identify and advance ideas to a stage where they might attract the interest of financial intermediaries.

The NIDP has had an important role in addressing these “institutional failures”.

Business ventures and investments often fail when personal relationships are absent

The role of information technology

There is a view that transactional intermediation (computers, information, syndications and securitization, etc) can replace relationship intermediation. In particular, many people believe that the Internet can provide funds provider-user matching services.

This view is, however, severely flawed: the Internet has not replaced the laws of business – it has not provided any new solutions to creditors’ problems of monitoring and controlling behaviours of managers.

At the end of the day, financial relationships are based on a high level of trust. This can only occur if the investor knows the investee personally, and/or the investee has a strong reputation and a high degree of credibility.

As indicated, the NIDP has been of particular importance in establishing these personal relationships.

The entrepreneurial economy is seeing the emergence of a new breed of “dealmakers”

The emergence of financial “dealmakers” and “brokers”

The existence of financial frictions and the importance of relationships in the entrepreneurial economy is giving rise to a new breed of “deal makers” – people and organisations that have limited access to funds of their own but work on linking entrepreneurial businesses to established intermediaries. They perform a number of roles, including:

- Introduction and referral
- Assistance in the preparation of submissions, documents and business plans
- Provision of basic business advice and training

- Disseminating information about programs and canvassing applications
- Screening applications and building credibility with the funding agencies.

Dealmakers come from a variety of institutional backgrounds. They include:

- Private individuals, including former CEOs and company directors with an interest in leveraging their own resources and contacts to support the development of a new business and/or commercialisation of a new product
- Business associations and regional networks established to share information, expertise and contacts
- Government agencies, including State Departments, keen to promote economic development by assisting businesses obtain access to available support and assistance.
- Lawyers, accountants and consultants seeking a profit, or “rent” from a successful introduction and financing deal that will put new or additional cash into a business with a product that may qualify for a government grant: this is a growth industry.

The challenge for the entrepreneur, the one with the innovation, is to find what we have termed the *honest broker*: someone who will act in his or her interest in the commercialisation process.

The NIDP has been important in establishing “honest broker” roles and responsibilities for State and regional organisations

Government, business associations and regional networks have a key role as honest brokers. NIDP program managers have targeted State agencies and regional associations in disseminating information about the program and sourcing applications.

One of the major contributions of the NIDP has been in building broker relationships in State government agencies and regional networks.

This role of State Government economic development agencies and regional organisations is particularly important where there is no pre-existing financial relationship between an entrepreneur and an investor.

In many respects, the NIDP program performs a role as a facilitator in a deal making environment.

Public policy to support entrepreneurship

Commercialisation of research and development, support for emerging technologies and generally

encouraging entrepreneurship are all high priorities of the present government.

Governments throughout the OECD area view entrepreneurs as a unique segment of the economy and have adopted policies and programs that directly support the growth of an entrepreneurial economy. This includes tax and regulatory policy as well as targeted support and assistance programs.

Governments also recognise the important contribution of universities and public research institutions to an economy that relies on innovation and technology.

Access to capital to “seed” new ideas that have not yet been proven to be commercially viable and in the form of equity investment in new technology start-ups, is a major concern for entrepreneurs. Another important concern, however, is investor confidence about business planning and management capacity.

The NIDP is directed towards supporting entrepreneurship through the provision of “seed capital” and early stage support for start-up ventures.

Support for entrepreneurship is a high priority for government

Institutional gaps and market failures

The NIDP fills an institutional gap in Australia in that there are not many large companies with Boards that “see the oak tree in the acorn” and have the resources to invest in ideas and the experiments to create an “Innovation Portfolio” on the terms described above.

Moreover, financial frictions will discourage external investors from providing finance to ideas and experiments that have not been proven – unless, of course there is a pre-existing relationship. This is, of course, a “failure” in the capital market.

Many established companies that do see the opportunities in ideas are relatively small and do not have the reserves or cash flow to undertake their development to experimental stage. A number of companies were interviewed during the project that had a very strong portfolio of ideas. The NIDP had been important in taking those ideas forward in the form of experiments and ventures.

Projects involved as “experiments” include:

- The Echinacea project
- The “E-nose” detector in the truffles project

Projects that may be classified as “ventures” include:

- The Japanese cherries project

The NIDP fills an institutional gap as well as a market failure

- The Japanese strawberries project
- The Kyoho grapes project
- The “skin on meat” project

In all of these cases the NIDP people inside the company prepared the application.

The NIDP provides the incentive in the form of “seed” funding for companies to take their ideas or experiments to the next stage in the opportunity portfolio.

The commercialisation of research and development

Commercialisation occurs along a number of “pathways”

It is of interest to look at the NIDP in terms of what we have termed *innovation pathways*. This is important in considering points where support and assistance can be of greatest benefit.

It is well recognised that the innovation process is neither sequential nor linear in its orientation. There is also now a growing recognition that there are different innovation processes, or pathways, in different industry sectors and components of sectors.

The main differences in commercialisation between industry sectors arise because of differences in the *drivers* of the innovation process along innovation pathways. It is possible to classify pathways into three broad categories.

Commercialisation occurs through science, technology and market drivers

- Innovation based on shifts in *scientific* knowledge - *science* based innovation – such as in drug discovery in the pharmaceuticals industry: discovery is linked directly to a product for an uncertain, untested but potentially highly profitable market. “Discovery” research, using techniques of molecular biology, for example, is important in this process. The innovation processes pushes product and market opportunities.
- Innovation based on shifts in *technical* knowledge – *applications or engineering* based innovation – such as in plastics, chemicals, automobiles: product development is the main driver of innovation arising from commercial and market considerations. The innovation process pulls through basic research and new knowledge into technologies to create new and/or enhanced products.

This research relies, however, on the continual generation of new knowledge through discovery. But discoveries may take many years to become

attached to a commercial application. From this perspective, it is important that intellectual property in discoveries is fully protected.

- Innovation based on improvements in *market* knowledge – a *consumer* driven process flowing from greater knowledge of and responsiveness to consumer tastes and preferences arising from the capacity of technologies to track and model market segment behaviours.

This is particularly important in the agri-business sector where consumer preferences and tastes vary not only by country but regions within a country. *A commodity approach to agri-food marketing is no longer commercially sustainable.*

While the predominant driver in the projects specified was driven by market knowledge, there were also elements of science and technology drivers.

This issue is important where scientific discoveries in areas such as plant breeding can have a direct market application. In this respect we see the continuing importance and role for linkages between Australian and overseas businesses and universities under the umbrella of the NIDP.

The Review indicated in Tasmania, for example, that there were close relationships between the University of Tasmania and businesses in projects and significantly through research personnel. A similar situation occurs in northern NSW between the Southern Cross University and regional businesses.

In the area of technological innovation, the NIDP has been instrumental in supporting the acquisition of new technology in the form of capital equipment and implementation in the form of specific facilities.

An important feature of the NIDP is support for capital expenditure

Attachment 3: Early stage venture capital investment in the Agri-food sector

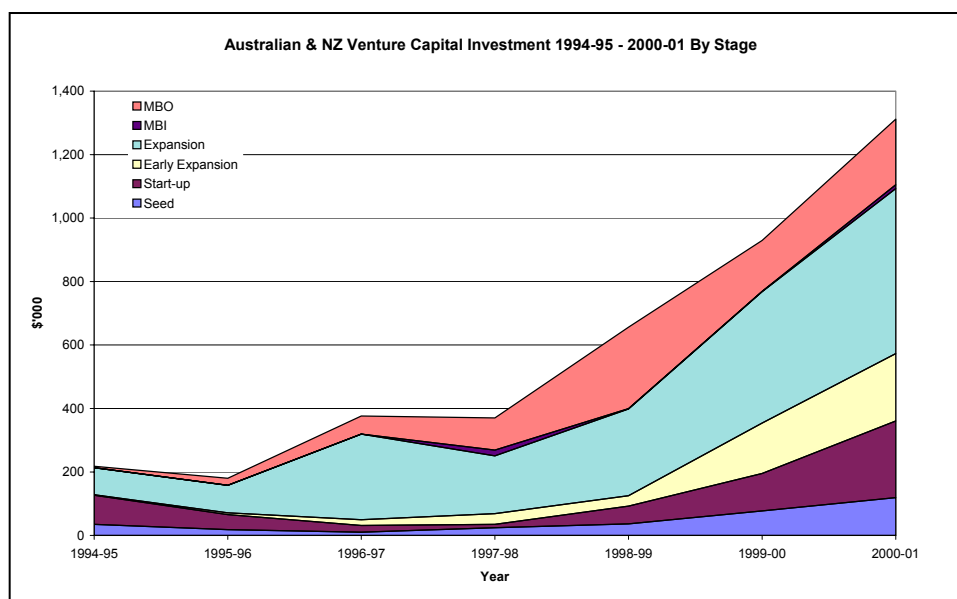
Total funding

Total venture funds flowing into Australian industry has increased rapidly over the last eight years.

Stage	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	Total
Seed	34.65	18.46	9.80	24.54	36.40	77.03	118.68	28.10	347.66
Start-up	92.00	47.33	21.65	10.11	56.01	117.92	242.10	24.28	611.40
Early Expansion	1.55	5.12	17.56	33.85	32.37	159.47	212.21	72.42	534.55
Expansion	85.48	86.79	270.40	182.20	273.65	413.55	519.86	73.85	1,905.79
Management Buy In (MBI)				18.05	1.05	1.00	12.00		32.10
Management Buy Out (MBO)	4.00	22.30	56.50	101.34	256.50	160.61	207.02	126.77	935.04
Initial Public Offering (IPO)		0.05			0.50				0.55
Replacement					4.71	34.35	70.09	3.33	112.48
Restructure			1.00						1.00
Turnaround	3.50		3.50	0.10	12.70	2.95	22.98	4.52	50.26
Loan							5.10	9.49	14.59
Total	221.18	180.05	380.42	370.20	673.89	966.88	1,410.04	342.76	4,545.42

Source: Howard Partners Analysis of Australian Venture Capital Journal Data.

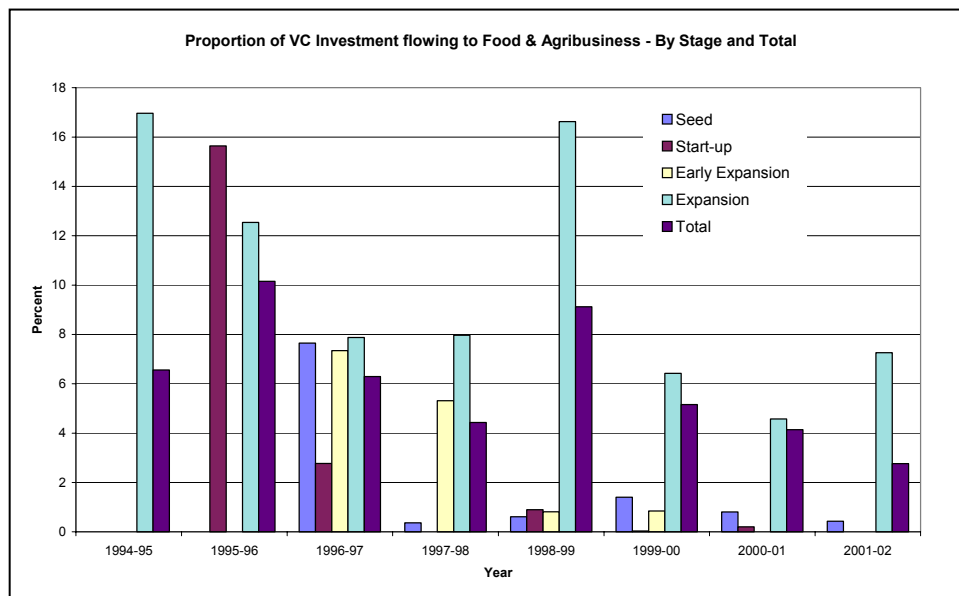
The trends are illustrated graphically below.



Unfortunately very little has been flowing into food and agriculture. The percentage of each major category for the 7.5 years is shown in the table below.

Stage	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	Total
Seed			7.65	0.37	0.62	1.40	0.81	0.43	0.93
Start-up		15.64	2.77		0.89	0.03	0.21		1.48
Early Expansion			7.35	5.32	0.81	0.85			0.88
Expansion	16.96	12.54	7.88	7.96	16.62	6.42	4.57	7.26	8.52
Total	6.56	10.15	6.29	4.43	9.12	5.15	4.14	2.77	5.55

Source: Howard Partners Analysis of Australian Venture Capital Journal Data.



Investment by stage

Number of investments

	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	Total	Proportion
Seed			1	2	6	8	7	3	27	22.7%
Start-up		1	1		1	1	3		7	5.9%
Early Expansion			3	1	2	2			8	6.7%
Expansion	4	4	10	8	14	16	7	3	66	55.5%
MBI							1		1	0.8%
MBO	1				1	1		1	4	3.4%
Replacement							3		3	2.5%
Turnaround	1						2		3	2.5%
Total	6	5	15	11	24	28	23	7	119	100.0%

Source: Howard Partners Analysis of *Australian Venture Capital Journal* Data.

Amounts invested

	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	Total	Proportion
Seed			0.75	0.09	0.22	1.08	0.96	0.12	3.22	1.3%
Start-up		7.40	0.60		0.50	0.04	0.50		9.04	3.6%
Early Expansion			1.29	1.80	0.26	1.35			4.70	1.9%
Expansion	14.50	10.88	21.30	14.51	45.49	26.56	23.76	5.36	162.36	64.4%
MBI							3.00		3.00	1.2%
MBO	0.00				15.00	20.80		4.00	39.80	15.8%
Replacement							28.08		28.08	11.1%
Turnaround	0.00						2.10		2.10	0.8%
Total	14.50	18.28	23.94	16.40	61.48	49.83	58.40	9.48	252.31	100.0%

Source: Howard Partners Analysis of *Australian Venture Capital Journal* Data.

Investees

The investees in the agribusiness sector are

Investee	Investor	IndClass	InvType	InvFinYear	TotalInv
Seed					
Adoil	Vital Capital Ltd	Food/ Beverages	Follow-on	2000-01	0.12
Adoil	Vital Capital Ltd	Food/ Beverages	New	1999-00	0.25
Aquaculture Investments	Venture Capital Corporation International Pty Ltd	Agribusiness	Follow-on	2000-01	0.01
Aquaculture Investments	Venture Capital Corporation International Pty Ltd	Agribusiness	Follow-on	2000-01	0.01
Australian Cattle Fund Ltd	Vision Venture Capital	Agribusiness	Follow-on	2000-01	0.50
Australian Cattle Fund Ltd	Vision Venture Capital	Agribusiness	New	2000-01	0.15
Plaide	Caltech Capital Partners Ltd	Agribusiness	Follow-on	2000-01	0.11
Plaide	Caltech Capital Partners Ltd	Agribusiness	Follow-on	1999-00	0.05
Plaide	Caltech Capital Partners Ltd	Agribusiness	Follow-on	1999-00	0.15
Plaide	Caltech Capital Partners Ltd	Agribusiness	Follow-on	1999-00	0.20
Plaide	Caltech Capital Partners Ltd	Agribusiness	Follow-on	1998-99	0.02
Plaide	Caltech Capital Partners Ltd	Agribusiness	Follow-on	1998-99	0.01
Plaide	Caltech Capital Partners Ltd	Agribusiness	Follow-on	1997-98	0.05
Plaide	Caltech Capital Partners Ltd	Agribusiness	New	1996-97	0.75
Vital Woman	Aegis Partners Pty Ltd	Food/ Beverages	New	1999-00	0.05
Startup					
Vegco	Rothschild Private Equity	Food/ Beverages	Follow-on	1996-97	0.60
Vegco	Rothschild Australia Capital Investors Ltd	Food/ Beverages	New	1995-96	7.40
SandwichDirect.com	BlueFire Group	Food/ Beverages	New	2000-01	0.30
SandwichDirect.com	BlueFire Group	Food/ Beverages	Follow-on	2000-01	0.10
Acacia Ridge	Growth Capital	Agribusiness	New	1998-99	0.50
Expansion					
Abalone Farms	BCR Asset Management Pty Ltd	Agribusiness	New	2001-02	4.00
Acacia Ridge	Growth Capital	Agribusiness	Follow-on	1998-99	0.16
Andrew Garrett Vineyard Estates	First Wine Fund	Food/ Beverages	New	2000-01	0.75
Australian Plantation Timber	Growth Capital	Agribusiness	Follow-on	1998-99	1.55
Australian Plantation Timber	Growth Capital	Agribusiness	New	1998-99	0.50
Australian Vintage	Hambro-Grantham Management	Food/ Beverages	New	1996-97	0.25
Barrington Estate	Westpac Private Equity Pty Ltd	Food/ Beverages	New	1999-00	4.50
Berri	Rothschild Australia Capital Investors Ltd	Food/ Beverages	Follow-on	1999-00	0.50
Berri	Rothschild Australia Capital Investors Ltd	Food/ Beverages	Follow-on	1999-00	4.40
Berri	Deutsche Asset Management (Australia) Ltd	Food/ Beverages	Follow-on	1999-00	3.20
Berri	Capital & Technology Partners	Food/ Beverages	Follow-on	1999-00	1.70
Berrivale	Axiom Funds Management	Food/ Beverages	New	1997-98	1.65
Berrivale	Rothschild Private Equity	Food/ Beverages	Follow-on	1996-97	2.00
Berrivale	Australian Wine & Horticultural Fund	Food/ Beverages	Follow-on	1996-97	15.00
Berrivale	Australian Wine & Horticultural Fund	Food/ Beverages	Follow-on	1996-97	1.00
Berrivale	Rothschild Australia Capital Investors Ltd	Food/ Beverages	New	1994-95	7.00
Blueberry Farms	Hambro-Grantham Management	Agribusiness	New	1995-96	0.88
Brian McGuigan Wines	Integrated Development Capital	Food/ Beverages	New	1996-97	0.50
BRL Hardy	Australian Wine & Horticultural Fund	Food/ Beverages	Follow-on	1997-98	5.61
Chateau Xanadu	Growth Capital	Food/ Beverages	Follow-on	1999-00	1.00
Chateau Xanadu	Growth Capital	Food/ Beverages	New	1998-99	3.50
Chiquita Brands	Australian Wine & Horticultural Fund	Agribusiness	New	1998-99	3.60
Clements Marshall	BCR Asset Management Pty Ltd	Agribusiness	New	1998-99	0.99
Cobungra Station	BCR Asset Management Pty Ltd	Agribusiness	New	1997-98	4.10
Cranswick	Hambro-Grantham Management	Food/ Beverages	New	1997-98	0.50
Cuppa Cup Vineyards	Integrated Development Capital	Food/ Beverages	New	1998-99	0.50
Dairy Vale Investment Trust	BCR Asset Management Pty Ltd	Food/ Beverages	New	1994-95	0.00
Dromana Estate	Wine Investment Fund	Food/ Beverages	New	1999-00	2.00
Eels Australis	BCR Asset Management Pty Ltd	Agribusiness	New	2000-01	1.20
ForBio	Integrated Development Capital	Agribusiness	New	1996-97	0.50
Goona Warra Vineyard	Wine Investment Fund	Food/ Beverages	New	1999-00	0.50
Hancock Victorian Plantations	Morgan Grenfell (Australia)	Agribusiness	New	1998-99	25.00
Harvest Freshcuts	Rothschild Australia - Arrow Private Equity	Food/ Beverages	Follow-on	1997-98	1.80
Huon Valley Mushrooms	BCR Asset Management Pty Ltd	Agribusiness	New	1998-99	0.40
King Valley Wines	First Wine Fund	Food/ Beverages	New	2000-01	0.45
King Valley Wines	First Wine Fund	Food/ Beverages	New	1999-00	0.65

Howard Partners

Investee	Investor	IndClass	InvType	InvFinYear	TotalInv
Logic China Investment	APEC Group Pty Ltd	Agribusiness	New	2000-01	3.30
Meadowbank Wines	BCR Asset Management Pty Ltd	Food/ Beverages	New	1999-00	1.35
Miranda Wines	Deutsche Asset Management (Australia) Ltd	Food/ Beverages	New	2000-01	15.00
Monarch Winemaking	First Wine Fund	Food/ Beverages	New	1999-00	1.50
Mt Romance Australia	Foundation Management	Agribusiness	New	1998-99	1.25
Nobilo Vintners	Direct Capital Private Equity Ltd	Food/ Beverages	New	1995-96	5.00
Nobilos Wines	Direct Capital Private Equity Ltd	Food/ Beverages	Follow-on	1996-97	0.30
Normans Wines	Hind Consulting and Investment	Food/ Beverages	New	1996-97	1.00
Normans Wines	BCR Asset Management Pty Ltd	Food/ Beverages	New	1994-95	0.00
Not Available	Smallco Development Capital Pty Ltd	Agribusiness	Follow-on	2000-01	0.06
Not Available	NAB Capital	Food/ Beverages	New	1999-00	0.85
Not Available	BCR Asset Management Pty Ltd	Agribusiness	Follow-on	1998-99	0.10
Not Available	Citicorp Equity Capital Ltd	Food/ Beverages	New	1997-98	0.60
Not Available	BCR Asset Management Pty Ltd	Agribusiness	Follow-on	1996-97	0.09
Palliser Estate Wines	Direct Capital Private Equity Ltd	Food/ Beverages	New	1996-97	0.45
Parle Foods	Gresham Rabo Management Ltd	Agribusiness	Follow-on	2001-02	1.25
Parle Foods	Gresham Rabo Management Ltd	Agribusiness	Follow-on	2000-01	3.00
Parle Foods	Gresham Rabo Management Ltd	Agribusiness	Follow-on	1999-00	1.00
Parle Foods	Gresham Rabo Management Ltd	Agribusiness	New	1998-99	3.00
Peat Resources	BCR Asset Management Pty Ltd	Agribusiness	New	1998-99	0.22
Plant Master	Allaway Hawker Williams Development Fund Pty Ltd	Agribusiness	New	1999-00	0.50
Reynolds Wine Co	Endeavour Capital Pty Ltd	Food/ Beverages	New	1999-00	2.00
Rumentek	Australian Mezzanine Investments	Agribusiness	Follow-on	1997-98	0.10
Rumentek	Australian Mezzanine Investments	Agribusiness	New	1994-95	7.50
Select Harvests	Australian Wine & Horticultural Fund	Agribusiness	New	1998-99	1.50
Sensational Sausages	Pencarrow Funds Management	Food/ Beverages	Follow-on	1996-97	0.30
Sensational Sausages	Pencarrow Funds Management	Food/ Beverages	New	1995-96	0.00
Simeon Wines	Australian Wine & Horticultural Fund	Food/ Beverages	Follow-on	1998-99	1.48
Simeon Wines	Australian Wine & Horticultural Fund	Food/ Beverages	Follow-on	1997-98	1.35
Skypac International	Wine Investment Fund	Food/ Beverages	New	1999-00	0.26
The House of Winston	Equity Partners Management Pty Ltd	Food/ Beverages	Follow-on	1999-00	1.00
The House of Winston	Equity Partners Management Pty Ltd	Food/ Beverages	Follow-on	1999-00	1.00
The House of Winston	Equity Partners Management Pty Ltd	Food/ Beverages	New	1998-99	2.00
Vegco	Rothschild Private Equity	Food/ Beverages	Follow-on	1996-97	0.60
Vegco	Rothschild Private Equity	Food/ Beverages	Follow-on	1996-97	0.60
Victorian Livestock Exchange	Bendigo Asset Management Ltd	Agribusiness	New	2001-02	0.11
Wine Industry Supplies	Australian Mezzanine Investments	Food/ Beverages	Follow-on	1997-98	0.60
Wine Industry Supplies	Australian Mezzanine Investments	Food/ Beverages	New	1995-96	5.00
MBO/MBI					
Bestcare Foods Ltd	Business Management Ltd	Food/ Beverages	New	2000-01	3.00
Balfours Pty Ltd	Business Management Ltd	Food/ Beverages	New	2001-02	4.00
Eastern Equities	AMP New Zealand/ Pencarrow Private Equity	Agribusiness	New	1999-00	20.80
Frucor Beverage	Pacific Equity Partners Pty Ltd	Food/ Beverages	New	1998-99	15.00
Goldfields Turkey	Catalyst Investment Managers Pty Ltd	Food/ Beverages	New	1994-95	0.00
Replavement/Turnaround					
Banksia Wines	GS Private Equity Pty Ltd	Food/ Beverages	New	2000-01	3.00
Harvest Freshcuts	Rothschild Australia Capital Investors Ltd	Food/ Beverages	Follow-on	2000-01	0.08
Restaurant Brands	AMP Henderson Private Capital New Zealand Ltd	Food/ Beverages	New	2000-01	25.00
Rosetto Wines	First Wine Fund	Food/ Beverages	New	2000-01	0.90
Vegco	Victorian Development Capital Managers	Food/ Beverages	New	1994-95	0.00
Yarra Valley Hills	Wine Investment Fund	Food/ Beverages	New	2000-01	1.20

Attachment 4: People and organisations contacted

Contact has been made or attempted with a total of 29 NIDP recipients. Of these, 21 have either been interviewed, or a time has been booked to either meet with them or contact them by phone. In addition, two of the panellists from the June 2001 Canberra Capital Raising day have also been interviewed.

Telephone interviews

Janelle Bray, GrandiFlora Pty Ltd (Christmas Bush)

Mike Nunn, Phoscal Holdings Pty Ltd (Phoscal Dental Powder)

Kel Doolan, Viapak Pty Ltd (Citrus Machine)

Joe Rinaudo, High Grove Pty Ltd (Chestnuts)

Steve Mantzaris, Mantzaris Fisheries Pty Ltd (Processed Fish Product)

Bill Allan, 88 Golden Eels Pty Ltd (Live European Carp)

Mike Nunn and Tom Kyriakou KUE Pty Ltd (Meat Log Machine)

Patricia Bolster Gelair Pty Ltd (Gelair)

Colin Webb and Mike Nunn Biostarch Pty Ltd (Biostarch CMR)

Barry Elliott, Oceanwest Fisheries Pty Ltd (Sea Cucumber)

Peter Chapman Beef Wellington (NSW) Pty Ltd (Bell River)

Tony Rumsey JARIT (Aust) Pty Ltd (Onion Seed)

Scott Harris Coopers Brewery (Coopers Wine Kits)

Kim Martin Vegco - Also spoke to their PR company – Beyond the Square – Monique Cerreto

On-site visits

S.D. Reid & Sons Pty Ltd (Japanese Cherries)

Spoke with Tim Reid

BRA Manufacturing Services Pty Ltd (Echinacea)

Meetings with Tim Groom on plant site

Meetings at head office with Brian Chung and Ian Folder

Field Fresh Tasmania (Kyoho Table Grapes)

Meeting with Glen Graham, Jason Dennis, Sam Graham on site

Lenah Game Meats Pty Ltd (Skin-on-meat)

Met with John Kelly on site

Panda Ranch (Pluots)

Met with Jason Slim

JF & AF Terry Pty Ltd (E-Nose Truffle)

Met with Tim Terry

Ichigo Australia Pty Ltd (Tonoyoka Strawberries)

Met with Mayumi Otsuka

Other discussions

Michael Tighe – Agribusiness Advisor, Westpac Institutional Bank –panellist on the NIDP June 2001 Canberra Capital Raising Panel

Jack Boorne - NIDP June 2001 Canberra Capital Raising Panel

Malcolm Irving, Chair, NIDP Working Group

Peter Shelley, Depity Chair, NIDP Working Group, and Chairman, Aquaculture Services Australia Pty Ltd

Peta Sugden, Department of State Development, Tasmania

Barry Westlake, Member NIDP Working Group

Attachment 5: References

AFFA. "Liquefying Bovine Cartilage to Treat Cancer and Arthritis." *Rural Vision*, no. February 2001.

_____. "How Is She Doing?" *Made in Australia* 2, no. 1 (2002).

Albrink, Jill. "Adventures in Corporate Venturing." *Strategy+Business* 22, no. 1 (2001): 120 ff.

Australia. Chief Scientist (Dr Robin Batterham). *The Chance to Change: Final Report By the Chief Scientist*. Canberra, 2000.

Australia. Department of Agriculture, Fisheries and Forestry. *Annual Report*. Canberra: Austinfo, 2001.

Australia. Department of Finance and Administration. *The Outcomes & Outputs Framework: Guidance Document*. Canberra: Department of Finance and Administration, 2000.

Australia. Innovation Summit Implementation Group. *Innovation: Unlocking the Future*. Canberra, 2000.

Baghai, Mehrdad, Stephen Coley, and David White. *The Alchemy of Growth: Practical Insights for Building the Enduring Enterprise*. Cambridge (Mass.): Perseus, 1999.

Bhide, Amar V. *The Origin and Evolution of New Businesses*. New York: Oxford University Press, 2000.

Bryan, Lowell, and Jane Fraser. "Getting to Global." *McKinsey Quarterly* (1999).

Bryan, Lowell, Jane Fraser, Jeremy Oppenheim, and William Rqall. *Race For the World: Strategies to Build a Great Global Firm*. Boston: Harvard Business School Press, 1999.

Calomiris, Charles W, and Carlos D Ramirez. "Financing the American Corporation: The Changing Menu of Financial Relationships." In *The American Corporation Today*, ed. Carl Kaysen. New York: Oxford University Press, 1996.

Dixon, Nancy M. *Common Knowledge: How Companies Thrive by Sharing What They Know*. Boston: Harvard Business School Press, 2000.

Drucker, Peter F. *Innovation and Entrepreneurship: Practice and Principles*. Melbourne: Butterworth Heinemann, 1985.

Foster, Richard, and Sarah Kaplan. *Creative Destruction: Why Companies that are Built to Last Underperform the Market - and How to Successfully Transform Them*. New York: Currency Doubleday, 2001.

Hamel, Gary. *Leading the Revolution*. Boston: Harvard Business School Press, 2000.

Jolly, Vijay K. *Commercializing New Technologies: Getting From Mind to Market*. Boston: Harvard Business School Press, 1997.

Marsh, Ian, and Brendan Shaw. *Australia's Wine Industry: Collaboration and Learning as Causes of Competitive Success*. Sydney: Australian Business Foundation, 2000.

New Industries Development Program. "Working Group Meeting No. 5, Agenda Papers." November 2000.

_____. "Working Group Meeting No. 6, Agenda Papers." March 2001.

New Industries Development Program Advisory Group. *Third Meeting: Agenda Papers*. Canberra, 2002.

New Industries Development Program Working Group. *First Meeting - August 1999: Agenda Papers*. Canberra, 1999.

_____. *Second Meeting - November 1999: Agenda Papers*. Canberra, 1999.

_____. *Fourth Meeting: August 2000: Agenda Papers*. Canberra, 2000.

_____. *Sixth Meeting - Friday 30 March 2001: Agenda Papers*. Canberra, 2001.

Norton, Rob. "The Decline (But, Trust Us on This, Not the Fall) of the American Venture Capitalist." *Business 2.0* (2001).

Program, United States. Advanced Technology. *Between Invention and Innovation: Mapping the Funding of Early Stage Technology Based Innovation*. Washington: Project Working Paper, 2001.

