A high-technology incubator in Belo Horizonte (Brazil) plans to develop revenue sources from consulting and other high-value services to clients also outside the incubator to reduce its reliance on rental income.

As per InfoDev reports, Parquesoft in Colombia, for example, negotiates sales on behalf of its entrepreneurs, collecting 10% of fee for the service, and Kharkov Technologies charges a membership fee to new virtual clients. Others are providing services to non-incubating clients such as training or consulting, or as in BusyInternet’s case, running ancillary businesses such as an ISP, a bar and a restaurant.

### The case of Biominas in Belo Horizonte

“Biominas, a biotech-focused incubator in Belo Horizonte, provides an example of innovative financing which also contributes to financial support for promising new ventures. The incubator has started a program with the Inter-American Bank (IAB) to finance new companies in Brazil. IAB gives the incubator grant money of $200,000 to $1 million to invest in promising new firms. The program allows the incubator to invest money in its more promising firms with the return on investment reinvested in other companies. This particular incubator had financed 12 companies through the IAB program, and has also started a seed capital program in partnership with FINEP and FAPEMIG (Minas Gerais State Agency for Science and Technology) of R10 million (US$4.382 million) to invest as seed capital in early-stage biotech ventures, with the incubator taking a 25–30 per cent stake in the venture in return for its investment.”

7. **Ownership and Management of Incubators**

In this section we consider the key issue of ownership and management of incubators from the viewpoint of public policy.

In many countries the first wave of incubators have been established and managed by the governments, either nationally or locally. With few exceptions, this ownership pattern has proved dysfunctional.

Publicly owned incubators have generally been too cautious and employed people without sufficient business experience to deliver the level of services required. Managers of public owned incubators tend to be more focused on bureaucratic aspects and devote less time for engagement with clients or tend to link incubator clients with sources of financial assistance and can be less selective in entry procedures. In Malaysia part of the reform process launched since 1999 was aimed at overcoming the lack of experience of part of the incubator managers of public funded incubators, who were considered as bureaucrats with little knowledge in entrepreneurship.

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35 Aruna Chandra “Business incubation in Brazil: creating an environment for new ventures” (Belo Horizonte interview, 2006).
As a result most of new start-ups were going out of business, showing a lack of support to their activities and sometimes poor entry procedures.

A lack of managerial skills can also be found also in university environments where disfunctionalties are often compounded by part-time management which further undermines the needed focus on the incubatees and on efficiency (e.g. lessons from Thailand and India). Whereas mixed ownership structures (public, private) encourage incubators to make riskier direct investment in their clients and thus to be more efficient in selection of ideas (Chandra and He, 2008).

The government role is essentially to develop the technical infrastructure, policy framework and initial finance and to help catalyze the venture creation process, but experience shows that the establishment of public private partnership (PPP) based incubators contributes to maximizing the positive effects of the incubation experience.

Several countries, for instance Brazil, South Africa, India, Thailand, Finland and Turkey, have promoted governmental mechanism favoring PPP based incubators. Some countries, for example Israel, have opted for privatization programs for state owned incubators, attracting private financial entities as well as strategic actors within specific sectors to be owners of incubators and to operate them in a more efficient way. This has brought higher success rates; both in raising funding for projects during the incubation period and after graduation, as well as enhanced quality of the management teams within the incubators. About 65% of the privatization program’s graduated projects have successfully attracted private investments compared with 45% in the original program. In the same way, the corporatization of government-funded technology parks and research institutes has managed to change the mindset of incubator managers towards being more business-minded and profit-oriented.

Incubators are expected to enable their clients to integrate with the commercial, financial and research networks that are critical for the growth and success of their business. Equally, incubators needs to be integrated into the same networks to build their reputation and support for their activities. Consequently, incubator require clearly defined mechanisms to ensure they are networked with key stakeholders and are clearly recognized as a centre of expertise within appropriate networks.

In many cases, either the ownership or the governance structure is used to construct a public private partnership that facilitates the incubator and its clients networking with key stakeholders. Sometimes, incubator programs encourage important institutions to engage in incubation projects and select incubators for grant funding using evaluation criteria that include effective networking arrangements. In other cases, some restrictions are imposed. For example, the program may require that at least one of the owners is an academic institution or that incubators demonstrate a well functioning cooperation with universities.

The main problem is to decide who does what and build an appropriate level of trust and shared vision. This implies measures to introduce the incubation concept and its advantages to all partners involved and reach an overall consensus on incubator program objectives.

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36 In other cases an advisory committee is used to achieve the same effect.
Workshops can be organized with relevant institutions to invite foreign experts from benchmarked countries to provide training and exchange experience about successful PPP in business incubation, thus inducing the establishment of similar initiatives. Relevant institutions can be involved in sectoral strategy working groups created for the identification of projects (including incubation) that can be financed through public sources.

The next table summarizes the ownership and partnership structures adopted in the four countries of our case studies. The observed formal legal structures, ranging from internal department, through to private company, to NGO, etc, reflects the different legal options available.

<table>
<thead>
<tr>
<th>Ownership / Partnership structure</th>
<th>Brazil</th>
<th>New Zealand</th>
<th>Malaysia</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mixed partnerships as required by the specific project. Government works in tandem with industry and universities.</td>
<td>Generally stand-alone commercial entities, owned by universities or regional economic development agencies. A small number are joint ventures between these organisations and national, multinational companies.</td>
<td>National authorities, universities, voluntary organisations.</td>
<td>All the incubators are registered as independent entities, being either not-for-profit companies or trusts, and report to STP.</td>
</tr>
</tbody>
</table>

Because of different ownership models, business incubators’ management and leadership styles vary. When the owner is a government agency, the incubator is usually established according to the public institution model with a director appointed to manage the incubator and take care of its functioning. Incubators established on the basis of a public-private partnership are also usually set up according to the prevailing corporate style and culture, creating a board appointing a general manager.

Currently, some newly-established government-sponsored business incubators are also following a more corporate style. A combination of a board of directors and a manager appears more likely to be a successful mix for the management of an incubator. In this way the board can be focused on the incubators formulation and implementation of strategy and hold a clear overview of progress against the targets set., while the manager can take care of the day-to-day management and engage more with clients. To this aim, a clear division between the governing committee and day-to-day management is essential and the governing committee maybe be overseen, as in New Zealand, by a central monitoring body.

The initial leadership of the incubator is critical to the success of the initiative. Experience shows that dynamic, entrepreneurial managers are crucial to set the course of an incubator, while cautious, overly academic or bureaucratic managers generally fail to produce high-impact initiatives.
Day-to-day management is clearly delegated to a manager with the appropriate business skills and experience plus management expertise. The incubator manager is responsible for the delivery of the service mix to clients, marketing programs to attract clients and responding to needs as they occur. Other staff should be working under his/her direction.

The management of the incubator should be carried out like the incubator itself is a company with its own cost and profit constraints to be respected and for which the manager takes responsibility. The incubator is designed to assist companies to become fast growth businesses which inevitably requires the clients to adopt a clear commercial orientation. It is difficult to conceive how an incubator which is not commercially oriented itself would be able to create such an orientation in its clients.

Equally, the terms and conditions of employment should ensure there is an award system that encourages success with a clear system for replacement if success is not forthcoming. One of the most significant reasons for the failure of incubators is the appointment of inappropriate people into key positions. This can be caused because the employment package reflects considerations of the public sector not relevant to the post (i.e. pay structure, grades and terms of employment appropriate for a public servant on an internal career path), or because the post becomes part of an appointment system where the needs of the incubator are not central to the decision, (i.e. part of wider career paths for civil servants, etc).

In all selected countries examined in our study, a corporate style prevails or has been introduced in the day-to-day management, as can be seen in the table below.

<table>
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<tr>
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Whatever the ownership and management structure it is important that the public sector is clear about its objectives, the level of finance to be provided and the outcomes expected. This enables the development of clear performance measures (see below) and also for periodic bids to be made for future public support.

Program designers should place particular emphasis on recruiting and empowering strong managers to drive the management of business incubators.

Donors should consider investing more directly in leadership development of incubator managers, including capacity building for high potential individuals, global networking and knowledge-building opportunities, and disseminating effective strategies for recruiting and retaining talent in the incubation sector.

8. Monitoring and Appraisal

At the start of this paper we raised issues relating to the best practice approach. Central to best practice is the need to clearly define policy and program objectives in operational terms, enabling clear monitoring of outputs and appraisal of the impacts actually achieved, enabling identification of the process leading to success which can be further improved and replicated as necessary.

Programs designed to implement the objectives of government within best practice should be defined as a set of goals to be achieved with the resources available. Such goals should follow SMART principles; these are that the program should be: specific, measurable, attainable, realistic and timely. Monitoring and appraisal systems are then easy to define and relate to the “measurable” part of the SMART definition, enabling both implementers and policy makers to see the real progress being made in achieving the policy goals.

The design of a monitoring and appraisal system for a business incubation program is therefore critical to identify unexpected problems that are preventing successful outcomes and to identify where further improvements can be made. The matrix adopted should clearly reflect the objectives and goals of the program without placing unnecessary strain on the incubators resources.

Within this framework monitoring should be used to regularly measure ongoing process in implementing the specific policy goals with the measures designed to effectively capture key quantitative measurements of performance, allowing policy makers to evaluate what is being achieved against the clear goals they have set, both for individual incubators and for the program as a whole. It also allows for evaluation of incubation against other policy options for the promotion

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**Specific** - To set a specific goal you should be able to answer the six "W" questions:
- **Who**: Who is involved?
- **What**: What do I want to accomplish?
- **Where**: Identify a location.
- **When**: Establish a time frame.
- **Which**: Identify requirements and constraints.

**Measurable** – refers to the need to establish concrete criteria for measuring progress toward the attainment of each goal you set. The measurements should be easy to collect and relate directly to the goals to be achieved. When you measure your progress, you stay on track, reach target dates, and know the effort required to reach your goal.

**Attainable** – Goals should be clearly defined and achievable within a specific period for them to be attainable.

**Realistic** - To be realistic, a goal must represent an objective that implementers are both willing and able to work.

**Timely** - A goal should be grounded within a time frame. With no time frame tied to it there's no sense of urgency.