



Department
for Business
Innovation & Skills

TECHNOLOGY STRATEGY BOARD

TRIENNIAL REVIEW

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Contents

Contents	2
Summary	4
Introduction – stage one	7
Scope and Purpose of Triennial Reviews	7
Process and method	7
Cabinet Office guidance.....	7
The BIS approach	8
Context.....	9
The changing landscape	9
Public Bodies Reform Agenda	13
The Government’s Plan for Growth and Industrial Strategy.....	13
Other issues relevant to the Triennial Review.....	14
Function and Form	16
Functions of the TSB.....	16
Analysis of TSB Functions	18
Delivering programmes to improve UK innovation performance.....	18
Support for specific technologies to deliver specific Government objectives.....	24
Policy input to government and development of strategic partnerships.....	29
Relationship with Research Councils.....	31
Current form	32
Current Size and Structure of the TSB.....	33
Options for the form of the TSB	35

Options Analysis	38
Return the functions to BIS	38
Delivery by new executive agency	40
Move to Voluntary Sector	40
Delivery by Local Authorities or LEPs	42
Private sector delivery	43
Merge with the Research Councils	44
Maintain the status quo	45
Stage 1: Conclusions and Recommendations	47
Stage 2: Introduction	51
Stage 2: Assessment	52
Statutory Accountability, Accountability for Public Money and Ministerial Accountability	52
Role of the Sponsoring Group	53
Role of the TSB Chair, Governing Board and Chief Executive Officer	53
Effective Financial Management	53
Communications and Engagement	54
Conduct and Propriety	55
Conclusion	55
Concluding remarks	56
Annex A: Respondents to call for evidence	57
Annex B: Questionnaires sent to BIS and TSB	60
List of questions to BIS: Phase one	60
List of questions to TSB: Phase one	61
Annex C: TSB tasks as set out in tasking framework letter	63
Annex D: Stage 2 Detailed Assessment	65

Summary

Stage 1 of this review assesses the continuing need for the functions and form of the Technology Strategy Board (TSB), the Government's instrument for supporting nationally important business-led innovation. Stage 2 subsequently examines compliance with statutory accountabilities, financial and management responsibilities as defined by the Cabinet Office. It was carried out by a team of officials from the Department for Business, Innovation and Skills (BIS). They are independent of the TSB and the BIS sponsor team responsible for overseeing the TSB.

During the course of the review the team received views from over 60 stakeholders with business, local government, central government and scientific and engineering backgrounds. The team also sought the views of the TSB and interested BIS officials and attended regular meetings with them to share progress.

In Stage 1 of the review, drawing upon the TSB's tasking letter the review team categorised the TSB's functions as:

- Delivering programmes to improve UK innovation performance,
- Support for specific technologies to deliver specific Government objectives, and
- Policy input to Government and development of strategic partnerships.

We estimated that the first function accounts for around 70% of TSB staff time with the balance spread between the remaining two functions. In practice, however, we found that there are strong interdependencies between all three functions, which mean it is difficult to attribute staff time between them. It also means that the value of all three functions combined is greater than the sum of the parts.

Based on the evidence gathered during the Review, the team concluded that Government needed to retain all three functions within a single body. The rationale for retention was:

- All three functions contribute to the delivery of Government objectives e.g. to improve economic performance and to improve the delivery of public services. And that evaluations show that TSB activities do add value.
- That demands for TSB functions are likely to increase given recent developments in policy, such as the Plan for Growth and the Industrial Strategy.
- Beneficiaries of support and wider stakeholders value these functions for the benefits they bring and the TSB's role in the wider innovation landscape.

The Review team considered a range of delivery options for the TSB, including bringing delivery within BIS, merging with other Research Councils, local delivery and private sector delivery. The team concluded that NDPB status offered the best delivery model in terms of effectiveness of delivery, independence and impartiality and likely costs and benefits. In particular, the rationale for retaining NDPB status is:

- Stakeholders believe that NDPB status is a material factor in the effectiveness of programme delivery, particularly giving it more freedom to recruit specialist staff.
- The arm’s length nature of the relationship between Ministers and the TSB increases trust and helps facilitate productive relationships, particularly with other Government departments.
- Ministers value the TSB being free to make depoliticised judgements about which technologies and businesses should be supported.

The Cabinet Office has set out three tests regarding our recommendation to retain NDPB status for the TSB. The tests, and our assessment of how the TSB performs against them, are given in the table below.

Test	Remarks
Technical function needing external expertise	From the evidence we have received it is clear that technical expertise is essential to the effective delivery of the TSB’s mission. This applies across all three of the functions, but particularly to those relating to the delivery of innovation support.
Political impartiality	We also consider that there is a strong evidence to retain the TSB’s independence to make decisions on funding priorities within the parameters set by government. This is particularly important when assessing the merits of one business proposal against another and in maintaining business confidence in the process.
Establishment of facts and figures with integrity	We do not consider that the TSB has a role to play in establishing facts and figures with integrity in the way envisioned in the final test but we do believe that it is important that there is objectivity in the advice that TSB provides to government.

We therefore concluded that the Technology Strategy Board should be retained in its current form. This conclusion was accepted by the Minister for Science and Higher Education and confirmed by the Cabinet Office.

In Stage 2 of the review the team considered in more detail the relationship between the Department and the TSB in order to assess compliance with statutory accountabilities and confirm that appropriate governance arrangements were in place. The team concluded that TSB complied with all key accountabilities but that some improvements could be made. In particular, the team examined in some depth the effectiveness of financial management systems, communications and stakeholder engagement and confirmed that suitable action plans were in place to address these issues. Consequently the team concluded that overall compliance with recognised principles of good corporate governance should be rated amber/green – there are some aspects that require substantial attention but overall compliance was good.

Our key recommendation from Stage 2 is that the Department continues to work closely with the TSB leadership to support and monitor implementation of the actions that have been identified and establishes key milestones to review progress, particularly on effectiveness of financial management and communications. Progress on addressing the issues identified in this report should be included in the performance agreement of senior executives and monitored by the TSB governing body.

In addition, we recommend that further thought is given to clarifying the role of Ministerial involvement in TSB operational decisions. Stage 1 of the review concluded that the arms-length relationship was a key strength of the TSB. However, the Department and the TSB need to be clear about how best to handle those issues where Ministers might expect to have a greater role to play. This is particularly important when considering how the Department and the TSB can work together to manage key communications and stakeholder engagement issues more effectively.

Introduction – stage one

Scope and Purpose of Triennial Reviews

The Cabinet Office has identified two principal aims for Triennial Reviews:

- To provide robust challenge to the continuing need for individual NDPBs – both their functions and their form (stage one); and
- Where it is agreed that a particular body should remain as an NDPB, to review the control and governance arrangements in place to ensure that the public body is complying with recognised principles of good corporate governance (stage two).

This report covers stage one of the review of the Technology Strategy Board (TSB). The programme of departmental Triennial Reviews is agreed on a rolling basis with the Cabinet Office. The Cabinet Office agreed that BIS would carry out a Triennial Review of the TSB starting in July 2012. All reviews are conducted according to the following principles:

- **Proportionate:** not overly bureaucratic; appropriate for the size and nature of the NDPB.
- **Timely:** completed quickly to minimise disruption and reduce uncertainty.
- **Challenging:** robust and rigorous, evidencing the continuing need for functions and examining and evaluating a wide range of delivery options.
- **Open and inclusive:** Individual NDPBs must be engaged, key users and stakeholders should have the opportunity to contribute. Parliament should be informed about the commencement and conclusions.
- **Transparent:** all reviews should be announced and reports should be published.
- **Value for Money:** conducted to ensure value for money for the taxpayer.

Process and method

Cabinet Office guidance

Cabinet Office guidance on Triennial Reviews requires that the first stage of the review should identify and examine the key functions of the NDPB. It should assess how the functions contribute to the core business of the NDPB and the sponsor department and consider whether the functions are still needed. Where the department concludes that a particular function is still needed, the review should then examine how this function might best be delivered.

When assessing how functions should be delivered, the review should examine a wide range of delivery options. This should include whether the function can be delivered by local government, the voluntary or private sectors, or by a mutual. It should also include an examination of different central government delivery models, including whether the function can be delivered by the sponsoring department, by a new or existing Executive Agency or by another existing central government body. It is Government policy that an NDPB should only exist where the NDPB model is clearly the most appropriate and cost-effective model for delivering the function in question. Reviews must evidence that functions have been assessed against a wide range of delivery options.

In many cases, some delivery options can be quickly rejected. However, for each function under consideration, the review should identify all viable delivery options and undertake a fuller assessment of these options. Where appropriate, this should include a cost and benefits analysis. If one of the delivery options is the NDPB option, this must also include an assessment against the government's "three tests":

1. Is this a technical function (which needs external expertise to deliver)?
2. Is this a function which needs to be, and be seen to be, delivered with absolute political impartiality (such as certain regulatory or funding functions)?
3. Is this a function which needs to be delivered independently of Ministers to establish facts and/or figures with integrity?

Based on these fuller assessments, the department can then make an informed decision on how the function should be delivered in the future:

- Abolish
- Move out of Central Government (e.g. to voluntary or private sector)
- Bring in-house (e.g. to an existing Executive Agency of BIS)
- Merge with another body
- Delivery by a new Executive Agency
- Continued delivery by an NDPB

The BIS approach

Triennial reviews are consistent with the BIS commitment to review its arm's-length bodies (ALBs). The reviews have been run as a single programme, governed by the Triennial Review Group (TRG) and supported by a Programme Manager from the Finance Directorate. The TRG is comprised of BIS Directors.

A Challenge Panel provides robust challenge to the review and includes representation from BIS, the Cabinet Office and a Non-Executive Director, and chaired by the TRG Chairman.

Stakeholder engagement

The Triennial Review of the TSB was announced by Written Ministerial Statement on 10 July, in line with Cabinet Office guidance. Following announcement the review team wrote to the Chairs of the relevant Parliamentary committees¹ in order to inform them of the review and provide them with an opportunity to comment. No input was received.

In carrying out its work, the independent review team based its conclusions on data drawn from a wide range of sources, including extensive stakeholder engagement:

- Interviews and written inputs from over 60 stakeholders drawn from government, business, business organisations and the scientific and engineering research community (Annex A). Many of these represent the views of TSB “customers”, either because they use the TSB to deliver Government technology programmes or they benefit from TSB support.
- Interviews with current and past members of the governing body of the Technology Strategy Board (a business-led board that provides strategic leadership to the organisation).
- Responses to phase one questionnaires sent to BIS and TSB (Annex B).
- Documents relevant to the form and function of the TSB.

The review team also attended meetings with TSB officials and Board members in order to discuss progress, obtain the views of the bodies being reviewed and give feedback on the response received from stakeholders.

The responses from both the consultations and subsequent meetings have been incorporated into this report at the appropriate stage of the options analysis and in the concluding section where emerging themes are identified.

Context

There are several issues that are relevant to the Triennial Review and need to be highlighted before considering the on-going requirement for the functions of the TSB and the delivery model options. They will help to inform any recommendations that are made for stage one.

The changing landscape

In 2003 the previous Government announced its decision to establish the TSB in the Innovation Report². The TSB was established as an Advisory NDPB to advise on the DTI's

¹ The House of Commons Science and Technology Committee; the House of Lords Science and Technology Committee; the House of Commons Business, Innovation and Skills Committee; and the Opposition Spokesman on business and the economy in the House of Lords

² Competing in the Global economy: the Innovation Challenge. DTI, 2003.

allocation of resources to technology priorities and to act as a high level forum for interaction between business, Government and other stakeholders. Its role was further described in the Science and Innovation Framework document published in July 2004:

“The [Technology] Strategy will be guided by a Technology Strategy Board, which will be independent of Government, business led, and expertly informed through engagement with stakeholders in the science base and business to provide clear and transparent guidance to Government in setting funding priorities.”³

Prior to becoming an NDPB it was an in-house body and Ministers decided that the TSB should be business-led and should be the main decision making body overseeing expenditure of the Department’s technology programme, approximately £200m per year.

The TSB was also given a broader role to work across government to support the development of innovation policy and was asked to report annually:

“To ensure that the Government’s investment framework for science and innovation is developed in a way that fosters business R&D and innovation in the UK, the Technology Strategy Board will prepare an annual report for publication on its own activities and on Government policies which relate to technology innovation and knowledge transfer. This will include consideration of:

- the Research Councils’ technology priorities in relation to business;
- the extent to which Government regulation and procurement policies provide clarity as to the challenges and opportunities for business innovation over the coming decade;
- an independent assessment of the regional mechanisms for strengthening technology innovation and the extent to which they are developing cost effective solutions;
- the extent to which the National Metrology System and the National Standards Strategic Framework is contributing to early uptake of new technology; and
- the UK’s priorities in the negotiation of the EU Framework Programme and its benefit to business.”⁴

Appointments to the TSB were made in line with the public appointments process and the board was constituted in order to represent a broad cross-section of industry and the main government stakeholders (Table one).

Table one: Appointments to the Technology Strategy Board (2004)

BUSINESS			
	Name	Technology background	Business background
CHAIR	Graham Spittle	IT software	IBM
2	Alan Begg	Engineering	Automotive Academy
3	Joseph Feczko	Pharma	Pfizer
4	John Brown	Biotech	Ex-Acambis/Roslin
5	Julia King	Materials	RR/Imperial

³ Science & innovation investment framework 2004-2014 (July 2004), paragraph 5.6

⁴ Science & innovation investment framework 2004-2014 (July 2004), paragraph 5.38

6	Mike Howse	Engineering	Rolls Royce
7	Mike Walker	Telecoms	Vodafone
VENTURE CAPITAL			
8	Anne Glover	Materials	Amadeus
9	Catherine Beech	Bio/pharma	Cambridge Gateway
REGIONAL			
10	Nick Buckland	(IT)	Deputy Chair SWRDA
11	Janet Brown	(materials)	Scottish Enterprise / ex-Motorola
OTHER MEMBERS/OFFICIALS			
12	John O'Reilly	EPSRC	Nominated by Research Councils
13	David Hughes	DTI	DG/Innovation Group
14	Mark Gibson	DTI	DG/Business Group
15	Vicky Pryce	DTI	Chief Economic Adviser
16	Keith O'Nions	OST	DG/Research Councils
17	Fields Wicker-Miurin	DTI (non-exec director)	Chair, Investment Committee
18	Claire Durkin	DTI	Head/Energy Innovation and Business Unit
Other DTI staff ex-officio and Technology Strategy Board Secretariat			

Ministers were concerned however, that the Civil Service lacked the skills and credibility to design and deliver business-led technology programmes. So in March 2006, the Government announced in the Budget its intention for the TSB to operate at arm's length from Government. Subsequently the Technology Strategy Board was established as an Executive NDPB in 2007 under the provisions of the Science and Technology Act 1965. This enabled it to be established as a NDPB through Royal Charter on the same basis as the Research Councils. Several members of the Advisory NDPB agreed to transition on to the governing board of the new Executive NDPB, including the chair. New appointments, and reappointments, were made in line with the rules governing public appointments.

The leadership role of the TSB was refreshed and restated in the 2007 Review of the Government's Science and Innovation policies "The Sainsbury Report"⁵. This involved:

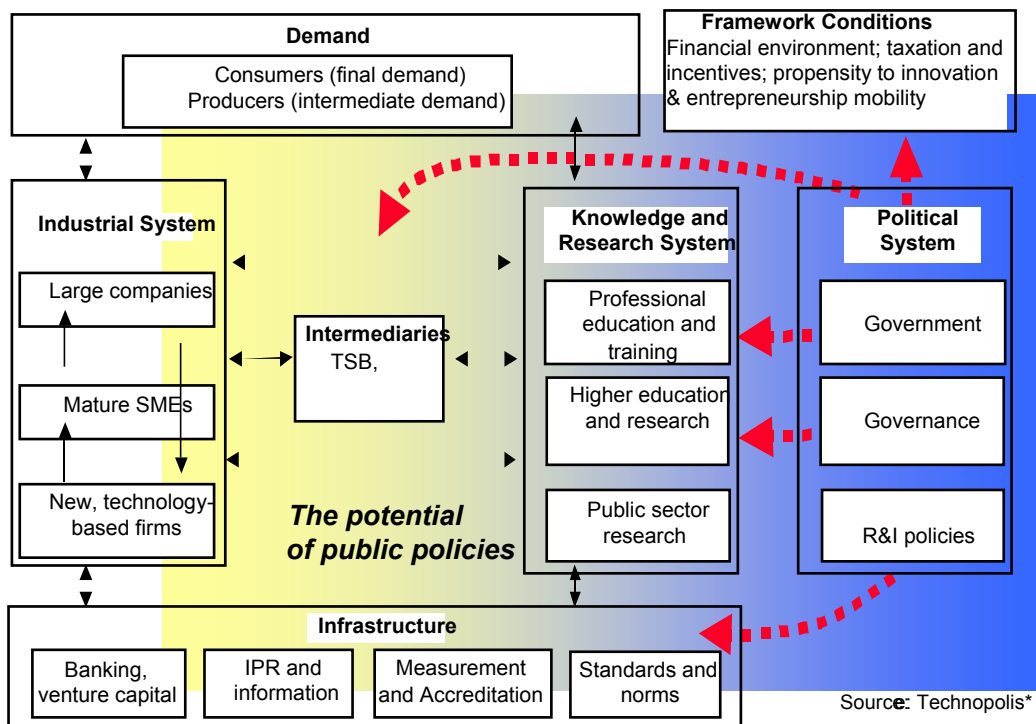
- Working with the Regional Development Agencies (RDAs), the Research Councils, government departments and the economic regulators to co-ordinate public sector technological innovation activity, leverage public sector resources and simplify access to funds for business.
- The TSB extending into new areas, such as the service sectors (including the creative industries) in which technological innovation is important.
- The TSB developing an international strategy and working more closely with UK Trade and Industry (UKTI) to enhance the UK's position as a centre for investment by world-leading companies.

In the present day the TSB describes itself as the UK's national innovation agency and occupies a unique place in the UK's innovation landscape (Figure 1):

- The TSB is the only organisation supported by the Government that provides funding support for R&D in business. No other innovation partner organisations do this, although they fund related innovation activities (e.g. design, seed investment, various programmes), some of which can be linked with TSB programmes.
- Various activities supported by the Research Councils and HEFCE also support innovation, through collaborative projects involving universities and business, although businesses are not eligible to seek direct grant funding from the Research Councils.
- The Higher Education Innovation Fund (HEIF) supports a range of innovation activities, but this funding is allocated at the discretion of universities and is often used to fund Technology Transfer Offices and similar infrastructure; it does not systematically support R&D in business.

⁵ The Race to the Top: A Review of the Government's Science and Technology policies, October 2007.

Figure one: Position of the TSB within the UK's innovation system



Public Bodies Reform Agenda

This is led by the Cabinet Office, using HM Treasury rules and standards. The TSB was reviewed against the 3 Triennial Review criteria as part of the wider Cabinet Office review of arm's length bodies conducted in 2010. The decision was taken to retain it as an arm's length body based on the TSB's primary role being a technical one where a high level of specialist technological and market knowledge is required. It was also seen as beneficial for the TSB to be viewed as an independent organisation and one whose decisions were based on objective criteria relating to its overall mission, rather than being subject to political judgements.

This does not pre-determine the outcome of this Triennial Review, which is based on evidence, but is a relevant consideration.

The Government's Plan for Growth and Industrial Strategy

In November 2010, the Government launched the Growth Review, setting out its aim to build a stronger and more balanced economy in the medium-term. The Plan for Growth announced a wide-ranging programme of economic reforms. Further reforms have followed and departments have made significant progress, including:

- Launch of the National Planning Policy Framework, introducing a powerful presumption in favour of sustainable development;
- Introduction of Universal Credit to simplify the benefits system and improve work incentives;
- An ambitious infrastructure agenda, including publication of the National Infrastructure Plan 2011 and the recent launch of the UK Guarantees Scheme; and

- Opening of academies and free schools, giving schools the freedoms and flexibilities they need to continue to drive up standards.

The Government's Industrial Strategy was launched by Vince Cable in a speech at Imperial College Business School on 11th September⁶. It sets out a long-term approach to how government supports business to give greater confidence for investment and growth. The strategy:

- Sets out that the Government will provide a spectrum of support to sectors;
- Will develop partnership strategies with specific sectors that have real impact;
- Will be a whole of government approach to using the resources at its disposal including making difficult trade-offs;
- Support long-term plans for technology investment and identify and develop new, potentially disruptive, technologies;
- Ensure we get the most out of procurement.

The TSB is expected to make a major contribution to the delivery of the technology and procurement workstreams of the Industrial Strategy.

Other issues relevant to the Triennial Review

The Heseltine Review

On 31 October 2012, Lord Heseltine published a report on competitiveness in the UK entitled "No Stone Unturned in Pursuit of Growth"⁷ in which he made a series of far-reaching recommendations. This included the proposal that over £50 billion of central government programmes should be devolved to Local Enterprise Partnerships (LEPs), including the current funding for the TSB. A number of other recommendations are directly relevant to the TSB:

39. The Government should continue to commit to the long term stability of the core funding of science and research, at a level which keeps pace with our international competitors.

40. UKTI should work with the Technology Strategy Board and the Research Councils to strengthen the marketing of the UK as an inward investment destination on the back on our world-renowned research excellence.

41. The Department for Business, Innovation and Skills and the Technology Strategy Board must set out a clear statement explaining how they and other government agencies will work with LEPs and the devolved administrations to better connect national strategy with local initiative.

42. All government departments, working through the Chief Scientific Advisers Committee, should consult with the Technology Strategy Board and Research Councils UK on the development of their growth commitments.

It is not appropriate for this review to take a view on these recommendations which are currently being considered by the Government.

⁶ <http://www.bis.gov.uk/news/speeches/vince-cable-industrial-strategy-september-2012>

⁷ No Stone Unturned in pursuit of Growth, Report by Lord Heseltine of Thenford, October 2012.

Abolition of the RDAs

The Regional Development Agencies (RDAs) had broadly similar objectives and priorities to the TSB in supporting innovation. Sometimes they also delivered similar programmes at a regional level to those delivered by the TSB at a national level. The RDA activity was primarily focused on SMEs, extended the coverage of innovation support beyond that provided by the TSB and also funded large, capital-based, innovation projects. The Sainsbury report led to greater alignment between TSB, RDA and Devolved Administration support by establishing a target to align, over a three-year period (2008-11), at least £180m of RDA funding against TSB priorities. This, in turn, meant that TSB funding decisions were informed by, and provided support for, the technology priorities of the RDAs and DAs⁸.

The abolition of the RDAs meant that the TSB acquired more responsibilities for supporting the innovation efforts of SMEs and programmes previously delivered through the RDAs, including Smart and Innovation Vouchers. The TSB did not take over the Innovation Networks product from the RDAs, which supported intermediaries to connect businesses to the innovation support structure. Pressure on the TSB to support the development of regional innovation infrastructure increased but it did not take responsibility for existing facilities, with some assets transferring to the Homes and Communities Agency (e.g. science parks), others to central government departments and others being moved out of the public sector. The publication of the Hauser report⁹, however, led to specific calls for the establishment of a series of “Technology and Innovation Centres” across the country. The TSB was subsequently asked by BIS to oversee the establishment of these, now known as Catapult Centres.

Probably the most significant impact of RDA abolition on the TSB’s ability to deliver innovation support is that RDA leverage of EU Structural Funds, which contributed substantial funding to innovation support, ceased with no alternative arrangements having been put in place. This was not an area where the TSB was expected to have a capability when the organisation was first designed. The TSB has now appointed a member of staff with specific responsibility for engaging with these programmes. The UK is in the process of negotiating the Common Strategic Framework (CSF) Funds 2014-2020 partnership agreement with the European Commission, which will involve partners at national and sub-national level.

Since the abolition of the RDAs the Government has approved 39 Local Enterprise Partnerships (LEPs), covering all of England. TSB officials have begun the process of engaging with LEPs, usually at Chair, Director and/or senior officer level, or through meetings with groups of LEPs in a geographical or sectoral area. LEPs are diverse – in terms of size, funding, governance, staffing resource and capacity and perception of their role. The extent to which they can, or whether it is appropriate for them to, fill the gap left by the RDAs in supporting innovation is unclear. LEPs now receive core funding from the Government and will be producing Growth Strategies by the end of December 2012.

⁸ Accelerating Business Innovation Across the UK, Report by TSB, RDAs and DAs, February 2010.

⁹ The Current and Future role of Technology and Innovation Centres in the UK, March 2010.

Function and Form

This section of the report looks at the functions of the TSB. It then considers current and potential structures for the TSB before assessing their merits and making a recommendation supported by the evidence.

Functions of the TSB

The Technology Strategy Board is the prime channel through which Government supports business-led technology innovation. It is a business focused organisation with a cross-Government leadership role to stimulate and accelerate technology development and innovation in the areas which offer the greatest potential for boosting UK growth and productivity. The TSB describes its role as to catalyse and connect, accelerating the pace of innovation in the UK by identifying those areas where it can make a significant difference:

“The vision of the Technology Strategy Board is for the UK to be a global leader in innovation and a magnet for innovative businesses, where technology is applied rapidly, effectively and sustainably to create wealth and enhance quality of life.”¹⁰

In 2008, the TSB published its first strategy, under the title “Connect and Catalyse”, to explain how it would promote and invest in innovation for the benefit of business and the UK between 2008 and 2011¹¹. In May 2011, it published “From Concept to Commercialisation: a strategy for business innovation 2011-2015” which set out its approach to accelerating the pace of innovation over the current Spending Review period. It currently supports projects in 4,000 businesses, and in 2012 committed £250m through 60 competitions to help both large and small businesses R&D in a wide variety of sectors and technologies. In total, since 2007, it has invested with partners over £2.5bn and claims a return to the economy of £7 for every £1 spent (Box one).

Box one: Evidence on the effectiveness of TSB programmes

Evaluations typically show that TSB support provides additional economic benefits from higher levels of innovation. For example, **support for Collaborative R&D** appears to be highly additional with 98% of projects saying that they would not go ahead without government support. The returns to projects were highly skewed with 5% giving 87% of benefits. Overall, the programme is estimated to have delivered £6.71 in additional GVA for every £ of project costs.

¹⁰ www.innovateuk.org/ourstrategy

¹¹ <http://www.innovateuk.org/assets/pdf/corporate-publications/technology%20strategy%20board%20-%20connect%20and%20catalyse.pdf>

The TSB has a range of tools that it uses to support this mission, set out below.



Under the terms of its establishment, BIS signed a financial memorandum and management agreement with the TSB to determine the governance and financial arrangements between the two organisations. A tasking letter issued at the start of the spending round period sets out BIS priorities for the TSB.

Annex C describes the 10 tasks contained within the TSB's tasking letter. The letter covers a similar set of issues to those referred to by the previous Government and is structured to reflect the interests of different parts of BIS and its partner bodies. However, the tasks can generally be grouped into three distinct functions, which we have used as the basis for this review and throughout the rest of the report. The three main functions are:

1. **Delivering programmes to improve UK innovation performance**, including the drawing up of strategy and delivery plans, the design of programmes, the selection of projects and grant payment processes. This includes engagement with BIS, UKTI, the Research Councils, the Devolved Administrations and International bodies (e.g. EU). The key feature of this function is that it relates to the core funding of the TSB and it is for the TSB to determine how best to use this funding to support innovation in the UK.
2. **Support for specific technologies to deliver specific Government objectives.** This might include agreements with other Government departments or agencies, such as the UK Space Agency, the Energy Technologies Institute or the Department of Energy and Climate Change, or the Office for Strategic Co-ordination of Health Research (OSCHR) and the Department of Health. It is about how TSB tools and expertise can be used to support specific objectives. It also includes the TSB's role in delivering the Small Business Research Initiative (SBRI) which is of particular interest to those Departments with large procurement programmes, such

as the Ministry of Defence. The key feature of this function is that it is “mission-led” and generally relates to additional funding, negotiated on a bespoke basis, with TSB and the other party agreeing respective roles and responsibilities.

3. **Policy input to Government and development of strategic partnerships** with the wider innovation infrastructure including the National Measurement Office, the Design Council and Nesta. This relates to the TSB’s ability to provide advice and expertise in the shaping of government innovation policy and wider economic policy, including industrial strategy.

Analysis of TSB Functions

This section sets out our analysis of the TSB functions identified above. For each function we consider:

- The range of evidence received from BIS and TSB, and
- Evidence from stakeholders on the way the functions are carried out.

We take each function in turn.

Delivering programmes to improve UK innovation performance

This function covers TSB activities inherited from the DTI’s old technology programme, new schemes developed by BIS and schemes inherited from RDAs.

Evidence received on TSB functions

The TSB’s grant expenditure in 2011/12 was around £260m, excluding contributions from departments other than BIS. Due to difficulties in forecasting project grant drawdown and long periods between expenditure by companies and claims, this was significantly under-spent. The TSB introduced new procedures in November 2011 for forecasting grant drawdown: the move from forecasting average accruals to one based on what participants achieved historically should reduce future underspend¹².

The TSB’s budget includes provision for expenditure in the following areas:

- Support for feasibility studies;
- Support for Collaborative R&D and demonstrators;
- Knowledge Transfer Partnerships, where associates from public sector research organisations are funded to work on innovation projects in business;
- The Smart programme - R&D grants for individual companies, primarily SMEs;

¹² TSB Annual Report and Accounts 2011-2012.

- Support for Catapults, i.e. previously described as Technology and Innovation Centres (Box two), and
- Support for networking and information sharing activities across business and the

Box two: What is a Catapult centre?

In 2011 the Government allocated over £200m to invest in a network of new Business-focused technology and innovation centres focusing on areas of greatest potential for the UK. These will provide:

- Access to world-leading technology & expertise
- Collaborative R&D projects with business
- Contract research for business
- A critical mass of activity
- Skills development at all levels

The Catapult Centres are a novel feature on the UK landscape and incorporate an element of responsive and thematic funding. The TSB and BIS jointly identified a series of opportunities for intervention, based on an assessment of the global market potential and current UK capabilities. This resulted in a TSB-led programme of activity to seek bids from consortia to establish a series of seven Catapult Centres in a diverse range of areas. This has since moved from being a competitive process to a process where TSB works with consortia to develop a single national offering.

We consider the Catapult programme to be significant because:

- it helps explore the nature of the relationship between the TSB and BIS;
- the Catapults are intended to be globally visible features on the UK innovation landscape;
- they link together existing publicly-funded assets and infrastructure; and
- they have a strong regional impact and presence.

research base through the Knowledge Transfer Networks and the _connect networking platform.

TSB funding operates in two modes:

- **Responsive**, i.e. businesses bid for support under established schemes managed by the TSB e.g. Smart. This mode accounts for around a quarter to a third of all expenditure. In this case the TSB is required to use its technological expertise to select projects for funding. Some of these programmes (such as Smart) are ring-fenced, meaning that the TSB has no discretion about the level of expenditure dedicated to particular programmes in the face of potentially volatile demand.
- **Thematic interventions**, where the TSB constructs calls where businesses can bid for a mix of support including feasibility studies, support for R&D and demonstrators and knowledge transfer partnerships. This mode accounts for half of all expenditure and includes the Catapult programme. In this case the TSB is responsible for:

- Consulting with business, academia and government to establish high level priorities for action, drawing upon five criteria.¹³ The Technology Strategy Board high level priorities are set out below.
- Once resources have been allocated at a high level, the TSB identifies specific technologies where support can make a difference. This stage uses data analysis, commissioned research and consultation to identify opportunities and barriers. Technology road-mapping has been used in some areas to structure these interactions.
- Calls are then launched in technological areas, which businesses then respond to. The TSB then assesses and selects bids according to the quality of the application.

We consider that the development and provision of a set of tools to support innovation in the UK is a core function of the TSB. This may take the form of a series of horizontal interventions intended to support the innovation system as a whole, e.g. networking activities to increase SME interactions with Universities and large companies, and a series of deep thematic interventions intended to target specific opportunities. In both cases it is important to note that it is the TSB that leads on identifying the problem, assessing and developing appropriate tools to tackle the problem and then delivering the programmes needed to address the problem.

Evidence received on the way functions are carried out

There is strong support, from across the spectrum of the stakeholders interviewed, for the role undertaken by the TSB to support businesses in the UK to innovate and to commercialise their innovations, thus contributing positively to the economy.¹⁴

The product set is seen to be, on the whole, fit for purpose, supporting businesses where there is no market offer, or where there are barriers to accessing private sector support. There are differences in emphasis however:

- Stakeholder appreciation of individual tools varies depending on their place in the innovation eco-system (e.g. whether they are a large company, SME, university etc). Networking is seen, for instance, as very important for and by SMEs, but less so for large companies and vice versa for large scale collaborative R&D programmes.
- The TSB is seen by several stakeholders as providing a valuable function for consolidating public support for R&D although some argue that it provides more

¹³ The criteria are:

- How big is the market?
- What are the UK's research and business capabilities?
- Is the timing right?
- Why should the Technology Strategy Board support this?
- whether an intervention by TSB can make a real difference?

¹⁴ Submissions from Association of the British Pharmaceutical Industry, Sebastian Conran, JaguarLandRover, Pfizer, Rolls-Royce

effective support to near-market R&D activities. That said, beneficiaries point to opportunities and successes in supporting investment in new technologies:

- The TSB could play a more active role in engaging with/influencing EU instruments of relevance to the pharma/bio-pharma sector.¹⁵
- GlaxoSmithKline (GSK) for example is appreciative of TSB's responsiveness to new technologies including at the chemical/biological interface (although have highlighted that it is "more focussed on supporting nearer to market R&D activities").¹⁶
- Pfizer feel that interaction in the health sector had been successful and that TSB has brought in new innovation and supports the right areas.
- A number of respondents identify knowledge transfer as key to unlocking growth, having identified Universities as the holders of world-class research and knowledge. There is some support for Knowledge Transfer Networks¹⁷ but several large companies see the value of Knowledge Transfer Networks to be more for SMEs.¹⁸
- Respondents from the Research Councils thought that the TSB fulfils an important role in the Innovation System, supporting the process of translating research outcomes into economic benefit¹⁹. And that the TSB has the ability to operate in ways that the Research Councils cannot emulate. For example, it can invest in business R&D directly and align the public sector with innovation opportunities²⁰. That said, Research Councils felt that:
 - The process of single, time limited, calls is perceived to be unhelpful for bio-science related areas which have a longer timescale between initial research and commercial application. An open call process would allow prospective applicants to develop their ideas before the applying to the TSB²¹.
 - The TSB sometimes lacked in-house expertise and that funding processes could make collaboration with the Research Councils more difficult and bureaucratic.
 - The Biomedical catalyst was an effective way at offering new ways of working tailored to specific sectors, with more flexible rules and processes and boundaries between Research Council and TSB spend.
- The Devolved Administrations are, on the whole happy with the products offered, but have identified that this can lead to duplication and confusion, as the Devolved Administrations all run and fund their own programmes.

¹⁵ Submission from GlaxoSmithKline

¹⁶ Submission from GSK

¹⁷ Submission from ABPI

¹⁸ Submissions from JaguarLandRover and Viridor

¹⁹ Submissions from BBSRC and EPSRC

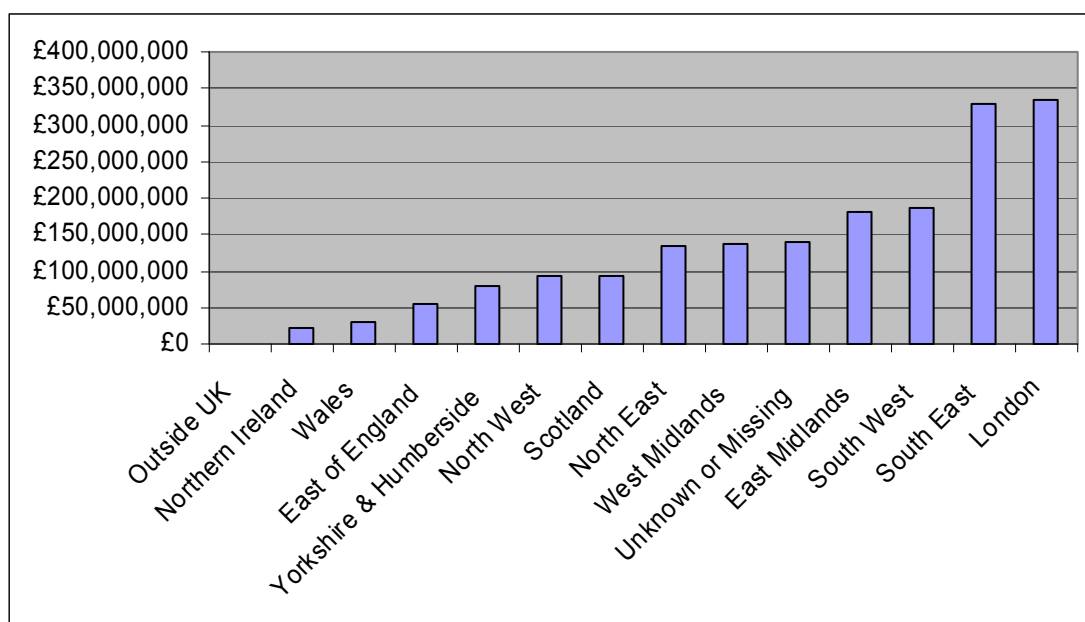
²⁰ Submission from MRC

²¹ Submission from BBSRC

The TSB funding model is “place blind”, and is via competitions and excellence. Stakeholders outside of London and the South East, including in Scotland, Wales and Northern Ireland, are concerned that this model can inadvertently miss innovative potential (by concentrating on existing excellence) and does not address playing a role in helping areas to transform incrementally. For example, Knowledge Transfer Networks are valued by the Devolved Administrations, though it is pointed out that the KTNs are mainly headquartered in London and the South East of England, and that activity is focused mainly on the south of England.

TSB funding is skewed heavily towards London and the South East (Figure two), although the proportion of funding that goes to these areas (36%) is not too far out of line with the regional concentration of business R&D (29% of business R&D is carried out in London and the SE)²². There is a view that a less place blind approach e.g. **by having TSB presence** in the Devolved Administration countries would be beneficial. This idea has also been proposed by others, e.g. having a TSB Northern Office to ensure a focus on the potential in this part of the country.

Figure two: Regional breakdown of TSB funding (2003-2012)



A number of stakeholders have identified a “gap” in strategic thinking below the national level. This had previously been led by the Regional Development Agencies, who brought with them resources in the form of expertise and budget. They spotted nationally significant innovation going on locally, connected with SMEs and linked them to TSB schemes, and funded innovation which was locally significant, but below the TSB radar. Other routes will need to be considered, and this is pressing, as plans are agreed with the European Commission on the proposed delivery structures for ERDF 2014-20. Failure to

²² In addition the TSB data refers to region of applicant, not where the R&D is performed. It is therefore possible that TSB grant applications are submitted by Headquarters based in London and the SE with the money spent elsewhere.

link TSB support to available European funding would lead to less business innovation support, particularly in poorer areas of the UK which are eligible for European funding. Respondents however gave mixed views on whether the TSB should perform this role.

More broadly, there is some concern that the loss of the RDAs had led to some unrealistic expectations being placed on the TSB - particularly to engage with the 39 LEPs on an individual and collective basis, and fill gaps left by the abolition of the RDAs.²³ Other stakeholders believe that SMEs are more exposed now the RDAs have disappeared and that the demise of the RDAs has left a hole in terms of localised support to innovation and the SMEs. It is thought that the TSB is neither incentivised, nor funded and resourced to fill this gap.²⁴

There are significant differences in view about the extent to which the TSB supports small firms:

- Some SMEs and organisations speaking for SMEs expressed a strong view that the TSB is perceived as being for large companies and not for SMEs, particularly the smallest firms. And that the TSB needs to do more to support SMEs to get their ideas to market.
- It is also felt that the TSB has to learn how to communicate the offer better to SMEs, improve its marketing and use “business language”. Some stakeholders have also commented that competitions processes are too formal and bureaucratic, and provide inadequate feedback - which acts as a disincentive for businesses to get involved.²⁵
- Other stakeholders comment that the TSB puts too much emphasis on SMEs. Others comment on:

“an SME fixation...the TSB has long held a view that most (some believe all) innovation starts with SMEs in pharmaceuticals it probably is 100% true, but in aerospace it probably is 100% false. So there’s a spectrum, and we don’t think the TSB quite understands that.”

- Others believe that the TSB should place more emphasis on getting an SME into a supply-chain to position them for future growth.²⁶

Evidence of funding by beneficiary type (Figure three) suggests that SMEs have been effective at accessing funding: their share of TSB funding for businesses (47%) exceeds the share of all business R&D performed by SMEs (21%). In part this reflects the existence of programmes targeting SMEs (e.g. Smart) but it may well reflect the past success of the Regional Development Agencies in connecting SMEs into the innovation support system, providing resource in terms of both people and money to do this. If so, the loss of the RDAs may lead directly to less support for SMEs. Stakeholder feedback has identified as key the role of connecting SMEs into the TSB, and that this is essential to ensure that the

²³ Submission from JaguarLandRover

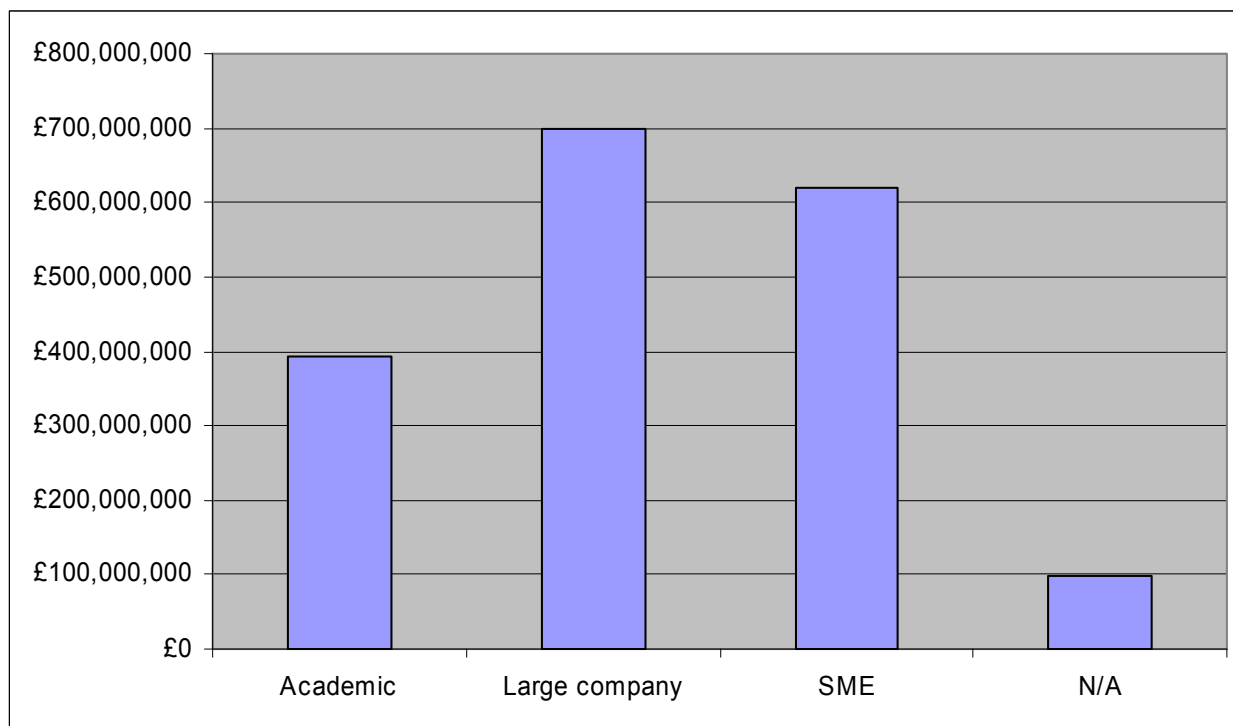
²⁴ Submission from Rolls-Royce

²⁵ Submission from SME Innovation Alliance

²⁶ Submissions from Sebastian Conran, Intelligent Energy

innovation support system is effective. This should be a role for the TSB or for other bodies and intermediaries.

Figure three: breakdown of funding by beneficiary type (2003-2012)



Some stakeholders' believe that the TSB's resources could be strengthened:

- While some believe that the TSB is effective at leveraging expertise through networks²⁷, others argue that it has insufficient administrative resources, either in terms of technical expertise (including economics), strategic direction or procurement.²⁸
- Others argue for its programme resources to be increased so that it can increase the scale and scope of its activities in the UK innovation landscape.

Support for specific technologies to deliver specific Government objectives

This function covers TSB activities with other government departments (OGDs), including the co-development and co-funding of programmes that support departmental priorities. It could be described as mission-led innovation support - helping government departments' deliver their policy priorities and objectives, whilst also generating business opportunities for UK based businesses.

²⁷ Submissions from Pfizer and Rolls-Royce

²⁸ Submission from SMEIA

Evidence received on TSB functions

When the TSB was established in July 2007, its relationships with Government Departments were limited and patchy. There were a few inherited links with Department for Transport (DfT) and the Home Office and there had been discussions about possible future Innovation Platforms with OGDs.

Since then the TSB worked on establishing contacts at senior level with all of the main Government Departments and bodies, particularly HM Treasury, Defence, Health, Home Office, Transport, DEFRA, DCLG and FCO and Government agencies such as the Environment Agency and HMRC. This included raising awareness and understanding of the role of the Technology Strategy Board and how it could support their Departmental objectives and priorities.

The TSB supports the delivery of OGD objectives through:

- **Support for the Small Business Research Initiative (SBRI).** This is a procurement-based programme which allows public bodies to explore innovative solutions to policy or service delivery needs at the feasibility and prototyping stages. In doing so, it also encourages innovation in companies, particularly SMEs. SBRI is championed by the Technology Strategy Board. Examples of Government Departments working with the Technology Strategy Board on SBRI competitions are:
 - i. the Home Office Scientific Development Branch (HOSDB), now the Centre for Applied Science and Technology (CAST), and the Technology Strategy Board launched an SBRI competition to fund development work on an oral fluid (saliva) screening device to aid the detection of drugs;
 - ii. the Department of Health, National Institute of Health Research (NIHR) worked with the TSB to find new ways to tackle the serious problem of healthcare associated infections;
 - iii. the UK Space Agency has worked with the TSB on an SBRI competition which will create and build demonstration software and components necessary to enable the distribution, handling and implementation of the security keys which will allow access to the Galileo PRS; and,
 - iv. in February 2010 Defra and the Technology Strategy Board launched a £1.2m SBRI initiative to fund development work on ultra efficient lighting (UEL) for the domestic environment.
- **Support for Innovation Platforms.** These bring industry, academia and government together to focus on a specific societal challenge such as reducing vehicle emissions, fast and accurate disease diagnosis, sustainable agriculture and food security, and seek ways to address these through developing innovative new approaches, technologies and relevant products or services. There are currently six Innovation Platforms underway including:
 - i. Low Carbon Vehicles – launched in 2007, involving the DfT and the Department of Energy and Climate Change (DECC).

- ii. Assisted Living – launched in 2007, involving the Department of Health (DoH).
 - iii. Low Impact Buildings – launched in 2008, involving DECC.
 - iv. Detection and Identification of Infectious Agents - launched in 2008, involving DoH.
 - v. Sustainable Agriculture and Food – launched in 2009, involving DEFRA.
 - vi. Stratified Medicine – launched in 2010, involving DoH.
- **Support for Collaborative R&D.** Examples of jointly funded collaborative R&D projects include:
 - i. Three CR&D calls with DEFRA including new approaches to crop protection; sustainable protein production and food processing and manufacturing.
 - ii. Working with Scottish Enterprise on the forthcoming UK Marine Vessel Efficiency competition.
 - iii. Co-funding with DfT the accelerating rail competition.
 - iv. MOD S&T – co funding up to £3m for vessel efficiency competition.

The scale of the TSB’s involvement with OGDs has been increasing overtime as evident by the increase in funding from Government departments and other bodies (excluding BIS), which increased from £11.5m in 2007/08 to £39.1m in 2011/12. Particularly notable are the MOUs (or Charters) which the TSB has been able to agree with the Office of Low Emissions Vehicles (OLEV) and the Ministry of Defence. These set out how the two organisations will work with the TSB in order to support their objectives.

In addition to programmes that the TSB has developed in partnership with other government departments to meet specific objectives or mission-led innovation, it also manages a number of funding programmes on behalf of the Advanced Manufacturing and Services (AMS) Directorate within BIS. This represents total additional funding of more than £50m which passes through the TSB, approximately 15% of its grant expenditure, net of OGD contributions.

Table two: BIS (AMS) Budgets delegated to TSB

£ million	2012/13	2013/14	2014/15
RESOURCE	64.5	44.5	44.5
CAPITAL	13.2	10.2	10.2

This funding is used to support a number of innovation projects in aerospace, offshore wind and construction, including for example a Centre for Aerodynamics, the Mitsubishi

Efficient Offshore Wind project, Accelerating Rail Innovation and Low Voltage DC networks. In addition, TSB was responsible for managing the Advanced Manufacturing Supply Chain Initiative (AMSCI) competition on behalf of BIS, a national initiative that was derived from an RGF project initiated by Birmingham City Council. The funding for this project was managed separately and overseen by the Industrial Development Advisory Board.

The detailed arrangements for the management and monitoring of AMS-derived projects varies, including different arrangements for determining value-for-money, due diligence and the responsibility for making the final funding decision. Examples include:

- Projects where the funding decision and responsibility for assessing vfm rest within BIS and where TSB primarily acts as a payment and monitoring body (in some cases BIS may fund the additional administrative costs associated with this).
- Programmes where TSB expertise in running competitions is utilised in order to manage the handling and processing of bids from companies efficiently and quickly. For example the Advanced Manufacturing Supply Chain Initiative.
- Programmes where TSB plays a role in assessing and identifying successful bids, including contributing to the value-for-money assessment and carrying out due diligence.

We therefore consider that the delivery of bespoke programmes or projects for Government departments is a core function of the TSB and is clearly distinguishable from the broader role to support innovation in the UK.

Evidence received on the way functions are carried out

Evidence from stakeholders suggests broad support for the work that the TSB is carrying out with other Government departments (OGDs). There is a clear consensus regarding the need to bridge the gap between invention and implementation, derisking technologies in order to deliver public services that draw on innovation to create effective, efficient solutions (Box three).

Box three: Evidence on the effectiveness of support for low carbon vehicles

Evaluations show that TSB support for the development of low carbon vehicles has had a transformative effect on the industry and will help reduce emissions whilst delivering economic benefits:

- The vast majority of partners have either experienced, or expect to experience, a transformative shift in the Technology Readiness Levels of their developments, and consider that the CR&D funding was fundamental to that happening.
- Partners thought that the programme could deliver CO₂ reductions

Box three: Evidence on the effectiveness of support for low carbon vehicles

equivalent to 20% of emissions from the passenger car sector over a 10-15 year time horizon.

- Overall the programme demonstrates high levels of additionality in the key delivery areas. The median additional increase in projected GVA was around £14 per project £.

Stakeholders in OGDs expressed support for the TSB's "sturdy independence", commenting on the need for impartiality so that it can act as an honest broker and trusted independent partner, with horizons that reach beyond BIS policies.

OGDs value the link that the TSB provides between Government and industry, between the Government's priority needs and commercially-driven research and development. Stakeholders noted that the TSB's business led approach can support better translation producing practical applications. The TSB can play a particularly valuable role in sectors that require a multi-disciplinary approach or where a Department wishes to engage a wide variety of organisations in an open challenge or where it would not be efficient for the Department to invest resource in maintaining a business network of its own. One stakeholder also observed that the TSB enhances the impact of research undertaken in universities and promotes collaboration between the industrial and academic sectors which may endure beyond funded projects.

The TSB is valued for its ability to generate a high level of interest in programme calls, although some OGDs expressed the view that the TSB's grant giving processes could be slower, and more expensive, compared to other research focused organisations. BIS feedback on the AMS programmes delivered by the TSB indicates that the TSB is increasingly seen as a valuable delivery body. It has an efficient and effective set of processes that can support AMS objectives, and deep and credible expertise in key technology areas that can be used to help shape and assess projects or programmes.

Some OGD stakeholders described the TSB as very responsive; an organisation that not only seized opportunities but also proactively sought to satisfy needs of Government as well as industry. Its approach was characterised as "very collegiate" approach, with staff that were prepared to "go the extra mile".

However, others raised concerns that the TSB could be slow to recognise opportunities or develop capability in areas that lie outside the expertise of its current staff. There were examples where a lengthy period of senior level engagement had been required before the TSB picked up a new agenda. In most cases, the TSB's response developed momentum rapidly once the TSB had appointed a lead with the appropriate expertise and industry networks. This suggests that the issue may lie with the relative leanness of the TSB's staffing and the fact that the TSB's expertise is not consistently as strong or deep across all areas. Several stakeholders raised the issue of "person dependence" and perceived reliance on a single individual in key areas of activity led some stakeholders to raise concern about resilience.

In addition to the challenge of building capability in areas where the TSB is relatively new to the field, there are also areas where the TSB faces additional challenges in particularly complex environments:

- Stakeholders observed that the TSB works best when there is a pre-existing research consensus. However there are areas where the Government may identify a clear priority need, for example in healthcare, where a research consensus is lacking and needs to be developed.
- Stakeholders observed that the TSB works best when there is a clear sponsor for the work and an identifiable market opportunity, or where senior decision makers can commit to future procurement decisions if the technology development is successful. This creates challenges in areas where clear priorities have been identified but the procurement landscape is complex.

More recently direct engagement between BIS and individual TSB technology experts has increased in order to secure their input to the development of individual sector strategies under the banner of the new Industrial Strategy. Comments received from within the TSB (and from other funding organisations in the innovation landscape, e.g. HEFCE) indicate that the value of TSB delivery processes and technological expertise is widely recognised.

Policy input to government and development of strategic partnerships

Evidence received on TSB functions

The majority of evidence we received during the course of the review, included the information submitted by the TSB itself, related to the core support programmes and activities of the TSB – in other words the way in which the TSB spent its core budget either on its own or in partnership with other sources of funding. However many respondents, including the TSB governing body members past and present and officials in BIS commented on the way in which the TSB interacted with policy development in central government. This is partly reflected in the wording of the tasking letter²⁹ which refers to:

- “Consider the role of the wider innovation infrastructure ...”
- “Work closely with and across sector teams in BIS and business-led stakeholder groups to stimulate innovation in those areas which offer the greatest scope for boosting UK growth and productivity”;
- “Work in partnership with OGDs to identify key policy challenges ...”

In effect, the letter requires TSB to work with BIS and OGDs to identify key policy challenges and stimulate innovation. This goes beyond simple delivery of those policies and encourages the TSB to engage in design of policies and programmes. The TSB provided examples of this at EU, UK and local level:

- The TSB has provided advice and guidance on technology innovation and business issues, e.g. during the development of the 2011 innovation and research strategy

²⁹ See Annex C.

- It acts as the national contact point for the European Framework Programmes and has helped leverage EU funding for UK companies in the Eurostars programme, part of the EUREKA initiative;
- The TSB and individual members of staff are also involved in a number of EU initiatives, including EU technology programmes as well as Commission work on innovation procurement

However TSB engagement in the policy process is currently not an explicit requirement, in contrast to the role initially envisaged for the TSB when it was asked to report annually on its own activities and relevant Government policies.

The tasking letter also asks the TSB to:

- “develop strategic partnerships with organisations such as the NMO (and other metrology organisations), the Design Council, NESTA, UK IPO, the BSI and WRAP in developing its strategy and interventions”

This again implies a degree of engagement in the innovation policy development process.

Evidence received from within BIS clearly indicated that the Department saw the TSB contributing significantly to the development of innovation policy, working particularly through the sponsorship team and its wider engagement across the Department. One respondent commented that the TSB had inputted significantly into BIS’s innovation and research strategy. We therefore consider that the provision of policy advice to government on matters relating to innovation is a core function of the TSB and is clearly distinguishable from the functions described above.

Evidence received on the way functions are carried out

The review team received a number of comments on the TSB’s role in the innovation policy landscape and its relationship with other organisations. Broadly speaking these fell in to two categories:

- Comments from within BIS on the impact on policy development, and from members or former members of the governing board of the TSB; and
- Comments from other organisations on the influence TSB had on their funding decisions and prioritisation processes.

Overall there was positive recognition of the impact the TSB had had on the innovation landscape and that “the TSB had a fundamental role and had transformed the UK’s innovation landscape”. There was evidence that the TSB had input significantly to BIS’s innovation and research strategy, and had also contributed to the development of industrial strategy through consideration of emerging technologies and their affect across the economy. However, comments from within BIS indicated that although the TSB was doing a good job, and had contributed significantly to thinking on technology and innovation policy, it had had less influence on the development of broader industrial strategy and economic policy and that this was an area that could be improved. This was reflected in some comments from TSB Board members, who felt for example that the TSB could have done more work on procurement and that it had not been so good at advising on broader policy, both within BIS and with OGDs. It was suggested that part of the problem appeared to be little appetite for advice from the TSB outside of those parts of the

department directly concerned with technology and innovation, although it was also noted by some stakeholders that in some areas, such as procurement and SBRI, the TSB had insufficient power to influence departments and agencies.

Comments received from other organisations in the innovation landscape indicated that the TSB was generally seen as a valuable source of advice and played an important role in setting the overall direction of travel. This was captured in input from two external commentators who respectively saw the TSB as an intermediary institution playing an important role by publishing a direction of travel free from political interference to which other parties and consortiums can relate; and as an important partner and adviser on business and innovation matters. There was general agreement that the TSB occupied a unique space in the innovation landscape and organisations such as the Research Councils, HEFCE, NESTA and the Energy Technologies Institute (ETI) had very different roles in the innovation ecosystem. In all the replies from such organisations there was strong evidence of the close relationship and interaction, including connectivity with other funders.

Relationship with Research Councils

The TSB works to ensure that business derives most benefit from the UK's world leading research base. Its relationship with Research Councils is an especially important element of strategic alignment as well as operational delivery. The focus has been to establish good relationships with each RC, recognising the differing levels of maturity across the individual councils. Examples of TSB/RC joint activity, which cover strategic alignment as well as delivery include:

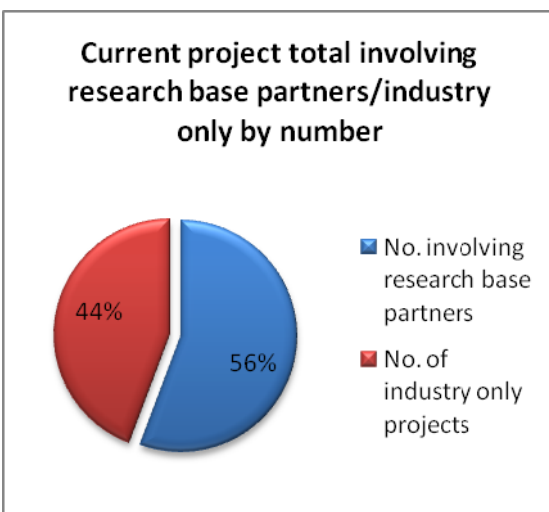
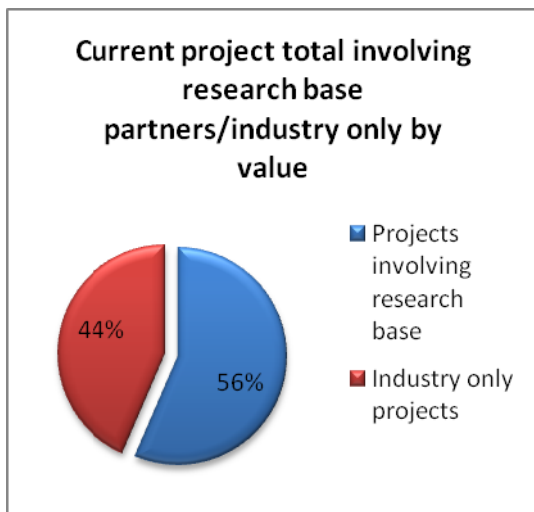
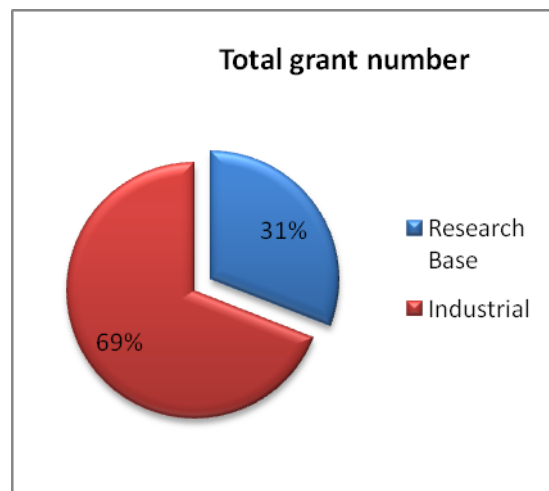
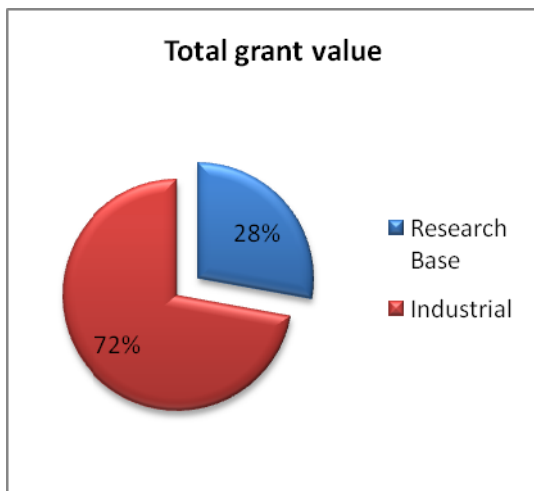
- Establishing a portfolio of Innovation and Knowledge Centres - centres of excellence to accelerate and promote the business opportunities of an emerging field of research and technology. The key feature is a shared space and entrepreneurial environment in which researchers, potential customers and skilled professionals can work side by side. These centres are supported in partnership by EPSRC, BBSRC and the Technology Strategy Board.
- Emerging technologies and Synthetic Biology: There has been close joint working to identify emerging technologies of potential major economic significance. One of the leading candidates, Synthetic Biology developed a Roadmap which led to a new IKC in partnership with EPSRC and BBSRC and a £6.5M feasibility studies programme funded by TSB, BBSRC, EPSRC and ESRC to encourage businesses to explore innovative industrial applications of synthetic biology.
- All Research Councils are now partners in the Knowledge Transfer Partnerships scheme.
- Low carbon vehicles integrated delivery programme: A joint programme of support for the UK's low carbon vehicle activity supported by EPSRC and the Technology Strategy Board - from strategically important academic research, through collaborative R&D, to the production of demonstration vehicles.

All Research Councils and TSB are now actively engaged in a wide range of joint activities. This relationship is continuing to grow as all parties see that there are even

greater opportunities to collaborate and deliver impact for business by building on the skills, capabilities and other resources delivered through the research base. TSB's future objective is to do more early strategic development work together and to align and connect our wider portfolios, in addition to continuing joint funding.

The following figures refer to the total current TSB portfolio and indicate both the number and value of grant portfolio directed to the research base and industry together with the overall extent of research base collaboration across all activities.

Current total TSB portfolio - £1.08bn, 2707 projects (includes public sector co-funding, excludes industrial contributions)



Current form

As previously noted, the Technology Strategy Board was established by Royal Charter under the auspices of the 1965 Science and Technology Act as an Executive Non-Departmental Advisory Body, sometimes referred to in short as a NDPB. This puts it on the same footing as the Research Councils.

BIS has a sponsorship relationship with the TSB on behalf of the Secretary of State, although it operates at arm's length from BIS. The relationship between BIS and TSB is governed by a tasking letter³⁰ which sets out the TSB's budget allocation, the financial conditions attached to its use, requirements for the TSB to publish strategies and delivery plans and factors the TSB should aim to include in its plans. Guidance by the Institute for Government suggests it is good practice for NDPBs and sponsoring departments to agree a memorandum of understanding (MOU) to govern any disputes e.g. over the extent of ministerial and official interference³¹. Currently the TSB/BIS relationship is not regulated by a MOU, though a financial memorandum and management agreement were drawn up in 2007. Stage two of the report will consider to what extent these two documents are equivalent to an MOU.

Current Size and Structure of the TSB

The current membership of the TSB Governing Board is set out in Table three. It differs markedly in its composition compared to when it was first established in 2004: it includes more technology experts from business and academia and there are no Civil Service members. According to the TSB's website the appointments were made in accordance with the requirements of the Code of the Commissioner for Public Appointments³².

Table three: Current membership of TSB Governing Board

	Name	Technology Background	Business role
CHAIR	Paul Smith	IT	Cisco
2	Dr David Grant	Engineering	Vice Chancellor Cardiff University
3	Jonathan Kestenbaum	Finance	Chairman and Chief Executive of Five Arrows Ltd.
4	Andrew Milligan	Finance	Head of Global Strategy, Standard Life Investments
5	Hazel Moore	Finance	Chairman of First Capital
6	Sara Murray OBE	Health	Serial entrepreneur
7	Professor Sir Christopher Snowden	Engineering	VP Royal Academy of Engineering
8	Dr Stewart Davies	Materials	MD of Romec Limited and of Balfour Beatty Technical Services
9	Iain Gray	Aerospace	Chief Executive of the TSB

³⁰ The latest version covers the period 1st April 2011 to 31st March 2015.

³¹ Institute for Government (2012), "It takes two: how to create an effective arm's length relationship between government and arm's length bodies." This report argues that MOU's are essential in clarifying accountabilities and roles and responsibilities between NDPBs and Departments.

³² <http://www.innovateuk.org/aboutus/governingboard.ashx>

10	Ian Shott	Pharmaceuticals and biotechnology	MD of Shott Consulting Ltd.
11	Doug Richard	Software and computers	Serial entrepreneur
12	Robert Sorrell	Energy	British Petroleum
13	Colin Paynter	Space	CEO Astrium Ltd.
14	Mike Carr	Telecommunications	British Telecom

In 2011 the Board was supported by around 105 permanent staff³³, 38 provide communication and operational functions (e.g. IT support, administration) or directly support the Chief Executive. The remaining staff members are in the frontline of delivering functions.

Using data published by the TSB and after advice from TSB officials we have allocated TSB frontline staff to the three functions that we have used during the course of the Review. In practice this exercise is not straightforward since TSB staff are not organised along the lines of the functions we have identified. Individual staff members can support any or all of the functions in their day job: as we noted before separating the three functions is not straightforward since they are highly interdependent. However, we provide this data to give a sense of the relative weight the three functions have in the TSB's work (Table five).

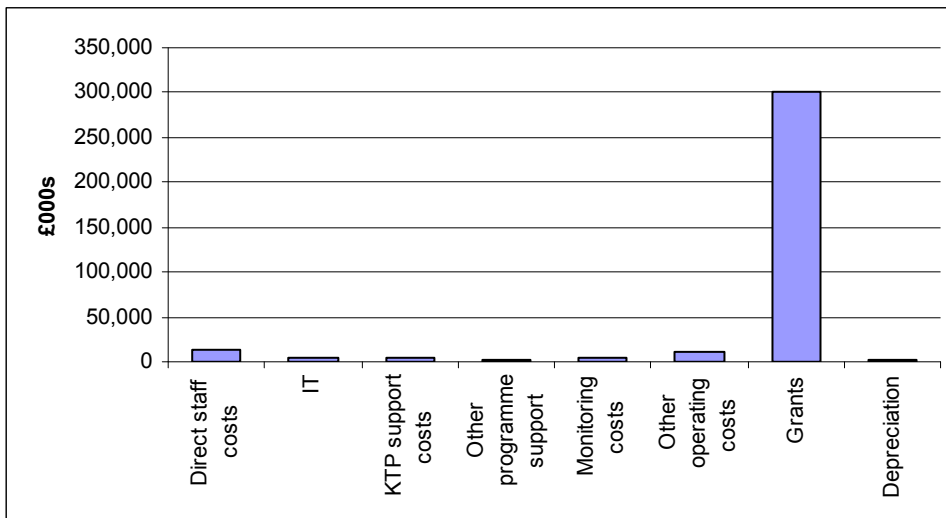
Table five: Approximate breakdown of TSB by function

Function	Share of staff time
Delivering programmes to improve UK innovation performance	70-80%
Support for specific technologies to deliver specific Government objectives	10-20%
Policy input to Government and development of strategic partnerships	10%

In terms of budget, in 2011/12 the TSB spent around £343 million, of which around £300 million was spent on grants. The grant expenditure includes £39 million of funding spent on behalf of others, principally OGDs (Figure four).

³³ TSB Transparency data, December 2011.

Figure four: TSB expenditure for the year ended 31 March 2012



Source: TSB Annual Report and Accounts 2011-12

Options for the form of the TSB

There are several options which could be considered for delivering the TSB functions. Table five sets out different possibilities for providing TSB functions and whether they are appropriate. The different models are those set out in the Cabinet Office guidance on Triennial Reviews. The Yes/No indicate our views on whether there is a need to explore the option further or whether it can be quickly ruled out. Any which are deemed appropriate are explored in the options analysis and evaluated drawing upon NAO guidance³⁴.

³⁴ NAO (2011), Assessing business cases for changes to arm's length bodies, National Audit Office memorandum for the Public Administration Select Committee.

Table five: Possible options for the provision of TSB functions

Delivery model	Improving UK innovation performance	Supporting specific objectives	Providing Policy advice	OVERALL CONCLUSION	Comments
Bring inside Government department	Y	Y	Y	Y	The TSB functions were previously carried out by the Department of Trade and Industry. This option is explored below. This could include transferring some functions to OGDs.
Move to an existing executive agency	N	N	N	N	Existing BIS agencies perform very different functions to the TSB making a successful transfer unlikely and disruptive. ³⁵ The potential to move functions to another public body elsewhere in government is considered under the merger and new executive agency options.
Move to a new executive agency	Y	Y	Y	Y	This option is explored below.
Move to voluntary sector	? ³⁶	N	Y	?	This covers a range of potential options, including charitable status, mutualisation, NGO or community organisation and is explored further below.

³⁵ Existing BIS executive agencies include Companies House, The Insolvency Service, The Intellectual Property Office, Land Registry, the Met Office, the National Measurement Office, Ordnance Survey, Skills Funding Agency and the Space Agency. Only one of these has a mission to fund technology development and this has a very narrow remit (Space).

³⁶ Challenge Panel requested further analysis on voluntary sector options, such as establishment of a mutual or community-interest organisation

Delivery model	Improving UK innovation performance	Supporting specific objectives	Providing Policy advice	OVERALL CONCLUSION	Comments
Move to local authority or LEP	Y	N	Y	Y	LEPs or LAs could provide advice or deliver innovation programmes restricted to their areas. However they could not deliver programmes for OGDs which have a national focus. This option is explored below.
Move to private sector	Y	Y	N	Y	BIS already contracts with private businesses to deliver programmes, so this option, along with others, is explored below. However to avoid conflicts of interest this is likely to require the separation of policy advice from other functions.
Establish new NDPB	n/a	n/a	n/a	N	Unlikely to deliver any efficiency gain and would not meet the Government's objective to reduce the number of NDPBs. We consider this option to be equivalent to maintaining the status quo.
Merge with another body	Y	Y	Y	Y	We consider below the potential to merge the different functions of the TSB with other another organisation. Given the breadth of the TSB remit we consider that the Research Councils would be the obvious body to merge with.
Maintain the status quo	Y	Y	Y	Y	This option is explored below.

Options Analysis

In its memorandum on “Assessing business cases for changes to arm’s length bodies”, the NAO set out good practice principles to help in assessing changes to arm’s length bodies. These include:

- Demonstrating clarity over the proposed change, what it is designed to achieve and why it is superior to current arrangements.
- Clarifying how the change affects public accountability to Ministers, establishing whether there are cogent reasons for independence from direct ministerial control and identifying wider public administration impacts.
- Ensuring that each option is chosen according to appropriate and well-evidenced criteria and that the preferred option can be supported on grounds of economy, efficiency and effectiveness, in particular on comparison of expected costs and benefits.

We therefore assess each of the options against the following criteria:

- Effectiveness of function delivery, i.e. would the proposed delivery model improve the effectiveness of the TSB at generating benefits for its beneficiaries?
- Independence and impartiality, i.e. how would the proposed delivery model affect the degree of independence and impartiality currently enjoyed by the TSB?
- Likely costs and benefits, i.e. would the new delivery lead to higher costs or benefits relative to the status quo?

Each option draws on considerations relevant to the TSB’s three basic functions. However, we note that these functions are highly interdependent and that the case for keeping them together needs to be considered, both in terms of the efficiency and the effectiveness of delivery. This is discussed in our recommendations.

Return the functions to BIS

Effectiveness of function delivery

Several respondents felt that central government did not possess the combined business and technical expertise which is required to perform the TSB’s functions and that processes would inevitably become more bureaucratic (and costly for beneficiaries).³⁷ One respondent noted that this was the rationale for giving the TSB NDPB status in 2007. The TSB’s expertise is a significant benefit to businesses, other government departments and the Devolved Administrations: any change that reduced this is likely to reduce the value of TSB functions to its “customers”. Historically the DTI struggled to provide a service to OGDs because of perceived conflicts of interest and different policy agendas.

³⁷ Submissions from JaguarLandRover and Viridor

Independence and impartiality

Respondents felt that prior to the establishment of the TSB the UK's innovation agenda was hampered by a lack of continuity; and that cross party consensus was important for long term success which would be more difficult to achieve if the functions were within BIS. Additionally, political independence was essential to encourage innovation and breakthrough technologies. Inevitably, grant awarding processes would be less transparent and more open to accusations that support decisions were politically driven. This is consistent with previous experience of the DTI's technology programme (the predecessor of the TSB) where beneficiaries felt decision making processes were opaque, perceived to be subject to political interference with less funding certainty because of the annuality of government expenditure. One respondent felt that the TSB needed to be autonomous to develop and sustain expert governance structures.

Likely costs and benefits

Compared to the do-nothing option this option is likely to result in:

- Some savings in staffing costs given higher floors and ceilings for TSB pay scales (Table six), although the realisation of these depends upon staff turnover.
- Fewer benefits as a result of a gradual loss in expertise as pay becomes less competitive relative to technologists in industry.
- Higher costs on businesses and other Government departments as a result of slower and less consistent technology support decisions.

This option is not recommended.

Table six: Comparison of BIS and TSB pay scales

TSB grade and salary	BIS, outside London, equivalent
Band 2 - £48,720 - £77,650	G6/G7 - £41,950 - £63,813
Band 3 - £36,240 - £56,950	HEO/SEO - £28,351 – £43,354
Band 4 - £26,900 - £41,620	EO - £24,427 - £28,507
Band 5 - £21,820 - £31,060	AO - £24,795 - £26,555

Source: TSB Transparency data, December 2011; BIS Pay award 11/12 includes professional and technical allowance

Delivery by new executive agency

Effectiveness of function delivery

An executive agency is directly within Ministerial control and the TSB would not be operating at arm's length. The impact on effectiveness would be similar to bringing the TSB within BIS. There is likely to be some loss of expertise. In cases where the TSB has been asked by BIS or OGDs to deliver specific projects it is effectively acting as delivery agent but any separation out of these functions would lose the efficiencies and economies of scale and scope provided by delivery through the TSB.

Independence and impartiality

The impact on independence and impartiality would be similar to bringing the TSB within BIS.

Likely costs and benefits

Compared to the do-nothing option this option is likely to result in:

- Some savings in staffing costs, as above.
- Fewer benefits as a result of a gradual loss in expertise.
- Higher costs on businesses and other Government departments as a result of slower and less consistent technology support decisions.

This option is not recommended.

Move to Voluntary Sector

There is no single definition of the voluntary sector however it is usually used to describe those organisations that focus on wider public benefit as opposed to statutory service delivery or profit. Options include:

- **Registered charities** are probably the largest single category, and include some of the best known voluntary organisations in the UK.
- **Non-charitable voluntary sector organisations**; including, not-for-profit community businesses, community interest companies and credit unions. Most voluntary organisations of any size will also have a paid staff of permanent employees.
- **Mutualisation** where public sector workers are given a new 'right to provide', to form employee-owned co-operatives to deliver what are currently public services³⁸.

Taking each in turn.

³⁸ Cabinet Office (2011), Unshackling Good Neighbours.

Effectiveness of function delivery

Legal advice indicates that the TSB as a whole is unlikely to meet the stringent criteria required for **charitable status**. NESTA and the Wellcome Trust are both registered charities and have comparable functions to the TSB, however the majority of their activity is in support of an educational or a public health role. This, along with the conditions attached to their endowments, limits the scope of their activities. Other charities qualify on the basis of a religious or poverty relief objective which does not apply here. We should also note that the community that receives support from the TSB – businesses – would receive a substantial economic benefit which would make the TSB ineligible for charitable status.

Non-charitable voluntary sector organisations, such as community interest groups or not-for-profit think tanks and NGOs may be able to deliver some functions currently provided by the TSB. The Big Innovation Centre for example, supported by The Work Foundation and Loughborough University, seeks to provide advice on innovation to the government and wider community. Several Universities have similar innovation policy research centres. However, as argued previously we do not believe it makes sense to separate the policy advice function of the TSB from the delivery of innovation support. Similarly, we can envisage a scenario where community-based groups seek to promote locally-based innovation in order to deliver local benefit, but again we are concerned that this would lead to fragmentation and dissipation of effort. These issues are considered further in the discussion of local delivery options.

Independence and impartiality

Mutuals have often been used to channel investment via experienced fund managers. In these cases the contributors to the fund become part owners of the mutual fund. For example the Civil Service pension has adopted a mutual model. Around a half of all funding for the TSB comes from Government with the balance from companies, making the Government the largest shareholder in any mutual. There is no fund for companies or government to own shares in. Under a mutual model, Government involvement would have to increase, reducing the arms length nature of the process. The model does not fit with the competitive nature of TSB support, where in any given year the best projects are chosen. Thus the nature of the share ownership would have to change on an annual basis, leaving Government as the most consistent voice.

Likely costs and benefits

- Some models could ensure delivery of support at arms length from Government; although others would make the TSB less arms length than now (e.g. mutualisation).
- Models other than mutualisation however require changes to primary legislation or would require the separation of TSB functions that would impose costs e.g. through fragmentation of delivery. Likely to be a weaker link between national priorities and policy decisions taken in government.

This option is not recommended.

Delivery by Local Authorities or LEPs

Effectiveness of function delivery

The TSB tasking letter defines the TSB as a national body engaged in the translation of scientific research for economic benefit³⁹. It is currently “place blind” in the way it allocates funding. Several respondents noted that the effectiveness of the TSB was compromised with the abolition of the RDAs, which performed a valuable function in spotting nationally significant innovation being carried out locally, engaging with SMEs, publicising TSB schemes and accessing EU funds.⁴⁰ Several respondents suggested that the TSB needed to develop a local presence, either through regional centres or through greater local engagement. Delivery by local authorities or LEPs would undoubtedly help to meet this perceived need. But delivery via LEPs or Local Authorities would increase overheads, reduce the likelihood of large, potentially high impact, projects being funded (e.g. the TSB allocation per LEP would be less than £10m). It would also become more difficult to develop packages of support for many industries where technology development involves global as well as national collaborations. Experience of negotiations over the location of Catapults suggests that projects would not be selected on the basis of technological excellence and maximising UK economic benefit⁴¹. Respondents also noted that LEPs do not currently have the remit and are not resourced to play a major role and their understanding of the innovation agenda is patchy.

Independence and impartiality

Delivery would clearly be independent of central government, although independence from local politics is likely to be considerably reduced. Local political agendas would become more influential and projects that benefitted more than one locality would find it more difficult to get funding. Joint work with other Government Departments would probably cease, unless a sizeable coalition of local bodies had a common interest and were willing to incur the co-ordination costs.

Likely costs and benefits

Compared to the do-nothing option this option is likely to result in:

- Higher costs to Government and businesses from duplication of administration, multiplicity of schemes and increased co-ordination.
- A higher risk of sub-optimal allocation of resources and lower impact projects supported, compared to a national programme.
- Less support for other Government department’s priorities.

This option is not recommended for as long as the Government views the TSB as a deliverer of nationally important programmes.

³⁹ ‘In fulfilling these purposes it is to have particular regard to the benefits to be gained by those engaging in business activities in the United Kingdom.’

⁴⁰ Submission from Rolls-Royce

⁴¹ A similar phenomenon was observed after the establishment of the RDAs. RDAs established 22 centres for micro and nano technology, all of which were sub-scale, with each RDA believing that its region had, or could develop, a competitive advantage in these technologies.

Private sector delivery

There are several models of private sector delivery that could be adopted. We considered a company limited by guarantee or public corporation for the TSB. These undertake or deliver a public service in a given industry. They are governed by a board and have specific arrangements in place to cover financial controls and accountability for public funds. Examples include the Post Office, Channel 4 or Ofcom. However, a body can only be classified as a corporation if it is classified as a *market body* – a body that derives more than 50% of its production cost from the sale of goods or services at economically significant prices. This does not apply in the case of the TSB.

Other options include:

- Delivery of TSB programmes by a private sector contractor,
- Delivery by a public private partnership e.g. Energy Technology Institute model.

Taking each in turn.

Effectiveness of function delivery

Private sector contractor: BIS already contracts out the management of programmes to private sector companies with specific expertise. For example the Manufacturing Advisory Service is delivered, on behalf of BIS, by a consortium including Grant Thornton, Pera, WM Manufacturing Consortium Ltd and SWMAS Ltd. This model is clearly business facing and would allow the TSB more freedom in terms of recruitment (e.g. the ability to set salaries). For a given TSB budget, the amount of resource dedicated to projects would decrease to provide business profit, although we appreciate that there might also be a stronger incentive to find efficiencies, which may increase the funds available to supported businesses.

Public private partnership: The Energy Technologies Institute offers an example of a hybrid public-private partnership, co-funded equally by government and private sector investors. ETI decisions are made by the business board and it has 10 year funding certainty. However this model is best suited to delivering clearly defined technology support which is aligned to the specific needs of a few companies. TSB call-based funding, open to a much wider range of companies, would not fit easily within this model and we do not believe that the direct influence of a relatively small number of private sector investors on funding decisions would be appropriate for the delivery of broad-based innovation support.

Independence and impartiality

Private sector contractor: A private sector model would clearly be independent of Ministers, but subject to the detailed terms of the contract. The TSB would be less responsive to changes in the policy framework since contracts for additional services would need to be renegotiated, and the realisation of any efficiency savings from the private sector would be dependent on a stable, long term contract. Policy advice, currently provided for free, would be charged for. More generally the principal (the Government) would need to regulate the agent's (the contractor's) behaviour through more expensive methods, such as contract negotiations, rather than official input at meetings. Policy advice is likely to be subject to potential conflicts of interest, particularly if the company also

provided advice to potential TSB beneficiaries. In principle the TSB's policy advice function could be spun out of the TSB and returned to the Department. However this would, in the opinion of the Review team, reduce the effectiveness of policy making. The unique value that is derived from the TSB's advice stems from its close engagement with businesses; moving it in house would lose this.

Likely costs and benefits

Compared to the do-nothing option the **private sector contractor** option is likely to result in:

- Higher monitoring costs for the Department.
- Less flexibility and responsiveness to a changing environment, without the Department incurring additional costs
- Policy advice, currently provided for free, would be charged for. Spinning out advice to BIS would reduce its value given that it would lose the TSB's unique business focus.
- Potentially more efficient delivery, although some diversion of programme resource to profit is likely.
- Possibly greater freedom to invest in increasing capacity to deliver programmes for other government departments.

The private sector options are rejected because the TSB would not meet the stringent criteria required or because the model would not fit with the TSB's model of operation. The private sector contractor option is not recommended for as long as the Government sees the TSB as making a contribution to policy development.

Merge with the Research Councils

Effectiveness of function delivery

The Research Councils value the existence of an independent business facing organisation, which can translate scientific advances into commercial benefits. There is a potential overlap with some Research Councils, for example the EPSRC provides substantial funding to scientists to engage in collaborative research with industry. One respondent noted that, unlike the Research Councils, the TSB's sole focus is on supporting business research. This means it can more effectively prioritise the selection of research projects on the basis of likely economic benefits. Bringing the TSB within the remit of the Research Councils would increase independence but risk losing its distinctive commercialisation role, particularly in the eyes of business. The Research Councils and the TSB operate different funding processes, limiting the scope for synergies, reflecting their different roles.

Independence and impartiality

The Research Councils are perceived to be independent of Government and to fund research without political interference, with established mechanisms for funding research and research infrastructure based on the peer-review process. In some areas, such as

climate science or medicine, the ability of the Research Councils to support research which is demonstrably independent from both government and business is critical. However, respondents noted that the TSB's arms should be shorter than the Research Councils, given that its role is inextricably linked with economic policy and industrial strategy, which will inevitably be influenced by Government priorities.⁴²

Likely costs and benefits

Compared to the do nothing option this option is likely to result in:

- Potentially fewer benefits to business from a loss of business focus and lost economic benefits.
- Disruption to the Research Councils.
- No additional cost savings over and above those already achieved, or being considered, as part of the merger of TSB and Research Council back office functions.

This option is not recommended.

Maintain the status quo

Effectiveness of function delivery

Evidence received from a range of stakeholders suggests that the NDPB status has been a material factor in the effectiveness of programme delivery. By having the flexibility to recruit individuals with business and technology backgrounds the TSB has gained credibility in the eyes of businesses.⁴³ It was also felt that the functions were interdependent and could not be separated⁴⁴ and that it would be disruptive to change the TSB when it is building trust and yielding the benefits from their investment of public funds.

Independence and impartiality

Respondents believe that the arm's length nature of the TSB allow it to engage with other government departments and other organisations more effectively because no one departmental view is dominant.⁴⁵ This increases trust and helps to facilitate the development of a productive relationship. It also allows funding decisions to be depoliticised and taken with more pace.⁴⁶ Ministers value being at arm's length from decisions over which specific technologies or businesses should be supported, though they recognise that Ministers should set the policy framework, within which the TSB operates, and agree work programmes with the TSB. Some respondents felt that the length of the arms shortened recently – after the abolition of the RDAs - and that this was unhelpful,⁴⁷ and that there extensive dialogue between the TSB and NIS over the timing

⁴² Submission from GSK

⁴³ Submissions from Viridor, Intelligent Energy

⁴⁴ Submission from Viridor

⁴⁵ Submission from Pfizer

⁴⁶ Submission from Viridor

⁴⁷ Submission from JaguarLandRover

and nature of the Catapult programme. Looking ahead, a more interventionist approach by BIS through the Industrial Strategy may also see more intensive dialogue between TSB and BIS and a closer relationship.

Likely costs and benefits

This option has no additional implications for the profile of costs and benefits.

Stage 1: Conclusions and Recommendations

There are a number of key points that emerge from consideration of the various options for the TSB and stakeholder feedback.

There is a strong interdependence between the three core functions identified. This is seen in the ability of the TSB to use its toolset in support of both the broader innovation objective and specific, mission-led objectives. As the Catapult programme demonstrates there is no clear dividing line between these two functions. Furthermore, the ability of the TSB to provide objective advice to government, based on reality, derives from its embedding in the UK innovation system and direct interaction with the market. We do not therefore consider that it makes sense to separate these functions out and believe that the effectiveness of delivery of all three functions depends on their delivery by a single organisation.

This leads us to conclude that the TSB's description of itself as the "UK's National Innovation Agency" is justified and that the evidence received, when considered as a whole, indicates that the TSB does indeed occupy a unique and valuable place in the UK's innovation landscape. The TSB has a key role to play both in building the UK's innovation capacity, supporting mission-led innovation and in helping to develop the policy framework. We are aware that there is previous and ongoing work to look at how the UK landscape compares to that in other countries and we would recommend that this is further explored in order to determine whether there are ways in which TSB impact can be further enhanced.

Credibility is key to the TSB's ability to perform its job effectively. This credibility is derived from two sources:

- TSB's ability to recruit and retain technology experts able to engage on a peer-to-peer basis with industry.
- TSB's independence from government, enabling it to be considered as an equal partner that can take objective, evidence-based decisions.

A relative degree of independence is imperative to the effectiveness of the TSB. It is seen as an organisation that is able to understand business largely because it is overseen by a business-led board. However, a note of caution needs to be sounded as there is a risk that decision-making is based on current TSB expertise and resources, with the result that the organisation becomes locked in to a specific pattern of support. We considered this carefully but concluded that the risk is minimised by the requirement to ensure that all appointments to the Governing Body of the TSB follow the Cabinet Office rules on public appointments, and the ability of the TSB itself to take independent decisions on resourcing needs. We also noted that it would be difficult to retain both the business experienced staff and the level of business understanding (with adverse effects on impact and effectiveness) if the function was returned to central government or given to local government. Consequently the NPDB status is essential in ensuring the effective delivery of

government objectives. This was evidenced by the ability of the TSB to develop new relationships and a programme to support agri-technology with DEFRA, an area previously unknown to it.

However, also key to the credibility of the TSB is the recognition that it is not entirely separate from government and it is both in tune with current political priorities and able to access and influence decisions on broader policy and funding. Business welcomes the potential for TSB to act as voice in support of technology and innovation within government, but it has been noted that this voice is not always as loud as it could be, nor always listened to. Some respondents to this review believe that the capacity of the TSB to influence could be improved through the development of broader, and stronger, strategic, representational and analytical (particularly economic) capabilities. There were some comments that the TSB could improve its marketing and communication capabilities in order to reach a broader audience and increase its impact. We recommend that this is considered further, although it is not within the scope of this review.

The relationship between the TSB and BIS is an important factor in the way that other government departments perceive the TSB. It was clear that when TSB functions were delivered from within the DTI (pre-2007), the Department struggled to develop meaningful partnerships with others that escaped from the regular pressures of government spending rounds and competition between departments for resources. The evidence we have received strongly indicates that in its current form, the TSB is much better placed to develop productive, long term relationships with other government departments, as demonstrated by the MOUs that have been established with the Office of Low Emission Vehicles and the Ministry of Defence. These relationships are based on the ability of the TSB to deploy its resources, expertise and knowledge of the UK's innovation system in support of specific government objectives, either using existing tools such as SBRI or developing new programmes. We conclude that the status of the TSB as an NDPB is essential to its ability to act as a trans-governmental agent in support of mission-led innovation. However, we note that this is also dependent on the receptiveness of individual government departments and their ability to engage in a meaningful way with the TSB and to frame their needs in terms of the problems that need to be addressed rather than seeking to directly procure specific solutions. Departmental Chief Scientific Advisers may sometimes play an important role in brokering the relationship but we recommend that further thought is given to strengthening the ability of OGDs (and other public bodies) to engage with the TSB.

We also need to recognise the long-term landscape around the TSB. Many commentators have discussed the need for the TSB to step in to the gap left by the RDAs and to do more to promote innovation at a local level, for example through the establishment of one or two regional centres, but there was a broad consensus that the government should not seek to establish a "TSB local" model of delivery, nor should it seek to devolve TSB functions to LEPs or Local Authorities. It is clear to us that the TSB has a national (and international) role to play as the UK's innovation agency, with a remit to support the UK's innovation system as a whole. We note that the development of the Catapult programme has, in many ways, established a strong regional presence in support of innovation in specific sectors, based primarily on the geography of the relevant technological capabilities, and that the TSB has started to consider how it should interact with local agencies, such as LEPs. It is outside the scope of this review to consider whether or not dedicated support is required for innovation at a local level, but respondents clearly stated that the loss of RDAs

left a gap in the innovation support system, particularly for SMEs. We accept that there may be a need for an element of innovation capacity-building at a regional level but whether LEPs or another body will fill this gap is unclear. Our strong recommendation is that this gap should not be left to the TSB to fill by default. In this respect we believe there are parallels with the research councils who seek to fund excellence in research, wherever it may be found, and the TSB which seeks to fund excellence in innovation, from concept to commercialisation.

Similarly, we have noted the question marks surrounding the TSB's role in helping companies to access EU funding, a role previously performed by the RDAs. We understand that there are currently discussions around the support that the TSB could provide and whether or not it would be appropriate for the TSB to take on this role. From our perspective, this would be compatible with the TSB's current role, and in particular its function in support of developing innovation in the UK, but a final decision would require a discussion between the TSB and BIS on the resources and capabilities required to do this. We would caution against imposing too much additional delivery requirements on the TSB without appropriate resourcing and against diluting (or over-bureaucratising) the organisation. We believe that the current arrangements allow for such a discussion to take place but we recommend that the governance arrangements between BIS and the TSB are examined to ensure that this is the case. (This will be considered in Stage 2 of the Triennial review).

And finally, there is a desire for the TSB to have a visible international role as the UK's innovation agency and able to engage in strategic partnerships with other countries. In many countries, particularly in Asia and emerging economies, there is an expectation that any such organisation is wholly owned by government and is a clear and visible part of the public sector. This is often a prerequisite for dialogue and development of joint programmes. If TSB is to fulfil this role effectively then NDPB or equivalent status is essential.

Having considered all the possible options for the delivery of the functions of the TSB, we conclude that:

- the functions should be retained in a single organisation; and
- the TSB should retain its status as an Executive NDPB.

The delivery options analysis set out above suggests that major changes are likely to lead to additional costs or reduce the effectiveness of TSB delivery. Two delivery options have been ruled out because they are inconsistent with current Government policy. Local delivery would be more attractive if the Government thought that technology policy should be used to meet regional, rather than national, goals. At present that is not the role envisaged for the TSB. Private sector delivery becomes more attractive if the Government decided that there was no benefit from using TSB advice as an input into policy.

Consequently, the Cabinet Office guidance asks us to consider three further tests regarding the proposal to retain the TSB in its current status:

- Is this a technical function (which needs external expertise to deliver)?

- Is this a function which needs to be, and be seen to be, delivered with absolute political impartiality (such as certain regulatory or funding functions)?
- Is this a function which needs to be delivered independently of ministers to establish facts and/or figures with integrity?

Our answers to these three questions are set out below:

Test	Remarks
Technical function needing external expertise	From the evidence we have received it is clear that technical expertise is essential to the effective delivery of the TSB's mission. This applies across all three of the functions, but particularly to those relating to the delivery of innovation support.
Political impartiality	We also consider that there is a strong evidence to retain the TSB's independence to make decisions on funding priorities within the parameters set by government. This is particularly important when assessing the merits of one business proposal against another and in maintaining business confidence in the process.
Establishment of facts and figures with integrity	We do not consider that the TSB has a role to play in establishing facts and figures with integrity in the way envisioned in the final test but we do believe that it is important that there is objectivity in the advice that TSB provides to government.

Stage 1 Recommendation: Functions

The functions should be retained in a single organisation.

Stage 1 Recommendation: Form

Taking all of this into account, the recommendation is to retain the TSB as an executive NDPB.

The Minister of State for Universities and Science agreed with the conclusions of Stage 1 of the review and the outcome was confirmed by the Cabinet Office in May 2013.

Stage 2: Introduction

This section sets out the findings of Stage 2 of the Review, which concluded in June 2013.

Stage 2 of the triennial review examines compliance with recognised principles of good corporate governance. This includes requirements on openness, transparency and accountability, including ensuring that the right relationship is in place between the NDPB and the parent Department. The assessment is summarised below, and set out in detail in Annex D. It covers the following areas:

- statutory accountability, such as compliance with relevant legal requirements and best practice;
- accountability for public money, including appropriate arrangements to ensure that public funds are properly safeguarded and deliver value for money; public money is used economically, efficiently and effectively and for the purposes expected;
- Ministerial accountability, including, amongst other things, ensuring that Ministers and the department exercise appropriate scrutiny – for example the process relating to agreement of the tasking letter, and for review of the financial memorandum and management statement;
- establishing clear roles for the Sponsoring Department, NDPB Board and Board members that ensure robust governance arrangements and high performance including arrangements for making decisions on capacity and capability;
- ensuring that effective systems of financial management and internal control are in place;
- ensuring that the public body is open, transparent, accountable and responsive, e.g. clear and effective channels of communication with stakeholders; and
- ensuring that the board and staff work to the highest personal and professional standards.

The stakeholder input received in Stage 1 provided a useful source of material for considering the issues to be covered in Stage 2. In particular it highlighted the need to consider the effectiveness of TSB's financial management and communications strategy. Consequently the review team worked closely with the TSB to understand these areas in more detail and the actions being developed to improve capability. These are considered in more detail below.

Stage 2: Assessment

The detailed assessment is recorded in Annex D and the main findings are summarised below. The review team concluded that the overall rating for compliance should be scored as Amber/Green⁴⁸. This reflects concerns about effective financial management and communications, as well as some minor points relating to the definition of roles and responsibilities.

Statutory Accountability, Accountability for Public Money and Ministerial Accountability

The review team found that the TSB was fully compliant in all required aspects of statutory accountability. TSB's compliance with its statutory authority was certified by the NAO in approving the TSB Report and Accounts. Certification and completion of the accounts for 2009/10 and 2010/11 was delayed pending agreement with the NAO on the treatment of accruals for grants made to companies but this has now been resolved. The 2011/12 accounts were approved by the NAO and laid before Parliament without qualification.

Similarly, the TSB operates within the requirements of the Freedom of Information Act and dealt with all requests for information under the Act within the statutory time period. The website includes a section setting out how the TSB complies with the Data Protection Act and all staff receive training. The TSB complies with its obligations under the Public Records Act, although is not yet registered with the National Archive since formal archiving only starts after 8 years.

The CEO of the TSB was formally appointed as Accounting Officer in March 2008, has received the required training and has ensured that the TSB complies with the requirements set out in Managing Public Money. TSB's financial memorandum with BIS sets out the financial framework within which the TSB operates and TSB's internal controls and processes are fully documented and regularly reviewed by internal auditors.

With respect to Ministerial accountability, the review team found that the Secretary of State was able to exercise appropriate scrutiny and oversight of the TSB both directly and through the Departmental sponsor team. The Secretary of State was responsible for all appointments to the Governing Board, including Chair, the CEO and Non-Executive Directors. All appointments were made in accordance with the OCPA Code of Practice.

There are frequent Ministerial meetings with the TSB CEO and Chair. The BIS Innovation Director holds formal six-monthly review meetings with the CEO; the sponsor team meets TSB officials on a bi-monthly basis; and there are regular meetings between BIS and TSB finance officials. Texts of key strategic documents produced by the TSB are provided to BIS before publication and BIS Ministers are frequently involved in announcements about new TSB developments and initiatives.

⁴⁸ RAG ratings are defined in Annex D: Red, Amber/Red, Amber/Green and Green

Role of the Sponsoring Group

The Review Team found that the BIS sponsoring team and the TSB were compliant in almost all aspects of governance and oversight, although noted that steps were being taken to ensure that the structure and presentation of the management statement and financial memorandum were consistent with current guidance and practice.

The Sponsor Team sits within the Knowledge and Innovation Group in BIS and reports to the BIS Director of Innovation. Effective scrutiny is ensured through BIS representation at TSB Governing Board meetings, the TSB Remuneration Committee and the TSB Audit Committee meetings.

A formal management statement sets out the roles and responsibilities of both the TSB and the Department. A financial memorandum is also in place as a separate document governing the financial relationship. These documents are being reviewed to ensure that they meet the needs of the Framework Document specified in current guidance.

Role of the TSB Chair, Governing Board and Chief Executive Officer

The review team found that the leadership structure of the TSB, consisting of the TSB Chair, CEO and a Governing Board with strong non-executive representation, was appropriate and highly effective at providing strategic direction and oversight.

The TSB Governing Board meets six times per year and has a range of expertise and experience drawn from across industry. It regularly receives reports from the executive and there is an agreed Board Operating Framework. The review team considered the role the Board played in the leadership of the organisation to be a key strength, in particular the ability of non-executive board members to bring external perspective and challenge to both the organisation.

However, the review team noted that at the time of the assessment there was no process for appraising board members' performance. This has now been rectified and the Chair of the Governing Board is currently in the process of evaluating the performance of members of the Governing Board. The Chair's performance will be evaluated by the Director General of Knowledge and Innovation Group, BIS. The TSB has confirmed that these appraisals will be conducted on an annual basis in future.

The review team recognised that the appointment of a strong and effective CEO was an essential element of the leadership of the TSB and was satisfied that the duties, roles and responsibilities of the CEO were clearly defined and compliant with all requirements.

Effective Financial Management

The review team identified serious concerns about the effectiveness of financial management in the TSB, leading to an Amber-Red rating for this section of the pro forma. However, these concerns were recognised within both the TSB and BIS and the team was very impressed with the amount of recent effort that has gone into improving the TSB's

financial systems, although it was clear from our site visit that this is still work in progress. It is clear from the financial management improvement plan that the TSB's weaknesses in its financial management go back a long way and are not easy to fix. They have required substantial effort and fixing one aspect has led to problems being uncovered further down the line. For example the grant management system TSB inherited was not fit for the purpose – with only very limited information recorded in a number of unconsolidated spreadsheets; once this issue was resolved improvements to the accrual process were required.

The most pressing current problem is that the TSB is reliant on grant recipient forecasts which are highly volatile and tend to be optimistic particularly at the outset. TSB underspends in any year cannot be recycled into new projects because of the competitive processes that the TSB must follow. As a result of poor forecasting by projects TSB underspends exceed the departmental tolerance of 1%, by a significant margin. However we recognise that, in the past, BIS' own actions have also aggravated underspends when they passed programmes to the TSB with unrealistic spending profiles (e.g. biomedical catalyst). Underspends represent a missed opportunity to support innovative projects and therefore affects the Government's ability to meet its objectives.

The team judges that the changes already introduced or are planned to introduce are likely to reduce underspends in the future although there is a high likelihood that without further action they are likely to exceed current BIS requirements. So currently we assess the TSB to be Amber/Red on effective financial management. However, the TSB Governing Board has commissioned a “root and branch” review of the financial and operating model of TSB which is due to report in October which may lead to further improvements in financial systems and changes in the TSB's operating model which will also help to resolve the issue. We are therefore satisfied that TSB is committed to working with BIS to reduce underspends.

Communications and Engagement

The review team identified a number of concerns about the TSB's communications and engagement strategy and assessed this aspect of the pro forma to be amber-green. However, the team recognised that the TSB has invested a great deal of thought and effort into improving its communication and engagement strategies, and that weaknesses have now been identified, and action plans developed. We are pleased that the Governing Board has engaged fully in this process, and has a continued role in steering delivery of the improvement plans. A new Communications and Networking Director is in the process of being recruited.

The team assessed that all of the other criteria for effective and transparent communication and engagement have been met, apart from the holding of open board meetings or of an annual open meeting, but notes the intention to hold an open access communication session for Board members at the 2014 Innovate conference. The Innovate conferences are recognised as excellent occasions for bringing together innovators from business, academia, government and other sources. The TSB will need to ensure that this session is structured so as to meet the requirements of an Annual Public Meeting and that it is understood by the Board and Senior Team as one of the most important activities of each year.

Whilst we agree that the TSB proactively publishes agendas, minutes of board meetings and performance data, we recommend that the TSB reviews annually why it is publishing the data and therefore what is provided, to ensure it is continually relevant.

We currently assess the TSB to be Amber/Green in the area of Communication and Engagement, however we recognise the direction of travel as very positive and we have confidence that the Executive, with an on-going steer from the Governing Board, will see the plans through.

Conduct and Propriety

The review team considered that the TSB was compliant with most elements of conduct and propriety, in particular the Code of Conduct. This was captured in the Code of Practice provided for TSB Board Members and staff handbook.

Guidance on conflicts of interest was provided to Board members and declared interests were published in line with Cabinet Office requirements. However, it was not clear what procedures were in place for managing conflicts of interest that might arise, nor was it clear that rules were in place for senior staff in the TSB to ensure compliance with requirements on the acceptance of appointment or employment after resignation or retirement. We therefore assess the TSB to be Amber/Green in the area of Conduct and Propriety, with action needed to ensure that the TSB is compliant with Cabinet Office Guidance as set out in *Public Bodies: A Guide for Departments*.

Conclusion

The review team concluded that overall compliance with recognised principles of good corporate governance should be rated amber/green – there are some aspects that require substantial attention but overall compliance was good.

In particular, the TSB complies with all statutory accountabilities and has strong and effective governance structures. The review team is satisfied that the weaknesses that have been identified in the effectiveness of financial management, communication and engagement have been accepted by the leadership and are being pro-actively addressed. The review team tested the action plans that have been developed to tackle these issues and was pleased to see the progress that had been made during the course of the review.

Our key recommendation from Stage 2 is that the Department continues to work closely with the TSB leadership to support and monitor implementation of the actions that have been identified and establishes key milestones to review progress. Specifically that:

- (i) the sponsor team should agree with the TSB a mechanism to monitor progress on implementation of the necessary changes identified in this report, and particularly those actions required to address financial management and communications;

- (ii) and that demonstrable progress on addressing the issues identified in this review should be included as a criterion in the performance agreement of senior TSB executives. The TSB Governing Board should play a key role in assessing progress.

In addition, we recommend that further thought is given to clarifying the role of Ministerial involvement in TSB operational decisions. Stage 1 of the review concluded that the arms-length relationship was a key strength of the TSB. However, the Department and the TSB need to be clear about how best to handle those issues where Ministers might expect to have a greater role to play. This is particularly important when considering how the Department and the TSB can work together to manage key communications and stakeholder engagement issues more effectively. Consequently, we recommend that:

- (iii) the review of the management statement and financial memorandum and the establishment of an overarching framework agreement clarifies the role of Ministers in TSB decision-making processes.

Concluding remarks

The Triennial Review process, established by the Cabinet Office and implemented by BIS, places considerable weight on the delivery of an independent, evidence-based review of the form and function of Non-Departmental Public Bodies. This review has been conducted by a review team drawn from across BIS who collectively have experience of international innovation, regional support programmes, scientific advice, skills, growth strategy and economic analysis. This has proved invaluable in ensuring that the review was able to take a fresh, broad look at the TSB and its role within the UK's innovation landscape. From the start, a determined effort was made to seek the views of a wide range of external stakeholders – from partner organisations, through to businesses, universities, professional bodies and individuals. We are very grateful for the input received and for the time that many correspondents have taken to answer our questions and to discuss the issues with us. The input we have received, including from the Challenge Panel, helped to shape the review and provided the evidence needed in order to reach what we believe are clear and robust conclusions.

Throughout the conduct of the review we have ensured that the TSB has been kept informed of our thinking and has been able to comment on the facts and figures used in this report as appropriate. The Review team met with the TSB five times during the work for Phase 2, including visiting a visit to TSB Headquarters in Swindon for in depth discussions on financial management and communications. The TSB and the sponsoring team within BIS have provided helpful information and evidence on the range of programmes and activities carried out by the TSB. Input from former and current members of the TSB Governing Board has been particularly helpful in identifying some of the issues that need to be considered in the review. Consequently we feel that it provides an accurate and fair reflection of the current position. We were encouraged by the positive and proactive manner in which the TSB responded to the review and the determination with which it has tackled the issues raised in Stage 2.

Annex A: Respondents to call for evidence

Type of stakeholder	Organisation
Parliament	Parliamentary Committees on Business, Innovation and Skills; and Science and Technology (no response received)
BIS	Department for Business, Innovation and Skills: BIS Ministers and Senior Officials
Other Government Department	Defence Science and Technology Laboratory (Ministry of Defence)
	Department for Communities and Local Government
	Department for Environment, Food and Rural Affairs
	Department of Health
	Department for Transport
	Government Chief Scientific Adviser
	Office for Strategic Co-ordination of Health Research
	National Institute for Health Research
Devolved Administrations and their Executive Agencies	Department of Enterprise, Trade and Investment- Northern Irish Government
	Highlands and Islands Enterprise
	Invest Northern Ireland
	Scottish Enterprise
	Scottish Government
	Welsh Assembly Government

Type of stakeholder	Organisation
TSB Governing Board	Current board members
Non-Departmental Public Body/Non-Government Organisation	Big Innovation Centre
	Wellcome Trust
Public-Private Partnership	Energy Technologies Institute
University	Sussex University (Science Policy Research Unit)
	University of Sheffield
Research Council	Biotechnology and Biological Sciences Research Council
	Engineering and Physical Sciences Research Council
	Medical Research Council
Professional Body	Institute for Engineering and Technology
	Royal Academy of Engineering
	Royal Society
Large Business	Amadeus
	GlaxoSmithKline
	Intelligent Energy
	Jaguar Landrover (JLR)
	Pfizer
	Rolls Royce
	Sebastian Conran Associates
	Viridor
Small and Medium	Gordon Murray Design

Type of stakeholder	Organisation
Enterprise	
	Second Mile
Business Representative Body	Confederation of British Industry
	Small and Medium Enterprise Innovation Alliance
	Association of the British Pharmaceutical Industry
Small and Medium Enterprise Intermediary	Advanced Manufacturing Research Centre (Catapult)
	Birmingham Science City Partners
	Oxford Innovation
	South West iNETS
	St John's Innovation Centre
Local Enterprise Partnership	Derby, Derbyshire, Nottingham and Nottinghamshire (D2N2)
	Greater Cambridgeshire Greater Peterborough
	Hertfordshire
	Liverpool City Region
	New Anglia
Individuals	John Brown (former board member)
	Anne Glover (former board member)
	Dame Professor Julia King (former board member)
	Lord Sainsbury
	Graham Spittle (former Chair of TSB)

Annex B: Questionnaires sent to BIS and TSB

List of questions to BIS: Phase one

Functions

- What would you describe as the TSB's main functions? Please provide illustrative examples.
- What would be the impact on the Department's business if the TSB ceased to exist?
- Have you considered other delivery models for the TSB? If so, how do they compare with its current status? In particular please make reference to Triennial Review criteria: technical function, political impartiality and independence.
- Have there been any changes to the TSB's remit and functions since its inception? If so, please provide details and rationale for changes and any correspondence between the TSB and the Sponsor Department confirming this.
- Are there any overlaps between TSB functions and other bodies operating in this space (e.g. NESTA, Design Council, University Commercialisation schemes)?

Demand from users

- How do these functions contribute to the Department's business? What wider benefits do these functions provide?
- What value do you think the TSB's arm's length relationship with BIS brings to BIS?
- Please set out the Departments view on:
 - The role of TSB in delivering local growth objectives via LEPs and previously RDAs,
 - The role of LEPs and RDAs in delivering TSB objectives,
 - The TSB's role in engaging with international programmes and European funding streams.
 - The role of the TSB in promoting innovation through procurement.
 - The role of the TSB in providing innovation advice to HMG.

- Has the TSB met the Department's objectives in these areas?
- Is the TSB's engagement with innovative companies in the UK sufficient? Do you consider that it does enough to engage with the full range of companies?
- As sponsor, do you feel that the TSB has the right mix of staff and capabilities to fulfil its functions?

List of questions to TSB: Phase one

Functions

- What would you describe as the TSB's main functions? Please provide illustrative examples.
- Have there been any changes to the TSB's remit and functions since its inception? If so, please provide details and any correspondence between the TSB and the Sponsor Department explaining the rationale for any changes.
- Are there any overlaps between TSB functions and other bodies operating in this space (e.g. NESTA, Design Council, University Commercialisation schemes)? If so what steps has the TSB taken to address these?
- What is your process for determining technological priorities? Do you publish the analysis underpinning your choices? Please provide the analysis underpinning the last selection of priorities.
- What benefits do you believe these functions provide? Please provide evidence supporting any statements.

Financials

- For the latest year, please provide a breakdown of the TSB budget against the main functions. Can you distinguish between funding provided by BIS and funding provided by other Government Departments?
- For each year, please provide a breakdown between core programme funding (where TSB has full discretion over how it is spent) and additional funding to deliver specific activities asked for by Government.
- What do you think have been the main changes in funding emphasis since the TSB's first inception? What has driven these?
- For each year, please provide data on the TSB admin spend.

- Please provide a breakdown of TSB funding by programme: by size of beneficiary firm, by region of beneficiary firm and by industry for:
 - 2007,
 - 2011,
 - All years combined

Demand from users

- Have you obtained feedback from businesses on the value of the services you provide? If so please provide summary results.
- How would you describe the strength of your relationships with Government Departments, including BIS, and their demand for your services?
- How would you describe TSB's past involvement with the RDAs? What were main drivers for the outcomes you describe?
- What steps have you taken to engage with Local Economic Partnerships (LEPs)? Have they shown an interest in working with the TSB?
- Do you think that the arms are too long, too short or just right? Please explain giving relevant examples where appropriate.
- What value do you think that the TSB's arm's length relationship with BIS brings to:
 - BIS,
 - The beneficiaries of your support (i.e. businesses, other Government Departments)

Annex C: TSB tasks as set out in tasking framework letter

The tasking framework letter provides a statement of the Spending Review settlement, including a budget for 2011/12 and indicative budgets for future years, for the TSB to fund R&D collaborations, grants for SME R&D, funding for the Energy Technology Institute and funding to establish Technology and Innovation Centres. The TSB is required to develop strategies and plans setting out how it will plan and co-ordinate support for innovation and technology development across Government, which should be agreed by the Secretary of State. Plans should show how they contribute to the objectives set out in the coalition agreement and other Government priorities, including those identified by the Secretary of State.

In addition the letter sets out additional tasks in paragraph 10:

1. Work in partnership with OGDs to identify key policy challenges where technology can play a role, and support departments in developing their capacity to engage with business to provide innovative solutions to these challenges.
2. Work closely with the Research Councils and the Devolved Administrations of Scotland, Wales and NI to identify, prioritise and co-ordinate public sector support with a view to providing business with a coherent package of technology and innovation support that is aligned to maximise impact. The TSB should also work with Local Enterprise Partnerships where this will deliver similar benefits.
3. Continue to champion the Small Business Research Initiative (SBRI) across the public sector, managing the process and its successful deployment. This includes delivering on the commitment in the 'Plan for Growth' to provide over £20m over the next two years to the SBRI, including £10 million from the Department of Health on specific competitions to address healthcare challenges.
4. Work with the Energy technologies Institute (ETI), the Carbon Trust and DECC to coordinate support for Energy RD&D.
5. Work with the Office for Strategic Co-ordination of Health Research (OSCHR) to support the translation of medical research into economic and patient benefit.
6. Work closely with the UK Space Agency to enable the development, commercialisation and exploitation of space technologies.
7. Work closely with and across sector teams of the Department for Business Innovation and Skills and business-led stakeholder groups to stimulate innovation in those areas which offer the greatest scope for boosting UK growth and productivity.
8. Consider the role of the wider innovation infrastructure and look to develop strategic partnerships with organisations such as the National Measurement Office (and other metrology institutions), the Design Council, NESTA, UK IPO, the British Standards Institute and WRAP in developing its strategy and interventions.
9. Develop the capability of the TSB to engage effectively with the EU and internationally where international collaboration can support its wider objectives, through increased business participation in activities such as the Framework Programme and other EU funding programmes, including through support for National Contact Points and other services where appropriate, in helping the UK stay at the leading edge of technological development and innovation.

10. Work closely with the Science and Innovation Network (SIN) and UK Trade and Investment to support and enhance international collaboration and the UK's position as a centre for investment and R&D by world-leading companies.

Annex D: Stage 2 Detailed Assessment

1. Completing the Assessment Template

For each principle of good governance, the TSB (sometimes referred to as the “Partner Organisation” or “PO”) and the sponsor team were asked to assess compliance with the detailed criteria listed in the proforma and indicate ‘comply’ or ‘explain’, and to provide appropriate justification. This material was stored in a data archive which the review team used to verify the self-assessment. The review team then considered all of the evidence provided and agreed an overall assessment for the principle being reviewed and a RAG rating according to the following scale:

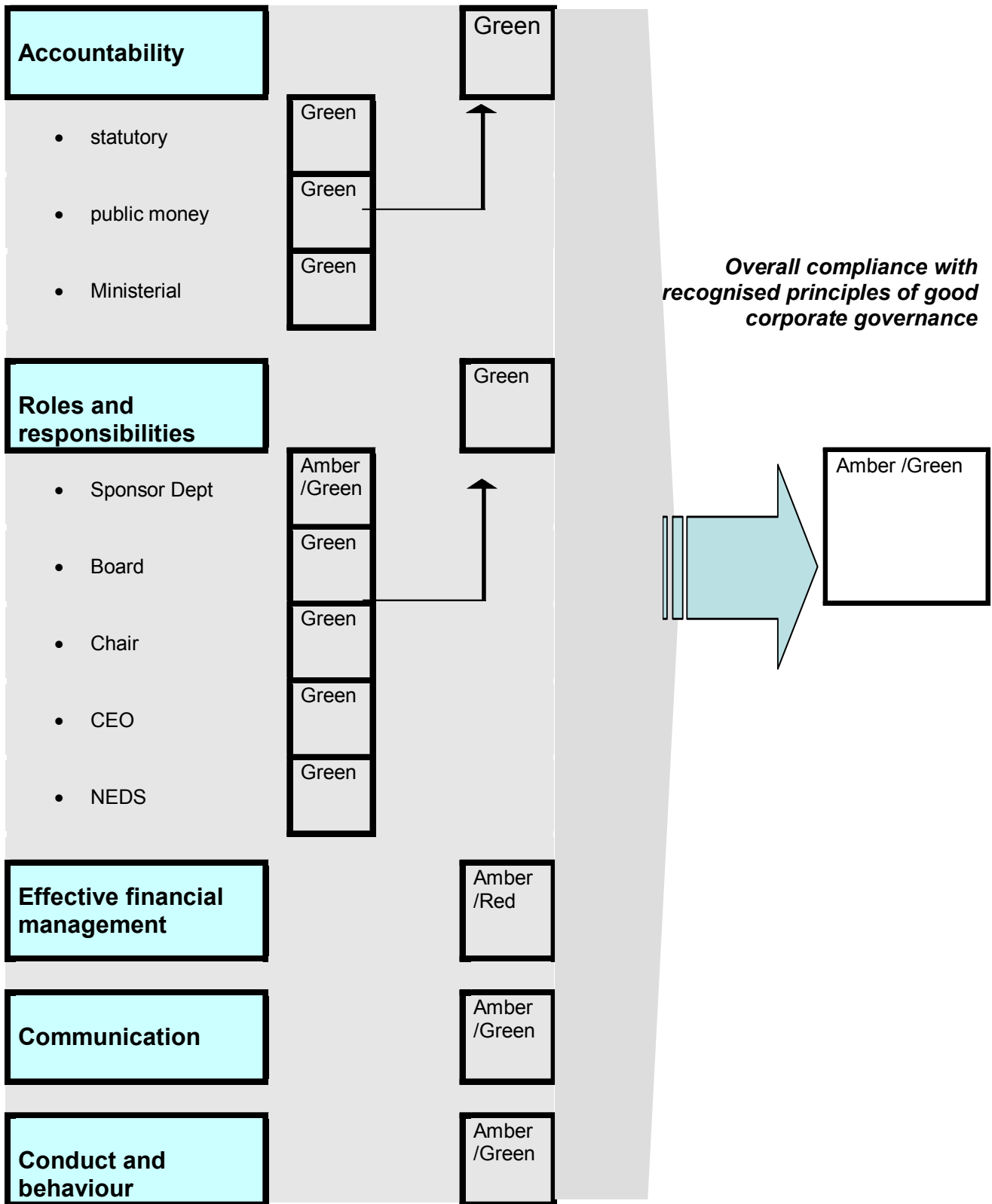
Red	Highly Problematic. Requires urgent and decisive action.
Amber/Red	Problematic. Requires substantial attention. Some aspects need urgent attention.
Amber/Green	Mixed. Aspects require substantial attention. Some good.
Green	Good. Requires refinement and systematic implementation.

The RAG ratings are used by the Department and the partner organisation to prioritise actions and provide a readily accessible and comparable assessment of performance.

The proforma enabled the TSB and the sponsor team to identify strengths and areas for improvement, and to state any actions planned to address areas of concern. The review team used these comments to identify areas for further investigation through a series of meetings with TSB managers and the sponsor team, as well as a visit to the TSB offices at Swindon. Actions planned were agreed between the TSB and the sponsor team with the expectation that these would be monitored at future accountability meetings and carried through to the any subsequent Triennial Review.

Finally an overall assessment was determined by the Review Team. The RAG ratings from each principle were assessed and a judgement on overall compliance was made in line with recognised principles of good corporate governance.

2. SUMMARY ASSESSMENT



3. STATUTORY ACCOUNTABILITY

Does the public body comply with all applicable statutes and regulations and other relevant good practice?

Detail of Requirement	Assessment
The PO:	
3.1 complies with all statutory and administrative requirements on the use of public funds (inc HMT Managing Public Money, and CO/HMT spending controls);	Compliant
3.2 operates within the limits of its statutory authority and in accordance with delegated authorities agreed with BIS;	Compliant
3.3 operates in line with statutory requirements for the Freedom of Information Act;	Compliant
3.4 has a comprehensive publication scheme;	Compliant
3.5 proactively releases information that is of legitimate public interest;	Compliant
3.6 produces annual reports and accounts which are laid before Parliament	Compliant
3.7 complies with data protection legislation;	Compliant
3.8 complies with Public Records Acts 1958 and 1967.	Compliant

Overall assessment of statutory accountability	Green
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Evidence of compliance or explanation for non-compliance

3.1 Compliant

The Governance statement provided by the TSB CEO to NAO for completion of 2011/12 accounts recorded compliance with the principles of good governance and internal control.

The TSB Annual Report and Accounts for 2011/12 was approved by NAO without qualification and laid before Parliament before the summer recess. Certification and completion of the accounts for 2010/11 and 2009/10 was delayed pending agreement with the NAO on the treatment of accruals of grants made to companies. Both were finalised and laid before Parliament in the first half of 2012. Reports for all years were laid before parliament and were made available to the review team to verify.

A report on overall financial management in the TSB was prepared by Deloitte in summer 2012 and identified a range of improvements to both finance systems and management arrangements in order to improve forecasting.

Building on this and other inputs from the BIS finance team and the Governing Board the TSB Finance Director has prepared an action plan to be implemented over the coming months which will permit better quality information to be provided to BIS and improved forecasting of end year outcomes. Elements of the plan were discussed with the review team and a copy of the most recent version of the plan has been provided to the team.

3.2 Compliant

TSB's compliance with statutory authority was certified by the NAO in approving the TSB Annual Reports and Accounts (see above).

TSB operates within a delegation of Financial Authority letter issued by BIS. A copy of the most recent letter of delegation from the Director of Innovation in BIS which was issued to the TSB CEO on 1 June 2012 was made available to the review team.

3.3 Compliant

TSB operates within the requirements of the Freedom of Information Act. Its website includes an Information Charter setting out the nature of the information the TSB will make available on request and the way that it will be managed.

A publication scheme focusing on TSB's FoI obligations is available on the TSB website at <https://www.innovateuk.org/documents/1524978/2138994/Freedom+of+information+-+Publication+Scheme/4b9d8d4d-fb14-40bf-baa6-f950a1f3d86c>

In 2012 TSB dealt with 72 requests for information under the Act and responded to all within the statutory time period. Statistics on the numbers of requests for previous years have been made available to the review team.

3.4 Compliant

A comprehensive publication scheme is available on its website, see -

<https://www.innovateuk.org/documents/1524978/2138994/Freedom+of+information+-+Publication+Scheme/4b9d8d4d-fb14-40bf-baa6-f950a1f3d86c>

3.5 Compliant

The TSB website includes a section which includes data that TSB makes publicly available – see <http://www.innovateuk.org/aboutus/public-data.ashx>

The data covers TSB’s organisational structure, financial transactions, funded projects, declarations of interests of Board members, tax arrangements for public appointments and TSB financial transactions.

TSB is planning a project to improve the accessibility of project information for enquirers.

3.6 Compliant

See answer to question 3.1 for information on publication of TSB Annual Reports and Accounts

3.7 Compliant

TSB’s website includes a section setting out how TSB ensures compliance with the Data Protection Act – see

<http://www.innovateuk.org/termsandconditions.ashx>

All TSB Staff are inducted and trained on their obligations under the Act. In 2012/13 TSB achieved 97% compliance with the online training on the Civil Service in relation to data protection. In previous years the figure has been 100% and the target is to return to this level.

3.8 Compliant

The TSB complies with its obligations under the Public Records Acts to keep files relating to its work. TSB is not yet registered with the National Archive since formal archiving only starts after 8 years and TSB is only 5 years old. The TSB’s information manager has however started the process of marking up files for retention or otherwise. TSB also needs to keep records for financial transactions for 6 years to comply with normal commercial legal requirements.

Strengths identified

TSB meets its statutory accountability requirements, and has responded to all FOI requests within the statutory time period.

Areas for improvement and action planned

TSB has a considerable volume of data available on its website, but the quality of its supported project information requires improvement.

Action is being taken in this area of TSB's publicly available data (see action plan on engagement and communications)

4. ACCOUNTABILITY FOR PUBLIC MONEY

The Accounting Officer of the PO is personally responsible and accountable to Parliament for the use of public money by the body and the stewardship of assets

Detail of Requirement	Assessment
4.1 There is a formally designated Accounting Officer (AO) who in particular has a responsibility to provide evidence-based assurances required by the Principal Accounting Officer (PAO);	Compliant
4.2 The role, responsibilities and accountability of the AO should be clearly defined and understood and the AO should have received appropriate training;	Compliant
4.3 The PO should be compliant with requirements set out in Managing Public Money, relevant Dear Accounting Officer letters and other directions;	Compliant
4.4 The PO should establish appropriate arrangements to ensure that public funds: <ul style="list-style-type: none"> • are properly safeguarded; • are used economically, efficiently and effectively; • are used in accordance with the statutory or other authorities that govern their use; • deliver value for money for the Exchequer as a whole; • are subject to Treasury approval, either directly or through established delegated authority; 	Compliant
4.5 The annual accounts are laid before Parliament after certification by the Comptroller and Auditor General	Compliant

Overall assessment of accountability for public money	Green
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Evidence of compliance or explanation for non-compliance

The answers to this section concentrate on the formal accountabilities for financial propriety and control. The issues relating to good financial management are covered under section 11 below.

4.1 Compliant

The TSB CEO was formally appointed as TSB's Accounting Officer by a letter dated 18 March 2008 from the Permanent Secretary (DIUS). This letter sets out the responsibilities of the TSB Accounting Officer in relation to the Principal Accounting Officer. The text of the letter was made available to the review team.

4.2 Compliant

The role and responsibilities of an Accounting Officer (Chapter 3 of Managing Public Money) were attached to the Perm Sec designation letter of 18 March 2008. The current TSB CEO has attended the National School of Government's "An introduction to public accountability for Chief Executives" as required under the designation letter. The letter was made available to the review team.

4.3 Compliant

The BIS sponsorship team has communicated the relevant guidance and directions to TSB. NAO approval of the TSB accounts indicates that the TSB is in compliance with these requirements.

4.4 Compliant

TSB's Financial Memorandum sets out the financial framework within which the TSB is required to operate. It includes the requirement and circumstances under which HMT approval should be sought by TSB. The TSB has sought approval from BIS and HMT as necessary when decisions go beyond its delegated authority.

TSB's internal controls and processes are fully documented and regularly reviewed by internal auditors.

TSB support programmes are designed to use taxpayers money effectively and efficiently and deliver value for money through the achievement of high impact. TSB identifies its areas for investment through a rigorous selection process involving the use of four criteria

- is there a large global market?
- is the UK strong enough— in both business and research - to exploit the opportunities?
- is it timely to provide support?
- can TSB devise an intervention which will make a real difference?

In the cases where TSB is satisfied the answers to these questions are positive the criteria used for selection of projects to support are aligned with the strategic goals which have been

identified.

TSB has also invested in evaluations to measure the impact of its programmes which showed for example that its collaborative support achieved a return of £6.71 per project £ invested. Larger multiples have been identified in some of its innovation platforms.

4.5 Compliant

As noted in the answer to question 3.1 above TSB's Annual Report and Accounts for 2011/12 and before have been laid before Parliament after certification by the NAO.

Strengths identified

The TSB fully complies with the requirements of its Financial Memorandum and has appropriate internal controls in place to demonstrate proper accountability for public money.

Areas for improvement and action planned

The TSB's Financial Memorandum will be reviewed to ensure it is consistent with current guidelines and best practice.

5. MINISTERIAL ACCOUNTABILITY

The Secretary of State is ultimately accountable to Parliament and the public for the overall performance of the public body

Detail of Requirement	Assessment
5.1 The Secretary of State and Sponsor should exercise appropriate scrutiny and oversight of the PO;	Compliant
5.2 Appointments to the board should be made in line with any statutory requirements and, where appropriate, with the <i>Code of Practice</i> issued by OCPA;	Compliant
5.3 The Secretary of State will normally appoint the Chair and all non-executive board members of the PO and be able to remove individuals whose performance or conduct is unsatisfactory;	Compliant
5.4 The Secretary of State should be consulted on the appointment of the Chief Executive and will normally approve the terms and conditions of employment;	Compliant
5.5 The Secretary of State should meet the Chair and/or Chief Executive on a regular basis;	Compliant
5.6 Parliament should be informed of the activities of the PO through publication of an annual report;	Compliant
5.7 a range of appropriate controls and safeguards should be in place to ensure that the Secretary of State is consulted on key issues and can be properly held to account (e.g. Business Plan, power to require information, a general or specific power of Ministerial direction over the PO, a power for the Secretary of State to be consulted on key financial decisions.)	Compliant

Overall assessment of Ministerial Accountability	Green
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Evidence of compliance or explanation for non-compliance
<p data-bbox="113 271 331 304">5.1 Compliant</p> <p data-bbox="113 344 1394 454">There are frequent Ministerial meetings with TSB CEO and Chair. A full schedule of these meetings was provided to the review team. Copies of sample agendas have also been provided.</p> <p data-bbox="113 495 1426 638">BIS Innovation Director and Sponsor Team have formal 6-monthly Review meetings with TSB CEO and Directors. TSB Sponsor Team also has bi-monthly meetings with TSB officials. BIS Finance Team officials also meet with TSB Finance officials on a regular basis. Records of the meetings have been provided to the review team.</p> <p data-bbox="113 678 1426 788">The TSB consults BIS Ministers on its key strategic documents – its three-year Strategies and annual Delivery plans. Decisions going beyond TSB’s delegated financial authority are also submitted to BIS for endorsement</p> <p data-bbox="113 828 1414 938">BIS Ministers are frequently involved in announcements about new TSB developments and initiatives and there are regular and frequent communications between the TSB and BIS communications teams.</p>
<p data-bbox="113 978 331 1012">5.2 Compliant</p> <p data-bbox="113 1052 1437 1308">As an upper tier body, appointments to the TSB Governing Board are required to be made in accordance with the OCPA Code of Practice. OCPA processes required that an Independent Public Appointments Assessor sit on the interview/selection panel for TSB Board appointments. At the very end of the process the OCPA IPAA is required to verify, by way of submission of a Validation Certificate to the Sponsor Team that the appointment procedures fully complied with the OCPA Code. The certificates have been received and copies for the 2011 and 2012 Board appointment rounds was made available to the review team.</p>
<p data-bbox="113 1352 331 1386">5.3 Compliant</p> <p data-bbox="113 1426 1398 1536">The Secretary of State is responsible for appointing the Chair and Governing Board members. The Sponsorship team is responsible for the management of appointments and submission of names to Ministers.</p> <p data-bbox="113 1576 1430 1720">Appointment letters note that Board Members may be removed from office by the Secretary of State on grounds of incapacity or misbehaviour or a failure to observe the terms and conditions of the appointment. An example of an appointment letter was made available to the review team.</p>
<p data-bbox="113 1762 331 1796">5.4 Compliant</p> <p data-bbox="113 1836 1445 1901">The Secretary of State appointed the CEO and approved the terms of employment. A copy of the appointment letter for the CEO was made available to the review team.</p>
<p data-bbox="113 1951 331 1984">5.5 Compliant</p> <p data-bbox="113 2024 1385 2058">The Secretary of State of State meets with the TSB CEO from time to time and Chair and</p>

CEO have regular meetings with the Minister of State. A full schedule of Ministerial meetings with the Chair and CEO was provided to the review team.

5.6 Compliant

As noted in response to question 3.1 TSB's has published Annual Report and Accounts for 2011/12 and previous years – all of which have been laid before Parliament.

5.7 Compliant

The TSB's Management Statement and Financial Memorandum sets out provisions for the Secretary of State to be consulted on key decisions. These documents were prepared in 2007 and will be reviewed in June to ensure they are consistent with current guidance.

The TSB consults BIS Ministers on its key strategic documents – its three-year Strategies and annual Delivery plans. Decisions going beyond TSB's delegated financial authority are also submitted to BIS for endorsement and agreement.

BIS Ministers are frequently involved in announcements about new TSB developments and initiatives and there are regular and frequent communications between the TSB and BIS communications teams.

Strengths identified

Rigour of Chair, CEO and Board Member appointment processes conducted by BIS.

Frequent and open contact between senior TSB staff and Ministers. For example, David Willetts and TSB CEO have a monthly catch-up meeting. The Minister also attended part of a recent TSB Board meeting, and both the Secretary of State and David Willetts have engaged with TSB executive and Board during visits to TSB supported companies/activities.

Ministerial approval has also been regularly given for TSB's Strategic and Delivery Plans

Areas for improvement and action planned

The TSB's Management Statement is due to be reviewed to ensure it is consistent with current guidelines and practice.

6. ROLE OF THE SPONSORING GROUP

BIS ensures that there are robust governance arrangements with the board of each PO setting out the terms of their relationship, and how they will be put in place to promote high performance and safeguard propriety and regularity

Detail of Requirement	Assessment
6.1 The Group should scrutinise the performance of the PO. There should be appropriate systems and processes to ensure effective governance, risk management and internal control in the PO;	Compliant
6.2 There should be a Framework Document in place which sets out clearly the aims, objectives and functions of the PO and the respective roles and responsibilities of the Secretary of State, the Sponsoring Group and the PO. It should be regularly reviewed and updated and follow relevant CO and HMT guidance. The Framework document should include a Financial Memorandum as an appendix. A review of the Framework document should be carried out every three years and in line with the Triennial Review.	Partly Compliant
6.3 A Sponsor should be indentified and there should be regular and ongoing dialogue between the Sponsoring Group and the PO. Senior officials from the Sponsoring Group may as appropriate attend board and/or committee meetings.	Compliant

Overall assessment of the role of the Sponsoring Group	Amber / Green
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Evidence of compliance or explanation for non-compliance
<p data-bbox="113 271 331 304">6.1 Compliant</p> <p data-bbox="113 344 1414 454">Overall performance and issues concerning governance and internal control in the TSB are reviewed as part of the formal 6-monthly Review meetings and are, as appropriate, also included in the bi-monthly Sponsorship meetings.</p> <p data-bbox="113 495 1433 602">Scrutiny is also in place via Sponsor Team representation at TSB Governing Board and TSB Remuneration Committee meetings (as observer) and BIS Finance Team representation at TSB Audit Committee meetings.</p> <p data-bbox="113 642 1286 676">Records of the formal 6 monthly meetings was made available to the review team.</p>
<p data-bbox="113 719 424 752">6.2 Partly compliant</p> <p data-bbox="113 792 1422 902">A formal Management Statement sets out the roles and responsibilities of both the TSB and Department. A Financial Memorandum is also in place as a separate document governing the financial relationship between TSB and the Department.</p> <p data-bbox="113 943 1426 1052">Both documents were put in place at the time of establishment of the TSB in 2007. They are now being reviewed to ensure they are compliant with current central guidance and meet all the expected requirements of the Framework Document.</p> <p data-bbox="113 1093 1075 1126">Copies of both documents were made available to the review team.</p>
<p data-bbox="113 1167 331 1200">6.3 Compliant</p> <p data-bbox="113 1240 1422 1350">Regular and frequent dialogue takes place between the Sponsor Team and TSB via the 6-monthly Review meetings and the bi-monthly Sponsorship meetings. In addition there is daily less formal contact with TSB officials working at the TSB hot desks in 1 Victoria Street.</p> <p data-bbox="113 1391 1445 1500">The Sponsor Team has senior official representation as an observer at TSB Governing Board and TSB Remuneration Committee meetings and BIS Finance Team representation at TSB Audit Committee meetings.</p>

<p data-bbox="145 1626 453 1659">Strengths identified</p> <p data-bbox="145 1677 1409 1787">There are effective governance systems in place through frequent formal and informal meetings. Strength and breadth of bilateral contact between sponsorship team and TSB, as reiterated in recent partner organisation risk assessment.</p>
<p data-bbox="145 1823 807 1856">Areas for improvement and action planned</p> <p data-bbox="145 1874 1422 2018">Need for the Management Statement and Financial Memorandum to be reviewed to ensure they remain consistent with current guidance and practice. Further reviews should take place every three years, to ensure that these framework documents remain up to date.</p>

7. ROLE OF THE BOARD

The PO is led by an effective board which has collective responsibility for its overall performance and success, and provides strategic leadership, direction, support and guidance. The board has an appropriate balance of skills, experience, independence and knowledge, with a clear division of roles and responsibilities between Executives and Non-Executives

Detail of Requirement	Assessment
The Board of the PO should:	
7.1 meet regularly, retain effective control over the PO, and monitor the SMT, holding the CEO accountable for the performance and management of the PO;	Compliant
7.2 be appropriate in size with membership from a diverse background;	Compliant
7.3 establish a framework of strategic control specifying what matters are reserved for the board and establish arrangements to ensure it has access to relevant information, advice and recourses to carry out its role effectively;	Compliant
7.4 establish formal procedural and financial regulations to govern the conduct of its business;	Compliant
7.5 make a senior executive responsible for ensuring appropriate advice is given on financial matters, procedures are followed, and that all applicable statutes and regulations and other relevant statements of best practice are complied with;	Compliant
7.6 establish a remuneration committee to make recommendations on the remuneration of top executives. Information on senior salaries should be published and rules for recruitment and management of staff provide for appointment and advancement on merit;	Compliant
7.7 be evaluated annually, including an evaluation of the chair and board members.	Compliant

Overall assessment of role of the Executive Board	Green
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Evidence of compliance or explanation for non-compliance
<p>7.1 Compliant</p> <p>TSB's Governing Board meets 6 times per year. It receives a regular reports from the CEO and scrutinises the work of the senior management team in delivering the agreed strategy. It holds both to account for the management of the Board's work</p> <p>There is an agreed Board Operating Framework (BOF) which defines the roles of the Board and the Executive team – a copy of which was made available to the review team.</p>
<p>7.2 Compliant</p> <p>The size of TSB's Governing Board is in line with the requirements of its Royal Charter.</p> <p>While BIS seeks to obtain as diverse a Board as possible, the prime factor in making appointments will always be the experience and expertise an individual will bring to the role. Copies of the mandates given to head-hunters stressing the need for a diverse range of candidates have been provided to the review team.</p> <p>A full list of appointments made since the Board was set up in 2007 was made available to the review team.</p>
<p>7.3 Compliant</p> <p>The Board has agreed a Board Operating Framework which sets out its relationship with the Executive Management Team, their respective areas of accountability and responsibilities and the framework of strategic and operational control for the TSB.</p> <p>Following the appointment of a new Chair the Governing Board reviewed the information which it felt it needed to be effective and the Executive team has put in place arrangements to provide this including fuller and more regular financial information in a regular finance report.</p>
<p>7.4 Compliant</p> <p>The Board Operating Framework defines the arrangements for the conduct of business and financial delegation within the formal framework of control agreed with BIS (the Management Statement and Financial Memorandum).</p>
<p>7.5 Compliant</p> <p>The Director of Finance and Operations has been nominated as the senior executive responsible for providing advice to the Board on financial matters. He prepares the annual Governance Statement which is signed by the CEO as part of the process of completing the annual report and accounts.</p>
<p>7.6 Compliant</p> <p>TSB has established a Remuneration Committee and information on senior salaries is</p>

published in TSB's Annual Report and Accounts and on the 'Public Data' section of its website.

The TSB staff manual makes clear that appointments and promotions are made on merit

A copy of the TSB Staff Manual was provided to the review team.

7.7 Compliant

The Chair is currently conducting an evaluation of the performance of Governing Board Members (including their attendance record) which will be completed by end June. The template used has been provided to the review team. The intention is for this to be done annually in future and the process will be conducted next year in the first quarter of 2014.

The performance of the Chair will be evaluated by the Director General of the Knowledge & Innovation Group.

Strengths identified

Strong Governing Board with a good range of experience and technology backgrounds. Introduction of the Board Operating Framework put its relationship with TSB's Executive Management Team on a firm footing.

Areas for improvement and action planned

Requirement for the TSB Chair to evaluate the performance of the Board members and for the Director General of the Knowledge & Innovation Group. to evaluate the performance of the Chair.

Continuing emphasis is needed to ensure that Board membership is refreshed or otherwise reflects emerging / new priorities and is representative of society as a whole.

8. ROLE OF THE CHAIR

The Chair is responsible for leadership of the board and for ensuring its overall effectiveness

Detail of Requirement	Assessment
8.1 The Board should be led by a non-executive Chair, whose duties, roles and responsibilities, terms of office and remuneration should be set out clearly and formally defined in writing. Terms and conditions must be in line with CO guidance and any statutory requirement	Compliant
8.2 There should be a formal, rigorous and transparent process for the appointment of the Chair, which is compliant with the Code of Practice issued by OCPA. The Chair should have a role in the appointment of non executives.	Compliant
8.3 The responsibilities of the Chair can include: <ul style="list-style-type: none"> • representing the PO in discussions with the Secretary of State • advising the Sponsor Group/the Secretary of State about board appointments and performance of non-executive members • ensuring non executives understand their responsibilities; are trained appropriately and undergo annual assessments. • ensure the board takes account of guidance provided by the Secretary of State; carries out its business efficiently and effectively, has its views represented to the public. • develops effective working relationships with the CEO (role of Chair and CEO must be held by different individuals.) • subject to an annual appraisal by the Permanent Secretary or relevant Director General • appraises other board members ensuring they are performing to standard, following disciplinary procedures if necessary and ensuring they are committing the appropriate time to the work. 	Partially Compliant

Overall assessment of the role of the Chair	Green
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Evidence of compliance or explanation for non-compliance

8.1 Compliant

TSB Chair role and responsibilities, term of office, remuneration and other terms and conditions are set out in the letter offering appointment, including the accompanying Code of Practice for TSB Board Members.

A copy of the Chair's letter of appointment was made available to the review team.

8.2 Compliant

As an upper tier body, appointments to the TSB Governing Board are required to be made in accordance with the OCPA Code of Practice. OCPA processes required that an Independent Public Appointments Assessor sit on the interview/selection panel for the TSB Chair appointment. At the very end of the process the OCPA IPAA was required to verify, by way of submission of a Validation Certificate to the Sponsor Team, that the Chair appointment procedures fully complied with the OCPA Code. The certificate has been received for the December 2011 Chair appointment and a copy was made available to the review team.

The TSB Chair is always the third member of the selection panel for any round of Board Member appointments to the Governing Board.

8.3 Partially Compliant

The TSB Chair responsibilities described in the bullets are largely reflected in the Code of Practice for TSB Board Members and the TSB's Management Statement.

The Chair

- has frequent meetings with Ministers
- takes part in the recruitment of Board members
- is involved in the induction of Board members
- works with the Executive to ensure that Board takes note of guidance provided by Ministers works efficiently and communicates its views to the public
- has an effective working relationship with the CEO
- is in the process of conducting performance assessments of Board Members

The performance of the current post-holder will be conducted by the new Director General for Knowledge and Innovation during 2013.

Strengths identified

Role of the Chair is set out clearly.

Rigour of the Chair appointment process conducted by BIS.

Areas for improvement and action planned

Requirement for the TSB Chair to evaluate the performance of the Board members and for the Director General of the Knowledge & Innovation Group to evaluate the performance of the Chair.

The Chair's Terms and Conditions need to be reviewed to ensure that they comply with Cabinet Office guidance and any other statutory requirements.

9. ROLE OF THE CHIEF EXECUTIVE OFFICER (CEO)

The CEO is responsible for leadership of the PO and for ensuring its overall effectiveness

Detail of Requirement	Assessment
9.1 the PO should be led by a CEO, whose duties, roles and responsibilities, terms of office and remuneration should be set out clearly and formally defined in writing. Terms and conditions must be in line with CO guidance and any statutory requirement	Compliant
9.2 there should be a formal, rigorous and transparent process for the appointment of the CEO.	Compliant
<p>9.3 the responsibilities of the CEO can include the responsibilities of the Accounting Officer, the Consolidation Officer and Principal Officer for Ombudsman which involve:</p> <ul style="list-style-type: none"> • Overall responsibility for the PO's performance, accounting for any disbursements of grant to the PO. • establish the PO's corporate and business plans and departmental targets. • inform the Ministry of Justice of any complaints about the PO accepted by the Ombudsman for investigation if applicable. • management of senior staff within the PO ensuring they are meeting objectives and following disciplinary procedures if necessary • maintains accounting records that provide the necessary information for the consolidation if applicable. • (details of accounting officer covered under 10: Effective Financial Management.) 	Compliant

Overall assessment of the role of the CEO	Green
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Evidence of compliance or explanation for non-compliance

9.1 Compliant

TSB CEO role and responsibilities are described in the letter offering re-appointment to the current postholder dated 10 October 2012 and also in the Code of Practice for TSB Board Members and TSB's Management Statement.

9.2 Compliant

The Sponsor Team has been and will continue to be responsible for ensuring that a formal, rigorous and transparent recruitment process is in place for recruiting the CEO. While not an OCPA regulated appointment, the process will largely follow the OCPA Code of Practice.

9.3 Compliant

TSB CEO responsibilities as Accounting Officer, Consolidation Officer and Principal Officer for Ombudsman can be found in the letter offering appointment (Accounting Officer only) and TSB's Management Statement.

Strengths identified

Role, responsibilities and terms and conditions of appointment are set out clearly.

Areas for improvement and action planned

Process to appoint a new CEO (the first new CEO appointment since the TSB was established) to begin Summer 2013 and will need to be robust.

The CEO's Terms and Conditions need to be reviewed to ensure that they comply with Cabinet Office guidance and any other statutory requirements.

10. ROLE OF THE NON-EXECUTIVE BOARD MEMBERS

As part of their role, non-executive board members provide independent and constructive challenge

Detail of Requirement	Assessment
Non-executive members should:	
10.1 form the majority of the board.	Compliant
10.2 be appointed under a formal, rigorous and transparent process compliant with the code of practice issued by OCPA.	Compliant
10.3 have their duties, roles and responsibilities, terms of office and remuneration set out clearly and formally defined in writing. Their terms and conditions must be in line with CO guidance and any statutory requirement.	Compliant
10.4 be independent of management	Compliant
10.5 allocate sufficient time to the board with details of their attendance published.	Compliant
10.6 undergo proper induction, and appraisals.	Compliant
10.7 their responsibilities include:	Compliant
<ul style="list-style-type: none"> • establishing strategic direction of the PO and oversee development and implementation of strategies, plans, priorities and performance/financial targets. • ensuring the PO complies with statutory and administrative requirements on the use of public funds and operates within its statutory and delegated authority. • that high standards of corporate governance are observed. 	

Overall assessment of the role of non-executive directors	Green
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Evidence of compliance or explanation for non-compliance

<p>10.1 Compliant</p> <p>NEDs form the majority of the TSB Governing Board (see TSB’s Annual Report and Accounts) in line with the TSB’s Royal Charter.</p>
<p>10.2 Compliant</p> <p>As an upper tier body, appointments to the TSB Governing Board are required to be made in accordance with the OCPA Code of Practice. OCPA processes required that an Independent Public Appointments Assessor sit on the interview/selection panel for TSB Board appointments. At the very end of the process the OCPA IPAA is required to verify, by way of submission of a Validation Certificate to the Sponsor Team, that the appointment procedures fully complied with the OCPA Code. The certificates have been received and copies for the 2011 and 2012 Board appointment rounds was made available to the review team.</p>
<p>10.3 Compliant</p> <p>NEDs role and responsibilities, term of office, remuneration and other terms and conditions are set out in the letter offering appointment, including the accompanying Code of Practice for TSB Board Members.</p>
<p>10.4 Compliant</p> <p>NEDs are appointed to be independent of TSB’s Executive Team.</p>
<p>10.5 Compliant</p> <p>NEDs are required to give 18 days per year to TSB business, as noted in the letters offering appointment. Their attendance record was published in the TSB Annual Report and Accounts for 2011/12.</p>
<p>10.6 Compliant</p> <p>There is a full induction process for NEDs. The Chair completed the first round of assessments of NED performance by the end of June 2013. These will be conducted annually in future.</p>
<p>10.7 Compliant</p> <p>The responsibilities of Members for supervising the work of the TSB are described in the Board Operating Framework as follows -</p> <ul style="list-style-type: none"> • using their experience to challenge and support the Board, acting corporately and not simply reflecting their own functions; • ensuring that the Board obtains and considers all appropriate information; • advising on the operational and delivery implications of policy proposals; • forming an Audit Committee and a Remuneration Committee; and

- supporting the processes for recruitment and appraisal of senior executives, and succession planning;

Their responsibilities of Members for ensuring that TSB complies with statutory and administrative requirements and for maintaining good standards of corporate Governance are set out in both the Code of Practice for TSB Board Members and the Board Operating Framework.

Strengths identified

Rigour of Board appointments process.
Role and responsibilities of Board Members set out clearly.

Areas for improvement and action planned

Requirement for the TSB Chair to evaluate the performance of the Board members

11. EFFECTIVE FINANCIAL MANAGEMENT

The PO has taken appropriate steps to ensure that effective systems of financial management and internal controls are in place

Detail of Requirement	Assessment
11.1 publish on time an objective, balanced and understandable annual report which complies with Treasury guidance, and includes an Annual Governance Statement;	Compliant
11.2 comply with NAO requirements relating to the production and certification of their annual accounts;	Compliant
11.3 have effective systems of risk management as part of their systems of internal control;	Compliant
11.4 ensure an effective internal audit function is established which operates to Government Internal Audit Standards in accordance with CO guidance;	Compliant
11.5 have appropriate financial delegations in place understood by all relevant staff and stakeholders. Effective systems must be in place to ensure compliance with these delegations and the systems are regularly reviewed;	Not compliant
11.6 have anti-fraud and anti-corruption measures in place, and clear published rules governing claiming of expenses, with systems in place to ensure compliance. Information on expenses claimed by board members and senior staff should be published;	Compliant
11.7 establish an audit (or audit and risk) committee with responsibility for independent review of the systems of internal control and external audit process;	Compliant
11.8 take steps to ensure objective and professional relationship is maintained with external auditors.	Compliant
11.9 comply with BIS guidance with regard to any department restrictions on spending.	Compliant
11.10 report to Corporate Finance with management accounts and Grant In Aid authorities	Compliant

Overall assessment of effective financial management	A/R
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Evidence of compliance or explanation for non-compliance
<p>11.1 Compliant</p> <p>The TSB 2011/12 Annual Report and Accounts was published in July 2012. A copy was been made available to the review team. The report was prepared in the light of a full Governance Statement signed off by the CEO. TSB is on track to produce this year's annual report and accounts to the timetable required by BIS.</p>
<p>11.2 Compliant</p> <p>The full set of Annual Reports and Accounts for all years since the TSB inauguration in 2007 have now been produced by TSB and certified by the NAO. They are available on the TSB website.</p> <p>The TSB Report and Accounts for 2011/12 was approved by NAO without qualification and laid before Parliament before the summer recess in 2012. Previous Annual reports had however been delayed pending final Audit by the NAO of the treatment of accruals of grants to businesses. Now that an audited approach has been agreed with the NAO TSB expects to be able to produce timely accounts in future.</p>
<p>11.3 Compliant</p> <p>The TSB risk register is reviewed quarterly by the Audit Committee.</p> <p>An Audit of internal TSB risk management processes was conducted during 2011/12 which made recommendations for a number of improvements. These recommendations are being implemented across TSB's directorates, each of which has its own risk register.</p>
<p>11.4 Compliant</p> <p>The TSB uses the cross Research Council Audit and Assurance Services Group which operates to Government Internal Audit Standards.</p> <p>A regular programme of internal audits is proposed by TSB in consultation with its internal auditors and approved by the Audit Committee.</p>
<p>11.5 Not Compliant</p> <p>The system of internal delegation currently in place is being developed as part of an overall finance improvement plan with the intention of improving forecasting and reducing future underspends. A full set of new delegations will be in place by end June</p> <p>The plan builds on significant changes to the TSB's accounting software, improvements in the way that information is collected from grant recipients, changes to way that internal financial delegations are made and a compulsory training programme for all non finance TSB staff who have budgetary responsibilities. Copies of the plan have been made available to the review team.</p> <p>The TSB Finance function has created an action plan which will involve putting in place a</p>

<p>new system of delegations which require those spending to ensure that new activities are with their delegated limits for both up-front commitment and for subsequent spending year by year.</p>
<p>11.6 Compliant</p> <p>The TSB has anti-fraud and anti-bribery policies. The TSB has a travel and expenses policy which has recently been reviewed. Information about expenses of senior staff and Board Members is published in the Annual Report and Accounts and on the website.</p>
<p>11.7 Compliant</p> <p>The TSB Governing Board has established an Audit Committee which meets 4 times a year. Its terms of reference were provided to the review team. The Committee has responsibility for independent review of systems of control and the external audit process.</p>
<p>11.8 Compliant</p> <p>There are regular and constructive discussions with the NAO.</p>
<p>11.9 Compliant</p> <p>The TSB complies with the BIS guidance in relation to spending controls including those introduced by the Cabinet Office in areas such as consultancy and marketing.</p>
<p>11.10 Compliant</p> <p>The TSB has regular contact with the BIS Corporate and Knowledge and Innovation Finance teams and complies with the requirements for the submission of regular management accounts.</p>

<p>Strengths identified</p> <p>TSB has introduced Finance Business Partnering approach; this is likely to embed financial management further across TSB and contribute to improved accountability, challenge and Management Information outputs.</p> <p>TSB has agreed path to account close which is faster, unqualified and meets BIS deadlines.</p> <p>TSB has agreed process for management of accruals now meets with NAO approval.</p>
<p>Areas for improvement and action planned</p> <p>TSB's system of internal delegation and control is in the process of improvement – an action plan is being developed and will lead to more robust forecasting.</p> <p>Improved understanding and integration of TSB finances into wider government budgeting and reporting requirements both by means of systems improvements and understanding of staff and Senior managers.</p>

12. COMMUNICATION AND ENGAGEMENT

The Public Body is open, transparent, accountable and responsive

Detail of Requirement	Assessment
12.1 The body should establish clear and effective channels of communication with stakeholders;	Partly compliant
12.2 make an explicit commitment to openness in all activities. Engage and consult with public on issues of public interest or concern and publish details of senior staff and board members with contact details;	Compliant
12.3 hold open board meetings or an annual open meeting;	Not Compliant
12.4 proactively publish agendas, minutes of board meetings and performance data;	Compliant
12.5 establish and publish effective correspondence handling and complaint procedures, and make it simple for members of the public to contact them/make complaints. Complaints should be investigated thoroughly and be subject to investigation by the Parliamentary Ombudsman. Performance in handling correspondence should be monitored and reported on;	Compliant
12.6 comply with any Government restrictions on publicity and advertising, with appropriate rules in place to limit use of marketing and PR consultants. Have robust and effective systems in place to ensure the PO is not engaged in political lobbying, includes restriction on board members attending Party Conferences in a professional capacity.	Compliant
12.7 engage the Sponsor Group appropriately especially in instances where events may have reputational implications on the department.	Compliant

Overall assessment of communications	A/G
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Evidence of compliance or explanation for non-compliance

12.1 Partly Compliant

The TSB has identified its key stakeholders and has identified the key channels to reach them. It makes extensive use of e-channels as well as the network of KTNs it funds.

It has recently been working with its Governing Board on its communications and engagement strategies. In both areas the Governing Board has requested additional work to define improvements. In response TSB has developed action plans to identify what needs to be done in order both to achieve more recognition for what it does and to ensure that it has effective channels to its customers.

Summaries of the action plans have been made available to the review team together with copies of relevant Board papers. The review team has also been able to discuss progress with the relevant TSB Director.

TSB has also identified the need to strengthen its professionalism in these areas and is in the process of recruiting a new Communications and Networking Director – information about the job spec has been made available to the review team.

12.2 Compliant

The TSB has committed itself to openness in all its activities. A new public website has been launched designed to provide information about its activities in more user friendly way for business users.

Information about senior staff and Board Members is published on the TSB's website and in its Annual Report and Accounts.

TSB undertakes numerous consultations with businesses about its forward strategies and activities – which are then published through its website and elsewhere.

12.3 Not compliant

The Governing Board discussed holding Open Board meetings at its October 2012 Board meeting and concluded that it would prefer to engage with its business users in other ways.

The Board concluded that it would be preferable to engage through open-access communication sessions at meetings such as the annual TSB Innovate Conference. A number of Board Members were present at different sessions in the 2013 Innovate conference. An open access communication session for Board members will be part of the next 2014 Innovate conference – planning for which has already started.

12.4 Compliant

Agendas and summaries of Governing Board meetings are published on the TSB website. A variety of performance data is published in the Annual Report and Accounts and in the annual Delivery Plan. The Board has also published the results of a number of evaluations of its support schemes and activities and will make the results of such studies public as a

matter of course in future.

12.5 Compliant

TSB has a published Complaints Procedure on its website. It deals promptly with complaints and reports the number and nature of complaints to the Governing Board. During 2011/12 no deadlines for complaints handling were missed.

The TSB has also dealt with all Freedom of Information requests within the required timescale. In the relatively small number of cases where appeals have been lodged these have also been dealt with promptly. On the one occasion when a decision was appealed to the Information Commissioner the TSB decision was upheld. Statistics about the numbers of complaints and their handling was made available to the review team.

12.6 Compliant

TSB has complied with central government spending control requirements on publicity and advertising. It avoids engagement in political lobbying and has regularly informed its Board members of the restrictions on participation in Party Conferences.

12.7 Compliant

TSB engages closely with its sponsorship team and the BIS communication specialists on communications matters particularly where there are potential reputational issues.

The action plan in relation to improvement of TSB communications work has been prepared in close consultation with the BIS communications team.

Strengths identified

Engagement with users and customers through electronic channels. Annual Innovate Conference used to bring together the innovative businesses researchers, think tanks and universities etc.

Areas for improvement and action planned

Key area for improvement is strategic stakeholder engagement. And the constant refinement of the customer engagement strategy through all forms of media, nationally and locally.

A communications improvement plan has been developed and been agreed with the TSB Governing Board. This includes a number of strategic changes as well as the recruitment of a new Communications and Engagement Director.

The holding of open board sessions at future Innovate conferences.

13. CONDUCT AND PROPRIETY

The board and staff of the PO work to the highest personal and professional standards. They promote the values of the PO and of good governance through their conduct and behaviour

Detail of Requirement	Assessment
13.1 a Code of Conduct must be in place setting out the standards of personal and professional behaviour and propriety expected of all board members which follows the CO Code and form part of the terms and conditions of appointment;	Compliant
13.2 the PO has adopted a Code of Conduct for staff based on the CO model Code and form part of the terms and conditions of employment;	Compliant
13.3 there are clear rules and procedures in place for managing conflicts of interest. There is a publicly available Register of Interests for board members and senior staff which is regularly updated;	Partly compliant
13.4 there are clear rules and guidelines in place on political activity for board members and staff with effective systems in place to ensure compliance with any restrictions;	Compliant
13.5 there are rules in place for board members and senior staff on the acceptance of appointments or employment after resignation or retirement which are effectively enforced;	Partly compliant
13.6 Board members and senior staff should show leadership by conducting themselves in accordance with the highest standards of personal and professional behaviour and in line with the principles set out in respective Codes of Conduct.	Compliant

Overall assessment of conduct and propriety	Amber / Green
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Evidence of compliance or explanation for non-compliance
<p data-bbox="116 271 347 304">13.1 Compliant</p> <p data-bbox="116 344 1342 416">The Code of Practice for TSB Board Members, which accompanies the letters offering appointment to the TSB Governing Board, provides a code of conduct.</p> <p data-bbox="116 456 831 490">The Code was made available to the review team.</p>
<p data-bbox="116 535 347 568">13.2 Compliant</p> <p data-bbox="116 609 1402 712">The TSB staff and line manager guide includes a code of conduct which complies with the Cabinet Office model. The provisions of the guide form part of the terms and conditions of staff.</p> <p data-bbox="116 752 879 786">The TSB staff guide was provided to the review team.</p>
<p data-bbox="116 837 448 871">13.3 Partly Compliant</p> <p data-bbox="116 911 1406 1014">Guidance on conflicts of interest for Board Members is provided in the TSB Board Member Code of Practice issued with the letter offering appointment. Board Members declared interests are published on the public data section of the TSB’s website.</p> <p data-bbox="116 1055 1377 1158">The TSB staff and line manager guide covers the issue of conflicts of interest for staff. A register of interests for senior staff is maintained and will be posted on the TSB website shortly</p>
<p data-bbox="116 1207 347 1240">13.4 Compliant</p> <p data-bbox="116 1281 1402 1384">The TSB Board Members Code of Practice, which accompanies the letters offering appointment to the TSB Governing Board, provides guidelines on political activity. Board Members are reminded of appropriate guidance whenever this is issued by Cabinet Office.</p> <p data-bbox="116 1424 1422 1505">For TSB staff the TSB staff and line manager guide includes the statement on Public Sector Values and Behaviours - which covers the issue of political impartiality.</p>
<p data-bbox="116 1543 448 1576">13.5 Partly Compliant</p> <p data-bbox="116 1617 1437 1760">The rules covering acceptance of employment etc after resignation or retirement are covered in the TSB Board Members Code of Conduct. There are no similar express provisions for TSB staff, although the issue is covered in the staff and line manager guide in relation to conflicts of interest.</p>
<p data-bbox="116 1807 347 1841">13.6 Compliant</p> <p data-bbox="116 1845 1383 1989">The TSB Board Members Code of Practice, which accompanies the letters offering appointment to the TSB Governing Board, makes it clear that individual Board members should be aware of their conduct and wider responsibilities as members of the Board and that they should follow the Nolan Committees “Seven Principles of Public Life”.</p>

TSB has its own statement of values

- committed to help one another
- passionate about innovation
- curious and creative
- solution focused
- one dynamic team

Senior staff model these in their behaviours in public sessions – for example the Chief Executive started his presentation on 8 May 2013 to all staff by talking about them and they were covered in the session describing the results of the 2013 staff survey.

Strengths identified

Robust code of conduct requirements are in place across TSB staff and board.

Areas for improvement and action planned

Need to put procedures in place for managing conflicts of interest.

Need to put rules in place for senior staff (as well as board members) regarding acceptance of appointments or employment after resignation or retirement. Need to ensure that these rules are then enforced.

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