



**Joint Supplementary Submission  
regarding the  
Technology Innovation Agency Bill**

To: The Department of Science and Technology  
Zelna Jansen - Committee Secretary on Science  
and Technology

By: AfricaBio & BioSA

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# Government support for innovation: International best practice

## 1. Introduction

At the request of the chairman of the Parliamentary Portfolio Committee on Science and Technology, we have prepared this submission on international best practice with respect to Government support for innovation. This is particularly pertinent in the context of the TIA Bill currently under consideration. A logical place to begin this analysis is COFISA – the Cooperation Framework on Innovation Systems between South Africa and Finland. COFISA is housed within the DST and is funded by both the DST and the Finnish government. It has as its main objective the enhancement of the effectiveness of the South African National System of Innovation (SANSI), thereby contributing to economic growth and poverty alleviation. In January 2007, a six-member COFISA delegation undertook a working visit to Finland to understand the highly successful Finnish National System of Innovation in terms of its structures and institutions, their roles and activities, development issues and future perspectives. The visit entailed high-level meetings with key role-players representing the main institutions responsible for supporting the Finnish National System of Innovation. This visit resulted in a very insightful *COFISA Trip Report*, to which we will refer frequently in this document. A second very useful document is the COFISA Input Report on TIA, which was drafted by leading Finnish innovation specialists after consultation with various South African stakeholders. Both of these COFISA reports are attached hereto.

In the spirit of co-operation that we wish to foster, we trust that this joint supplementary submission by AfricaBio and BioSA will contribute constructively to the Portfolio Committee's deliberations on the TIA Bill.

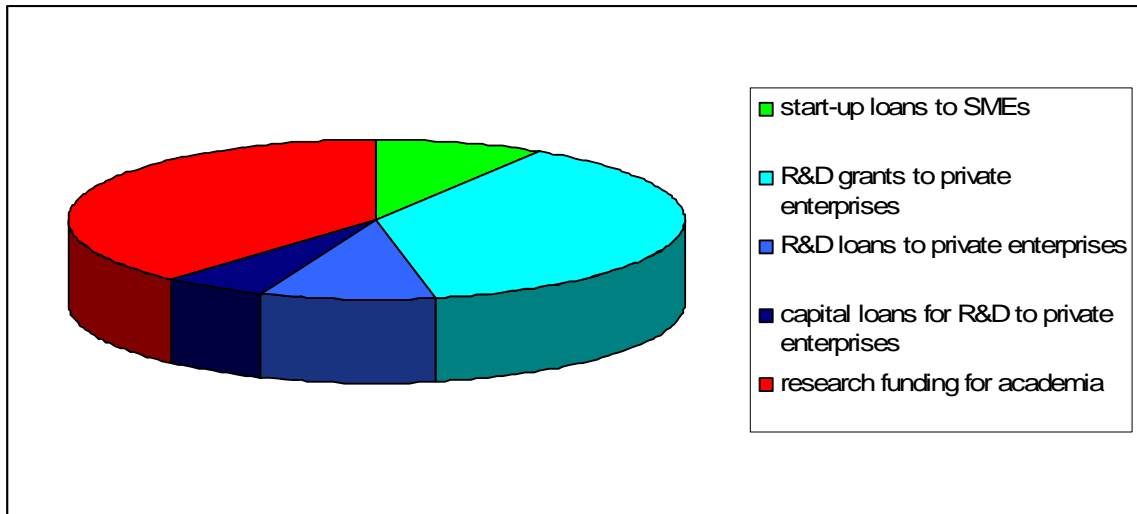
## 2. The central role that SMMEs should play in generating innovation

Finland's primary innovation support instrument, TEKES, has an annual budget of € 429 million, which is distributed as follows:

- € 178 million R&D grants to private enterprises
- € 41 million start-up loans to SMEs
- € 43 million R&D loans to private enterprises
- € 25 million capital loans for R&D to private enterprises
- € 179 million research funding for academia.

Contrary to the current situation in South Africa, where public research organizations are the dominant recipients of public innovation support funding, in Finland the private sector actually obtains more public funding than academia.

**Distribution of TEKES funds:**



The COFISA delegation accordingly observed that:

*South Africa needs a similar instrument [to TEKES] that can support start-up businesses and R&D in the private sector.*

This sentiment was also reflected by the feedback that AfricaBio and BioSA received from our members, who asked for clarity regarding the intended beneficiaries of TIA.

It is insightful that the COFISA delegation identified the following as the very first “lesson learnt” by the visit:

*A vital measurement of success of the Finnish NSI is the number of SME's created.*

It is essential that this pro-SME approach must also be integral to TIA. Parliament must measure the performance of the National System of Innovation – and TIA in particular – against the number of SMMEs that are created and supported. This must be a short-term and medium-term objective: *Innovative* SMMEs are not the commercialization agents of universities' IP. *Innovative* SMMEs innovate themselves by doing R&D from the very earliest stages. It is therefore important that TIA will also assist SMMEs in building their own innovation capacity in terms of infrastructure. (Note that about 6% of TEKES's distributions go to capital soft loans to private enterprises – i.e. buying research equipment.)

In order to clarify the objectives of TIA, and in order to expressly place SMMEs within the statutory determined focus of TIA, AfricaBio and BioSA suggest that *Section 3 Object of the Agency* be amended to read as follows:

### **Object of the Agency**

3. *The object of the Agency is to support the State in stimulating and intensifying technological innovation and invention in order to improve economic growth and the quality of life of all South Africans by supporting private as well as public initiatives that aim to develop and exploit innovations and inventions. In particular, without detracting from the generality of the aforesaid, the object of the Agency is to support SMMEs to build their own research and development capacities, thereby empowering them to participate in the whole innovation cycle and to contribute to South Africa's innovation output.*

The COFISA Input Report on TIA clearly confirms the AfricaBio-BioSA position on the importance of drawing SMMEs to the centre of the innovation system:

*Innovation will realise through companies. Their interest, involvement, commitment, participation and adoption of TIA's instruments is the function of TIA. When designing policies, tools and instruments, TIA needs to closely associate with companies. In fact, if TIA will be successful in this task, it can and should also – to certain extent – represent the voice of South African innovative companies for policy makers.*

Further strong support for our position comes from the recent OECD Report on Innovation in South Africa:

*A major gap in current innovation policy is indeed the lack of comprehensive support to innovation in SMEs.*

*...too much focus on the role of public R&D-performing institutions. This may have obscured important issues, in particular ... the central role of business enterprises in generating and implementing innovation...*

*Suggestions: ... Bring business enterprises much more centrally into the map of the innovation system both as generators and implementers of innovation and as creators of human resources for innovation.*

For TIA to be different from the current funding instruments, for TIA to have a real impact on South Africa's innovation output, we must clearly and explicitly bring SMMEs to the centre of the innovation system. Parliament now has a chance to do this by amending the TIA Bill as suggested.

### **3. Close the window on disincentives**

TEKES never takes equity or board seats. There is another Finnish funding agency, SITRA, which sometimes functions as a VC and in certain cases takes equity of board seats. SITRA

is, however, not the primary innovation support instrument in Finland. To the contrary, SITRA funding is restricted to very specific programme areas that change periodically. Furthermore, SITRA's VC investments in 2006 only amounted to € 9.4 million, a mere fraction (about 2%) of TEKES's pure grant and soft loan investments. This is why the COFISA delegation observed that "TEKES is essentially the backbone of the Finnish NSI funding component." And TEKES never takes any equity or board seats.

Sources:

<http://www.tekes.fi/eng/>

COFISA Trip Report

SITRA Annual Report 2006 – see <http://www.sitra.fi/en/>

In addition to the Finnish model, AfricaBio and BioSA have conducted a brief survey of a few other successful innovation systems abroad. As will be clearly shown by the results, not a single one of the primary funding instruments in the countries surveyed takes equity or board seats:

### 3.1 European Union

- Primary innovation support instrument: Seventh Research Framework Programme (FP7)
- Annual budget: € 7.6 billion (R76 billion)
- Nature of support: Grants to SMEs, universities, etc to do R&D. Even non-European organizations can qualify on condition that the recipient is part of a consortium that includes European members.

***No equity, no board seats***

Sources:

[http://cordis.europa.eu/fp7/home\\_en.html](http://cordis.europa.eu/fp7/home_en.html)

[http://ec.europa.eu/research/fp7/pdf/fp7-factsheets\\_en.pdf](http://ec.europa.eu/research/fp7/pdf/fp7-factsheets_en.pdf)

### 3.2 Estonia

- Primary innovation support instrument: Enterprise Estonia
- Annual budget: € 55 million (Note: Population: 1.4 million)
- Nature of support: Grants to SMEs, universities, NGOs, etc to do R&D, feasibility studies, etc. Specific objective to promote entrepreneurship.

***No equity, no board seats***

Sources:

<http://www.eas.ee/?lang=eng>

COFISA TIA Input Report, p17

### 3.3 Spain

- Primary innovation support instrument: Centre for Industrial Technology Development
- Annual budget: € 240 m (R 2.4 billion)
- Nature of support: Long-term, zero-interest loans to companies for R&D, innovative projects.

**No equity, no board seats**

Sources:

<http://www.cdti.es/index.asp?idioma=es>

[http://www.eurotransbio.net/article.php3?id\\_article=128](http://www.eurotransbio.net/article.php3?id_article=128)

COFISA TIA Input Report, p17

### 3.4 Netherlands

- Primary innovation support instrument: SenterNovem
- Annual budget: € 1 billion (R 10 billion)
- Nature of support: Grants to companies, universities, etc. In addition, high-tech SMEs qualify for start-up funding and loan guarantees.

**No equity, no board seats**

Sources:

<http://www.senternovem.nl/English/>

[http://www.eurotransbio.net/article.php3?id\\_article=19](http://www.eurotransbio.net/article.php3?id_article=19)

### 3.5 Flanders (region of Belgium)

- Primary innovation support instrument: Institute for the Promotion of Innovation by Science and Technology [Instituut voor de Aanmoediging van Innovatie door Wetenschap en Technologie in Vlaanderen (IWT)]
- Annual budget: € 230 million (R 2.3 billion)
- Nature of support: Grants to companies, universities, and individual PhD students. In addition, SMEs get grants for feasibility studies and innovation projects.

**No equity, no board seats**

Sources:

[http://www.iwt.be/iwt\\_engels/](http://www.iwt.be/iwt_engels/)

[http://www.eurotransbio.net/article.php3?id\\_article=125](http://www.eurotransbio.net/article.php3?id_article=125)

### 3.6 Canada

- Primary (federal) innovation support instruments: Industrial Research Assistance Program; Business Development Bank of Canada

**No equity, no board seats**

Sources:

[http://irap-pari.nrc-cnrc.gc.ca/main\\_e.html](http://irap-pari.nrc-cnrc.gc.ca/main_e.html)

<http://www.bdc.ca/en/home.htm?cookie%5Ftest=1>

### 3.7 Queensland (State of Australia)

- Primary innovation support instrument: Smart State Strategy
- Annual budget: AUS \$ 290 million (R 1.784 billion)
- Nature of support: Private and public R&D, research infrastructure, funding for early start-up companies, education and training of students, etc. "...setting new horizons will advance the Queensland biotechnology industry by servicing existing companies, promoting growth of new ones and attracting international firms to the state".

**No equity, no board seats**

Sources:

<http://www.dtrdi.qld.gov.au/dsdweb/v3/documents/objdirctrlled/nonsecure/pdf/12584.pdf>

[http://www.dtrdi.qld.gov.au/dsdweb/v3/guis/templates/content/gui\\_cue\\_cntnhtml.cfm?id=24104](http://www.dtrdi.qld.gov.au/dsdweb/v3/guis/templates/content/gui_cue_cntnhtml.cfm?id=24104)

[http://www.jcu.edu.au/office/research\\_office/Codes/QRDP\\_Intro.html](http://www.jcu.edu.au/office/research_office/Codes/QRDP_Intro.html)

### 3.8 Victoria (State of Australia)

- Primary innovation support instrument: Science, Technology and Innovation initiative
- Annual budget: AUS \$129 million (R 794 million)
- Nature of support: R&D, new start-up companies, R&D partnerships (encourage collaboration between education, research and industry sectors), clinical trials, gaps in discovery-to-market pipeline.

**No equity, no board seats**

Sources:

<http://www.business.vic.gov.au/BUSVIC/LANDING//SEC10.html>

<http://www.theage.com.au/news/world/what-have-we-got-for-biotech-billions/2007/10/27/1192941399344.html>

[http://www.business.vic.gov.au/busvicwr/\\_assets/main/lib60021/01\\_sti\\_initiative\\_review\\_exec\\_summary.pdf](http://www.business.vic.gov.au/busvicwr/_assets/main/lib60021/01_sti_initiative_review_exec_summary.pdf)

[http://www.business.vic.gov.au/busvicwr/\\_assets/main/lib60041/final%202007%20bsd.pdf](http://www.business.vic.gov.au/busvicwr/_assets/main/lib60041/final%202007%20bsd.pdf)

### 3.9 New South Wales (State of Australia)

- Primary innovation support instrument: Department of State and Regional Development
- Annual budget: AUS \$88 million (R 541 million)
- Nature of support: Private and public R&D, support of commercialisation of biotechnology research, provides assistance to non-research establishment costs (IP protection), proof of concept activities, etc.

**No equity, no board seats**

Sources:

[http://www.osmr.nsw.gov.au/state\\_of\\_research/science/view.php?id=995](http://www.osmr.nsw.gov.au/state_of_research/science/view.php?id=995)

[http://www.business.nsw.gov.au/NR/rdonlyres/1AAFA505-4180-4E94-9234-](http://www.business.nsw.gov.au/NR/rdonlyres/1AAFA505-4180-4E94-9234-34A0320ACC0D/0/NSW_Biomedical_profile_0611.pdf)

[34A0320ACC0D/0/NSW\\_Biomedical\\_profile\\_0611.pdf](http://www.business.nsw.gov.au/NR/rdonlyres/1AAFA505-4180-4E94-9234-34A0320ACC0D/0/NSW_Biomedical_profile_0611.pdf)

### 3.10 Brazil

- Primary innovation support instrument: Studies and Projects Funding Body (FINEP), also known as the Brazilian Innovation Agency. FINEP houses 22 different innovation support programmes
- Annual budget: US\$ 200 million (R 1.4 billion)
- Nature of support: 5 programmes give loans to companies; 3 programmes give grants and incubation services to SMEs; 4 programmes give grants to cooperative ventures between private and public entities; 3 programmes give grants to public entities; 4 programmes give grants to S&T projects aimed at social development; and 3 programmes invest in companies, of which one programme functions as a VC fund that takes equity.

*Of the 15 programmes in the FINEP portfolio that are specifically aimed at the private sector, none except the one VC fund takes equity or board seats. In addition, this VC fund mostly invests in private VC funds, to act as anchor investor to stimulate the private VC market.*

Sources:

<http://www.brasil.gov.br/>

<http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=976023>

[www.finep.gov.br/english/FINEP\\_folder\\_ingles.pdf](http://www.finep.gov.br/english/FINEP_folder_ingles.pdf)

<http://www.scidev.net/News/index.cfm?fuseaction=readNews&itemid=2815&language=1>

### 3.11 Conclusion: Close the window on disincentives

This analysis clearly highlights that international best practice stands in stark contrast to the current practice amongst the DST's funding instruments, namely to take equity and board seats. Two reasons were mentioned by the DST for this current practice:

- *Control*: In response, we note that the DTI does not require equity when they give SPII funding – yet SPII is widely considered a very successful programme. The DST can exert control over its investments through reporting and audit mechanisms.
- *BBBEE*: In response, both AfricaBio and BioSA are ready to work with the DST and government on a biotechnology industry-specific BBBEE scorecard. A scorecard is widely acknowledged as a far more effective way of ensuring real BBBEE than the DST's current focus on equity.

The above overview of international best practice policies reinforces AfricaBio and BioSA's stance, and we would like to appeal to the portfolio committee to amend the TIA Bill to explicitly close the window on entrepreneurial disincentives. As long as the window is open for TIA to take equity and board seats, it will exercise this opportunity – as is the current norm for DST funding instruments. As a result, South African innovation will continue to be underexploited. **Let TIA start on a new page of business-friendly practice; let TIA start on a new page of alignment with international best practice.**

Our proposed amendments in this regard, as per our original submission, are:

Section 4(1)(a)(iii) must be deleted and a new section 4(4) inserted:

4(4) The Agency may not acquire any interest in any consortium or enterprise undertaking the development or exploitation of any technological innovation or invention,

Section 4(2) should be reformulated as follows:

4(2) Where the Agency enters into any transaction with any person, consortium, enterprise or company in terms of subsection (1) (a)(i),(ii) and (iii), the Agency may acquire representation on the Board of such person, consortium, enterprise or company, on the condition that such person, consortium, enterprise or company may at any time and without any penalty dismiss such representative at its discretion.

#### **4. The road ahead**

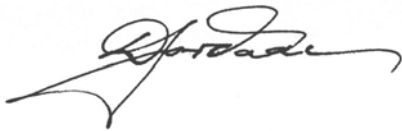
We trust that this joint supplementary submission will contribute constructively to the Portfolio Committee's deliberations on the TIA Bill. AfricaBio and BioSA firmly believe that TIA is perfectly poised to herald in a new era of entrepreneur-friendly government support. Our members are ready, willing and enthusiastic to contribute to building a robust and globally competitive economy in South Africa.

Signed on behalf of BioSA:

A handwritten signature in black ink, appearing to read 'Michael Pepper', written in a cursive style.

**Prof Michael Pepper**

Signed on behalf of AfricaBio:

A handwritten signature in black ink, appearing to read 'Adv Donrich Jordaan', written in a cursive style.

**Adv Donrich Jordaan**