

# CREATING AN EU SBIR PROGRAMME: *LESSONS FROM THE US AND PROPOSALS FOR EC ACTION*

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18 May 2010

*Based on presentations to European Commission Pre-Commercial  
Procurement Workshops in June and October 2009*

# SOME PERSONAL BACKGROUND

- Background in technology sector in London and Cambridge
- Founder and CEO of TTP Ventures
  - early stage investments in science and technology based companies
  - €50m from Siemens, Boeing and others
- Long term involvement in innovation policy through Government committees, research and publications
- Increasing awareness through VC experience that absence of US style Small Business Innovation Research programme was a **DISASTER** for UK (and EU) companies
- Campaigning for a UK SBIR since 2004; EU SBIR since 2009
- Today, split time between VC and technology company board roles, policy research and independent advice to Government agencies, inc Technology Strategy Board. Past member of Conservative Small Business Policy Task Force

# KEY FEATURES OF THE US SBIR

- Contracts awarded competitively from Federal Agencies for R&D to address departmental needs or policies as customer
- 4000 contracts worth \$2.5 billion a year
- Funding covers 100% of project costs (plus a profit element)  
*National and EU grant Programmes do not cover a high enough percentage of costs to give most SMEs the ability to start new R&D projects*
- Phasing of projects to manage risks:
  - Phase 1 - \$100k feasibility study (now \$150k)
  - Phase 2 - \$750k for a “demonstrator” or “prototype” (now \$1m: “serious money”)
  - (Phase 3) - further Federal funding available outside SBIR budget
- No requirement for collaboration;
- Company keeps the IP
- Very simple applications, standard contracts, fast processes
- Complete transparency; you can see where every \$ goes

# UK CAMPAIGN FOR A US-STYLE SBIR PROGRAMME

UK “SBRI” launched 2001, but ineffective.  
“Innovative procurement” highlighted regularly in government policy papers

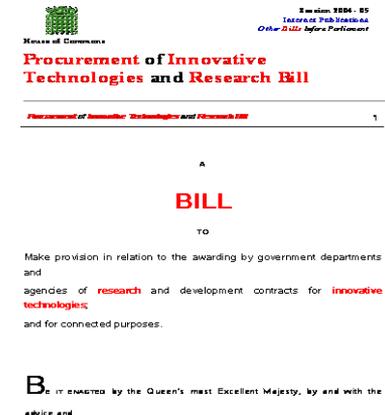
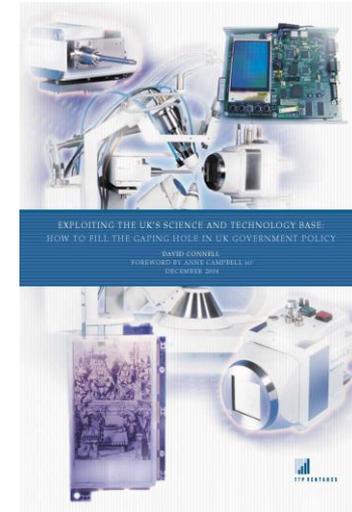
Campaign launched in December 2004 with press coverage and ‘White Paper’

Informal ‘supporters club’

Meetings with Government Ministers, advisers and senior officials

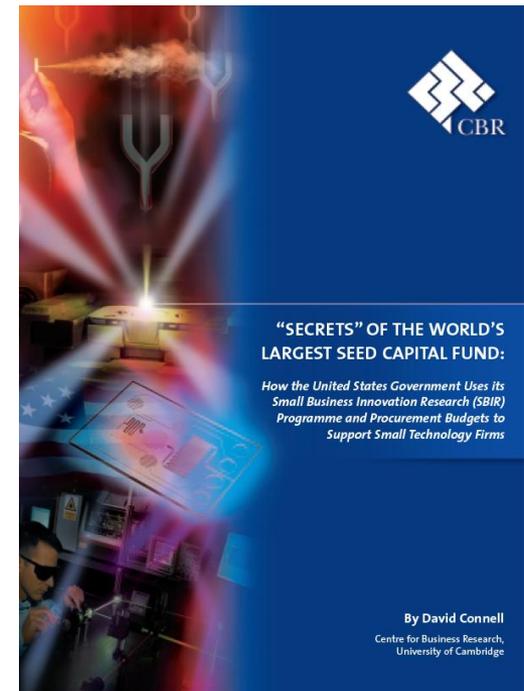
“Private Members Bill” (Anne Campbell MP in 2005) – carefully tailored to UK conditions

- **RESULT:** Inclusion of 2.5% ‘target’ mandatory for all Government departments announced in annual Budget in March 2005 (“worth £100m per annum, guaranteed”)



# CAMPAIGN CONTINUES.....

- “Target and encouragement” approach led to no action and no competitions for 2 years
- “Secrets...” report published 2006 with comprehensive analysis of US SBIR programme and detailed proposals for UK
- More meetings with Government Ministers, advisers and senior officials; second Private Members Bill; letter to Financial Times signed by 13 leading entrepreneurs, academics and VCs
- Proposals adopted by UK Government in March 2008 : “New SBRI”
- Letter to the Times from 15 leading entrepreneurs, investors and academics advocating “lead-customer” based policies – May 2010 (publication forthcoming)



# THE REVITALISED UK SBRI PROGRAMME

- Since April 2008, UK SBRI has been similar to US SBIR **with key exceptions**
- Problems with UK procurement “rules” now solved; SBRI is now an “out-of-the-box” solution for use across government. Good championship by Technology Strategy Board; total commitment about £25m to date; very good feedback from SMEs and spending departments
- Under a separate Government policy, all departments are also required to prepare annual “Procurement Innovation Plans” highlighting use of SBRI
- BUT
  - no new money;
  - no underpinning legislation, hence no ring-fencing of budgets
  - lack of participation by key departments
  - poor transparency
  - programme far too small AND jeopardised by pressure on departmental budgets

# WHY HAS IT BEEN SO DIFFICULT?

- In the UK, it has not been government's job to fund technology development in firms as lead customer (*"it's the private sector's job; government's job is to procure best available, risk free solutions and get value for money"*)
- Departmental R&D budgets are fragmented, academically orientated and largely pre-allocated
- Managerial responsibility for innovation in spending departments is non-existent or fragmented
- SBRI often seen by departments as a *"small business tax"*, rather than a useful tool for government; **THOUGH** the individuals who get involved usually become converted
- Some officials concerned that UK R&D budgets will go to non-UK firms under EU procurement rules; grants therefore seen as preferable..... even though ill-suited to SMEs. No incentive for member states to take a lead

# WHY HAS IT BEEN SO DIFFICULT (CONTINUED) ?

- Procurement rules and objectives have tended to get in the way (and “*best practice guidelines*” will not prevent “innovation” always taking 10<sup>th</sup> place to “value for money” and risk avoidance)
- Confusion over EU State Aids and Procurement Regulations (often used as an excuse to avoid change)
- No budgets or legislation (as in the US) to force through implementation
- Ministers and officials change frequently
- The basic idea is a “*no-brainer*”, but the “*devil is in the detail*”

**ENCOURAGEMENT AND GOOD PRACTICE GUIDELINES ALONE WILL NOT LEAD TO WIDE USE OF PRE COMMERCIAL PROCUREMENT**

# WHY IS PCP SO IMPORTANT TO THE PUBLIC SECTOR?

- It provides a mechanism to enable public sector agencies to find innovative solutions to improve operational effectiveness, reduce costs and address policy challenges.
- It provides access to potential solutions from a wide range of technologies, industries and innovative companies
- It encourages clear problem definition
- It manages risk through a staged approach to key challenges and uncertainties prior to full scale procurement
- It broadens the supplier base without undermining “value for money” criteria
- It helps ensure that as much mainstream procurement as possible goes to EU suppliers

# WHY IS PCP SO IMPORTANT TO THE PRIVATE SECTOR?

- It replicates the way SMEs use PRIVATE SECTOR R&D contracts to develop and trial new products; it plays to the “natural”, customer-led innovation process and creates reference customers to accelerate global marketing and help fund raising (see “Myths....” report)
- It reduces “time to lead customer”, which is critical to SME success in both the short and long term
- Cambridge experience and recent research indicates that:
  - many (probably most) successful new S&T based SMEs have adopted a “soft” model based on R&D contracts for private sector customers before developing standard products (VC funding is typically secondary or not required)
  - most are company spin outs; very limited use of university IP
  - collaborative R&D grants (especially EU Framework grants) are seen by successful entrepreneurial companies as unattractive or a distraction
- The standard venture capital model is not financially viable for investors in early stage science and technology based companies in the UK or Europe, at least without complementary funding.

# WHAT ARE THE LEARNING POINTS FOR EUROPE FROM THE US SBIR PROGRAMME?

- Defined budgets each year; run as a “SEED FUND”, not a set of “targets” or guidelines. (We must replicate this without legislation)
- Total value of US Federal Government R&D contracts with small firms is 3-5 times the SBIR budget.
  - more important than VC for early stage S&T based firms.
  - SBIR is just the first step on the procurement ladder
  - the 2.5% rule is just part of the story
- Topics are defined by informed officials in customer agencies, with ongoing dialogue with potential users and small companies with ideas for projects
- Key role of Department of Defense and NASA in funding component level technologies with dual (military and civil) use
- Diverse range of topics, mostly tightly defined

# EXAMPLES OF SBIR SOLICITATIONS

- Speech recognition technology for air traffic control (Navy)
- Affordable advanced lighting systems (Navy)
- Smart scalpel (DARPA)
- Chip scale technologies for Gigaband signals (DARPA)
- Methods for innovative pharmaceutical manufacturing and quality assurance (National Cancer Institute)
- Diagnostic tool for von Willebrand disease (National Heart, Lung and Blood Institute)
- New capabilities enabling the massive sequencing of entire genomes of organisms (National Science Foundation)
- Data mining and management (National Science Foundation)
- Food science and nutrition; e.g. novel or rapid assay technologies for food constituents (US Department of Agriculture)

# PROPOSED EU PROGRAMME

- Establish EU Framework programme to cornerstone “Procurement Innovation Competitions” (PICs) in individual member states
- EC supported competitions must be compliant with standard rules and processes similar to US SBIR (all innovative firms eligible, but designed mainly for SMEs)
- Projects must be related to government needs, objectives and policies as customer (direct or indirect) or specifier
- Single company contracts with no requirement for collaboration
- Target programme budget for FP8 : €800m per annum
- Successful bids from public sector member state organisations awarded EU contribution of 40% of programme costs. Total programme therefore worth €2 billion
- Pilot during FP7 with annual budget of €100m from 2010 to 2013 ; experience sharing across EU

**PAN EUROPEAN COMMERCIALISATION ENCOURAGED THROUGH SUPPORTING MEASURES**

# PROPOSED COMPLEMENTARY MEASURES

- All companies winning Phase 2 contracts automatically eligible for EU funding to help them present their technology at “showcase” events (e.g. the annual Hanover Messe technology trade fair)

Aim: to attract the interest of end customers, OEMs and system integrators, distributors and investors from across the EU and globally

- Web-based information system to encourage public sector agencies from different member states with similar interests (e.g. defence electronics, pharmaceutical drug delivery systems, carbon reduction in buildings) to share ideas on competition topics when they are ready to do so:
  - Problem definition and contract management the responsibility of a single “lead customer/specifier”
  - Some duplication is OK!
  - Single customer-developer relationship and fast, simple processes vital

**BENEFIT: WILL HELP BUILD A EUROPE WIDE MARKET FOR INNOVATIVE SMEs ONCE THEY HAVE GOT BEYOND THE LEAD CUSTOMER STAGE: MUCH BETTER THAN THROUGH COLLABORATIVE R&D**

# THANK YOU!

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