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Seven Strategic Issues for STP Management; Two Perspectives

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Executive Summary

There are an ever increasing number of declared Science and Technology Parks (STPs), and Business Incubators (BIs), around the world and there are just as many established quality benchmarks and performance indicators for their management. There will always, depending upon which evaluation techniques are used, be some STPs that are deemed successful whilst others are seen as less so. Beyond the basics of running a STP, STP managers will need 'answers' to a number of key challenges they face if they want to achieve a highly distinctive performance. Through observation and reflection seven such challenges have been identified.

1. Corporate Social Responsibility
2. Environmental Sustainability
3. Mentoring and Coaching
4. Economic and Financial Viability
5. Preparing Businesses for Growth
6. Churn Strategy
7. Justifying their Existence

The seven challenges will be approached from two perspectives; one strategic and the other a practical 'get the job done' viewpoint.

Keywords: Coaching, mentoring, business strategy

Introduction

The Author is based in the Highlands of Scotland which is sparsely populated, supporting many micro businesses and SME's. The Author through observation and experience has analysed whether there is a clearly identified economic need for STPs which is driving their development in his region or if economic development agencies are susceptible to a Cargo Cult¹ mentality; i.e. build STPs and the innovative, creative tenants will come. The seven strategic issues at the core of the paper have been arrived at through reflective thought and by hard won personal practical experience - they are in the Authors opinion an antidote to Cargo Cult.

Relevance: History and Geography

The influence of history and geography on economic development in the Scottish Highlands influences the type of STP developed in the region compared to the rest of the UK. Low population levels, geographical remote areas of economic activity and historical dependence on grant aid make for unique economic challenges within this part of the UK but at the same time they resonate with many other areas in the world. The Author has witnessed a convergence and crossing over of three worlds which were once very much separate in his particular region: public research, business and government. This convergence has been represented and explained through the Triple Helix model and are themes that are clearly evident in the Plenary Session 2 of the conference and are relevant to the Authors seven strategic issues.

Seven Strategic Issues

The Author and presenter of this paper has identified the following seven strategic issues that he offers here for consideration. The Author does not claim this is a definitive or exhaustive list by any means but he does believe they will contribute to the overall improvement and success of a STP.

1. Corporate Social Responsibility (CSR)

Organisations will often have their own particular definition for CSR; though there is likely to be many similarities between them. A simplistic definition is that CSR is about how companies manage their business activities to produce an overall positive impact on society. The World Business Council for Sustainable Development² used the following definition. "Corporate Social Responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large". In the same report² some evidence was given of the different perceptions of what this should mean from a number of different societies across the world.

¹ The term 'cargo cult' is a reference to aboriginal religions that grew up in the South Pacific after World War II. The practices of these cults centre on building elaborate mock-ups of airplanes and military style landing strips in the hope of bringing the return of the god-like airplanes that brought such marvellous cargo during the war. Usage probably derives from Richard Feynman's characterisation of certain practices as "cargo cult science" in his book "Surely You're Joking, Mr. Feynman!" (W. W. Norton & Co, New York 1985, ISBN 0-393-01921-7).

² "Making Good Business Sense" by Lord Holme and Richard Watts,
<http://www.wbcd.org/DocRoot/lunSPdlKvmYH5HjbN4XC/csr2000.pdf>

Definitions

There are many definitions for CSR; they can be as different as “CSR is about capacity building for sustainable livelihoods. It respects cultural differences and finds the business opportunities in building the skills of employees, the community and the government” from Ghana, through to “CSR is about business giving back to society” from the Philippines.

In the USA CSR has been defined more in terms of a philanthropic model. Companies make profits, unhindered except by fulfilling their duty to pay taxes. Then they donate a certain share of the profits to charitable causes. It is seen as distasteful for the company to receive any benefit from the giving.

The European model is much more focused on operating the core business in a socially responsible way, complemented by investment in communities for solid business case reasons. It can be argued that this model is more sustainable because:

- Social responsibility becomes an integral part of the wealth creation process - which if managed properly should enhance the competitiveness of business and maximise the value of wealth creation to society.
- When the going gets tough, the incentive should be to practice CSR more and better - if it is a philanthropic exercise which is peripheral to the main business, it will always be the first thing to go when ‘push comes to shove’.

But as with any process based on the collective activities of communities of human beings (as companies are, and indeed so are STPs) there is no ‘one size fits all’. In different countries, there will be different priorities, and values that will shape how businesses act. This is true for STPs as well; a particular STP may well have a cluster of businesses that share a common theme or industry sector. This should shape the thinking of everyone involved in the development of a CSR Charter.

STPs and CSR Charters

There will be increasing pressure on businesses to play their part in social issues. The STP management and the managers of BIs can have a very positive role to play in driving forward the adoption of CSR principles within companies on their STP or in their building in the case of BIs. The United Nations have an initiative entitled the Global Compact³ which defines ten principles in the areas of human rights, labour, the environment and anti-corruption. A STP could define its own principles but it would appear reasonable from the Authors practical point of view for a STP’s overarching CSR Charter to be based on some if not all of the United Nations ten principles as they are well documented, have been accepted by many large organisations and are there to guide and not to dictate actions. It would be unreasonable to expect that all ten principles are covered in every CSR Charter or that every principle will be covered in the same way as circumstances will vary from STP to STP. It is likely that STPs will want to ‘cherry pick’ from the ten those that are most appropriate for their business needs. The ten principles are³:

Human rights

1. Businesses should support and respect the protection of internationally proclaimed human rights; and
2. make sure that they are not complicit in human rights abuses.

Labour standards

3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
4. the elimination of all forms of forced and compulsory labour;
5. the effective abolition of child labour; and
6. the elimination of discrimination in respect of employment and occupation.

³ “After the Signature. A guide to engagement in the United Nations Global Compact”
http://www.unglobalcompact.org/docs/news_events/8.1/GC_Welcome_Kit_final_260307.pdf

Environment

7. Businesses should support a precautionary approach to environmental challenges;
8. undertake initiatives to promote greater environmental responsibility; and
9. encourage the development and diffusion of environmentally friendly technologies

Anti-corruption

10. Businesses should work against corruption in all its forms, including extortion and bribery.

By having a CSR Charter a STP is promoting itself as having a positive attitude towards corporate citizenship and is also managing the risk for all the companies and organisations involved by taking a proactive stance on what could become critical issues. It also demonstrates the sharing of good practices and knowledge which is an important facet of STP management. The Charter becomes part of the ethos of the STP. STPs should consider the development of a CSR Charter because it makes good business sense to set the lead for the companies based on the STP - whether those companies have their own plans in place or not.

2. Environmental Sustainability

Hong Kong Science Park⁴ is on a 22 hectare site at Pak Shek Kok, beside Tolo Harbour. It is a research and development location for high tech companies to set up base and it has made efforts to be sustainable. A review of available literature reveals that it has reusable formwork systems, Canadian sustainable sources of wood, waste sorting for reuse and disposal, wastewater pollution control and has used recycled glass tiles for 2,400 sq metres of pavement areas. There are Building Integrated Photovoltaic panels connected to the local power grid eliminating the need for batteries that store power on site. The air conditioning systems use heat pump and heat pipe systems to recover energy from office exhausts and chiller condensers respectively. Separate refuse chutes – one for wastepaper collection and one for other solid waste – are used in an automatic refuse collection system linked to all buildings. Waste is directly transported via mechanised vertical duct shafts and underground pipes to a central collection station for accumulation, compression and storage of office recyclable materials. A central car park building is provided so building users can walk through a landscaped park environment to buildings away from traffic emissions and shuttle buses to urban areas connect with public transport networks.

Impressive and certainly not an academic exercise or feel good project. Sustainability helps to improve the quality of our lives but is also good business, and for an STP it is attractive for tenants. For an STP to implement an environmental sustainability programme in a practical way it helps to have a model for guidance; the Five Capitals Model is a reasonable place to start.

Five Capitals Model

The Forum for the Future⁵ declares that there are five types of sustainable capital that deliver the goods and services we want.

Natural Capital is the building block that produces goods and services. It includes:

- Resources - renewable and non renewable materials
- Sinks - that absorbs, neutralise or recycle wastes
- Processes - such as climate regulation

⁴ http://www.hkstp.org/HKSTPC/en_html/en_index.jsp

⁵ <http://www.forumforthefuture.org.uk/our-approach/tools-and-methodologies/5capitals>

Human Capital consists of people's health, knowledge, skills and motivation; they support productive work.

Social Capital is the networking that takes place between families, communities, businesses, trade unions, schools, and voluntary organisations in support of Human Capital.

Manufactured Capital is material goods or fixed assets such as tools, machines and buildings which contribute to the production process rather than being the output itself.

Financial Capital enables the other types of Capital to be owned and traded.

Sustainable development is a way to manage these capital assets for the long term. It is a dynamic process through which organisations can begin to achieve a balance between their environmental, social and economic activities and is applicable to individual business as well as groups of businesses on an STP. Where appropriate and practical the STP should commit itself to sustainability and best practice; carbon neutrality; waste into energy; and, biodiversity because companies of all types will expect it of the STP. It will become increasingly difficult to attract companies to an STP that does not play its part in sustainable issues.

3. Mentoring and Coaching

Coaching and mentoring are processes that should enable both individuals and businesses to achieve their full potential. Coaching and mentoring share many similarities, they both facilitate the exploration of needs, motivations, desires, skills and thought processes to assist the individual in making real, lasting change. Rather than directing the course a client should take questioning techniques are used to facilitate the client's own thought processes in order to identify solutions and actions. They apply tools and techniques including one to one training and counselling. They ensure that clients develop personal competencies and do not become dependent on the coaching or mentoring relationship. They both should work within their area of personal competence.

Both coaching and mentoring offer a method for analysis, reflection and action that ultimately enable an individual to achieve success in one more areas of their life or work. Coaching has been defined as "a process that enables learning and development to occur and thus performance to improve. To be successful a Coach requires knowledge and understanding of process as well as the variety of styles, skills and techniques that are appropriate to the context in which the coaching takes place"⁶. A definition for mentoring is "off-line help by one person to another in making significant transitions in knowledge, work or thinking"⁷

As can be seen, there are many similarities between coaching and mentoring. Mentoring, particularly in its traditional sense, enables an individual to follow in the path of an older and wiser colleague who can pass on knowledge, experience and open doors to otherwise out of reach opportunities. This is where STP management can prove invaluable in providing the wisdom whether paid for or not that the company needs. Coaching on the other hand is not generally performed on the basis that the coach has direct experience of their client's formal occupational role like the STP management should have. Here outside agencies or consultants can be sourced for the company - the STP management providing a value added service. It is essential to determine what the client company's needs are and to ensure that the coach or mentor can supply the type and level of service required, whatever that service is called.

⁶ "The Manager as Coach and Mentor" Eric Parsloe.

⁷ "Executives and Directors" David Clutterbuck and David Megginson.

4. Economic and Financial Viability

The existence of well developed university and research facilities and strong technological talent is usually the best conditions for the success of STPs and incubators. Another is the availability of financing. STPs were never meant to be 'short term fixes', either in terms of their support for economic development or as property investments. These days investors in STPs take a long term view of financial viability and often have received a good return on their investment.

Even with increasing private investment in STPs even some highly successful STPs will require a level of public sector finance for specific programmes. This is likely to include establishing locations for specific and strategic technologies which require expensive initial fit out, or for expanding the STPs operations into a more difficult, economically disadvantaged part of a city or region. However, even in these instances, financial viability should be an essential objective.

Commercial investors have seen returns driven down by global liquidity and low inflation. Any chance of earning superior returns demanded a combination of knowledge and capital. This imperative has led to some developers, initially hesitant in signing flexible, relatively short term leases with small, technology based companies, to come to understand both the risks and the excellent opportunities of such deals. They have recognised that the very flexibility of the leases has aided the growth of tenants, thus facilitating clustering and the overall growth and reputation of the STP.

Although successful STPs produce a good commercial return on their property, they use a planned proportion of the surplus to support some of their services to tenants. Others offer a range of subsidised business services. Several take a 'portfolio' approach, and support the operation of their BI (both property and incubation services) from surpluses generated from rental income.

Experience

From observation it would appear there are basically four models to structure the financing of a STP. One is for the state to cover the initial investment and then let the STP meet all operating costs on a fee for service basis. The other is to cover both the capital and continuing operations as a social investment. The third is to structure the STP as a private, for profit, real estate based business. The fourth model is for a public private partnership, whereby the state meets capital and initial (say 3 to 5 years) operations, on the premise that private investors will eventually take over the entity.

Governments in some countries can be reluctant to commit public funds to STPs for a variety of reasons: limited budgetary resources, more urgent priorities, the lack of guarantee for quick returns and job creation, or simply because there is incomplete understanding of the longer term benefits of investing in technological enterprises. For these reasons, a more acceptable form of government assistance can be an in kind and indirect (for example relief of import/export duties) public support.

One of the essential goals for a successful STP is to be self sustaining in its operations after an appropriate start-up period. The financial plan should be based on the assumption that the STP will be a long term staged development and that when the STP is fully built out and occupied, expenditures and revenues will be balanced, and any surplus distributed to the investment partners or reinvested in STP facilities.

To help meet this goal, a STP's start-up package should include sufficient funds to support operations through the early ramp up period, and property assets against which the governing body can raise further development funds. Typically, a start-up package might support:

- A professional management team;
- The development of STP infrastructure to the point where it can accommodate the first wave of core assets and resident companies;
- The marketing activities needed to recruit these assets and companies to the STP; and,
- The development activities required to create the STP's initial offering of unique services.

The extent to which a newly established STP is exposed to commercial rate debt service is a significant issue. Initial debt should be limited or structured in a way that gives a young STP enough financial breathing room to build a tenancy and site amenity package that is consistent with its vision and entry policies. Sticking to the 'rules' particularly entry and exit criteria is very difficult when there is an over whelming requirement to make rental income.

5. Preparing Businesses for Growth

Starting businesses and helping them through early growth is not the whole story. Many businesses also need support for growth later on. It is important to put in place a series of policies designed to provide assistance to growing enterprises and organisations on the STP. Such an approach could prove very useful for example in promoting much needed new and emerging technologies for sustainable development, particularly for meeting needs in developing countries.

Policies to Encourage Growth

There a number of policies which can encourage growth and these may be particularly important if the STP is located within a developing country. Identified as some of the more important are:

International Economic and Technical Cooperation. To foster international efforts and attract companies from abroad, STPs can offer preferential treatment in certain cases. These might include: simplified corporate registration procedures; extensions of credit; multi-entry visas for technical personnel, and preferential siting for new facilities.

The Attraction of Talent. Academic institutions might have initially attracted personnel, but the role of the STP is to keep them productively engaged, and to make best advantage of their technical skills for economic development purposes. Policies designed to do this could include special provisions for work permits for scientists and engineers returning from abroad, or for foreign technical specialists who will work in the STP. Policies often focus on economic attractions, research funding or subsidies.

Protection of Intellectual Property Rights. Help can be extended to individuals and organisations to protect their intellectual property rights. The Author has found the help of the Scottish Intellectual Assets Centre⁸ invaluable in this regard. All of these policies are relevant to the growth and development of businesses and organisations on an STP. There are a number of tasks that companies and organisations should undertake to prepare themselves for continued growth.

Tasks

These tasks can be used by STP management to help guide their own development and that of their tenant companies.

Review the Experience of Existing STPs

There are many different types of STPs in many different countries. Some of these operate as independent organisations, some are attached to regional governments, and some have national and international ties. Some have a narrow high tech focus, while others have a broader technological base. This task is designed to review the nature of these various STPs; identify their organisational structure; and, establish how successful they have been in developing and fostering new

⁸ Scottish Intellectual Assets Centre, <http://www.ia-centre.org.uk/>

technological entities. This task gives an opportunity for STP management to avoid re-inventing the wheel.

Target Particular Technologies

A wide range of technologies might be appropriate for businesses based on STPs but it may be appropriate for the STP to become more narrowly focused. As discussed earlier some existing STPs such as the Hong Kong Science Park have focussed on clean energy technologies, eco-environment protection, cleaner production technologies and water efficiency technologies. An analysis could be conducted to explore the advantages and disadvantages of such an approach, based upon market analyses, commercialisation potential and existing technological factors.

Explore Potential Opportunities for Partnerships through STP associations

Such a STP network may be newly established with one of the STPs playing a leading role.

Estimate Financial Needs and Develop Growth Programme

Making sure businesses on the STP are finance ready at different stages of their development and also providing access to funding opportunities matters to their long term success.

Disseminate Information to all Businesses/Organisations on the STP

Disseminating information to all 'members' of the STP not only promotes their participation, but also increases their feeling of belonging.

Starting businesses and helping them through early growth is not the whole story. Many businesses also need support for growth later on. Making sure businesses are finance ready at different stages of their development and also providing access to funding opportunities and business networks really matters.

6. Churn Strategy

The world is experiencing growth in the building of STPs; however it is sometimes hard to ascertain on what quality of feasibility study they are based. As mentioned in the introduction, Cargo Cult is akin to 'build it and they will come' as described in this cautionary tale from China.

"Visitors to Silicon Valley saw what they wanted to see, perhaps what they were conditioned to see - lots of thriving, new, high technology firms in a neat and pleasant setting with a prestigious university in their midst. It seemed self evident that the university generated the firms through the transfer of its technology, a model that universities had propagated over the previous decade.

Also unquestioned was the assumption that the greenery of the STP had an essential part to play in the success of high technology firms. The greenfield R&D sites of the 1960s had already made this part of the model familiar. And so, governments in the US, and then governments around the world, sought to establish their own versions of Silicon Valley in the science park.

Those responsible for science parks often went to extraordinary lengths to replicate precisely the trappings of the real Silicon Valley. The manicured lawns, the trim trails, the ducks and duck ponds, the space age architecture of science parks everywhere are pure Cargo Cult⁹."

Rather than believing in this 'STP Cargo Cult' STP management should concentrate on eliminating barriers to competition and making it easy for entrepreneurs to start businesses of all kinds. An emphasis on how STPs offer a protective environment for small companies, which allows them to survive despite their often limited capacity to raise venture capital, is a more worthy reason to be located on an STP than the allure of gleaming buildings. To prevent unplanned churn (the combination of new business start-ups entering the STP and existing businesses failing) it is

⁹ "Science parks in China: a cautionary exploration Int. J. Technology Intelligence and Planning, Vol. 1, No 1, 2004" Stuart Macdonald and Yunfeng Deng (2004)

important to put in place the assistance that companies want and then to acknowledge the usefulness or otherwise of this assistance. From the Authors personal experience it is evident that business and professional service assistance is not generally used and valued by clients of BIs. This is more than likely the case as well with companies located on many STPs. Clients, in general, when thinking of the support networks provided for them will often fail to recall, or give credit for, advice they receive. Despite this disappointing lack of acknowledgement it is possible to continue to suggest that professional services do need to be much more tailored to the needs of the clients especially when dealing with 'Gazelle' companies¹⁰.

It is easy not to move businesses out if they are successful and paying rent. But making space for riskier newcomer's matters, it is the lifeblood of the STP or BI. It is important to think through how to deal with struggling as well as successful companies. It is important to assess whether policies such as incubation may actually be artificially extending a businesses life.

7. Justifying their Existence

Part of the challenge of understanding the function and value of STPs is differentiating them from conventional Industrial Parks that happen to house technology based businesses. The primary difference is this:

- In conventional Industrial Parks, the relationship between the site managers and their tenants ends when the company enters the Park;
- In the STP model discussed in this paper, the relationship between the STP managers and their resident companies begins when the company enters the STP.

Not even the most successful facilities perform to best practice in all key performance areas. STPs are about achieving long term and sustained economic development from their assets and knowledge.

Some STPs may not succeed or thrive as expected. There are a variety of external and internal factors that slow down or reduce the growth and success of STPs. Some will be within the control of STP owners and managers, others will fall beyond them. For example, the sort of internal factors that can negatively impact on a STP's development can include:

- The loss of direction either in terms of what makes a STP unique or maintaining an effective and consistent approach to marketing and operations;
- Lack of defining vision and/or mission;
- Operating or entry policies that are compromised (often due to financial pressure);
- Weak or improperly constituted funding and operating partnerships with conflicting objectives;
- Lack of top level endorsement;
- Executive support is essential, an internal and external champion is required;
- Enthusiasm and skills to organise and sustain support for a 10 to 15 year vision is required;
- The STP cannot lose rank as an institutional priority; and,
- Turnover in STP management is disruptive, but turnover in key institutional leadership positions can be catastrophic.
- Lack of consistent availability of suitable tenant space over time.

These factors impact on micro issues (funding) and macro issues (local standing and contributing to economic and social regeneration as well as supporting emerging technologies). The public relations benefit of being associated with a successful STP raises the profile of all the organisations involved and brings multiple other benefits. It is therefore very important to maintain a constant, positive, public relations and communications strategy, portraying the site as a key engine for growth in a smart regional economy. But, they should be real achievements and contributions not just PR spin.

¹⁰ <http://www.investopedia.com/terms/g/gazellecompany.asp>

Conclusion

In summary, every STP should have a Charter of Corporate Social Responsibility (CSR) to cover social, environmental and employment issues. The Charter is part of the ethos of the STP and tenant companies and organisations can use it as a model. Where appropriate and practical STPs should commit themselves to Environmental Sustainability and best practice. As with CSR, environmental sustainability is not only intrinsically beneficial in its own right but it is also a positive PR message for the STP. Along with the provision of facilities and services, access to funding and peer networking Mentoring and Coaching are important forms of intervention by STP management. As the number of STP and BI environments continues to grow there will be competition for relatively scarce investment resources. To maintain Economic and Financial Viability and to grow, STPs will themselves have to develop and sustain a competitive edge. Preparing Businesses for Growth involves making sure businesses are finance ready at different stages of their development and also providing access to funding opportunities. Problem solving and providing support services to companies are strands within a Churn Strategy; another important part is developing awareness within the entrepreneurial tenant the value of the support services provided to them. Finally STPs should become adept at Justifying their Existence, not through empty advertising but by highlighting real achievements.

The Author believes that STPs need to develop an awareness of, and insight into, the seven strategic issues outlined and that this will encourage the development of embryo action plans for how STPs might deal with some or all of the issues.