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# Key success factors for business incubation in South Africa: the Godisa case study

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**B**USINESS INCUBATORS ARE ORGANIZATIONS that provide protected environments for business start-ups. Not all incubators are successful, and it is therefore important to investigate the factors that contribute to successful, as well as unsuccessful, business incubation. We report the findings of such an investigation, conducted on the Godisa incubators in South Africa. Godisa, consisting of twelve incubators spread across the country, is an initiative of the departments of Trade and Industry, and of Science and Technology. This study found that eight factors determined the success of the incubators. An important conclusion is that these success factors were also strongly correlated with each other. Highly conducive environments for business incubation are seen as those characterized by the presence of all

eight factors. Government policies should therefore be aimed at creating and sustaining such environments. The key success factors reported here can also serve as a set of industry guidelines to help incubator managers better serve their clients.

## Introduction

The term incubator is often used to describe a wide range of organizations that, in one way or another, help entrepreneurs develop their ideas, from inception to commercialization. A business incubator is an initiative that systematizes the process of creating successful new enterprises, by providing them with a comprehensive and integrated range of services, which include floor-space made available on a flexible and affordable, but temporary, basis; common services that include secretarial support and shared use of

office equipment; hands-on business counselling; access to specialized assistance such as research and development support and venture capital; and networking activities operating as a reference point inside the premises among entrepreneurs and outside to the local community.<sup>1</sup> Business incubation is a means by which visions of new businesses are turned into reality with reduced risks.<sup>2</sup> Incubators aspire to have a positive impact on a community's economic health, by maximizing the success of emerging companies.

Business incubators have proved effective in many parts of the world. According to Rice and Matthews,<sup>3</sup> only 10 business incubators existed in the United States in 1980. There were nearly 500 by 1995, and a new incubator has been opening every week. Despite the rapid growth, the success of business incubators has been mixed. It is important to investigate and understand the factors that contribute to successful business incubation. We report the findings of such an investigation that has been conducted in South Africa.

## The Godisa Initiative

According to Wagner,<sup>4</sup> business incubation was first practised in South Africa in 1995 when the Small Business Develop-

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**Table 1.** The 12 Godisa Incubators (2005).

- Embizeni Innovation Support Centre (Durban)
- Zenzele Technology Demonstration Centre (Randburg)
- Softstart Business & Technology Incubator (Johannesburg)
- Timbali Technology Incubator (Nelspruit)
- Acorn Technologies (Cape Town)
- Bodibeng Technology Incubator (Johannesburg)
- Chemin Chemical Technology Incubator (Port Elizabeth)
- eGoli BIO Life Sciences Incubator (Johannesburg)
- Furntech Furniture Technology Centre (Cape Town, George, Durban, Umzimkhulu, White River)
- Mpumalanga Stainless Initiative (Middelburg)
- National Fibre Centre (Port Elizabeth)
- Downstream Aluminium Centre of Technology (Richards Bay)

ment Corporation (SBDC) established 'hives of industry'. These were premises in African townships with access to relatively developed infrastructure such as telephones, electricity and storage. The hives also played an important role in facilitating subcontracting partnerships between large and small enterprises.<sup>4</sup> Hives were not real incubators in the current form because there was no set period for the company to move out of the hive. Cassim<sup>2</sup> gives a full account of the incubation initiatives in South Africa since 2000. The participants include government at all levels, the private sector, donors and partnerships between these role players.

The Godisa initiative was launched in 2000 by the departments of Trade and Industry and of Science and Technology. The aim of the Godisa Programme has been to create technology-intensive small, medium and micro enterprises (SMMEs) through the enhancement of technological innovation, improvement in productivity and accelerated international competitiveness. Two important objectives of this programme have been to create new businesses and new employment opportunities. The Godisa initiatives are listed in Table 1.

### Key success factors

Business incubators help emerging growth companies survive, and grow, during the start-up period when they are most vulnerable. Not all business incubators are successful, however. For this reason, many researchers have investigated the factors that contribute to the success of business incubation. We identified a total of 39 success factors reported in the literature.<sup>4-15</sup> Many of these factors represent different aspects of the same basic construct, while others are deemed irrelevant to current conditions in South Africa (for example, the early stage of incubation and the culture of entrepreneurship). The list has been shortened therefore to eleven potential success factors (see Table 2).

The research proposition for this study

**Table 2.** The set of eleven potential success factors for business incubation.

1. Access to science and technology expertise and facilities
2. Comprehensive business plan
3. Stringent selection criteria
4. Availability of funding
5. Quality of entrepreneurs
6. Stakeholder support
7. Supportive government policies
8. Competent and motivated management
9. Financial sustainability
10. Experienced advisory board
11. Networking

is that the eleven factors all contribute to the success of incubation in South Africa. We therefore propose that these factors all have positive relationships with the success of the incubator centres.

### Data collection and analysis

Primary data were collected by means of questionnaires and interviews. Seventy-three questionnaires were sent to the Godisa initiative manager, the incubator managers and entrepreneurs in the innovation centres. The response rate was 52% with thirty-eight questionnaires returned. One was from the Godisa manager, eleven from the incubator managers, and 26 from the entrepreneurs.

The eleven potential success factors were treated as the independent variables and the concept of 'success' as the dependent variable. Since the incubators were not equal in size and age, it was necessary to develop a normalized measure that would enable valid comparison of the incubators. The operational definition of success used was return on investment, measured as annual sales per capital invested. This measure, for the dependent variable, thus provides a fair comparison between the different incubators. Correlation and regression analysis and tests for significance were used to analyse the data and we report as follows.

### Findings

Cross-correlation analysis found that eight of the eleven potential success factors were correlated and cannot be treated as independent variables (Spear-

man correlation coefficients >50%). These inter-dependent variables were: 1) access to science and technology expertise and facilities, 2) availability of funding, 3) quality of entrepreneurs, 4) stakeholder support, 5) supportive government policies, 6) competent and motivated management, 7) financial sustainability, and 8) networking. These variables were therefore combined into a single independent variable labelled 'conductive environment', its value being the mean of the values of the above eight inter-dependent variables. The other independent variables were: 1) a comprehensive business plan, 2) stringent selection criteria, and 3) an experienced advisory board (Spearman cross-correlation coefficients <50%).

Correlation analysis between the dependent and independent variables shows very weak relationships between incubator success and a proper business plan, stringent selection criteria, and an experienced advisory board (Spearman correlation coefficients of 0.11, -0.34 and 0.19). In contrast, a very strong correlation was found between incubator success and a conducive environment (Spearman correlation coefficient = 0.94). In this situation, it made sense to develop a model for the relationship between these two variables. This was done using simple linear regression analysis. The estimated model is  $Y = 0.85X$  ( $Y$  is incubator success, measured as annual sales per capital invested, and  $X$  is the conducive environment index of the incubator). This is a highly significant model ( $t = 3.88$ ,  $F = 15.1$ ) with 63% of the variation in  $Y$  explained by  $X$ .

### Conclusions and recommendations

The Godisa case study has shown that incubators that operate in conducive environments tend to be more successful than those that are not in such a setting. An important finding of this research is that the success factors that showed strong correlation with incubator success were also strongly correlated with each other. The highly conducive environments for business incubation are those characterized by the following key success factors.

*Access to science and technology expertise and facilities.* Conducive environments for business incubation are located where access to scientific and technical knowledge and services and supporting infrastructure is readily available, either from universities or scientific institutions such as the CSIR and science councils.

*Availability of funding.* Incubators must

have the ability to help raise capital and provide business tax and risk management services for its clients. Conducive environments are those that have ready access to low-interest funding such as government grants and loans or angel and venture capital.

*Quality of entrepreneurs.* Notwithstanding the fact that this research found a weak correlation between stringent selection criteria and incubator success, it did find that successful incubation depends on the quality of entrepreneurs being incubated. Entrepreneurship development seems to be more important than selection. The entrepreneurs must have sufficient knowledge and ability, be prepared to take calculated risks, and have the desire to succeed.

*Stakeholder support.* The involvement and support of stakeholders, consisting of sponsors drawn from the local business community, government, the broader community, venture capital providers, entrepreneurs and incubator management are vital for success. It is important that there is clarity, consistency and cooperation from its stakeholders that is consistent with the needs and capacities of the locality it is aiming to serve. There should be consensus on a mission that defines the incubator's role in the community and quantifiable objectives to achieve the mission. Incubators should develop stakeholder support, including a resource network.

This research found only a weak correlation between support from an experienced advisory board and incubator success. This could simply be that advisory boards have not yet made an impact because of the early stage of incubation in South Africa, or it might indicate that advisory boards are currently ineffective. Incubators need to appoint effective boards of directors committed to the incubator's mission.

*Supportive government policies.* The success of services directed to entrepreneurship promotion depends largely on a broad-based consensus on economic and industrial policy. Initiatives such as business incubators make sense only if the relationship between entrepreneurship and

economic growth has been acknowledged at all levels of government.<sup>1</sup> Government policies should therefore be aimed at creating and sustaining environments that are conducive for business incubation, that is, having the characteristics described in this report.

*Competent and motivated management.* The success of business incubators depends to a large extent on the quality of the management teams appointed to operate them. The team leader should have a business background and entrepreneurial skills, a flair for leadership and organization and be well networked in the community. The management team should be given measurable objectives against which performance can be monitored and incentives should be offered to managers to encourage and award outstanding performance. Incubators must recruit and appropriately compensate management capable of achieving the mission of the incubator.

*Financial sustainability.* Incubators should operate as viable businesses, with their own sources of sustainability such as taking equity, royalties and even ongoing subsidies. The ultimate test of success of an incubator is whether it can be self-sustaining. Incubators should be dynamic models of sustainable, efficient business operations. It is surprising that we found only a weak correlation between implementing a comprehensive business plan and success in incubation. This might also be due of the early stage of incubation in South Africa. Business plans might simply not have had enough time to make an impact yet.

*Networking.* Partner networks contribute to incubator successes through sharing of the wisdom reaped from both achievement and failure. Networking is also important in expanding market opportunities for entrepreneurs and graduates. This network typically includes universities, industrial contacts, and professional service providers such as lawyers, accountants, marketing specialists, venture capitalists, angel investors, and volunteers.

As stated, government policies should be aimed at creating and sustaining environments that are conducive for business

incubation characterized by the eight key success factors. The key factors reported here can also serve as a set of industry guidelines to help incubator managers better serve their clients. Our research shows that incubation programmes that adhere to these principles and best practices outperformed those that did not.

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