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DEVELOPING INCUBATION POLICY

DISCUSSION PAPER

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1 Introduction

This paper raises a number of issues and points that CREEDA believes should be taken into account in developing Incubation Policy. In developing the paper we have drawn upon experience with business incubation in Europe and the USA as well as Australia. We are conscious that while lessons can be learnt from overseas adaptation to the Australian situation is equally important.

The paper does not attempt to provide a thorough analysis. It comprises:

1. This introduction
2. A short Executive Summary
3. Where do Incubators fit in the broader scheme of things?
4. Implications for Policy
5. Attachments
    a. Facilitation Methodologies,
    b. Comparing High Technology and General Purpose Incubators

The paper assumes a degree of understanding about business incubators. CREEDA can provide additional information to anyone who feels they do not have adequate information about business incubators, their development, the types of models that exist around the world, lessons learnt in Australia and overseas and emerging trends.

2 Executive Summary

With more than 10 years experience with business incubators in Australia it is arguably time to re-consider the overall policy for business incubators. The current Commonwealth funding program has been evaluated and changed over the years to a stage where the industry feels that most of the settings are right. It is clear that many incubators are working well and achieving significant outcomes. There appears to be no shortage of interest from a range of bodies wanting to develop new business incubators, although reinforcing the existing investment should be a priority. Consideration of policy may be relevant for the future development of incubators and for improving the performance of existing incubators. Policy needs to be considered carefully and a number of points and issues are raised in the paper, including:

- The market failure that justifies business incubators;
- The size of the markets in Australia, which, compared to overseas, are very small;
- Building on the existing incubator infrastructure, both general and high tech;
- Development of incubator economies of scale and financial self sufficiency;
- Improving incubator capacity and performance;

- Experience to date, best practices and emerging trends;
- The outcomes achieved by the various types of incubator and the benefits they bring to their communities, some of which are tangible such as business survival and employment outcomes. Other important outcomes are far harder to measure, for example the catalytic impact on a community, or development of social capital, or developing entrepreneurship and innovation.
- Integration of incubators with other business support programs
- Opportunities to leverage additional resources for developing businesses, for example finance.
- Ongoing accountability and monitoring

Government at all levels has an important role to play in the incubation industry, although it should not directly involve itself in day to day management. The most common forms of government and other public institution support for business incubators include:

1. Provision of buildings at a peppercorn rental or in other comparable ways that mean the incubator does not pay rent on the building or the capital costs.
2. Establishment funding. This is generally cheaper and over a shorter period for general incubators when compared to high tech incubators.
3. Integration of incubation with other services to new start and growing businesses.
4. Promotion to new start businesses and other service providers.
5. Facilitation of incubator establishment and helping build the capacity of incubator organisations.
6. Overall policy context and monitoring of outcomes.
7. Improving operational efficiency and training in the incubation industry. It is particularly important to improve incubator manager and staff skills in incubator management areas as well as with the business development skills to add value to client firms.

There is a need to co-ordinate and possibly segregate the responsibilities and focus of Commonwealth, State/Territory and Local Governments who all might have a role in supporting business incubators.

An easy segregation might be to ensure State/Territory and Local Government provide the necessary buildings with the Commonwealth support focusing on establishment funding and capacity building (training/skills enhancement). All tiers of government should be setting an agreed policy framework for business incubation that relates to other business support services.

As this is a discussion paper recommendations are not included although they can be drawn from an analysis of the points made in the paper.

3 Where do incubators fit within the broader scheme of things?

Incubators need to be integrated at a policy and implementation level with other related initiatives and in particular:

- Business advisory services
- Technology Parks
- Industrial Parks
- Innovation Strategies

This requires a segmentation of these services.

Service	Comment
Business Incubators	Business facilitation, coaching and intervention Proactive – the incubator staff and advisors live with the businesses on a daily basis and do not have to rely upon calls for assistance High intensity Property Base Clients are early stage businesses and not intenders High technology incubation focussed on commercialisation of IP is very different to other forms of incubation, which are commonly grouped under the General Purpose or Mixed Use terminology.
Business advisory services (e.g. Business Enterprise Centres (BECs))	Business facilitation Reactive – to requests for assistance Information, Seminars & workshops, one to one appointments and mentoring Usually free government supported services Low intensity Intenders are a high proportion of clients
Technology Park	Limited business support services Clients are established, large and multinational companies

	Focus on technology transfer with R&D bodies Property based and linked to R&D bodies Incubators are often included in a Technology Park
Industrial Park	Property development
Innovation Strategies	Can involve many initiatives and can provide a good conceptual framework for linking and integrating the other services

4 Implications for policy

A number of factors need to be addressed in developing business incubator policy

4.1 Understanding of incubators and their differentiation

The best definition of incubators we have come across is:

"Business incubation programs accelerate the successful development of entrepreneurial companies through an array of business support resources and services, developed or orchestrated by incubator management and offered both in the incubator and through its networks of contacts. The goal is to produce successful firms that will leave the program financially viable and freestanding. The incubator graduates have the potential to create jobs and wealth, revitalise neighbourhoods, commercialise new technologies and strengthen local and national economies. An incubator must provide management guidance, technical assistance and consulting tailored to young, growing companies. Incubators usually provide clients access to appropriate rental space and flexible leases, shared equipment, technology support and assistance in obtaining the financing necessary for company growth[1]".

We can provide comprehensive and detailed information about how incubators operate and the variety of models in Australia and around the world. However, for this paper we have assumed a good understanding of business incubators. To help with the distinction between general and high tech incubators, which is the most basic segmentation, we have attached a table that contrasts the two types of incubator.

4.2 Incubator Objectives

General-purpose incubators are generally driven by employment creation objectives in a context of local community and economic development. Important objectives are:

- Employment creation
- Development of social cohesion and social capital
- Development of an entrepreneurial and innovative spirit in a community

[1] *Best Practices in Action*, NBIA 2001 and adapted from the Definition of an Incubator approved by the National Business Incubation Association (NBIA) board of directors in 1996.

- Improved survival rates for new start businesses
- Industry development and economic diversification
- Wealth creation (secondary to employment creation)

High Technology incubators are generally driven by wealth creation objectives in a context of commercialisation of R&D. Other important objectives are:

- Wealth creation
- Employment creation (secondary to wealth creation)
- Development of an entrepreneurial spirit in R&D organisations
- Technology Transfer
- Industry development and economic diversification
- Improved survival rates
- Improved rates of commercialisation of R&D with spin off companies

4.3 As large as possible

Economies of scale are essential with business incubators and this is noted continually in the literature. The OECD summarises this important point in a policy recommendation: "Aim to achieve scale. Greater scale opens up possibilities for cost and risk reduction as well as the leveraging of private finance."[2]

Policies should facilitate development of incubation capacity, in both high tech commercialisation and general incubation, in a way that maximises the potential economies of scale, while being suited to the level of demand.

In a small market place all that makes sense is to have one body managing general incubators and one-body managing high tech commercialisation incubators. Competition between incubators in a small market is likely to down quality, fragment resources and lead to a reduced capacity.

For smaller regional centres regional incubator networks, with incubators in a number of towns in a region run together to realise economies of scale, show promise and an alternative to having small independent incubators operating on their own. However, there may be other ways of delivering incubation in regional Australia where demand is clearly limited. Rural incubation has been reviewed in the USA with a view to improving performance and identifying successful strategies and this may be desirable in Australia.

Virtual incubation should be viewed with scepticism. The concept has been talked about for more than 10 years and there have been a range of experiments. However, it is very hard to find a model that has worked, is differentiated from advisory services such as Business Enterprise Centres and has stood the test of time.

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[2] *Good Practices in Business Incubation*, OECD 1999.

4.4 Size of the market

Ensuring the incubation infrastructure suits the current and future demand.

The market in Australia is very limited, particularly in regional areas. General rules of thumb are:

- One general incubator (about 30 tenants) per 100,000 of population and
- High tech commercialisation incubators are driven by R&D spending and the spin off rate per $100 million of R&D, with the best countries in the world achieving 11 spin out companies per $100M and the worst about 1 per $100M.

4.5 Market failure

An understanding of the market failure is fundamental to the justification for public support of business incubators. We concur with the OECD policy recommendation that "Public intervention should be justified by explicit reference to market failures and/or the provision of public goods. Market enhancement rather than displacement should be aimed for"[3].

Business incubators are not commercially viable and these services are not provided by the private sector. However, confusion in the market place may lead to serviced offices, private business advisory services, developers of industrial and commercial real estate and industry parks thinking that they provide business incubation services. This confusion can generally be overcome by provision of information and improved understanding.

4.5.1 Linking incubation infrastructure and services to market failure

The market failure for incubators falls into 3 areas:

1. **Property market**[4]

- Too risky for property owners
- Cannot give suitable financial guarantees

2. **Business services market**

- New start and micro businesses can't or won't pay for the help they need. This

[3] *Good Practice in Business Incubation*, OECD 1999

[4] The OECD 1999 Publication *Good Practice in Business Incaution* includes a good analysis of the market failure in the property area. This is contained in a paper by Ian Dalton, a Technology Park specialist. Unfortunately the conclusion Ian Dalton draws, that governments should simply guarantee the rent of privately funded buildings, is flawed as it does not take account of the other aspects of market failure that relate to business incubators, ignores the fact that incubators are much more than just property developments (in fact focusing purely on property development is seen as worst practice) and in this respect are very different from Technology Parks and ignores other incubator best practices and issues of financial viability.

is the justification for a range of government supported services targeting the new start and micro market.

- Incubators also offer personal support

3. Seed Finance

- Equity for companies with global market potential– up to$1M to $2M. This can be called the Seed Funding Gap and the extent of this market failure depends on the state of the venture capital market. Venture Capitalists (VCs), even in good times, rarely come in at the Seed Stage preferring, for understandable reasons, to come in later with first and second round funding. At the moment VCs have retreated and the gap is out to $2 to $3Million. The amount of seed funding required to bridge the gap depends on the extent of the gap, the industry and the state of the VC market, but is typically around $500,000.

- Unsecured debt and cash flow lending for growing companies- $10K to $50K. Only established businesses can get this type of facility from banks and other institutions, which consider new start and growing businesses as being too risky. Relationships incubators used to have with the local bank managers, before de-regulation, that could be used to secure unsecured finance for incubator clients are no longer effective.

- Not <$10K in Australia, unless as a part of employment equity programs. For most people starting a business the 3 Fs (Friends, family and fools) combined with credit cards and leasing of plant and equipment can get people going. However, there are groups of very disadvantaged people where support may be warranted.

4.6 Market driven

Incubators as with other businesses should be market driven and responsive to the changing requirements of clients.

4.6.1 Strategic Location of Incubators

Policies should ensure appropriate geographic coverage to give ready access to incubation services by emerging businesses and, in the case of High tech commercialisation for researchers, scientists and their institutions.

4.6.2 Knowledge of where the market is being stimulated

As a part of industry development strategies incubators may be used to stimulate a market segment. Where this occurs it needs to be acknowledged and the implications understood. It can be argued that there are other less capital-intensive ways of stimulating a market that could be pre-cursor to an incubator that would be established once there is a market for the incubator. This generally only occurs with high technology commercialisation incubators where they are used as a tool to stimulate commercialisation of IP. One example is St Johns Innovation Centre linked to Cambridge University where it took many years to have numbers of tenants enter the facility. The incubator has gone on to be very successful and is an important part of Regional Innovation in Cambridgeshire.

4.7 Integration with other innovation and business development infrastructure and services

This has been addressed already, however several further points can be made:

- **Boundaries to incubation**

These need to be understood. Incubators are only one specific tool and not a solution to all problems.

- **Regional Innovation**

Regional innovation strategies are a good context for consideration of incubators if innovation is looked at broadly and not just in terms of high tech commercialisation. Research from Europe indicates that innovation is best considered at a regional level and the best regions in Europe generally have a mixture of incubation and technology park services available. Unfortunately innovation is a term that is being used very loosely and losing its impact (along the lines of networks and clusters).

- **Road map & entry points**

Incubators are only elements in a suite of business support programs. Customers can be confused as to where to go to obtain the support they require, which could be information and advice from services such as BECs, mentoring, finance or business incubation. It is important for customers to have a very simple and clear road map of services ideally with a one-stop shop type of entry point or access to the suite of services by accessing any one of the services. Confusion should be minimised.

- **Linkages to markets**

Incubators need to help clients access markets for their products and services. For some businesses this is the local market whereas for others it is national and export markets.

There may be opportunities for channels to international and national markets to be facilitated by a co-ordinating body, as other programs and services as well as incubators need these channels. The international incubator in San Jose is just one example of how countries use this Silicon Valley service as a channel to USA markets and finance for their domestic companies.

- **Linkages to Finance**

Finance is always an issue for new start and growing companies. Incubators provide a value adding, risk minimisation tool that can have low transaction costs. They can be a useful tool for financiers and there is potential to use incubators more strategically as a channel for debt and equity finance. Prior to bank de-regulation it was relatively easy to help clients obtain unsecured loans but this is now far more difficult.

Equity seed funding at a very early stage is very difficult to secure and is a constraint on high tech commercialisation. This does not mean that funds are in short supply, which is not the case, but that risk aversion is forcing the funds to later stage and less risky deals.

The BITS program is a good example of how incubators can link with venture capital, although the retreat of the Venture Capital Industry to later stage and larger deals since the Technology crash has not made this easy. In time one would expect the market to change and come closer to early stage deals. Epicorp has shown how an incubator can be a very useful

tool to lever local Angel Investment.

From a policy perspective and in a relatively small country it is important to try to make sure that there is as little duplication of effort as possible and that resources, initiative and effort are co-ordinated and integrated. Government facilitating sharing and communication between service providers involved could achieve this and there may be roles for the Government or other accountable regional bodies to co-ordinate access to international markets and venture capital.

4.7.1 Leverage

Incubators are tools that can be used to leverage other services for growing businesses.

- **Finance**

  Incubators minimise the risk of investments, add value to investments through the value adding services and can cut down transaction costs. Using incubators to address finance needs should be in areas where there is a market failure with finance for new and growing businesses to maximise impact.

- **Other Government Programs**

  Incubator policies and implementation should allow the incubation infrastructure to be used to add value and provide leverage for other government and indeed private initiatives. This could be at the high tech end with R&D Grant recipients or at a more general level to back up other business support programs or for the development of particular industry sectors or for attraction of businesses to a location.

4.8 Focus on development of growth businesses

Incubators should be focussed on businesses that aspire to and have the capacity for growth. This does not necessarily just mean high growth and export but could equally be growth from 1 to 5 employees.

The main employment impact of incubators will come with the graduates after that have left the incubator This is summarised by the OECD in a policy recommendation: “Business development should take primacy over job creation. In the context of incubation, job creation is best attained through successful business outcomes. Broader initiatives to raise interest in entrepreneurship should complement incubation”[5].

4.9 Incubators as a tool to help disadvantaged people?

A useful distinction with regard to the job creation outcomes of incubators is between:

1 Additionality - creating additional jobs in a community through business development and focusing on those that have potential to grow

[5] Good Practices in Business Incubation, OECD 1999

2 Equity – helping disadvantaged people create their own self-employment.

Incubators are used in varying locations to help disadvantaged people to create their own self-employment. Good examples are the USA Empowerment incubators that are general incubators focusing on economic and community development in black and Hispanic ghettos.

The argument against this approach is that resources are better used by helping people establish growing businesses to create new jobs with no priority placed on the status of the principal (this would be the OECD line). However, there are counter arguments that disadvantaged people should have access to the specialised services of an incubator to help redress their disadvantage even though the employment outcomes may be limited and they may need financial support to be able to afford incubator services.

4.10 Specialisation

There are advantages with specialised incubators in that services can be focused on the needs of a particular industry and industry synergies can be fostered. On the other hand there are advantages that flow from non-specialisation in that cross industry linkages can be capitalised upon (e.g. high tech software developers still need access to a range of services).

Most successful incubators, whether high tech or general, are not specialised. Specialisation limits the market being served and increases the risk at the same time as reducing the potential economies of scale. However, they may develop on site themes with groups of tenants (driven by market needs, i.e. natural groupings of tenants) or have industry segmentation within the incubator (a more focussed and proactive approach to a particular industry). Narrowly specialised incubators have proven to be far riskier than more general incubators and are common in the lists of failed incubators.

Most general incubators around the world will have a high proportion of office based service businesses. Most high technology incubators will have a high proportion of IT&C businesses and a growing number of Biotech businesses.

Where exclusively specialised and focussed incubators operate successfully they are underpinned by a critical mass of demand for incubator services in that industry, or R&D and a critical mass of local industry in that sector. One example is the Biomedical incubator in Chicago, which is surrounded by 56 acres of hospitals and bio-medical research. Nowhere in Australia has anything like this critical mass.

More commonly specialisation is not exclusive and is achieved by themes or clusters within the one incubator. For example, an incubator may have a range of different clients and mini-incubators within the overall structure, thus achieving the benefits of specialisation and non-specialisation without limiting the market being served. -

In a small and limited market any specialisation is best achieved using existing incubator organisations and infrastructure rather than establishing new organisations and infrastructure. There are many examples. One of these is the San Jose Environment and Software incubators (called Environment and Software Clusters), which are badged separately but a part of the one incubator body and using the same building. An Australian example is the Australian Technology Park incubator, which has numerous separately badged infrastructures within the one incubator.

Considering developments around the world and the Australian situation there are a number of possibilities for specialisation, some of which are outlined in the following table (not an exhaustive list). Incubators should be able to provide services to any industry, where the

businesses can move into an incubator (some industries such as retail, primary production and heavy manufacturing are not suited to incubation).

Type of Incubator	**Comment and Examples**
Environment Industries	Both high tech and general. San Jose Environment Cluster incubator Clean Energy Alliance Incubator Network in the USA – using incubator infrastructure to lever Venture Capital finance into clean energy companies
IT & Software	Generally not specialised and most high tech and general incubators will have a high proportion of IT tenants. One would expect most incubators to have a high proportion of IT companies. Specialised example: Software Cluster Incubator in San Jose BITS incubators focussing on ICT industries
Biotech	Specialised incubators where there is sufficient R&D in the area to warrant specialisation. In other cases biotech is a common category in High Tech Incubators. There is clearly potential although the critical mass may not be evident in many locations to warrant a biotech incubator. Specialised Examples Nidus Cente in St Louis attached to Monsanto and universities and reliant upon the critical mass of Monsanto research
Manufacturing	Generally developed as a part of industry restructuring and in areas where manufacturing has been predominant. In Australia these have not been very successful other than as a part of general incubators. In the North East USA many were established on the back of political imperatives to do something in the industry. As examples they are limited as they generally only service the domestic USA economy whereas in Australia we would

	have to export. In the advanced manufacturing area there may be potential but this needs to be considered in terms of the new knowledge economy and manufacturing now being focussed in Asia.
Arts and Crafts – businesses	Incubators helping artists and crafts people have a mixed record around the world. Only a proportion of artists and crafts people want to take a business approach. Good models address the fact that artists and crafts people often do not take a market driven approach, are not good at selling or mass production and prefer to focus on their art. There is potential although many clients may need financial support. The difference between studio space and arts incubation is the business development path tenants would be subject to in an incubator followed by graduation. Specialised Example: Bridgeworks in Pittsburgh that undertakes marketing and mass production for the artists.
Arts and Crafts - organisations	Incubators to help arts and crafts non-profit organisations to develop professional management skills and appropriate governance structures grow and prosper and provide quality services to their clients. There is potential for this as a way to enhance performance of arts organisations and share the cost of expensive infrastructure (e.g. IT and broadband) and possibly with reference to Gorman House Specialised examples: Entergy Arts Centre in New Orleans and San Jose Arts Incubator which provides broad band access for its tenants (significant value add).
Design	Incubator with specialised design equipment and software to help design businesses. There may be good potential for this as a service to graduates of design courses.
Fashion	In Australia a number have been funded and have floundered. There are a number in the USA. These need to address the separation between design, sales and marketing and production, which is far cheaper in Asia. Generally developed where there has been a strong textile industry that has been shifted to Asia as a part of industry re-structuring

Service businesses – personal, finance, property and business services	These industries are common in general incubators, which, along with IT, accords with where growth has occurred in the economy. Potential for specialisation could focus on specialised services for these businesses.
Community Organisations	In Australia there is interest in this concept and the term social venture incubators is being used. The aim is to put community organisations through an incubation process to help them grow and succeed. There are many examples in the USA.
Food Industries	Kitchen Incubators to overcome barriers to entry in food industries and to help food producers and caterers. They rent fully equipped kitchens on an hourly basis and focus on food technology and boutique marketing value-adding services. There appears to be potential in Australia's food growing and value adding regions. Specialised example: Denver Enterprise Centre, the most successful in the USA and attached to a successful general incubator.
Youth – students and graduates	The potential is focussed on helping undergraduate and graduate students develop businesses. These can be high tech or general. Specialised examples: Norwegian incubators helping undergraduates develop a business Babson College in Boston and Robert Gordon University in Scotland
Leverage for finance	Using incubators to leverage debt and equity finance for tenants. This could be high tech (Venture Capital) or general (Venture capital and debt finance). Specialised examples: In the high tech arena the BITS incubators are leading examples on a global basis. Others are the Israeli incubator program and

	the Clean Energy Alliance (a network of incubators leveraging VC funding to clean energy tenants). In the general arena and debt financing the Birmingham Business Advice Network (BBAN) in Birmingham Alabama has a very good loan fund as does the Incubator Centre in Grand Junction Colorado
Company attraction	Incubators are sometimes used to help attract companies to a region. Specialised example: International incubators to help companies into the USA. The leading USA example is the International Business Incubator in San Jose that helps overseas high tech companies enter the USA market by a range of hospitality services as well as linking with USA venture Capital and marketing expertise. Many companies are represented in this incubator and some have since established their own incubator in Silicon Valley
Internships	Providing work experience opportunities for interns as a part of university studies and value adding for the incubator companies involved. Generally this is focussed on graduate students, as undergraduates are not able to add a lot of value to incubator tenant companies. Specialised examples: San Jose Cluster incubators partnering with San Jose State University NASA Commercialisation Centre Poloma USA.
Post Incubation facilities	Appropriate premises for incubator clients to graduate to. In the high technology arena this will ideally be to the technology park in which the incubator resides and allows the graduating company to retain proximity to the R&D institution concerned (a cornerstone of Technology Parks). In other areas there may be potential where specialised facilities are required or proximity to a particular service or institution or for a range of other

	strategic reasons. Specialised examples: Zernike in Groningen Holland, Rensselaer in New York State, Boulder Technology Incubator in Denver, Bethlehem in Pennsylvania and the ATP in Sydney.

4.11 High Tech or General Incubation?

This is a question being asked more often since innovation and high tech commercialisation has come into vogue. The question is often confused by general incubators trying to badge themselves as high tech and technology parks calling themselves incubators to capitalise on the international interest in incubators, not to mention the non-incubator initiatives calling themselves incubators for a variety of spurious reasons (often an attempt to obtain government funding).

High tech and general-purpose incubators have very different objectives and modes of operation. High Tech incubation is properly rooted in commercialisation of R&D, with 1 or 2 out of 100 applicants being accepted into the incubator and an expectation that only 10% to 20% of those will go on to global success. High Tech incubation is not a numbers game and is about picking the cream of the crop.

General-purpose incubation is rooted in community and local economic development responding to business development needs in a local community. Also, general incubators, in helping a wide variety of companies, often do get involved with high technology commercialisation and good general incubators will have around 15% to 20% of high tech clients. The Softlaw Corporation is a good example of a successful high technology graduate from the CREEDA general-purpose incubators.

It is not a question of either or but both. The scale of each should be determined by an assessment of the demand for each type of incubation.

Specialisation can occur with both types of incubation.

4.12 Accountability, evaluation and benchmarking

4.12.1 Ensuring the infrastructure is flexible, focussed, continually improving, responsive to change and available as a value adding tool for other public and private programs.

While governments should not run incubators it is to be expected that governments will want to ensure that the incubator infrastructure, which is normally be operated by non-profit and publicly accountable bodies, responds to changes, opportunities and industry development priorities which will change from time to change.

Government is a key stakeholder in business incubators and mechanisms need to be put in place that allow incubators to be managed independently as businesses in their own right, with appropriate accountability and responsive to government priorities.

4.12.2 Stakeholder and government focus on outcomes, policies and not day to day management process

CREEDA believes that the proper focus of governments should be on overall policies and outcomes and not on the process of running the incubators. The government should also ensure that the infrastructure is available for the benefit of appropriate businesses and adds value to other government initiatives.

4.13 Learning

There has been a 15-year history with business incubation in Australia and a longer history internationally. Many lessons have been learnt, best practices identified and there are clear trends evident. These should be taken into account in future incubator policies.

4.13.1 Best Practices

Policies should encourage incubators to operate according to accepted best or good practices.[6]

4.13.2 Learning the lessons (National & International)

These are outlined in CREEDA PowerPoint presentations and can be converted to a separate paper on the topic.

4.13.3 Knowledge of emerging incubation trends

It is important to keep abreast of emerging trends through participation in international forums and consideration of papers and publications. The trends that are evident are addressed in CREEDA PowerPoint presentations and can be converted to a paper on the topic.

4.13.4 Chaos, ambiguity and paradox

Innovation and incubation are non-linear and have to accept chaos, ambiguity and paradox. Policies and incubator management need to allow the necessary flexibility and be responsive to change.

4.14 Financial sustainability of the incubator

Government policies should assist incubators to achieve financial self-sustainability, understanding that they are rooted in market failure. Economies of scale and access to buildings are critical features for achieving financial self-sustainability.

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[6] The following publications give a good picture of best practices in the Industry:

Best Practices in Action, NBIA 1999

Growing New Ventures Creating New Jobs, Principles & Practice of Successful Business Incubation, Rice & Matthews, Quorum, 1995

Business Incubation In Australia, Best Practices and an Industry Profile, ANZABI, 1997

4.15 How can Governments help?

The most common forms of government and other public institution support for business incubators are:

8. Provision of buildings at a peppercorn rental or in other comparable ways that mean the incubator does not pay rent on the building or the capital costs. Incubators should, in most cases, be able to cover all short and long term building costs (insurance, annual and cyclical maintenance etc). In costing this support, governments should use the net opportunity cost (gross opportunity cost less the property management and building costs which would otherwise be associated with building).

9. Establishment funding. This is generally cheaper and over a shorter period for general incubators when compared to high tech incubators.

10. Integration of incubation with other services to new start and growing businesses.

11. Promotion to new start businesses and other service providers.

12. Facilitation of incubator establishment and helping build the capacity of incubator organisations.

13. Overall policy context and monitoring of outcomes.

14. Improving operational efficiency and training in the incubation industry. It is particularly important to improve incubator manager and staff skills in incubator management areas as well as with the business development skills to add value to client firms.

4.15.1 Segregation of Government Support?

There is a need to co-ordinate and possibly segregate the responsibilities and focus of Commonwealth, State/Territory and Local Governments who all might have a role in supporting business incubators.

An easy segregation might be to ensure State/Teritory and Local Government provide the necessary buildings with the Commonwealth support focusing on establishment funding and capacity building (training/skills enhancement). All tiers of government should eb setting an agreed policy framework for business incubation that relates to other business support services.

The division of responsibility and policy framework could be something to be considered by the Commonwealth-State-Territories Small Business Minister's Council

5 Attachments

5.1 Facilitation methodologies

Another way of looking at the business support industry is in terms of what is called enterprise facilitation. This can help illustrate and understand the difference between incubators and advisory services such as provided by BECs and some State Government services.

5.1.1 Pure enterprise facilitation

- ***Information***
- ***Diagnosis***
- ***Referral***

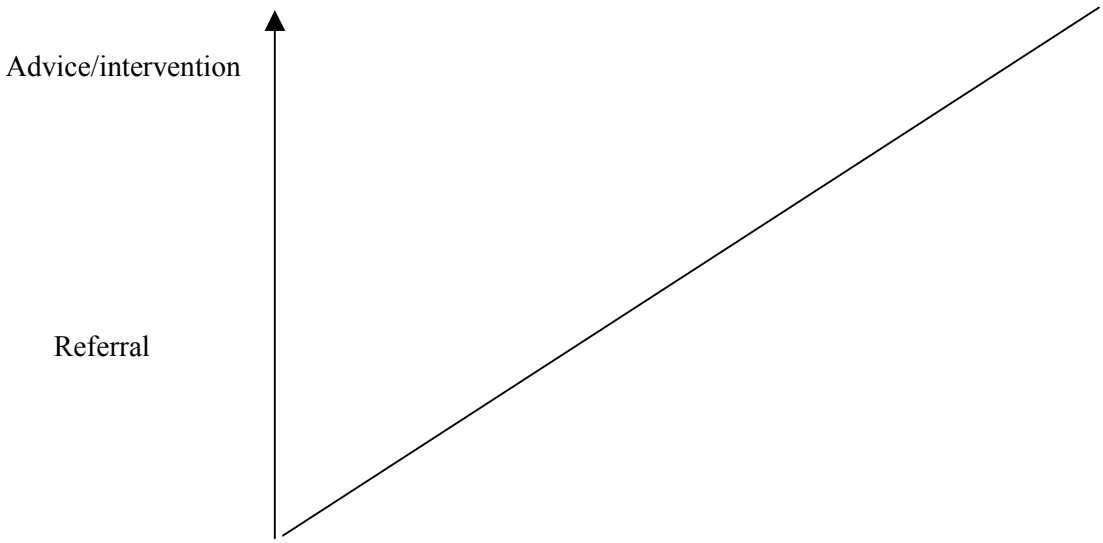
This style of facilitation is best suited to intenders and is a feature of free and confidential government supported services such as the Business Enterprise Centres around Australia

5.1.2 Advice and intervention

- ***Advice***
- ***Intervention (by a business consultant, mentor or development service)***

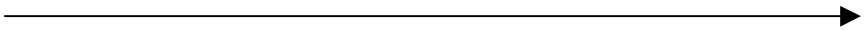
This style of facilitation is applicable to working with growth companies and with business incubators. [7]

The relevant application of different methodologies can be shown with the following chart:



1 [7] Thanks are due to Dr Claire Massey of Massey University for helping develop understanding in this area and for access to her research**:** *Knowledge systems & enterprise assistance: Responses from the public sector.*

Information



Intenders Growth

It is clear that there is no one approach that suits all situations and that intervention methodologies need to be tailored to the needs of the particular person, business, industry and stage of business growth.

5.1.3 High Growth & Commercialisation require different approaches

The pure model of enterprise facilitation espoused by the Australian Institute of Enterprise Facilitators does not work well with growth and commercialisation of IP. For example High Tech IP Commercialisation is based upon an understanding that:

- IP holders will not be long term business managers
- Building a management team around the IP is absolutely critical
- Venture Capital and seed funding from external sources is required
- Investment and partnering with the business is at the core of commercialisation.

5.1.4 Key points for intervention

With growth companies there are some key points for intervention that can be characterised by the number of employees.

- 1st employee – often a hurdle for a micro business to overcome, but only about 20% of micro businesses want to grow and employ people
- 7-10 employees – formal management systems required, although only a % of businesses have the potential and aspiration to grow
- 15-17 employees – professional management required to lay a foundation for growth up to about 50 to 60 employees.

5.1.5 Fostering a dynamic and innovative business culture

- business paradigm has changed
  - speed and change
  - knowledge
  - innovation
- planning vs. jumping in and can do
- failing forwards rather than backwards

Attitudes and awareness need to change.

5.1.6 Finance

For high growth and high value adding, early stage debt &/or equity finance for client companies may be required as a part of a mix of services

5.2 Comparing High Tech & General Purpose Incubators

The following table outlines the key features of general incubators in the left hand column and key and unique features of a notional ideal best practice high technology incubator in the right hand column. In making this judgement, we refer to models and experience in Australia, the USA and Israel. In addition, the table makes it very clear how high technology incubators differ from more general purpose or mixed-use incubators.

FEATURES OF HIGH TECHNOLOGY INCUBATORS COMMON TO GENERAL PURPOSE INCUBATORS	UNIQUE FEATURES OF HIGH TECHNOLOGY INCUBATORS
Accommodation: ➢ Flexible, easy in easy out, to suit the needs of the businesses concerned, ➢ Generally offices and/or light industrial units ➢ Security	**Specialised Accommodation**: ➢ May include laboratories and other specialised accommodation; ➢ Better quality communication infrastructure
Office services: ➢ Phone, fax, photocopying, bookkeeping, secretarial etc.; ➢ To reduce start up costs and offer access to high quality services	**Partnering the tenant with administration and management:** ➢ Accounting, marketing, sales, payroll, human resources etc. (i.e. general business management); ➢ May be on a pay as you use basis, in exchange for equity or royalty payments; ➢ Can be mandatory
Proactive business Development Assistance and Training: ➢ Manager with general business and business facilitation skills and understanding: ➢ Referrals to professionals, mentors and other consultants; ➢ Business planning, management, accounting, legal, finance, marketing etc.; ➢ Facilitative in nature – not doing it for the business; ➢ Aiming to teach the business proprietor the necessary business management skills and attributes	**Specialised Commercialisation Assistance:** ➢ Referral to specialists; ➢ Manager with commercialisation skills and understanding; ➢ Not necessarily trying to have the proprietor develop all the business management competencies, as in a growth company specialists will be engaged to undertake the business management; ➢ Helping the proprietors develop growth and commercialisation skills
Support for the person (as well as with business management)	

Networking: ➢ On site and in the local business community	➢ With R&D and specialised networks; ➢ With academia and venture capitalists

Active Community Links: ➢ Developing the market; ➢ Raising awareness; ➢ Changing cultures; ➢ Outreach programs ➢ Virtual tenants	**Active Links to R&D Institutions and Academia:** ➢ Developing the market; ➢ Raising awareness; ➢ Changing cultures; ➢ Identifying mutually beneficial R&D and training opportunities, between the businesses and R&D bodies concerned; ➢ Access to academic resources and institutional infrastructure
General Objectives: ➢ Employment; ➢ Reduction of small business failure; ➢ Wealth creation; ➢ Growth ➢ Other Social and regional development objectives	**Specific Objectives:** ➢ Commercialisation; ➢ Technology Transfer; ➢ Investment; ➢ High growth; ➢ Export; ➢ May focus on a specific industry segment
Stakeholder Objectives ➢ Social and economic outcomes	**Stakeholder Outcomes** ➢ Wealth and funds from successful commercialisation of spin out local companies
Finance ➢ Some have loan funds in house ➢ Links to debt finance sources	**Finance** ➢ Early stage venture capital ➢ Expansion venture capital ➢ In house or by third parties
Selective ➢ Tenants need to meet general criteria	**Very Selective** ➢ Additional highly specific criteria and assessment procedures
Graduation ➢ To the local community ➢ General criteria	**Graduation** ➢ May be to a Technology Park ➢ Specific criteria

Technology incubators can readily be distinguished from Technology Parks, R&D Parks and Industry Parks where they may be located.

The table does not address management structures, programs of support, financial parameters and other operational elements of the two types of incubator. However, there is a similar pattern of common features with additional specialised aspects of high technology incubators.