



23 January 2006

Science and Innovation Study  
Productivity Commission  
PO Box 80  
Belconnen ACT 2616

**Re: Submission to the Productivity Commission to Review Public Support for Science and Innovation**

I write as an engineering professional who has worked in public funded research centres in the United Kingdom and Australia, and now head a leading centre based in a Non Government Organisation focused on technology for people with disabilities and the ageing, with the largest ongoing R&D group in that field in Australia. I also lead the bid for a Cooperative Research Centre in Technology for Independent Living as part of the 2006 CRC round.

I commend the Commission on the breadth of their Draft Report released in November 2006. It is encouraging to read that some of the issues that have been of concern to many of us in this sector have been recognized by the Commission. I endorse many of the Commission's suggestions to enhance the value of publicly funded research and development for all Australians.

I believe the Report effectively describes many of the intangible and hard to quantify benefits that flow from publicly funded research. I would add that in our experience there is also a challenge in gaining research support to address specific needs of individuals through relatively low cost solutions (eg mobile grab rails) that can potentially save substantial expenditure (given our ageing population) for individuals, organisations (eg aged care facilities) and governments. In many cases the current population makes do with traditional, suboptimal solutions because Australian firms are unwilling to invest funds on breakthrough technology because there is no assurance there will be any premium paid (especially by larger organisations and government) for those better solutions.

**Cooperative Research Centres**

The Report's comments on commercialisation and the CRC program reflect our experiences. The 2006 application round was particularly frustrating for many focused



**NovitaTech** (formerly Regency Park Rehabilitation Engineering)  
a division of **Novita Children's Services Inc.** (formerly The Crippled Children's Association of SA)  
171 Days Road, Regency Park, South Australia 5010  
PO Box 2438, Regency Park, South Australia 5942  
Telephone 1300 855 585 • Fax (08) 8243 8208  
enquiries@novita.org.au • www.novitatech.org.au  
ABN 47 993 053 341



on the public benefits of research. We believe an opportunity was lost to build key centres focused on research and development critical for Australia's economic future. The list of successful bids suggests that quick financial returns for industry or the government were the priority rather than building capacity and benefits over seven years.

The CRC in Technology for Independent Living bid was developed as a collaboration between centres in four states with international expertise to assist in developing a model that had succeeded in other nations (most notably Canada). Our emphasis was a national R&D centre to coordinate solution development that would enhance mobility, communication and community based living (generally in the domestic home). We had active engagement from end users (people with disabilities and older Australians), a number of SMEs and six Universities. The commercialisation pathways were outlined and the benefits defined in terms of:-

- improved or novel products for domestic and export consumption through direct end-user engagement at all stages of the product life cycle (a world first)
- the impact on 1.7 million Australians
- enhanced training for those specifying and committing public funding on product purchase where currently it is patchy or non-existent
- a focus on all three specific priorities under the National Research Priority "Promoting and Maintaining Good Health" and several other NRPs
- significant potential (based on the Canadian experience) of enhancing and creating SME working in this field, diverting many into areas with more significant return on investment than their current operations.

Despite this base, the proposal (like many others – eg the Australian Medical Devices CRC) was not successful at Stage 1 primarily because there was no financial commitment from government bodies and private sector entities that purchase devices for people with disabilities and the ageing. The CRC Committee felt that the potential \$237M domestic market was not a large economic benefit, especially without the 'commitment' of the 'end-users' (ie the purchasing companies and government departments).

I would welcome the opportunity to explore with Government the potential for a simplified collaborative system than the CRC process entails. Our experience was that many Universities were now extremely cautious about participating in a CRC (with some refusing outright) and many SMEs felt overwhelmed by the complexity and legal requirements when their prime focus was collaborating with Universities and other SMEs to develop better products.

### **Challenges of Securing Public Funding for Award Winning R&D**

NovitaTech has a substantial track record in the area of accessible telecommunications. We have secured partners from local and international telecommunications manufacturers and carriers and have now been funded three times by the federal Dept of Communication, Information Technology and the Arts (DCITA), each time achieving significant steps forward in enhancing access to telecommunications technology. Despite winning peer reviewed award for the staff and the research, we have been unable to secure any form of ongoing funding for the work from either a major public research funder (other than the short term DCITA grants) or key industry contributors.

In the case of the public funding bodies, they cite the small numbers that directly benefit from the outcomes of the research as a reflection of low significance. Measurement of the team's track record is also compromised by the limited places to publish in the field (only 3 international journals exist in the world with a direct interest) and the lack of consideration of past research work being completed on time and on budget, and

meeting or exceeding the agreed outcomes. Currently 20% of staff time in the R&D group of four people is necessary for submission of funding grant proposals to public bodies. To our knowledge, no public funding institution in Australia has a panel of reviewers and advisors who can adequately judge the merits of research proposals that deal with technology in the disability sector. The sector also struggles with the transition from initial or pilot studies (which are sometimes funded) to large scale or multicentred trials of potential solutions which are rarely funded. Thus cost and time saving solutions may never reach everyday use.

Commercial bodies have not been willing to support the work financially because they do not wish to support research that is likely to be widely disseminated for 'public good' and thus benefit their competitors. As a consequence the projects are funded by short term (6 months) grants or money raised through public donation.

### **Sustainability**

Of grave concern to many in this sector is the steady decline of research and innovation in the sector of technology for independent living. At a time when there is greater demand for people with disabilities to participate in the workforce, and for people who are ageing to remain in their homes (or even in the workplace) rather than institutional care, the number of researchers working in the field is static or falling. In South Australia, our University collaborating Department on the CRC bid is now in jeopardy as the Flinder's University considers closing it down due to "inadequate student enrolments."

Several innovative SMEs have been taken over by multinational providers and the innovation pushed off shore. There is no funding currently to assist young researchers and innovators to build their career in this field, let alone gain multiple benefits to our community by assisting people with disabilities to undertake studies and begin a research career (something being increasingly adopted in North America and Europe).

The challenge is that this sector of the Australian economy will never achieve large export sales or high returns on investment (especially as it is usually disadvantaged people or government who funds the purchase). However should it fail, the cost to our economy of reliance on imported technology (and potentially expertise in that technology use) will pose a significant cost to our community in the years ahead. It is critical in my opinion that the value of research and development be judged not just in commercial terms alone.

Dr Lloyd Walker  
Director - NovitaTech