THE INNOVATION FUND

(TAP) TECHNOLOGY ADVANCEMENT PROGRAMME

EVALUATION TEMPLATE

Project Number	T50024
Project Title	Comprehensive pneumatically actuated exercise platform operating within a greater electronic fitness management system
Evaluator (Title, Name and Surname)	Prof. Tim Noakes
ID Number	
Indicate whether business or technical evaluator (or both)	Technical
Contact telephone number and e-mail	University of Cape Town
Place of work	
Report submission date	13th April 2005

Indicate Evaluation Phase

Evaluation	**Mark with an X**
1. Pre-Proposal	
2. Site Visit	
3. Presentation	
4. Full Proposal	X

EVALUATION SUMMARY

Rank each criterion on a scale of 1-5

1: Poor

2: Fair

3. Good

4. Very Good

5. Excellent

The product of the mark and weighting equal a score per criterion

e.g. Mark = 2, Weighting = 20, Score = 2X20 = 40

Criterion	Mark	Weighting	Score
1. Technology, Novelty	5	30	150
2. Market need, competitiveness and commercialization potential	4	30	120
3. National/Social benefits	3	20	60
4. Consortium	3	20	60
Total		100	390
Overall rating			

Overall Rating

Poor: 100-150

Fair: 151-250

Good: 251-350

Very Good: 351-450

Excellent: 451-500

Please comment on each of the criteria below in relation to the scores allocated (include comments on project risks). The comments recorded below will serve as verbatim feedback to applicants.

1. TECHNOLOGY, NOVELTY
The technology is clearly highly innovative. There are three innovations - **1. The use of pneumatic controls to regulate the work load throughout the range of motion and to be able to record that information for historical purposes and to regulate the exercise work load in future exercise sessions.** **2. The development of an upper body exerciser that allows exercise to be performed in more than one plane. This contrasts with current systems which allow exercise to be performed in a single plane. This is important since many sporting activities produce muscular imbalances (ie they overdevelop some muscles whilst leaving others less developed producing imbalances across joints) which contribute to injury. For example young fast bowlers develop injuries because of muscular imbalances that develop in their spinal muscles as a result of the multiplanar activity of bowling and which is not correctible with any current weight training systems. I believe that this system may allow such training to be done and evaluated by a single system for the first time. The benefit would extend to any activity in which activities are not simply in a single plane – which covers most sports except weight lifting, running, cycling and rowing, amongst others.** **3. The collation of information from each training session to allow (a) more effective training programmes based on what the athlete achieved in previous exercise sessions including the detection of excessive training in previous sessions that impairs performance in subsequent exercise bouts and (b) the use of this information by insurance companies such as Discovery Health to reward and incentivise regular participation in physical activity. This information will also allow large scale studies of the individual responses to different training methods and training regimes.**

2. MARKET NEED/COMPETITIVENESS AND COMMERCIALISATION
There is a clear need for this product in the current market. The product is highly

competitive with what is being produced elsewhere and has excellent prospects for commercialization.

3. NATIONAL/SOCIAL BENEFITS

If the product is commercially successful it has potential for real financial gain for the country since this is a growing market with huge international opportunities. However to achieve this will require taking on some really big players in the world. I would expect that the temptation will be to sell the technology to such companies rather than to compete with them.

4. CONSORTIUM

The consortium requires help with the commercialization of the product since their strengths appear to be in the engineering side of its development and may be rather weaker in their experience of how best to commercialise such a product.

The backing of a scientific organization is essential from an early stage to insure that the science behind the product is world class and that all competitive advantages can be maximized.

COMPLETE SECTION 5.1 or 5.2

5.1 Comments in support of the project advancing to the next stage of the business process

I fully support the further advancement of this project. It has great potential if properly managed and if the appropriate scientific support is forthcoming and is incorporated into the further development of the project.

Please note my declaration of potential conflict of interest under 6 below.

OR

5.2. Comments in support of the project being rejected at this stage

6. Highlight any concerns with respect to the project budget

I am not skilled in this area and so cannot offer any objective opinion.

Please note that I have been involved in this project from an early stage of its development and that my research unit stands to benefit if the project is funded since the unit will be involved in the further testing of the product.

Whilst this is a clear conflict of interest in providing this report, I believe that my opinions are as objective as it is possible to be. Please note that I do not stand to gain any personal financial advantage from this involvement. I do not now, nor will I in the future have any financial involvement with the consortium and I have provided my support for this project over the past 8 or so years without any consideration or receipt of financial or other reward.