

Best Practice

in

Business Incubator
Management

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This study on Best Practice in Business Incubator Management was undertaken by Andrew Duff, AUSTEP Strategic Partnering Pty Ltd

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The TCG Case Study is based on "TCG: Sustainable Economic Organisation Through Networking" Studies in Organisational Analysis and Innovation, Number 7, by:

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Abbreviations

| | |
|-------|--|
| CBI | Centre for Business Innovation, Inc. |
| EDI | Enterprise Development, Inc. |
| NBIA | National Business Incubation Association |
| SBEC | Sydney Business Enterprise Centre |
| SBIR | Small Business Innovation Research Program |
| SCORE | Service Corps of Retired Executives |
| SPEDD | SPEDD, Inc. |
| TAFE | Technical and Further Education |
| TCG | TCG Pty Ltd |
| US | United States of America |
| UMKC | University of Missouri at Kansas City |
| WSOM | Weatherhead School of Management |

Executive Summary

If business incubators are to deliver economic development benefits, then more attention needs to be paid to promoting business growth among incubator clients. This Report treats this issue by identifying best practice by business incubators in facilitating the development of competitive growth businesses.

The rationale for the incubator concept lies in its capacity to enhance the initiation, survival and growth of enterprises. The components of best practice business incubator management in this report demonstrate how incubators can be designed and operated to rapidly move through their initial, real estate focused phase of development to concentrate time and effort on enterprise development by providing value adding management services to their clients.

The design of an incubator program critically effects the speed of this transition. The self sufficiency of incubator programs and their focus on enterprise development are explored as key factors in achieving a rapid transition through the incubator life-cycle.

This report looks in-depth at eight case studies of leading business incubator programs to provide detailed appreciation of program design and incubator operations. Four of these programs are Australian and four are drawn from the United States.

The report finds that incubation programs which value add most effectively are those that adopt a pro-active business development stance, based on a sound appreciation of the business needs of their clients. The characteristics of these pro-active, direct intervention systems are that the incubators which employ them:

- are highly selective both in which firms gain entry to the program and, within their client portfolio how time is divided among firms, with most being allocated to the firms demonstrating the highest growth;

- base their decision-making on a comprehensive business plan for each enterprise and include intensive review and analysis as a significant element of the package of services in which their clients participate;
- actively participate in deal-making and deal-shaping with their clients;
- identify and monitor clear quantifiable milestones with their clients, which are set as an element of a tailored business development program;
- enhance organisational learning amongst their clients;
- have access to extensive and deep networks of expertise specifically cultivated to develop small, rapidly growing enterprises; and
- facilitate capital acquisition to underpin the implementation of the business development strategy.

This Report also illustrates best practice in value adding to incubator clients by highlighting and drawing together issues within the case studies such as:

- techniques for adding value to the internal operations of incubator clients;
- the incubator manager as facilitator;
- building and managing entrepreneurial networks;
- facilitating business relationships between tenants;
- the incubator as a node in supplier/production networks;
- using universities and TAFE colleges as a source of added value;
- gaining the most for clients, from business development initiatives operating elsewhere in the community; and
- administering value adding and deriving an income for the incubator from this activity.

Chapter One

Introduction

This Report is concerned with promoting best practice by business incubators in facilitating growth in new business ventures.

A business incubator may be defined as an organisation which offers a range of business development services and access to small space on flexible terms, to meet the needs of new firms. The package of services offered by a business incubator is designed to enhance the success and growth rates of new enterprises thus maximising their impact on economic development. This report will distinguish between unmanaged workspace or serviced offices and business incubators.

Business incubators embody a systematic approach to new enterprise development which can be described as consisting of five dimensions:

- enterprise development;
- a business consultancy network;
- entrepreneurial synergy;
- flexible affordable working space; and
- shared office services. (Small Business Council, 1988, p 13, 14)

These five dimensions describe the purpose, benefit, design and management of business incubators.

The work undertaken in this Report is motivated by an earlier study which reviewed the application of the business incubation concept in Australia. In 1992, 40 operational incubator programs were identified in Australia. Half of these responded to a detailed survey which sought information on management, staffing, services, building/s, tenants, graduates and funding. (Office of Local Government 1992)

One of the most prominent findings was that incubator managers spent a low proportion of their time on "client intervention". Superficially, this would seem to be a surprising outcome.

The rationale for the incubator concept lies in its capacity to enhance the initiation, survival and growth of enterprises. If business incubators are to deliver economic development benefits, then more attention needs to be paid to promoting business growth among incubator clients.

Using the five dimensions referred to earlier, it could be expected that incubators would devote more attention towards "business development", "business consultancy" and generating "entrepreneurial synergy" at the expense of activities which make a relatively smaller contribution to enterprise growth such as "working space" and "office services". However, analysis of the proportion of the incubator manager's time spent working with clients and a review of the nature of services being delivered, revealed that the notion of "value adding" to the internal operations of tenant firms was not uppermost in the minds of some incubator managers as the key to success.

It was disturbing to find that, on average, nearly 75% of incubator managers' time was being spent on non-incubator responsibilities and incubator real estate issues such as rent collection, maintenance and the management of refit or refurbishment of tenant spaces. A median of only 10% of incubator managers' time was spent working with tenants.

If incubators are to achieve their potential as useful economic development tools in Australia, generating greater wealth and helping produce more jobs, then information and guidance on the most effective techniques for facilitating entrepreneurial growth could make an important contribution. Case studies which illustrate practical examples of best practice could aid in the uptake of the most effective approaches.

This Report does not seek to provide a commentary on best practice in every aspect of incubator management. The focus of this work is pitched at enhancing those aspects of incubator operations most concerned with facilitating growth in competitive enterprises.

The purpose of this Report is to identify the best in state of the art incubator management techniques designed to value add to tenant firms.

The Report illustrates best practice in value adding to incubator clients by discussing issues such as:

- techniques for adding value to the internal operations of incubator clients
- the incubator manager as facilitator
- building and managing entrepreneurial networks
- facilitating business relationships between tenants
- the incubator as a node in supplier/production networks
- using universities and TAFE colleges as a source of added value
- gaining the most from existing business development initiatives for tenants
- administering value adding and deriving an income for the incubator from this activity.

Information on techniques that incubator programs have adopted to enhance their capacity to facilitate growth in their clients is sourced by reviewing business incubation programs employing different approaches.

Case studies from both Australia and the United States are used to provide examples of some of the creative practices employed in working with incubator clients. The execution of the incubator concept has a relatively short history in Australia. The wider and deeper range of experiences evident in the United States may help to provide some indicators of how management practices may evolve in Australia as an incubator industry matures.

It is well understood that incubator managers have a difficult role and that daily, they walk a fine line in managing the conflicting calls on their time. One of the avenues explored in some depth in this study relates to the creative measures employed by some incubator managers in leveraging their own time resources to best effect. Invariably this leads to consideration of how an incubator manager can orchestrate people, other than him or herself, in working with incubator clients.

This Report adds to the significant weight of evidence that the mere provision of shared space and office services does not make an incubator program. It is hoped that this Report will encourage existing incubation programs, and those considering launching an incubator initiative, to recognise the importance of value added management services in designing or redesigning their approach to incubator management.

Chapter Two

Evolution of an Industry

This Chapter establishes that an incubator's role in enterprise development is its critical feature.

As the literature on business incubators has matured since its emergence in the mid 1980s, it has moved to focus its attention firmly on the role of the incubator in enhancing the capacity of its client firms to compete and succeed. The literature is now assembling a strong argument to show that those incubators which are most enterprising and sustainable, in business terms, are also most effective in value adding to their clients.

The components of best practice business incubator management rest on how incubators are designed and operated to rapidly move through the initial, real estate focused phase of their development, to concentrate their time and effort on enterprise development, by providing value adding management services to their clients.

The design of an incubator program critically effects the speed of this transition. The self sufficiency of incubator programs and their focus on enterprise development are explored as key factors in achieving a rapid transition through the incubator life-cycle.

The literature also indicates that incubators which focus their resources on enterprise development add most economic value to their region, with job growth following the development and expansion of competitive growth businesses.

Further, the literature establishes that best practice incubators develop an intimate understanding of each of their client business ventures, undertake regular review and analysis of clients against financial milestones, are highly selective in the placement of incubator resources, and match the development needs of their clients with

people resources, derived in the main from highly cultivated business development networks.

INCUBATOR DEFINITION

Chapter One defined a business incubator as consisting of five dimensions: enterprise development, a consultancy network, entrepreneurial synergy, flexible space and shared services. Let us explore each of these elements in a little more depth.

Enterprise Development

The incubator manager and other members of the incubator management team can play an important role in assisting their clients to launch and grow their business ventures. It is typical for the incubator manager to know a great deal more than an incubator client about the entrepreneurial process. The incubator manager will have experienced the entrepreneurial process at close quarters on many occasions with a variety of business ventures. This experience is valuable, particularly early in the life of a client firm.

In addition to this, it is typical for the incubator manager to bring expertise in strategic planning for small enterprises, and to be well connected to small business resources and contacts in the business community, as links to information and advice. Further, the incubator manager may have established an business development network and is most often the access point to that network.

Consultancy Network

An incubator consultancy network or business development network consists of individuals drawn from the ranks of professional business service providers, experienced business people and educators who are willing to provide advice and assistance to entrepreneurial enterprises.

An incubator adds value by assembling a comprehensive array of skills and through experience, screening the participants in the network down to select individuals who can most successfully tailor their services to the needs of small growing firms. This process assembles a rich business development resource base for the region. Something that otherwise would exist only as a dispersed set of individuals that would be very difficult to replicate by a small business.

Participants in the network gain from devoting their time by having what could be a rich source of growing clients made aware of their skills and expertise. Network participants commonly regard this, and the associated word of mouth information dissemination, as an effective marketing tool.

Entrepreneurial Synergy

Co-locating entrepreneurial firms provides the prospect of generating a symbiotic environment where entrepreneurs share resources and experiences, learn from one another, exchange business contacts and establish collaborative business relationships. One other important

contribution that co-location of entrepreneurs can make, is to overcome the loneliness of the entrepreneurial work environment.

Flexible Space

Commercial real estate developers normally find the balance of risk and return unattractive for spaces smaller than about 150 square metres (1500 square feet). From the developer's perspective, prospective tenants for smaller spaces tend not to appear substantial, in commercial terms. Small firms find the expectation of covenants, guarantees and bank references required to secure a lease, typically for a minimum of three years, difficult to meet. In addition, given the relatively large scale of the space against a firm's early needs, moving into available spaces means that new firms must carry a significant cost overhead, particularly if the space requires fitting out.

The flexibility in space provided by incubators results from the incubator offering to lease small spaces (down to as little as ten square metres), commonly on short-term leases with as little as one month's notice required by either party to vacate. In addition, incubator buildings usually contain spaces in a variety of sizes so that as a firm grows, there is the potential to relocate to a larger incubator unit. It is less common for incubators to vary the dimensions of individual units.

A significant additional innovation by incubators has been the two page lease agreement which overcomes the intimidation and legal costs inherent in negotiating a standard lease. The start-up firm finds that the terms of the lease means that costs are avoided and in turn, from the incubator perspective, the tenant does not develop any rights that they then might want to hold on to. This means initiating and ending relationships is more clean cut. If the tenant fails, it can get out quickly with minimum cost, and the incubator can get the next tenant in. Yet tenants have security while they are paying their rent.

Cost is seen by many entrepreneurs and some incubator programs as a big factor. For most businesses, however, the rent they pay for space is not a large proportion of their cost structure. What is important is that they have the right sized space in the right locality. It is much cheaper to pay a high price per square metre for exactly the space you need, than to pay a normal price for a bigger unit and only use a small proportion of the available space. Consequently, incubator developers tend to talk about price per week or month rather than the rate per square metre. The significant additional flexibility afforded by incubator space can justify a price premium.

Shared Services

The shared services dimension refers to incubator-provided pooled equipment, services and facilities such as photocopier, fax, receptionist, mail handling, board room, loading dock and the like. Start-up firms have a need for such services but are often too small to

justify the cost of providing these services in-house. Access to those services through the incubator means that entrepreneurs can focus their attention and capital on the critical task of getting their product or service to market, while still presenting a professional image to their business contacts and customers.

It is important to note, that the first two dimensions of a business incubator, shared services and small spaces, have been available in the marketplace for many years via serviced offices and so called nursery factories, to name two of the more common options. A business incubator must include a number of additional dimensions to distinguish itself from such real estate ventures. These additional dimensions relate to how incubators facilitate management development and growth in their clients.

"Emphasis in incubator programs on site development is misplaced in light of the management assistance needs of entrepreneurs " (Allen, D.N. & Weinberg, M. 1988, p214)

"Providing shared office services...may help reduce tenants' operating expenses but does little to address management problems that plague new firms." (Allen, D.N. & McCluskey, R. 1990, p70)

The National Business Incubation Association has chosen to emphasise the non-real estate parameters of incubator management in its definition. To be classed as an incubator in the eyes of the NBIA a program:

"must offer at least one of the following services:

1. networking opportunities encouraged by incubator management;
2. management or technical assistance through in-house expertise and/or a network of community support;
3. assistance in obtaining financing; and
4. service to business clients outside the incubator as well as to in-house tenants." (Rice, 1992, p. 43).

Across the incubator movement, the management problems of incubator clients are met with the delivery of a variety of value-added management services. 'The driving force (in incubator programs) is the supply of expertise, capital and support that comes from assistance activities directed towards filling the voids in entrepreneurs' abilities (Allen, D.N. & Weinberg, M, 1988, p 214).

The five dimensions work together to provide the unique defining character of a business incubation program. Experience in assembling and managing these elements has developed rapidly over the past 15 years.

HISTORY

The incubator concept and the term Incubator have been around since at least 1959 when Batavia Industrial Centre in Batavia, New York was opened (McKee, 1992, p41).

Early incubators appear to have arisen largely from a recognition in corporations and universities of the benefits of commercialising high and medium technology developments through new start-up enterprises. The University City Science Centre, for example, was founded in Philadelphia, Pennsylvania with these ideals in 1964.

Beginning in 1973, the National Science Foundation supported a series of experiments with innovation centres through its Experimental Research and Development Program.(NSF 1985) By 1981 the Program had expanded to include a total of eleven centres. These served as the basis for future university efforts in launching innovation/incubator centres.(Allen & Weinberg 1988, p200)

Through these formative efforts it was recognised that fledgling firms could benefit from a supportive environment which could be structured to achieve a balance between entrepreneurial independence and linkages to an incubator organisation. (Cooper, 1985) A frequently-cited example of the involvement of an incubator organisation in enterprise development is the Fairchild Corporation, which between 1957 and 1970 was directly or indirectly responsible for the start-up of 35 companies including Intel and National Semiconductor (National Council for Urban Economic Development. 1985, page 1). Control Data's Business and Technology Centres provide another example of a large corporation sponsoring the establishment of business incubators.

The main objective of these early initiatives was the creation of growth-oriented, for-profit businesses. As a development from this early growth process the clientele was broadened to include non-spin-off ventures. This trend was fuelled by the growing recognition that small to medium sized enterprises were making a major wealth creation and employment contribution to the national economy (Birch 1979).

Through to the early 1980s, the concepts underlying the definition of what we now call business incubators were not discussed in depth in the literature, but some common principles did emerge. These common features included shared premises, pooled administration, interaction between tenants (synergies), business advice networks and the manager as a value adding agent. (Smilor & Gill 1984)

This lack of a formal articulation was evidenced also by the fact that other names were employed for incubators or other types of organisations that were considered to perform incubator functions,

such as enterprise centres, business and technology centres or innovation centres (National Council for Urban Economic Development. 1985, page 1).

By 1984 there were still only 26 incubators in the US (Meyer, 1987, p53), but then came an explosion in numbers. The business incubator concept was adapted to "incubate" a much wider range of enterprise types, with a concomitantly broader set of objectives and desired outcomes. The type of organisation interested in incubators was also broadened by the entry of policy-oriented public sector institutions driving for job creation, or welfare-oriented bodies seeking to provide enhanced job opportunities for the unemployed and minorities.

By January, 1990, 385 Business Incubators were operating in the United States (NBIA 1990). Naturally, this exploding activity brought with it an expanding analysis and literature as more researchers began to explore this phenomenon.

The "incubator industry" also became more formalised with new institutions, such as The Pennsylvania Business Incubator Association which commenced operations in 1984 (Hogan, 1991, p. 54), followed shortly afterwards by the National Business Incubation Association (NBIA) and other regionally-based incubator associations.

Today there are 523 incubators in the USA and Canada and new business incubators are opening at the rate of one per week. There are more than 9000 incubator clients and over 4000 firms have graduated from a business incubator. (Adkins, 1994)

Studies of the developing incubator industry have highlighted a number of concepts that are important for understanding the development of incubators. These include:

- definition of a life cycle for the business incubator; and
- identification of six 'classes' of business incubator, distributed along a value added continuum.

LIFE CYCLE

A concept which has helped to engender understanding about how incubators are managed was discussed in Allen's (1988) analysis of incubator life cycles. The focus of management attention during the "start-up" stage is establishment of the physical facility, be that through renovation of an existing building or construction of purpose built accommodation. Because of incubator cash flow requirements, early tenants are likely to be chosen on their capacity to pay rent rather than their growth potential. This stage ends around the time that the facility achieves financial break even.

During the second or "business development" phase, attention is redirected towards the nurturing of new businesses. More emphasis is placed on developing a business advisory function and business network. Another characteristic of the business development stage is the incubator manager working to build synergies through dialogue and trading between tenants. When demand for space is appreciably greater than space available for tenants, and sophisticated, responsive business advisory arrangements are functioning well, the incubator is ready to move into the "maturity" phase.

Maturity is when the incubator spreads its span of influence throughout its region, becoming a focus for entrepreneurial endeavour. The excess of demand for tenancy over available space allows the incubator to become more discerning with its entrance criteria and accelerate the graduation of firms. At this stage, the program may consider expanding to accommodate the demand for its services. As the incubator moves through the three phases of the life cycle, it would be expected that the quality and quantity of development outcomes (eg, in terms of firms graduated) would be higher.

The interaction of the "stages of evolution" of an incubator facility with the three areas of responsibility which must be covered by an incubator manager (incubator stakeholders, the building and incubator tenants) gives rise to an incubator time/function matrix as set out in Table 1 below.

Table 1: Incubator Time/Function Matrix

| | Stakeholders | Facility | Tenant Companies |
|-----------------------------|---|--|--|
| Start-up | Create core group of sponsors | Perform cost/benefit analysis of building | Provide basic shared tenant services |
| | Assemble mission statement | rehabilitation | Offer flexible, inexpensive space |
| | Determine needs and resources of sponsors | Rehab initial space to be rented Admit first tenant companies | Provide access to professional assistance |
| Business Development | Enlist aid of sponsors to market facility | Attract one or more anchor tenant companies | Assist firms in capital acquisition |
| | Enlist aid of sponsors to provide business support services | Renovate space on as needed basis | Create programs to encourage the mixing of companies |
| | Expand base to include more stakeholders | Provide space for shared tenant service | Market the collected products and services of tenants |
| Maturity | Reassess levels of commitment to original plan | Manage cash flow Construct specialised lease hold components | Take equity in tenant companies Sub-contract to private service providers |
| | Evolve programs to reflect changing needs of stakeholders | Leverage physical plant for future interest opportunities | Coordinate seed capital pool |
| | Construct alliances between and among sponsors | | |

Source: Allen et al (1987) Small Business Incubators - Phases of development and the Management Challenge, *Economic Development Commentary*, Volume 11/Number 2/Summer 1987, pp 6 - 11.

BUSINESS INCUBATOR CONTINUUM

While no two incubators are exactly alike it is possible to identify a range of similarities between incubator initiatives. The value added continuum set out in Table 2 below helps to assemble incubators into a number of discreet groups. Incubators within these groupings are more likely to be similar with respect to their missions, policies, services and performance than incubator programs across different groups.

'The value added continuum is anchored at either end by two important incubator elements. On one end, an incubator functions like a real estate development operation. On the other end, an incubator functions more like an enterprise development program. One can hypothesise that incubators at the right side are more likely to add economic value to the local economy (because they emphasise business development) than incubators at the left side of the continuum.' (Allen and McCluskey, 1990, p 64)

Table 2: The Business Incubator Continuum - Facility Objectives

| | Real Estate | Value Added Through ←-----→ | | Business Development For-Profit Seed Capital Incubators |
|---------------------|--|---|---|--|
| | For-Profit Property Development Incubators | Non-Profit Development Corporation Incubators | Academic Incubators | |
| Primary Objective | Real estate appreciation • Sell proprietary services to tenants | Job creation Positive statement of entrepreneurial potential | Faculty-Industry collaboration Commercialise university research | Capitalise investment opportunity • Rapid enterprise growth |
| Secondary Objective | Create opportunity for technology transfer • Create investment opportunity • | Generate sustainable income for organisation Diversify economic base, bolster tax base Complement existing programs and utilise vacant facilities | Strengthen service and instructional mission Capitalise investment opportunity Create good will between institution and community | Product development • Self sufficiency • Wealth creation |

Based on: Allen D. N. & McCluskey R. 1990, page 65.

Four incubator types are represented in Table 2. For-profit property development incubators seek to generate real estate profits as their primary goal. Non-profit corporations focus on creating jobs. Incubators associated with Universities seek to commercialise university technology while at the same time seeking to generate local economic development benefits. Seed capital incubators co-locate investee businesses to afford the seed fund manager the opportunity to provide maximum attention to the investment portfolio. Two other incubator types are also evident: hybrid incubators which a combination of any two of the stakeholders in Table 2 and incubators sponsored by large organisations. These have not been included in Table 2 due to their relatively low incidence in the incubator population.

BEST PRACTICE

From these developments, a set of best practices have evolved which are common to incubators most effective in the creation of high growth graduate enterprises. To enhance the economic development impact of incubators, we should bear two key parameters in mind:

- business incubators should be designed to travel through their life cycles more rapidly; and
- business incubators should adopt a more business development-oriented stance in establishing their program.

Speeding the Life Cycle

"The entire life-cycle process has been seen to take five to six years, but as new incubators are able to learn from past industry experiences, new knowledge and information-sharing compresses the learning curve." (Allen, D.N. & McCluskey, R, 1990 p 66)

The capacity of a business incubation program to achieve maturity rapidly is critically dependent on how it is designed at the outset. Once an incubator program is operating, with a given set of parameters, it is very difficult to make changes to how the program is run. This is particularly the case if the potential revenue base for the program is more or less fixed.

Two broad issues play a significant role in determining the speed at which the maturity phase of the incubator life cycle is reached:

- surety of program funding; and
- a clear program focus on enterprise development.

Financial Independence

Speeding the life-cycle is about setting up the initiative to succeed. Many sponsors of incubator programs have been shown to have only a shallow commitment to and understanding of incubators. Economic pressures have resulted in some incubator sponsors having great difficulty in raising enough income to support their own core business, let alone fund an incubator program. Even programs successful in their main business incubation mission have been de-funded as a result of a budget shortfall, a new personality or altered priorities driven by political expediency.

Financial independence can insulate an incubator from this uncertainty. The keys to this are to seek to have the program attain self sufficiency. That is, generate enough income to pay the program's operational expenses. In turn, establishing a self sufficient program is dependent upon generating an adequate stream of income and minimising on-going costs.

The importance of this point was recently reinforced by the Executive Director of the NBIA:

"...if we expect to reap the rewards of incubators, and we acknowledge that these rewards are long-term, then we must also make our incubators more entrepreneurial. We must do a better job of developing self sustaining programs; we must give them a measure of independence and we must structure them financially to become self sufficient, or at least to minimise dependence." (Adkins, 1994, p8)

Rice (1992) underpins this point with the findings in his research of nine incubator programs. He found that the more effort that had to be expended by the incubator manager in shoring up ongoing operational

Enterprise Development Focus

funding for the incubator, the less the time available for facilitating the creation and development of new enterprises. Since an incubator program is often dependent upon the support of state legislators others have observed:

"the higher the political content of the program, the lower the entrepreneurial content." (Adkins, 1994)

The second major determinant of the rate of progress through the incubator life cycle is how effectively the program focuses on enterprise development.

Many incubator programs are subject to two conflicting issues; one operational, the other policy driven. The operational issue is the polarised forces between real estate and enterprise development. This has been discussed in some depth above. The policy issue evident in many programs is between job creation and enterprise development.

Focusing an incubation program on enterprise development means ensuring that programs designed to enhance the viability and growth of enterprises are in place and that adequate resources to deliver these programs are present. Developing and delivering such a program is a people intensive activity and to deliver quality enterprise development outcomes these programs must be closely managed.

June Lavelle, who manages the long running Fulton-Carroll Centre for Industry incubator in Chicago emphasises the importance of an enterprise development focus:

"Job creation is a by-product of business development, its not *the* product....anybody ought to understand that no one goes into business primarily to hire people." (Mamis, 1989, p125)

An extract from the National Council for Urban Economic Development (1985) provides an additional viewpoint:

"Support for home grown enterprises can have both short-term and long-term results. Short-term outcomes are early-stage results that may have little apparent influence on the local economy. For example, a few new start-ups create recognition that entrepreneurship is possible. This recognition can change the attitudes of other individuals and perhaps induce them to start a business.

Although these few start-ups initially employ only a few workers, they become part of the foundation supporting future economic growth in the community. When some firms grow over the long run, say five to ten years, employment multipliers, capital inflow

and other development outcomes can have a noticeable impact.

So while many are interested in incubators as a support mechanism for job creation, it is somewhat misleading to focus on the number of jobs created by firms in incubators. Appreciable impact on local employment is most likely to occur after a firm moves from a facility into local commercial or industrial space."

Undue short-term pressure to produce jobs can undermine the capacity of an incubator program to achieve critical goals such as financial independence and high quality business development programs. As well as this, pressures to meet job creation targets can colour the advice that an incubator manager gives to a client to the detriment of the competitiveness or even survival of the firm.

As our knowledge about the job generation impact of smaller enterprises becomes more sophisticated, we are finding that growth in employment is not evenly spread. Growth in employment in small firms is not as a result of most firms employing one more person, but from a dramatic growth of a few new enterprises.

"A recent study of the American economy 1981-8 found all the employment growth came from the small and medium business sector, but 90 percent of the SMEs recorded no employment growth over that period. Indeed 70 percent of the growth came from 0.5 percent of the firms (Gollis 1994)."

Enhancing Business Development

Enhancing business development programs in an incubator requires the incubator to build its capacity to:

- value add to its clients; and
- streamline its entrepreneurial development processes.

Value Adding

Building an incubator's capacity to value add is related to two key parameters, how proactive the incubator is in working with its clients and, the quality of the people and programs which comprise its business development network.

Proactive client intervention

Rice (1992 p8,9) states that there are four critical areas which determine the success of new ventures. These are:

1. The new venture must have an entrepreneur or entrepreneurial team.
2. The venture must have a product or service to sell.
3. There must be a market for the product or service, or the entrepreneur must be able to create one.

4. In most cases the venture must have access to capital or its equivalent to survive (the almost inevitable) periods of negative cash flow.

Since most new ventures are deficient in one or more of these areas, it is the role of the entrepreneur or manager of the incubator to recognise and act to overcome the deficiencies before problems arise or cash runs out.

To ensure that the entrepreneur performs this role effectively, the incubator manager must have a sound understanding of the clients of the incubator. This can only be achieved if there is a constant dialogue between client and manager. Much of the manager's time should be devoted to providing technical assistance, support and identification of network specialists for particular problems associated with individual ventures. Unfortunately, a recent review of Australian incubators found that managers spend only a small proportion of their time on direct client intervention (Office of Local Government, 1992, p. 13).

In an extensive analysis of three research reports on incubators, Rice (1992) found that, along with the provision of facilities/services and access to funding, researchers identified peer networking, networking by intervener, counselling, and training/education as the most important forms of intervention.

According to Rice, such intervention may take place at three levels:

- Level 1: Passive environmental intervention
- Level 2: Reactive direct intervention
- Level 3: Proactive direct intervention.

Key findings of the study by Rice (1992) are :

1. For business incubator ventures, passive environmental intervention remains the dominant form. It enhances the survival rate of firms by helping participants to conserve resources and by providing emotional support.
2. Reactive direct intervention is becoming more prevalent in better managed incubators, with networking and counselling as the dominant forms of intervention mechanisms(p. 30).
3. Intervention effectiveness increases with increased intensity of intervention (p. 109).

Rice concludes that "intervention effectiveness" and incubator performance can be increased through three general strategies:

1. Optimise the allocation of the incubator manager's time to maximise the time dedicated to direct intervention in the

incubator firms with the highest potential return on that investment of time.

2. Maximise the intervention skills of the incubator manager, and by extension the skills of the other interveners that are brought into the intervention process, through the networking efforts of the incubator manager.
3. Increase the capacity of the participating entrepreneurs to be responsive to the intervention process.

Business Network Development

An incubator's business development network is one of its key tools for enhancing both the range and depth of skills upon which it can draw and hence expand the number of clients to which it can deliver enterprise development services.

Any individual can only work with a finite number of projects at any one time and perform effectively. The best measure we can gain of the number of clients with which an incubator manager can work at any one time, is by drawing a parallel with other professionals who work in similar ways with business.

The business development role played by a venture capitalist is most akin to that of the business incubator manager. (Rice, 1992) In a study of the roles played by venture capitalists, Gorman and Sahlman (1989) found that the senior (managing) partners of a venture capital firm typically spend about half their time monitoring a portfolio of 9 investments; of these, five are companies on whose boards they sit.

The managing partners of venture capital firms are seasoned business professionals. According to Gorman and Sahlman (1989) they spend half their time working with their portfolio companies. Since incubator managers are on average relatively new to their role, and spend an average of only 10% of their time intervening with tenants according to a study for the Office of Local Government (1992), it would appear that a portfolio responsibility of nine firms would be at the high end of performance expectations for incubator managers. Since many incubator managers work with 20 or more clients located inside and outside the facility, an incubator manager who is intent on value adding to clients has two options: either employ additional professional staff or develop a business development network. The selection of a strategy for value adding has obvious implications for the cost structure of the incubator program.

Managing the network

The significance of relationships in entrepreneurship was well demonstrated in a PhD dissertation by Lichtenstein (1992). He undertook an extensive case study of two business incubators to answer the questions:

1. What is the significance of relationships and how do they influence entrepreneurship?, and

2. What kind of settings or networks of relationships are conducive to entrepreneurship and how do we create them? (p. iv).

His major finding was that "the most important contribution of business incubators to entrepreneurship lies in the opportunities they provide for entrepreneurs to interact and develop relationships with other entrepreneurs, the incubator manager and other individuals associated with the incubator" (p. iv).

Factors influencing networking

To foster such relationships among firms or individuals, Lichtenstein (1992) lists nine factors which influence the effectiveness of interaction. They are:

- Type of businesses. Similar industries can lead to pooled arrangements, while complementary industries provide opportunities for collaboration to produce greater outcomes. Both types can lead to interdependence.
 - Personal characteristics. These include the willingness and ability to collaborate and the background or experience of the collaborators.
 - Stage of development. More direct intervention in early stages of development, tapering off to indirect intervention and support when tenant firms are more mature.
 - Critical mass. There must be a sufficient number of individuals, whose needs and interests intersect, in order for certain types of interactions to emerge.
 - Space. The further people are separated from each other the less the frequency of interaction. The space utilisation of the incubator environment must be considered in forging relationships.
 - Forums. Both formal and informal workshops, forums, seminars, lectures and demonstrations in which entrepreneurs and others can meet are critical for the development of relationships.
 - Norms and attitudes. The collective standards to which individuals are expected to conform.
 - Network positions. The informal roles particular people occupy to promote linkages among participants, regulate relationships, develop shared visions, etc.
 - Time. It takes time to develop individual relationships and network relationships. They do not happen overnight and require the proper conditions for development (Lichtenstein, 1992, p.28-33).

Lichtenstein sees enormous developmental potential in well managed networks. The outcomes of his research indicate two important implications for incubator management:

First, development programs should be designed to create relationships of interdependence rather than transactions or relationships of dependence. There are examples of successful programs built on this principle but they are few and far between, largely because this point has not been understood and incorporated into the program design.

Second, for incubator managers in particular, the findings of this research suggest that more emphasis should be placed on creating opportunities for entrepreneurs to develop relationships than is currently done. The concern with real estate management, although critical in many cases for financial survival, drains resources away from business incubation. Incubator managers must begin to understand how the developmental benefits entrepreneurs receive through relationships connect to successful utilisation of technical and managerial assistance. Finally, incubator managers must learn how to manage the nine factors that promote networks of relationships in an effective and efficient manner. (Lichtenstein, 1992, p. 120).

Research conducted on "sponsorship" and the survival of new organisations reinforces Lichtenstein's assertions about the dangers of incubator client dependence.

Flynn (1993) states that, in the earliest stages of development of a new firm, sponsorship blocks out external environmental threats. Sponsorship is considered to be most effective in these early stages since the firm is most open to intervention and impressionable. The balance of knowledge is clearly in the sponsor's favour. However, as the firm matures it benefits decreasingly from the buffering effects of sponsorship since it must expose itself to the competitive and environmental factors inherent in competing for customers, raw materials, capital and labour.

Incubator managers must be aware that both positive and negative outcomes are possible from sponsorship:

- sponsorship buffers organisations from environmental pressures and minimises the opportunity for organisations to recognise that they need to adapt;
- sponsorship can expose new firms to inappropriate role models such as bureaucratic decision-making processes;
- as organisations mature in a sponsored environment, it is necessary that they match their technical capability with an administrative core, prior to graduation;
- if an organisation is sponsored, some of the knowledge necessary for survival may remain with the sponsor; and

- in later stages of a sponsored organisation's life-cycle, the ability to effectively compete for scarce resources can be severely undermined by an incubating environment artificially inflated with resources.

The implications of this for the incubator manager is that sponsorship (or incubation), without a complementary focus on helping to create self organising systems within new organisations, may result in an over-dependency on sponsors; and this may ultimately make the incubator client more vulnerable.

Streamline Entrepreneur Development

Information on the findings contained in a forthcoming report on small business education and training provide an underpinning rationale for the mode of intervention preferred by best practice business incubators.

Coopers and Lybrand have conducted a survey, commissioned by the Industry Taskforce on Leadership and Management Skills, into the perceptions of small business operators about small business education and training in Australia.

It showed that small business operators had a number of difficulties with education and training and were suspicious of claimed benefits, reluctant to return to a classroom setting and were keen to gain immediate returns. The reservations they had led them to seek advice from informal but less knowledgeable sources.

"Most training available to small business operators was too general, too formal and did not offer ongoing counselling. Most was provided by the public sector which did not often revise or target its courses for specific industries or businesses at a particular stage of development. The problem was that the more targeted, more relevant courses preferred by small business operators would be seen as too expensive..."

The survey showed that, in ideal circumstances, small business operators preferred training to be related to specific problems, to be tailored to the client's needs, to encourage action learning and peer group learning and involve a discursive learning system rather than a passive one." (Porter, I. 1994)

Best practice business incubators avoid the "general" and "formal" modes of small business training offered by many small business agencies by customising training to the specific needs of a client, offering in-depth counselling over an extended time frame and by structuring the training to have firms reinforce their learning by applying it in their business. The nature and scope of the learning is often set by the need to achieve short-term milestones linked directly to financial and other goals in the client's business plan.

Chapter Three

Methodology

This project is designed as an ethnographic study. The data were gathered in a qualitative study of the processes by which best practice business incubator programs deliver added value to their clients.

The analysis looks in-depth at a eight case studies of business incubator programs to provide detailed appreciation of program design and incubator operations. This choice of research design is justified on the basis of the proliferation of studies with larger sample sizes reporting statistical interpretations of an incubator population. It was felt that these studies had tended to hide the important differences that exist between incubator programs and did not provide a good platform for highlighting the creativity and ingenuity evident among better managed programs.

Given that the research is intended to provide incubator managers and their stakeholders with an insight into practices that can assist them to enhance the development of their tenants and clients, it is important that a good degree of detailed "how to" information be supplied.

This study was based on field interviews conducted by the author in the United States and in Australia during 1993. The interviews, and supplementary information provided by incubator managers during the author's visit, form the core of the research project information on which the case studies are based. The case studies look in detail at the interactions between the incubators and their clients.

The objective of the research was to learn more about how best practice incubation programs are designed, managed and implemented.

To be eligible for consideration as case study candidates, an incubator program must have met the following criteria:

- in the US
 - operational at least six years
 - population of graduates
 - show innovation in their approach to business incubation

- in Australia
 - operating for at least four years
 - graduates
 - indicated by peers or program administrators to be the strongest examples of the incubator model in that state

Candidate incubators each included some of the elements of best practice management derived from an analysis of the literature. The in-depth examination of each of the case studied incubators against the principles for best practice incubator management derived from the literature led to the definition of significant additional principles.

In the US, suitable incubator programs to be case-studied were short-listed on recommendations from the Executive Director of the National Business Incubation Association, Ms Dinah Adkins, and Dr David Allen of Ohio University. Dr Allen's research experience in the incubator field including recent in-depth reviews of state wide incubator programs in Ohio and Pennsylvania provided a sound starting point for targeting best practice candidates. Further, applications under the NBIA's annual "Incubator of the Year" program were reviewed to help validate the final choices.

The eight incubator programs represented a small but diverse sample. They included three programs with university affiliation in US. The Australian sample set was also diverse with three non profit incubators and a private sector enterprise that is managed along similar lines to a business incubation program.

Preliminary briefings on US incubators was provided by Dr David Allen, Assistant Vice President Technology and Economic Development, Ohio University and Ms Dinah Adkins, Executive Director of the National Business Incubation Association. Historical information on incubator programs to be interviewed was sourced from the extensive resource base held by the National Business Incubation Association.

The incubator programs which were studied as part of this report are:

United States

Centre For Business Innovation
Enterprise Development Inc
Genesis Technology Incubator
SPEDD, Inc.

Australia

Canberra Business Centres
Midland Enterprise Centre
Sydney Business Enterprise Centre
TCG

The above case studies are set out below at **Attachment A**.

Interviews with the business incubator managers were conducted on the incubator site in each instance, except in the case of TCG. The TCG case has been reviewed by Dr John Matthews of the Industrial Relations Research Centre of the University of New South Wales.

Chapter Four

Analysis

In Chapter Two, a number of principles of best practice were established for business incubators developing competitive growth businesses which could deliver value and benefits to the economy. These principles have now been tested against the findings in the case studies at **Attachment A**.

The literature also identifies that the capacity of an incubator program to "make a difference" to the business performance of its clients distinguishes the best incubator programs from the rest. The case studies highlight how this can be achieved through the development and implementation of best practice incubator management techniques.

Based on this analysis a detailed framework for best practice management of business incubators has been established.

Chapter Two indicated that best practice in incubator management is dependent on two key issues. Firstly, on an incubator moving through its life-cycle rapidly to the stage where it is actively working with its clients to enhance the performance of their businesses. Secondly, best practice is dependent on the effective delivery of value added business development services to incubator clients.

The findings of the case studies will now be analysed against these two broad key issues.

RAPID LIFE-CYCLE

The achievement of a rapid life-cycle time is on one hand dependent upon the incubator program being designed to achieve self-sufficiency and on the other, on developing a coherent program focused on enterprise development.

Self Sufficiency

The term self sufficiency, in the incubator context, means that the operational expenses of the program are more than covered by the income generated by the incubator. These expenses typically include items such as the salaries and related on-costs of incubator staff, office expenses, utilities, rates and charges and any lease, rent or mortgage expenses related to the incubator building.

In projecting self sufficiency, it is regarded as most desirable for the operating expenses to be covered by "core income". That is to say, income which is least variable and most reliable, such as the rent and service fees that incubator tenants pay. A reliance on highly variable forms of income to cover operating expenses, for example, those generated by royalties or equity held in tenant and graduate firms, would be regarded as a risky strategy. Rather, non core income, less certain than rent and service fees, should be regarded as the cream and used for discretionary expenditure only.

The self sufficiency of an incubator program is an important issue from a number of perspectives:

- if stakeholders wish to build an incubator program of some quality, then having discretionary income which may be reinvested in the further development of the incubator and its programs is essential;
- the capacity to generate discretionary income will be an attractive feature when stakeholders are attempting to secure the services of a skilled chief executive and other key staff;
- perhaps most importantly, when an incubator is self sufficient, the chief executive will not have to spend time seeking financial and political support for the program, thus allowing a more intensive focus on value adding to client firms;
- just scraping to get by, or operating at a loss with significant time spent on politicking and proposal writing, communicates inappropriate messages to tenants and prospective tenants
- the incubator is not being run as a viable business. This provides a poor role model to tenants.
- a reliance on government funding or benevolent foundations may communicate a mendicant mind-set to tenants.
- with common knowledge of the tenuous financial status of the program, tenants could focus on securing short-term cost benefits from the incubator at the expense of seeking a higher value added relationship more aligned with the central role of enterprise development.

These factors all point to an incubator beset with such problems being unresponsive, or at best reactive to tenant needs, thus leading to an

under-performing group of tenants, further undermining the likelihood of the incubator achieving self sufficiency.

Self sufficiency is foremost the product of well executed planning at the outset of incubator establishment, together with injecting some entrepreneurial creativity in generating a diversity of income sources.

Well Executed Planning

Dr Robert Meeder, President of SPEDD, Inc. manages 18 incubator facilities and has conducted many feasibility studies as a consultant for groups interested in establishing new incubator programs. In 1993 he prepared a feasibility study guide which is published by the National Business Incubation Association.

"The major reasons why a feasibility study is important are the following:

- 1 The process can be used to forge a consensus among key civic leaders and organisations regarding the definition of the type of incubator that best serves the community's needs and to identify the proper stakeholders and managers for the program;
- 2 The process can become the catalyst to motivate participation by a number of local resources that can provide facilities, equipment, human resources, funds, competitive offers that produce better prices, etc. that otherwise might not have contributed;
- 3 The establishment of this process is the best method for generating creative ways to overcome obstacles. Someone once said "Strategy is the Springboard for Creativity."
- 4 A proper feasibility study includes the completion of a facilities and service program business plan;
- 5 Solicitation of most federal, state and local funds requires a feasibility study;
- 6 After more than ten years of growth in the incubation industry, there are many examples of programs that have made critical errors in such areas as facility selection, governance structure, and formation of value-added business assistance programs. These errors are numerous enough to demonstrate the importance of a feasibility study that identifies the best practices and avoids the patterns of error;
- 7 Many political leaders, local business owners, and other civic leaders have just enough knowledge about business incubation to be dangerous. Conducting a feasibility study should include substantial community education. Otherwise, the project begins with hidden confusion as key people, attempting to do good things, base their decisions on an incorrect or incomplete concept of incubation that is out of step with their colleagues' concepts and with the informed practice of the incubator industry;

- 8 Many incubation projects are conceived and developed by local leaders before the incubator manager is identified and employed. The feasibility study is a valuable document that records the early history and activities of the project enabling the succeeding staff and board to have a reference point from which to work;
- 9 It is important to make contact with a number of successful incubator programs in communities that are similar to yours. There are enough programs with more than three years of operating experience to permit you to identify several from which to learn. Their experiences - good as well as bad - from development to operation, when combined with the wealth of information that the NBIA has accumulated on contacts, research, and recommended practices, should significantly reduce your margin for error and increase the productivity of time spent on the study; and
- 10 A proper feasibility study will help you to avoid two "classic errors": a) The temptation to accept the worst building in town. b) The temptation to treat your management assistance program as something that will take care of itself with a few referrals for business plan assistance and a few office practice services." (Meeder, 1993, p3-4.)

Client Centred Feasibility

From the rationale set out above, the process for conducting a feasibility study can no longer rely on real estate issues to generate its conclusions. Rather, it must be driven from the perspective of value adding to clients. Hence, a simplified framework for an ideal feasibility study should look more like the following approach:

- 1) characterise in some detail the nature of the clients to be targeted by the proposed incubator;
- 2) set out the specific value added services that will be required by these clients in the management and growth of their enterprises;
- 3) define the attributes and qualities required of the incubator management team to be recruited to develop, deliver and coordinate the incubator program, including the delivery of 2 above;
- 4) set out the costs implied by the management services and the salaries and on-costs and other related expenses of the incubator management team;
- 5) define the dimensions and projected cost of an incubator building (and land) that can, at 67% occupancy, generate sufficient cash flow from rent and service delivery to pay for the expenses of the incubation program. That is, the incubation program will be initiated on the basis that it is financially self supporting;
- 6) set out an expected rate at which the occupancy of the incubator will move towards full house status; and
- 7) define any short term operational subsidy required to tide the program over until the 67% occupancy stage is achieved. In most circumstances this should be achieved in less than two years.

The key question in the feasibility study is: given the targeted clientele, how large a program, that is how many tenants are needed, to support the costs inherent in the management team. The "how many tenants" variable relates to the rate at which the facility will produce core income from rent and service fees.

This approach may be contrasted against the building driven approach. All too often incubator developments are driven by the acquisition or lease of a building prior to the stakeholders developing a detailed understanding of the new firm market, target clients and incubator costs.

The merits of the seven step approach set out above are:

- it is driven by a client focus;
- it requires an in-depth understanding of the needs of the proposed target clientele;
- the cost structure of the program is established principally by the nature of the services to be delivered and the process for delivery; and
- a conservative estimate of income is used
 - on the basis of income source - rent and service fees
 - it is recommended that break-even be calculated at 67% occupancy to ensure an adequate margin for variation in rent and predicted market demand.

This feasibility framework allows incubator stakeholders to seek an outline of the few simple key assumptions in constructing the feasibility study, thus allowing a creative scenario to be established to ensure the ultimate viability of the incubator program.

If predicted rent and service income cannot be made to achieve break-even due to certain "givens", for example a poorly maintained building, contaminated site, target clientele who cannot pay market rate rents, then other parameters in the equation may be varied such as introduction of an annual subsidy or consideration of lower management cost options. However, each of these decisions will have important implications for what the incubator will ultimately achieve.

Diversify Sources of Income

While the above approach may have merit for those organisations considering the establishment of a new incubator program, organisations managing an existing program will be more interested in how they might act to improve their existing income base. Diversifying income sources provides incubator programs with the tools to tackle some of the hard problems such as inappropriate real estate or sources of funding drying up.

Diversifying income sources in a services focused program means being more entrepreneurial in defining incubator strategies and moving decisively away from the "landlord" mode of operation. Options that may be explored for income diversification include:

- redefine services such that they can be sold Incubators broadly perform two functions. One is to lease space; the other is to offer services such as shared office facilities and management advice and information. Existing incubator services may be "repackaged" or new services developed into a suite of income earning products. This point is discussed in some detail under Networking when the SPEDD PASSPORT^a Program is reviewed at Attachment A.
- screening tenants more effectively Most incubator managers find that a proportion of tenants refuse to use incubator services and cannot be encouraged to try them. This element of the tenant population may pay their rent but do not add to the income generated from incubator services. Incubator income from services could be maximised by ensuring that tenants who are recruited are likely to make use of the services. An incubator manager could approach this issue by emphasising or investigating the willingness of a tenant to participate in the service programs during the process of tenant screening. More prescriptive mechanisms might encompass the inclusion of a minimum monthly level of service use as an element of the lease;
- clients, not just tenants If incubator programs develop an income earning capacity by offering services to their tenants it may be possible to expand the income able to be generated from such services by offering them to a broader range of "clients" rather than just to tenants. To maintain coherence, clients are considered to be firms located outside the business incubator which meet the criteria set by the incubator for entry to their program. Both SPEDD, Inc. and the Centre for Business Innovation have taken this step with services they offer and have developed a significant "non tenant" strand to their business activity. Enterprise Development, Inc. has expanded its training and conference capability to become a self supporting business and has "spun-out" several other cost centres. Cleveland Enterprise magazine, for example, is an independent venture which makes its own way by writing principally about EDI run programs and events.
- repackage services for new market niches Incubators can reconfigure the services they offer to meet the needs of new or under-served market niches. Sydney Business Enterprise Centre has creatively repackaged its articulated training, screening, business advice and incubator services and space to outplacement consultants working to redeploy people from large organisations. Some redeployment candidates may

have the appropriate skills and experience to develop themselves a new job by becoming self employed.

One important point to consider is the desirability of developing income earning activities which are directly related to the mission of the incubator, not tangential to it. The desirable outcome is a mutually reinforcing relationship with the core enterprise development thrust.

Each of these techniques is predicated on the incubator developing a range of services beyond real estate that will be valued sufficiently to have clients willing to pay for them. In turn this assumes, that given a set of quality services, the incubator personnel will be able to successfully deliver, or arrange the delivery of, the services and that the clientele will be in a position to pay for them. This ideal state of affairs may not always exist. In such instances, where the viability of the incubator strategy is in question, sponsors may be called upon to supply an on-going subsidy in order to maintain incubator operations.

Enterprise Development Focus

The second strand to achieving a rapid incubator life-cycle is designing the incubator program to focus on enterprise development. Five strategies should be considered in seeking to enhance the enterprise development focus of an incubation program. These are:

- prioritising incubator roles;
 - assembling the incubator team;
 - main streaming enterprise development;
 - tenant selection and screening; and
 - devoting management time to working effectively with clients.

Prioritise Incubator Roles

In focusing on enterprise development, incubator stakeholders and managers must effectively translate strategy and intention into actions. This means ensuring that the implications of an enterprise development focus are present in the design of the incubator initiative from the outset. This requires the setting of clear operational priorities and ensuring that the balance of time spent by the incubator manager with clients or developing tools for enhancing clients growth, such as networks and review panels, is appropriate.

Further, to ensure this clarity of focus, the incubator and its management should have a significant weighting in their annual performance review rated against the enterprise development outcomes they have produced.

The Centre for Business Innovation (CBI), for example, has translated their clearly stated vision, mission and objective into a coherent approach which directly measures the value of the incubator program

to its clients in terms of its own survival. That is, CBI earned income is directly linked to the rate of growth and development of their clients via the royalties and equity positions that CBI receives in lieu of rent and fees for service. This, in turn, is linked to the quality of CBI clients as exhibited by their growth patterns and the judgements of the financial marketplace as to the attractiveness of such investments.

Further, the CBI incubation program is designed to maximise their stake in a royalty and equity income base. Most advice and assistance is delivered in-house with only occasional recourse to external professional assistance. This ensures that CBI both justifies the royalty and equity positions it holds in a client firm and looks after its own interests by contributing to the creation of value.

To help create additional value, CBI has adopted a very interventionist business development program. This is resourced, in incubator terms, by a large professional staff, together with a strong student internship initiative developed in conjunction with CBI's stakeholder university. Each client is matched with at least one student intern.

CBI establishes a three person "business development team" for each client in their portfolio. The business development team works with each company to see that clear and quantifiable milestones are achieved.

The CBI program illustrates the importance of coherent program design principles. Each program design element is in-step with other elements and the ultimate achievement of the Centre's objectives.

The Incubator Team

The quality of the personnel involved with all aspects of an incubator program such as its operations, including its board of management, its staff, mentors, advisers, business network and student interns, all influence the enterprise development capacity of an incubator.

People selected to play a role with a business incubator should be selected on their capacity to either enhance the operation of the business incubator itself (as a business enterprise) or to make a contribution to the business development of the incubator's clients.

The ability to attract and maintain the interest of suitably skilled and experienced individuals is effected to a significant degree by many of the fundamental program design decisions made at the outset of developing a business incubator. For example, the quality and likely growth rates of tenants, the size of the program and its influence in its community, whether a proactive business development role is envisaged and the quality of existing board members or management personnel will all have implications for the type of people that will choose to participate in, or devote time to, the program.

The CBI and Genesis programs, for instance, have used the support for their incubator by the president of their local university to assemble and maintain the high quality of their boards of management and subsidiary operating committees. EDI has used both its university connection and its sponsorship by a business dominated committee in its community to attract some of the best performing business leaders onto their Board. With the additional credibility that this provides the program, people of outstanding quality have been secured to fill the programs' management roles.

Main streaming Enterprise Development

An incubator manager's time can be spent most effectively if the program under management is sharply and coherently focused.

However, it is common for incubator programs to be set multiple tasks. For example, in Australia the incubator model has been adopted most enthusiastically by state and federal government employment portfolios, with incubators being established as a tool for job creation and the development of micro-enterprises. However there are grounds, in light of the emerging understanding on best practice in incubator management, for questioning whether making these issues the primary objective is compatible with best practice incubator development.

To maximise the entrepreneurial content of the incubator program it is important to separate the programs designed to advance social objectives from the economic development function of the incubator delivered through its central value added management services.

Choosing whether or not to participate in the delivery of social programs, such as those related to the creation of jobs, is ultimately a strategy decision by the incubator's board of management. If the board chooses to divide the incubator's attention from the main task of enterprise development then there should be a sound reason for doing so. One effective justification could be that the social initiative may include components which could be additive to the enterprise development mission of an incubator. However, it must be emphasised that being paid a fee to deliver the social program is not, on its own, a sufficient reason to agree to divert time and other scarce resources to tasks other than the incubator's core enterprise development role. This point is developed further later in this Chapter when the segmentation of a client portfolio is discussed in some detail.

Tenant Selection and Screening

A request for assistance from a tenant might be an easy way to justify expenditure of management time, however, the mere receipt of a request for assistance does not necessarily mean that this will be the most effective use of the manager's time. An incubator should have a global overview of its clients and where management assistance can

be provided to best effect.

Just as an investor must manage the proportion of funds between cash, stocks and real estate investment instruments to generate the best returns while avoiding excessive risk, so an incubator manager should review his or her allocation of time across various clients to generate the best returns for the incubator.

The incubator manager is presented with a time investment portfolio which contains three parameters:

- which incubator clients are likely to generate the best outcomes from the investment of incubator manager time;
- what form of intervention is most appropriate for each client; and
- an incubator manager can only work intensively with a maximum of about six clients at any one time.

This incubator time management equation implies that an incubator manager is fully conversant with all relevant information about the business prospects of each incubator client and is able to meaningfully rank clients in terms of both their likely response to intervention by the manager and the manager's ability to bring to bear the required assistance.

More than a passing familiarity with the general business status of an enterprise is required to help make the correct intervention decisions. This requires a comprehensive business plan which serves to guide the strategic development of the client in question.

Without a comprehensive business plan drawing together all the threads of a business, no verifiable source of information is available upon which strategic investment decisions can be based. Without a coherent strategy, the incubator manager will be relying upon other people's opinions, a weak position from which to make critical decisions. The business plan provides a road map which identifies the firm's position and allows it to select a road to growth. After all, fundamental strategy theory suggests "If you do not know where you are going, any path will get you there." The business plan also provides the information that an incubator needs to make its initial screening decisions and help prioritise the clients to which most management time should be devoted.

Each of the Genesis Program, CBI and TCG have exacting entry criteria which excludes all but the best motivated and highest potential enterprises.

The initial indicator of a highly focused program is the screening process that a program requires its prospective client to negotiate. CBI subjects proponents to a matrix analysis which evaluates the status of each potential client according to the stage of development of its management team and how advanced the product development process is. CBI has adopted criteria very similar to those used by seed venture capitalists in identifying prospective investee businesses. Their ideal client is one which is likely to be a future candidate for venture capital investment.

CBI has established a system which includes weekly reporting to clients on the status of tasks, identifying who is responsible for tasks, when they must be completed and what criteria the completed task must satisfy. This weekly information provides clients a confirmation of the amount and nature of the work being performed for it by CBI. At monthly intervals, CBI meets with clients to review progress against clear, measurable milestones, usually set three months in advance. In turn, these three monthly milestones are related to the milestones and objectives which appear in each client's business plan.

Thus, due to the intensive, hands-on mode of working with its clients, CBI has an intimate knowledge of not just the apparent financial performance of the firm, but inner operational workings of the enterprise. This detailed understanding of a firm's progress places CBI in a strong position to judge how strongly a firm is growing and what prospects it has for generating returns to the incubator.

The Genesis Technology Incubator has established a rigorous screening process which over an eighteen month period received 54 applications and endorsed only three for entry.

Genesis Director, Samuel Pruett, submits the prospective tenant's business and technical plans for review by experts on the University of Arkansas staff. Only after positive feedback is received on both commercial and technical aspects is tenant status granted.

To assist in monitoring the progress of clients, Pruett has established an Exodus Committee comprised of financially literate people drawn from the private sector. Members of the Exodus Committee also help tenants with the graduation process by ensuring that they are robust both financially and operationally prior to exiting the Genesis program.

**Maximise
Intervention
Time**

Self sufficiency or assured funding over an extended time frame is the most effective tool for freeing up incubator management time for working with clients. This is true since the debilitating and time consuming tasks of shoring up financial and political survival are obviated.

Incubator Managers can also generate more time for working with incubator clients if they partition some of the lower value added, time intensive tasks to be performed by someone else. Tasks that are a strong candidate for this type of action include the real estate issues including rent collection, maintenance, fit out and shared office services.

Techniques for partitioning the lower value added tasks include:

- identifying a suitable tenant to undertake these tasks
 - this option is adopted most often in the case of shared office services when a secretarial services firm takes on the role of reception, switchboard, mail handling , word processing etc;
- contract out the work
 - maintenance and fit out are commonly contracted out, however, the management of this activity can still intrude on incubator management time to a significant degree;
- arrange for a sponsor of the incubation program to deliver the service
 - one of the stakeholders in the incubation program may be the principal of a real estate enterprise who could contribute in-kind support by taking on the rent collection responsibilities;
- train a donated or other staff member to perform the role
 - the incubator manager is usually selected for their ability with respect to business development and advice. Real estate management is not the highest and best use of the incubator manager's time and not often a task in which such a person has any experience;
- share people who perform similar roles amongst several incubation programs
 - where incubator programs are located within adjacent regions, a number of incubation programs may be able to pool resources and share the costs of much of the real estate related work; and
- restructure the base relationship with clients to eliminate rent collection
 - eliminate rent collection by gaining payment for incubator services through other means such as royalties or equity.

Each of SPEDD and CBI have focussed on the issue of increasing the efficiency with which they treat building and incubator operations issues such as rent collection and fit out. However, both are special cases. SPEDD's network of 18 incubator sites provides it the economies of scale to have a specialist unit look after buildings and operations related functions. A member of the SPEDD management team and a small group of salaried staff perform maintenance and fit-

out tasks across all sites, and, with the aid of the one administrative staff member resident at each site, administers billing and payments for rent and services.

CBI has its Director of Accounting perform most of the incubator operations role. However, CBI is moving away from rent revenue as a form of income and even though it still has a few remaining "tenants" its attention is focused more towards servicing its "clients" needs.

Midland Enterprise Centre has structured its shared office services so that they can be delivered by a secretarial services firm. The principal of the firm performed the role of personal assistant to the initial manager of the Centre. Now she has been formally employed by the Centre as operations manager on a full time basis.

While real estate issues were shown to be time consuming activities for incubator managers (Office of Local Government, 1992, p13) so too were non incubator responsibilities. Together, real estate and non-incubator responsibilities, on average, eroded almost three quarters of incubator management time. Avoiding or minimising these time traps should be a significant part of the design of an incubator initiative, thereby allowing the incubator manager to spend more time with clients and developing tools to enhance the intervention process.

DELIVERING VALUE- ADDED

Turning now to the second key issue for best practice incubator management: the effective delivery of management services which value add to incubator clients. Successful delivery of value added management services is dependant upon three parameters:

- building the capacity of the incubator program to enhance business development amongst its clients;
 - the processes at an incubator's disposal to attract prospective entrepreneurs as clients and help facilitate development of each client business venture; and
 - the highly targeted approaches to business development selectively applied by best practice incubators in working with their best clients.

Building Capacity

Two strategies have been employed by business incubators to help build capacity for enhancing business development in their clients:

- building an incubator's internal capacity for delivering value added management assistance; and
 - developing and managing business assistance networks.

Many incubator organisations seek to leverage their lean management resources by building a business development network.

Building Internal Capacity

This approach can help keep costs down while retaining the ability to value add. This is discussed in some detail below. There are circumstances however, where an incubator may choose to concentrate its value adding capacity in-house.

Building the internal capacity of the incubator program relates to ensuring that there are sufficient staff of adequate expertise on the incubator payroll to deliver value added management assistance. There are a number of incubator program design implications in deciding to deliver value added management assistance and advice primarily through incubator employees.

The CBI Case Study illustrates these design issues very clearly. CBI directly employs a staff of four professionals and three administrative staff in addition to its President, Mr Robert Sherwood.

CBI bases the cost structure of its program on the delivery of a high value adding approach to business incubation and has chosen to deliver this largely with in-house expertise. The costs implied by having a critical mass of business development professionals on-staff is significant. To justify the scale of on-going operational costs due to staffing, it would be expected that the outputs generated by the program would need to be significant.

CBI has developed an integrated set of management services which it applies to its client firms. CBI makes a conscious effort to ensure that it is placing most of its resources and attention with clients who are going to grow most rapidly. This topic is raised at each CBI staff meeting by asking "are we putting most effort into the best client?" This is an essential discipline for CBI since its earnings are derived directly from client success in terms of enhancing growth in its sales and increasing the valuation of the client company.

The value added management programs developed by CBI are structured along the same lines that you would expect a traditional venture capitalist to adopt. However, CBI's predominant forms of investment are time and management expertise rather than equity capital.

As could be expected from a venture capitalist, CBI's initial actions with a client are to intervene in establishing the "people" aspect of the business venture, while helping refine the strategic and business plans of the client. CBI helps assemble a balanced management team which embodies the skills and experience necessary to succeed in the identified target market. In addition, CBI establishes an advisory board for each client to further supplement the skills base available to each client. Most importantly, however, an advisory board also brings

management experience to the venture initiation and growth management phases for the client.

CBI's strategy has delivered it a portfolio of impressive high growth companies. It is projected that the income derived from equity and royalties in these companies will enable CBI to become self funding in the medium term. CBI has secured long-term support from its State Government and University to allow it to pursue this strategy.

Another example of an innovative approach to generating internal business development capacity is TCG's network. TCG has developed an internal network among the 24 firms which comprise its constellation of enterprises. Inter-trading between firms that comprise the TCG network provides the glue that binds the firms together for mutual benefit. In addition to the strong inter-trading culture, TCG has developed a model for financing the start-up of new ventures based on the financial performance of the group. This provides new ventures and TCG with a mechanism for growth not matched elsewhere in the Australian capital market.

Networking and Network Management

Where an incubator manager is an expert in the entrepreneurial process, he or she is usually able to assist clients a great deal with the issues that need to be faced during the start-up process. An experienced incubator manager has been through the start-up process many times with many of the same issues arising each time a new venture is launched.

As ventures mature, however, their needs evolve. General information on generic business concepts becomes less valuable to the client while industry knowledge and market specific issues become most critical to firm survival. For example, during the start-up process, a client may find general information on how to set prices for goods or services useful. However, later in its development the venture will seek information on, say, the price sensitivity of buyers for its product in its market niche under prevailing industry conditions, where the product offers a number of innovative features over that offered by a competitor. The incubator manager would be expected to be conversant with general approaches to price setting but would in all probability have no appreciation of the detailed industry specific information. It is not possible for any one person, or even an incubator manager, to be an expert in every product/market area.

One effective approach that incubator managers use to supplement their own skills and fields of knowledge is networking to others who hold greater expertise in a particular area. Networking itself is a skill that can be acquired and developed as an important part of the incubator manager's skill set.

Used judiciously, networks can also supply the incubator manager with significant additional resources for client interaction and value added management assistance.

Network Building

Four major approaches offer themselves for consideration in building effective networks. These include:

- organisational design and affiliation;
 - entrepreneurship education and training;
 - student interns; and
- personal contact.

Organisational Design

The need to establish networks to support and add value to the entrepreneurial process is one factor which should influence the selection of stakeholders to participate in the initiation and further development of an incubator program. Therefore, in establishing the board of management of an incubation program or subsidiary advisory boards, and in selecting the organisation to act as host to the incubator, it is important to consider which organisations have an existing commitment to fostering entrepreneurship or could be a valuable resource if they were to develop such a commitment.

One way to develop a solution to this design issue is to base the incubator in an organisation with well developed community networks relevant to business development, such as an economic development organisation or university. In the case of a university, it is an advantage if it offers entrepreneurship education and training, such as in the case of EDI's linkage to the Weatherhead School of Management at Case Western Reserve University.

Some incubator programs use their boards of management as sources of advice for their tenants. Others feel that the best use of senior people's time is directing the management of the incubator program and so they choose to establish subsidiary advisory boards. The subsidiary advisory boards may be established for specialist purposes.

For example, Genesis has established an Exodus Committee which is made up of private sector people largely with financial management expertise. The purpose of the Committee is to assist the Director of the incubator in analysing the financial performance of tenants. In particular, the committee also has responsibility for smoothing the path for enterprises as they graduate from the Genesis program. The Exodus Committee also helps Genesis avoid any prospect of client dependency on the incubator or University by ensuring that the client moves towards graduation with a structured approach that ensures it is well prepared to operate independently.

One other approach that has been adopted by Genesis has been to build close relationships with organisations who work with small business such as the Service Corps of Retired Executives (SCORE) and the Small Business Development Centre. Due to the strength of the relationship between these organisations and Genesis, the services these organisations ordinarily supply to small business clients can successfully be delivered to entrepreneurial organisations within a framework supplied by Genesis. Genesis helps establish the framework for business development through its business planning and monitoring functions and calls on SCORE and SBDC to help supply components of knowledge to help complete the business development jigsaw for particular tenants.

In direct contrast to the network oriented approach, CBI has structured itself to deliver as many of the value added management services as possible from internal resources, in order to effectively service the royalty and equity positions they hold in their clients. The implications of this are that CBI must maintain a much larger professional staff contingent in order to service client demands. CBI has sought only limited recourse to networking. CBI has leveraged its internal capacity to deliver value added management assistance principally through the use of student interns from the University of Missouri.

Midland Enterprise Centre has also associated itself with a number of organisations, both private and public sector, who deliver services to small businesses. The relationship established by Midland with its clients is more laissez faire than the other organisations represented in the case studies. The Midland tenants are routinely responsible for initiating approaches to these organisations themselves. It is the fact that these service organisations are co-located with the tenants that encourages the firms to make use of their services.

Education and Training Programs

Educational programs concerned with entrepreneurial development inevitably involve a heavy reliance on practitioners and professional business advisers for their delivery. Such programs are an ideal forum for seeing the teacher or mentor in action with an entrepreneurial audience and, for example, assessing the rapport that builds. Such programs provide an ideal opportunity to source new talent for an incubator business development network or advisory board. EDI has used this technique to great effect through its array of workshops, conferences, training programs and recognition events.

If the educational program were structured to be an entrepreneurial outreach initiative, then the incubator could possibly kill two birds with one stone. The program could be used to develop prospective clients while also auditioning possible new members for the business development network.

Student Interns

Another important slant to the issue of entrepreneurship education and training, as a mechanism for enriching incubator networks, is the critical role that can be played by student interns. Student intern programs seem to be quite common in the United States. They are conspicuous by their absence in the Australian scene.

In the most common form of incubator/intern relationship, interns are drawn from a variety of disciplines including journalism, law, communications, business disciplines, engineering, the sciences and computing. Typically, the interns who worked in the incubator programs studied were graduate students, or less often, senior undergraduates.

Although most intern programs were staffed by University students as outlined above, the Genesis program had developed an innovative approach where it had worked with the local community college to develop an entrepreneurship course. Students who participated in the course were then offered the opportunity to round out their entrepreneurial education by working in an operational entrepreneurial venture.

This approach has a number of inherent advantages. Students were working on a "for academic credit" basis with work experience contributing to their assessment. This also has implications for the cost to the incubation program of "employing" student interns. Where academic credit is an element of the reward package for the student, payment for student work could usually be restricted to vacation periods. Students had already self selected to undertake the course on entrepreneurship and therefore are motivated about the entrepreneurial process. This obviates the need for an extensive screening and evaluation programs evident in some other student intern programs to ensure an appropriate quality intern.

The Centre for Business Innovation accords sufficient importance to its student intern program to spend significant time and effort in attracting the best student talent. To this end CBI has developed a formal marketing program including a brochure extolling the virtues of an internship experience at CBI. CBI has one student intern per client.

EDI has also developed some creative approaches to encouraging competition amongst students for places on its internship program. To achieve this EDI markets the prospect of free attendance at some of its most practical and highly reputed marketing training programs for growth companies. The positive feedback on the quality of the learning experience afforded the students on the otherwise expensive program ensures that there is a significant waiting list for internship positions at EDI.

Personal Contacts

The assembly of a business development network may also be achieved by drawing on the range of contacts held by the incubator manager and incubator stakeholders as well as referrals from these contacts.

It is important to ensure that the skills profile of people available to the incubator through its management and staff, its boards or organisational affiliations is managed to provide a spectrum of the essential skills required in the entrepreneurial process. One way incubators can achieve this most readily is to actively nurture the skills and experience available within their network.

Network Orientation and Training

Over time, networks require management and maintenance, to replace the skills of people who are unable to maintain their involvement in providing advice, or to acquire new skills in an area of expertise needed by incubator clients.

Unfortunately, people with the appropriate skills and experience to provide value added management assistance to growing enterprises are not always readily available. Communities will find that the availability and sophistication of these skills will depend significantly on the "entrepreneurial climate" operating in their region. It is also true that inappropriate people within an incubator business advice network can significantly undermine the credibility of the incubator program. Indeed, Rice (1992, p67) indicates:

"To try to guard against poor performance by network members it is important to consider how aspiring service deliverers can be screened, inducted into the incubator network so that they fully understand the context and likely impact of their advice, and develop the quality of their business advising over time."

The above statement implies that these issues are under the control of the incubator manager. Some of the incubator case studies in this document use advisers predominantly sourced from other organisations' networks. Without a clear common understanding between the organisations and mutually realistic expectations, it may be difficult to manage the quality of the services delivered.

Screening of prospective network members can be achieved through a number of different approaches. Once an operational network is in place, one of the most effective selection mechanisms is to rely upon the recommendations of existing top performing network members. Without such a reliable recommendation, an incubator may have to resort to the standard personnel selection procedures of reviewing a Curriculum Vitae and discussing the anticipated role with the candidate's referees.

Some of the most regularly occurring situations which require caution when screening prospective network members are approaches from consultants seeking to quickly bolster their client base and people who may have business expertise and experience developed solely in large business. Such people may be unable to translate their knowledge and experience to make their advice and recommendations relevant to newly established growth business.

Canberra Business Centre's network of business advisers consists of over thirty people. Initial interest was stimulated in the Centre's activities through two small articles in the ACT's daily newspaper, the Canberra Times. Julian Webb the Centres' Manager takes particular interest in vetting any individuals who wish to join the advisory network. He, together with one of the more experienced advisers, interviews the potential network member. The skills and personal attributes of the applicant are taken into account prior to testing their mettle on one of the regular review panels with two experienced network members. Their performance under these managed conditions helps form the decision on whether or not they should be admitted to the network.

Sydney Business Enterprise Centre (SBEC) goes out of its way to build the quality of its business advisory and mentorship services. Each person who is part of the business advisory pool is an honorary Associate Member of the Centre. Through this, the business advisers receive complementary entry to all Centre membership functions and delivery of the SBEC networking materials such as the Membership Directory and Newsletter.

SBEC also provides training and development for its business advisers. One of the most experienced staff members has been designated a coordinator and plays the role of communication hub amongst the advisers and mentors. Quarterly business adviser functions are held in which training and development issues of particular relevance to business advisers are covered.

In addition to this, the pool of advisers has been integrated into all aspects of the operation of the SBEC. Initially, for example, mentors were compartmentalised into only being involved in providing advice to businesses which had already been accepted into SBEC programs. On some occasions the mentors were being delivered businesses about which they held serious misgivings. The upshot of this was to involve mentors in the full life cycle of the tenant firms, from screening to graduation. This means that network members now participate in each program on offer at SBEC, including pre-screening of business concepts, participating in selection panels and sitting on pre-start enterprise review panels.

The Network Life-cycle

Just as businesses and incubators can be discussed in terms of their life-cycle, an understanding of the development and operation of entrepreneurial networks can also be enhanced by setting out a life-cycle construct.

When an entrepreneurial business advice network is initiated it consists of a loose affiliation of people who have an interest in assisting the growth and development of new firms. The existence of the incubator, and its strategic directions, helps provide a focus which encourages the loose affiliation to be transformed into a team. Like most teams, the objective is to bring together people who specialise in certain tasks in such a way that the network too performs more effectively than the sum of its parts. Best practice approaches indicate that the team metaphor should be extended to include the designation of a "coach" to help generate the benefits of teamwork.

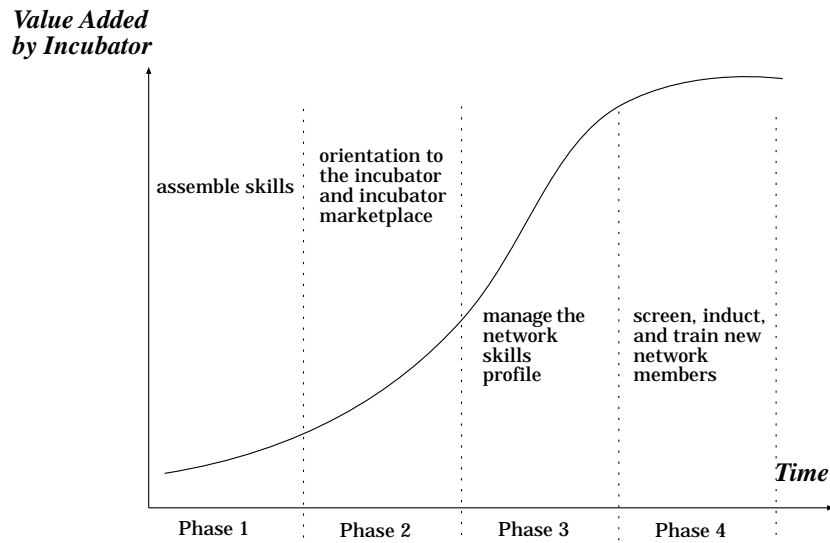
People in the incubator network are requested by the incubator manager to perform tasks individually, for example providing mentorship to one firm, or in a group say, making up an assessment panel or advisory board. The incubator manager may choose to take the opportunity to work with members of the network so that a sound understanding of the people in the network, and their area/s of expertise, can be developed.

Initially, the skills required by network members might relate to the needs exhibited by the earliest tenants in the incubator ie., principally to an appreciation of the start-up process, business and strategic planning, as well as early issues in finance, accounting and marketing. Later, tenants are likely to seek assistance in establishing their business systems and in sourcing and interpreting more detailed market and technology-specific information. So it will become necessary to draft additional skills to the network.

As the incubator manager becomes more familiar with the skills and experience of the people in the network, and the services most in demand from the tenants, the manager will play a role in seeking new network members to fill any skill gaps in the team which may become apparent. In addition, some network members will find that they cannot continue with their commitments to the incubation program. This will also necessitate the search for new talent for the network.

In seeking to bring new talent to the incubator network it could be expected that there may be quite a distinction between the skills and experience of practiced network members and the newcomers, with respect to intervention with new growing enterprises. This disparity could provide the motivation to introduce the screening, induction and training initiatives to enhance network processes.

Figure 1: A Network Life-Cycle Model



Four distinct phases of this life-cycle are evident:

- finding network participants;
- developing the "team" attributes of the network;
- generating processes for screening, inducting and training for network members; and
- ensuring a full complement of skills are available within the network.

Dr Robert Meeder, the President of SPEDD, Inc. has developed a significant innovation in the management and development of incubator networks. He has developed the SPEDD entrepreneurial network to the stage where it is a proven tool for marketing SPEDD, enabling SPEDD to grow its business, generating significant income and facilitating the incubator moving into higher value added aspects of business development.

SPEDD has developed the management of a number of separate incubators into the management of an "incubator system". The SPEDD Passport Program⁹ can be characterised as having developed over four identifiable steps.

Step One Incubator staff and the entrepreneurial network deliver services to clients as outlined in the above life-cycle.

Step Two The services are analysed, broken down into their constituent parts and repackaged as "products". The product definition

process includes developing a product description designed to communicate effectively with an entrepreneur, a clear statement of outcomes delivered by the product and the definition of the amount of time needed to purchase the product and its price. Related products are developed into articulated sets, with products early in the set leading to the more sophisticated products later in the set.

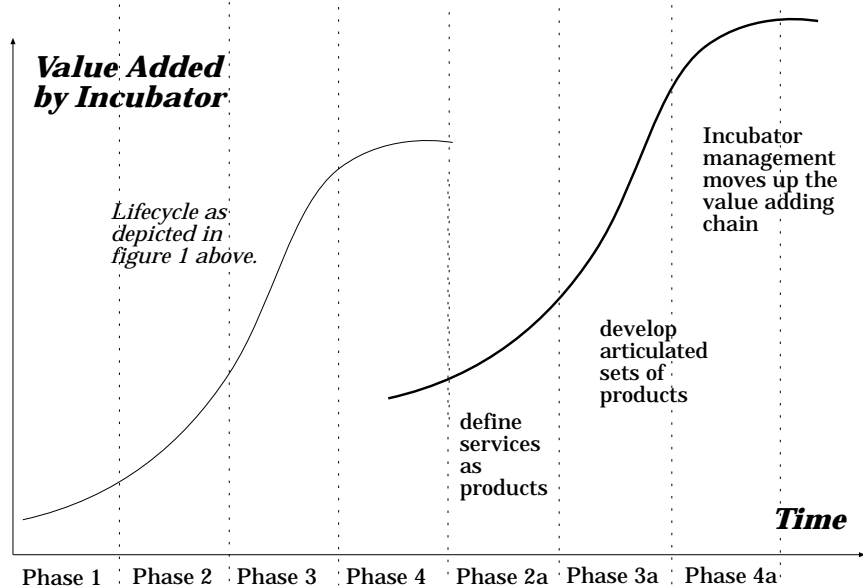
Step Three The collection of products is defined as a system which can be refined. Additional products are added and poorly used products retired from the system. New people are inducted into the system, trained in how to deliver existing products and encouraged to put forward suggestions on how the system might be improved. The Passport Program^a is constantly redeveloped to include the most effective sets of products.

Step Four The system is deliberately managed to facilitate the transition of incubator management away from delivering introductory products. The aim is to maximise the "value added" delivered by the incubator management team through the delivery of more advanced products. That is, members of the network are encouraged to deliver more of the products thus allowing the incubator management team to focus the majority of their time and attention on managing the system, developing new products and delivering the higher value added products. Thus, the definition and management of such a system provides the flexibility necessary to allow incubator management to move up the value added chain of services offered by the network. Network members deliver the products within a managed environment which is designed to entrench quality.

The definition of a "systems approach" to operating a network has a number of advantages. By arranging products in articulated sets, a form of screening process is naturally generated by the system. That is, as clients progress through the basic products to those delivering higher value added, those firms that exhibit the best growth characteristics and ability to respond to the products are naturally disposed to taking on the next product in the set, or graduating to a new, more advanced set of products. Ultimately this leads to the best firms getting the most attention and time with incubator management.

This innovation in network management provides a powerful tool for enhancing the ability of the incubator to generate value added for its clients. The life-cycle construct set out in Figure 1 to help describe the development of the conventional form of incubator network is also a useful tool in showing how it might be possible to introduce a network systems approach to reorient the management of an existing incubator network.

Figure 2: Innovation in Network Life-Cycles



The definition of the Passport Program^a has facilitated a paradigm shift in the value added which can be generated from incubator entrepreneurial development networks. As shown in the life-cycle diagram in Figure 2, the system developed by Dr Meeder extends the capacity of the network to deliver value added to incubator clients. The Passport Program^a has enhanced SPEDD's capacity to engage in both deal making and deal shaping with its clients and at the same time has enhanced SPEDD's income generating capacity by freeing it to concentrate its efforts on the highest value added elements of enterprise assistance.

Entrepreneur Capture and Development

Delivering value added is dependant in the second instance on the processes that an incubator develops to capture prospective entrepreneurs and facilitate the development of their business ventures.

Information can be transferred between organisations in a number of different ways producing varied results, both in terms of the effectiveness of the information transfer and the usefulness of the information.

A simple framework for the information transfer process is proposed below. It consists of three components which relate to the development of organisational learning by incubator clients:

- information transfer;
- knowledge transfer; and
- personnel transfer.

Information transfer may be considered equivalent to a training program and transfer under these conditions is relatively poor. Knowledge transfer can be likened to a more interactive exchange such as an interactive workshop or advisory board. The quality of organisational learning under this process is more effective than under the "information transfer" mode. Personnel transfer consists of introducing new people to bring required skills to a client firm. The result is the transfer of deep learning and understanding in the skill area to the client. Examples of personnel transfer in the case studies includes recruitment of new management personnel, the use of student interns and the intensive role of business development teams at CBI.

The case studies demonstrate that :

- at the information transfer level, education and training programs are used by best practice incubators to attract client candidates and to enrich their business development networks.
- best practice incubators have devoted significant energy towards developing applications of knowledge transfer and personnel transfer to enhance the performance of their clients.
- One of the principal methods employed by incubators seeking to encourage entrepreneurship in their region is to run entrepreneurship education and training programs. Such programs, to be successful, require a strong applied orientation with practicing entrepreneurs (rather than business school academics) responsible for delivering much of the course content. It is usual with such programs to also use professional business advisers along with the entrepreneurs to supply focused information in one on one counselling sessions as part of the educational approach.

The people who participate in delivering the training and mentorship can be ideal advisers for incubator tenants and other rapidly growing firms.

Enterprise Development, Inc. (EDI) has developed the seminar/conference/training program for entrepreneurship and related areas of interest into an art form. In addition to operating annual thematic events such as the North Coast Growth Capital Conference, EDI also runs conferences which pitch their subject matter at important entrepreneurial issues of the day. These programs attract a great deal of interest from intending entrepreneurs as well as other growth oriented enterprises. This provides EDI an excellent marketing forum as well as an opportunity for prospecting for new adviser/mentor/trainer talent.

Targeted Action

EDI has taken this process a number of steps further by running a high profile annual recognition event, the Weatherhead 100. The event is structured to highlight the achievements of their region's 100 most rapidly growing firms. Its targeting is finely tuned to the market segment to which EDI pitches its services - small rapid-growth firms. As a result of this initiative, EDI accumulates valuable information, generates outstanding contacts, and reinforces its nodal position as a provider of services to growing firms.

The third strand to delivering value added is the development of highly targeted approaches to business development, selectively applied by best practice incubators in working with their best clients.

In Chapter Two, Rice's analysis of current practice with respect to incubators working with their clients was discussed. He identifies three levels of intervention:

Level 1: passive environmental intervention;

Level 2: reactive direct intervention; and

Level 3: proactive direct intervention.

This intervention model is a convenient way of characterising the relationships that develop between an entrepreneur and an incubator manager. According to Rice, passive environmental intervention does not require a direct relationship between the two parties. Instead the incubator manager provides an environment and the entrepreneur chooses how to use this to best effect. Level 1 intervention can include facilities, shared services and peer networking among tenant companies.

By comparison, direct intervention, in both its reactive and proactive forms, requires a direct relationship between the entrepreneur and the incubator manager.

Direct intervention manifests itself in two major forms: counselling by the incubator manager and networking to external sources of expertise. With respect to the reactive form of direct intervention Rice states (1992, p 110 - 129) that:

"there are several flaws in the practice of reactive direct intervention which suggest that a more proactive approach could be effective:

- First, the process is generally initiated by the entrepreneur. This required the entrepreneur to recognise the potential value of initiating the intervention and to take the initiative. Since frequently the objective

of the incubator manager is to use counselling as a catalyst for change, he will challenge the entrepreneur's way of doing things. As the entrepreneurs' experience with direct intervention accumulates, he or she may resist the challenge and the change and be less likely to initiate the intervention process;

- A second flaw in the one shot reactive intervention process is the orientation toward short term problems or crises; and
- Third, this style of intervention does not typically move the venture toward addressing the long term need for developing a complete management team and for oversight through a competent board of advisers."

Proactive direct intervention requires the incubator manager to put in place measures to assess the status of the company, establish clear strategy and goals, set achievable, quantifiable short-term milestones and monitor the performance of the company against these.

Proactive intervention often involves the injection of extra personnel through such tools as advisory boards, business development teams, student interns, mentors etc to assist the firm to resource its part of the intervention process.

Rice indicates (1992, p 30) the literature shows that proactive direct intervention is largely non-existent although some signs of experimentation exist. Further, amongst the sample of nine incubators he included within his survey sample, he found little if any evidence of proactive direct intervention.

However, three of the incubators case studied in this report (CBI, Genesis and SPEDD) show that they operate well developed proactive direct intervention systems. The characteristics of these proactive direct intervention systems are that they:

- are highly selective;
- include intensive review and analysis;
- identify and monitor clear quantifiable milestones which are set as an element of a tailored business development program;
- encourage organisational learning through knowledge transfer via people inputs; and
- facilitate capital acquisition to underpin the actioning of the business development strategy.

Selectivity

The selectivity issue, in particular, is worth exploring in greater depth since it sets the scene for incubator success. Incubators in the cases use five generic techniques to enhance the selectivity of their business development programs:

- screening of prospective tenants to select the most appropriate businesses to become tenants;
- monitoring tenants to identify what actions the incubator might take to facilitate or assist growth;
- segment the tenant population and choose to work intensively with those tenants which exhibit most growth potential;
- structure a program to allow self selection by tenants with those showing most potential progressing to higher levels of intervention; and
- establishing a rigorous "deal hurdle," the structure of which, selects firms with the right character for success.

Screen

While each of the incubators in the cases screen the businesses that approach them for tenancy, the screening program undertaken by Genesis illustrates a best practice approach most clearly. The Genesis approach is centred around the review of technical documentation and a business plan defining the proponent's business venture. Genesis arranges for both a technical and commercial assessment to be conducted by suitably skilled and experience academic staff from the University of Arkansas. A firm is admitted once consensus exists that the firm qualifies for Genesis against clearly articulated selection criteria.

Monitor

The business planning that takes place during the screening process at best practice incubators sets strategy and business goals and provides a sound starting point for the setting of near-term milestones. CBI business development teams and advisory boards use three month milestones and weekly status reports between the incubator and entrepreneur to track progress. CBI experience indicates that longer-term goals (set at yearly intervals, for example) are too abstract and distant to be an effective management tool.

Segment

CBI staff meet regularly to discuss their portfolio of clients. One of the key questions asked during such meetings is: "are we spending the most time with the best firm?" Rice and CBI advocate the use of a matrix to help prioritise their allocation of resources amongst clients.

Rice (1992 p 145 - 149) advocates that it is important to clearly define the nature of the clients sought by an incubator program. Prospective clients are assessed for four critical business success factors. These are:

- management;
- product/service;
- market; and

- finance.

An analysis of the maturity of the firm against these four dimensions will provide the incubator manager with the necessary insights to categorise client companies. This is set out in Figure 3.

Figure 3: Client Selection Matrix

Source: Rice (1992) p 146.

This matrix allows the incubator manager to determine which prospective clients to accept and reject. Importantly, the matrix also provides a valuable tool for ranking tenants with respect to allocation

| | | | |
|---|-----------|--|-------------------|
| | | Level of maturity of the firm with respect to critical success factors | |
| | | <i>ih</i> | <i>o</i> |
| Potential to meet objectives of the incubator | <i>ih</i> | I: Superstars | II: Up and Comers |
| | <i>o</i> | IV: Anchor Tenants | III: Long Shots |

of incubator staff time to providing assistance.

Superstars are those firms with the greatest desirability with respect to financial investment. The product or service is fully developed, the product is ready for an established market and the company is fully staffed with an experienced and competent management team.

Up and Comers are the firms which deserve the most focused attention from the incubator. They have sufficient current or potential competitive advantages to qualify as potential Group I: Superstars. However, they have significant weaknesses or deficiencies that prevent achievement of their full potential.

Long Shots are firms that might make it past incubator entry criteria with the presence of potential competitive advantages, but the

entrepreneur fails to make the advantages materialise. Further, the entrepreneur may not recognise the deficits that must be overcome and may not have the capacity to overcome them even if they were recognised.

Anchor Tenants are firms which are mature in terms of the operation of their business in that they require little or no proactive intervention assistance from incubator management. They provide the incubator a stability in cash flow from rent and may provide services to other incubator clients.

Self Selection

SPEDD's hierarchical array of Passport Program^a products helps screen out those firms which are less capable. Only those firms with growth attributes progress to take part in the most advanced products within the Program. Such products commit SPEDD and the entrepreneur to intense interaction and constitute the highest value added contribution by SPEDD.

Deal Hurdle

TCG requires prospective entrants to establish the commercial viability of their venture at its outset. This is achieved by structuring a deal which serves to finance the new product development phase for the firm. This approach also has the benefit of establishing a strong link with a lead user, that is, a large and demanding customer. The implications are that if the technology is delivered on time and to specification, the project will achieve initial sales. This triangular deal structure, including a prospective large end user of the new technology, helps TCG validate its selection of new TCG member firms.

Deal Making and Deal Shaping

Perhaps the most direct and tangible contribution that an incubator can make to a client company is to assist it or participate with it in a business transaction.

With a client company in pre-venture or early start-up stage, an incubator is in a position to use its better developed business skills to pull together a business deal which provides its client company with a short term goal and much needed cash flow.

There are a number of different deal-making roles in which an incubator may participate. These roles include:

- bringing the skills and resources to help develop a critical component of a venture;
- assembling a venture; and
- participating in a client's business to help generate sales and growth.

Venture Components

Prospective incubator clients often present themselves with the core of a good concept for a business venture that has one or more significant weaknesses. Such ventures may be accepted by an incubator in spite of such flaws because the incubator is in a position through its knowledge and experience, or access to this through its network, to overcome the problem to deliver a strong and viable enterprise.

Examples of this role are common within the cases.

EarthCare Systems Inc came to Genesis with a good concept for a composting business. Its technology consisted of a cocktail of microbes which it used to inoculate compost materials to significantly accelerate the composting process. Genesis, through its linkage to the University of Arkansas, helped transform a good idea into a business system.

The University helped to identify the conditions and species of bacteria which for defined compost raw materials would give optimal composting results. As a result of this analysis, a University research centre worked with the company to design and construct an "agricultural scale" machine protected by patents, that provides the company the capacity to convert large tonnages of material into compost. Local Authorities in the US required the system to have the capacity to treat significant tonnages of material prior to considering its purchase. Thus, Genesis made a critically important contribution to EarthCare Systems becoming a viable business by helping to develop the venture's technology to meet the needs of the company's clients.

Capital acquisition is an important element of any business. Most incubators give some attention to assisting tenants to build a relationship with a local bank and help them to effectively present their case for being granted a loan. However, incubator programs have also adopted a far more pro-active stance to assisting clients to capitalise their ventures. This includes assisting clients to access government programs to support research and development. Genesis, for example, has an outstanding record in helping to attract SBIR Program grants. Similarly, TCG companies have a strong track record in securing GIRD grants and in using the 150% tax incentive for R&D to good effect.

Beyond this, however, the Centre for Business Innovation and TCG have regularly secured tranches of funding for their clients from other sources. In the case of CBI, this has included venture capital. In the case of TCG, funds have been secured from corporate backers who would be significant users of the product being developed by the capital seeking firm.

The experience, relationships and resources that incubators bring to the capital acquisition process can make a significant contribution to their clients. Such incubators use this knowledge to advise their clients on establishing the appropriate configuration of business which is most likely to be received well by targeted backers.

The skills and industry experience of a venture's founder is one key attribute held as an important indicator of the likelihood of success of a business venture. CBI maintains a CEO database to assist businesses to develop a strong management dimension to their venture. One example of the usefulness of this database is recorded in the Centre for Business Innovation case study. The vignette discusses the initiation of a company known as MorningStar Interactive Corporation.

Assembling a Venture

The CBI MorningStar and TCG ILID vignettes illustrate the proactive deal-making and deal-shaping stance that incubators can take where they consider that the business rewards are likely to be significant. In both ventures, a new technological concept spurred the assembly of a new venture, largely developed by the CBI and TCG management respectively. It is likely in the absence of the deal-making knowledge supplied by the incubator in these instances that the technology would have remained "on the shelf" and that a new venture would never have formed.

It is pertinent to contrast the level of value added contributed by incubators under these circumstances with that of the "landlord" model incubator which provides space, shared office services and little else.

Participating in the Business

SPEDD's Passport Program^a contains an articulated set of value added management services which is purpose-designed to encourage the most developmental and responsive clients to participate in the proactive services designed by SPEDD for intensive client interaction.

SPEDD has evolved its Passport services to the stage where through its TRADEMAKER Program^a it assists its most advanced clients to make sales, explore new market territories and enter international business.

The value added management inputs delivered by the incubator derives significant returns for SPEDD which generates income through fees and royalties.

The above examples provide a snapshot of the types of value added relationships that have been developed between incubators and their clients. Appropriately configured incubator programs can make a significant contribution to business formation and development.

Summary

Best practice in incubator management results from firstly, establishing an incubator so that it may rapidly move from a real estate focus at start-up to a business development focus and secondly, by enhancing the capacity of the incubator to "value add" to the business development of its clients.

The operational mix of each incubator facility will vary since its regional context, entrepreneurial climate, nature of its stakeholders and their objectives, clients, and the skills which it can assemble to apply to business incubation. However, within this mix, a number of common parameters influence success.

The incubation programs which value add most effectively will be those that adopt a pro-active business development stance based on a sound appreciation of the business needs of their clients. The characteristics of pro-active direct intervention systems will be developed further in Chapter Five.

Conclusion

In Chapter Four the best practice approaches to incubator management were identified and discussed. It is important to emphasise the interrelatedness of these elements of best practice incubator management. It is generally not possible to select one element of best practice and implement it in isolation from other elements. Success in incubator development therefore depends to a significant extent on how the incubator program is designed and the way in which the interrelated elements of best practice are assembled.

If the industry in Australia is to mature, it will be necessary to develop a sufficient number of business incubators based on these design and management principles.

PROGRAM DESIGN

How each incubator program is designed has critical implications for the rate at which it travels through the business incubator life cycle, and its ability to make a value added contribution to its clients.

National and international experience, based on the case studies, shows that best practice in business incubator management means:

- concentrating on enhancing the capacity of the incubator program to contribute to the business development of its clients rather than focusing on real estate operations; and
- adopting a pro-active business development stance, as opposed to merely responding to client requests.

The capacity to become pro-active in business development is largely set by how a business incubator is set up initially. As Dr Matthews states in his case on the TCG group:

"It is a general rule that the origins of an organisation profoundly mark its subsequent evolution and *modus operandi*."

This report suggests that an incubator program should design its business development strategy as the key element in its feasibility study. Business development capacity in an incubator, especially if this is to be delivered with any aspirations towards quality, is not a cost-free activity. Frameworks for assessing the feasibility of business development centred incubation programs are discussed in Chapter Four.

Meeder (1993, p38) makes this point particularly clearly:

"You would be surprised to learn how many self-styled business incubation programs opened for business without asking themselves if they were really an incubator. Granted, there are many variations to the definition of a business incubator. However, *every definition must include the requirement that a business incubation program provide value-added management assistance to the entrepreneur*. Too many business incubation programs fail to establish their niche in the community as a service provider.

A centre with adequate facilities but no tangible service program is hard pressed to justify an identification as a business incubator. The service program with a relatively comprehensive management assistance portfolio of services is essential.

What is a business incubator?

- a facility is not enough.
- a facility with below market rent is not recommended.
- a facility offering just shared office practice services and equipment is not enough.
- a facility offering management assistance services via referral to other service organisations is not enough.
- a facility with a list of tangible office practice services, management assistance, and technical services (some by referral and some delivered directly) is beginning to warrant the label "business incubator".

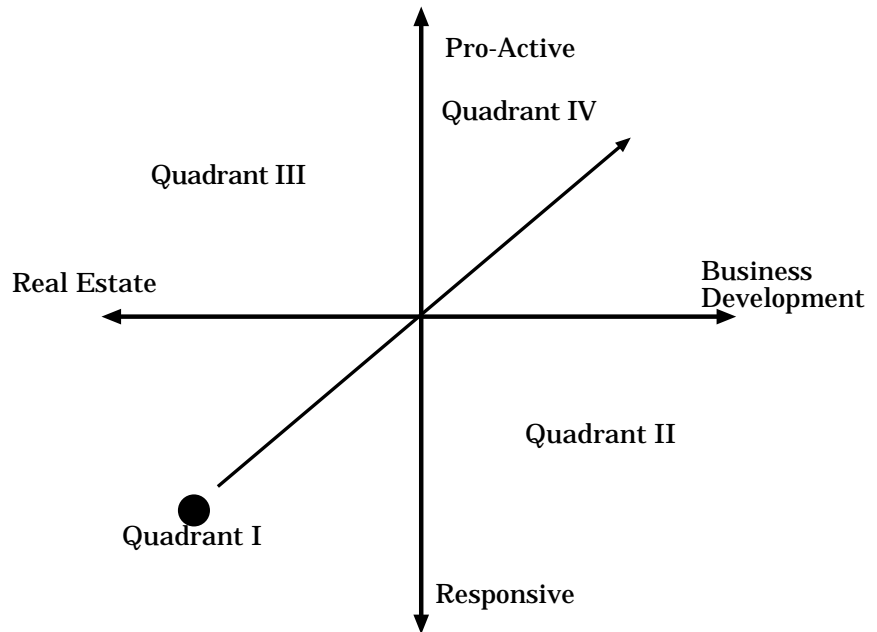
The definition, organisation and implementation of your service program is more important than your facility. Your feasibility study should elaborate upon your incubator's service program

just as you require your entrepreneur clients to defined their distinctive competency within their business plans."

BEST PRACTICE

This report has outlined best practice approaches to making the transition from a responsive real estate oriented program to a pro-active business development oriented one.

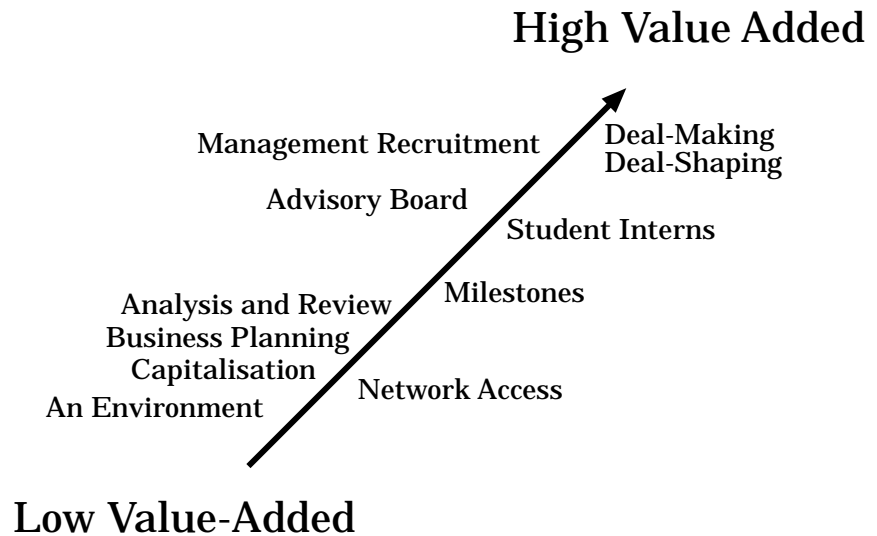
Figure 4: Managing the Incubator Transition



This report suggests that for business incubators to achieve maximum impact, it is necessary that they be deliberately designed to make the transition from Quadrant 1 to Quadrant 4 and thus enhance their capacity to facilitate growth in their clients.

Chapter Four discusses some innovative approaches that incubation programs in Australia and the United States have used to make this transition. Some of these are depicted in the diagram below which sets out a number of the services on a continuum from least value added to most.

Figure 5: The Value Added Continuum



The incubation programs which value add most effectively will be those that adopt a pro-active business development stance based on a sound appreciation of the business needs of their clients. The characteristics of these pro-active direct intervention systems are that they:

- are highly selective both in which firms gain entry to their program, and within their client portfolio, how time is divided, with most being allocated to Up and Comer firms;
- base their decision-making on the comprehensive business plan for each enterprise and include intensive review and analysis as a significant element of the package of services in which their clients participate;
- actively involve the incubator in deal-making and deal-shaping with their clients;
- identify and monitor clear quantifiable milestones which are set as an element of a tailored business development program;
- encourage learning by incubator clients through knowledge transfer via people inputs such as business development teams, student interns, advisory boards and management personnel;
- have access to extensive and deep networks of expertise specifically cultivated to develop in small, rapidly growing client enterprises; and
- facilitate capital acquisition to underpin the actioning of the business development strategy.

INCUBATOR INDUSTRY LIFE-CYCLE

Just as the study of the characteristics of individual incubator facilities has produced the concept of incubator life cycles so too can incubator "industry" life cycles be discerned in Australia. The emergence of an incubator industry life-cycle in the United States was discussed in the study for the Office of Local Government (1992). An incubator industry life-cycle is also beginning to emerge in the Australian context, with many similarities to that described for the US.

In Australia, the incubator industry has developed along the following path.

Embryonic stage

The "Explorers" or earliest venturers were the initiators of incubator programs before significant activity with business incubators could be identified. These people sensed a good, practical idea and pursued it. They didn't know where the idea was taking them because they did not encounter any barriers that they could not overcome. The people are highly respected in their own communities and have started dozens of companies, now they are doing it in a more coordinated fashion through an incubator.

The "Pioneers" sense the opportunity as conveyed by some early explorers, telling their tales of success. Some Australians hear stories of significant achievement from foreign pioneers and seek to explore application of the concept on home territory. Many of these people do not have extensive business backgrounds but have unbounded energy, vision and leadership skills. They undertake incubators with an economic development purpose, whereas explorers undertook incubators because it was a natural evolution of their own business development strategy.

As more pioneers undertake incubators the variation in the types of incubator model increases.

A few groups closely network but many are hardly aware that others exist. Gradually word gets around and a sense of the whole forms. A few successes of explorers and some pioneers are touted by the local press and as the sense of the whole begins to take place. Predictions of high expectations for success across the industry are made. It is not that anyone comes out and sets the expectations, its more due to unbridled optimism.

In summary, the embryonic industry is more like a "movement". True believers emerge and begin to place the movement on the cutting edge of economic development. Of course, nay sayers abound calling the incubator movement the "flavour of the month" or economic development "fad". This stage began sometime in the mid 80's and ended in the late 80's.

Growth Stage

The compelling nature of the concept captures the attention of many different groups. The concept is seen as easy to understand, easy to "sell" and it exhibits characteristics that fit to many local community problems, ie, disadvantaged regions, employment creation or help for small business. Research proving the importance of small business to employment growth in the economy is widely cited as the underpinning rationale for business incubators.

By participating in the development of an incubator, the community or an organisation is seen to be doing something positive and proactive about economic development. An added advantage of the incubator concept is that such an initiative has the ability to generate revenue and many hold out the hope that it will eventually be self-sustaining.

The true believers group expands beyond explorers and pioneers to include consultants, academics and state and federal policy makers. A promotional posture is taken by many of these people as a way to seek business (feasibility, evaluation and financial studies) and research support.

A rush to develop business incubators occurs. State and federal agencies get involved and help non government organisations, local government and local communities establish incubator programs. State governments develop incubator programs after some initial success with one off support.

Incubator managers begin to realise they have common problems and are confronting common issues. Some sense of opportunity is derived from networking. A national, and in some cases sub-national, organisation is formed. The promotional machine moves into high gear and publications, national conference, political influence and news stories become the agenda for the association.

Growth in the number of business incubators is at a peak fuelled by all this interest. A vibrant economy adds fuel to growth, but even in recessionary times, some are able to find money to plough ahead. Significant yearly increases in the number of incubators occurs with tapering off toward the later part of this stage.

One of the negatives which results from this stage is that many communities rush in without sufficient resources, networks, management expertise etc. Some financial supporters become disheartened when they realise the incubator will not break even and that continued subsidy will be necessary. Other negatives which become evident as the sense of euphoria diminishes is that:

- initial government funding contract reaches the end of its term and is not renewed;

-
- incubator managers find that they must take on additional roles in their community to make ends meet, thus eroding both clarity of mission and their time to participate in business development or in establishing tools for enterprise development;
 - tenants not closely aligned to the stated mission of incubator facilities occupy space so that the program can increase rent revenue; and
 - incubator managers find themselves in a landlord rut and frustration grows.

Late in this stage, the shake out increases. Marginal facilities fade into multi tenant use or vacancy and growth in the national incubator population slows to below 10% and in some states where incubators have existed for years, few new facilities are created. In these states little state-wide incubator growth may occur. Other states which had few or no previous incubators, may continue to see growth as the promise of incubators sweep across the economic development landscape.

In summary, some sense of balance has entered the development of the incubator industry as the unbridled optimism of the embryonic stage is countered with evidence of some misguided and unplanned incubator initiatives resulting in failure.

Maturity Stage

More realistic expectations about performance of business incubators develop based on more thoughtful research and a history told through years of experience and operation. The lessons recounted from international developments is analysed more thoughtfully. Those now coming into the game are a lot more sophisticated about entrepreneurial development and have keener sense of working with community networks.

The preparation of comprehensive feasibility studies precedes all new incubators rather than the old approach of raw energy and intuition. Wide variation in the model and mission of incubators still exists within the industry but the industry has gravitated towards selecting high value enterprises as tenants based on 5 to 10 years experience of surviving pioneers and explorers and the sophisticated new managers coming to the industry.

The national industry association mutes its promotional campaign and redirects its efforts towards advancing the professionalism of incubator managers, offering training and development, conducting research and encouraging networking between practitioners.

National media stories now focus on a decade of achievement evidenced by the success of early facilities.

Most life cycle constructs include a decline stage. It is not relevant to discuss this for the Australian incubator industry at present.

Life-Cycle Position

Australia would appear to be a good way through the Growth Stage of the incubator industry life cycle at present. Therefore, the latter part of the Growth Stage and the Maturity Stage are a projection, based on the author's understanding of international experiences and knowledge of the Australian scene, of what is likely to occur in the Australian context.

ACTION STATEMENTS

The following recommendations highlight the most important issues to be considered by incubator managers, incubator stakeholders and policy makers.

Incubator Managers and Stakeholders

Incubator Managers and Stakeholders should:

- 1 Design, develop and manage incubator programs in accord with the best practice principles defined for business incubators in this Report.
- 2 Segment the market for small growing firms in your region and target the design of your incubator program to meet the needs of the firms in the targeted segment/s.
- 3 Define the suite of business development initiatives that the incubator will deliver and build the cost structure of your program based on achievement of value added service delivery milestones, not real estate objectives.
- 4 Design your incubator program so that the manager can spend a minimum of 40% of time working with clients or enhancing other tools for value adding to clients. (eg networks)
- 5 Market your program on the its value-added management services not cheap rent.
- 6 Develop the capacity to maintain a thorough understanding of the strengths, weaknesses, business targets and performance of each client.
- 7 Devote most time and energy to the best performing firms.
- 8 Develop the capacity of your incubator to value add to clients by drawing on resources outside your direct control while maintaining the ability to achieve 5.

Policy Makers and Program Managers

Developers of policy and government program managers should:

- 1 Encourage the development of business incubator programs based on the best practice principles identified in this Report.
- 2 Focus on business incubators for growing competitive firms to make a real net contribution to the economy.
- 3 Act to help compress the incubator industry life-cycle in Australia so that the shake-out period is minimised, thereby lessening the loss of resources and maintaining the viability of the industry, enhancing its rate of development and the enterprise development outcomes it produces.
- 4 Work with incubator stakeholders and managers to compress the individual incubator life-cycle such that the business development and expansion stages are achieved as rapidly as possible.
- 5 Predicate on-going support for an incubator on evidence that it is moving through its life-cycle and delivering increasing value to high value added enterprises.
- 6 Avoid short term financial assistance.

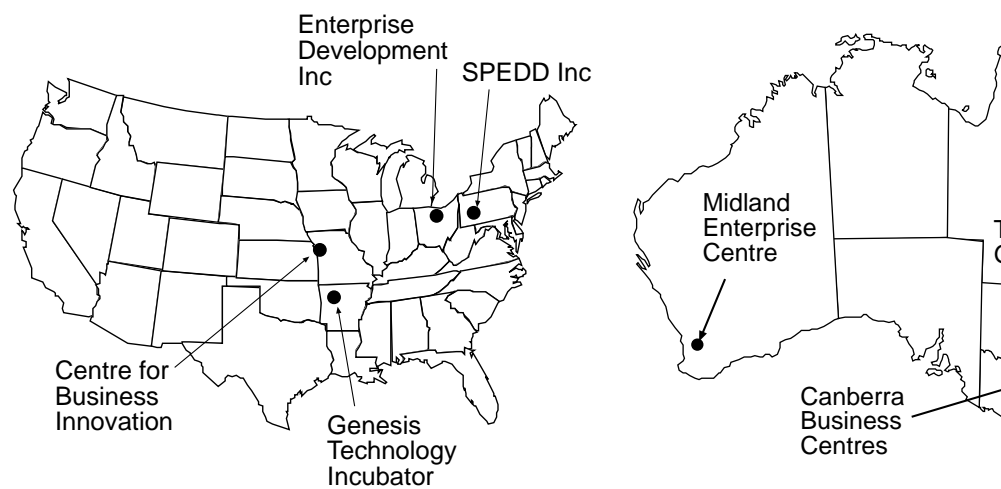
Attachment A

Case Studies

Attachment A contains a total of eight case studies with four contributed from the United States of America and four from Australia.

The maps set out below illustrate the location of the business incubators which are the case study subjects.

Figure 6: Incubator Location



To facilitate easy reading a shorthand nomenclature has been used to refer to the case studied business incubator programs in appropriate situations. Among the US incubators CBI stands for the Centre for Business Innovation and EDI represents Enterprise Development Inc. In the Australian cases, CBC is shorthand for Canberra Business Centres and SBEC stands for the Sydney Business Enterprise Centre.

Table 3 provides a summary of key data from the case studied incubators so that readers might contrast these key parameters and gain a deeper understanding of the differences between the various programs'.

Table 3: Summary of Key Incubator Data

The case studied incubator programs have supplied information on the scale of their program and its outputs during 1993 in a common format. The

| Incubator | Start Year | University Affiliation | 1993 Clients ¹ | 1993 External Clients ² | Total Clients Serviced ³ | Graduates cum. ⁴ | Graduates 1993 ⁵ |
|----------------------|------------|------------------------|---------------------------|------------------------------------|-------------------------------------|-----------------------------|-----------------------------|
| United States | | | | | | | |
| CBI | 1985 | Yes | 6 | 23 | 96 | 40 | 3 |
| EDI | 1987 | Yes | 12 | 2 | 30 | 26 | 3 |
| Genesis | 1986 | Yes | 8 | 2 | 28 | 20 | 2 |
| SPEDD | 1982 | No | 225 | 70 | 295 | 33 | 7 |
| Australia | | | | | | | |
| CBCs | 1989 | No | 64 | 23 | 112 | 22 | 5 |
| Midland | 1989 | No | 35 | 6 | 60 | 15 | 2 |
| SBEC | 1986 | No | 36 | 4 | 100 | 16 | 7 |
| TCG | 1971 | No | 24 | n/a | n/a | n/a | n/a |

information in Table 3 has been supplied against the following instructions:

- 1 maximum number of firms housed as clients within your facility/s at any time during your 1993 year (fiscal, calendar or otherwise) To be considered a client, a firm should have been

screened (or assessed) and formally accepted into your program on a status equivalent to that of a "tenant".

- 2 number of clients to whom you have provided incubator services whose place of business is located outside your incubator space during your 1993 year.
- 3 Total Clients Serviced is the total number of firms ever accepted as clients by your program through to the end of your 1993 year .
- 4 Total number of firms ever graduated through to the end of your 1993 year (do not record discontinuances or firm failures.)
- 5 number of firms graduated during your 1993 year.

TCG operates as a private, for profit business entity and, as described in the case, has no intentions of "graduating" member firms. TCG has not given itself the tag of business incubator. However, the systems and procedures in place provide direct parallels incubator management principles. The creativity shown in the development of new client-centred approaches to product development and commercial cost contracting between TCG group members is of direct relevance to incubator managers keen to encourage intertrading and enter into deal making with their clients.

Centre for Business Innovation, Inc.

4747 Troost Avenue

Kansas City Missouri 64110

Key Concepts

- work with "clients", rather than tenants
- take equity and royalty positions with all clients
- intrusive, hands-on management style
- pro-active in helping to place management with clients

Quick Facts

NBIA Incubator of the Year 1993

President

Mr Robert Sherwood

Management Body

Centre for Business Innovation, Inc.

Mission

To create an environment for the development and delivery of a comprehensive set of value added incubator programs and services that enable entrepreneurs to succeed.

Opened:

1985

University Affiliation

Yes (University of Missouri at Kansas City)

1993 Clients

6

1993 External Clients

23

Total Clients Serviced

96

Graduates, cumulative

40

Graduates during 1993

3



Introduction

The Centre for Business Innovation (CBI) has since 1986 negotiated a stake in each of its client companies. The mix of equity and royalty returns is the only form of income which CBI derives from its clients (its tenants, however, pay rent).

The forging of equity relationships has cemented what CBI characterises as a real partnership and mutual incentives between the Centre and its clients. Centre staff and clients work together to short time-frame strategic plans with strict weekly milestone reporting. Centre staff and a selected group of "associates" (post graduate students from University of Missouri at Kansas City) work intensively with clients to help achieve set milestones.

History

The Centre for Business Innovation was launched in 1985 with a grant from the Missouri State Government in recognition of the need to assist economic development in the State. Importantly the State committed to support CBI's growth and development for a period of seven to ten years.

The Centre has a total staff of eight, consisting of five professionals and three administrative/secretarial personnel. The Centre has an annual budget of \$600 000, of which 55% comes from the State Department of Economic Development. Other support is provided by the University of Missouri at Kansas City (UMKC). The State funding for the Innovation Centre Program which consists of four incubators across Missouri, including CBI, has been renewed for a three year period through to 1995.

CBI is a non profit organisation but is managed by a business oriented Board of Directors as though it is a for-profit organisation. The Board comprises many of the leading business people in the Kansas City community. Since its inception, the Board has remained focussed and strong. Its original membership has been supplemented with successful entrepreneurs and high profile technologists.

In 1986 , after operating for a little over one year, The Centre decided on a significant change of direction. Until then CBI had followed the path of a typical early incubator development. Its focus was primarily on the real estate aspects of the program, making sure that the building and facilities were appropriate and that tenants were recruited.

The change in orientation is best illustrated by the Centre's decision to no longer work with "tenants" but to instead seek "clients". This realignment was accompanied by a commitment to be proactive rather



than reactive. The Centre's emphasis shifted from a real estate orientation towards a "value adding to clients" focus.

The notion of value adding to clients was defined by CBI as a set of services offered by the incubator to clients, which would enable those clients to survive and thrive as rapidly growing companies. This means that CBI threw its weight behind a client's management team to assist the business to plan, set targets and then achieve the set milestones.

CBI readily points to their distinctiveness as a provider of services to small business. CBI works with a select clientele at the high-growth end of the small business spectrum. While CBI is prepared to work with a client for over a year and as part of this build a strong rapport with the client, other groups such as the SBDC will work with a firm for 1 day or over a few short sessions.

CBI now works with clients who are likely candidates for venture capital investment . To accompany this client target, the Centre committed to work only with those clients with whom it could negotiate a mix of a share of the equity and/or royalties in the venture in exchange for the Centre's value added services.

Client Selection

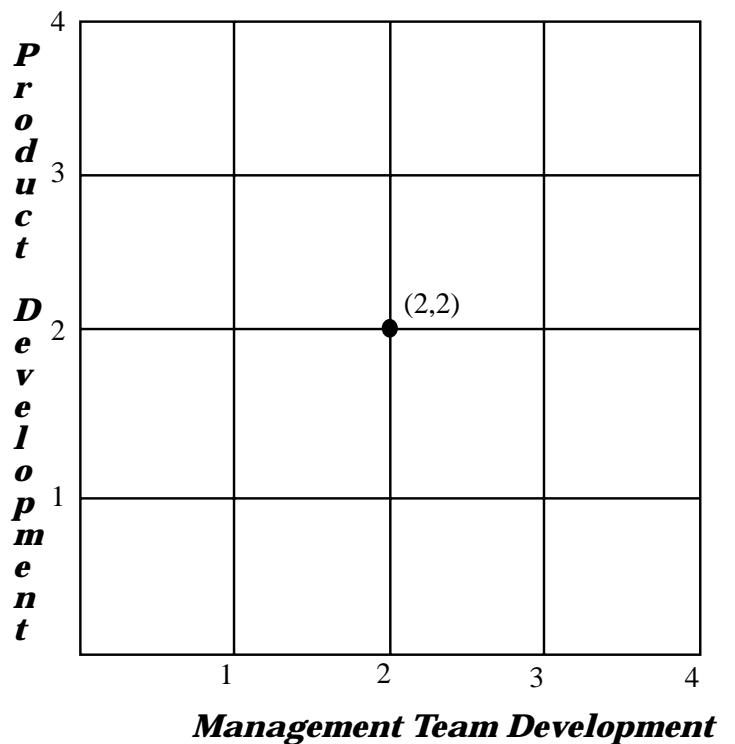
CBI uses a two axis four point scale to assist in identifying appropriate clients. In Figure 1 (below), the X axis illustrates the stage of management team development . For example, 0 would illustrate an idea with no accompanying entrepreneur. 4 would signify a fully formed management team holding all skills required to develop a successful venture together with extensive experience relevant to the technology/market niche. The Y axis illustrates the level of maturity of product development with 1 signifying a concept with some drawings and proof of concept prototype and 4 indicating a profitable new product.

Figure 6: Tenant Screening Matrix



Using this framework (0.5, 0.5) might be considered to be a technical inventor with an idea. On the other hand, (4, 4) would indicate a mature company with a fully developed management team, and with more than one product in the market place.

CBI identifies themselves as targeting (2, 2) companies. That is, say two people with some business experience with a concept (and hopefully a prototype) with some understanding of the market potential of the concept. The ideal stage of development for a client,



as CBI sees it, is that the venture should be more mature than just a concept, but much less mature than a company that a venture capitalist or banker would be willing to consider. In the initial discussions with a prospective client, the Centre explains its very "hands on" style of management and sets out its requirement for an equity and/or royalty stake in the company to be assigned to CBI.

A Slice of the Action

The agreement establishing CBI's stake in the company is negotiated and signed by the parties prior to CBI admitting the company to client status or performing any work. In most cases, the new client issues equity to CBI immediately. In some cases, equity is delivered in the form of an option.

Early on, where CBI was inexperienced with taking this form of remuneration, their equity stake was always in the form of an option. Some of these options have been exercised over time, and CBI holds



shares in some of these companies. Others however, remain in the form of an option. These tend to be from ventures that have become "lifestyle oriented" companies.

In each equity stake that CBI holds, the stock is able to be diluted. As a general rule of thumb, the more mature the company is when it becomes a CBI client, the less CBI's stock looks like founder's stock. In most instances CBI negotiates a stake in each client company in the range of 5 - 10 % .

CBI has also made a practice of negotiating a royalty position with companies where it looks as though there is little chance of the value of the company increasing rapidly enough to give CBI a return via acquisition, listing or the venture capital route.

Now, for each client, CBI negotiates a mix of equity and royalty positions and also includes built in exit points, so that the Centre can realise the value of its investment at defined times or defined events in the life of a client. In general terms, it is typical for royalties to be negotiated in the region of 1 - 1.5% of sales for \$200,000 to \$ 5 million and for the royalty to decrease on a sliding scale after the milestone of \$5 million is achieved.

Gary Fenton, Director of Accounting for CBI stated that "of the over 500 business incubators in the United States, only about 20 or so take an equity position in their clients/tenants."

Fenton also notes that the process of negotiating an equity position with a clients is always a very tough deal to "sell". There appear to be three key success factors which serve to persuade the prospective client and help close the deal.

- Firstly, CBI is able to point to some of their successful clients and paint the scene of similar success for the prospective client;
- Secondly, giving up equity means that CBI can be rewarded for its role without any cash having to exit the business in fragile early stages;
- Thirdly, CBI wins only if their client wins. That is, CBI can only realise the value of the time and effort they have committed to the client (as represented by the growth in value of the company) if the client firm is acquired by another entity or matures to the stage where it lists in an offering to the public.

An example of the pro-active mode of operation adopted by the Centre for Business Innovation is contained in the following vignette.



July 1992 saw the culmination of months of work when CBI created the company MorningStar Interactive Corporation. MorningStar Interactive Corporation designs, manufactures and markets multimedia products specialising in information and education titles. MorningStar has facilities for developing titles from conception to mastering. These facilities are used to develop both standard format and fully customised applications. The company also trains and services clients who wish to produce their own titles. The company has strategic partnerships with the Centre for Telecomputing Research at The University of Missouri at Kansas City and the Centre for Business Innovation. The company's five and thirty minute Video Brochures are targeted at product presentations, corporate overviews and self directed product tutorials. For example, the shorter template holds up to five minutes of video, music, graphics, narration and text in a single interactive program. The company also offers a VideoKiosk product as a means of broadcasting the message. MorningStar was formed by CBI by marrying a prototype multimedia product developed by the Centre for Telecomputing Research with a team of three engineering executives external to the University who CBI new were interested in the multimedia field. CBI new that the prototype technology existed within the research Centre and that there was no entrepreneurial drive associated with the project. CBI identified a management team and found the initial capital. Now the company employs six people and sales are beginning to grow.

Due to the instrumental role played by CBI, the MorningStar deal holds a higher equity stake for CBI. While CBI normally would expect to hold equity in the 5-10% range, in this case, even after a new round of financing, CBI retains a 10% holding.

Negotiating an equity stake, up front, also has a number of other advantages from CBI's perspective. By agreeing to assign a portion of the company to the incubator, the entrepreneur is signalling that they have the mind-set to work cooperatively with incubator staff. This helps to screen out those enterprises who are fiercely independent and would not wish to work with incubator staff and/or other clients.



Some entrepreneurs worry more about royalties than equity. Issuing royalties might mean that a small proportion of the revenue from sales would exit the firm as sales begin to build.

Another particularly effective method of selling the benefits of CBI client status is to show the prospect of the depth and quality of the work performed by CBI for other clients. For example, CBI often conducts extensive market research on behalf of clients. Such market research might normally cost \$30 000 or more if prepared by a consultant. As a CBI client, however, no fees need be paid to access the same quality of work.

The success of this approach to deriving income depends on CBI's skill at selecting clients and then working with them to project the businesses upon a path to rapid growth. One effect of this is that CBI has moved away from being involved in raw start-ups towards companies that have a sales history, say \$ 100 000 in its first years with up to three and four employees, which may be ready to jump to ten.

In effect, CBI is in the business of managing and adding value to an equity and royalty portfolio. CBI characterises this type of relationship with its clients as a real partnership with mutual incentives.

CBI's stance in working with clients is to adopt a very hands on proactive approach. The Centre seeks to establish short-term operational goals for its clients and then helps to resource the "projects" required to achieve identified growth milestones, chiefly by supplying the skills of Centre staff, supplemented where possible with the experience and capabilities of selected student interns from UMKC graduate programs.

CBI Team Skills

The skills profile offered by CBI to its clients is a significant selling point. Leading the CBI team is Mr Robert J Sherwood, CBI President. Mr Sherwood's career gives him in-depth insights into the process of building rapidly growing companies through the leading roles he played in several high tech start-ups such as Envirotech Corporation, EDC Corporation, Softkey and Raster Ops Corporation. Mr Sherwood, in addition to his entrepreneurial achievements, is also well known for his contributions to entrepreneurship development and education through his authorship of over 25 articles for various publications, including a series of video tapes for Inc Magazine and guest lectureships, appearances at trade shows, business planning seminars and several US universities including Stanford Business School. The depth and diversity of Mr Sherwood's experience with high growth companies places CBI in a strong position when they assert that they can add value to the initiation and growth of an entrepreneurial venture.



The CBI Service Profile

Bob Sherwood is assisted by a team of four professionals and three administrative staff. The professional staff consist of an accounting/finance manager and three people with expertise in the marketing disciplines. Collectively these staff now have been instrumental in the start-up of over 50 companies which, together with Sherwood's track record, supplies CBI clients with an impressive bank of experience upon which to draw.

CBI characterises their incubator services as consisting of six principal elements:

1. Business Planning
helps entrepreneurs with strategic planning, business plan development, financial planning, management team development, intellectual property issues, and access to outside human resources
2. Strategic Partnering
helps entrepreneurs identify and form partnerships with corporations that can assist in areas such as distribution, advertising, customer leads and product development;
3. Administrative Services
provides support services such as secretarial, word processing, desktop publishing, telephone answering, photocopying, faxing and office space leasing
4. Advisory Board Development
new clients are assigned an advisory board which typically consists of a CBI professional staff member, a business or civic leader from CBI's Board of Directors, a graduate intern and, when appropriate an individual from Kansas City's business community
5. Marketing
helps entrepreneurs with public relations, developing and conducting focus groups, productisation, product introduction, and regional and national publicity
6. Management Team Development
business and strategic planning carried out in conjunction with CBI often leads to the identification of skill gaps in the management team leading the venture. This program seeks to bring to the client the appropriate expertise. Often such expertise may also be accompanied by a contribution towards early capitalisation. CBI maintains a database of CEO candidates that might want to invest money in an interesting venture.

Each of programs 2-6 above grow out of the issues identified for growth in a client's business planning. The business planning program relates to more than just preparing a business plan



Project Management

document, however. It also relates to the operationalising of the various elements of the business plan, such as assisting in the implementation of a book keeping and accounting system. These aspects of the program extend from assistance with the selection of a computer-based accounting package through to installation of the package on the company's computer and training of the staff to use the software.

CBI adopts an extremely pro-active stance in working with its clients. Its mode of operation is defined by its orientation towards working on projects. CBI's managers and student interns get closely involved. They work with the clients to determine what needs to be done and then help the client undertake the necessary work.

In contrast to the extended business networks used routinely by some incubators for accessing expertise, CBI tends to allocate most of their project work internally. That is, the Centre's professional staff or interns do the majority of the work with clients. CBI tends not to use their high level Board members in day to day work and draw on external expertise only occasionally. If a client needs external help beyond the skills able to be contributed by CBI then CBI provides a pre-screened selection of service providers. It is left up to the client to choose the one that best fits their needs.

CBI brings a discipline to the entrepreneurial process by encouraging the client to focus on short term goals, the achievement of which can be judged by readily measurable parameters. The key question that CBI puts to clients is: "What do we need to accomplish over the next three months in order to make the business successful." In CBI's experience, working in time frames of three months is far more effective than trying to relate to a twelve month strategic plan which has milestones changing constantly as the company evolves. CBI has found that bite-sized tasks and clear, measurable achievement targets are an essential discipline. CBI has found that entrepreneurs readily adapt to this type of operating procedure.

To make this discipline a managed process, CBI develops regular status reports on each company. Each status report lists key objectives, identifies tasks, establishes the relevant delivery dates and sets out who will perform each task. The status reports for each client are updated once a week as an element of CBI project management and are collated to provide a monthly report which is sent to the client. The monthly client report is motivated primarily by CBI's desire to clearly set out for the client what CBI believes it has done that month. This helps a great deal with the communication process and gives clients an opportunity to respond immediately if they have a different view of the process or on any transaction in the process (ie.,



responsibility for a task). This process provides CBI with a good client relationship management tool.

The weekly meetings of CBI staff provide the opportunity to track how much time each manager is spending with each client. CBI regards it as very important to have a portfolio-wide view as to whether they are devoting most time to the highest potential client. CBI are very clear on not wanting to spend time with low growth companies.

Even where a client does have the necessary skills, CBI still makes a point of remaining proactive. Since the entrepreneur is likely to have his or her mind focussed on detail and short-term priorities, it is possible that there could be times where the management team could lack perspective. Tasks could fall through the cracks which inevitably attend any rapidly growing venture. Tasks that might not seem important today, may have important implications for tomorrow.

Typical examples of tasks performed for clients by CBI include:

- Book keeping
 - analysis of software accounting packages
 - installation and configuration on client's computer
 - training of client personnel to use software;
- Business Planning
 - an intern might prepare the business plan or write the executive summary
 - extensive market research including competitive analysis by measuring 50 criteria for 20 different competitors; and
- Accounting
 - taxation
 - reporting
 - doing the accounting for a client.

The CBI orientation towards prioritising its project work means that the higher their equity position with a particular client, the more mundane the work which CBI is prepared to undertake. For example, with MorningStar Interactive, CBI performs all the company's accounting and has been instrumental in their marketing. CBI have also helped MorningStar to set up seminars and trained them to make presentations. In addition CBI has written a major portion of their business plan. For other firms, CBI often helps to access appropriate people in the regional banking community so that clients can learn about the broader banking market.



Developing the CBI/University Relationship

CBI stands firmly behind this highly intrusive style of working with clients. ... "We don't regard our work as spoon feeding - high growth companies need resources and therefore we are underpinning their growth."

CBI has always had a link with its University. After all, the champion for the centre's establishment was the University of Missouri at Kansas City's President, Dr George Russell. It was he who regarded the Centre as essential for the development of UMKC and Kansas City and had the status in the community to assemble the high level Board of Directors.

While administrative linkages and some interaction with academics have taken place in the past, CBI now has a far stronger and closer University relationship as a high priority corporate goal. The motives for this are primarily concerned with accessing good students as interns and gaining access to technology to commercialise.

The CBI/UMKC relationship now consists of:

- free accommodation for CBI, on University property;
- an equity share for the University in CBI clients;
- selected University students work with clients as interns
- access to University expertise at pro bono rates
- the establishment of a technology commercialisation task force

The successful implementation of an income generation strategy based on equity and royalties has not been straightforward. However, after a number of different arrangements between CBI, its University and CBI's clients it appears that they have now developed a most effective approach.

Initially CBI leased its building from the University and the lease agreement stated that the University would receive a 50% of the equity in University firms held by CBI, in lieu of rent. In practice, however, the University never received any equity.

CBI has been mindful of the key role that University support has played in its development and has ensured, on each occasion that the Centre received a return on its equity or royalty holdings, that the University received half (ie., when one client was acquired, CBI received \$ 200 000 and passed \$ 100 000 to the University).

Subsequently, the Centre altered this arrangement as part of a deal to give CBI management a more incentive-based remuneration package.



The Intern Fellowship Program

A new agreement was signed with the University to pass on one third of any annual surplus. Unfortunately no annual surplus ever eventuated.

CBI recently revisited the need to build a more effective relationship with the University. The University was contributing a significant amount to the Centre and CBI saw the need to deliver a tangible return to its key supporter. Therefore CBI negotiated with the University that in return for additional space, modernisation of the building utilities, a building upgrade, a contribution towards half the cost of University interns and access to University technology, a proportion of the equity held in each CBI client would be assigned to the University.

The size of the University's equity holding now varies depending on the length of time the firm has been a CBI client and whether or not the client was originally derived from the University. New University derived CBI clients give the University its highest equity holding.

"CBI interns work with real life companies making critical decisions every day. The interns are not merely observers. Each one becomes part of the day to day management team involved in finding solutions and implementing them to help that company continue to grow,".....so states the promotional brochure for the Intern Fellowship Program, which is a key element of CBI's program.

Participants in the Internship Program have three primary responsibilities:

- assist CBI's professional staff in all aspects of client services and client projects;
- work directly with business clients in resolving business problems; and
- facilitate communication and activity between CBI clients and resources within the community and area universities.

CBI employs graduate students as interns. During the 1993 year they matched nine interns, drawn from a variety of disciplines, with client firms:

- 6 from the school of business administration and public administration of UMKC;
- 1 from the law school at UMKC;
- 1 computer scientist from UMKC; and
- 1 student from University of Kansas City.



The performance of the interns has been outstanding. They have dramatically increased the capacity of CBI to work 'hands on' with clients. Internships are regarded as a crucial element of the CBI program over the coming years. In 1994 CBI has 25 graduate-level interns or one per client.

CBI puts significant effort into recruiting high quality interns. Internships are actively promoted in the Universities in the region. A glossy brochure describing the program is distributed, presentations are made to classes and job postings are placed on prominent notice boards.

Candidates submit resumes and are interviewed. During the selection process each candidate's writing ability is sampled. The intern's ability to communicate in writing is a highly weighted element of the selection criteria. CBI manages their marketing of internship positions to achieve the balance of disciplines the Centre seeks. Experienced, full time students are targeted and on average the interns are 30 years old.

At present, students can gain academic credit for their internship work only if they arrange it for themselves. CBI is working with the University to have internship work recognised and have it count towards a qualification. CBI considers interns as employees and works to strengthen the ownership and sense of responsibility of the intern through placing them formally on the CBI payroll. In 1993 CBI interns received \$6.75 per hour and are paid for 20 hours per week. The interns are worked hard as the job market demands this. The key selling point for interns remains what they can write in their resume about their CBI experiences.

The Kansas City Entrepreneurs Club

The Entrepreneurs Club is CBI's way of providing entrepreneurial assistance to the broader community. It also provides a focus for entrepreneurial development in the City and helps to get the mission and name of CBI known.

The Kansas City Entrepreneurs Club is designed to assist and bring together people interested in furthering the entrepreneurial activities of the Greater Kansas City area. Its membership consists of entrepreneurs, investors, mentors, service providers, executives looking for investment and employment opportunities, and others interested in Kansas City's entrepreneurial activity.

The Entrepreneurs Club is a program of CBI and is co-sponsored by the Ewing and Marion Kauffman Foundation - Centre for Entrepreneurial Leadership at UMKC.



While only one or two clients have come out of the Entrepreneurs Club, the value of the program for CBI lies principally in the networking and PR derived from the regular seminars, workingshops and conferences.

Seminars are run in the University Conference Centre from 6-8pm on a Tuesday evenings and consist of an address by one speaker with an opportunity for questions afterwards, while WorkIngShops are held on Saturday mornings from 8.30-12.30 and are comprised of workshop topics addressed in a practical way by three facilitators.



EnterpriseDevelopment, Inc.

Case Western Reserve University

11000 Cedar Avenue

Cleveland Ohio

Introduction

Key Concepts

- comprehensive, multifaceted entrepreneurial support program
- precise targeting on high growth firms
- effective relationship with Case Western Reserve University
- outstanding network of business expertise
- significant investment in the quality of its networks and PR for entrepreneurship

Quick Facts

| | |
|------------------------|---|
| President | Richard S Gray |
| Management Body | Enterprise Development, Inc. |
| Mission | EDI's mission is to improve the climate for entrepreneurial accomplishment in north east Ohio, thereby adding jobs and building economic value in the region. |
| Opened: | 1983 |
| University Affiliation | Yes (Case Western Reserve University) |
| 1993 Clients | 12 |
| 1993 External Clients | 2 |
| Total Clients Serviced | 30 |
| Graduates, cumulative | 26 |

Graduates during 1993

99

3

Enterprise Development Inc (EDI)



EDI commenced life as an incubator without walls. That is, it developed a suite of strong business assistance and development programs prior to being asked by the State of Ohio to establish a physical incubator facility. Thus, from the very outset of the incubator development, tenants slotted into an environment with a variety of programs and services designed to support successful development of new and rapidly growing enterprises.

EDI's strength is the synergy it has developed between its many programs and its clarity of focus across these programs on its target audience: high growth small to medium enterprises.

EDI's profile consists of seven elements:

- the Edison Technology Incubator;
- Courses;
- Conferences;
- Recognition Events;
- a Public Information Program;
- Workshops; and
- Client Assistance.

History

Enterprise Development Inc (EDI) is a non-profit organisation that helps Cleveland entrepreneurs. Its services are pitched at assisting high growth enterprises. EDI acts as a catalyst for entrepreneurial growth on the North Coast of the state of Ohio. EDI promotes its role in the State by making the point that "EDI helps give Cleveland the distinction of being a city which actively encourages development, not one which merely watches business come and go.

EDI receives support from a diversity of sources: the Cleveland Foundation, The George Gund Foundation, BP America, Cleveland Tomorrow, the Greater Cleveland Growth Association, the State of Ohio, Case Western Reserve University and other individuals and corporations. These contributions have assisted EDI to develop an articulated set of highly professional business assistance and development programs.

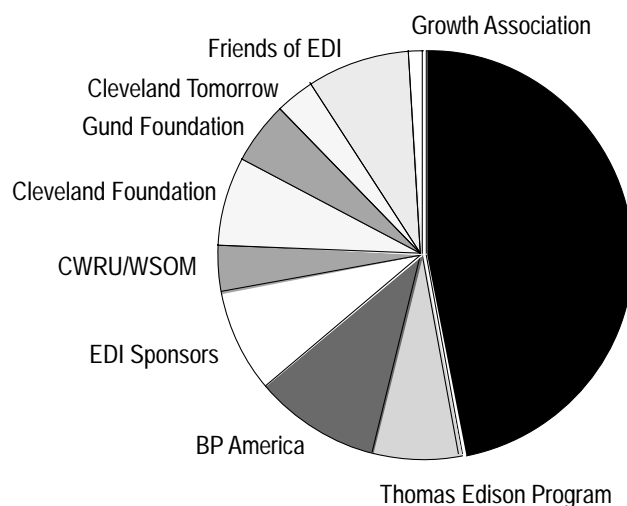
EDI helps individual entrepreneurs in a variety of ways and at many stages in their development. Services include the review of business plans, strategy development, identification of market opportunities and funding sources, and the location of management team members. What makes EDI strong is the multitude of events and formats used to deliver these services.



EDI also serves as an educational source for entrepreneurs with its series of courses and conferences offered throughout the year. Likewise, the Weatherhead School of Management at Case Western Reserve University, as one of the nation's leading schools of management, offers outstanding MBA and Master of Accountancy programs as well as graduate and undergraduate curricula in various management disciplines.

EDI was formed in April 1987, by combining the Centre for Venture

Sources of Funds 91/92



Development (CVD) and the Entrepreneurial Assistance Group (EAG). Both organisations were founded in 1983: CVD by a joint task force of Cleveland Tomorrow (a committee of 44 business leaders committed to Greater Cleveland's economic

development) and the Council of Smaller Enterprises (a division of the Greater Cleveland Growth Association), and EAG by the Weatherhead School of Management (WSOM) at Case Western Reserve University.

Enterprise Development, Inc. is an economic development program of which the Edison Technology Incubator is one component. EDI's program elements include:

- the operation of The Edison Technology Incubator for technology-based start-ups;
- business counsel for entrepreneurs;
- a minority assistance program;
- courses and conferences on entrepreneurial topics; and
- a public information and education program.

The composition of EDI's income and expenditure is outlined below:



Edison Technology Incubator

During the financial year ending in 1992, EDI managed a budget of just under \$2 million. Of this, EDI generated nearly half from the programs it ran. The other half was contributed by 9 Sponsors. It is interesting to note that sponsor contributions were reasonably evenly spread with no one supporter providing a significant majority of the funding.

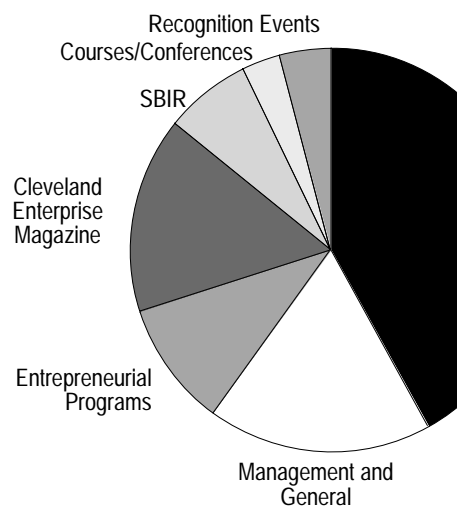
The Edison Technology Incubator, as part of EDI, is designed to nurture new and emerging technology-oriented businesses. By providing managerial and technical assistance, shared services, affordable space and an environment conducive to new business development, the incubator program allows the new business to concentrate its limited resources on developing its product or service.

On-going management assistance is available, at no extra charge, on an as needs basis. EDI staff can assist tenant companies in the planning, marketing, financing and technology development of the emerging company. Graduate students from the Weatherhead School of Management, are also available to perform business related projects for incubator tenants.

EDI offers access to the standard array of shared administrative services. In addition, conference and meeting rooms, kitchen facilities, a commercial loading dock, service elevator, and 24 hour building security are available at low or no cost. Office, laboratory, light assembly/manufacturing, and storage space is available on an annual lease basis, with no minimum space or monthly rental amount required.

For entrance into EDI's incubator program, one of five Thomas Edison Incubators located throughout the State of Ohio, entrepreneurs must have a commercially focused concept for a technology-oriented

Use of Funds
1991/92



Client Assistance Program

business. Periods of tenancy differ from business to business; however, tenants are expected to graduate to the Greater Cleveland business community within three years of joining the incubator program.

The objective of EDI's Client Assistance Program is to help each entrepreneur work on a package of business development issues to improve a company's prospects for success and make the company attractive to sources of capital.

The client assistance staff offer the following services:

- candid evaluation of concepts for new businesses (a SWOT analysis for start-ups);
- counselling in preparation of business plans;
- assessment and critical review of business plans;
- information on funding sources and financing alternatives; and
- guidance for early stage businesses including
 - appraisal of growth strategies
 - assistance in identifying markets and marketing channels
 - identification of business advisers and professionals.

In some cases EDI may refer entrepreneurs to individuals or other agencies in its resource network. In other instances, EDI will recommend attendance at its courses or conferences, such as the Entrepreneurial Management Course, the Entrepreneurial Finance Conference, or the North Coast Growth Capital Conference.

The extent of involvement with a company depends primarily on the company's potential for high growth. EDI does not charge for Client Services and has no funds of its own for investment in client businesses.

Minority Assistance Program

In March 1991, the Minority Assistance Program, came into being. The purpose of the Program is to significantly increase the number of profitable, minority-owned enterprises in north eastern Ohio. To that end, a systematic effort is made to reach out and provide assistance to those groups most under-represented in business ownership in this area, namely blacks and Hispanics.

The Minority Assistance Program offers assistance in those areas in which EDI traditionally helps (the acquisition of the technology, capital and human resources needed to successfully grow a business). However, it also helps minority owners to identify and implement



business opportunities for start-up, acquisition, or expansion.

Services delivered under the program include:

- one-on-one client assistance (development of business plans, identification of financing sources, referrals);
- a mentor program to help entrepreneurs achieve business objectives;
- a regular series of courses specifically designed for minority entrepreneurs, such as the course "Make Your Own Breaks: Business Ownership for the Minority Entrepreneur";
- identification of specific opportunities for minority-led buyouts of majority-owned businesses; and
- development of a cadre of minorities with the skills needed to manage an acquired company.

Access to the Edison Technology Incubator is also an option for minority entrepreneurs. However, competition for the available space is keen and each enterprise must meet the high growth potential criterion to be considered a suitable tenant.

Courses and Conferences

In keeping with the EDI mission of educating and informing the public about entrepreneurship in north eastern Ohio, EDI sponsors a number of conferences and courses throughout the year on issues of interest to entrepreneurs who have recently started a business (or are about to) as well as other members of the business community. Since 1987 EDI has offered over 20 courses for managers in start-ups or emerging growth companies and well over 400 entrepreneurs have signed up to take them.

Courses are normally offered once a week for four or more consecutive weeks in the Autumn and in the Spring on topics such as strategic marketing, innovation in management, and leadership as a management tool. Actual entrepreneurs from the community are brought in as lecturers and/or course leaders. Feedback from course participants often determines what topics will be offered.

Conferences on entrepreneurial subjects are held two or three times a year and have continued to attract a diverse group of people within the business and professional communities. Conferences have been held on entrepreneurial banking and finance, growth capital, mergers and acquisitions, and technology transfer. Altogether, the conferences since their inception, have attracted over 2000 attendees.

Some examples of the conferences held which serves to illustrate the tight focus EDI has on entrepreneurship and growth companies include:



-
- Banking on the Entrepreneur - A one day conference held at a city hotel which focused on financing for those starting, buying or expanding a business attracted over 200 participants. Local experts discussed bank financing, venture capital, government guaranteed loans and export financing;
 - Tech Ohio - showcases leading edge technologies for license, sale or collaborative development. Tech Ohio grew out of the realisation that individuals with new technologies need a forum for technology transfer. Forty three presenters introduced their new technologies in advanced manufacturing, biotechnology, environmental science, advanced materials, electronics and telecommunications. In panel sessions, experts discussed global and domestic issues in technology development.

Other conferences held include:

- Entrepreneurial Finance. March 1993;
- North Coast Growth Capital Conference and Technology Showcase. May 1993; and
- Excellence in Management-Overcoming Adversity. June 1993.

Growth Capital Conference

The annual flagship of the EDI conference program is the Growth Capital Conference. Each year, high expectations, money and power come together and deals are consummated at the Conference.

North Coast Growth Capital Conference Two simultaneous conferences showcasing: business plan presentations by entrepreneurs seeking investors; technologies available for license, sale or joint venture. Also professional panel discussions on: the key strategic issues involved in taking a company public; attracting financing from individual investors and corporations. Entrepreneurs, investors, potential presenters and R&D Managers and Researchers should attend.

The Growth Capital Conference consists of three principal elements:



-
- Firstly, at the venture presentations, entrepreneurs pitch their ideas, products and companies to prospective risk equity capital investors. In each presentation, the proponents analyse market projections and growth, business plans, current and future uses of their technology, the strength of their proprietary position and a number of other factors which illustrate the potential for capital growth by the company and how this is planned to be achieved;
 - Secondly, potential licensees of new technology are presented with a smorgasbord of new technologies from universities and private companies. During these presentations, technology experts discuss what their technology can do and address market potentials and the rewards to be gained from licensing; and
 - Thirdly, professional panel discussions on issues relevant to the capitalisation of new ventures such as the strategic issues involved in taking a company public and attracting finance from individual investors and corporations.

Entrepreneurs, investors, potential presenters, R&D managers and researchers typically attend the event and past attendees have rated the networking to be had at this event to be more valuable than the high quality formal sessions. Exchanges of ideas and business cards between entrepreneurs who head companies at similar stages of development, often facing similar obstacles, is an important spinoff benefit for the event.

The Growth Capital Conference has had a number of success stories. One of the attendees at the 1992 Conference had just taken his company public in the week before the Conference. His company, STERIS Corporation had earlier received venture capital from Primus Venture Partners as a result of the first Conference held in 1986.

The Conference is presented by EDI in cooperation with the Weatherhead School of Management, Case Western Reserve University, and Cleveland Enterprise Magazine. The growth capital portion of the Conference is supported by half a dozen venture capital companies while the technology showcase is sponsored by a variety of industrial enterprises and the Edison Biotechnology Centre.

The Weatherhead 100

The highest profile of the EDI recognition events is the annual dinner and awards night - the Weatherhead 100. The Weatherhead 100 lists the fastest growing companies identified in north east Ohio based on their revenues from the previous five financial years. This event is sponsored by a stockbroker, EDI, Weatherhead School of Management and Cleveland Enterprise Magazine, (an EDI spinout company).



As the Weatherhead 100 award and dinner event continues to become more popular, the number of companies nominated for inclusion has continued to grow each year. 1993 will see this program run for its sixth year.

Any for-profit company with sales in the first year of the survey over \$ 100 000 located in the six county region around Cleveland is eligible for nomination. In addition to self nomination, nominations are sought from law firms, accounting firms, insurance companies, banks, venture capitalists, investment bankers, and PR/advertising firms (to identify their fast growth clients). Since the process of identifying the Weatherhead 100 is done by nomination, it is possible that other fast growth firms which would have qualified for the list are not included because they were not nominated or they chose to decline their nomination.

The Weatherhead 100 list creates a bias towards smaller companies since the winning companies are chosen on the percentage growth of their revenues. However, many large-growth companies which also make an impact on the greater Cleveland business community are regularly included within the list.

Running the Weatherhead 100 is wholly coherent with EDI's incubator mission since its targets for the award are growth companies. Such companies supply important role models for its incubator tenants. Further, the knowledge and industry contacts gained by EDI each year expand its impressive entrepreneurial development network, thus underpinning its capacity to make key linkages for the entrepreneurs it assists.

Other Recognition Events

Each year Enterprise Development, Inc. holds special recognition events to boost appreciation of the role of entrepreneurship in the development of the Cleveland economy.

In 1991 EDI honoured thirteen north eastern Ohio companies that received Phase 1 or Phase 2 grants through the Small Business Innovation Research (SBIR) program. At the same event, EDI awarded certificates to four graduates from the Edison Technology Incubator.

Seminars and Courses

Each year EDI runs a series of courses specifically designed for the entrepreneurs guiding growing companies.

The intention of these programs is to bring entrepreneurs together and to provide them with an outstanding practitioner speaker on a current



management topic. The outcome is usually an exchange of what works and what doesn't in certain business situations, as well as a number of creative business ideas that can be put to use immediately.



During 1992/93 the following courses were presented:

**Courses for Start-Up and
Early Stage Companies**

Make Your Own Breaks:
Business Ownership for the
Minority Entrepreneur. October
1992

The Nitty Gritty of Law and
Money - Legal and Financial
Issues for New and Emerging
Companies. December 1992

Business Planning for New
Companies. January-February
1993

**Courses for Growth
Companies**

Strategic Marketing for
Growth and Profits. October-
November 1992

Successful Entrepreneurial
Management. February-
March 1993

Leadership for Changing
Times. February-April 1993

Expanding Your Business
Through Technology
Transfer. April 1993

Other programs designed to assist entrepreneurs are:

- The Enterprise Forum, and exclusive meeting series in which 25 chief executives of successful companies meet, listen to a guest speaker, and discuss a pertinent business topic; and
- the Breakfast Series, a unique educational series offered exclusively to Weatherhead 100 companies that focuses on issues relevant to high-growth companies.

**Public
Information
and Education**

Enterprise Development judges that the community's support for entrepreneurship is one important factor in the development of a local "enterprise culture". One of the newest programs run by EDI therefore seeks to enhance understanding of the entrepreneurial process and its contribution to a regional economy.

In 1991 EDI's Speaker's Bureau was established as part of a new major public outreach effort. Originally designed to highlight entrepreneurship and inform the public of the success and achievements of local businesses, the list of speakers has grown in two years to include over 50 experts on a wide variety of business and management topics. A select sample of some of the topics delivered include:

- tax planning for succession;
- advertising during a "down" economy;



-
- cash flow management;
 - how to handle failure; and
 - gender differences in problem solving.

The Speakers Bureau is offered free-of-charge to local business groups and organisations as a way of encouraging and honouring successful entrepreneurship in the Cleveland community. A month's advance notice is required to place a speaker. EDI offers to coordinate arrangements, provides help in choosing a topic and has been known, in some circumstances, to arrange publicity for the event. In 1992 the Bureau performed at 15 events; most commonly before local civic and business groups.

Also during 1992, three EDI affiliated companies were featured on television, seventeen radio interviews and spots featuring EDI staff, incubator tenants, or client companies took place; the newsletter Upstart's circulation doubled from 2000 to 4000.

Publications

EDI and its interests in small to medium high growth firms is serviced by two periodical publications.

The first and largest of these is "Cleveland Enterprise". Cleveland Enterprise is a professional business magazine which offers from 50 to 70 pages of material pitched at fast growing companies. For five dollars, 30 000 owners, chairpeople, CEOs, CFOs, presidents, accountants, attorneys and bankers of small medium and large companies in the five county area surrounding Cleveland receive each issue.

The firm that publishes Cleveland Enterprise is a spin out company from EDI. However, the content of the magazine still revolves around the programs and clients served by EDI. For example, each of the major events run by EDI receive build-up and coverage by Cleveland Enterprise. For example, the Weatherhead 100 recognition event and the Northcoast Growth Capital Conference each receive extensive coverage both in building up to the event and reporting its outcomes.

Each edition runs three to four 'features' which include a regular article from an elder statesman of the Cleveland business world, a guest article breaking news of new information for managers and an in-depth case study of a business. Four 'columns' appear in each edition including a commentary from the editor and a contribution by the Dean of the Weatherhead School of Management. The balance of the Magazine is comprised of 'Small Business Departments' in which special interests are catered for on a one page per topic format. The sections include: women in business, minority business, smokestack,



service business, incubator entrepreneur, high tech, and future entrepreneur. Cleveland Enterprise benefits from significant advertising revenue.

The second publication is a quarterly newsletter called UPSTART. UPSTART provides a simple vehicle for promoting EDI clients and news and events. Each issue also includes indicators of the health of the economy via analysis of general Business Indicators, Entrepreneurial Indicators and Technology Indicators.

Access To Expertise

In addition to Case Western Reserve University, EDI links its clients into a outstanding research organisations in the Cleveland area on an as needs basis. EDI's linkages with the Edison biotechnology Centre are particularly close since this centre was developed by an EDI staff member and was a longer term tenant for EDI. The Biotechnology Centre is now significantly larger than its parent organisation.

The Centres of expertise upon which EDI clients draw are:

- Case Centre for Electrochemical Sciences;
- Centre for Automation and Intelligent Systems Research;
- Cleveland Advanced Manufacturing Program;
- Edison biotechnology Centre;
- Edison Sensor Technology Centre;
- NASA Lewis;
- The Ohio State University; and
- The University of Akron.

Student Interns

The relationship between EDI and Case Western Reserve University has grown steadily since 1987 when the Entrepreneurial Assistance Group (located at Case Western Reserve University) and the Centre for Venture Development combined. Initially, the Weatherhead School of Management merely supplied the "institutional home" required by the government and foundations as a location for grant support.

The linkages have grown steadily since this time and now include a strong program of student involvement with EDI and its clients. Student involvement takes two forms:

Interns With Firms

Case Western Reserve University runs a Technical Assistance Program in which it offers business access to its professors and post graduate students to help solve technical problems being experienced



by firms. Larger firms with significant R&D budgets use this as a supplement to their in-house R&D teams. However, an entrepreneur in a small firm who wants work completed immediately is not in a position to wait for the Professor's new graduate student who is scheduled to begin in three or four months.

To assist entrepreneurial firms, which typically must be able to work up solutions on a very short time-frame, EDI has developed an alternative route to accessing high level student expertise. The Vice President of EDI (who also happens to be the entrepreneurship Professor at Case Western Reserve University) has developed a for credit course where students undertake projects for entrepreneurs.

The program has proven highly successful, not just in terms of the outcomes generated during the course but also as a result of the informal ongoing relationships that develop between firms and students once the educational component is complete. Employment relationships between student and firm can continue in whatever way the student and the entrepreneur see fit.

Companies who access such students are taken from the EDI "Entrepreneurial Forum" program. Growth oriented firms come together on a quarterly basis to meet for breakfast to discuss issues directly related to managing growth in such companies. Companies participating in the Forum are given the opportunity to come up with projects which are suitable for student work.

It is typical for incubator tenants to participate in this program. A number of job offers have been made to students as a result of their participation in this entrepreneurship program. In one case, a PhD student has been employed by an incubator tenant. The value of the student's work has led to the entrepreneur offering a slice of equity in the firm as part of the remuneration package.

The program delivers wins to all participants. The entrepreneurs get a highly educated student (for far less than it would cost them for a qualified PhD). The students are more than willing to do the work since it gives them hands on business and industrial experience and some income.

Note Taking On EDI Courses

In each of the courses EDI runs there is one place reserved for a Weatherhead School of Management MBA student. In return for free entry to the course, the students trade their note taking ability thus allowing the participants to focus on the content and interaction. The high quality, practical nature of the courses means they are a good foil



Applying The Resources

for the more theoretically driven WSOM courses. This is recognised by the students and there is now a waiting list to take part in EDI courses.

Courses typically run for six weeks and are held on a Saturday morning. Students submit their notes on the Monday, they are posted to course participants on Tuesday and can be read on Wednesday and any issues can be raised in the next class.

One MBA student characterised the value of the EDI courses by recounting "I learned more practical knowledge and techniques from the eight week EDI marketing course than the six courses in marketing I have taken during my MBA. I learned things that I could use tomorrow if I were running a business."

EDI reflects its origins as an "incubator without walls" in the rich smorgasbord of entrepreneurial development opportunities it provides through workshops, counselling, recognition events, publications, conferences and its business incubator.

While the entrepreneurial climate that EDI produces is undoubtedly a good one for incubator tenants, the environment on its own would be of relatively low developmental value unless there existed a mechanism for engaging tenants in it. The Manager of the Edison Technology Incubator, Penny DePuy, performs this role. It is her responsibility to assess firms development needs and to monitor progress. This is achieved principally through a business planning process. To meet the development needs of tenants the Edison Technology Incubator links entrepreneurs to appropriate people, information sources, counselling and events.

The Edison Technology Incubator has, like many other incubator programs, however, experienced the frustration of some incubator tenants choosing not to participate in the development opportunities that are on offer. Ms De Puy believes such non participating firms are using the space that a more developmentally minded entrepreneur could put to better use. Her solution to the problem is threefold:

- screen prospective tenants more carefully at the outset;
- include a specific clause in the lease agreement which establishes that the tenant will participate actively in business development programs; and
- encourage those tenant firms not making effective use of EDI services to seek accommodation elsewhere.

EDI has used its wide array of programs to establish itself as a node in its community for focussed entrepreneurial development. EDI has



adopted the role of seeking out and assisting the development of high growth potential firms. The Edison Technology Incubator is an important component of the entrepreneurial development program offered by EDI in that it helps to focus the array of other elements of the program to achieve the best business development results for its tenants.



GENESIS INCUBATOR

TECHNOLOGY

Engineering Research Centre University of Arkansas Fayetteville, Arkansas 72701

Key Concepts

- strong network with University and community
- pro-active management approach
- Genesis Program effectively integrated with University resources and expertise
- success in gaining funds via SBIR Program

Quick Facts

NBIA Incubator of Year, 1992

Director

Samuel W Pruett

Management
Body

University of Arkansas

Opened:

1986

University
Affiliation

Yes (University of Arkansas at
Fayetteville)

1993 Clients

8

1993 External
Clients

2

Total Clients
Serviced

28

Graduates,
cumulative

20

Graduates
during 1993

2



Introduction

Genesis is a technology-oriented business incubator housed in the Engineering Research Centre of the University of Arkansas. Although the outstanding technical resources available to tenants are not touted to attract clients, these facilities are in place and unsurpassed. The Engineering Research Centre is home to 40 specialised research laboratories.

Fayetteville and Northwest Arkansas has a reputation for spawning entrepreneurs. With national figures like Sam Walton who has developed the Wal Mart retailing empire, JB Hunt in trucking/transport/warehousing and Don Tyson's Tyson Foods, Genesis has local role models which help make the vision that it seeks to bring into reality achievable.

The Genesis Business and Technology Incubator is located in two facilities at the University of Arkansas at Fayetteville: the Engineering Research Centre and the Biomass Technology Centre. The 20 000 square foot Genesis facility is part of the 160 000 square foot Engineering Centre. The Biomass Research Centre is located near the University's Agricultural Farm. The Engineering Research Centre houses companies associated with technology and engineering while the Biomass facility accommodates science and chemistry related enterprises.

History

The Genesis Project was established by the University of Arkansas and funded by the Arkansas Science and Technology Authority to facilitate the development of technology-based business enterprises and the resulting prospective increased employment. Genesis was launched in 1986 with grant funding for two years of \$ 550 000.

Genesis, in addition to its business incubation role, was founded to deal with the issues of technology transfer and commercialisation with a focus on the capacity of a University to assist start-up firms to grow. The Colleges of Business and Engineering, along with the Chemistry Department, play important consultation and service roles within the project.

The University of Arkansas at Fayetteville has a long-standing history of committing University resources to aid regional development. The Genesis Program is another example of the University delivering effectively against its service mission.

Self Sufficiency

The State of Arkansas is one of the poorer states in the US. The recent recession has resulted in funding difficulties for each of the four Arkansas incubators. Genesis, as the best heeled facility and with its record as 1992 NBIA Incubator of the Year, has managed to maintain effective operations even in the face of late appropriations from the



State during the early 1990s. However, Genesis has found that the rent it derives from its facility is not sufficient to support its operational costs without state support. Further, since Genesis is an organisational unit of the University of Arkansas System it is subject to the State legislation which forbids Universities to invest in private sector organisations. This statute effectively prevents Genesis from holding equity in any of its clients. This is somewhat of a sore point, given the outstanding growth performance of several Genesis clients.

However, Genesis' performance and its finely honed public profile through its politically skilled Director, Sam Pruett, has resulted in Genesis recently being boyed by news that it has been successful in attracting federal funds through the Small Business Administration to expand its space to 80 000 square feet. Pruett projects that now, at 80% occupancy, the facility will support the operational costs implied by a staff of four, purely on rental income.

Management Structure

The Genesis Director reports to an Executive Committee comprised of University Administrators. The Executive Committee consists of The Vice Chancellor of Academic Affairs, The Dean of the College of Engineering, The Dean of the Graduate School, The Associate Vice Chancellor of Research, The Vice President of Finance and Administration of the University of Arkansas System and Director of the Arkansas Centre of Technology Transfer.

Genesis also has an Advisory Board of Directors comprised of state business leaders and the above listed University personnel. This body meets quarterly. In addition, Advisory Board members each take on a client mentor assignment and meet with their assigned client on a regular basis to offer counsel and guidance.

Management

The current design of the Genesis program enables its relatively lean management structure to work effectively. Genesis is highly selective in the tenants it accepts into its program. In addition, among its present tenants it has a number of firms who have grown to a relatively mature stage with a significant number of employees (68 by 8 tenants). In addition, Genesis has two member firms in residence, one of which (Acxiom) marks the first incubator/Fortune 500 affiliation in the US.

Pruett is the pivot of the Genesis approach. It is he who designs the approach to incubation for each Genesis client. He works intensively with the client to gain an understanding of their business and calls upon expert assistance to enrich his analysis via the Genesis network. Initially expertise for assessment is sourced within the University.



Tenant Selection

In the eighteen months to July 1992 Genesis reviewed 52 applications from prospective tenants. Pruet works intensively with those select few clients who pass through the rigorous early stages of the tenant screening process. This is particularly the case with establishing the prospective tenant's business plan and early performance milestones.

Sam Pruet, oversees and coordinates the process of researching, screening and accepting applicants. He also reviews the business plans of current and prospective clients. Mr Pruet also participates in each of the monthly reviews of client firms.

Genesis staff members who report to Pruet are two full time secretary/administrative positions and three part-time staff members tasked with various incubator program responsibilities. Two of the part-time staff are University of Arkansas students; one being a graduate assistant and the other being an intern from the Department of Communication.

To gain tenant status, companies are recommended, after successfully negotiating the screening process, to the Executive Committee who in turn recommend acceptance or rejection to the Genesis Advisory Board.

Admittance to the Genesis Project requires an assessment of the prospective firm's technical plan by University appointed principal investigators. The Arkansas Science and Technology Authority (ASTA) has attached a number of conditions to grants paid to the University of Arkansas including a requirement that firms participating in the program align with ASTA specifications.

In defining "technology-based" relating to the required criteria for admittance, the University defines this to mean a firm which has technology as an essential element or core of its business. "Technology" is defined to mean: contemporary operational advances in the fields of science and engineering, and is a consensus opinion of persons within the University (current in various fields) who evaluate potential enterprises to see if they meet this criterion.

The procedures for applying to the Genesis Program are:

- 1 Prospective entrants to the program contact the Program Director, Mr Pruet, for a brief introduction and explanation of the Program;
- 2 If after the initial evaluation Pruet determines that the firm is a potential client, then further contacts with screening panel members are arranged and a formal request for admission is submitted;



-
- 3 A technical assessment and review of the prospective firm is conducted by University of Arkansas Principal Investigators (researchers with strong reputations in their field of expertise)
 - 4 The firm's business plan is submitted to the Director of the Bureau of Business and Economic Research (BBER) at the University's College of Business Administration for approval;
 - 5 If the Principal Investigators and Director of BBER reach a consensus that the firm qualifies for Genesis, then it is submitted with an appropriate recommendation to the Program Director
 - 6 The Program Director in turn submits the recommendation to the Vice Chancellor for Academic Affairs; and
 - 7 The Program Director at the Genesis Advisory Board Meeting then may recommend the firm for formal admission.

Review and Monitoring

Genesis also has a Financial Advisory Committee (The Exodus Committee) comprised principally of people with financial management experience. The Committee performs two key tasks. The first is to monitor the advancement of tenants via their monthly reporting. The second key task performed by this Committee, which has given it its name, is to assist firms to successfully make the transition from Genesis tenant to independent, growing company.

Each month, each client is interviewed and their progress against milestones in their business plan monitored. Companies supply financial information in the form of a balance sheet, profit and loss statement and sales journal and this is reviewed against the business plan and the requirement for working and expansion capital.

Each client which graduates from the Genesis Program is thoroughly prepared by the Exodus Committee. On exiting the Program a detailed questionnaire of over 60 items is completed in an interview with the Director. Sam Pruett finds the Client Exit Interview to be an important quality management tool which assists Genesis to fine tune its program and introduce new elements to meet perceived weaknesses or deficiencies.

Genesis Network

The Genesis Program has built a strong network among the North West Arkansas community based solidly in the University but also extending through Chambers of Commerce in the five districts of the region and small business service programs within Fayetteville. The network provides Genesis a rich source of business talent and experience to supplement the strong business analysis and technical expertise available within the University.



SCORE and SBDC

The Genesis Program offers free accommodation to two small business advice and counselling programs which are sponsored by the United States Small Business Administration. Both the Arkansas Small Business Development Centre (SBDC) and the local chapter of the Service Corps of Retired Executives (SCORE) maintain offices within the Genesis complex. This has allowed not only Genesis clients to access assistance from these organisations, but it has provided a centralised location for other community members to utilise these resources.

The Genesis program makes strong use of the resources and contacts supplied through these programs each of which Genesis Director, Sam Pruett, rates as being of exceptional quality.

SCORE has been operating in the United States since 1964 and now consists of over 70 offices across the nation with upwards of 15 000 men and women business veterans. Most SCORE members are retired, but some executives active in business give volunteer time to SCORE.

SCORE counsellors will provide assistance at any stage in the business life-cycle. There are no charges for individual counselling sessions and referrals to counsellors with expertise in a particular facet of a business is common. Examples of SCORE services include advice on business planning, cutting costs and export/import. Complementing individual counselling, SCORE has developed workshop programs which offer group study.

Bureau of Business and Economic Research

The Bureau of Business and Economic Research (BBER) was established in the College of Business Administration in 1943 in response to a growing need for a facility that could explore and report on economic, business and social conditions in Arkansas. The Bureau has become a well known point of communication and exchange of ideas, research and data for universities, businesses, government agencies and individuals. In addition, the Bureau serves as a focus in providing assistance to academic staff and graduate students in experimentation with their ideas in both theoretical and applied research.

The principal objectives of BBER are to develop, store and disseminate data relevant to the business, economic and demographic conditions of Arkansas as well as regions and areas within the state. This data is available to academics, students, governments, businesses and individuals.

An Entrepreneurial Services Centre (ESC) resides within BBER which is designed to assist high potential non-incubator applicable



entrepreneurs in initiation of their businesses. ESC Business Consultants assist in the preparation of business plans, provide marketing advice and other related services.

Student Access

Sam Pruett has cultivated relationships with many Departments within the University of Arkansas at Fayetteville and takes advantage of a variety of approaches to secure students to work with Genesis and Genesis clients.

Students are available through four kinds of working relationship with Genesis. Work/study studentships and graduate assistantships generates cost effective expertise for Genesis clients at the rate of around \$8 per hour. Cooperative education program participants and student interns are expected to complete work assignments as a requirement for registration by the professional body accrediting the qualification that they will ultimately receive from the University.

Most students who work with Genesis are sourced from the engineering departments, journalism, public relations, marketing and business.

Each semester 10 to 15 students work with Genesis or Genesis clients. Some students build their experience with Genesis over a number of work assignments across multiple semesters, while others rotate to other work placements in seeking to broaden their experience. Sam Pruett has not found it necessary to establish any screening or selection system to encourage the best suited students to participate in the Genesis Program.

Some Professors also have graduate students working on projects with Genesis clients and these are in addition to the figures quoted above.

Entrepreneur Studies Program

As tenants in a technology-oriented business incubator, most Genesis clients are headed by people with post graduate qualifications in science or engineering disciplines. In most cases, however, these people do not have an adequate grounding in business skills or experience. Genesis stipulates stringent entry criteria and monthly review procedures designed to instil lasting business skills that remain useful well beyond when the client leaves the Genesis Program.

Genesis has also realised that this problem is shared by entrepreneurs outside the fields of science and technology-based business. Genesis has developed a curriculum in Entrepreneurial Studies which is delivered by the Northwest Arkansas Community College.



Although Genesis is affiliated with the University of Arkansas, it was determined that the best place to set up such a program was from within an institution geared to the returning (or mature aged) student. The effect of this collaborative effort has been felt throughout the university and has led to the formation of the Northwest Arkansas Alliances for Higher Education.

Students enrolled in the Entrepreneurial Studies program are given internships with Genesis companies. Through this program, students witness the day to day rigours of managing a start-up company. Genesis feels that there is no equal for the experience factor that the program provides.

Through Genesis' detailed monitoring activities, students are allowed to benefit from 20:20 hindsight. Students may evaluate former client business plans and practices. Instructors may offer "real life" scenarios which faced Genesis' former clients and make their own determinations as to which course of action these companies should pursue. The actual effect/outcome may then be demonstrated as these are not merely textbook scenarios but real problems which faced real companies in their own region.

Small Business Innovation Research (SBIR) Program

Genesis has generated an outstanding track record in facilitating applications for financial support for its clients, as well as other Northwest Arkansas businesses, from the SBIR Program.

Genesis staff track all SBIR solicitations for possible matches with client firm capabilities. While Arkansas ranks 45th in the total number of SBIR awards made, Genesis clients have brought to Arkansas 15 of the 17 SBIR awards made in Arkansas. This equates to a total boost to research and development conducted in the state of over US \$ 5.2 million in four years.

One of the keys to successful grant application writing has been the role played by the University of Arkansas Technical Writing Department. The Department has acted as a trainer and reviewer of applications and through iterative feedback has given Genesis clients a very high success rate in gaining support under this prestigious granting program.

Advantages of University Affiliation

The University of Arkansas offers several benefits for the firms in the Genesis Incubator System. The potential of university hosted incubators was a significant motivator for the funding source during the formation of Genesis. Incubator clients benefit both directly and indirectly from the University of Arkansas affiliation with access to both physical and intellectual resources, many at subsidised rates.



Genesis clients have significantly reduced operational costs due to the following contributions made by the University:

- access to the University library at University Staff member status;
- entry to and use of world class sporting facilities;
- free parking
- free computing tuition on a wide variety of software packages;
- access to long distance telephone services on the significantly reduced University bulk-rate
- free electricity, heating, air conditioning and water;
- preferred access to University expertise at pro bono rates.

The University also offers other tailored benefits to Genesis clients including access to the highly impressive research facilities and equipment within the Engineering Research Centre in which the Incubator Program is located. Genesis clients may also access University of Arkansas students to perform work through a variety of work and technical experience programs.

Genesis enforces strict entry criteria, one of which is that the University must have a capacity to assist the firm seeking entry to the program. Genesis has helped firms gain access to critical scientific and engineering skills which helps them to generate the distinctive new product features, necessary for success in a competitive marketplace. Genesis is intent upon seeing that both business innovation and technological innovation are successfully delivered by its tenants.

Vignette: Client/University Interaction Perhaps one of the best kept secrets in the College of Engineering is the Technology Assistance for Special Consumers (TASC) Project. TASC is a consumer oriented volunteer organisation whose purpose is to help the disabled function more independently. Since its beginning in July 1990, TASC activities have involved the active participation of people with disabilities who work with technical experts, health professionals and others to solve the problems and meet the needs of the individual



consumer. The mission of TASC is to provide technology devices and related services to assist individuals with disabilities, as well as their families, advocates and associated professionals, to increase independence in the home, schools and work environments. Engineering classes play a big role in TASC. A mechanical engineering class and an industrial technology education class are working together to develop a wheelchair similar to a bumper car for small children who do not yet have the skills to use a conventional electric wheelchair. Tom Jacobs, President of Invo Tek, a Genesis client, is a member of the TASC Steering Committee. Invo Tek develops devices to assist disabled people for the commercial market. When TASC comes up with an idea, in appropriate cases, Jacobs patents the concept and mass produces it through his company. Invo Tek's product line includes the Expanded Keyboard Interface, the Independent Voicephone as well as the Talking Eyepoint Board. These products are tools to facilitate communication. Another Invo Tec/TASC project is the Super Wolf speech synthesiser that is interfaced to a large keyboard. The relationship between TASC and Invo Tek has obvious benefits for both participants and indeed the clientele that TASC is designed to serve. Mr Jacobs inputs the business and market criteria which must be considered in developing a new product. This challenges the engineering students who participate in the TASC program, with real world engineering design challenges. Further, TASC sees some of its projects manufactured and sold to the clients it was established to serve.

Another of Genesis' clients, EarthCare Systems, Inc. has also benefited directly from the integrated business and technology development approach that Genesis manages in tandem with the leaders of the research programs at the University of Arkansas at Fayetteville.

Vignette: Client/University Interaction EarthCare Systems, Inc. offers the agricultural, industrial and municipal markets a unique waste reclamation process.



Through this process of high technology composting, a nutrient laden, humus-like product with applications as a soil enhancer or fertiliser is produced. The most visible component of the composting process is the "Earthtender" a large agricultural machine which tills windrows of compost and sells for \$165 000. The process used by Earthcare involves grinding the solid waste and spreading it in piles, called windrows. The pile is then inoculated with microbes specifically designed for the kind of material being composted. Optimal composting conditions are then maintained by regularly turning the windrows with the Earthtender. The end result is an environmentally safe compost in about 13 weeks. The last 12 days of the process is carried out at temperatures between 140 and 160 degrees Fahrenheit, which kills the bacteria. The Director of the Genesis Program, Sam Pruett, introduced Mr Phil Fredericks, the President of EarthCare, to the Arkansas Centre for Technology Transfer to assist the design and development of the Earthtender. The first two machines constructed by the firm were assembled under the supervision and auspices of the Technology Transfer Centre. Genesis' involvement extended to providing some money to have Technology Transfer Centre technicians build the first machine. The Arkansas Centre for Technology Transfer, which is housed in the Engineering Research Centre adjacent to the Genesis Program, maintains a staff of five full time engineers and 25 engineering graduate students and is under the direction of Professors within the Engineering Faculty. Earthcare is now working with University of Arkansas researchers to develop a probe to monitor temperature, moisture and oxygen in compost piles. The EarthCare system will use these measures to adjust the inoculants. It is expected that data from the probe will be automatically down loaded into a personal computer and that specially developed software will provide advice about what adjustments must be made to achieve optimal composting conditions.

Genesis has sought not only to work with its tenants, University and Network but also to influence issues of importance to entrepreneurship which are outside its own direct jurisdiction. As a result of these activities, Genesis has extended the impact of its



The Northwest Arkansas World Trade Committee

business development efforts while helping to enhance the environment for entrepreneurial development in North West Arkansas.

Genesis helped establish the Northwest Arkansas World Trade Committee. This committee is composed of area professionals engaged in international trade and those wanting to explore international trade opportunities.

Genesis has received several visitors from foreign countries interested in developing similar technology oriented business incubators. Capitalising on this opportunity, Genesis invited several local industries to participate in these visits so that mutually interesting trade opportunities might be explored. This informal process evolved into the Northwest Arkansas World Trade Committee.

The Shandong Science and Technology Exchange in China approached Genesis in the hope of using the program as a model on which a sister program could be based. During the visit of the Chinese delegation, Genesis clients and members of the World Trade Committee were afforded the opportunity to establish trade alliances within Shandong province. Two Genesis clients have begun to export their products to the province. TCIS, a Genesis client who has developed a database to broker used food processing equipment, has supplied three poultry processing plants with machinery from the local producer, Tyson Foods. BioCOPE, a Genesis tenant which has developed an enzyme additive for treatment of waste water lagoons, is now supplying this additive to the poultry processing lagoons surrounding the new plants outfitted by TCIS.

The Northwest Arkansas World Trade Committee reported US \$1.2 billion in overseas sales in the 1992 financial year.

Legislative Amendment to Encourage Entrepreneurs

The provision of State Government financing for Universities in the United States is accompanied by strict legislative frameworks to protect the State from charges of financial mis-management. One of the provisions of State law in Arkansas has been a statute which forbids state funded employees from participating in state funded business assistance programs.

Genesis proposed and achieved an amendment to state legislation. The effect of this was to allow academic and general staff of the State's universities to participate in the business incubator programs.

Since that time five faculty-founded companies have become clients of Genesis. This legislation has given the University of Arkansas the ability to reap the rewards of the commercialisation of several processes owned in part by the institution. It has also allowed the



retention of some of the University's most gifted academic staff who are now allowed to retain their tenured positions while pursuing their own business.

In one instance, a University of Arkansas Engineering Professor was able to commercialise a wide angle bar code reader for the US Postal Service. This led to millions of dollars in contracts for the University of Arkansas and created hundreds of jobs nationwide. Other Genesis clients have been generated out of the University of Arkansas Departments of Mechanical Engineering, Geography, Chemical Engineering and Industrial Engineering.



SPEDD Inc.

12 300 Perry Highway

Wexford

Pennsylvania 15090

Key Concepts

- services marketing through a highly developed PASSPORT System
- resource sharing across multiple incubators
- proactive deal-making with clients

Quick Facts

| | |
|------------------------|--|
| President | Robert A Meeder, PhD |
| Management Body | SPEDD, Inc. |
| Scope | SPEDD manages 18 incubator facilities in Pennsylvania and Northern Ohio. The gross area under management is 1,900,000 square feet. |
| Opened: | 1982 (first facility) |
| University Affiliation | No |
| 1993 Clients | 225 |
| 1993 External Clients | 70 |
| Total Clients Serviced | 295 |
| Graduates, cumulative | 33 |
| Graduates during 1993 | 7 |



Introduction

SPEDD, Inc. manages a network of eighteen business incubators in the adjoining states of Pennsylvania and Ohio. SPEDD derives significant economies of scale from this arrangement, spreading the costs of management and service provision across many facilities. Its Passport Program provides services to clients as packages which entrepreneurs find easy to relate to.

The continuous enhancement and evolution of the Passport Program delivers SPEDD a significant competitive advantage in communicating with entrepreneurs and prospective entrepreneurs - as well as with communities who wish to develop an incubator. This novel mode of communication has delivered SPEDD significant leverage for growing its business.

History

Prior to 1988 SPEDD, Inc. was known as the South Western Pennsylvania Economic Development District (SPEDD). In 1988, as part of a significant restructuring, the acronym was adopted as the official title - SPEDD, Inc.

Prior to 1982 SPEDD served the economic development needs of 6600 square miles and a population of 4 million people in a region centred on Pittsburgh, Pennsylvania. Begun in 1967, the Corporation gained experience in a wide range of economic development roles including technology parks, vocational training, access road/infrastructure development and technical assistance for both private and public development corporations and governments.

With changes in the pattern of government funding in the late 1970s and early 1980s , SPEDD searched for a new corporate rationale and in 1982 started the first business incubator in its region.

Over six years from 1982, SPEDD oriented its activities solely toward the development of incubators and evolved its governance structure and employee skills profile until in 1988 the Corporation chose to pursue growth by forming an alliance with a private, for profit corporation. SPEDD/Brackenridge now manages eighteen business incubator facilities. Table 1 summarises key data for each of these facilities.

Table 1: Key Data, SPEDD Managed Incubator Facilities



| Name | Gross Sq Ft | First Year of Operation | Number of Graduates | Number of Tenants |
|-------------------|------------------|-------------------------|---------------------|-------------------|
| Wexford 1 | 36 400 | 1982 | 3 | 11 |
| Wexford 2 | 31 200 | 1984 | 11 | 37 |
| Glassport 1 | 272 000 | 1984 | 2 | 16 |
| Vanport | 18 000 | 1984 | 1 | 9 |
| Arnold/NK | 23 000 | 1985 | 3 | 15 |
| Glassport 2 | 150 000 | 1987 | | 7 |
| Indiana | 70 000 | 1987 | 4 | 18 |
| Connellsville | 70 000 | 1988 | 1 | 7 |
| E&O Brewery | 48 000 | 1988 | 3 | 12 |
| Latrobe | 160 000 | 1990 | 4 | 25 |
| Commerce Park | 45 000 | 1991 | | 3 |
| Collinwood | 84 000 | 1991 | 1 | 9 |
| Parks Bend | 32 000 | 1992 | | 7 |
| Monongahela | 500 000 | 1992 | | 5 |
| Riverside Commons | 80 000 | 1992 | | 5 |
| Glenville | 187 000 | 1992 | | 5 |
| Somerset | 21 000 | 1992 | | 0 |
| TOTAL | 1 830 000 | | 33 | 195 |

Both in 1982 , when SPEDD tied its corporate strategy firmly to the development of business incubators and again in 1988, when SPEDD chose its hybrid for profit / non profit path, its contacts (particularly in government) were sceptical about chances for success. Initially, in 1982 government was sceptical about SPEDD's capacity to break out of its old mode of business to manage the development and growth of a business incubator. Later, in 1988 the State Government which had invested many millions of dollars in multiple incubator facilities were concerned that a hybrid for profit / non profit structure would lead to asset stripping and a change in corporate focus towards developing incubators only in affluent communities.

On both of these major reorientation's SPEDD has exceeded their sponsors expectations and allayed fears by making their business concept work while delivering effectively against sponsor needs.

Operations

SPEDD divides its business pursuits into two distinct activities, real estate management and service provision. Services are delivered on one hand to clients (incubator tenants) and on the other in teaching others about effective enterprise development strategies (including the incubator industry, municipalities, universities, government, small business centres).

SPEDD directly employs twenty staff to manage the its business operations and its eighteen incubator facilities. It is not possible to neatly categorise SPEDD staff into discrete roles, since work patterns are fluid and some staff perform multiple duties. In general though, approximately 14 staff are responsible for incubator facility management in three functionary areas, administrative secretaries, maintenance and security. The balance (six people) are responsible for service delivery to tenants and other businesses as well as



delivering centralised management functions on behalf of the entire SPEDD incubator network (eg purchasing).

Those managers responsible for delivery of tenant and small business services visit multiple incubator sites each week. It is typical for any one manager to visit seven or eight sites per week. Tenants communicate their need for services through their site's administrative secretary.

SPEDD derives significant economies of scale by maintaining a mix of circulating and site-linked staff. Tenants are comfortable with the notion that they need to fit into someone else's 'schedule' to gain access to business advice and support. This is due, to a large extent, on the clarity of communication between SPEDD and its tenants. SPEDD's major vector for communication is via its Passport System, a concept which serves to distinguish its management philosophy and operations from those of most other incubator programs. The Passport System has underpinned the growth of the SPEDD incubator network. The clarity and power of the Passport leads to the many requests SPEDD receives from prospective incubator developers to further expand the SPEDD network.

SPEDD is widely recognised for the way it works with entrepreneurs, particularly its skill in efficiently managing incubator operations so that it may spend time and effort with client entrepreneurs.

SPEDD operates in a climate of active economic development interest in Pennsylvania and Ohio. It routinely works with approximately 30 agencies. Until a recent change in the political administration of the State of Pennsylvania, the Ben Franklin Partnership Program was one of the most supportive of the incubator concept in the United States. SPEDD works most closely with the State Department of Commerce and County and City economic development offices. It also works closely with the SBIR program and the Pennsylvania Industry Development Authority on whose Board one SPEDD employee sits. SPEDD seeks to remain as independent as possible in the face of these many sources of economic development input.

Passport to Growth and Success

Dr Robert Meeder, President of SPEDD, Inc. describes the Passport Program as the heart and soul of the incubator marketing program for the SPEDD Incubator Network.

The design of the Passport Program is surprisingly simple. Meeder first had the idea for the system while he was travelling. A hotel in which he was staying outlined the services which they offered in a document which was promoted as their service passport. The document also looked like a travel passport.



Today, the SPEDD Passport presents as a desk-top published booklet on standard format paper of about twenty pages. The booklet lists incubator services together with some information about each service. The presentation is professional without being glossy since changes to the Passport document is changed and revised constantly.

It is typical to find the services offered by incubators to entrepreneurs to be quite abstract and defined only in fairly broad terms. This could mean that in introducing an entrepreneur to services that either :

- the service as it is described means very little to the entrepreneur; or
- that it means something, but we have little understanding of the assumptions and expectations which the entrepreneur forms. These may lead to expectations developing which no one can fulfil.

SPEDD has gained a great deal of experience in working with entrepreneurs . Some of SPEDD's experiences have been factored into the design of the passport system. Amongst the most important issues influencing its design are the following:

- it is necessary in working with entrepreneurs (on say a business plan for example) to give them very specific things to do - the more abstract or general the concept, the worse they tend to perform;
- not many of the entrepreneurs were making use of the services offered by the early SPEDD incubator;
- when services were provided to entrepreneurs, SPEDD found that the incubator manager was being left with more hours of work to do than the entrepreneur, and that even after this extensive assistance was delivered it was apparent that there was low level of satisfaction expressed by the entrepreneur;
- external firms have been known to criticise incubator programs as government subsidies for business;
- in discussing the incubator with a prospective tenant and emphasising the service aspect of the concept over cheap rent, the prospect invariably wanted proof of the manager's technical industry experience and expertise..

The design features inherent in the Passport system in response to the difficulties outlined above are:

- products are designed to be discrete, bite sized chunks of learning and work;
- products need to be simply stated, specific and well defined;



-
- products are made attractive and offered in a way that encourages entrepreneurial curiosity;
 - the delivery of each product provides the entrepreneur with the necessary information and techniques to complete the necessary work themselves;
 - control over the time and quality parameters of each product rests with SPEDD;
 - fees are charged for each service;
 - non tenants are allowed to access services; and
 - clearly illustrate the depth and diversity of the skills and experience able to be tapped through the incubator's network.

The Passport System also acts as a screening device. Those entrepreneurs who are most committed and capable work on the techniques and background information that they receive, do the necessary work to derive the results to proceed to the next step and make an appointment to buy the next product. The products are arranged in a hierarchical list. They start out as relatively simple and entrepreneurs graduate to more complex and time intensive tasks as they work through the list. SPEDD therefore spends most time with those entrepreneurs who progress most rapidly and effectively.

In designing his Passport System, Meeder took the services that were being delivered through the incubator and defined each one as a product. He was able to define 18 products. For example, a number of marketing products, business plan preparation, accounting and bookkeeping, switchboard services, group purchasing and customised job training. These products fell roughly into two categories, office practices and value added management services.

Design Your own Passport: 1 identify your services as products and list them; 2 Break down each product into an articulated set; 3 include the preliminary products in you passport document; 4 make each product distinctive, and define time, expected outcomes and price.

The Passport is presented as a booklet. However, a number of important design features distinguish it from the typical list of services which incubators set out in their corporate brochure or services



manual. Prior to placement of an entry into the Passport, each service, where possible, is broken down into a series of products. Progressive articulated sets of products were then defined to match the development path of an entrepreneur, from novice to experienced.

In each instance only the preliminary or "taster" item in each set is included in the Passport. The products are described as being delivered over a discrete amount of time, delivering a defined set of outcomes and costing a set price. A taster product is deliberately designed with a catchy title, to be inexpensive, extremely good value for money with easy first steps, and to deliver a sense of accomplishment to the entrepreneur.

One of Meeder's most successful taster products has been the introduction to marketing called Seven Guerrilla Marketing Tactics. People were immediately intrigued by the French spelling of the word and its military connotations. This led to many enquiries. 'For \$35 we will take your company through these seven techniques'. 'They're designed to be inexpensive, highly effective ways to introduce your company's product to a market'... the Passport promises. 'If you like one of the techniques, we will offer for a price not to exceed \$275, to take you through a modification of your product materials into one of the seven applications.'

The easy initial steps are designed to gain commitment from the entrepreneur and engage them in using subsequent products in the articulated sets, the objective being to encourage the entrepreneur to get into the habit of using the Passport.

Marketing Incubator Services to Entrepreneurs

Meeder recounts the case of one product from the initial Passport which emphasises the importance of knowing how to communicate with an entrepreneur. One of the products listed in the Passport was the Dialog Database. Very few people requested this service since most did not know what benefits this product could deliver. When an entrepreneur did try the Dialog service, however, the



customer always went away satisfied with this cheap and efficient way of accessing market information. Yet, even with this high level of satisfaction Meeder found it difficult to encourage repeat or word of mouth sales. Meeder decided to adopt the "taster formula" and gave the product a catchy title - "How many left handed people work at Disney World?". The taster was packaged as a one hour trial and a challenge was issued to the entrepreneurs at large. SPEDD promoted that it could find the answer to any question faster than the entrepreneur could. The combination of the catchy name and attendant images, with SPEDD's performance in always winning their challenge using the Dialog tool, resulted in satisfied customers and a client base who talked about left handers and the challenges issued by SPEDD . This in turn led to a great deal more business flowing from customer recommendations.

The Passport has become a very efficient method for transacting business with entrepreneurs - but there are also a number of other advantages inherent in the system:

- The Passport creates a better tool to link entrepreneurs to value added services and to get the entrepreneur to feed back their level of satisfaction to SPEDD such that modifications can be made to better meet their needs;
- The Passport System gives an important focus for incubator manager. Typically, managers are motivated to provide services to entrepreneurs, but are not sure how to proceed. Under these circumstances, it becomes easy for issues of secondary importance (such as facility management and real estate issues) to absorb the majority of the manager's time. (US incubator managers spend 10 hours per week of time working with tenants, down from 15 per week two years earlier¹);
- The Passport creates a track or system which can serve as focus for developing an incubator's business through developing its clients. Meeder exhorts his managers to spend at least one third of their time on further developing SPEDD's Passport; and
- While the booklet was certainly initially entrepreneurially centred, it has also proved a valuable tool for working with non SPEDD service deliverers and incubator developers.

¹Coopers and Lybrand, Business Incubators Coping with the Recession, Summer 1992.



When SPEDD initially developed the Passport it laid out the services it was able to deliver and also sought to supplement these with 'products' supplied by external service providers. In working with external service providers, SPEDD works to a strict formula. Firstly , get the service provider to break their services down into 'bite sized' products. Secondly, only provide to SPEDD the best of those products. Thirdly , make that product exclusive to SPEDD. That is , do not provide it to anyone else as defined in its Passport format or if this rule must be broken, do not advertise the product. The rationale for this last stipulation is to ensure that the product is rare and only available through SPEDD.

Meeder also invites all clients to consider becoming a service provider as well as a service receiver. This approach provides a means of growing the Passport offerings since it requires the entrepreneur, who understands the product from an entrepreneur's perspective, to design and submit the 'product' prior to inclusion in the Passport. The listing of a product can also be an alternative source of cash flow for an early stage company.

The refinement and further development of the Passport is of critical importance to SPEDD. To Meeder and his colleagues, the Passport is a living, breathing document that must be revised as part of meeting their corporate objectives for growth.

The key to the process of developing the Passport is in Meeder's words 'to adopt the Demming approach'. That is, define the product concept and try it. Pitch out what does not work. Build on what does work. Demming doctrine states that it is a mistake for a manager to spend time working on a weak product in an attempt to make it strong.

In the first iteration of the Passport Program, the booklet detailed 18 products. At its first revision four services were deleted and seven were added . Today, the Passport consists of 42 products; 11 of which relate to marketing, 7 to book keeping and accounting and others including government procurement, office practices and related services.

The development process employed by SPEDD in improving their Passport Program is not a random, opportunistic set of events, but a deliberate calculated approach. Every year SPEDD seeks a way of splitting one of its products into more products.

It's objective is to further develop the articulated sets of products while still maintaining the logic of the development path that entrepreneurs follow. Each time a product is split and the range of options in the articulated set expanded, SPEDD selects one of their stronger base products (perhaps one of their tasters) and goes out into the



community to find someone to learn this so that they can deliver the product instead of SPEDD, thus expanding SPEDD's capacity to serve. This also allows SPEDD to focus more attention on products at the more advanced stages of entrepreneurial development.

Finding a New Deliverer for Guerilla Marketing

Techniques: Pick a local advertising or marketing firm, explain the Guerilla Marketing Techniques concept and how this fits into the Passport Program offered by the Incubator Network. It is relatively obvious if the firm gets switched on. Robert Meeder get them to express interest; then teaches them how to deliver to an entrepreneurial client base. Once they are hooked, they suggest improvements to products based on their own experiences. This expands SPEDD's delivery capacity, diversity, and depth of expertise.

In seeking to improve its Passport, SPEDD finds that it is continuously working the base due to churn in its deliverers. That is, it is quite usual for one of their product suppliers to be recruited interstate or for the new boss of a firm, which has been a regular supplier, to decide he wants to move the business towards serving larger firms.

Thus, there is always a steady stream of new deliverers that need to be located, vetted, enthused, trained and evaluated. It is , however, most important to ensure that the base of supply is evolved slowly. Mass changes lead to a loss of what Meeder terms 'flavour' from the products. He recounts that service providers are quick to forget that they are working with entrepreneurs and fall back into delivering services more suitable to large companies. Invariably such services are bigger and more complex than a small venture needs and this tends to 'choke' the entrepreneur. It is also a fact of life that many prospective service deliverers 'never get it' about the foibles and special needs of entrepreneurs and new ventures. Under these circumstances SPEDD steps in to take control and either straitens things out or axes the service outright.



How to Kill a Product that is Not Working: Meeder recommends one of two approaches: Firstly, your Passport document should be reproduced once per year. Ask your staff what should be pared out of the book. Dr Meeder knows which products have been inactive through billing records of the Passport training and counselling products. Secondly, If a service provider drops below expectations of quality and service then that person should be contacted immediately. Make use a mythical committee - this serves to dilute any personal feelings that may enter the equation. Indicate that the committee voted their service out of the book.

"The committee" is also a useful concept to use in screening service opportunities such as those offered by consultants. Meeder says to the consultant proposing a new service that he will take the concept to the committee. For screening purposes, tenants/clients control this committee. The committee rejects or gets the provider to modify the prospective service.

Working with service providers to help them understand the special needs of the entrepreneur is also an important avenue for improving the Passport. One such case with SPEDD's Passport relates to a provider of pension fund related insurance. As any entrepreneur will readily tell you, as soon as a new business name is registered or a company formed, the entrepreneur is immediately inundated with calls from all forms of sales people on the make - particularly insurance agents. The first reaction that any entrepreneur is likely to make to an approach from an insurance salesman after this type of experience is that they do not want to talk at all about insurance.

However, Meeder decided to persist with an insurance agent as an element of the Passport even though its first year of listing had resulted in little activity for the service provider. Meeder decided to work with the insurance agent because he liked the people working with this particular firm and he identified a strong need for insurance (particularly pension fund insurance) for entrepreneurs.

It is typical for there to be no provisions made for pension insurance by an entrepreneur. This approach is usually rationalised by the entrepreneur taking the stance that a pension will be established later when the company is stronger. However sometimes it takes many years for a new company to become firmly established and some never do succeed.



Meeder decided to work with the insurer to restructure the Passport entry describing the insurance product. The Passport was restructured to tell stories of sacrifice by an entrepreneur and that after some time, things had not gone as well as expected and the project had to be abandoned. The story continues that if the entrepreneur had partitioned some of their assets into an investment portfolio then at least they would walk away from the failed venture with some financial capacity.

This story evokes interest. Entrepreneurs ask, "how can I achieve this for myself and my family?" Now instead of talking in generic terms about the pension insurance products they have available, the insurance firm is able to come in and present an number of strategies to help the entrepreneur protect personal assets whether the company does well or not.

SPEDD is recognised for the way it works with its clients. It has the reputation of being strongly client oriented and able to communicate well, work efficiently and effectively with entrepreneurs. SPEDD is recognised as expert in the process of delivering services to new venture clients. Thus, its expertise is sought beyond the incubator industry by municipalities, universities, government agencies and Small Business Development Centres to help advance the quality of their services to new business ventures.

The Passport initiative has been important for SPEDD because it has given their business a distinctiveness in an increasingly crowded market place. It has also been SPEDD's experience that the term 'incubator' is very unattractive to some of the highest potential prospective tenants, particularly manufacturers and that the Passport system is an effective way of diffusing an undue focus on this term.

Today SPEDD has a very strong set of Passport services, particularly in the area of marketing and sales. This strength and the broadening of the base of service providers has enabled SPEDD to progress the services it supplies to a more specialised and higher value added role. This has afforded the organisation opportunities for growth unforeseen at the outset of developing the Passport System.

SPEDD has evolved a new program as part of the Passport which it calls Trademaker. SPEDD engages the entrepreneur and works with them through the various marketing and sales products in the Passport. It performs significant work for clients in the area of business strategy. SPEDD assists the client to lay out a sales strategy and targets markets and helps to prepare the client for contact with the customer. Now SPEDD has taken this concept an extra step. SPEDD goes out in parallel with clients using the same strategies, in a different market territory to the client's sales force.



SPEDD gains recompense for this work primarily through commission and is presently working with 18 - 20 clients in this manner.

SPEDD works with clients on the application of a sales strategy. It does not accompany the client on sales calls. SPEDD defines its own territory by agreement with the entrepreneur and works this market.

Of the 225 tenants housed in SPEDD facilities, approximately 70 are making use of the Passport's value added services (other than office practices) such as management and technical assistance. Another 70 clients are active Passport clients from the general community. This gives a total client base of almost 300. Meeder says that for the size of his Passport program he tries to maintain approximately 140 users of the value added services.

Amongst those two thirds of tenants with whom SPEDD plays only a land lord and office services role, SPEDD maintains linkages and provides exposure to the higher rating elements of the Passport program through the Passport document which is upgraded annually, through contact with SPEDD's administrative secretaries and hopes that satisfied active members of the Passport Program will draw inactive tenants into the Program.

Meeder says that he does not get the tenants together for events, such as lunches and that he does not run elaborate recruiting campaigns, He states that SPEDD is just so busy working the Passport System and that the Passport creates the interaction and drives the recruitment process.

Meeder's objectives remain simple:

- make the Passport System better and better
- think about the Passport System every day
- prompt managers to spend one third of their day each day on developing the Passport System
- pressure the managers to come up with ideas on how to further develop the Passport System.



Canberra Business Centres

Bradfield Street

Downer 2602

Key Concepts

- dual sites with over 50 tenants
- business advice and review panel

Quick Facts

| | |
|------------------------|---|
| General Manager | Julian Webb |
| Management Body | Local Employment Development Incorporated |
| Opened: | 1989 |
| University Affiliation | No |
| 1993 Clients | 64 |
| 1993 External Clients | 23 |
| Total Clients Serviced | 112 |
| Graduates, cumulative | 22 |
| Graduates during 1993 | 5 |



History

The Canberra Business Centres operate from two sites. The first, established in 1989 in the north Canberra suburb of Downer, occupies the old primary school site. The second, established in December 1992 occupies the former ACTION Bus Depot in the southern lake-side suburb of Kingston.

The Canberra Business Centres were established by a non profit community organisation, Local Employment Development Incorporated, with the support of the ACT Government. The ACT Government supplied some initial capital to assist the initiation of the Downer site as an incubator and has agreed a ten year rent free lease for both Downer and Kingston.

The funds required to manage and operate the facilities as an incubator are generated via the market rate rents paid by the tenants. Refurbishment and start-up costs at Kingston were funded from surpluses generated out of the Downer facility.

Statistics compiled on businesses assisted through the Downer facility show that 78% are still trading, 9% have failed, 5.5% have closed for other reasons and 7.5% have tested the market and closed. Overall through to the end of 1993, 24 graduates and 50 tenants have produced a turnover of \$ 27 007 000 and employ 250 people.

Operations

In Canberra Business Centre's infancy, it ran a business advisory service for which it received program funding from the ACT Government. This business advice program was developed as an element of Canberra Business Centre's "business enterprise centre" status under Business in the Community Limited, an initiative of Rotary in New South Wales.

This service no longer receives government funds, but remains a key element of the Centre's marketing program. The Centre offers a business advice service to the general public and uses this as a tool for identifying prospective tenants. The development of the network of business advisers spurred by this service has now, with several innovations in service delivery, formed the centre-piece of the business advice and mentorship functions delivered by the Centre.

The Panel

On receiving a request for tenancy, the Centre invites the prospective tenant to meet with its Business Advice and Review Panel. A Business Advice and Review Panel is made up of two of the 30 or so experienced business practitioners in the network plus the Centre Manager. The Panel is tailored to ensure that general management skills and experience relevant to the prospective tenant are present.



The Panel performs two roles. It assesses whether a business should be admitted as a tenant and analyses what forms of business assistance the potential tenant needs to survive and grow.

The Business Advice and Review Panel also plays a role with tenants when either they are considering leaving the incubator or, when they run into difficulties. In the former circumstance, the Panel wishes to ensure that the graduation of the tenant proceeds smoothly and that the enterprise is on a sound business footing. In the latter case, the Panel review the problem facing the tenant and assist the Centre to decide whether or not a turnaround strategy, sometimes including carrying a tenant's rent and service costs for a short period, can save the firm.

The Business Advice and Review Panel provides the Centre with a clear indication of the strengths and weaknesses of the potential tenant. Firms are offered tenancy when they pass this review, on the condition that they agree to work with the Centre and undertake the development program identified by the Panel.

Under this regime an initial panel session could be expected to cover all or some of the following issues: goals, focus, commitment, realism, understanding of finance and cash flow, characteristics of market, the product or service offered by the firm.

Business assistance and advice is available through the Canberra Business Centres from three sources and in three main formats. The sources of advice include Centre Management, the business advisers network and beyond this access to other networks of expertise from Canberra contacts or via the extended network of business enterprise centres in New South Wales. The formats in which the advice may be provided include:

- trouble shooting - one on one consultation to solve a specific clearly defined problem;
 - mentorship - an individual with relevant experience and expertise from the Centre's business advisory network provides a medium term development program for the enterprise; and
 - a panel - a multi disciplinary group provides business counselling and assist in setting targets and monitoring performance against goals. A panel can work with a tenant over an extended period and adopt the role of an advisory board
- in this mode, a panel might for example set a three month period for the development of a tight marketing plan. The process, including milestones, would be



overseen by the panel, with the business owner undertaking the background research and formulation of the plan.

The Centre's Manager plays an important role in setting the make-up of the panel. Typically, he chooses to use successful business people with judgement and perspective derived from general management experience. In general, accountants are not used in this role. This is to ensure that "big picture issues" are at the centre of attention initially, at the expense of focusing on mechanistic issues for example the format in which accounting information is presented.

Panels are most useful in situations where broader issues such as business strategy or the firm's marketing plan or business plan need review. The structure of the panel session is relatively informal. Attempts to establish a formal structure to panel sessions have met with resistance from both panel members and tenants. One practice which has seemed to work well is the process of the panel chairman summing up at the end of the meeting to ensure that the tenant is absolutely clear on the main issues covered and is deriving value from the feedback received.

The Canberra Business Centres do not require that a prospective tenant provides a comprehensive business plan prior to entry. Nor do they expect each tenant to undertake formal business planning while they are tenants. Entry to the Centres requires that an application form be filled out and the process of trouble shooting, mentors and panels may be expected to target the issues that would normally be discussed in a business plan, in an informal manner.

However, over the period of their tenancy, all firms will be challenged to proceed through the various steps required to develop the components of a business plan. The upshot of this approach is, that while you may not be able to pick up a single bound document called the business plan, each firm will go through each of the components of a business plan as a part of the training and counselling they receive.

The Network

Canberra Business Centre's network of business advisers consists of over thirty people. Initial interest was stimulated in the Centre's activities through two small articles in the ACT's daily newspaper, *The Canberra Times*. Centre management takes particular interest in vetting any individuals who wish to join the advisory network.

The Centre Manager and one of the experienced advisers interview the potential new network member. The skills and personal attributes of the applicant are taken into account prior to testing their mettle on



one of the regular review panels with two experienced network members.

Members of the business adviser network are not paid by the Centres, however, an offer to reimburse any expenses in servicing Centre tenants is made. Some of the service providers in the network are professional accountants and lawyers. Typically, such business professionals provide their services free for the first and perhaps the second meeting with a tenant, however, after this they normally begin to levy charges on tenant clients. The Canberra Business Centre plays an intermediary role during this transition by advising the professionals which firms can or cannot afford to pay full rates for their services.

The broader network which the Canberra Business Centres cultivate includes tenants, graduates as well as members of the business advisory network. The Centre runs a number of social events to help generate opportunities for informal discussion and linkages. These include:

- a formal "drinks at the Centre" event which is held on a quarterly basis
- one such event was a light hearted annual awards night with prizes awarded for categories of tenant "performance";
- Workshops where tenants and others are invited to hear a speaker; and
- a basketball team comprised of Centre tenants.

Management

The overarching management approach at the Canberra Business Centres is to stay in touch with the tenants. At a formal level the Centres operate with a monthly checklist for each tenant that helps maintain a comprehensive overview of tenant activities and progress.

The other formal contact is via the collection of rents. Any difficulties with rental payments create the opportunity for dialogue and analysis and provide a lever for encouraging an owner to seek assistance.

Both receptionists and management at Kingston and Downer are required to continually cultivate the confidence of tenants and their employees. The communications which flow from this provide Centre Management with a chance to help identify possibilities and opportunities to help firms grow.

The quality of the informal communications which operate within the Centres is touted as a major factor in the success of the Canberra



Business Centres to date. Management provide information and encourage tenants to enter into group purchasing arrangements, joint ventures and to exchange expertise and contacts.

One example of how this activity is beginning to show results is that one tenant is working directly with five other tenants. In one arrangement the tenant is in a consortia with three other firms. In another capacity the same firm has sub-contracted two other firms to supply components to help meet an order.

Management make it one of their key tasks to refer tenants to one another. In particular this works well when resources or forms of assistance sought by one firm is held by another tenant.



Midland Enterprise Centre

Cnr Great Eastern Highway

and Viveash Road

Midland 6056

Western Australia

| | |
|------------------------|---|
| Key Concepts | Network of enterprise service providers sets a supportive environment for tenants |
| Quick Facts | |
| Executive Officer | John Rogers |
| Management Body | The Midland Enterprise and Arts Centre is an independent incorporated association run on a not for profit basis |
| Mission | The Midland Enterprise Centre has a dual mission. <u>Enterprise:</u> To increase economic activity and thus employment opportunities in the Midland Region. <u>Arts:</u> To provide a focus and facility to encourage the development of cultural activities in the region. |
| Opened: | 1989 |
| University Affiliation | No |
| 1993 Clients | 35 |
| 1993 External Clients | 6 |
| Total Clients Serviced | 60 |
| Graduates, cumulative | 15 |

Graduates during 1993

149



Introduction

The Midland Enterprise Centre occupies a 1.8 hectare site on the corner of Great Eastern Highway and Viveash Road in the heart of a newly revitalised Midland Town Centre, one of the regional business nodes in the eastern suburbs of Perth, Western Australia. The site contains 13 buildings, including some of heritage status, and was originally used as a school.

A total of fifty three enterprise units are offered in a variety of configurations. This provides the Midland Enterprise Centre with some flexibility in moving tenants to larger units as they expand. Seven new manufacturing workspaces have recently been completed. This has afforded the Centre a good deal of flexibility with its space allocation.

The Midland Enterprise Centre is managed as an Incorporated Association and has adopted a dual mission pitched at encouraging both new enterprises and the arts in the Midland region.

When a visitor is first introduced to the Enterprise Centre it can readily be seen that there exists distinct arts and enterprise activities , however this is really only part of the story. The Midland Enterprise Centre has encouraged a number of enterprise service providers to co-locate on its site. These service providers include professional business advisers (accountant, lawyer, marketing consultant etc.), the Midland Chamber of Commerce and the Eastern Region Economic Development Committee which delivers a number of enterprise related government programs. Midland Enterprise Centre has adopted a laissez faire approach to encouraging enterprise development with an informal set of demarcations in place that delineate which organisation performs what services for which client.

Incidental communication through co-location between these organisations and cross participation in one another's programs provides the necessary information to keep track of tenant progress.

Mr John Rogers, Executive Officer of the Midland Enterprise Centre, characterises the Centre's activities as consisting of three principal strands:

- accommodation for small enterprises.
- accommodation for a collection of organisations who supply services to enterprises.
- accommodation for cultural organisations.



History

The 'Midland Enterprise and Arts Centre' appointed a site manager in 1990 and the complex was officially opened in May. The Centre occupies 4,000 square metres gross space of which 3,600 is leased to tenants.

The initiation and development of the Centre was a task coordinated by the Eastern Region Economic Development Committee. In 1989 a public meeting saw the formation of an Executive empowered to manage the site for the newly incorporated Centre. The Centre is now managed by voluntary Board consisting of 10 people. Five members of the Board are drawn from the regional business community and the other five from State and Local Government. Half the Board is elected each year with each member holding a two year term.

The Centre targets businesses in the light manufacturing, assembly, office and craft work sectors and emphasises that its tenants must be generating a new or unique business activity for the Midland Region. The Centre is keen not to be seen to be supporting the initiation of new firms in direct competition with businesses already established in the town centre and region. The Centre also seeks and receives one off grants from public sector agencies for specific tasks. For example, one grant from the federal employment ministry was used to refit one building on the site to generate six small office spaces.

Midland Enterprise Centre has been granted a ten year rent-free lease to their site by the State Government. In addition to the rent and service income generated by servicing tenants, the Centre receives an annual grant from State Government which supports part of the facility's management expenses and the significant costs of maintaining the heritage listed site. The Centre is staffed by two full-time staff, the Executive Officer and an Executive Coordinator.

Services to Enterprises

The Eastern Region Economic Development Committee and the Enterprise Centre have maintained a close working relationship as the Centre has grown. This relationship has been an important factor shaping the incubator program developed by the Midland Enterprise Centre.

The Eastern Region Economic Development Committee (EREDC) started its life as the Eastern Region Economic and Employment Committee . The role of the EREDC has been threefold:

- industry attraction;
- assisting the start-up of micro businesses;
- providing business information and contacts.



The balance of the EREDC's activities has been heavily weighted in the direction of providing micro business start-up programs (approx. 50 per year) and the provision of business information and contacts (approx. 1300 per year). The EREDC has achieved this principally by being a deliverer of two government programs.

Firstly, EREDC is a designated Business Enterprise Centre (BEC) supported under a state government program and delivered under the umbrella organisation of Business in the Community Ltd an activity of the Rotary Clubs of Australia.

The Midland Business Enterprise Centre is part of a state-wide government supported network which uses the process of facilitation to assist individuals to expand or develop successful business. The Network's primary aim is to ensure that local communities maximise opportunities available in the process of sustainable economic development.

The Midland BEC assists clients in business planning, access to commercial and government sources of finance, marketing, market research and trade information. All services are provided free of charge.

Secondly, EREDC acts as a managing agent for the New Enterprise Scheme (NES) jointly suggested by state and federal government employment ministries.

The purpose of the NES is to provide training, networking, income support and facilitate access to bank finance for unemployed people wishing to launch their own firms as a means of becoming self employed.

The Executive Officer of the Midland Enterprise Centre, John Rogers, sits on the selection panel for NES. The role of the selection panel is to select those applicants who put forward business concepts that exhibit potential for success and show behavioural characteristics which indicate they possess the necessary ability and commitment to succeed.

The New Enterprise Scheme is run by a consultant contracted to the Eastern Region Economic Development Committee who manages and delivers the training program and coordinates the pool of business mentors, one of whom is teamed with each business during the pre launch phase.

NES and its analogues, which operate around Australia, gets a mixed review from incubator managers in terms of the program's ability to



generate prospective tenants suited for entry into incubation programs. In the case of the Midland Enterprise Centre, however, Mr Rogers relates that a number of excellent clients have been generated by this employment program. Mr Rogers attributes this to both the nature of the NES applicants in the Midland Region and the quality of the NES training and mentorship. According to Mr Rogers, his positive views about the NES are supported by the Officers of Federal Government Employment Ministry who have stated that NES at Midland is well run and has outstanding clients.

The constructive, yet informal relationship between the Midland Enterprise Centre and the EREDC with its attendant government programs has set a theme for the Enterprise Centre. Given the comfortable fit achieved with this relationship, the Enterprise Centre has encouraged other enterprise related service providers to become tenants. Other organisations concerned with enterprise development in evidence at the Centre include the Midland Chamber of Commerce and another employment related program funded by the Federal Government, Midland Skillshare.

The Chamber of Commerce provides the following services relevant to the Midland Enterprise Centre program:

- networking to members of the Chamber - this has been of particular relevance in several cases where Midland Enterprise Centre tenants have gained business advice through Chamber members;
- inter-trading amongst Chamber members;
- providing a link to local government authorities over issues of importance to small business such as signage, planning etc;
- access to the Job Link program which provides information and assistance regarding gaining of employment for those who have become unemployed. This program consists of one on one counselling regarding training and education opportunities, resume preparation and job searching skills.

The Skillshare program administered out of the Midland Enterprise Centre location conducts training programs to provide skills for unemployed people to assist them to acquire jobs. The skills taught at Midland Skillshare include office and clerical skills, hospitality, introduction to metal trades, book keeping, key boarding, customer service, literacy, job seeking club and open access - computers and typewriting.



In addition to this collection of resident enterprise and employment programs Midland Enterprise Centre has encouraged a number of business professional to take up tenancy. Presently a lawyer, public relations, marketing and accountancy practices trade out of the site. Services delivered by these firms are delivered to fellow tenants at a discount rate.

Thus, in addition to the advice and assistance offered by the Executive Officer, there exists an array of advice and assistance available at the Midland Enterprise Centre through its tenants. Mr Rogers plays a facilitatory role in directing his tenants to the most appropriate service provider as each request for assistance is received.

Screening Prospective Tenants

Midland Enterprise Centre requires prospective tenants to fill out a two page application form and attend an interview to discuss their business venture with the Executive Officer and two members of the Centre's Board.

Applicants are not required to have a business plan but are encouraged to produce a marketing plan and a cash flow statement. Where applicants do have business plans, these have usually been developed as the result of participating in one of the training programs offered by the enterprise service providers which hold tenancy at the Midland Enterprise Centre or another government agency. For example, New Enterprise Scheme participants, who apply to become tenants, bring both a business plan and a mentor allocated by the NES program. Where the Centre believes a prospective or new tenant would benefit from developing a business plan it encourages the manager of the venture to attend the formal training sessions on business planning run through the Business Enterprise Centre.

Further Assistance and Advice to Tenants

The Executive Officer is available to offer counselling and advice to tenants on a no-charge basis on the setting of an appointment. He provides general business advice and information about how to access business development services on offer elsewhere in the Centre and region.

Midland Enterprise Centre has organised a number of training initiatives for its tenants. As a result of a tenant training needs survey the Centre organised a three evening marketing workshop. During small business month the Centre ran training programs on the topics of computers, banking, business and the law, success and marketing.

Tenants are also encouraged to attend relevant training programs run by the Business Enterprise Centre as well as those offered by independent speakers who choose to use the Midland Enterprise



Centre as a training venue. Part of the service package that the Centre offers external speakers is that their seminar or training program will be publicised with Centre tenants.

The Midland Enterprise Centre has worked hard at establishing a rapport with the local banking organisations and is now at a stage where banks put a degree of faith in the status that a business holds as a Midland Enterprise Centre tenant.

Centre tenants work with the Executive Officer or another service provider to prepare their documentation before approaching the bank. Tenants gain feedback from the Centre on what financing is realistic and what information the Banks require to make a decision and how this should be presented. Now that the banks understand the role of the Midland Enterprise Centre, they are more willing to listen to proposals and tend to view them in a more favourable light than previously, according to Mr Rogers. A valuable additional perspective on financing is added by one of the Centre's Board Members, the Manger of the local branch of the Westpac Bank.

The Centre also assists its tenants to promote their goods and services. It achieves these through four main vehicles:

- a regular newsletter;
- advertisements about the Midland Enterprise Centre placed in the local newspapers from time to time;
- the publication of a service directory which is updated regularly and publicises the goods and services of each tenant in one third of a page per business; and
- the Centre takes a full page in the local newspaper once each month. The page provides a opportunity for the Centre to insert editorial, publicise new tenants and highlight other tenants' products and services. The Centre also offers tenants the opportunity to advertise on this page at a subsidised rate.

A regular social club event is run by the Centre to encourage tenants to mix outside the business environment. Mr Rogers has been most encouraged by the success of this initiative since it has encouraged the development of a significant level of inter-trading activity among tenants.

Inter-trading between tenants within the Midland Enterprise Centre is predominantly about one firm purchasing another's goods or services. For example, an entertainment booking agency has had advertising and cartooning work performed for it by a public relations firm. Furniture, pottery, curtains, and accounting and legal services offered



by some tenants have been purchased by their cohorts. However, some more collaborative forms of inter-trading are also evident. One example of this is a firm that manufactures electronic controllers which has contracted another firm to develop customised software for the controller.

In summary, the Midland Enterprise Centre may be characterised as a convenient location for a group of enterprises and enterprise service providers. The proximity of the enterprises and the service providers to one another provides benefits for both groups by facilitating a more efficient communication process.



Sydney Business Enterprise Centre

7th Floor

8 Kippax Street

Surrey Hills 2010

Key Concepts

- strong training and business advice networks
- intervention on a needs rather than systematic basis
- CBD fringe location

Quick Facts

Manager

Phil Schwenke

Management Body

A division of WorkVentures Ltd

SBEC Aims

- advise and provide practical assistance to people wishing to start their own business
- assist existing small businesses who are experiencing difficulties or looking to expand
- assist innovators wishing to evaluate and commercialise their inventions
- foster initiatives that will contribute to the economic, training and social needs of the community

Opened:

1986

University Affiliation

No

1993 Clients

44

1993 External Clients

10

Total Clients Serviced

195

Graduates, cumulative

143

Graduates during 1993

16



History

The Sydney Business Enterprise Centre (SBEC) was the initial business enterprise centre initiated by the formative Business in the Community Ltd. Initially this was purely a business advice service. However the Enterprise Development Unit of Sydney ITeC (Information Technology Centre) was, in 1986, merged with SBEC to give the SBEC its present form.

In 1986, the Enterprise Development Unit of Sydney ITeC comprised a manager, two consultants and three small office spaces. Today, SBEC is a multi-component business which employs eleven people directly and has cultivated a network of business advisers and mentors made-up of over 40 experienced business practitioners. It also had a broader client and supporter membership-base consisting of some 400 businesses.

The SBEC is a division of WorkVentures Ltd, a non profit economic and employment development organisation. WorkVentures is comprised of five divisions:

- Sydney ITeC
- SBEC;
- Corporate Services Division;
- Peninsular Division; and
- Electronics Repair and Maintenance.

The operational style of SBEC has changed significantly as it has grown and with changes in management personnel. When the present manager took up his position in 1990 he inherited a highly interventionist and very systematic approach to incubator/client relationships. The chief embodiment of this was a 54 page manual.

He also found that some incubator fundamentals required attention such as presentation of a professional image to customers of tenant businesses (including such issues as reliability of the phone answering service and quality of the meeting areas), building security and offering a responsive and alert reception service.

Consequently, the primary focus of management attention has been to ensure that the physical environment for the SBEC works well. The operational integrity of SBEC has been able to afford this reorientation due to the existence of mature business advice networks which have ensured that tenants have access to support when they seek it.

SBEC currently derives half of its revenue of \$ 850 000 (in 1994) from delivery of government programs and other WorkVentures activities.



It derives the other half of its income from fees it charges on the programs it runs.

Operations

SBEC operates within three cost centres:

- business incubator;
 - business training; and
 - business support.

Thus, the business incubator is located within a rich framework of business development measures. Business development of incubator clients is principally achieved by the incubator manager, the Manager of SBEC and other SBEC staff helping make linkages within this framework and monitoring the results.

Business Training

Within its business training cost centre, SBEC operates as a managing agent for the New Enterprise Incentive Scheme (NEIS), a program funded jointly by State and Federal Government employment portfolios. The objective of NEIS is to provide training, income support and business mentorship to unemployed people to facilitate starting a new small business.

As a NEIS managing agent, SBEC is responsible for assessing applicants and their potential ventures, providing a training program in new venture initiation, including the development of a business plan, and supplying business mentorship and advice to support the new entrepreneurs as they launch and develop their business.

As a spin off of the training program offered to NEIS clients SBEC also offers a fee paying course on business planning. The course follows a similar structure to that offered under the NEIS program, however, participants pay a fee to attend the program. The intent of the program is to have each participant produce a comprehensive business plan as a tool for implementing a business venture.

SBEC also offers a differentiated form of the business planning courses that it offers to assist those who wish to explore purchasing an existing business. This program is more heavily weighted towards selection of the right type of business to suit the individual prospective small business owner and assessment of the status of the potential purchase. Also included is a section which deals with how to get the most out of using professional advisers such as accountants, lawyers and business consultants.

SBEC's experience in offering enterprise training programs to a variety of clients has made their expertise much sort after by other



Innovation Assessment Program

organisations seeking to generate a capability to deliver similar services in their own community.

SBEC sets out the philosophy behind enterprise training and discusses the key elements of curriculum for various types of clients that might seek out such training. SBEC regard the action learning approach (learning by doing) as a key to success and emphasise the importance of getting the right mix of content and entrepreneurial motivation by using practitioners to highlight their experiences in business. SBEC also provide guidance on how to initiate, manage and maintain quality in business advice/mentorship for enterprise training programs.

SBEC is supported by its State Government to provide a three tiered service targeted at inventors. The three tiers are a self assessment service for inventors, a counselling service and a technical assessment.

The Self Assessment Service consists of a computer based questionnaire of 32 questions relating to the technical status of an inventor's concept and their knowledge of the marketplace in which customers for the invention might be found. The profile of the inventor's answers to the questionnaire generate a response from the computer which predicts the likelihood of commercial success. In essence the Self Assessment Service provides a structured checklist for the inventor inexperienced in commercialisation of new concepts.

Inventors are provided with an interactive counselling session with one or two experienced business advisers for a fee of \$ 50, paid by the inventor. The counsellor reviews the technical and business concepts proposed by the inventor and provides feedback. Where thought appropriate, the counsellor refers the inventor to one of SBEC's advisers or broader network members with skills of particular relevance to the product in question.

The value the inventor derives from the counselling is largely dependant on the counsellor's ability to link the inventor into appropriate business development training and support offered by SBEC or links to services offered by government, industry associations, universities or other organisations.

SBEC commissions a written technical assessment of the invention proposed for commercialisation. The assessment is performed by an engineering consultant registered with the New South Wales State Government. The purpose of the technical assessment is to provide the inventor with a credible technical review by an independent third party where it is felt that this may assist the inventor to secure the interest of a prospective commercial partner.



The three tiered process offered by SBEC is deliberately structured as a screening device. Those inventors lacking in the personal qualities (determination, persistence, willingness to learn) required to successfully commercialise an invention do not normally pass through the stages where increasing commitment of personal time and resources (ie., \$ 50 and \$ 100) are required.

Membership

One concept which all the 46 business enterprise centres in New South Wales have in common is the notion of membership. Various levels of membership are available to businesses and individuals who essentially "sponsor" a business enterprise centre.

SBEC has pursued a highly targeted membership strategy due to the fact that it is one of five divisions of WorkVentures Ltd. The strategy has been to pursue many small memberships amongst people who value their affiliation with SBEC rather than one or two large corporate supporters who might readily swap their sponsorship allegiances. This also means that SBEC is not seeking sponsors in the same marketplace as WorkVentures or the other divisions.

SBEC has two classes of membership. The first is affiliate members which is comprised of some 400 present and former clients who pay \$ 75 per year. The second is associate members (the lowest category open to professionals and business people under the business enterprise centre regime) who pay \$ 250 per year.

Like all business enterprise centres, SBEC works up a membership directory which provides a mailing list, promotes SBEC services to members and promotes goods and services offered by members to encourage inter-buying between supporters of the SBEC. In addition, other membership benefits include free attendance at any of SBEC's monthly Business Workshops.

Business Workshops

The Workshops are considered a "loss leader" by SBEC which regards the network development benefits that these events generate as worth the investment. Workshops are typically held on Tuesday nights and start straight after work. From 5.30pm to 6.30pm a happy hour and free buffet snack are provided. From 6.30pm the business of the night begins with announcement of news items of relevance to members. Then everyone at the meeting (typically 80 people) each spend less than 30 seconds announcing who they are and the nature of their business interests.

Following on from the promotion of networking, the educational part of the evening is conducted. SBEC prefers to make this activity a workshop or activities based format. The emphasis is that participants should be able to take away a practical benefit for their own business.



Simple tools such as a business problem to solve or checklists to fill out have been successful formats.

Free Business Advice

SBEC is paid a fee to provide a free business advisory service by the New South Wales State Government. The service SBEC provides is to coordinate a roster of volunteer business advisers within a defined area in Sydney. As a supplement to this service, the business advisers are able to put their clients in touch with the broader SBEC business advisory network or call upon the skills of SBEC management.

This service is open to existing businesses and individuals who are intending to pursue the establishment of a small business. Referrals of unemployed people from the Commonwealth Employment Service dominates the profile of the client base who make use of this service.

Consulting

SBEC offers its services as expert business trainers in a variety of markets. At present, it has sought to market its integrated "business initiation service" (which includes pre-screening of potential small business owners and their venture concepts, feasibility analysis and technical assessments, training, review of business plans by an expert panel, mentorship and incubation services and space) as an out placement service. That is, organisations which are going through the process of downsizing can offer their retrenched employees the option of small business ownership as a tool for generating a new job.

The integrated package of services offered by SBEC gives their service a distinctiveness that has caught the attention of several organisations.

The SBEC Network

The programs offered by SBEC are underpinned by a cadre of 40 or so business advisers and mentors, without whom the Centre would not operate effectively. The 11 core staff and the business advisers provide the glue that holds the separate programs together and generates the "cross fertilisation" among the program elements that makes SBEC bigger than the sum of its constituent parts.

SBEC's business advisers and mentors are honorary Associate Members. These individuals make up the pool on which SBEC draws to offer its training, screening, advice and mentorship programs. The pool of business advisers was initiated to meet the requirements of delivering the initial NEIS program offered by the Centre over three years ago. One advertisement, three years ago, helped identify a core of skilled and experienced business practitioners. Now, the pool is maintained via word of mouth.

The pool of business advisers is staffed by volunteers (mostly retired or semi-retired) and others to whom SBEC pays an honorarium.



Funds available under the NEIS program has enabled SBEC to pay some of the Mentors assisting in the delivery of the NEIS program. The issue of payment is particularly important for an enterprise centre concerned about quality management. When a fee for service is provided by the Centre to the adviser certain expectations about quality can be maintained. Without this, the Centre would find it difficult to impose minimum standards - particularly as it would be trading on the good will of its volunteers.

The business advisers that SBEC uses in its network gain several benefits from the relationship. SBEC joint ventures with some network members in its consulting and commercial training programs. SBEC passes work to members of its pool of business advisers when the opportunity arises. Some tenants of SBEC are also members of this pool.

SBEC goes out of its way to build the quality of its business advisory and mentorship services. Each person who is part of the business advisory pool is an honorary Associate Member. Through this, the business advisers receive full membership benefits including complementary entry to all membership functions and delivery of the SBEC networking materials such as the Membership Directory and Newsletter.

SBEC provides training and development for its business advisers. One of its most experienced staff members has been designated a coordinator and plays the role of communication hub amongst the advisers and mentors. Quarterly business adviser/mentor functions are held in which training and development issues of particular relevance to business advisers are covered.

The pool of advisers has been integrated into all aspects of the operation of the SBEC. Initially, for example, mentors were compartmentalised into only being involved in providing advice to businesses which had already been accepted into SBEC programs. On some occasions the mentors were being delivered businesses about which they held serious misgivings. The upshot was to involve mentors in the full life cycle of the programs on offer at SBEC including pre-screening of business concepts, participating in selection panels and sitting on pre-start enterprise review panels.

The result is a better integrated system and more effective quality control on the type of businesses with which SBEC agrees to work.

Summary

The overarching strategy of the SBEC approach is to ensure that the salaried staff of the Centre work at identifying linkage points across the organisation so that sources of advice and assistance can be readily tapped by SBEC tenants. This is what makes the informal



approach adopted by SBEC work. Cross fertilisation of knowledge and contacts across the multiple components of the Centre's activities provides the information and networks which help SBEC tenants and clients to survive and grow.



TCG

Balfour Street

Chippendale 2008

Case prepared by: Dr John Matthews, Director, Industrial Relations Research Centre, University of New South Wales.

Introduction

In the inner Sydney enclave of Chippendale a small group of firms called TCG (Technical and Computer Graphics) have been networking with each other and with the external world to become the largest privately owned computer services operation in Australia. TCG has perfected a form of commercial contracting between members of the group, combined with a 'triangular' approach to new product development involving larger partners and customers, that leverages it into product areas and markets that would otherwise be well beyond the resources of a small group.

TCG has encouraged its strategic partners into alliances with it to develop new technological solutions to business problems, making full use of existing government support schemes, such as the offsets program and the 150 per cent tax deduction for research and development.

Starting over 22 years ago as a small computer service operation of four people, TCG has grown to become one of Australia's most significant innovators in the fields of portable data terminals, computer graphics, simulators, barcoding systems, electronic data interchange, electronic identification tags and other applications of information and communications technology. Turnover in 1991 was \$43 million, earned by a group employing around 200 staff.

But TCG is no ordinary company. It has grown as a dynamic cluster of small firms, each specialising in certain operations, and each one feeding work to the others. Today it consists of an operating core of 24 companies, organised as a cooperative network or cluster, but with a market coherence that gives the group profound advantages over its more conventionally structured commercial rivals.

A Networking Model

How does TCG's a networking system operate? One of the TCG member firms, TCG Systems Automation Marketing (TCG SAM), for example, might gain a contract for, say, 1000 data terminals from a supermarket chain, with special features tailoring the products to the



supermarket's business. TCG SAM could take care of all aspects of delivery of these terminals - but it would subcontract the details to other TCG firms. It would let a contract to TCG Systems Automation (TCG SA) for the software engineering and maintenance; it would let a contract to TCG Manufacturing for the actual manufacture of the terminals to TCG SAM's specifications. TCG Manufacturing would in turn let contracts for components supply and assembly to electronics firms around Sydney and Australia. If the terminals were to have communications facilities linking them to the supermarket's existing systems, then this work would be contracted by TCG SAM to TCG Tel.

The original order from the supermarket thus sets in train a cascade of activities that are regulated by strict commercial contract and performance, and coordinated overall by the TCG company gaining the order, in this case TCG SAM. It sets up a chain of value-adding activities where the links are well-established and long-term in nature. The customer deals only with one firm and gets maximum attention from that firm; all the activity takes place further along the 'value-adding chain' that is unleashed by the order. Quality and performance at each link are strictly regulated by the demands of commercial contracts that member firms negotiate with each other.

The overheads for the TCG group are minimal. Most business functions are carried out by the individual member firms themselves. There are no staff positions growing into a bloated bureaucracy. Accounting services for each member firm are available from one of the TCG group, a specialist accountancy firm. R&D services are provided by another member firm that in fact makes its own commercial way through ownership of intellectual property rights.

There is no central personnel department; member firms hire and fire at their own discretion. There is no central marketing department; member firms are their own marketing agents. Likewise there is no central procurement department (although economies of scale are captured through member firms pooling their purchases whenever it is convenient to do so). There is no central board or Central Committee allocating tasks and functions. Member firms decide for themselves what they want to get involved in; this is the secret to the group's responsiveness to market trends and its innovative record.

Where then does the group's coherence come from? Some things are centralised. All invoices are issued centrally and payments received centrally before being allocated to the respective member firm. This is done again through a firm, this time through what remains of the original TCG, now owned by one of the group's founders. This firm



has an equity stake in each of the TCG member firms, thus providing linkage through ownership.

It is this internal network structure that enables the TCG companies to maintain their autonomy and flexibility, allowing them to identify and seize market opportunities that would cost bigger firms a much greater commitment of time and resources to realise. TCG exploits this advantage conferred by operating as a network rather than as a unified firm, with great commercial success.

TCG's multiple internal and external connections protect it from the vicissitudes that disrupt and destroy independent ventures that are sometimes much larger. While some firms that started within the TCG group have since left, there has never been a bankruptcy - a remarkable achievement that flies in the face of the conventional wisdom that sees high rates of bankruptcy amongst small firms as inevitable.

New product development

TCG member firms exploit their network structure in the way that they leverage themselves into new markets and new product developments. Rather than seeking to 'go it alone', TCG identifies the opportunities and then actively seeks out partners for new developments, financing the whole manoeuvre through a major customer. In this way, TCG forms product-specific 'triangles' which extend its network outwards into the global computer marketplace.

TCG seeks partners that complement its own strengths, through the formation of long-term collaborative arrangements governed by contract. It forms a triangular network that in totality is far stronger than the sum of the three component parts. It seeks a share of the development benefits, recognising that a share of a successful development is much better than 100 percent of nothing - or of something worse, if debts accumulate and creditors have to be paid out in the event of bankruptcy. The networking approach ensures that Australian-based firms are involved in the development, and that any export orders that result from it are translated into Australian firms employing Australian workers to supply these orders.

TCG manufactures its own products through sub-contracting; it expands its group membership through equity partnerships; and networks beyond itself through the formation of consortia which lead sometimes to the formation of joint ventures.

The TCG member firms have recognised that long-term arrangements based on trust and networking carry considerable commercial advantages provided they are not allowed to become restrictive.



Origins And Growth Of The TCG Group

It is a general rule that the origins of an organisation profoundly mark its subsequent evolution and modus operandi. TCG is no exception to this rule. Its member firms have grown in response to specific circumstances in a pattern that is only now becoming evident. In the case of TCG, origins are critical in understanding how this pattern has developed.

Origins

A tiny company, Technical and Computer Graphics, was founded by four computer specialists in Sydney in 1971. For all of them, it was their first attempt to run a business of their own. They gained their start with two significant breaks: first, they had a customer in the form of an order for some programming that one of the partners brought with him from the Commonwealth Department of Supply; second, they obtained an overdraft of \$5,000 from the Bank of NSW (now Westpac), which gave them the working capital needed to tide them over their first months. Turnover in the first year mounted to \$69,000.

The business was a struggle in its early years, as is the experience of many small firms. It changed direction more than once, as opportunities appeared and others disappeared. TCG got involved in developing computerised mapping services, in operating a computer service bureau, and in offering computer servicing and maintenance arrangements. It was a small service company finding niches for itself in the early expanding years of the computer industry.

The firm's first big break came with the opportunity to create a new computerised stock control system with a car distribution agency, Capitol Motors. This was the first such system using mini-computers installed in Australia. A second project with a chemical laboratory, California Laboratories created Australia's first 'turnkey' in-house stock control mini-computer system.

TCG became a group of companies partly by design, and partly by accident. The first separate company was formed in 1973, after the Capitol Motors and California Laboratory experiences, to house the firm's engineering capacity, as TCG Systems Automation. This was done partly to distance the founding firm from the hardware side of TCG, and partly to give the initial head of engineering his own sphere of influence.

In 1976, Peter Fritz, TCG's Chairman and Chief Executive, saw an opportunity to branch out in a new direction. In response to a tender invitation, he was approached by Pat Gallagher, who had formed his own business and taken up the Australian distribution rights for the US company Norand. Through this vehicle, Gallagher had acquired the Australian rights to market portable computer terminals designed for



retail stock control, from the Swedish firm Micronic. (In fact he had snatched the deal from under the nose of TCG, which was after the same result.) Gallagher's operation was too small to get significant contracts from major retailers like Woolworths, who were nevertheless interested, and Gallagher wanted to sell the terminals to TCG as a means of obtaining some market leverage. Peter Fritz countered with a partnership offer, and after negotiation, it was agreed to form a new company, TCG Systems Automation Marketing (TCG SAM), to exploit the Micronic agency.

Working capital was obtained in the form of a bank overdraft of \$50,000, which allowed the new venture to function without draining resources from the rest of the TCG group.

TCG SAM demonstrated the benefits of networking, in this case the synergy that emerged between a small marketing company with a product to sell, and an organisation that could back it up with financial clout, accounting, computer programming and systems engineering expertise, and an established computer maintenance service. TCG SAM quickly secured orders for the Micronic terminal, growing to become the largest company in the world (outside Scandinavia) handling the Swedish product, and then used this experience to leverage itself into the emerging microelectronics market, securing an early 70 percent of the Australian hand-held data terminal market. This in turn led to the development of multi-purpose software for the retail industry, which further consolidated TCG SAM's performance.

Further companies emerged in the TCG group through employees becoming directors of their own operations. By 1981, the TCG group had grown to nine companies, with \$10 million in annual turnover and 100 employees.

By the end of the 1980s TCG had become the largest privately owned Australian computer company.

By 1991, the core TCG group had settled to a moderate size, consisting of 24 companies, with \$43 million in annual turnover and 200 employees. Thus, over ten years, it has roughly doubled in size overall - a modest rate of growth for a group of firms operating in the growing information technology market.

But the really remarkable feature of this story is that over this time not one of the member companies has failed - in stark contrast with the usual experience where 70 per cent of small businesses fail within five years of being established.



Member Companies

The TCG group consists of 24 small firms engaged in various complementary activities in the computer services industry. Coordination on management issues is effected through the group's members contracting with each other for services.

The following section describes five of the firms that make up the TCG group in some detail. A richer understanding of the development of these firms will provide the reader an understanding of how the TCG network operates.

Technical and Computing Graphics P/L

This was the core company founded in 1971, and the corporate framework within which the early triumphs such as the installation of the first mini-computer based order entry and stock control system in Australia. Its core business ever since has remained software engineering.

This core company provides the accounting and payroll functions for the other members of the TCG group. Any order placed by a customer to a member of the group is processed by TCG, as is any payment received for any service. Thus the cash flow to the group as a whole is constantly monitored at the centre, effectively by Peter Fritz himself; this provides 'early warning' that any member of the group may be getting into trouble. Intervention from the centre may not be particularly welcome within any of the member firms, but has saved firms from disaster on more than one occasion.

Technical and Computer Graphics charges member firms at cost for all consumable overheads such as lighting, power, telephone as well as rental. TCG's buildings are owned outright, and so rental charges to member firms are made at below-market rates. A unique profit-sharing arrangement exists with TCG SAM to cover overheads: SAM pays Technical and Computer Graphics a third of its net profits each year. This arrangement was devised to minimise the possibility of the founder members quarrelling over small expenses; it also carried the advantage for TCG SAM that if it got into trouble in any year, and made no profits, it would not be further burdened with overheads charges.

TCG Systems Automation P/L

TCG-SA was the second company founded within the TCG group, beginning operations in 1973. It functions through two divisions, one covering engineering services, and the other covering graphics peripherals. TCG-SA is the largest company in the TCG group, employing over 70 staff and turning over \$8.5 million in 1991.

Its two divisions support each other in a significant way. Engineering services provides the capability to install the range of products sold by



the graphics peripherals division. In turn, Graphics Peripherals is building a service client base for the Engineering Services division.

Recent business has included total maintenance contracts to service the computing and document processing operations of American Express, the reservations system of American Airlines, and the EFTPOS network of the State Bank of NSW. The American Express contract was a major coup for the group; it involves supporting a large document processing system using Optical Character Recognition and barcoding devices, with an on-site service centre staffed round the clock by technicians. American Express is reported to be pleased with this arrangement; a spin-off for TCG is that a member firm acquires new expertise, and develops new ideas for products.

TCG-SA wins a lot of work for itself and for other members of the TCG group. It currently has over 1800 contracts on its books; around 30 per cent come from 'third parties'; 15 per cent from graphics; 30 per cent from portable data entry systems provided through TCG-Systems Automation Marketing; and 25 per cent from scanning equipment and other services. TCG-SA interact intensively with other TCG member firms. It orders all stock for TCG member firms. It receives a number of orders through TCG Systems Automation marketing, and spins off product development ideas from its contracts to TCG manufacturing.

TCG Systems Automation Marketing P/L

TCG-SAM was formed in 1976, as a joint venture between Peter Fritz and Pat Gallagher. It has been run by Gallagher ever since, within the overall framework of the TCG group. TCG-SAM has pioneered Australia's entry into the portable data entry (PDE) market; it claims today to hold a 60 per cent share of the PDE market, which covers such items as retail order entry, meter reading, surveying, and stocktaking. It is also an important supplier of cash registers and smart point-of-sale equipment. Recent products have also established it as a major force in the retail and banking cheque encoding market. TCG-SAM now employs 20 staff and is one of the larger companies in the group, turning over \$7.5 million during 1991.

TCG-SAM consists of two major divisions, covering hand held terminal and point of sale equipment. The company primarily markets products licensed from overseas producers such as Symbol. TCG-SAM utilises its membership of the group to the full; it is able to sell itself to potential clients on the strength of its associated capacities, such as its ability to provide maintenance contracts arranged with TCG-SA (which in turn supplies SA with new business), and tailored software packages produced by TCG Software Development Division.



TCG-SAM's typical style of operation can be illustrated using one its latest developments, the Grid Pad. This is a portable PC without a keyboard that can recognise handwriting and capture signatures on its display screen. The novel product was exhibited at the 1990 Hanover Fair in Germany. A TCG-SA representative saw the product there, expressed interest in distributing it in Australia, and by February 1991 had tied up the Australian rights; the product was launched on the Australian market three months later. TCG-SAM developed complementary software (using TCG Software Development) and as a result is able to train Australian clients in the use of the product and is able to assist them to develop their own customised software.

Patrick Gallagher is convinced that he would have been financially trapped on more than one occasion had he not entered into the joint venture with TCG to form TCG SAM and had the resources of the whole group to tide him through difficult periods. Similarly TCG-SAM, as a senior member of the TCG group, has helped other members into new business and assisted them when in trouble. This is all considered part of the give-and-take of the TCG network.

TCG-SAM has itself formed joint arrangements that constitute a sub-cluster within the wider TCG group. These include TCG-POS and TCG-ILTD, as well as numerous partnerships.

TCG Export P/L

TCG Export was established in 1986 to provide an export focus as well as an export facilitation service to all members of the TCG group. It arranges exhibitions in overseas trade fairs, it acts as an intermediary in the negotiation of contracts and tenders, it manages overseas product launches, and generally guides its clients through the legal, commercial, bureaucratic and other barriers that stand in the way of successful exporting from Australia. TCG Export is recognised as a Trading House by Austrade.

Like other members of the group, TCG Export arose to fulfil a group-wide function but now is encouraged to seek business with external clients. TCG Export turns over around \$5 million a year (from food and technical products). Like other members of the TCG group, it is a small and lean operation.

CSD P/L

CSD, or TCG Customs and Freight, was formed in 1985 to provide custom clearance arrangements for the whole group. The need arose from the substantial importing/exporting activities of various member companies of TCG, and their different and multiple arrangements for customs clearance. Thus the company realises a return to scale for the group as a whole - one of the considerable advantages of networking.



The company's role is to monitor the shipment of goods, from the gate of the consignor to the gate of the consignee. One of its largest export operations involved the exporting of cash registers from Japan to the UK. These Fujitsu registers were under license to TCG SAM which had won a large contract in the UK.

The company employs extremely sophisticated Electronic Data Interchange (EDI) systems to clear goods through customs in paperless transactions, often while they are still in transit; relevant duties and sales tax payment are transferred to Australian Customs through electronic funds transfer.

Over 90 per cent of CSD's work is generated by TCG member companies; it does the balance of its work for external clients.

TCG Commercial Arrangements : Relational Contracting

There is no overall holding company for the TCG 'group'. TCG is a genuine network or value-adding partnership of independent firms. The firms deal with each other on a bilateral basis through commercial contracts. As the group has matured, so the ingenuity shown in devising these contracts has blossomed. By now, five distinct forms of commercial cost contracting have evolved. It is worth discussing these, as they form the 'nuts and bolts' of the TCG network.

Cost-Plus Charging

Originally, when there were only two elements in the TCG group, one specialising in software and the other in hardware, they would cooperate by providing each other with services, charged at cost-plus-10 percent. This proved to be most effective over many years, allowing the separate operations to maintain their own identity, and to draw profits from their contracts with the outside world, rather than from each other. This formula provided for a form of 'mutual non-exploitation', which is one of the fundamental features of successful networking.

Direct Quotation

The cost-plus charging was effective, but it could be inflexible, particularly if one company in the group found itself working more for other members than for outside customers. Hence member firms looked for an alternative arrangement, and practised a simple form of competitive direct bidding. For example, the POS division will seek quotes for the development of a product, inviting a TCG member firm such as TCG Manufacturing to tender, but also inviting external companies to tender as well. In many cases the business goes to the TCG member firm, but in some instances it is given to the external tenderer.

This approach carries the obvious benefit of keeping the member firms on their toes. It carries the risk of creating bad feeling within the



group when a contract is let externally. These are the kinds of disputes that the central coordinator within TCG is called in to mediate. But the basic commercial operating arrangements means that everyone understands the rules of the game; non-performing commercial passengers will not be carried by the rest of the group.

Revenue-Sharing Arrangements

Rather than utilising 'cost-plus' arrangements, some TCG member firms have invented novel arrangements that cover their costs and provide for a form of revenue-sharing. For example, TCG Software will give any firm in the TCG group a preferential quotation for a job, with a discount of 30 per cent of the going commercial rate, in return for a 2 per cent bonus on the total value of the product being sold. TCG's low rate is possible because of the lean character of the TCG group, and the revenue-sharing arrangement allows member firms to share the risk of development.

TCG Information Systems has developed an arrangement where it provides products such as its 'pop software' to other TCG member firms for cost price plus 50 per cent of the net revenue obtained by them in selling the products.

These commercial formulae encourage cooperation between member firms and provide a means for the sharing of risks and benefits.

Guaranteed Minimum Return Arrangements

A form of tendering that has evolved within the TCG group is based on the notion of a constant hourly rate, ie a rate charged for a service that would be guaranteed not to fluctuate as demand for the service shifts; such an arrangement provides a degree of forward security, and builds on the close relations that develop between TCG member firms.

This arrangement has been extended to encompass a form of tender based on guaranteed minimum return. Company A agrees to guarantee a minimum order to company B, in return for receiving a preferential rate. This allows company B to plan its operations in advance, particularly its staffing levels,

and so provides another means of spreading risk. As a check that company B is actually working as hard as it should be, company A has the right to demand its time sheets.

These arrangements can be interpreted as a form of privately developed insurance provided mutually between TCG member firms against the risk of market fluctuations.



Profit-Sharing Arrangements

A novel commercial arrangement, arising from the nature of the network itself, involves company A agreeing to provide company B with a service free of charge, on the understanding that spin-offs (such as a maintenance contract) will be given to company A plus one third of gross profit. This innovative arrangement (which appears to have no counterpart elsewhere in the commercial world) brings the partner companies together in a mini joint venture with respect to the service being provided or the customer being dealt with.

These five forms of contractual arrangement constitute a form of commercial innovation in themselves. They solve the problem of cost allocation within the TCG group, ensuring that it reflects operating expenses and is equitable over the long term (compared with the conventional approach in an integrated firm which allocates costs in the most arbitrary fashion). In a sense, one can say that the TCG member firms invented their own form of 'activity based accounting' before it was discovered and elevated into a technique by integrated firms.

Network Coherence

How does a network like that of TCG maintain its coherence? What is to stop a member company from breaking a network contract in order to fulfil a more attractive order placed unexpectedly by a third party? Wouldn't such commercial inducements tear a network apart? What, in short, constrains opportunistic behaviour within a network organisation?

In the market place, where atomistic firms are looking to secure their immediate advantage, such short-term contract breaking is routine. But it does not occur so readily in the case of a substantial network. It doesn't occur in TCG because member companies look to their longer term interests as well as to their short term position. They look to the advantages of having continuity of supply of business, and continuity of trading arrangements and conditions, which is a source of security; in effect it is a form of insurance against risk and a means of minimising costs of adjustment to new transactions.

How is the network to maintain internal discipline? Superficially one might expect that 'anything goes' in a network, but in fact in the case of TCG, members are maintaining constant monitoring of each others' performance through 'external benchmarking'. This is the very opposite of an imaginary market mechanism, where an imaginary trader goes around seeking the lowest price for a given service by asking for quotations. In the real world of the network, if company A enters into a service agreement with company B, then company B monitors A's performance against what it can glean of best current practice. If A's service appears to slip below this standard, then B's



response is not to rise up and switch suppliers but instead B will take the matter up with A, pointing out that superior performance is possible, and threatening to depart at a future date if A does not improve its standards. Company B might go further and offer to help A to improve its performance, for example by bringing new technology or new procedures to its attention. Company A likewise monitors B's performance.

Thus, in a genuine network, as at TCG, each member is 'quality assuring' the others, in bilateral pairwise relations, through this process of external bench-marking.

In TCG this process is made explicit when one member calls for quotes from member firms as well as from external firms, and ends up giving the contract to an outside company. This sends a signal to the member firm which loses the contract that it has to lift its game.

Successful networks cannot afford to carry non-performing passengers. One bad company could undermine all the others. Hence these disciplinary procedures are all-important; they are the glue that holds a collaborative network together. However the network has the flexibility to allow one of its member firms to go under if faced with a business catastrophe, without dragging all the others with it. This is a very significant commercial advantage that networks hold over conventional integrated firms, which are forced to share losses as well as profits across their various operating divisions.

Entry And Exit Modes

How does a network change its composition? The TCG group is a relatively stable but evolving group of companies. Some have started within it and departed. Others were started as joint ventures but differences of opinion led to a parting of the ways.

Entry to the network has tended to follow a characteristic pattern. A trusted employee who has shown initiative, or an external entrepreneur with an idea (and a customer!), is accepted as an equity partner with TCG, with initial capital coming from a bank overdraft rather than from resources drained from other member firms. The new member then operates within the group, enjoying all the advantages this offers (such as preferential rates for the provision of services, a client base within the group, and access to a client base external to the group where business is already being done by member firms). At the same time it is free to secure as much business as it can from outside the group. New start firms which might otherwise look to be a poor risk to a bank can secure an overdraft readily simply because of their membership of the TCG group; this is one of the principal benefits for a new firm in joining the network.



It is to be expected that firms which evolve their own client base and deal less and less with other TCG group member firms will eventually 'leave the nest' and strike out on their own. However firms which could do this, such as TCG-SAM, elect to stay because of the tangible benefits involved in remaining part of a wider group. Because of the rarity of departures, TCG has not developed any formal rules or procedures to cover such events.

The TCG 'Model'

Let us summarise this description of the TCG group's operation by developing a set of rules that appear to govern its activities. Ten such rules can be identified as governing the TCG network. This set of rules (or 'axioms') constitute an abstract 'model' of the TCG group.

1. Mutual Independence

The TCG network consists of independent firms whose relations are governed by bilateral commercial contracts. It is open to new entrants who are prepared to abide by the rules. There is no internal hierarchy, such as one of the member being the 'lead firm'.

2. Mutual Preference

The first rule for group cohesiveness is that member firms give preference to each other in the letting of contracts. This rule gives the group its identity; without it, TCG member firms would simply be atomistic entities sharing some resources. Tendering and contract letting is done along strictly commercial lines. Preference does not exclude the possibility that contracts will sometimes be let outside the group, against a competitive bid from a member firm, when circumstances warrant it (such as work overload, or as a signal to the member firm that it has to lift its game).

3. Mutual Non- Competition

The second rule for group cohesiveness is that member firms do not compete head-to-head with each other. If one member firm is marketing hand-held terminals, another member firm does not acquire rights to market the same kind of terminals from another supplier. This is a form of 'self denial' that establishes the necessary foundation for trust between members. (In the absence of such a rule, members would be reluctant to discuss business opportunities with each other, for fear that others would take advantage of the information in a way that undercut the original firm's operations.)

4. Mutual Non- Exploitation

Member firms do not seek to make profits from transactions amongst themselves. This is the origin of the various forms of 'cost-plus' and profit-sharing arrangements that exist between them. The goal is to maximise profit from dealings with the outside world; dealings with each other are a means towards this end. (Again, the absence of this rule would imply a breakdown in trust, and the creation of a hierarchy of strong and weak members within the group that would lead rapidly to its dissolution.)



5. Flexibility And Business Autonomy

The flexibility of the group as a whole derives from the capacity of member firms to respond to opportunities as they see fit. They do not need to seek group 'approval' for entering into any transaction or new line of business, provided their proposed innovation does not breach the other rules. This rule allows for maximum flexibility.

6. Network Democracy:

There is no overall network 'Owner' or controller. There is no holding company 'holding' the TCG network together. Nor is there any form of 'central committee' or formal governance structure for the network as a whole. It coheres as a result of the commercial ties operating between member firms. Group coherence is also provided through the oversight of transactions by the central accounts department. Member firms can hold equity in each other (eg as TCG SAM holds equity in TCG ILID) as well as in third party joint venturers.

7. Non-Observance Of Rules Leads To Expulsion

Member firms have natural incentives to cooperate with each other, based on the insights of long-term interest maximisation rather than on short-term spot transacting. These incentives are complemented by the sanction of expulsion if any member wilfully disobeys the rules. It has not been necessary at TCG to resort to this sanction in twenty years of network operation - but it remains a rule of last resort. Expulsion can be effected simply by severing all commercial ties with the miscreant member.

8. All Members Have Access To External World

There are no 'sub-contractor only' firms within the TCG group; each member firm has access to the open market, and is free (indeed is expected) to bring in work from outside. This is a rule which makes good business sense (maximising the market responsiveness of the group as a whole); it also ensures that no hierarchy of brokers and sub-contractors develops, leading to a form of exploitation that is evident in some Italian small-firm networks.

9. Entry: New Members Are Welcome, But Are Not To Drain Resources From The Group As A Whole

This rule allows the network to expand, without sacrificing the efforts of older members to the improvidence of new entrants. This rule is translated into the requirement that new members obtain capital through bank overdrafts rather than through equity from other member firms. It is the network as a whole that generally provides the collateral for such a loan - so the new member enjoys considerable advantages in starting its life within the protection of the group. It also underlines the significance of a financial institution as being a necessary accompaniment of a successful network.



10. Exit: Mature Members Are Able To Leave If They So Desire

In general, the group as a whole places no impediments in the way of a departing firm. Companies such as Hypercom and CED have left the TCG 'nest', flying off to pursue their own interests.

These ten rules can be said to constitute the TCG 'model' or constitution.

The group differs from cooperatives in its absence of any overall corporate structure, and in the freedom of member firms to develop their own business.

In addition to its network-based organisational structure, TCG offers striking innovation in its mode of expansion utilising joint ventures and large customers to assist product development. This 'triangular' model of networking beyond the confines of the TCG group, and the particular advantages conferred on the TCG member companies that engage in this form of expansion, is the really extraordinary commercial invention of TCG.

The TCG Triangular Networking Model

Companies within the TCG group extend their network in a quite distinctive fashion. They call it 'triangulation', meaning that it involves a three-cornered partnership. The essence of the arrangement is that a TCG company forms a relationship with a similar technology-based firm, each bringing complementary strengths to create an entity that is stronger than the sum of their two parts. The partner firm brings with it access to new market prospects of collaboration.

The TCG company brings with it all the attributes of the TCG group, which are 'screened' from the joint venturer but which provide the back-up expertise that makes the TCG company an attractive partner. But so far this is a partnership without a customer; what really drives the arrangement is the introduction of a major customer who does more than simply place the first order; this major customer becomes in effect a partner in the development, offering an important first contract but also securing certain rights, such as preferential supply, best price, and sometimes further marketing rights in the company's own sphere of competence.

How does this work in practice? In recent years, TCG member firms have stitched together several of these 'triangulation' deals. In the following section, two cases are described, to give a flavour of the approach taken.



Case Studies

Case 1: The Hand-Held Fuel Monitoring Terminal

Partners: TCG, ACME, Mobil Oil

This triangle starts with a TCG firm, TCG Systems Automation Marketing (TCG SAM) discovering a niche for hand-held terminals to be used by truck drivers refuelling planes on airport tarmacs. The idea is that in order to record all the necessary data about a plane being refuelled, the operators on the tarmac simply punch the flight number of the plane into the hand-held remote data terminal (RDT) which they carry in the truck. The RDT, wired to the fuel meter,

records the amount of fuel supplied against the flight number, which is sufficient to call up full customer details. At the end of each shift, the operators unhook their RDT and download the data into a PC in the airport office. Transaction details can then be relayed to the fuel company's headquarters, and an invoice can be on its way within 24 hours.

In order to develop this concept, TCG entered into an agreement with ACME, an established manufacturer of aviation fuel metering systems, to jointly develop such a product. The joint venturers then brought in a major customer to drive the development - in this case, Mobil Oil was persuaded of the project's benefits.

Acting to Mobil's specifications, a fuel monitoring data terminal was developed, which is now known as the Rapid Aviation Refuelling Information System (RARIS). Mobil benefits by having more accurate and timely data of the rate of usage of its aviation fuel stocks. Mobil agreed to purchase a certain number of RARIS terminals, creating a customer order to drive the development of the new product. Mobil's Operations Group invested a great deal of time and energy in developing the RARIS system to meet their particular needs.

But Mobil is more than a deeply-involved customer. It is turned into a partner by being offered, and acquiring, rights to license the product to its Mobil branches at other airports. The RARIS system was first trialed at Brisbane Airport, where it was judged to be a success; it is now being introduced by Mobil to other airports in Australia and around the world; beyond this, it has licensed the product to other aviation fuel suppliers.

TCG for its part acquired the rights to sell the software driving the product worldwide. And ACME, for its part, acquired the right to extend its product range into the area of data logging, thus opening up new markets for itself.

This is the essence of the triangular networking strategy: using success of a new application in one market to take it into another



market, and likewise using success there to extend the product further.

TCG was the instigator and 'glue' that held this triangle together, through being responsible for the RDT product development. But it could not do it without the two partners. They provided credibility, a market, and cash (through an order) that allowed the development to proceed.

**Case 2: The
Indoor Light
Interactive
Display System**

**Partners: TCG,
ILID, Coles-Myer**

This case involves a totally new invention for in-store shelf label updating by supermarkets. Electronic shelf labels offer supermarkets the convenience of updating their product prices and descriptions automatically. The conventional approach to electronic shelf labelling would involve installing wired networks from store computers to shelves; these networks could then carry data from the store computer to the shelves, updating them as product lines and prices change. Such networks are expensive, and 'hard wire' the shelving configuration, discouraging stores from changing the shelving layouts. Other systems involve radio frequency or infra-red transmission systems.

TCG-POS has developed a revolutionary approach to conveying data to the electronic shelf labels, involving the transmission of information via the store's existing lighting system. The lights' energy output is modulated (in the same way that a radio wave is modulated) conveying a signal that is picked up by liquid Crystal Display labels. It is the lights themselves that carry the signal. Thus no wires are needed at all.

This ingenious device, termed the Indoor Light Interactive Display (ILID) system, was developed by a TCG engineer and is now protected by patents in 25 countries to date.

Information concerning a change (eg of price) is sent from the store computer to a modulator, which is an electronic box attached to the wall by the light switches. This modulator develops a low-frequency signal which travels down the lighting circuits and is transmitted to the shelf labels via the modulation of the lighting levels. This signal cannot be detected by human eyes; to customers in the shop, no change in the lighting levels is perceived. All the labels change instantaneously.

TCG SAM have formed a joint venture with the inventor, Trevor Gray, to form a company called TCG ILID. Other partners are involved (as described above), including the French computer company, Bull. TCG ILID holds the exclusive marketing rights for light-transmitted information systems, which could prove to become very valuable.



A major customer has been found to drive the product development, in this case the supermarket giant, Coles-Myer. This firm was persuaded of the benefits of the idea, and put up initial cash to develop a product to its specifications. Again it is more than simply a customer. It has become a partner

(without equity) by having rights to first production, to best price, to product enhancements, and to sharing in the details of the product development. Coles Myer was sold financially on the deal through the Australian government's

150 per cent tax deduction scheme for Research and Development. In this case, TCG was able to assist Coles-Myer apply successfully for a 150 per cent tax deduction for every dollar it spent on the ILID development.

The upshot is that a brilliant Australian invention is being developed in Australia, and a major supermarket chain is brought into the 'engine room' of high technology development. Substantial domestic and export sales await the joint venturers and it was the 150 percent tax deduction scheme that provided the financial incentive.

The Five-Step Triangular Process

This series of new product development arrangements is simply a sample of the leverage exerted by TCG's approach to networking. Other examples could be cited, such as the development of a barcoding system for use in office file tracking applications, involving the Computer Power Group and the Australian Taxation Office as partners in the first instance, but with applications further afield in the offing. In these cases, the power of networking is shown to best advantage. The steps in the TCG 'triangular' process of networking new product development, are worth spelling out in detail. Five such steps can be identified.

Step One: Identify The Market Niche

TCG is the technologically sophisticated firm that becomes aware of new possibilities for extending its expertise in data capturing, or electronic data interchange, or computing, into specialised applications. It is TCG which researches the application and develops a strategy for its development.

Step Two: Find A Development Partner

TCG then seeks a firm which has complementary skills, markets or technologies, to be a partner for the development. In the case of the fuel metering terminal, it was an existing meter supplier, which otherwise could have been a head-to-head competitor; and in the case of ILID, it is the inventor himself who is the development partner.



**Step Three: Find
A Major
Customer**

TCG then scours the world for likely customers for the envisaged product, and tries to convince them of its potential benefits for their particular operations. It seeks one of these to come into a partnership arrangement as the 'principal' customer, with contractual rights that carry it well beyond the status of customer. But in general it is not offered equity participation; this is reserved for the joint venturers, who have their eye on future developments in fields well outside the specialisation of the first major customer.

Step Three closes the 'triangle', thus establishing a three-way network of firms all with very different backgrounds but a common interest in the new product under development. The major customer's order provides the cash, in general, that finances the development - rather than a government grant (which runs out) or equity participation by an investment firm looking for quick profits.

**Step Four:
Involve Other
parts Of The
TCG Group In
Product
Development**

TCG has the unique capacity to bring its sister-companies into the development process, in a way which 'screens' the joint venturers from the glitches in the product development process. They deal not with TCG as a whole, but with TCG SAM or another of the TCG group; it is TCG SAM that then commissions development work in software, hard-ware and manufacturing from other TCG companies, keeping the mistakes, the rows and the stuff-ups 'in the family' as it were, and not exposing them to the critical gaze of the joint venturers. This is a feature of the TCG group that its component companies have been able to exploit time after time in their external dealings.

**Step Five:
Extend The
Triangle In New
Directions**

As the initial product development proceeds, the joint venturers look to realise their rights for further development. This takes each of them in new directions. TCG in particular seeks to link the development to others it has in the pipeline, generating further ideas and joint ventures which can in turn be 'triangulated' with a major customer. This is a process which might be described as 'technological leverage'.

The process of forming triangles is clearly open-ended and dynamic, bringing TCG into contact with an ever-broadening array of partners. It is this capacity of self-renewal and dynamic extension that is such an attractive feature of networks, making them a model for future economic organisation.



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