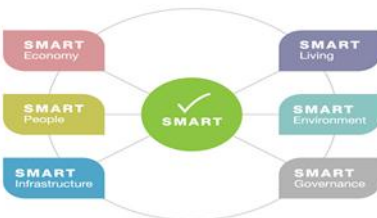


SMART Technopark in the Stellenbosch Innovation District (SID)

Background: Technopark was originally conceived of as a Science Park in the late 1970's when Prof Christo Viljoen, then vice-dean of the Engineering faculty at Stellenbosch University, went to Taiwan. There he visited Shinshu Science Park, one of the world's revered successes. He brought over the concept to Stellenbosch, and managed to obtain buy-in from the local and national government. The park was established in 1985, and was supported by the Industrial Development Corporation (IDC) and housed an incubator and innovation lab. The park was managed by a committee and the local municipality. The entering of firms into the park was very slow for numerous reasons, including rigid control and a poor business community understanding of the concept and benefit of a science park. Other external factors such as an economic slowdown forced the management to allow it to become market-oriented in the 1990's and the strict criteria of firms entering the park were relaxed. Today the park is well developed, albeit not as a traditional science park, and consists of a variety of businesses ranging from satellite manufacturers, engineering, banks and finance institutions to design schools. However, there do remain numerous firms that fit the profile of traditional science park firms, but more importantly, fit the profile of the modern concept of 'innovation hubs'. There are a number of Internet & Communications Technology, (ICT) businesses, technology engineering firms, financing firms and more.

Modern innovation hubs or districts base their success on smarter use and pooling of resources. SMART means that there is an integrated approach to economic value including smart: *people, environment, mobility, economy, living, infrastructure and management*. This ensures the enhanced value and sustainability of the space and promotes vibrant interaction and creativity through sharing of ideas at strategic meeting places (ie. Coffee shops, bars etc). What all these 'innovation zones' have in common is a strong link to knowledge centres or universities providing incentives for collaboration and mutual learning providing value for business.



Future Technopark as a SMART park: The concept of clustering similar industry together, as in the traditional model of a science park has been shown to have mixed results. The more modern concept promotes a networked approach and encourages numerous visitors to the park, which brings in new knowledge and diversity. The vibrancy of modern 'science cities' and 'innovation districts' are known to stimulate innovation and mutual learning in all sectors of the economy



(eg. 22@Barcelona in Spain). This vibrancy is often created through incorporating arts and cultural elements into the environment. There is room for the Stellenbosch social culture to move into Technopark! Universities benefit because they can align certain research projects with real world ventures, and collaborate for joint problem solving increasing their capacity. Firms benefit because they receive a flow of new knowledge, skilled graduates, information and expertise that increases their competitiveness and innovativeness. Benefits exist through various forms of joint training and education programmes or internships for students etc.

Technopark, already shares many of these characteristics of modern innovation hubs as a competitive business space with a great supporting environment (Schools, university, living). But there is also much room for improvement! The ideal for the transformation of Technopark lies in its future design as a sustainability oriented Innovation hub or urban "Smart Innovation Park or Zone". Through the transformation of the physical infrastructure and the implementation of SMART systems the park is expected to increase its value, attractiveness and competitiveness.



The research Intervention: Since the commencement of a research intervention in 2010, there has been a lot of stimulation and talk about sustainability and the future of Technopark among several stakeholders including: the Technopark Owners Association (TPOA) whom represent the owners of the buildings, businesses, local and national government and the University. The TPOA are legally bound by a constitution, and have to engage with the municipality on several matters of service delivery in the park. This relationship has been strained in the past, but with new visions for the park and through stakeholder engagement there is hope for much better collaboration in achieving i) a collective strategic vision and ii) implementing the vision. From January 2010, studies including interviews and contact sessions with the Technopark community revealed that the mandate of the

park was in a state of flux. What was worse was that the service delivery of this 'special zone one' (Technopark) was very poor, and the park was neglected. The local municipality had also conducted several studies concerning this matter, but there was no immediate improvement. Through the research intervention, a public event was held in June 2010 designed to establish a future vision for the park, which was well attended. The vision was established by a wide group of stakeholders, as well as the TPOA through several workshops – where the challenges were also raised. There were several fears that

the traditional 'science park' ideal would result in businesses having to leave the park as they did not fit the profile of a research and development or ICT company. Since then, and through the intervention of the research process, the stakeholders understood that they were in control of their own destiny. It would be more about collaboration with the municipality and university towards a common vision and goal. The immediate action plan is to finalize the vision, as a legal agreement or memorandum of understanding between the university, the local government and Technopark leadership.

The official vision is: ***“To enable and create a sustainable, vibrant and active innovation community”***

Transforming Technopark into a SMART zone in the Stellenbosch Innovation District?

Since 2010, the research intervention and future prospects of Technopark as an innovation hub, expanded to include the whole town of Stellenbosch as an Innovation District (SID). The question in 2013 now becomes more about what is Technopark going to become as a part of the SID.

TP requires attention! However, the concept of transforming TP into a SMART innovation hub, increases the potential for assistance from government. If TP is to become a conventional business park, it will stand little chance of future investments in infrastructure, nor will it be identified as a strategic economic asset for the Western Cape.

Transforming Technopark into a SMART innovation hub requires the following institutional and legal process:

A: Finalization of a representative **Technopark management structure**, organization or institution as a legal entity (ie. TPOA).

B: Finalization of an **institutional agreement** between TP, the SID, Stellenbosch University or the Cape Higher Education Consortium (CHEC), the Municipality and the Economic Development Partnership (EDP) and the Department of Science and Technology (DST).

C: Amendment and agreement of the **zoning of Technopark** to be representative of the vision and mandate of the park as a **SMART innovation zone/hub** within the Stellenbosch Innovation District (SID).

And the following SMART project upgrades and implementation processes over a specific time period ie. Until 2020:

A: Economy – Ensuring that TP is a competitive location for business operations, innovation promotion, showcasing and is marketed well.

B: People – Ensuring that there is a strong institutional link between the SID and the university for skilled graduates and research for business needs. Also improving communication and collaboration in the park.

C: Living – Considering living quarters within Technopark, to stimulate a work-life environment, with restaurants, bars and coffee shops.

D: Environment – the environment of Technopark should be sustainable, including the dams, recycling and waste treatment etc.

E: Mobility – Ensure that mobility into, out of and within Technopark is seen as a vital systemic infrastructure solution.

E: Infrastructure – Roll out the existing high speed dark fibre network in Technopark, establishing an intranet. Implement SMART infrastructure projects such as 'off-the-grid' energy and waste projects. TP mobile apps, and smart meters etc.

Stellenbosch region. An example could be an innovation centre to service the SMART concept as a:

Knowledge Innovation & Technology 4 Sustainability Centre (KIT4S)®



A building designed as a multi-functional innovation, knowledge generation and collaboration facility for SMART sustainability should be designed specifically for collaboration between business and industry,

government and researchers for the purposes of knowledge co-production and innovation for clean development and sustainability. The Swiss clean-tech research sector have already expressed interest as a potential tenant in collaboration with the SID. The facility would also be designed to produce spin-out companies as technology to service a SMART Stellenbosch Innovation District. Such a facility could provide the key puzzle piece for the upgrading of Technopark into a modern innovation hub environment and catalyze the town of Stellenbosch to become an innovation district for sustainability.



The aerial view of Technopark above shows the green areas as currently zoned public open space (dams) and the yellow areas as open properties for further development potential.

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And the park potentially requires an innovation and additional conference centre built around the principles of innovation and collaboration to service the business and research needs of the wider

The SID www.innovationdistricts.org is an initiative supported by:

