



Demand side measures to stimulate innovation

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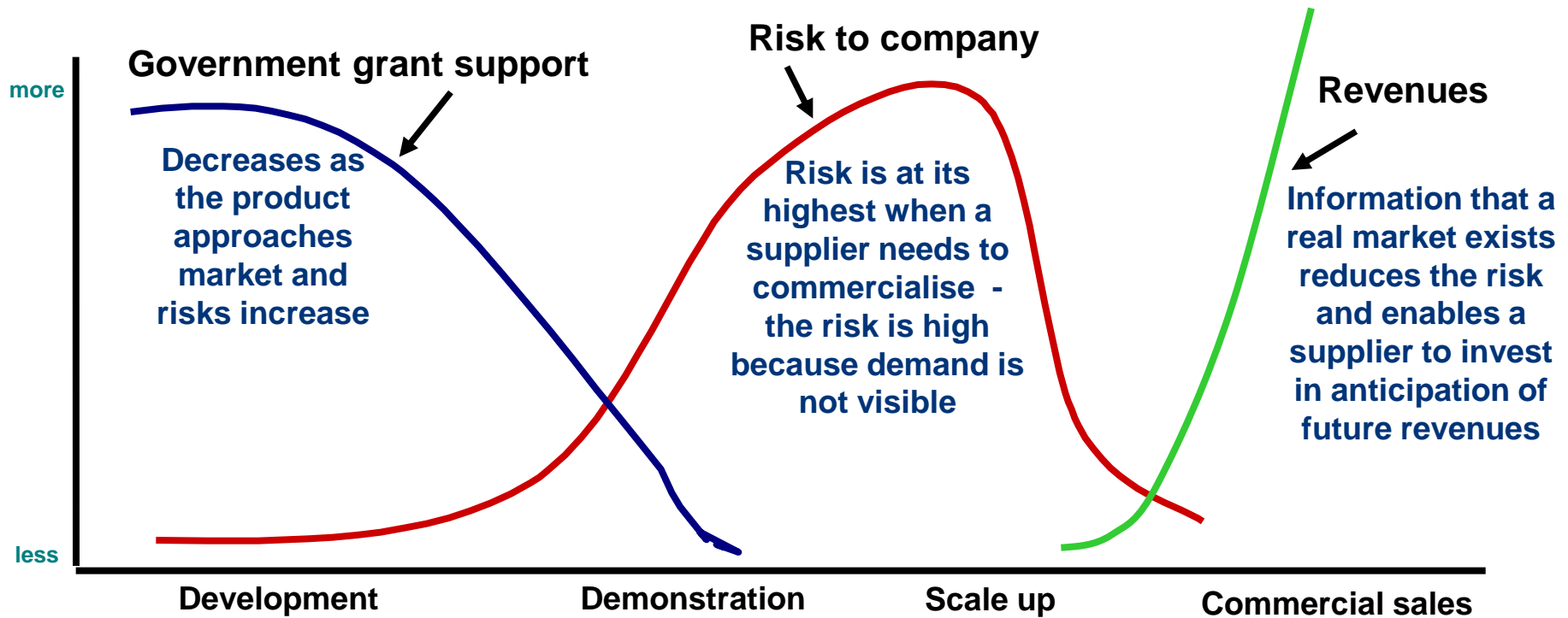
Strategic Context

- Innovation and Research Strategy for Growth – November 2011
- Industrial Strategy for the UK



Innovation from the suppliers side

- It is all about investment *risk* not costs
- Many products and companies fail at the demonstration and scale up stage
- The gap between development and commercial sales is often referred to as the 'valley of death'



Stages in bringing a product to market



Integrating Procurement into the Innovation System

- Can be effective alongside other mechanisms
- Supporting commercialisation and incentivise product development
- Require committed budgets
- Procuring organisations
- Intelligent selection of areas
- “Line of sight” to the market

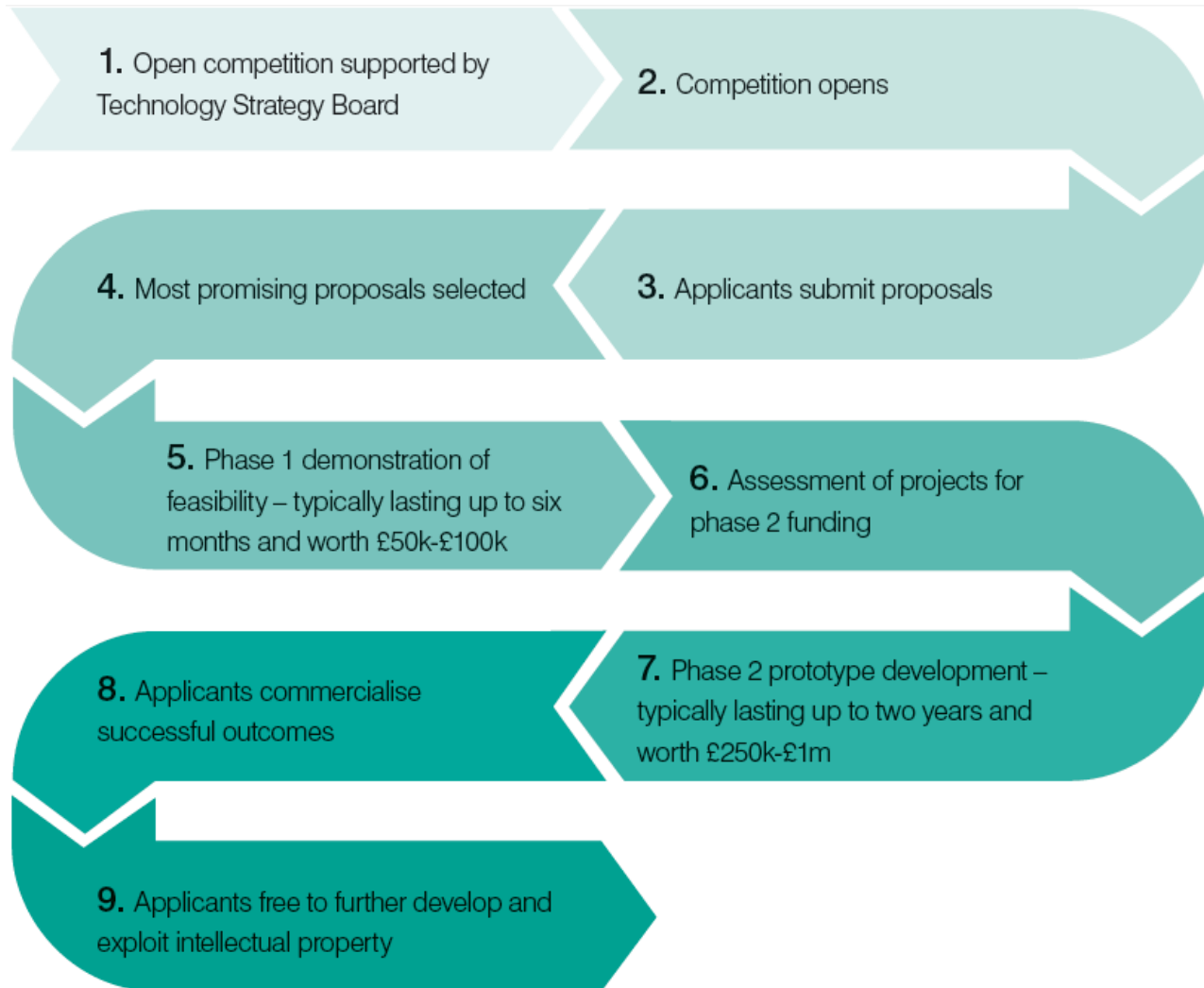


Barriers to innovation procurement

- Leaving it too late
- Practical knowledge gaps
- Solution led specifications
- Disconnect between key players
- Risk aversion
- Mis-understanding of legal framework and supplier engagement



SBRI Process





SBRI: A well-established tool that works

Departments benefit:

- Access new solutions for strategic/societal challenges
- Access to wide-range of high-tech SME suppliers
- Improved efficiency and effectiveness
- Process of procuring new solutions with managed risk

Companies benefit:

- Provides lead customer with route to market
- Funding to bridge seed funding gap
- Credibility that can leverage further private sector investment as the company grows
- IP remains with company

The Economy benefits:

- Supports high-tech SMEs that underpin future economic growth
- Provides valuable support to innovation in time of austerity
- Generates new products, new markets
- Enables vibrant SME supplier base



SBRI Progress so far

- Since April 2009
 - >120 competitions
 - >4000+ companies applied
 - >1200 +contracts awarded >£100M
- 40 Public Sector Bodies engaged so far

Dept	First engaged	Competitions launched	Value of Contract
MoD	Apr 2009	56	£30m
DH/NHS	Oct 2008	18	£13m
DECC	Feb 2010	7	£5.8m
Defra	Feb 2010	6	£2.8m
HO	Apr 2009	4	£2.8m
Dft	Jul 2009	1	£0.3m



Energy Efficient Soldier

- Soldiers carry up to 70kg into battle
- As part of a program to reduce this CDE launched “Energy Efficient Soldier” competition
- Intelligent Textiles won contract to develop uniform material that could provide power and data interconnect
- They are now working with a prime to integrate their solution
- Also in discussions with US DoD





Detecting Drug Drivers

- 20% of adults admit to having used illegal drugs
- 56 fatal accidents in 2008 in which drug taking contributed
- Current systems do not assess for multiple drugs simultaneously and rapidly
- Radox developed tech for identifying 13 drugs in saliva sample in ~10 mins
- Going for type certification prior to deployment to police forces





Inducement/Challenge Prizes



What are inducement / challenge prizes ?

- **Inducement/Challenge prizes** offer a reward for a developed solution to a specific problem or issue
 - stimulate innovation
 - incentives to innovate where the market might struggle
 - Can increase effort directed into solving a problem and encourage radical solutions.
- Work as part of an integrated innovation system – not a replacement for other interventions
- Distinct from **Recognition prizes** (eg Nobel Prizes) which reward previous achievement



Value of Challenge Prizes

- **Benefits** of inducement prizes:
 - **Raise the value** society places on solving the problem, seizing public imagination and focussing effort;
 - Encourage **investment** in neglected research domains;
 - Create **novel collaborations**, opportunities for cross-disciplinary working, complementary innovations, new customers and sources of finance;
 - Develop **new markets**, or introduce more **customer focus**;
 - Offer a **new information source** when disseminated;
 - **Good value for money** - the value of the work input far outweighs the value of the prize itself;
 - **Assist commercialisation**, matching innovators and investors, identifying the most promising inventions in areas most likely to deliver added value;
 - Support the **best** innovation, rather than the first.



When & how to use challenge prizes

- Inducement prizes can be used to spur innovation when:
 - a goal can be defined in concrete terms but the means of achieving it are unknown.
 - no specific organisation or individual is a clear candidate for developing the innovation.
 - it is clear that resources can be devoted to winning the prize
- To ensure innovation arise from your inducement prize:
 - Specify the objective or outcome – not the means of achieving it
 - Market to the widest possible community
 - Select an expert judging panel that is flexible enough to take account of unusual ideas
 - Ensure that infrastructure exists to exploit the results and support the successful applicants



BIS work on prizes

- **Innovation and Research Strategy** announced a strategic role for inducement prizes in the UK innovation eco-system
- BIS supports the UK Centre for Challenge Prizes and is the first contributor to the Prize fund to:
 - develop solutions to problems
 - encourage new ideas and cross-disciplinary working
 - complement other innovation policies and interventions
 - leverage resources
- The Centre will
 - Act as a hub of expertise and insight on challenge prizes
 - Design and run new examples of challenge prizes
 - Broker support across government, private sector & philanthropic organisations to encourage collaborations
 - Offer advice to organisations to develop their own prizes



Prizes so far...

- BIS co-sponsors two unique challenge prizes on topical subjects, both fitting the green agenda.
 - Hands off my bike / Workplace cycle challenge
 - Carbon data measurement prize
- The Centre is working with the European Community on designing future prizes
- Cabinet Office has run two prizes:
 - Ageing well – reducing isolation among the elderly
 - Reducing waste in communities



Other examples...

- **Recent interest in prizes is increasing:**
 - **Saltire Prize:** £10 million to demonstrate commercially viable wave or tidal stream technology in Scottish Waters with greatest volume of electrical output using only the power of the sea
 - **Virgin Earth Challenge:** \$25 million to design a way of successfully removing greenhouse gases from the Earth's atmosphere each year for 10 years
 - **NASA's Centennial Challenges:** an ongoing programme of prizes to drive progress in aerospace technology.
 - **The Nesta Big Green Challenge:** The UK's first ever challenge prize aimed at stimulating community innovation. £1 million prize fund to encourage community groups to work together to find imaginative ways to tackle climate change.