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**NESTA TENDER: Measuring Innovation in the UK**  
**APPLICATION FOR TENDER: Contact:r.ferrers@business.uq.edu.au**

**Measuring user-led innovation**  
**(DUE 12 Jan, 2009).**

**Organisation:** Centre for Global Innovation and Entrepreneurship,  
University of Melbourne (<http://www.cgie.unimelb.edu.au/>)

**Mission:** “to successfully compete for government and industry funding to conduct qualitative and quantitative research on innovation management and entrepreneurship involving Large and Small to Medium Enterprises (SMEs) in Australia, Europe, Asia and USA, and to publish the results in high ranking international journals.”

**1.Summary**

**Key features of the proposed User Innovation Measurement Project include:**

-Development of online website to engage UK innovators to vote on best user innovations. Votes will measure breadth and depth of user innovation. Relative votes over time, measure level of UK user innovation. Voters will be encouraged to vote more than once to indicate the strength of benefit they receive from an innovation. Potential for Royal or other government awards or recognition for best UK user-innovations eg Celebrate user-innovation UK awards. Awards can provide social recognition at low cost. Alternative forms of recognition include, User innovation Hall of Fame, webspace for user innovation stories, including photos of innovators, and their innovations, along with user comments. These initial suggestions are preliminary, and will be revised and developed in conjunction with the literature review on user innovation, other metrics, and ongoing consultation, during the course of the project.

-Open research methodology will provide online access to all project development documents, except emails.

-Australian researchers will provide a lower cost research outcome, while internet tools provide supervisory confidence. Leading US user innovation researcher supervise as Board of Review. US researchers are used due to their high level of user innovation expertise, and better time zone for dealing with Australia than UK supervision. NESTA welcomed to participate in monthly review meetings.

-Largely qualitative research approach, focussed on finding and telling user innovation stories, to showcase understanding and valuing the discovered user innovations.

-Researcher is experienced in innovation and value theory, innovation research projects, free internet development ecommerce tools, and project management. Research supervisor is experienced in innovation research, and publication of innovation research in high quality books and journals.

## 2.Supporting Argument

It is a gorgeous summer day in Melbourne, and while most people here are returning from summer and Christmas holidays, I am writing you probably the only Southern Hemisphere tender application to measure innovation in the UK. Australia suffers from a tyranny of distance, yet our physical isolation comes with benefits, which relate to innovation and ‘fresh thinking’. As a new country, we move quickly with new ideas. We have far less to build on than Europe, UK, and to a lesser extent the US. I believe an Australian approach to the NESTA tender can offer similarly, an innovative, fresh thinking approach to measuring innovation. Further, as a young researcher, my generation (Gen X) offers a newer perspective from our predecessors, the baby boomers.

Our project team includes a Gen X, project leader, Gen Y, research assistance, and a baby boomer(BB), research supervisor. The project leader, Richard Ferrers, has been immersed in innovation, internet tools, and culture for fifteen years, including for five as Editor, The Journal of the Information Economy, and as internet entrepreneur (in online golf booking systems). In contrast, the research supervisor, is a product of an engineering, and manufacturing career, MBA, PhD in quality and operations management, and now A/Professor in Innovation and Entrepreneurship. The project leader, is writing his PhD in how consumers understand the value in new technology. His research puts the consumer, rather than the innovator at the centre of innovation investigation, just as this research project, puts the user innovator at the centre of the measurement process. There are no secondary sources in this project plan. Administration costs will also pay for, to the extent possible, a Gen Y, internet savvy, research assistant to learn from the rest of the project team, and provide a young person’s perspective, and administration assistance.

This project plan aims to engage user innovators to share their creation stories. The UK community can then vote on the stories, valuing the innovations they have benefited from. Through these stories and votes, a new metric of user innovation will be constructed – a UK user innovation index (U2I2).

This process is part of a new movement of engagement, characterised by the widespread use of web tools. I call this process ‘value management’. Value management is about engaging with users and customers, to understand what they value, to deliver that value to them, and to monitor how their needs and value changes over time. Perhaps the greatest exponents of this phenomenon are Apple, Google, and Amazon – the new net generation of companies. For instance, in the eighteen months since the launch of the first iPhone, Apple, through its discussion area has hosted approximately 500,000 messages, with 3.8 million views. This project will aim to provide a similar system to engage, and measure the value of user innovators.

The second significant user (innovator) is Barack Obama, through his pre-Presidential website, change.gov. The new president is representing open government, by opening a dialogue with his constituency. He opened a discussion area for questions on Nov 25, and by the end of Round 1 on 15 December, 2009 had attracted 20,000 users, with 10,000

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questions and 1 million votes on the most appropriate questions. Round two has just closed on 9 January, with 103,000 users, 76,000 questions, and 4.7 million votes in three weeks. This is the power of value management, open government, and the resource which this project plan will attempt to harness to measure user innovation in the UK.

Change.gov is powered by IntenseDebate, a free comment tracking service, created by Gen Y (20 somethings), and available for free on their website (intensedebate.com). These are the tools of the future, and this project plan will leverage them to bring unprecedented value creation to the measurement of user innovation in the UK.

This project will aim to bring 20,000 user innovators together in the last two months of the project (Aug – Sept 2009) to tell their stories, and vote on which of the innovations has brought most benefit and value to their lives. The innovators can invite others to vote through a simple, and free emailing system, but with safeguards to prevent gratuitous spamming.

The Australian researchers will leverage the internet to provide a timely and cost effective research service to the UK. A US board of review with leading US academics will be established, and paid per the below budget. The proposed leading US Board Member was unable to participate in this project proposal, since he is already participating in another tender proposal. The US is preferred for review, over the UK, since they have the leading user innovation researchers, and their timezones are more amenable to realtime communication. Alternatively, UK researchers can participate through the Board of Review, with more offline participation.

This project will also use an openResearch methodology, whereby all the project documents will be made available at the project website for comment and review by NESTA, the innovation research community, and UK public. This high level of transparency will to the greatest extent possible, facilitate the project, regardless of the distance between the researchers and UK participants. The only documents not included for review, will be the emails relating to the project.

The project will also be heavily influenced by the following academic literature:

- Sveiby, K 1987 *The new organisation wealth: measuring and managing intangible assets*
- Von Hippel, E 1988 *Sources of innovation*
- Von Hippel, E 2005 *Democratizing innovation*
- Prahalad, CK and Ramaswamy, V 2004. *The future of competition: Co-creating unique value with customers*
- Kim, W and Mauborgne, R 2005 *Blue Ocean Strategy*
- Bijker, W, T. P. Hughes & T. J. Pinch (Eds.), *The social construction of technological systems : new directions in the sociology and history of technology*

Thank you for this opportunity to present our proposal.

Richard Ferrers, Research Fellow

Centre for Global Innovation and Entrepreneurship, University of Melbourne

12 Jan 2009

3. Project plan, including costs (3.7), timescale (3.1), deliverables (3.2), milestones (3.3), risks (3.4), relevant experience (3.5), project uniqueness evidence (3.6)

**3.1 Project Timescale:** (Costs see 3.7 – GBP 45,909)

Project Start Date: 31 March, 2009

Project Completion: 30 September, 2009

**3.2 Project Deliverables:**

- Literature review, user innovation, including potential for metrics. Key literature, Sveiby 1987, on Measuring and Managing intangible assets.
- Literature review, national metrics eg CPI, Dow Jones index, other innovation metrics.
- Literature review, website tools to facilitate innovation metric collection.
- Proposed initial website design, after literature reviews.
- Proposed final website design, after community, board and NESTA consultation.
- Working website.
- Initial user innovation metrics, after community engagement with working website. Target engagement level: 20,000 voting visitors in two months, given Apple iPod Touch engaged 120,000 messages in 15 months since launch in September, 2007, at Jan 10, 2009.

**3.3 Project Milestones:**

Month 1,2: Literature Review: user innovation metrics, other metrics, such as Dow Jones Index, worldwide innovation indices to the extent that they relate to user innovation, use of internet tools to gather community input, such as blogs, wikis, fora.

Month 3,4: Website development for engaging with the UK public, including feedback from the proposed design

Month 5,6: Engagement with the UK public to gather user innovation stories, and for UK public to vote on the user innovations that have most benefited their lives.

Month 6: Provide feedback report to NESTA on the role of user led innovation in the UK, highlighting strengths and weaknesses, for publication in the Innovation Index 2009.

**3.4 Project Risks:**

As with any project, there are risks to be addressed. The risks in the proposed project relate in part to the innovative approach (see 3.6) to the design of the project.

Major risks include:

- Engaging with UK public – the project success is dependent on engaging the UK public to participate in the web presence developed by the project. The project does not budget for publicity, or advertisement to attract the attention of UK innovators. The project would rely on electronic communication with groups of UK innovators, such as innovationindex.org.uk to make contact with innovators

electronically through the web. **This issue needs to be addressed through ongoing discussion between the project team and NESTA.** The researcher is confident that the Australian research team can engage electronically with UK innovators, but for ongoing engagement, the website management and updating will need to be handed over to ongoing UK website managers, to continue the engagement process with the UK user innovating public. Possible ongoing managers, include UK Statistics Authority ([www.statistics.gov.uk](http://www.statistics.gov.uk)). Ongoing connection to past voters can be leveraged to encourage them to revote each year, on past and new user innovations.

- Project review, without physical presence of researchers in UK. Mitigated by online communication, including Skype, openResearch method provides high level of project transparency, monthly review meetings, with online minutes, and audio transcripts.
- Incomplete literature review. Mitigated by Board of review.
- Political consequences of UK funding going offshore to overseas researchers. Mitigated by not tendering for full project funding, but less than 50% allowing UK researchers to receive the majority of project funding.
- Time to complete proposed activities. Mitigated by ongoing Board review, and consultation with NESTA. Since the project is so time sensitive, the initial strategy to meeting deadlines, will be to do less, rather than add more resources to reach proposed scope. These decisions will be made jointly between NESTA, and the project leader, with input from the project team.
- User innovators not online. This project, since it is focussed on using internet tools, may exclude user innovators who are not online. In discussion with NESTA, alternate contact methods to reach these innovators, may require a phone service, fax or post facility to capture these stories. Mitigated by ongoing review and consultation with NESTA.

### **3.5 Relevant experience: Relevant project team innovation and value, research and policy development experience:**

**Researcher:** Richard Ferrers, BCom, LLB, MTM

- writing PhD on user understanding of value and innovation, relating to new technology (2004 – 2009). Expected completion, June 2009.
- DRUID innovation conference, delivered paper on value and innovation, June 2008
- Invited to User/open innovation research workshop, Harvard Business School, by Prof. Eric von Hippel, MIT (and provided short research update to attendees) August 2008
- Value innovation exams, presentation development, and short paper for value innovation consulting accreditation, INSEAD, Professors Kim, and Mauborgne 2006.
- Research project work with Centre for Global Innovation and Entrepreneurship, 2006 – 2009, including:
  - Ambient intelligence in SME manufacturers, 2007-8.
  - Accelerating innovation in the Biomedical industry, 2007

- Innovation capability measurement, 2006.

**Researcher Policy development experience:**

- Invited to brief Shadow Communications Minister on Value impact of proposed National Broadband Network (October 2007)
- Recent submissions to government policy development:
  - US Department of Commerce – Innovation Measurement project, outlining value innovation perspective (April 2007)
  - Australian Garnault Review on Emissions trading scheme: value and innovation perspectives (April 2008) - implications chapter of PhD thesis.
  - Australian 2020 review on use of Web 2.0 tools in government policy making, and innovation and value impact of emissions trading scheme (April 2008) – implications chapter of PhD thesis.

**Researcher Internet, and project management experience:**

- Editor, The Journal of the Information Economy, 1998 – 2003. Published 500 blog type articles tracking rapid proliferation and explosion of internet tools for value creation.
- Principal, THE JOIE Web Solutions 2001 - 2002, developed online ecommerce prototype for the golf industry – an online golf booking system, including internet strategy, based on Moore's (1992), *Crossing the Chasm*, advice on innovation development. Business ran out of cash after \$70,000 investment, and 12 months full time work.
- Lecturer, Developing Ecommerce solutions, Information Systems Project Management, Ecommerce and the Law, Innovation and Change, Central Qld University, 2002 – 2006, including lecture preparation, delivery, and marking.
- Masters in Technology Management, including thesis on barriers to innovation, looking at telemedicine, 1995 – 2000.

**Research Supervisor: A/Prof Mile Terziovski:**

- Multi award winning conference author, Academy of Management in Operations Management, focussed on better understanding innovation, focussed in SME manufacturing.
- Multi award grant winner, especially European related joint research projects, Framework Programme 6, and 7. Ami4SME \$200,000, and COST-Worth projects \$350,000. Total grants received are in excess of \$1M AUD.
- Director, Centre for Global Innovation and Entrepreneurship
- A/Professor of Innovation and Entrepreneurship, University of Melbourne.
- Major recent publications:
  - Building innovation capability in organizations: an international cross-case perspective 2007, Imperial College Press (co-author)
  - Energizing Management through global innovation and entrepreneurship research and practice 2008, Routledge (editor)
  - The relationship between total quality management practices and operational performance, Journal of Operations Management, 1999 (cites 299)

CGIE, University of Melbourne

- The business value of quality management systems certification. Evidence from Australian and New Zealand, *Journal of Operations Management*, 1997 (cites 172)
- Active member in Melbourne Macedonian community, including advisory board to President of Macedonia on e-commerce and innovation 2002-2004.

#### **Review Board:**

Three international US leading user innovation scholars are invited to participate as monthly progress reviewers (requested lead scholar 8 Jan 2009). Their CVs are not provided, subject to their accepting the offer to participate in review. Includes Professor, MIT(BB), Professor, Harvard Business School (BB), Ass Prof, University of Washington(GenX).

#### **3.6 Project Uniqueness Evidence:**

This project uses international innovation researcher talent from lower cost Australia, yet highest quality review from top level US institutions to bring maximum return for the funds invested by NESTA.

This project will leverage internet technologies to provide low cost solutions to policy development while not sacrificing the highest standards of quality. Monthly international meetings will take place using Skype teleconferencing, which NESTA will be invited to attend. Website development will take place with free internet services such as free webhosting from zendfree.com, free web development tools such as Php, and mysql, free participation tools such as free wikis (such as wikidot.com), fora (such as phpNuke), and blogs (such as Wordpress).

This project will use an openResearch approach to ensure the highest levels of transparency, while ensuring to the highest extent possible the best result within the time and funding constraints. The UK public will be co-creators of, and participants in the resulting outputs and outcomes. The UK public will be engaged to participate in the production of documenting their user innovations.

Transparency will include all documents included on the project website, such as minutes of meetings, literature review, project plans, written correspondence. Emails are an exception to this transparency policy.

This project would attempt to capture a relative, and qualitative index of user innovation through assessing both the breadth and the depth of user innovation. Depth would entail assessing the financial, and other value creating impact of particular user innovations, and would be measured in part by the UK community voting for the user innovation that have most benefited the voters. Breadth would track the relative number of user innovations by engaging with such innovators to share their stories of their innovation, and the benefits they have gained from that innovation.

This project would take a value approach to innovation. Innovation is defined as 'something new that creates value', and value is defined according to Ferrers (2008) to

include, time, price, social benefits such as connection and community, individual benefits such as simplicity, beauty, and emotional outcomes. Many of these elements of value are immeasurable, so the benefits of innovation are similarly immeasurable. This project will attempt to engage the UK public to express their value created by user innovation through a voting system, to reward those users who create and share innovation with their communities. As such this innovation will most likely exclude business innovation, or at least separate those innovations which will overlap with the measuring firm level innovation performance, and innovation growth accounting.

### 3.7 Project Costs:

Researcher, Project Leader \$750 AUD per day (plus 50% administration overhead)  
 Research Supervisor: \$1,000 AUD per day (plus 50% administration overhead)  
 Review Board: 3 \* \$1,000 USD per one hour monthly review meeting

Researcher, Project Leader: Richard Ferrers, Research Fellow, Centre for Global Innovation and Entrepreneurship (expected completion PhD on innovation and value June 2009)

Research Supervisor: A/Prof Mile Terziovski, Centre for Global Innovation and Entrepreneurship, University of Melbourne. Professor of Innovation and Entrepreneurship.

#### **Proposed International Board and world leading experts in User innovation:**

Professor, MIT  
 Professor, Harvard Business School  
 Ass. Professor, University of Washington

#### **Total costs:**

Researcher (includes project management)	2 days per week @ \$750/day * 26 weeks	\$	Admin
		39,000	14,500
Research Supervisor	0.5 days per week @ \$1,000/day * 26 weeks	13,000	6,500
Review Board	3 * 6 monthly * 1hr review meetings and associated preparation and correspondence @ \$1,000 USD per meeting	\$18,000 USD	
Website development	\$1,000 AUD (optional)		

Total: AUD \$73,000\*, plus \$18,000 USD: Approximately in GBP. (\* including GST)

**Payable:** 80% upfront, with 20% on satisfactory completion of project.

AUD \$73,000	GBP 33,935 @ 0.4648
USD \$18,000	GBP 11,974 @ 0.6652
<b>TOTAL</b>	<b>GBP 45,909</b>

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Appendices, including project CVs, Application organisation

**CONTRACTUAL TERMS**

- Willing to participate in result dissemination YES
- Same or similar application not current with another organisation NO
- Researchers agree to support NESTA in achieving their goal to measure UK user innovation (through tendered proposal)

**IMPACT ON INNOVATION AND TECHNOLOGY POLICY**

- Researcher briefs Shadow Minister of Communications on value innovation interpretation of National Broadband Network proposal (Oct 2007)
- Recent contributions to National Policy Enquiries:
  - Australia 2020, on use of Web 2.0 by government, and value impact of proposed Emissions trading scheme (April 2008)
  - Garnaut Australian Climate Change Review, particularly innovation and value theory interpretations of proposed emissions trading scheme incentive impacts (April 2008)
  - Australian National Innovation Review – impact of creative destruction and value perspective on national incentive scheme (May 2008)
  - US Dept of Commerce inquiry into Innovation Measurement – value perspective of innovation measurement (May 2007)

**PROPOSED REFEREES**

- Professor Ross Chapman, University of Western Sydney, collaborator on AmI4SME, and Cost-WORTH projects
- International Science Linkages Programme, Department of Innovation, Industry, Science and Research, Australia ( re: AmI4SME project ref: GC110181)  
(clearance to use: awaiting approval from ISL)

AWAITING CLEARANCE FROM REFEREES... BEFORE RELEASE OF CONTACT DETAILS TO NESTA

**APPLICATION ORGANISATION PROJECTS (SAMPLE)**

## **Centre for Global Innovation and Entrepreneurship**

**Source:** <http://www.cgie.unimelb.edu.au/>

### **AmI4SME 2007 - 2009**

The AMI-4-SME project is aiming at a "Revolution in Industrial Environments" - Finding new technological and organisational approaches to enable Manufacturing SMEs to use Ambient Intelligence Technology for Systemic Innovation. The next revolutionary step in process innovation in industry is to radically innovate the whole industrial working environment, by focusing it upon the main actor in industry: the human actor, and by applying emerging systemic innovation approaches. The application of Ambient Intelligence (AmI) Technology can be considered as a key enabler to achieve such advances in the working environment. And especially SMEs need to be systematically enabled to actively take part in this revolution. ([www.ami4sme.org](http://www.ami4sme.org))

### **Assessment of Innovation Capability Models 2003 - 2006**

Major Outcome: Book of Cases, Imperial Press 2007

The purpose of this study is to develop and test innovation management capability models. After general development of the central constructs, application to nationally important areas of e-commerce, sustainable development, and new product development will be conducted. The project will develop and validate Best Practice Innovation Capability models for the creation of innovation-driven companies. The proposal responds to the Australian Government's Innovation Report (2001) call for "...the strategic vision and long-term commitment to create an environment that encourages ideas-an environment in which innovation will thrive".

The project is vital for a better understanding of how innovative Australian firms are able to create and maintain their competitive position. With this understanding educators and policy makers will be better placed in their efforts to provide programs and policy settings to assist all firms to improve their innovation capabilities.

### **Innovation Management Strategies and Practices to Accelerate the Commercialisation Process in the Biotechnology Industry 2003-2005**

The innovation cycle is a complex and misunderstood area of management, particularly in the Biotechnology Industry where the innovation cycle can take up to 15 years. The management literature provides anecdotal information, however lacks theoretical models that provide guidance to managers on how to shorten the innovation process.

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Therefore the aim of this PhD research, which is “a world first”, is to develop and test an innovation cycle model through quantitative and qualitative research.

The results of this research provide a theoretical and practical understanding to Australian managers on the complex relationships between innovation management practices and innovation performance in the biotechnology industry. This knowledge can assist managers to make more effective decisions on the allocation of scarce resources and complex project management. Australian companies will need to develop and implement strategic long-term plans in order to compete more effectively in increasingly competitive markets.

**COST-Worth Best Practice in Business Process Reengineering (BPR)  
in Australian Small to Medium Enterprises (SMEs) 2003 - 2006**

Cost-Worth (CW) is about developing a unique integrative approach to Small to Medium Enterprises (SMEs) continuously improving their business and processes, and focusing on their customers. The CW project is being conducted by an international consortium, consisting of the EU, Switzerland and Australia.