



MID-TERM EVALUATION OF THE BUSINESS INNOVATION (BI) PROGRAMME

The Innovation Partnership

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EXECUTIVE SUMMARY

INTRODUCTION

The Welsh Government (WG) Business Innovation (BI) Programme (2009-2014), which is partly funded by the European Regional Development Fund (ERDF), supports businesses throughout Wales in their innovative endeavours. Designed in 2008, the Programme delivers novel “business beneficiary-centric” integrated support packages that focus on supporting different stages of the open innovation process. *Note: for the purposes of this evaluation, the Consultants have defined open innovation as “a methodology and business concept whereby organisations acquire outside skills and resources to contribute to the innovation process. The open innovation ecosystem includes suppliers, customers, decision makers, specifiers and marketing partners”.*

In late 2011, WG's Business, Enterprise, Technology and Science (BETS) Division, following Welsh European Funding Office (WEFO) guidelines, openly tendered and commissioned a mid-term (2009-2012) evaluation of the BI Programme. The mid-term evaluation was to include a review of the Programme's performance against targets at the midway point (March 2012), face-to-face interviews with 17 key Programme stakeholders, including the Heads of six of the nine key sectors, a web-based e-survey open to all programme beneficiaries producing 100 responses (18% of the population), detailed personal interviews with 16 beneficiaries, and discussions with programme managers and delivery partners.

The key objectives of the mid-term evaluation are to identify and review Programme performance to date and assess the Programme's fit-for-purpose, its alignment with and delivery of key Welsh strategies, namely those of Science and Innovation, review the performance of the Programme's five delivery components and the benefits gained by the participating (beneficiary) companies. Specifically, this evaluation answers questions set by the Programme Management Team (PMT), draws key conclusions and present a series of recommendations for the remainder of the BI Programme 2012-2014.

PROGRAMME CONTEXT

The evaluation has been reported both in the context of the external environment, i.e. the economic climate both now and at the time the BI Programme was being planned (2008), and the internal environment, i.e. the structure and direction of the Welsh Government, the BI Programme's principle stakeholder and managing agent.



External environment: the Consultants are well aware that the performance of business support programmes, particularly those focused on SMEs throughout the EU, have generally underperformed over recent years due to the prevailing economic conditions. General programmes have reported reductions in outputs, particularly programme engagement/business assists, and delays and reduced outputs in terms of jobs, income leverage, contribution to GVA and profitability. The delivery and performance of the BI Programme over the first period has also suffered. Other ERDF-funded projects reviewed/witnessed by the Consultants indicate that performance is, on average, 10% to 25% behind target at the midway point. Other programmes are tending to tackle performance shortfalls principally through enhanced marketing activities or, by exception, negotiating reduced targets and spend.

Internal environment: the BI Programme has also been affected by internal changes and constraints as briefly identified below:

- Slow project start due to protracted set-up and contracting
- With the introduction of FS4B, the new relationship managers became the first port of call for businesses and, as a consequence, the Innovation Specialists (IS) and, arguably, the BI Programme became one stage removed
- ERP was introduced and the department lost 20% of its budget and staff
- Under the ERP, the Welsh Innovators Network (WIN) was discontinued with the net effect of reducing the potential client base by over 5,000
- With the introduction of the sector strategy, IS were allocated to sectors along with line management. This severely affected regional working practices, which significantly reduced the numbers of direct enquiries received.
- Changes in some programmes, i.e. grant to recyclable business finance, resulted in applications for support dropped to almost nothing for a period of at least six months
- Critically for the BI programme, there was a significant period where they were not allowed to market the Programme

BI PROGRAMME ALIGNMENT WITH KEY STRATEGES

It is common to review programmes against the strategies in place during the programme period, which the Consultants have done. With regard to future BI planning and performance, a review of new strategies has also been undertaken:

- *"Science for Wales"*, June 2012
- *"Response to the Calls for Evidence for an Innovation Strategy"*, November 2012



Each document recognises the role that innovation plays within the economy and promotes open innovation, and specifically the BI Programme, in word and deed (*Science for Wales*). It is the Consultants' considered opinion that the strategic position on innovation has been given the highest priority it has had at any time over the last twenty years. Equally as important, the objectives are actionable in the short term. BI is, and will prove to be, a significant instrument to: encourage/engage open innovation; widen the innovation agenda (including subjects such as business process innovation); support the development of the sector teams; help encourage investors in innovation and business; and encourage further engagement of the university base and delivery of the Government's strategic agenda. Notable within the strategies is the need for businesses to become investment-ready and thus attractive to all kinds of partners and funders. Beneficiaries also identify this need, and a recommendation is that the BI Programme could play a unique role to simplify this situation and provide accredited innovation uptake. It is our view that both strategies create an environment in which innovation can flourish and mirror the approach for the wider UK and rest of Europe.

DEGREE OF FIT: OTHER PROGRAMMES & SECTORS

The BI Programme has a strong degree of fit (i.e. complementary rather than competitive) with other BETS (RD&I) programmes, namely *Academics for Business* (A4B) and the *RD&I Support* (SMART Cymru), and other major SME support programmes (e.g. E-Business) delivered by WG. With regard to other WG programmes and sectors there appear to be limited cross referrals of companies to other programmes to provide appropriate additional support. Better understanding of programme content, targets and marketing activities by all programme managers could go some way to addressing missed opportunities. This is also the case for other ERDF/ESF-funded projects focused on supporting business such as ASTUTE (ERDF) and SAW (ESF).

With regard to the WG nine key sectors, at the point at which the evaluation was undertaken several had yet to embark on their delivery plans. This, coupled with limited understanding of the BI Programme, has resulted in misconceptions of BI and, on occasions, frustrations – evidence gathered more recently by the Consultants suggests that this issue is being addressed. Greater two-way communication is required to facilitate increased understanding of BI and what it can and, arguably, cannot provide, and also better targeting of businesses.

DEGREE OF FIT: TARGET BUSINESS NEEDS

Beneficiaries viewed the BI Programme as being 'feature-rich' and capable of accommodating their immediate needs. The single standout area/activity



was 'access to funding/help to source funding' which 46% of the beneficiary sample saw or perceived as a key part of the BI Programme.

BI PROGRAMME PERFORMANCE AGAINST WEFO OUTPUTS

The Programme's performance against key indicators at the midway point has been summarised as follows:

Programme Performance against Target Outputs

	Mid-term Target	Mid-Term Actual	Deviance
New/improved products/processes/services	200	214	+14
Enterprise assists	820	511*	-309
Products registered	142	126	+16
Enterprises financially supported	165	178	+13
Profit benefit	£5.6m	£2.25m	-£3.35m
Investment induced	£2.2m	£1.4m	-£800k
Jobs created	23	40	+17

* Note: up to the point of this mid-term evaluation, 511 Enterprise Assists were completed. Out of these 511, 443 companies returned the E&D forms.

The only non-financial metric to date which shows a negative result is 'enterprise assists', where outputs are circa 37% down at the midway point. The evaluation identified several reasons for this and programme management believes that in the coming three-year period, most (if not all) of the shortfall can be made up. This process of 'catching up' on the E&D data is ongoing and programme management will continually analyse this data in order to make recommendations for improvements going forward, both for this programme and for other future programmes.

Against other key output measures, other than financials, the BI Programme is on or slightly above target. This would indicate that if the Programme did catch up during the second phase (2012-2014), i.e. delivered more 'enterprise assists' (the start of business engagement), in all likelihood it would exceed all other unitary outputs and financial performance would be significantly enhanced.

With regard to the financial targets, 'investment induced' is 64% of target. It is well known that significant investment lags R&D and innovation support; in the majority of cases RD&I investment is lower than investment to capitalise on innovation (i.e. production staff, marketing etc), and there is a possibility that this difference could again be made up before the end of the Programme. It



is good practice also to measure investment induced beyond the end of the Programme to capture this impact measure in full, and this is something the PMT intends to do. Following behind investment induced is 'profit benefit', for which the Programme has achieved 40% of target. Given that less than 50% of the enterprise assist target has been achieved, this is in line with expectations. Profits from investments in innovation may not occur for a number of years and it is largely recognised that the profit contribution continues for several years. For this reason it is recommended that profit contribution and investment induced are measured beyond the ERDF programme period, ideally by a further three years.

One of the encouraging metrics is 'jobs created' which, at the midway point, is recorded at +17 (174% above target).

Overall, our research findings (beneficiary interviews) indicate that some of the reported figures may not be accurate. For example, one company interviewed was prepared to comment that other than grants for employment, the only support they had received was from BI/IS, and that this support has underpinned the creation of 80 jobs and that employment levels are likely to be circa 200 in total in the next four years.

STAKEHOLDER REVIEW

The internal stakeholder review identified conclusively that innovation and the support of innovation throughout Welsh businesses (all sectors) is much needed and should continue to be developed. Generally, it is regarded as an overarching activity that contributes significantly to delivery of the Science and Innovation Strategies and supports WG's sector approach. It was clear that the majority had some understanding of the BI model and content. However, a small number also had misconceptions about BI and, in one case, frustration was voiced; the PMT is aware of and acting upon this feedback. Those stakeholders with a greater interest in innovation, i.e. the Chief Scientist, Head of Innovation and Science Policy, clearly appreciated the BI Programme for what it is achieving and indicated that there is the potential that additional resource will be allocated to innovation support over the longer term.

Several of the stakeholders referenced the upcoming Innovation Strategy, believing it to provide more clarity on the support to be delivered by the public sector, and, a more focused approach to business support. The stakeholder community also believed that more alignment between the science base, industry, and those organisations funding innovation (including WEFO) within businesses should be sought.



Stakeholders were also questioned on the Programme's fitness-for-purpose and the need for grant support. All believed the Programme to fit well and several referenced the fact that UK Government has recently re-launched a number of R&D and Innovation programmes and grants, and that Wales should do likewise. The giving of grants was generally seen as being acceptable or necessary. Stakeholders identified the major drivers for grant support at this time as being the long-term depressed or uncertain economic prospects worldwide.

BI MODEL, REACH AND SIGNIFICANCE

WG set out to develop a programme model that recognised the dynamic open innovation process, and placed beneficiary business at the centre of this process. Originally designed to support manufacturing companies, it has been developed to cover the now nine key business sectors. It was clearly innovative, adopting the latest thinking at the time, and has proved to be a successful model and approach. We are judging success of the BI Model and Programme in terms of: significance and reach; ability to serve key industry sectors; acceptance by stakeholders; views of the businesses it has supported. As already stated what has not been successful is the promotion and therefore reach of the Programme in relation to key stakeholders and non-traditional or under-represented sectors for innovation support, primarily the service sectors. This is primarily due to constraints on marketing, which is being addressed. The responsibility for this should lie with Programme management, delivery partners, key stakeholders, specifically the sector teams, and the wider business-support community.

BI PROGRAMME CONTENT

Programme content was viewed by stakeholders and beneficiaries as being comprehensive, feature-rich and, importantly for SMEs in particular, actionable within the short term. Several companies indicated that they would have benefited from more long-term support and guidance from the IS, both during the intervention and beyond the planned Programme duration. For example, one service sector business interviewed by the Consultants is displaying exceptional growth (staff and turnover) and stated that its only link with the business support community is via its IS.

The evaluation has shown that the private sector is involved in delivering support to beneficiaries, often via the Innovation Voucher Scheme, indicating that there has been minimal displacement.

Aspects of innovation that stakeholders in particular believed the Programme could provide more support for are business process innovation and support for commercialisation. It was felt that this would make the Programme more



appealing to a wider range of key sectors, notably creative industries and financial services.

It was also commented that the language and focus of the BI Programme is not well suited to all qualifying sectors, with the creative industries and financial services again being mentioned. These sectors were under-represented in terms of beneficiaries and one of the reasons cited was that these sectors weren't marketed to directly/appropriately. This is easily rectified and stakeholders believed that it needs to be so that the messages and communication/engagement methods used are relevant to each target audience, and target their specific needs.

The key beneficiary-facing components of the BI Programme are the Innovation Specialists (IS) and IP specialists employed by WG, and the two delivery partners, one for BI-M and one for BI-D. The evaluation asked beneficiaries if they were satisfied, on a scale of 1 to 5, with the level of support they have received. The two most common answers were 'very satisfied' and 'satisfied', together accounting for 89% of total responses (100 in total). The Consultants have evaluated many business-support programmes and this percentage is very high indeed.

Individual scores across the board were extremely high and averaged close to or above 4 out of 5. The Consultants are also well aware that the more specific the support is, such as IP advice and guidance, the higher the rating.

Overall the components of the BI Programme are highly regarded by beneficiaries and considered fit-for-purpose. The PMT and stakeholders believe that they represent value for money (VfM) and justify grant aid due to the economic conditions and the risks attached to innovation.

PROGRAMME MANAGEMENT AND PROCESSES

Overall, stakeholders and beneficiaries viewed project management as being professional, with stakeholder/beneficiary-facing managers regarded as being extremely knowledgeable about the subject of innovation and generally doing a good job under difficult circumstances. Beneficiaries commented that the PMT was not particularly visible, nor ought it to be, but that the IS and delivery partners were and that was seen as positive.

Beneficiaries, and some stakeholders and IS, did believe that the application process could be more streamlined and less time consuming. Stakeholders also believed that the process could be reviewed to speed up applications and companies were, on occasion, frustrated by the amount of financial



information or continuing information requests as well as ongoing project monitoring.

Throughout the evaluation, the above issues were discussed with Programme management who were clearly aware of the situation but were also mindful of the conditions and constraints that they had operated under. It is correct to state that Programme management are continually reviewing the Programme in order to improve performance.

BENEFICIARY EXPERIENCES AND OUTPUTS

The aim of the BI programme is to promote and support the uptake of innovation, thereby improving the competitiveness and performance of businesses, and ultimately benefiting the economy and society. The e-survey undertaken as part of this evaluation sought to identify benefits that companies have obtained as a result of their participation in the Programme.

It is the Consultants' view that the BI Programme has, under less than ideal conditions, performed well. At the mid-term outputs against target are, with the exception of one or two measures, on track, and management has ideas and plans to improve poorly performing areas.

Below, we have summarised some of the headline figures:

- 84% of beneficiaries utilised the BI Programme to develop or improve products and services. In terms of the focus of the support, 46% were concerned with securing finance, 40% design support, 35% manufacturing, 26% intellectual Property and 12% other.
- In terms of impact on the business and commercialising ideas, 25% of the sample said that impact had been 'very significant' in terms of a company's ability, 34% said 'significant impact' and 11% said 'some impact'
- Almost 70% of beneficiaries with a specific innovation project indicated that they had moved their plans forward since receiving support from the BI programme. Of these 77% indicated that the support received was either 'very important' or 'critical' in securing this progress.



1 INTRODUCTION

The Business Innovation (BI) Programme is a six-year (2009-2014) ERDF-funded, pan-Wales programme. It provides an innovative and beneficiary-centric integrated support package, which focuses on the different stages of the open innovation process. *(Note: for the purposes of this evaluation, the Consultants have defined open innovation as “a methodology and business concept whereby organisations acquire outside skills and resources to contribute to the innovation process. The open innovation ecosystem includes suppliers, customers, decision makers, specifiers and marketing partners.)*

The project is a revenue and capital project with a total project budget of circa £30m funded by a mix of WG/ERDF funds and private-sector match.

In late 2011, the Welsh Government (WG) went out to tender for the mid-term evaluation of the BI Programme. The tender specification identified the scope of the mid-term evaluation, which was principally to establish whether the model of service delivery has been successful, and which should include:

- The performance of the Programme to date, what has worked well/not so well;
- The performance of third-party providers (effectiveness, efficiency, value for money [VfM] and impact);
- Innovation Specialists facilitation or clients accessing other support programmes (WG and non-WG);
- Review of the IP Centres (PATLIB) and their effectiveness in meeting the needs of businesses;
- Stakeholder feedback;
- Review of the benefits in the delivery of business support this programme provides to businesses;
- A review of the market need and how the Programme should react to any economic changes;
- A review of indicator targets;
- To review the economic benefit SMEs have gained or are gaining from the Programme;
- An examination of the willingness and the ability for participants to pay for elements of service delivered within the Programme;
- To review the risk of grant dependence by the end of the Programme;
- Recommendations for improvement of delivery, taking into account lessons learned from the Programme to date, and from identified models of best practice;



- Conclusions and recommendations resulting from the evaluation are evidence-based and in line with Government priorities and policies.

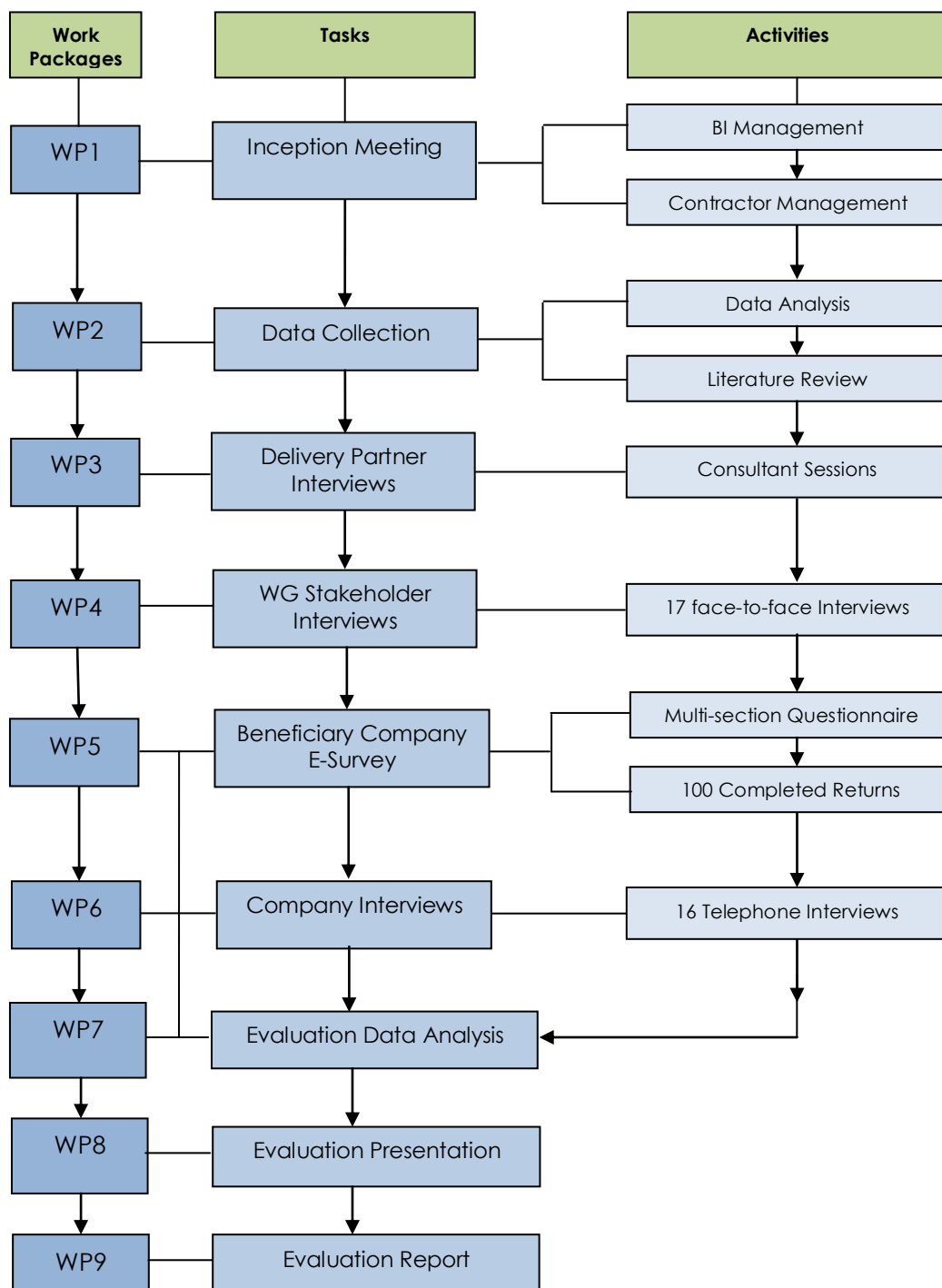
The Innovation Partnership and Regeneris Consulting (referred to in this report as 'the Consultants') successfully tendered for the evaluation, which commenced in January 2012. This final report (first version completed November 2012) presents research findings and conclusions of the mid-term Business Innovation Programme evaluation.



2 Evaluation Methodology

The methodology employed to deliver the mid-term evaluation of the BI Programme was executed via nine Work Packages (WPs) as follows:

Fig 1: Mid-Term Evaluation WPs Methodology





2.1 WP1: Inception Meeting

Two consultants from TIP, Nigel Woodruff and David Smith, met with senior managers and staff at WG – Business, Enterprise, Technology and Science (BETS), namely Philip Allen, Head of Knowledge Transfer and Commercialisation, Tony Guile, Lead on IP and A4B, Steve Holt, Lead on the BI Programme, Brian Thorne, Evaluation/Manufacturing and RD&I Lead, and Mark Lewis, Business Innovation Executive, collectively referred to as the Project Management Team (PMT) in January 2012.

This meeting allowed the Consultants and the PMT to discuss the evaluation proposal, make suitable agreed amendments and commence gathering of all relevant background information necessary for the evaluation.

The Consultants also met with the delivery partners of the key subcontracted components of the Programme, namely John Clement from Enterprise Consulting Ltd (www.enterprise.uk.com), contract manager for the BI-M (Manufacturing) programme, and Dafydd Davies from BIC Innovation (www.bic-innovation.com), manager for the BI-D (Design) programme. Once again, this allowed the Consultants to gather background information and to prepare both delivery partners for a fuller meeting that took place later in the month.

2.2 WP2: Data Collection and Analysis

The Consultants collected and analysed all WEFO reporting data and gathered evidence on outcomes and outputs for review. This included a brief assessment of examples of beneficiary reviews and documents produced by the Innovation Specialists (IS), the IP Audits, BI-M and BI-D reviews, and consultancy project reports.

2.3 WP3: Delivery Partner Interviews

Following the initial inception meeting, the Consultants then spent time in February 2012 with the delivery partners to gain a clear appreciation of their operations, engagement performance to date, and views on VfM. The Consultants discussed future intentions and met again with John Clement from Enterprise Consulting at a later date when Enterprise had then won the second three-year term for both the manufacturing and design elements of the BI offering.

2.4 WP4: WG Stakeholder Survey

The Consultants completed 17 face-to-face interviews with key stakeholders during February to April 2012. Discussions covered issues such as the perception and fit-for-purpose of the BI Programme, its marketing and



engagement with other Welsh programmes and sectors, and future needs and requirements for innovation support.

2.5 WP5: Web-based Survey

Regeneris Consulting undertook a web-based e-survey in which over 567 beneficiaries were identified and emailed and, over a period of some months (May to August 2012 – *[note: the e-survey was open for a relatively long period to facilitate the greatest possible response]*) 100 completed returns (18%) were received. The survey analysed key areas such as the characteristics of beneficiaries, the elements and areas of support, levels of satisfaction and the types of impact that beneficiaries have witnessed to date.

2.6 WP6: Beneficiary Company Telephone Interviews

The Consultants went on to interview 16 selected beneficiaries via telephone (October and November 2012) to build on information obtained in the e-survey and to provide further qualitative information, on outputs and impact specifically. All interviewees gave permission to be quoted in this report and all are willing to be the subject of a future case study to promote WG support, and specifically the BI Programme.

2.7 WP7: Evaluation Data Analysis

All programme management data, stakeholder interview and beneficiary data received relating to the Programme, i.e. e-survey and individual interviews, has been analysed and presented in separate sections of this report.

2.8 WP8: Results and Draft Report

A draft report was presented to the PMT (November 2012), where the individual research results, conclusions and recommendations were discussed and agreed

2.9 WP9: Evaluation Final report

The Consultants have provided this end of mid-term evaluation report (dated November 2012) detailing the results of the evaluation, including responses to the key questions posed and key conclusions and recommendations.



3 THE BUSINESS INNOVATION (BI) PROGRAMME OVERVIEW

Introduced in 2009 and due to run for six years, the BI Programme is a WG pan-Wales programme partly funded by the ERDF.

The Logic Chain for the BI Programme has been included as Appendix I. *Note: the Logic Chain is an important representation of the BI programme and is only relegated to the appendices for formatting reasons.*

3.1 Strategic Aims of the BI Programme

The aim of the BI Programme, originally part of the then Welsh Assembly Government's "Flexible Support for Business" (FS4B), is to support innovative businesses, primarily SMEs (although up to 20% of the Programme's budget can be allocated to supporting large businesses) in the development and protection of new technology, products, processes and services.

Principally, support is accessed and provided via a pan-Wales network of twelve Innovation Specialists (IS) providing access to specialist IP and commercialisation advice, detailed design and manufacturing consultancy, and funding for consultancy and capital investment projects via the BI Innovation Voucher scheme.

Distinctly, the BI Programme is not linear but seeks to meet individual and dynamic business needs and link to other government and non-government programmes. That said, there are clear strategic components and resources, as presented in BI Programme literature. These have been presented in Table 1 on the following page:



Table 1: Strategic Components of the BI Programme

Key Components	Related Resources
R&D/New Product Development	<ul style="list-style-type: none"> • 12 Innovation Specialists pan-Wales • Encourage development & exploitation of new ideas • Advice on prototyping & testing • Introduction of new technologies & processes • Access to funding including Innovation Vouchers & RD&I schemes
IP (Intellectual Property) & Commercialisation	<ul style="list-style-type: none"> • PATLIB Centres and IP Specialists • Raise businesses awareness of IP • Maximise opportunities to commercialise IP • IP diagnostics • IP training
Design Support (Developed by External Consultants)	<ul style="list-style-type: none"> • Review & develop client design process • Enhancement of client design skills • Advice on design tools & software • Design to achieve product improvement • Investigation of new materials • Advice on design for manufacture
Manufacturing Support (External Consultants)	<ul style="list-style-type: none"> • Manufacturing diagnostic/operational review • Utilise manufacturing space & equipment more efficiently • Improve operations management • Reduction of waste through 'lean' principles • Implement productivity improvements • Improve supply chain management

Source: Mid-Term Evaluation

3.2 Sector Focus and Scope of the BI Programme

The Programme originally focused on the six priority business sectors identified in “Economic Renewal: a New Direction” published in July 2010. These sectors were then expanded to nine in total in 2011, as identified below:

Table 2: Key Government Sectors

Key Government Sectors	
Life Sciences	Creative Industries
Information & Communication Technologies	Construction *
Advanced Materials & Manufacturing	Food and Farming *
Energy and the Environment	Tourism *
Financial and Professional Services	

* Note: Sectors added in 2011

The six-year BI Programme (2009 to 2014) focused on providing expert support, guidance and financial support (Innovation Vouchers) to individuals and businesses (beneficiaries) in Wales. The aim of this support was to:

- Identify, develop, protect and exploit new ideas



- Provide design advice to improve likely commercial success
- Support the identification and introduction of new or improved manufacturing technologies and processes
- Inform and support the commercialisation of new technologies, products, processes and/or services

This process was to be facilitated by three key pillars of the BI Programme as follows.

3.3 Three Key Pillars of the BI Programme

Pillar One – the development of an entirely new approach: to promote and facilitate innovation within businesses that will better service their needs, change their approach to innovation and new product development and bring sustainable growth. This involved the integration and fundamental restructure of a number of BI services to provide a more seamless, effective and efficient business support platform throughout Wales.

Pillar Two – the provision of cross-sector specialist support: to assist businesses with R&D, design, IP, NPD, manufacturing, licensing and the commercialisation of IP. This will result in the creation of new products, processes, services, technologies and new technologically innovative businesses.

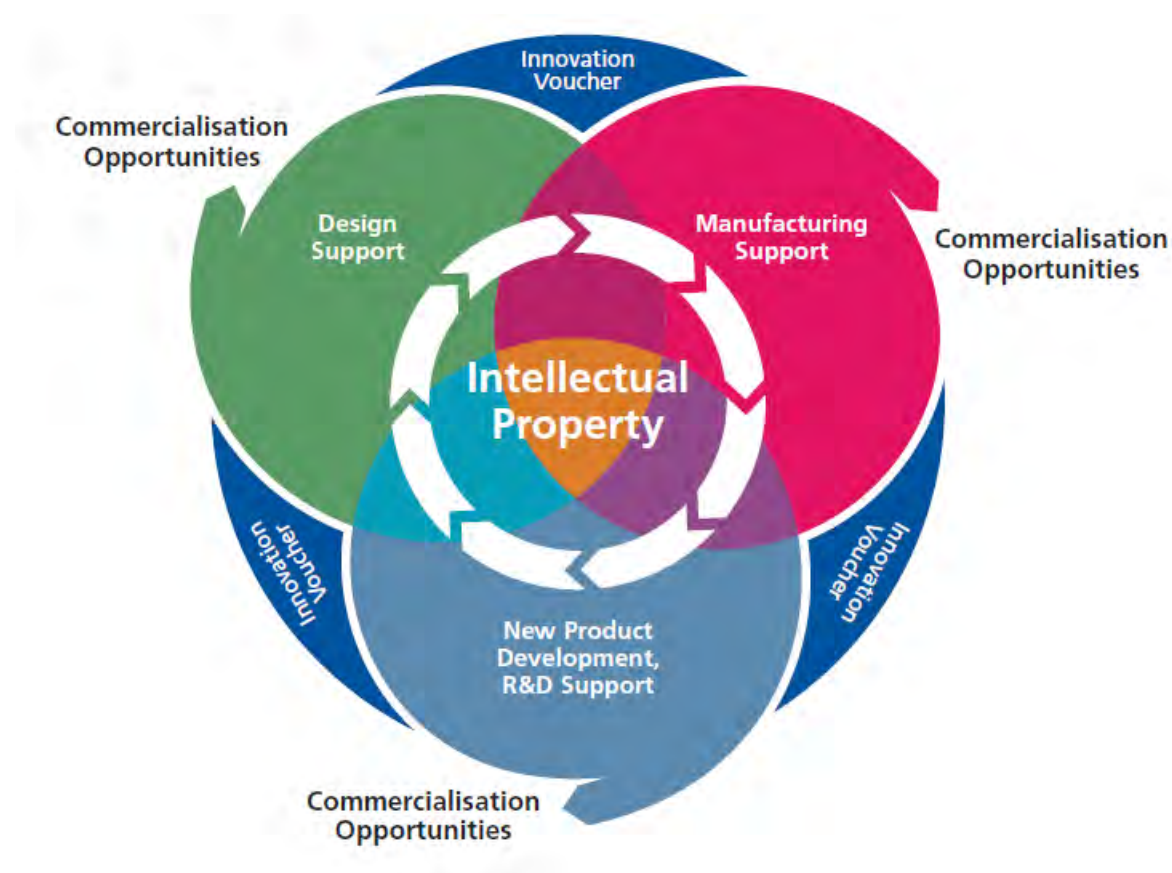
Pillar Three – the Programme is to provide: an innovation support network that would encourage more businesses to move to Wales, and showcase successful and innovative companies. The key outputs of the Programme include investment induced, new products, processes or services launched, and increases in profitability leading ultimately to the creation of new and high-quality long-term jobs.

These pillars underpin a new approach as is graphically represented in the BI Programme Model (Figure 2) below.

3.4 The BI Programme Model

Reproduced from Programme literature, the BI Model has been presented as follows:

Figure 2: The BI Programme Model



Source: BI Promotional Literature

According to Programme management, the BI Model is non-linear and designed to mimic, and therefore fit more closely with, business activity. The BI Model recognises and accommodates the often chaotic, non-linear nature of innovation. The entry point of the BI Programme is the point and time that is most appropriate for the individual business or beneficiary.

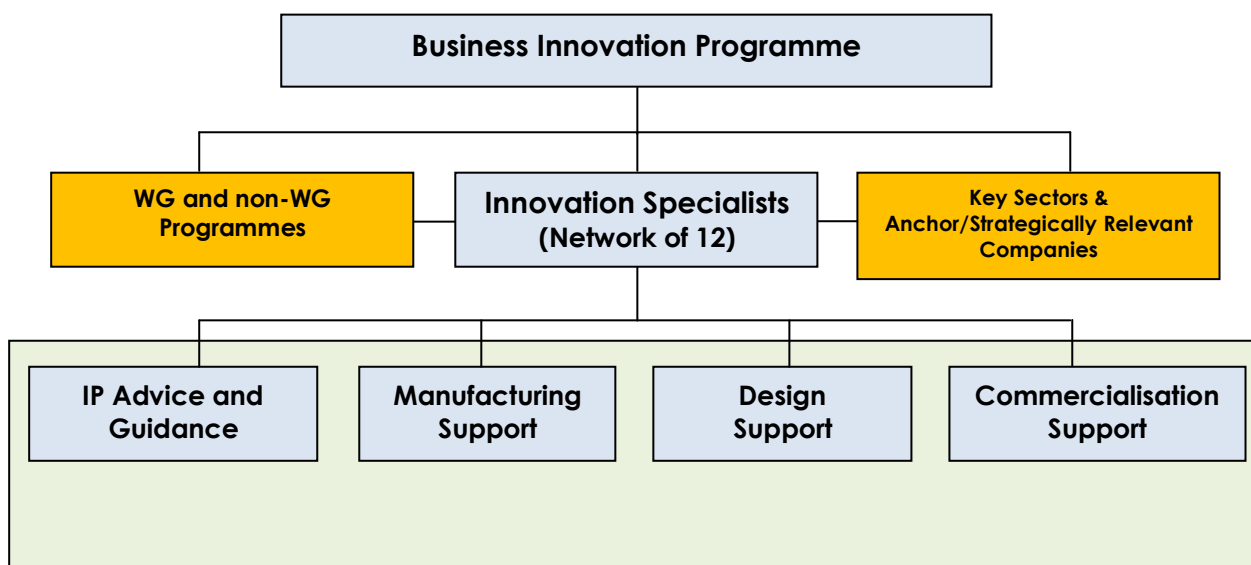
As shown in Figure 2, there are five key components within BI, delivered on a one-to-one basis through a team of Innovation Specialists (IS), Design Managers, Manufacturing Managers, and IP Managers. These five components have been summarised below.

All BI team members (internal and external) have been selected based on their subject knowledge and, importantly, their proven industrial experience, which is necessary to enhance the Programme's credibility with beneficiaries and to provide added value.



3.5 Five Delivery Components of the BI Programme

Figure 3: BI Programme Support Components



1

Innovation Specialists (IS) - Access to Advice, Funding and Networking:

beneficiaries receive free impartial advice on all aspects of innovation, specifically open innovation, via a network of 12 experienced IS employed by WG and seconded to the Programme. Normally, beneficiaries engage in an Innovation Diagnostic at the outset of the process. This diagnostic identifies business needs specifically in relation to innovation and commercialisation that will increase a company's competitiveness in the short term. Subjects covered within the Innovation Diagnostic include:

- Technical capabilities of the business in terms of equipment, resources and staff to take on board innovation and tackle areas of deficiency
- The company's IP position and potential development of its IP portfolio including the possibilities of recommending a more in-depth IP health check
- Scoping likely IP issues associated with new product, process or service development
- Experience of the business in successfully conducting R&D and NPD
- Existing links with academia and other specialist organisations to support open innovation and identify where new relationships can be forged
- The levels of technical and commercial feasibility already undertaken in relation to the new product, process, service development
- Review of outline plans or strategies in relation to pulling through new product, process, service development for commercial advantage.



Once a Innovation Diagnostic has been completed and agreed with the beneficiary, the IS will be able to assist the business with scoping individual activities and projects, providing access to appropriate funding (Innovation Vouchers) and other programmes, identifying appropriate technology and training requirements, and generally assisting the business in meeting these needs through referral to BI delivery partners (manufacturing, design and IP), relevant public- and private-sector support programmes, and other sources of funding.

The IS then have the capability of supporting the company further in terms of monitoring progress and providing ongoing advice.

2 IP Advice and Guidance: the BI Programme continues the WG provision of highly regarded IP advice and guidance. There are two dedicated IP Specialists employed by the WG – one based in North Wales and one based in South Wales.

At a beneficiary level, they can provide one-to-one advice and can undertake an IP Diagnostic, taking up to two days, for the business. On a more general advice, guidance and promotional level, the IP Specialists can deliver IP master classes and co-host specialist events with other innovation specialists and programmes. The IP Specialists also spend 50% of their time supporting other WG colleges and programmes.

The Programme also supports a PATLIB Centre based in Llandudno Junction, North Wales. The PATLIB Centre is a European Patent office-sponsored pan-European initiative. Details of the PATLIB Centre can be found at <http://www.ipo.gov.uk/whyuse/business/business-patlib/business-patlib-llandudno.htm>. The PATLIB Centre can deliver a range of services to occasional callers and those making an appointment, principally providing literature, training and clinics, and generally supporting WG staff. One of the IP Specialists, Nia Roberts (North Wales), also sits on the UK PATLIB Board.

Originally, the intention was to operate two PATLIB Centres but, more recently, the decision was taken not to open the second dedicated centre, with alternative arrangements now in place.

3 Manufacturing Support: is subcontracted to a third party, Enterprise Consulting (www.enterprise.uk.com), who has just been awarded a second three-year term. Manufacturing advisors from Enterprise Consulting work alongside the IS. These advisors provide a pan-Wales service, carry out Manufacturing Diagnostics on beneficiaries to identify opportunities for improvement and/or the adoption of manufacturing innovation, and



ultimately to improve overall competitiveness. The manufacturing-based diagnostic carried out by the manufacturing advisors includes, but is not confined to, the following specialist areas:

Table 3: Specialist Areas of Manufacturing Advice

Specialist Areas of Manufacturing Advice	
Productivity improvement	Review operational management and strategy
On-time delivery improvement	Evaluate supply chain and logistics
Equipment effectiveness	Review materials use (reduce, replace, recycle)
Reduced development costs	Assess factory layout/space utilisation
Lead-time reduction	Identify data/metrics to support impact of evaluation
Improve energy utilisation	Align with various key cross-cutting themes
Introduce green energy	Improvement in stock churn

The outputs of manufacturing diagnostics do vary and, if necessary, businesses can be helped to procure additional specialist manufacturing third-party expertise or equipment via the Innovation Voucher scheme. This expertise may include detailed consultancy on topics such as lean manufacturing, Six Sigma, improved resource utilisation, improved quality standards and attainment, logistics, materials and production/process innovation.

Businesses can also access a free manufacturing review lasting up to two days. These reviews cover the following areas:

<ul style="list-style-type: none">• Leadership• People management• Resource management• Business systems• Supply chain management• Workplace organisation• Visual management	<ul style="list-style-type: none">• Changeovers• Operational skills• Team working• Process improvement• Quality systems• KPIs• Equipment performance
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The BI Manufacturing (BI-M) team can be accessed via the IS or directly through a dedicated telephone service, accessing the initial free advice and guidance. A manufacturing advisor from Enterprise Consulting will often visit a business to discuss the key issues in confidence and works with the business to resolve them. The result may be a recommendation for further advice, attendance at a workshop or a more in-depth review, or identifying practical solutions to resolve issues.

The BI-M team also run manufacturing workshops which are typically half-day practical workshops involving some theory followed by hands-on exercises



where the benefits of simple tools and techniques can be identified/practiced. Typical workshops topics include:

- Working smarter through better processes
- Driving business improvement through visual management and effective workplace organisation
- Effective problem solving
- How to develop effective communications
- How to get more outputs from plants and equipment
- Team working that gets results

Attendance at the workshop is free and companies can then progress to receive one-to-one support often partly funded through an Innovation Voucher.

4 Design Support: once again, has been procured through open tender. BIC Innovation delivered the contract in the first three years of the Programme (i.e. for the period covered by this evaluation). The second three-year term (2012-2014) will be delivered by Enterprise Consulting. As with manufacturing, the BI design (BI-D) advisors undertake a Design Diagnostic which considers the following specialist areas as a minimum:

Table 4: Specialist Areas of Design Advice

Specialist Areas of Design Advice	
Existing products, processes and services	Existing markets
Design-related equipment, software	Use of external design support
New product development, including branding	The company's design processes and skills

The focus is primarily on design for manufacturing and the BI-D advisors have key industrial design expertise and skills in taking product design through to manufacturing. As with manufacturing support, the beneficiary can access a level of services from a design review, attendance at themed workshops and direct consultancy support.

If further expertise is identified and requested, companies can then access the Innovation Voucher Scheme (up until October 2011, all Vouchers were repayable).

5 The Innovation Voucher Scheme: qualifying companies exhibiting an innovative and novel step change in design, product, process or technology, are eligible for financial support through Innovation Vouchers. Businesses that engage consultants can reclaim 50% of the cost from the BI



Programme to the value of £10k at 50% contribution. In November 2011 the maximum amount was increased to £25k.

Beneficiaries can apply for one or more Innovation Vouchers per annum and companies can choose to appoint third-party support organisations to undertake work on their behalf. Applications for Innovation Vouchers are subject to financial and non-financial due diligence. (Note: up until October 2011, all Innovation Vouchers were repayable.)

Capital Innovation Voucher

Eligible companies can also apply for a Capital Innovation Voucher, which will provide 50% of the cost of capital acquisition up to a maximum of £25k.

These capital grants were introduced in November 2011.

3.6 BI Programme Positioning and Management

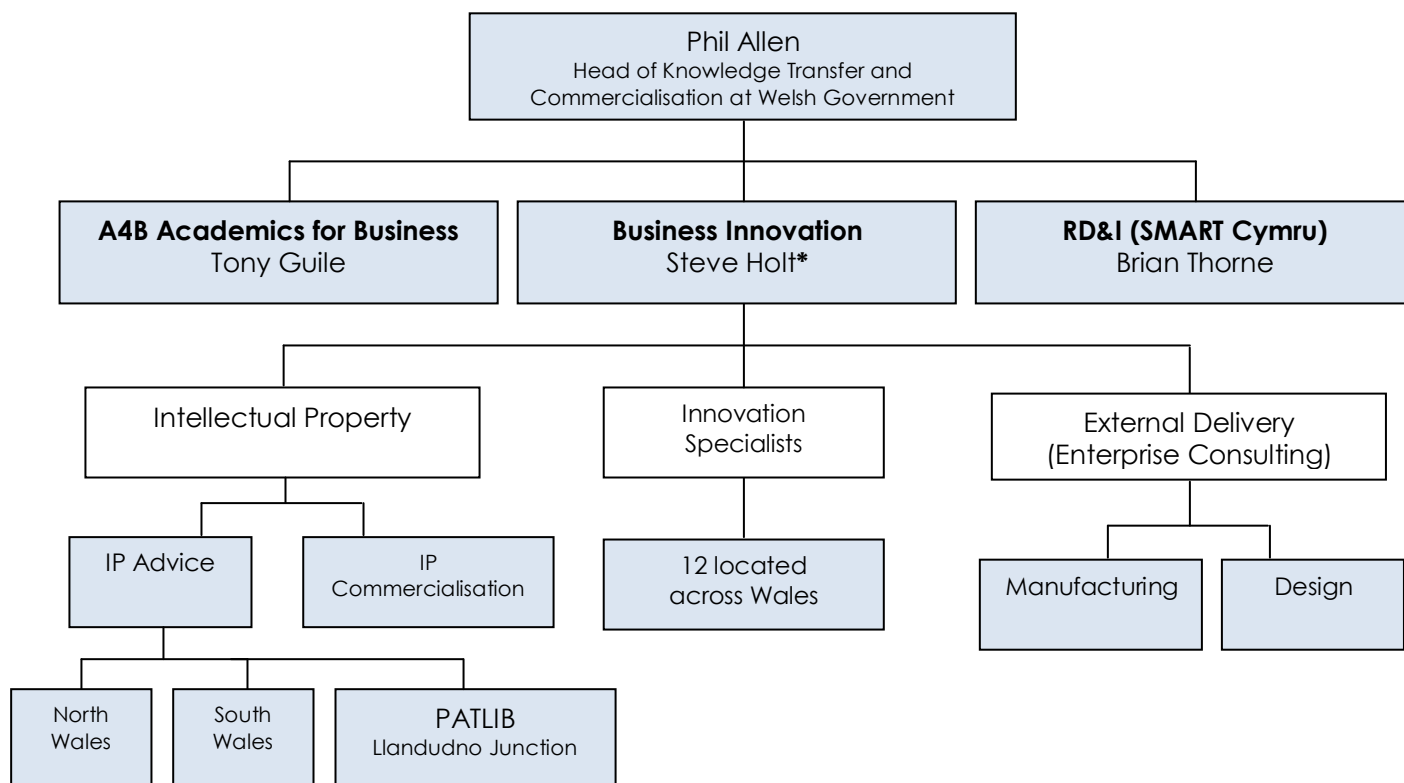
The BI Programme is one of three major WG programmes specifically designed to encourage and promote innovation throughout Wales, the other two being:

- **'Academics for Business'** (A4B), which principally supports academics in knowledge transfer (KT) from the Welsh Universities targeting Welsh businesses
- **'Research, Development and Innovation'** RD&I (SMART Cymru) Programme that provides advice and funding for businesses to directly undertake research, development and innovation projects.

The BI Programme is one of a small number of programmes that are pan-Wales and has been designed to support WG key sectors and specifically 'anchor' and strategically important businesses.



Figure 4: BI Programme Position and Organisational Structure



* Note: Steve Holt replaced in 2012 by Dr Gwion Williams

Under Phil Allen, Head of Knowledge Transfer and Commercialisation, senior staff such as Brian Thorne (RD&I), Steve Holt (BI) and Tony Guile (A4B) have managed the three key BETS programmes. The senior management team clearly demonstrates an understanding of current and future WG strategies and policies that BI can support and deliver, and also recognise the importance of collaboration. This team were the principle architects of the BI bid back in 2008. They are also aware of issues that have arisen out of this mid-term evaluation and the factors that have hindered process, specifically constraints on marketing activities. Importantly, they have innovative ideas on how to develop the project and move it forward, taking the BI Programme into the next EU funding round (2014 onwards). It is correct to state that Programme management are continually reviewing the Programme in order to improve performance.

The management and stewardship of the Programme undoubtedly benefits from individuals who understand the subject matter in great detail and have a high level of awareness of the innovation support landscape throughout Wales. They demonstrate a willingness to work under the sector Strategy but are keen to point out that innovation, as a business process, needs



specialisation as historically provided by WG. BI is therefore a horizontal programme that needs to embrace and support vertical sector-specific activities. This is in line with UK Government thinking as technology and innovation support for the Department of Business, Innovation and Skills (BIS) is channelled through the Technology Strategy Board (TSB) (www.innovateuk.org). Programme management also realise that as the sectors become more operational, there is a lot more support and understanding that they can provide.

It is obvious from our discussions that the Programme managers are aware of the relevant WG strategies and plans, and work continually to influence policy, specifically the recently launched Science and Innovation Strategies. We interviewed the four key managers, i.e. Phil Allen, Tony Guile, Steve Holt and Brian Thorne, separately and it was clear that all believed the Programme has a key role in enterprise support. All stated that there has been significant change within the WG and that this has hampered the Programme during the first three years but believe that the next three years will be successful.

In addition to the senior managers mentioned above, many of the IS have also been working with the WG for several years and this is demonstrated by their understanding of the subject and the business support community. This was recognised within the e-survey as the scores for IS knowledge and understanding were relatively high.

3.7 Innovation Specialists (IS)

The twelve IS anchor a lot of the activity within BI, are often a first point of contact for businesses, and work closely with WG department managers to support businesses. They get involved in undertaking technology reviews, identifying business needs and scoping out projects worthy of further support. They also work with the scheme contractors in delivering awareness-raising sessions and can undertake IP health checks. All IS have undertaken an IP training course and have direct links to WG's IP Specialists.

The IS can support the innovation/commercialisation process, introducing clients to potential customers, funding, investors, and HEIs for R&D support via A4B and other initiatives. They are also heavily involved in open innovation and sector events to support anchor and regionally significant companies and academia to assist them in maximising the benefits and opportunities for collaboration and licensing.

The IS are key to the promotion, delivery and client relation activities of the BI Programme. Whilst the number of IS, previously known as Innovation



Technology Counsellors, has reduced across Wales in recent years to 12, they do still demonstrate collectively a strong mix of business, scientific, technology, IP and innovation skills. Several IS have now been assigned to the individual sectors and indeed discussions with the individual Sector Heads indicated the value they have gained from this move and a willingness/desire to have more IS assigned. Not only was the value of the IS recognised by the e-survey, this was also strongly echoed by the stakeholder interviews and the beneficiary telephone interview programme.

Amongst other things, the IS see themselves as a link between business, WG and other business-support programmes. They also believe that they are viewed by businesses as an honest broker since they do not directly benefit from selling/delivering specific programmes and schemes.

The IS along with programme management went to some length to explain that it has been difficult to promote and manage projects over the last two years. Under the ERP they were prevented from working with individuals and businesses, having instead to signpost them to WG's Enterprise Division. The IS clearly believe that Enterprise did not have the skill set to handle innovation nor did they have the manpower to deal with high-technology businesses.

Another area of frustration observed was that since they became part of WG they believe there has been an increase in procedures and regulation, which tends to slow things down. This is particularly prevalent in the case of the Innovation Vouchers, specifically the due diligence processes. Whilst the IS recognise the need to abide by guidance and rules, they did say that in previous grant schemes, TEP for one, these processes were lighter-touch, were easily managed, and were not abused.

In terms of Innovation Vouchers, both Programme management and the IS believe that rejection rates are not high, which is generally a good thing. However the IS believe they could be better informed as to what makes a good, bad or indifferent application. One of the IS said that they could probably benefit from a checklist and, in the absence of an official checklist, this particular IS had produced an unofficial one for personal use.

It would be fair to conclude that those staff who understand innovation well can defend innovation as a standalone function that needs to be promoted, delivered and managed by people with relevant expertise and skills. The internal stakeholders we spoke with also referenced the impending Innovation Strategy, within which they expected innovation to get a higher profile with greater focus on business support.



It can be concluded overall that stakeholders value the BI Programme, are keen to see it continue, can see how it could develop further and be key to the delivery of Government strategies, and believe it needs promotion not content to have a great fit with the individual sector teams and sector-specific approach.

The Consultants believe that organisations such as Finance Wales, and indeed the banks with a greater focus on SME lending particularly for knowledge-based and manufacturing sectors, could be more involved/supportive. The issue here is how far the BI Programme wishes to support investment readiness and access to funding. In other parts of the UK, there are specialist programmes for investment readiness but not in Wales. This is something that BI may wish to take on board for the key sectors.

3.8 Application and Appraisal Process

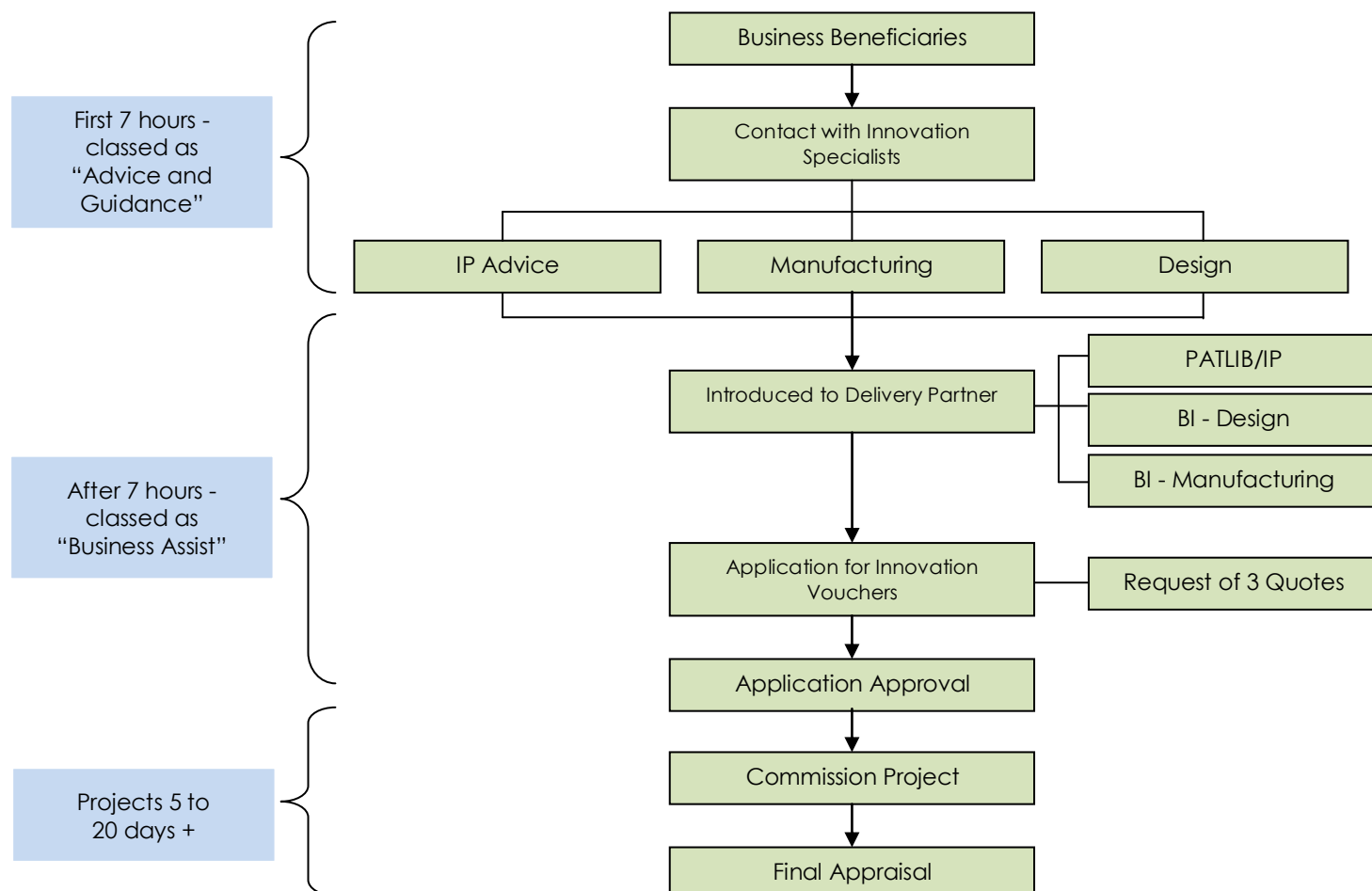
It was generally felt by a significant number of the key stakeholders that the process of application, engagement and support was too detailed, probably cumbersome, and generally unnecessary from the point of businesses. The Consultants are cognisant of the fact that Green Book guidelines needed to be adhered to.

The Consultants have designed and evaluated many business-support programmes. The structure adopted by BI (seen in Figure 5 on the following page) is no more cumbersome than those we have witnessed elsewhere. As with all programmes, a greater understanding of the process often alleviates misconception and frustration.

That said we have taken on board some of the stakeholder comments and recommend that the BI management team, alongside its delivery partners, looks closely at the applications processes to identify where time can be saved and, if at all possible, requirements for information (including financial data) can be reduced whilst still adhering to the levels of due diligence required.



Figure 5: BI Programme Application Process



3.9 IP & Commercialisation

IP & IP commercialisation technically sits across all three main delivery programmes, A4B, RD&I and BI, was managed by Tony Guile, and has two regional specialists in Nia Roberts (North Wales) and Dave Woodridge (South Wales). They can be called upon to give advice to businesses in all areas of IP, IP protection and commercialisation. Our research has shown that these specialists are held in high regard by large companies and SMEs alike, and that reach and significance across Wales is substantial. They also work closely with the IS, giving high-level support and delivering the two-day IP health checks (two days dedicated support to businesses). They also deliver IP championing courses/workshops and are focused within the EU network of patent libraries 'PATLIB', an initiative delivered by the EU Patent Office. It is the intention of BI to open two PATLIB offices, the first being opened in 2012 at the WG's office at Llandudno Junction and the second still being considered.



4 CONTEXT AND PROGRAMME POSITIONING

Planning for the BI Programme took place during 2008. At the time, the Government believed that they were providing adequate Research & Development support for businesses but believed that there was a need to provide direct support for innovation and, ideally, to promote open innovation.

In terms of context, in 2008 the economy and economic outlook were considerably healthier than has since transpired, and the aim of the BI Programme was to continue to support economic growth. No one could have predicted the crash in 2008, its longevity, and the still uncertain short-term economic future. Corrective measures used by other EU-supported programmes over the period, i.e. greater marketing activity, were not available to the Programme at the time due to internal changes and constraints. Key factors being as follows:

- Changes in WG delivery, notably 'Flexible Support for Business', then the ERP where there were significant redundancies
- The direct curfew on marketing programmes
- The introduction of six and then nine key sectors,
- Changes in RD&I programmes, going from grant to repayable loans (now reversed)
- From an external perspective, the WEFO has supported a number of programmes which entered and partly competed in this space, such as the ASTUTE programme, SAW, etc.

In addition, throughout this three-year period of increasing change, we are aware that potential beneficiaries have understood progressively less about what support is provided by whom and for what purpose.

4.1 BI Programme Fit with the Welsh Government Strategic Agendas

This brief review of the Programme's fit relates to new strategies and strategic agendas and not to those at the inception of the programme. This is critically important for the next three years. Key strategies are "*Science for Wales: a Strategic Agenda for Wales*" published in June 2012, and "*A Welsh Government Response to the Call for Evidence on an Innovation Strategy for Wales*", published in October 2012.

In addition, Appendix II of this report outlines activities undertaken by the Programme to address WG cross-cutting themes.



4.1.1 “Science for Wales”: in June 2012 the WG launched “*Science for Wales – a Strategic Agenda for Science in Wales*”. The goal of this Science Strategy is to build a strong and dynamic science base that supports the economic and national development of Wales. Key pillars of the Strategy include:

- Strengthening university science
- Promoting business innovation and the exploitation of science
- Increasing the science and engineering talent pool
- Improving delivery in Government

The Strategy clearly recognises the need to encourage innovation and the role played by the BI Programme. It comments, “*Innovation and the commercialisation of R&D have been key priorities in recent Government economic policy*”.

The Science Strategy identifies that innovation has also been placed at the heart of Europe’s “2020 Strategy”, being seen as the best means of tackling major societal challenges, such as climate change, energy and resource scarcity, health and aging. It goes on to confirm that WG, through its various economic development policies, will encourage long-term sustainable R&D investment in Wales by businesses and commerce to strengthen the Welsh economy through research, development, design and innovation. The Strategy recognises the support to business provided throughout the innovation process by the BI Programme. The Strategy recommends that the WG considers how a strategic advisory board that is active in the field of innovation and is business-led may be put together and run appropriately, and how it can properly engage with other bodies with an interest in the innovation space to prevent any overlap.

Science for Wales also recognises the core functions of IP and IPR. It specifically recommends that Government should adopt the BI Programme’s comprehensive plan for IP management in Wales. It goes on to welcome the BI Programme’s focus on initiatives that facilitate the use of IP, as well as issues such as how to go about protecting IP and how to carefully consider the outcomes of the “*Hargreaves Review of IP*” (www.ipo.gov.uk). This review makes ten recommendations designed to ensure that the UK has an IP framework best suited to supporting innovation and promoting economic growth in the digital age.

Without doubt, *Science for Wales* promotes the role of innovation and makes it central to the science agenda. We believe the profile for innovation in such a strategic context is higher than at any time in the recent past. We are well aware that WG is putting the final touches to the Innovation Strategy and we are also aware that the PMT, delivery partners and, in all likelihood, business



beneficiaries of BI have been involved in various consultations and workshops and we are told that their experience and observations have been influential in terms of understanding and planning.

4.1.2 The WG's response to the call for evidence for an Innovation Strategy for Wales: published in October 2012, this document precedes the WG's innovation strategy "*Innovation Wales*", due to be published in Q1 2013. The response identifies that Wales' future economic success will be determined at least in part by its ability to continually improve what it does.

It recognises that businesses need to respond to new markets and competition by enhancing their products and processes, developing new ideas and bringing them to market. It states that innovation is often chaotic and non-linear. This statement supports the BI model as it was designed to replicate business activity in difference to the academic linear model of the innovation process. The response to the call for evidence also recognises that innovation is not just R&D but, more importantly, it is the application of new knowledge, processes and ways of working. The document introduces business innovation through, quote, "ways of working", i.e. innovation in business processes, which is a market opportunity still to be adequately addressed by the BI Programme. The PMT is well aware of this and sees this and communication of innovation to underperforming areas worthy of specific attention.

The Government response goes on to state that *Innovation Wales* needs to be a living strategy to be revisited and revised. It also identifies that the EC has made the development of research and innovation strategies for 'smart specialisation' a precondition for certain themes of future structural fund programmes which could support the longer-term sustainability of BI or its successor. It goes on to state that it appears that a large proportion of support for the new round of structural funding that will start in Wales in 2014 will prioritise research and innovation.

'Smart specialisation' is defined as the process to select and prioritise fields where a cluster of activity could be developed. It goes on to confirm that the WG will be adopting smart specialisation methodologies in developing *Innovation Wales*.

Government research has identified a number of key themes which will underpin its approach and be fundamental to delivering *Innovation Wales*:

- 1 **Improving Collaboration:** open process and open innovation, engaging universities, companies and individuals to fully exploit new ideas and technologies. This needs to take place within and beyond



Wales and collaboration needs to account for as many actors and disciplines as possible

- 2 **Culture:** whilst not exactly culture, the Government document talks about the need to teach entrepreneurship and the need to build innovation into the curriculum and not focus innovation just at entrepreneurs but across all organisations and levels.
- 3 **Prioritisation and Critical Mass:** states that Government has a role of spreading this message and helping to create an environment that fosters this culture. It states that Wales needs to elevate itself to world class in key sectors.
- 4 **Finance, Availability and Speed of Delivery:** Government research has identified that financing innovation was problematic but a consistent message. The document references "*Bridging the Valley of Death*" which has been talked about for at least 20 years but now seeks to tackle this funding gap head on. Whilst it recognises that investment needs to be made more speedily and with a greater degree of risk, it doesn't propose any solutions. The research for the BI Programme evaluation has widened this to beyond finance availability and into the realms of investment readiness. Clearly, there is a demand for support for those businesses seeking to engage in open innovation.

The response to the call for evidence identifies the new round of structural funds deliver opportunities for new programmes and new support measures, either directly channelled towards RD&I activities or to other activities where innovation is acknowledged as one of the crucial drivers. The response identifies in outline what the WG proposes to do and its key words are 'promoting', 'encouraging' and 'enabling' innovation.

In terms of promotion, WG states that it will focus resources on the promotion of RD&I across Wales and will simplify its processes. Actions will include developing mentoring models with businesses to spread knowledge and experience across the SME community. WG will also increase awareness of funding streams and provide practical assistance to companies in drawing down these funds.

- 5 **Celebration:** WG will work with external partners to promote Wales as an ideal location to start and grow innovative businesses and projects. Key to this will be the introduction of themed innovation challenges, including the introduction of competitions, innovation events/awards.
- 6 **Delivery:** WG seeks to harness to the potential for external partners in the private and third sectors to deliver new innovation activities.



- 7 **Diversification:** WG intends to broaden what it means by innovation and the areas of innovation that it will support. It is an intention to develop new programmes to promote design and service innovation.
- 8 **Funding:** WG seeks to work with external partners to develop the sources of risk finance available to Welsh business and improve the investment readiness of these companies to attract such funding. It states that the need to work importantly to take a commercially informed approach to risk, not only be accepting the possibility of failure can investments in innovation drive some successes.

The response goes on to identify three grand challenge areas, as identified in the Science Strategy, namely 'life sciences and health', 'low-carbon energy and environment', and 'advanced engineering and materials'. It states that the research for *Science for Wales* showed that Wales has a considerable amount of expertise in these three broad sectors, which will focus *Innovation Wales* going forward. Actions in these areas would fit the following themes:

- 9 **Clusters:** the development of a select number of clusters bringing together academia and business with a specific remit to commercialise knowledge.
- 10 **Openness:** the introduction of means to encourage open innovation activities for businesses to collaborate with each other and academia
- 11 **Collaboration and Co-Funding:** Wales needs to ensure that its priorities are embedded in UK and European funding programmes, and that it makes more strategic use of external funding streams, specifically citing Research Councils, NESTA and the TSB.
- 12 **Prioritisation:** refocusing of support for innovation in universities into grand challenge projects which commercialise knowledge, promote collaboration with business, and bring products/services to market.
- 13 **Innovation Government:** WG will work with all departments in the Welsh public sector in Wales to try innovative solutions in areas such as health/transport where Wales is of a suitable scale to pilot new ideas.

The Consultants have worked under many Welsh economic and business support strategies and what we can see in the Science Strategy and the impending Innovation Strategy is a focussed approach and delivery, greater inclusion of open innovation, and the referencing of business innovation for the first time. A greater focus on activities benefiting business will draw on the BI Programme, specifically its developed and proven resources. Our conclusion can only be that strategy/policy is being increasingly tailored to business needs, and that BETS and the BI and similar programmes and their successors will be increasingly called upon to deliver more and to be innovative in their own right.



5 PERFORMANCE REVIEW - OUTPUTS

The tables below contain the targets and actual outputs at the midway point, three-year variances and total (6 year) target outputs for the BI Programme. Official WEFO/EU definitions of the output categories have been reproduced in Appendix III of this report). Targets are split between the convergence and non-convergence regions, and have also been collated to form a table.

The two metrics in which performance is below target to date are 'enterprises assisted' (total 7 hours of assistance) and 'profit benefit Induced'. We have discussed these through with Phil Allen and actual performance, in terms of 'enterprises assisted' is 511 against a three-year target of 820. It should be noted that the process of 'catching up' on the E&D data is ongoing and management will continually analyse this data in order to make recommendations for improvements going forward, both for BI and for other future programmes.

Table 5: Pan-Wales Total Outputs & Targets

Pan-Wales Total Outputs & Targets				
Output Indicators	3-Year Target	3-Year Actual	Deviance	6-Year Target
Technical Enquiries (new contacts)	n/a	4441	n/a	n/a
Repeat contacts	n/a	2216	n/a	n/a
New/improved products, process launched	200	214	+14	504
Enterprises Assisted	820	511*	-309	1512
Products/processes/services reg'd	142	126	-16	432
Enterprises financially supported	165	178	+13	504
Sales of products (£)	n/a	£11.8m	n/a	n/a
Profit benefit (£)	£5.6m	£2.25m	-£3.35m	£26.7m
Investment induced (£)	£2.2m	£1.4m	-£800k	£9.4m
Jobs created	23	40	+17	108
Funding secured (£)	n/a	£386k	n/a	n/a
IP advice	n/a	950	n/a	n/a
IP diagnostic	n/a	62	n/a	n/a
Events organised	n/a	71	n/a	n/a
Attendees at events	n/a	2741	n/a	n/a
Innovation Voucher applications received	n/a	463	n/a	n/a
Innovation Voucher offers made	n/a	397	n/a	n/a
Value of Voucher offers (£)	n/a	£2.1m	n/a	n/a

* Note: up to the point of this mid-term evaluation, 511 Enterprise Assists were completed. Out of these 511, 443 companies returned the E&D forms.

In terms of profit benefit our general observation is that the majority of projects do overestimate/increase sales income and/or profit benefit. Those programmes that do often find that, after a lag, sales and profits do rise and these benefits are often witnessed for many years after the project has



ended. At the meeting with WEFO, we touched upon these under performing areas and it was clear that WEFO has been kept informed as to progress and is not overly concerned (February 2012).

Table 6: Convergence Areas Data

Convergence Areas				
Output	3-Year Target	3-Year Actual	Deviance	6-Year Target
Technical Enquiries (new contacts)	n/a	See totals	n/a	n/a
Repeat contacts	n/a	See totals	n/a	n/a
New or improved products & processes launched	147	178	+31	360
Enterprises Assisted	560	347	-213	1008
Products/processes/services reg'd	97	80	-17	288
Enterprises financially supported	120	112	-8	360
Sales of products (£)	n/a	See totals	n/a	n/a
Profit benefit (£)	£4.6m	£2.2m	-£2.4m	£21.6m
Investment induced (£)	£1.3m	£780k	-£520k	£5.8m
Jobs created	15	32.5	+17.5	72
Funding secured (£)	n/a	See totals	n/a	n/a
IP advice	n/a	See totals	n/a	n/a
IP diagnostic	n/a	See totals	n/a	n/a
Events organised	n/a	See totals	n/a	n/a
Attendees at events	n/a	See totals	n/a	n/a
Voucher applications received	n/a	See totals	n/a	n/a
Innovation Voucher offers made	n/a	See totals	n/a	n/a
Value of Voucher offers (£)	n/a	See totals	n/a	n/a

Table 7: Non-Convergence Areas Data

Non-Convergence Areas				
Output	3-Year Target	3-Year Actual	Deviance	6-Year Target
Technical Enquiries (new contacts)	n/a	See totals	n/a	n/a
Repeat contacts	n/a	See totals	n/a	n/a
New/improved products/processes	53	36	-17	144
Enterprises Assisted	260	164	-96	504
Products/processes/services reg'd	45	46	+1	144
Enterprises financially supported	45	66	+21	144
Sales of products (£)	n/a	See totals	n/a	n/a
Profit benefit (£)	£1m	£51k	-£959k	£5.1m
Investment induced (£)	£900k	£649k	-£251k	£3.6m
Jobs created	8	7.5	-0.5	36
Funding secured (£)	n/a	See totals	n/a	n/a
IP advice	n/a	See totals	n/a	n/a
IP diagnostic	n/a	See totals	n/a	n/a
Events organised	n/a	See totals	n/a	n/a
Attendees at events	n/a	See totals	n/a	n/a
Voucher applications received	n/a	See totals	n/a	n/a
Innovation Voucher offers made	n/a	See totals	n/a	n/a
Value of Voucher offers (£)	n/a	See totals	n/a	n/a



6 Evaluation Findings

The evaluation findings have been presented in four key sections, namely:

- A review of the delivery partner activities (Section 6.2)
- Findings from the stakeholder interviews (Section 6.3),
- Results of the beneficiary e-survey (Section 6.4)
- Results from the follow-up beneficiary personal interviews (Section 6.5)

Although not required as part of the evaluation, the Consultants also interviewed two IS and spoke with others as a result of their long-standing track record of working with beneficiaries and their critical role in the delivery of the BI Programme. Brief notes from these interviews have been presented in Section 6.1 below.

6.1 Innovation Specialists

- The IS see themselves as the link to BI Design and Manufacturing but also, more importantly, other programmes and initiatives run directly by WG or funded by WEFO and others, i.e. TSB, FP7 etc. Clearly, the majority of IS have been in the role for many years and understand the subject of innovation, importantly, its role within an organisation and its key constituent parts.
- With regards to the BI Programme itself, the IS believe that they could play a clearer coordinating role between BI-M and BI-D and other programmes, working closely with beneficiaries over a longer term. One of the clear differentiators mentioned by the IS is that they will and do say 'no' to a beneficiary receiving support if they it would be inappropriate [on what grounds?], whereas they believe other programmes are more concerned with meeting targets as evidenced by poor project applications.
- The IS echo the frustration of BI management in delivering a programme during a period of unprecedented change within WG and its business-support infrastructure. They specifically stated that the introduction of the ERP two years ago meant that they were not allowed to work with individuals who were then sent to Enterprise Support, and see this as a missed opportunity particularly for high-growth, knowledge-based businesses. The IS acknowledged that Government has put in initiatives to support high-growth businesses but commented that the High-Growth Programme is targeted and delivers remuneration for supporting businesses that can grow rapidly over the short term. This would in most cases eliminate those businesses displaying high-growth potential over the medium term and not the



short term. An example, cited by the IS was a company in the medical devices arena which has great potential but because of product development requirements, testing and certification will take several years to achieve its potential.

- The IS also indicated that the grant vetting process was long-winded, resulting in anxiety and frustration for some companies. This was mainly felt during financial due diligence. Whilst the IS accepted that the Programme was adhering to policy, reference was made to past programmes' use of the TEP system to "vet grants", which worked very well as it involved a quick financial and project review, a panel meeting and fast decision. Increased appraisal, due diligence and monitoring was attributed to what was the WDA now becoming part of WG.
- The IS indicated that a simpler application and approach, and a simpler way of communicating to target audiences was needed. In terms of Scheme applicability, the IS voiced some frustration about the definition of 'novel': does the subject need to be novel to the company or the whole of the UK?
- In terms Programme content, the IS could clearly see the benefit of having a specific focus on design and manufacturing but also believe that in the current market, and given the increasing number of sectors, a third category should be introduced called 'Business Process Reengineering' or 'Business Innovation'. The subject and term 'business innovation' may sit more comfortably with the service sectors now within remit.
- The IS commented that there is still the tendency for 'silo' working (operational level) but that this is to be expected given the current uncertainty of programmes and directions. However, they felt that more could be done to help support businesses by sharing details. For example, it was mentioned that the E-Commerce programmes work with circa 800 companies and that the BI Programme is working with 600 but there doesn't seem to be any significant cross fertilisation.
- It was also suggested that because of recent changes some of the connections that the IS enjoyed have now been lost. One example cited was working with Local Authorities. One of the IS was receiving two or three introductions per week but this is no longer the case and he is aware of the Authority going to one specific sector team who do not really know how to handle these introductions.
- Whilst the IS now work closely with the sector teams, they believe it makes sense to keep the IS together as a cross-sector team for the benefits and support enjoyed. "We should deal with innovation across the Principality, possibly aided by better definition and communication of our role as a lead and support team."



- The dedicated IS team could have a national coordinator looking at projects and assigning them to the most appropriate IS, based on knowledge, availability, geography, understanding and networks. The IS realised that this would mean going back to the way the Innovation Technology Counsellors worked but commented that this was highly successful, “leveraging benefits beyond the way we work now”.
- Interviewees acknowledged the difficulties caused by the economic climate and the impact this has had on activity, but also believe that grants have been vital to stimulate and encourage activity.
- IS’ general understanding is that companies are being innovative but possibly taking smaller steps and less risk. That said there is a belief that more and more businesses are engaging in open innovation, working with supply chain and route-to-market partners, and willing to be supported by external teaching and research organisations.

IS are seen as a knowledgeable, valuable, and independent (nothing to sell) resource, clearly filling the gap where there is market failure. They provide a single access point to a range of skills and disciplines.

It was widely acknowledged that innovation support, such as that provided by the BI Programme, de-risks and accelerates innovation adoption within beneficiary businesses.

6.2 Review of Delivery Partner Activities – Manufacturing (BI-M) and Design (BI-D) Strands of the BI Programme

The manufacturing strand of the BI Programme (BI-M) has been delivered by Enterprise Consulting since the start of the Programme, the service provider retaining the work following re-tendering at the mid-term. BIC Innovation (BIC) delivered the design strand of the BI Programme (BI-D) for the first three years then failed to secure a continuation beyond the mid-term (2012 to 2014), the contract being won by Enterprise Consulting.

TIP interviewed both providers (March 2012) as part of the mid-term tendering process and then re-interviewed Enterprise Consulting after contracts had been awarded to review the company’s plans, particularly in relation to the design strand and the following topics:

- **Operations** – the delivery team, delivery process, project management, data management, reporting
- **Offer** – how this was packaged (BI) and the content of A&G (Assistance and Guidance) and Review products in each strand; targeting; awareness raising and lead generation activity; quality and use of case studies



- **Engagement** – initial engagement with beneficiary businesses through referral to ongoing relationship development
- **Performance to date** – contracted outputs and impact
- **VfM**

6.2.1 BI-Design (BI-D)

Dafydd Davies led delivery of the BI-D by BIC Innovation. BIC is experienced at delivering innovation-related business support projects/programmes and this is evident in the back office processes and systems used for management, delivery and reporting. Protocols are in place to ensure good communication within the BI-D team and between it and the BI Programme team. BIC is well networked in the Welsh innovation space from its headquarters in North West Wales.

The BI-D team possesses a good range of design skills enabling it to meet businesses strategic and operational needs. However, on the evidence of reviewed reports, A&Gs (Assistance and Guidance) and Design Reviews are not as developed as those produced by Enterprise but this is due in the main to the less well-defined nature of design in general and design support in particular. That said there is room for more consultancy activity and more detail.

BIC has made use of its own database to add value and promote BI-D and to generate leads and deliver themed presentations, both stand-alone and piggybacked. Podcasts of events have been produced and good use has been made of case studies.

The BI-D offer is focused on physical products and, therefore, encompasses industrial design, mechanical engineering and manufacture. It also includes marketing and branding, and the management and delivery of design within businesses. Dafydd recognises that more could and should have been done to support non-manufacturing businesses and hoped that this would be addressed in a second term.

The use of 'design thinking' in strategic business planning is also within scope and the breadth of BI-D content enables BIC to meet beneficiary needs. Our research would suggest however that whilst BI-D could accommodate more key sectors, such as ICT, financial services and the creative industries, there is limited information to suggest this is the case.

Most of the projects delivered have been at the tactical rather than strategic end of design, a fact acknowledged by BIC. Design thinking is one way of encouraging companies to use design strategically. Another technique that



actually straddles BI-D and BI-M is 'value analysis-value engineering' (VAVE). BI-M has touched on this technique, which is concerned with cost reduction without compromising product quality and functionality. In delivering both strands, the technique should be promoted strongly as it should be effective in introducing manufacturers to the value add of design. Hopefully, in the next three years this can be addressed and promoted to all nine sectors.

One aspect of design not offered under BI-D is service design. This growth area, which is benefiting both the private and public sectors, adopts a multidisciplinary approach but is arguably closest to product design. It could enable Enterprise to gain traction in the aforementioned hard-to-reach sectors (e.g. financial services, creative industries), and it can be applied to pure services or services that have products as an element of delivery. However, Service Design has been funded via A4B and delivered by Design Wales at Cardiff Metropolitan University.

BIC also believes that the holistic approach of BI is the right one but that implementation had been adversely affected by constant change within WG, particularly hindering promotional and engagement activity. BIC made reference to the "weakness" of WG marketing communications in building the BI brand in order to "change the hearts and minds" of Welsh businesses.

Also, initiatives such as the Capital Equipment Voucher would provide a boost, supporting investment in areas such as prototyping and 3D CAD to drive productivity and reduce time-to-market.

BIC stated that BI represents fantastic Value for Money (VfM) from a beneficiary's perspective because it provides not only access to high-level expertise at low rates via a competitive tendering process, but also access to a value chain consisting of the best consultancies.

We explored the concept of VfM with Dafydd Davies and the response received was that value was delivered through the assessment process (which is valuable to the company and free within the business assist timeframe), access to experts, and the benefit of Innovation Vouchers. This was described in outcomes/outputs in terms of de-risking ventures, ensuring best practice and the delivery of tangible results. VfM was also identified in terms of reducing market failure and that the interest of beneficiaries is at the heart of the whole process. Equally, benefits such as the independent IS support was clearly seen as adding value.



6.2.2 BI-Manufacturing (BI-M)

Delivery of the manufacturing strand is led and managed by John Clement, a capable individual with considerable senior manufacturing management and operational experience. The strategic perspective and operational rigor he provides is evident in the well-embedded management, engagement, service delivery and reporting processes and (data) systems used. BI-M team meetings ensure good communication, and Enterprise reported good dialogue with BI management and administrative functions.

It was identified at the second interview that John Clement has introduced an ethos of continuous management and delivery improvement within BI-M and this is being followed through in the second half of the BI-M contract. During the second interview, the BI-M operations were identified as in need of strengthening, both in terms of resource and process.

One of these opportunities was claim generation, with specific mention made of Innovation Voucher inspection reports. These are the remit of the IS but Enterprise believes that it is best placed to capture the impact of business support since it identifies business needs and initiates engagement with BI. It is widely acknowledged that the development of long-term client relationships is a key success factor for business support as they are far more likely to lead to businesses making step rather than incremental changes, delivering the impacts such funded support is designed to do.

John Clement leads and is a member of the team of BI-M advisors assembled to deliver Advice & Guidance (A&G) and Manufacturing Review (MR) products, i.e. the Manufacturing Diagnostic and provide additional (approved) specific support if needed (*note: total time of 7 hours constitutes a business assist by all support sources, i.e. IS, IP Specialists*). The team possesses considerable industrial and consulting experience across target BI sectors. Team members are well networked, and operate in flexible matrix to provide geographical and sector coverage.

The BI-M offer is well prescribed in terms of the structure of the products in the portfolio. Enterprise supports the holistic, joined-up approach BI takes in relation to meeting industry needs (manufacturing, design, IP, etc.) and has adopted the same philosophy when developing the content of the BI-D/BI-M products (A&G, Reviews). Content is based on best manufacturing practice and tailored to meet each sector's needs. This is evidenced by the scope of topics covered, ranging from lean to supply chain and the strategic business context, and the content of A&G and the more in-depth MR reports.



Enterprise has used various techniques to raise awareness and generate leads. Activity commenced using a Manufacturing Advisory Service (MAS) database with each qualified contact 'owned' by a BI-M advisor. Enterprise has made a series of presentations to promote the BI-M. Initially, events were stand-alone but efforts have been made to 'piggyback' onto existing and planned events delivered by sector network organisations, which, in our experience, is a more effective approach. Case studies have featured prominently to demonstrate to businesses the tangible benefits of engaging.

Enterprise expressed the view that monies available for marketing purposes limited the scope for promotional activity. It was also stated that more use should be made of the Internet to raise awareness, and make information and resources more accessible, and the WG website was described as being "business unfriendly" and "impenetrable".

During the second Enterprise interview, 'promotion' and 'initial engagement' were identified as areas that could be strengthened through better planning and additional resource. This includes a dedicated helpline, experienced marketing communications resource, increased use of industry networks and paid events hosted by primes (e.g. Sony, Toyota), which are known to attract good audiences. These changes were driven by the fact that Enterprise had won the BI-D strand and that some sectors were still reticent about engaging with BI (financial/professional services, agriculture & food, creative industries and tourism).

Achieving the A&G target has not proven difficult in the BI-M strand, but the result for 'Assists' and 'Innovation Vouchers' have fallen short. Enterprise made reference to the WG changes (e.g. repayable loans, sectors within scope) and stated that these changes had hampered planning and activity. Enterprise went on to comment that with a more settled situation and greater clarity, it was well placed to deliver against targets for both manufacturing and design, and that whilst contracted to deliver outputs, there will be a stronger emphasis on impact. Enterprise will continue to offer a service to all beneficiaries but will work smarter by targeting those businesses that will benefit most from support and deliver the most significant impact, not to mention strong outputs. It is believed that the grant for capital equipment will also provide a good stimulus in this respect.

It is our opinion that there are different aspects to VfM and the one that is nearly always forgotten is access to high quality expertise at no/very little cost. Judged on this basis, BI-M represents excellent VfM.



6.3 Stakeholder Interviews

As part of the mid-term evaluation, the Consultants conducted face-to-face interviews with key BI Programme stakeholders, including the Chief Scientist, Heads of Science and Innovation Policy, key WG Sector Heads, and senior staff responsible for enterprise and other business support programmes. Interviews also included representatives of the Welsh European Funding Office (WEFO) and Finance Wales. In total 17 interviews took place with the following senior personnel:

Table 8: Stakeholder Interviews Undertaken

Name	Department or Position	Organisation
Prof John Harris	Chief Scientist	Welsh Government
Richard Rossington	Head of Science Policy	Welsh Government
Mark Norris	Head of Sector – Advanced materials and Manufacturing	Welsh Government
Ifan Evans	Head of Sector – Life Sciences	Welsh Government
David Warrender	Head of ICT/Digital Wales	Welsh Government
Mick McGuire	Head of Sector – Financial Services	Welsh Government
Natasha Hale	Head of Sector – Creative Industries	Welsh Government
Duncan Hamer	Head of Enterprise	Welsh Government
Mike Barcroft	Senior Business Development Manager – Energy and Environment	Welsh Government
John Linford	Senior Business Manager	Welsh Government
David Rosser	Director of Anchor Companies and Innovation	Welsh Government
Alastair Davies	Head of Innovation Policy	Welsh Government
Mike Groves	e-Business	Welsh Government
Steve Smith	Director, Early-Stage Investments	Finance Wales
Geraint Green	Head of Business and Innovation	WEFO
Jacky Doran	Project Development Officer	WEFO
Andrew Davies	Project Development Officer	WEFO

The Consultants prepared a semi-structured questionnaire to guide interviews and record responses. This was agreed with the PMT and the 17 interviews lasted on average between 1 and 1.5 hours. The results of the interviews have been summarised below:

Note: in the majority of cases, the questionnaire structure was not followed due to the fact that interviewees had limited knowledge of or exposure to the BI Programme. This was due to:

- Several interviewees, including some Heads of Sectors, were new to their role/position



- The BI Programme has not been marketed recently, either internally or externally, primarily due to organisational change
- Limited or no direct exposure to businesses that have recently benefited from the programme

It was also recognised by the Consultants that with some exceptions the stakeholders had little recall in terms of exactly what the BI Programme consists of. Indeed several of the interviewees confused BI with RD&I or other programmes. There was also little knowledge of the BI application process, eligibility, product set and expected outputs. On occasions, these aspects were briefly explained by the Consultants to aid interviewees and encourage responses.

In this section of the report we have summarised the results of our discussions with key stakeholders under seven headings as follows:

6.3.1 WG's Requirement to Support Business Innovation

There was universal agreement amongst stakeholders that the WG needed to support the adoption of innovation practice and support, and accelerate innovation take-up and outputs in all businesses throughout Wales. Interviewees generally believed that the current poor economic climate and uncertain future added to the need for such direct and funded innovation support.

A number of interviewees referenced the soon-to-be launched *Science for Wales* policy and likely Innovation Strategy as giving greater credence and role to innovation. Sector Heads referenced the development of their strategies and plans and the likely prominence of innovation and innovation support. What was clear in terms of resource and thinking was that support needs to be clearly linked to impact in addition to outputs and outcomes.

Whilst stakeholders were generally aware of the need to reduce financial support/subsidy, many did indicate that this was not the right time to do so due to the prevailing economic conditions.

Specific related comments received included:

- "We need to provide innovation support that is fixed on delivering outputs."
- "Our innovation support (BI) is inclusive and state-of-the-art and it needs to remain so."
- "In terms of BI and RD&I, it should result in a step change for the company (beneficiary)."



- “We need to help all kinds of businesses with new product development to be innovative and to grow.”
- “Innovation plays a very important role and all sectors need to be as close to it as possible.”
- “The Minister will back us to get things done, create jobs, and working with the BI Programme to make things happen.”
- Grant support is vital in uncertain times to encourage and accelerate innovation.

Further justification for BI support was attributed to the fact that innovative endeavours lead to greater competitiveness, supporting business growth and, in all likelihood, increase exports.

Innovation was seen as an activity that warranted specialist support as such innovation skills and capabilities are not common within businesses, and that with all invention and innovation activities there are degrees of risk that the BI Programme can to some extent offset. Several interviewees also appreciated that innovation should be a continuous and, arguably, never-ending process, and therefore support for business needed to ongoing and long-term.

Several interviewees were aware of recent changes in terms of reintroducing innovation support and funding in England via the BIS and the TSB. These changes have seen the return of Innovation Vouchers, the reintroduction of SMART (Small Firms Merit Award for Research & Technology), the development of the Regional Growth Funds, and the intended reintroduction of the Manufacturing Advisory Service (MAS). Within the stakeholder interviews there was reference to such developments and business support and specifically grants as being universally necessary in today's economic and business environment.

Interviewees referenced on several occasions that Government changes, i.e. Financial Support 4 Business (FS4B) and Regional Economic Strategy (RES), had not helped in terms of the promotion and delivery of the BI and other smaller programmes, specifically mentioning RD&I. However, as one interviewee commented, there is now “clean water for the BI and other programmes to flourish.”

We interviewed representatives of six of the nine key sectors, namely Advanced Materials and Manufacturing, Life Sciences, ICT/Digital Wales, Energy & Environment, Financial Services and Creative Industries. This mid-term evaluation did not justify all sectors being interviewed; those that were not interviewed were ones that were only recently announced and therefore have yet to produce their strategic plans.



Representatives of all the six sectors interviewed recognised the importance of innovation and, as a support activity, indicated it did merit special attention. Innovation was clearly seen as a horizontal activity to the sectors' vertical approach. Heads of Sectors specifically recognised the novel skill set of the IS and IP Specialists in difference to general relationship managers, and the fact that innovation support justified being centralised and reaching across all sectors. Several of the Heads of Sectors requested more direct contact and responsibility in terms of innovation resources, i.e. staff and investment.

- “We will work to produce an innovation strategy, which we believe is necessary, specifically to pull through the science policy and research endeavours.
- “I have talked to the Sector Panel Heads about innovation strategies. Here, we think that the Director of Innovation should be leading.”

The Consultants observed that the Sector Heads work well collectively, respecting each other for their key strengths and expertise and are fully engaged with the Department to ensure that businesses, as best as possible, get the right and seamless advice and support.

That said two Sector Heads displayed some frustration, borne largely from the embryonic nature of the yet to be published sector operational plans and their lack of knowledge/experience of the workings of IS and the innovation programmes. These are issues that Phil Allen and his team are well aware of and continuously work to improve to ensure that innovation is promoted by all sectors.

The general consensus was that innovation is an area where WG needs to be, that sectors are working closely with the Chief Scientist via the 'Science for Wales' policy and that they await the Innovation Strategy. There were constant calls for simplifying processes and for more collaboration, and there were suggestions that RD&I, BI, A4B and other support programmes, such as E-Business, could potentially be brought together.

6.3.2 BI Programme Positioning and Fit-For-Purpose

Overall, the stakeholders were supportive of BI and stated a wish for the Programme to continue, with several claiming it to be a very direct and useful product. That said many agreed there was room for repositioning/realignment, improving communications, and having closer engagement with sectors and other programmes.



In terms of repositioning and realignment, it was felt that the Programme generally had a traditional manufacturing focus and needed to be marketed to or 'needed to accommodate' all the priority sectors, with specific reference to the creative industries and financial services. This was as a result of the acknowledged importance and integral nature of innovation, and a willingness to provide greater and inclusive support to businesses, specifically anchor and regionally significant businesses.

Several interviewees acknowledged that a mid-term evaluation is a good time to do this. They also pointed out that the economy is now very different to when the BI Programme was originally conceived, possibly necessitating a higher degree of flexibility from BI support. Specific comments in this respect included:

- "The BI offering needs to be more flexible and needs to reflect the sector themes."
- "We need to evolve, modify and take further our investment in innovation. We believe we need a liberal thinking strategist leading the charge."
- "The Programme definitely needs to be more flexible and if we look at the R&D Framework then there is possibly scope to do so."
- "The Programme should support all innovative steps however small they seem to be." (new to the company should be sufficient)
- The Programme should seek to identify and manage risk.

Whilst there was universal acknowledgement of the skills of the IS, there was some debate as to their appropriate management and reporting channels. It was clear that several Heads of Sectors would prefer that the IS joined and reported via the sector teams. That said they accepted that they are funded via the BI/ERDF project and that central support and development within the team is key to their effectiveness and ability.

It was mentioned on several occasions that perhaps BI needs to simplify the application and approval process to benefit the client, reduce timeframes and provide consistency of response. Comments received included:

- "We should thin out the process."
- "It may be too bureaucratic."
- "Too many people involved for too little money."
- "We've given larger amounts out for less scrutiny on other programmes."



Several interviewees stated that as long as they are confident money is being used appropriately and outputs are in line with investment, then they should be able to make these decisions, ideally at an IS or IS Manager level. There was a general belief that the Minister supports a commonsense approach to creating and sustaining jobs and that sensible decision making will be facilitated.

6.3.3 Definition of Innovation for BI Eligibility

Some time was spent with a number of interviewees discussing how innovation is defined within the Programme and what activities could be supported. One of the issues identified was that to be eligible to benefit, i.e. from Innovation Vouchers, the innovation has to be deemed as 'novel', with 'novel' being defined as completely new, not just new to that business (as SMARTCymru/RD&I requires) but new to the market. Whilst the definition of 'invention' (*created by thought, novelty, unique* – Oxford English Dictionary) describes novelty and newness, the definition of 'innovation' (brings in novelty, makes changes) does not mean originality. Hence the BI Programme can possibly accommodate both invention and innovation.

This was discussed with representatives of WEFO, i.e. the possibility of extending eligibility beyond 'invention' to include 'innovation', i.e. new to the company. WEFO commented that this would be possible for BI and could also be built into future programmes. Interestingly, the field research also identified that business process innovation was overlooked, which could be confirmed as an eligible activity and promoted accordingly. Business process engineering would appeal to a wider range of companies across all nine sectors. Specific comments in this respect included:

- “The BI project should be all about impact, should embrace the wider definition of innovation in terms of activity and the process of getting innovation out of the door streamlined.”
- “What this exercise needs to do is go back to square one and ask, what are we intending to do? Hopefully this study will do that.”
- We talked about extending innovation into service organisation innovation and he would suggest that should be separate and more to do with business process engineering and re-engineering than innovation per se.
- We discussed “incremental innovation” and it was commented that this was seen as being more business improvement and business efficiency. This is not covered by a direct programme and maybe that does need further investigation and possible inclusion.



- “It has been commented that we have not got business covered within business innovation. Given that we cover all sectors we should cover people/business innovation also.”

6.3.4 Perception of the BI Programme Target Market(s)

A number of the interviewees perceived the BI Programme to be focused more on the needs of manufacturing companies (those producing tangible products) than on service companies. To understand this view it is important to note that the BI plan was authored in 2008 when the economy was much stronger and when the Government was organised differently and had different priorities. The Consultants' view is that the language of the day (2008) leans towards manufacturing companies and products but does not specifically exclude other businesses. As one interviewee stated:

- “I am well aware that this (BI) was conceived some four years ago and doesn't have a natural fit with the sector approach of ERP. As far as I am concerned, innovation does not sit properly within any of the sectors which is why it was agreed it should be an overarching programme.”

According to stakeholders, the perception of BI under representing service businesses is dissuading businesses from applying and therefore benefiting from the Programme. We were informed by one interviewee that the WG R&D Framework would facilitate a rebalancing. Interviewees believed that clear product positioning, and good internal and external communication will address this situation, and increase demand and impact significantly.

Via WG funding, the creative industries sector has created its own innovation fund (the Digital Development Fund), promoted directly to this sector. The Fund was marketed as being able to fund the exploitation of digital products and services (*note: more exploitation than innovation*). The Fund could support 'seed funding' up to £50k at 50% of eligible costs. We were informed that after two months applications totalled £1.2m, the available funding being £500k.

Several of the stakeholders believed that the Welsh Government across the board has, up until recently, had a product or a product silo mentality and approach. There was no suggestion of failings or blame, but this has resulted in limited customer-focused collaboration across programmes and, needs to be addressed, to provide added value. An example given was that over the last three years the e-business team has assisted over 800 businesses. Over the same period, the BI Programme has assisted a similar number but the



number of businesses assisted by both programmes was perceived as being less than 1%. This suggests there may be a lost opportunity.

All the Heads of Sectors and representatives looked forward to greater cooperation and understanding with cross-sector programmes and initiatives, with Enterprise, E-Business, BI and RD&I specifically mentioned. They believe that this will happen, as sector teams become supporters of individual business and via ongoing engagement with the Innovation Specialists.

Across the board, there was much praise for the Innovation Specialists and the two IS who dealt with IP. Several particular instances were cited and several Heads of Sectors indicated that they would like more IS within their sector teams.

6.3.5 Sector Panels

Our stakeholder research indicates that several of the sector panels have directed the sector teams to focus on innovation and to support innovative start-up businesses. Some sectors have engaged with investors to create early-stage funds and look at innovative ways of returning investment. The Head of Innovation suggested that, moving forward, the Programme should look at, “the routes to market for innovation support and that innovation support should be focused on producing outputs that directly align with WG challenges.” He went on to say that the project should be all about impact and should embrace the wider definition of innovation in terms of activity, and the process of getting innovation out of the door.

Specific comments included:

- “As far as we are concerned we need to look at the routes to market for innovation support and we need to provide innovation support that produces outputs and directly addresses challenges.”
- “If businesses coming forward are not slap bang in the middle of the sector they may get ignored.”
- “The problem is there are sectors we are not addressing that we should be. Certainly in innovation in the health service and bio sectors, creative industries and financial services.”
- “Let’s do some research on the good businesses we have supported during the years, such as Ubiquity Software, IQE etc. What do they do differently and how can we support businesses in this knowledge?”
- “IS should be going after a broader range of projects. Doing something new.”
- “What Wales fails to do is to look outside Wales for grant funding, support and direction. Some of these projects could be led by BI, with funding out of organisations such as DECC and Ofwat, who have



bucket loads of money. This would be mainly for large, discrete projects which we could buddy up to other projects in Wales”.

6.3.6 BI Communications and Marketing

The interviewees believed that the Programme to date has suffered significantly from limited communications, resulting in misunderstanding of the Programme internally and confusion throughout Wales. None of the interviewees sought to blame the Programme itself, with several commenting that they are aware of restrictions and difficulties within Government

In terms of communication to business, several interviewees recognised that it is generally difficult to “sell innovation, particularly so in some key service sectors.” A number of commentators suggested that WG is not particularly good at selling things and the Programme could be better served if promotional activities were contracted out.

In terms of communications, each of the stakeholders interviewed accepted that communication is a two-way process and that they have not communicated well with other programmes and vice versa. This has created misunderstanding and certainly lost opportunity. However, as the sector teams become more established and implement delivery plans, things will undoubtedly improve. Areas in which communications need to be addressed, as seen by the internal stakeholders, include:

- Ensure that the language used does not disenfranchise any key sectors, specifically the service sectors
- Detail the product offering, eligibility, application process and timescales
- Ensure that all internal stakeholders are well informed
- It was suggested that a likely action and/or recommendation from the mid-term review would be production and distribution of a marketing plan. This should engage the sectors also in its support and delivery.

Further specific comments in relation to communications and marketing included:

- “There is a lot of value in Phil's team, which cuts cross the sectors and the Heads of Sectors need to understand it to appreciate it.”
- “There is no special MOU on how we approach all the sectors and it needs to be done on a sector-by-sector basis. It helps to speak to people differently, using their language of choice.”
- “BI should pitch to all the teams to ensure they know the product offering and why it should be delivered by them and not others.”



- “In terms of applications and support, we need a simple combined approach. We need to deliver consistency on how we promote grant schemes and how we handle them.”

6.3.7 Innovation Specialists

For many of the stakeholders the most tangible aspect of the BI Programme so far has been the Innovation Specialists (IS). Many of the IS were singled out and praised, particularly by the Heads of Sectors, for their mastery of the subject (innovation), and the support they have provided so far.

Whilst some of the Heads of Sectors have stated intentions to work with the IS assigned to their sectors, several suggested that this wasn't in the plans because of the lack of future clarity. However, a number accepted that the situation was now a little clearer and incorporating IS support in sector plans would be desirable. Specific comments included:

- “It was pointed out that there is no plan to work with the IS directly and formally and this may be the opportunity we need to explore this.”
- “Generally, he believed the IS to be extremely knowledgeable about the subject, an asset for WG, and one that needs exploiting further for the benefit of all sectors.”
- “We would welcome the IS and evaluation people spending some time with our PDMs and staff to get to know the nuances of the sector, i.e. BI doesn't have the expertise on copyright.”

6.3.8 BI Programme Fit with Strategy and Policy

The overarching strategy and policy that sets the agenda for BI is the “*Regional Economic Strategy*”, with two other key strategies currently being developed are the “*Science Policy*” and the “*Innovation Strategy*”, which are due to be released shortly. Interviewees believed that BI was a key instrument in supporting the introduction and delivery of Government policy and strategy. Many of the Heads of Sectors identified specifically ‘innovation support’ in their plans for anchor companies, regionally-significant companies, and SMEs. Several Heads of Sectors placed significant importance on innovation and innovation support and they have, within their budgets and plans, agreed to provide additional support.

In discussion with the Chief Scientist and the Head of Science Policy, it was made clear that the imminent Science Strategy will have a strong focus on innovation, not because of any particular pressure from any stakeholder but because it is an area that could currently be described as an empty space. In terms of deliverables it was suggested that BI needs to go back to square one and maybe this exercise would facilitate that. In part this is to identify



what the Programme needs to do based on an understanding of what has been delivered previously. This has been expanded on elsewhere in this report.

6.4 Beneficiary E-Survey Results

All businesses assisted by the Programme at the midway point (567 in total) were invited to complete the online survey, which was open to beneficiaries between June and September 2012. A total of 100 responses were returned. The survey explored the experience of clients of the programme, their reflections on the service they had received and the types of impact the support had on their business performance. Specifically, the survey explored:

- the characteristics of beneficiaries engaging with the programme
- the type and focus of support taken up by beneficiaries
- levels of satisfaction with the services received
- the type of impacts that beneficiaries report.

Survey evidence is the most accessible and practical means of gathering data about the experience of beneficiaries and the types of impact the support has generated, although there are some limitations to this approach. These include the size of the sample, its representativeness and the accuracy of the information provided by businesses. These limitations centre on the following:

- **Small sample size** - The survey achieved a sample of **100 completed responses** from a possible 567 beneficiary businesses for which email contact details were available at the time of the survey. This represents a response rate of 18% and provides an overall margin of error of +/- 9% at the 95% confidence level (although this margin of error will be wider for sub-sample analysis).
- **Sample Representativeness** – The representativeness of the sample is a key consideration in assessing the validity of survey data. There is limited data available about the size profile of beneficiaries of the programme and the focus of support received, so it is not possible to fully test the representativeness of the survey data. We therefore have to assume that the 100 responses received are representative of the wider population.
- **Accuracy and reliability of survey data** - The analysis survey data is wholly dependent on the accuracy and reliability of the information provided by beneficiaries. Checks have been carried out on the response data to identify and exclude any significant outlier responses.



The remainder of Section 6.4 sets out the key findings from the analysis of the survey data, highlighting relevant themes for the evaluation to explore in more detail.

6.4.1 The Programme's Client Base

Beneficiary Characteristics

Figures 6 and 7 below provide a summary of the characteristics of the businesses responding to the web-based e-survey survey. As there is no corresponding information relating to the wider population of beneficiaries, we have to assume that the survey data is representative of the Programme's full client base. With an 18% response rate over a large population, this is a reasonable assumption. Assuming that this is the case, the Programme's beneficiary base has some interesting characteristics, which are explored in brief below.

The broad range in the size of the BI Programme's clients and the spread of beneficiaries across pre-start to very well established businesses points towards the Programme's services having a **broad appeal to a variety of clients**. As Figure 6 shows, while the majority of the Programme's clients (79%) were established businesses that had been trading for more than three years, the service also assisted pre-start and new-start businesses. The overall split between established and new-start businesses is in line with the intention stated in the project business plan that, while the project would assist innovative new start-ups, the majority of activity would be with established businesses.

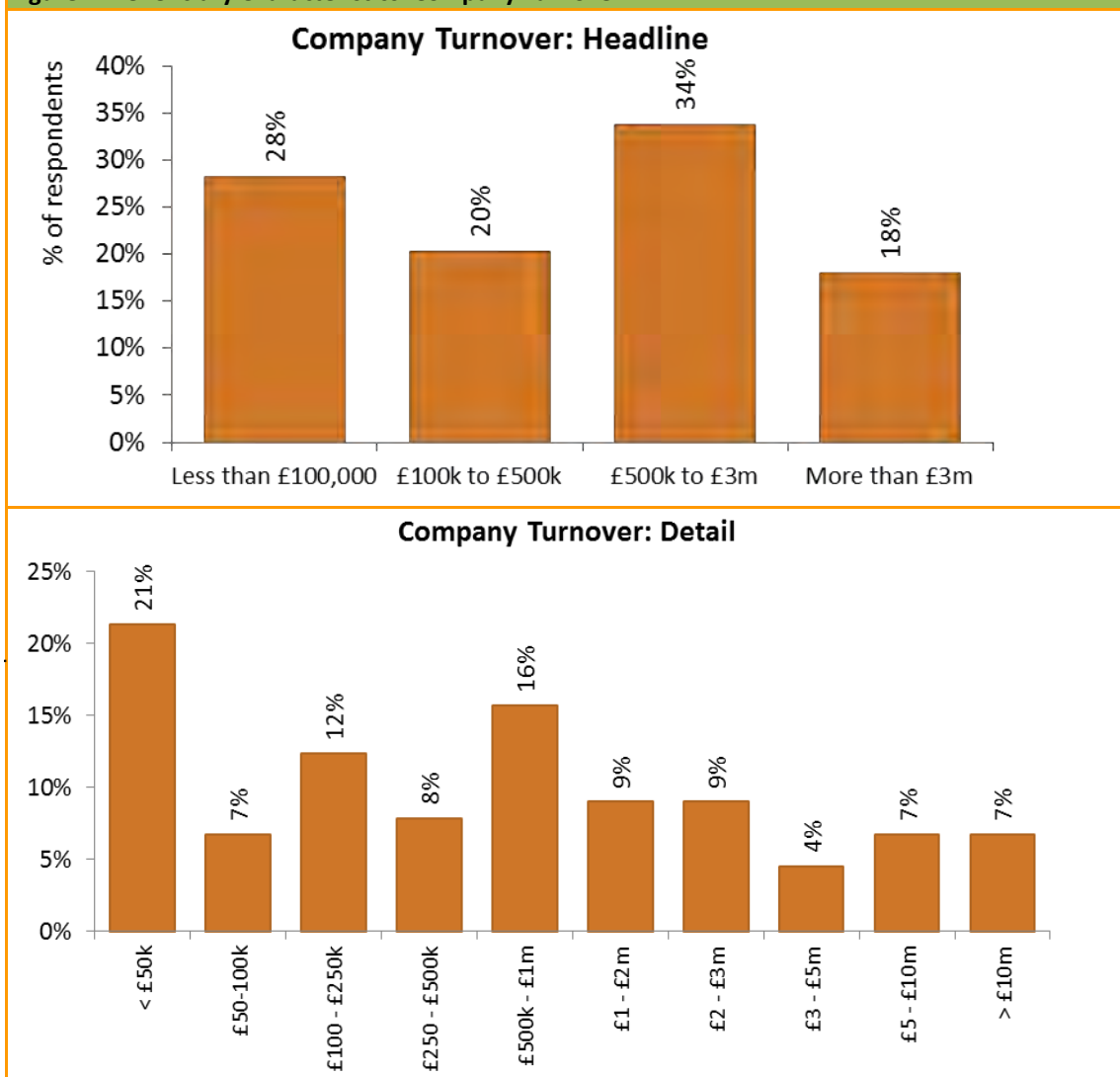
Similarly, clients of the service range from very small businesses (a fifth of the client base had turnovers of less than £50,000 per annum) through to very large companies, turning over in excess of £10 million per year. While the service operated across the full spectrum of company sizes, **smaller companies are dominant within the client base**, which is in line with the aspiration set out in the BI Programme Business Plan, that the service would be targeted towards SMEs, where the market failure case for publicly funded business support is strongest. This also assists us in addressing the question of the need for grant support.

Figure 6: Beneficiary Characteristics: Length of Time Trading



Source: Survey of BIP Beneficiaries, Summer 2012: Base = 100 respondents.

Figure 7: Beneficiary Characteristics: Company Turnover

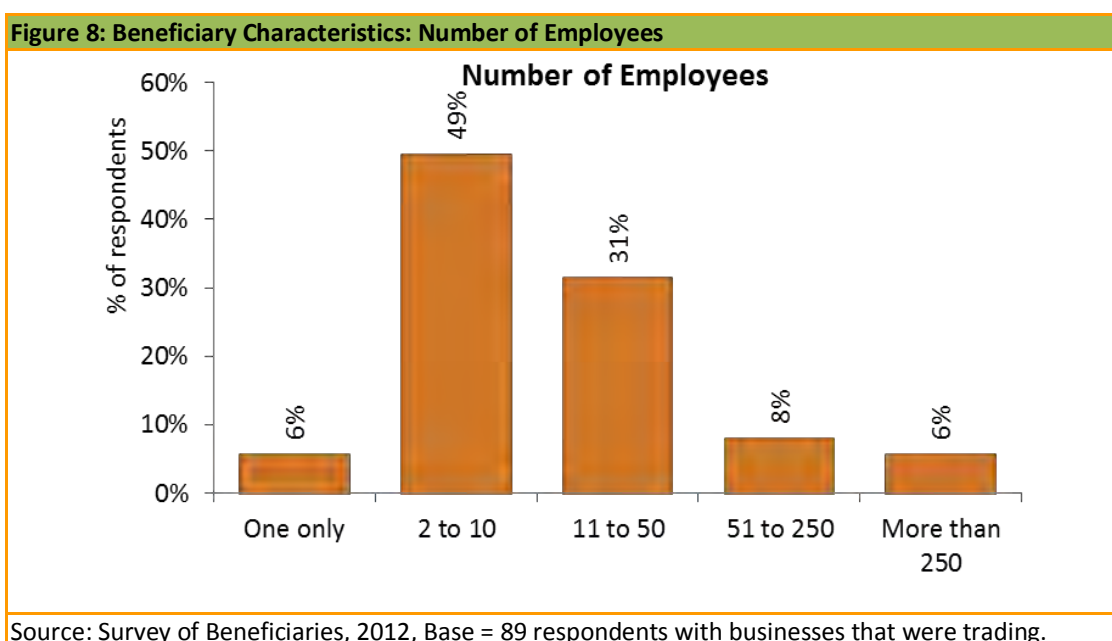


Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100 respondents.



Figure 8 underlines the focus on smaller companies within the BI Programme's client base – 87% employ less than 50 people. Interestingly, micro companies, employing fewer than two people make up a very small proportion of the client base.

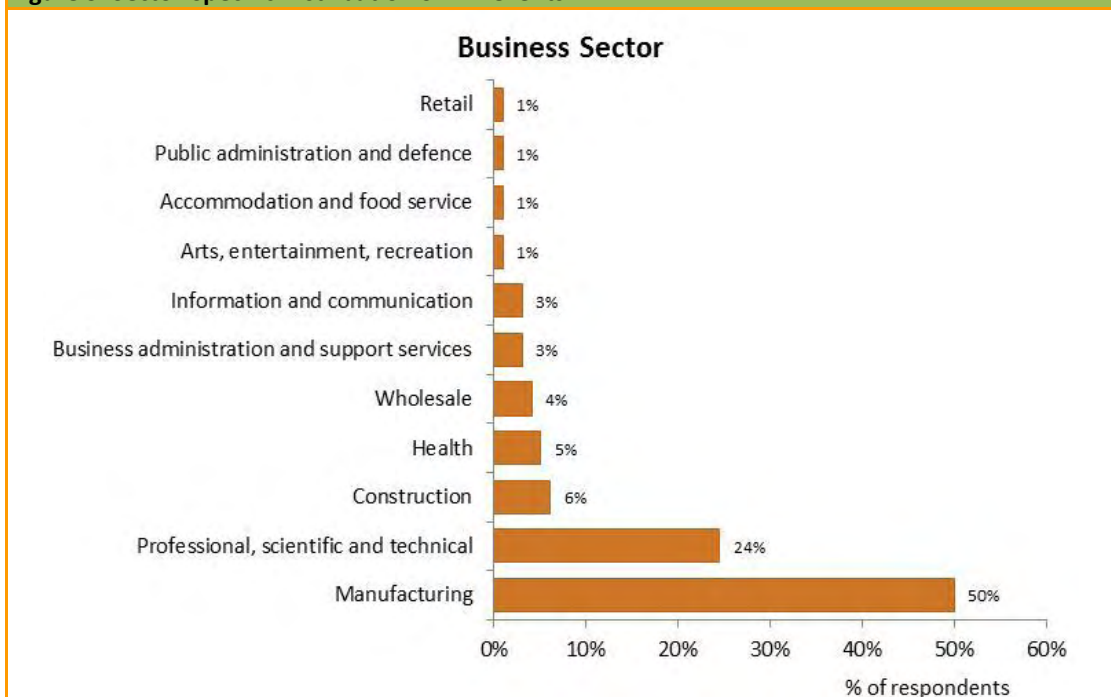
There are a number of reasons why this could be the case, including the discontinuation of the Wales Innovation Network, the introduction of FS4B, and the fact that the BI Programme was not marketed at all for a significant amount of time. (Very small businesses are usually 0 to 18 months old). In addition, for some time, the IS were not allowed to work with start-up businesses.



It is to be expected that a programme providing innovation support will see a strong weighting towards businesses trading in manufacturing and professional, scientific and technical sectors. This is clearly illustrated in Figure 9. The importance of these sectors within the Project's client base reflects the prominence of product design, manufacturing process and IP assistance within the mix of support provided by the BI Programme. It is encouraging, however, that the support provided has an appeal to clients trading in other sectors and that the nature of the offer can be transferred into other sectors (most likely with a focus on process rather than product innovation). 'Business Sectors' is a Government classification and we should possibly have used the WG key sectors as categories. Indications are that the top two categories, i.e. 'professional, scientific and technical' and 'manufacturing', include a high population.



Figure 9: Sector-Specific Distribution of BIP Clients



Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100 respondents.

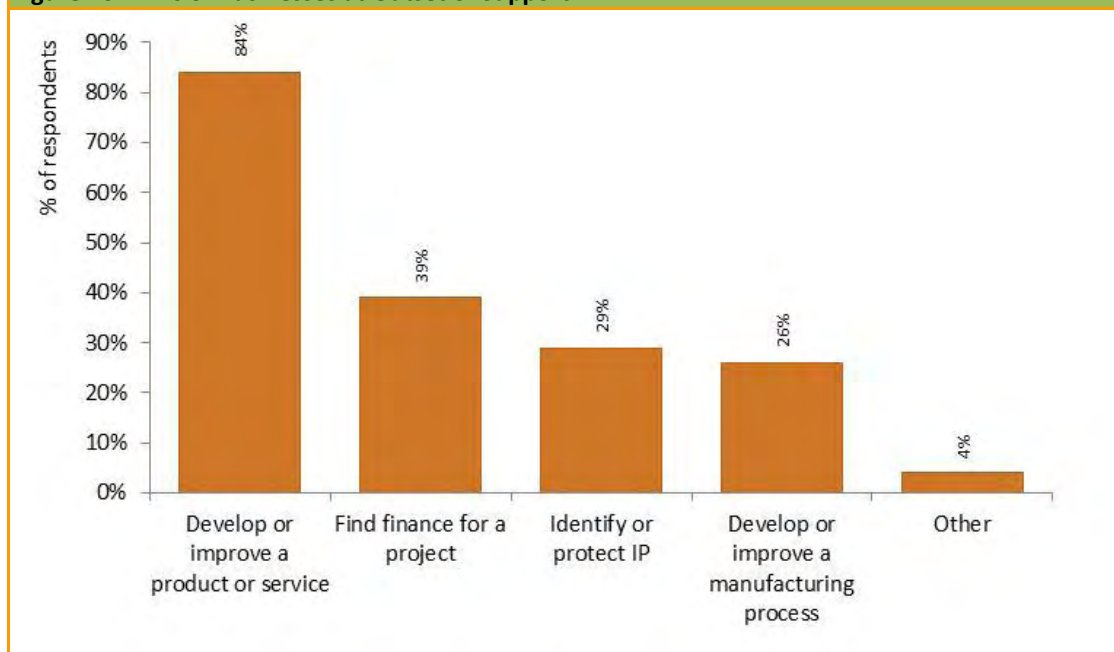
This focus is in line with the targeting framework set out in the project business plan, which states that target beneficiaries would primarily be knowledge and technology based businesses.

6.4.2 Reasons for Accessing Support

Companies responding to the questionnaire were asked about their aims when they first started receiving support from the BI Programme. A sizeable proportion (53%) of respondents highlighted more than one aim when they first received support, although improving or developing product or service was most commonly cited.

This is a clear indication that the Programme has been targeting its services towards clients with aims that are well aligned towards the core project objective of supporting businesses in the development of new products, processes and technologies.

Figure 10: Aims of Businesses at Outset of Support



Source: Survey of BIP Beneficiaries, Summer 2012, Base =100 respondents.

While the BI Programme was not a provider of finance, it is notable that more than a third of beneficiaries indicated that their aims when they first started working with BI included finding finance for the project. This is to be expected given the financial climate in which the Programme operated, particularly the squeezed availability of credit to SMEs. Only a very small minority of respondents (5%) indicated that they were looking to seek finance only, which indicates that this was an add-on to the core support provided via the Programme.

What does come out of this exercise is the fact that businesses are often seeking investment or grant and that much could be done to make them more investment-ready in difference to merely providing access to finance.

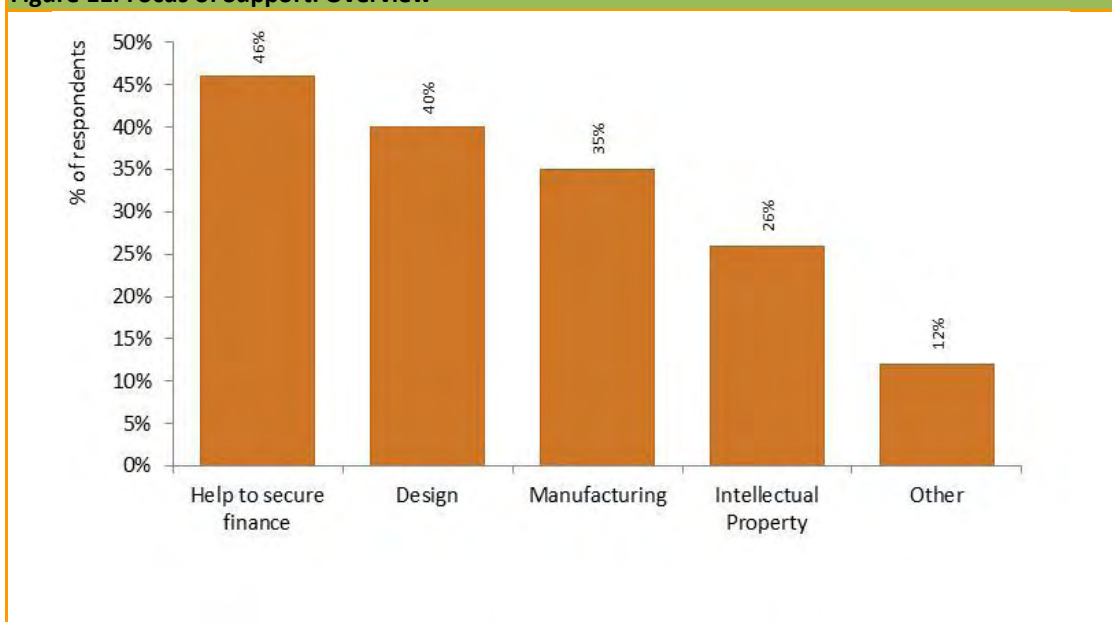
6.4.3 Types of Support Provided

Respondents to the e-survey were asked to highlight the focus of the support they received from the BI Programme to implement their project. Again, many businesses indicated that the support focused on a number of areas although, as Figure 11 shows, help to secure finance for the project ranks highest and was a component of the support received by almost half (46%) of survey respondents. Finance was often seen as grant but as identified in other sections of this evaluation, i.e. IS and stakeholder interviews, investment readiness does need addressing at the first opportunity.



This indicates that even though the headline aim for most businesses was to improve or develop a product or service, the support they required and drew down from BI was frequently related to securing finance for the project. This is not, of itself, a cause for concern as assistance to find finance for an innovation project can be an important element of a package of innovation support (as this is often amongst the more difficult barriers to overcome in implementing innovation projects). However, a quarter of clients indicated that the focus of assistance from the Programme was purely related to finding finance for the project rather than actively assisting with other aspects of the project's development.

Figure 11: Focus of Support: Overview



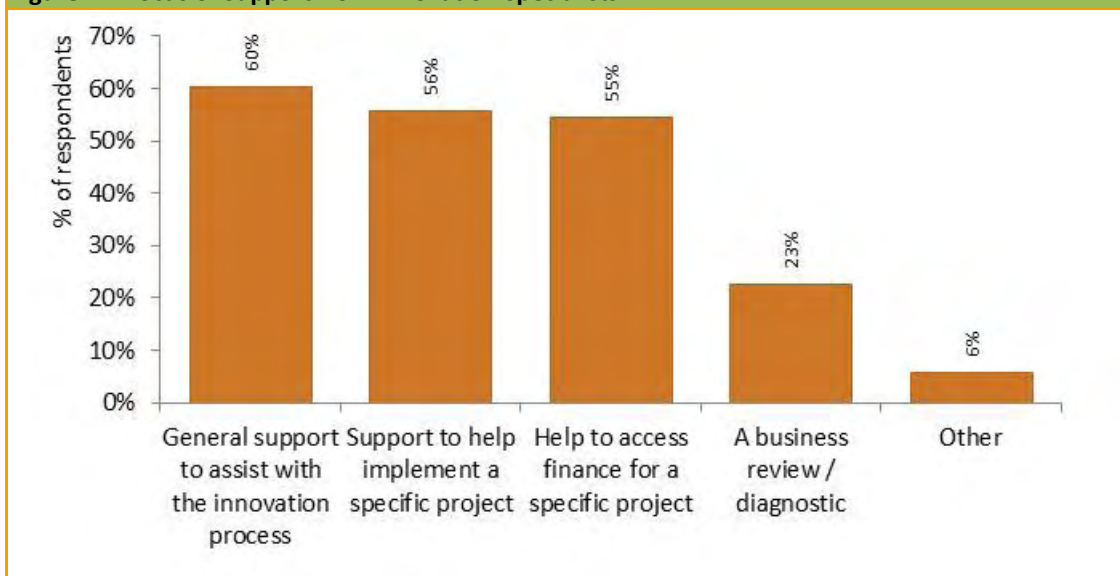
Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100 respondents.

6.4.4 Innovation Specialists

As the main gateway for the Programme, the IS' role was to assess clients' requirements and provide general innovation support where appropriate or pass clients on to more specialist support from the design, manufacturing and IP specialists (or other external providers of support) where necessary.

The majority of respondents (88%) indicated that they had received support from the IS. Most often, respondents indicated that this was general support to assist with the innovation process (cited by 60%), although a similar proportion highlighted that they were looking for support to implement a specific project or to access finance.

Figure 12: Focus of Support from Innovation Specialists



Source: Survey of BIP Beneficiaries, Summer 2012

Base = 88 respondents receiving support from an innovation specialist

Only 23% of respondents participated in a business review or diagnostic. This figure does appear to be low. However, we are aware from the Programme management and IS that many businesses could have had reviews and diagnostics in the recent past, but without instant recall.

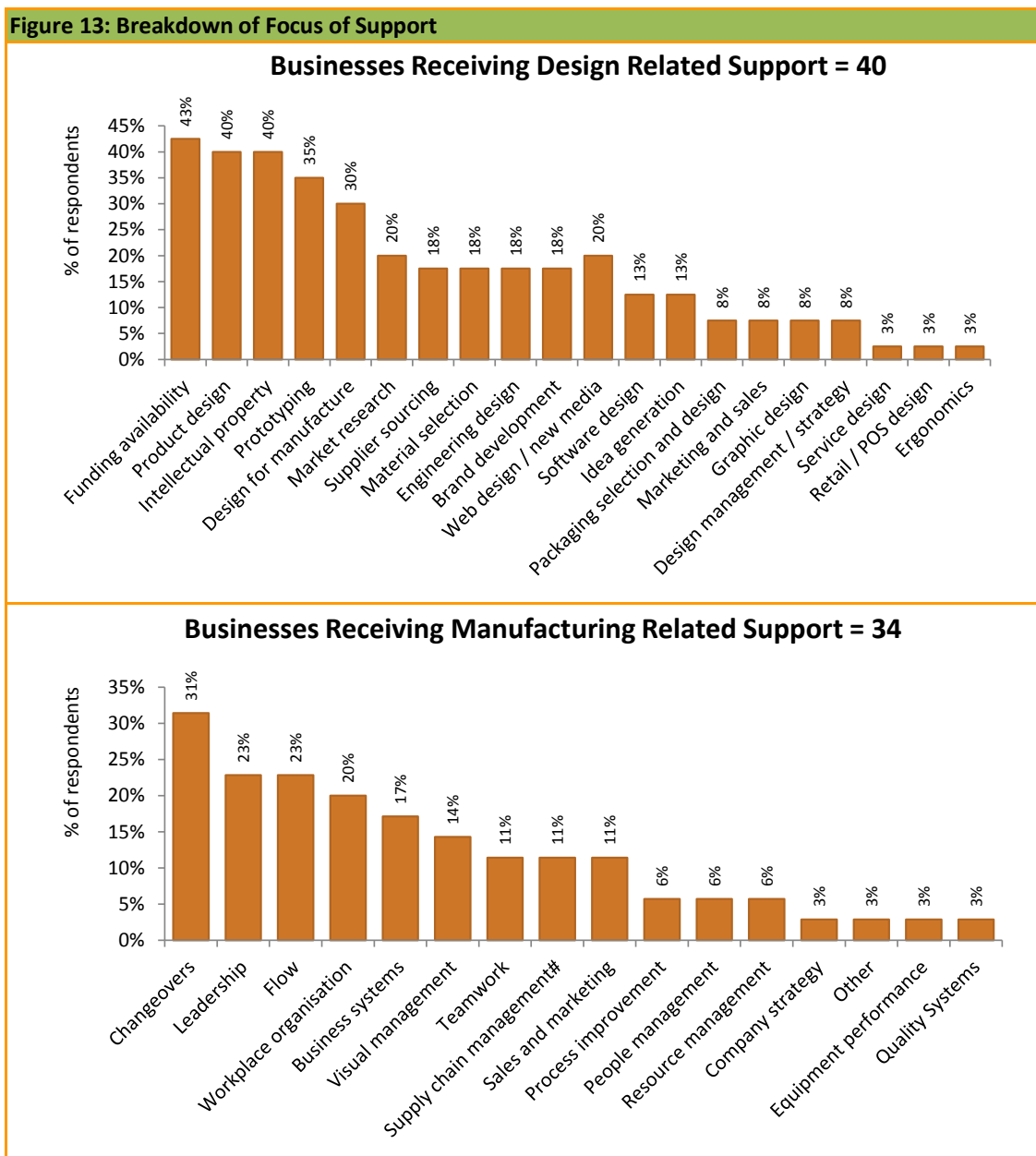
The majority of businesses receiving support from the IS indicated that they had also taken up more detailed support relating to design, manufacturing, finance or Intellectual Property. The breakdown of the type of support provided under each of these headings (shown in Figure 12) highlights a number of interesting points:

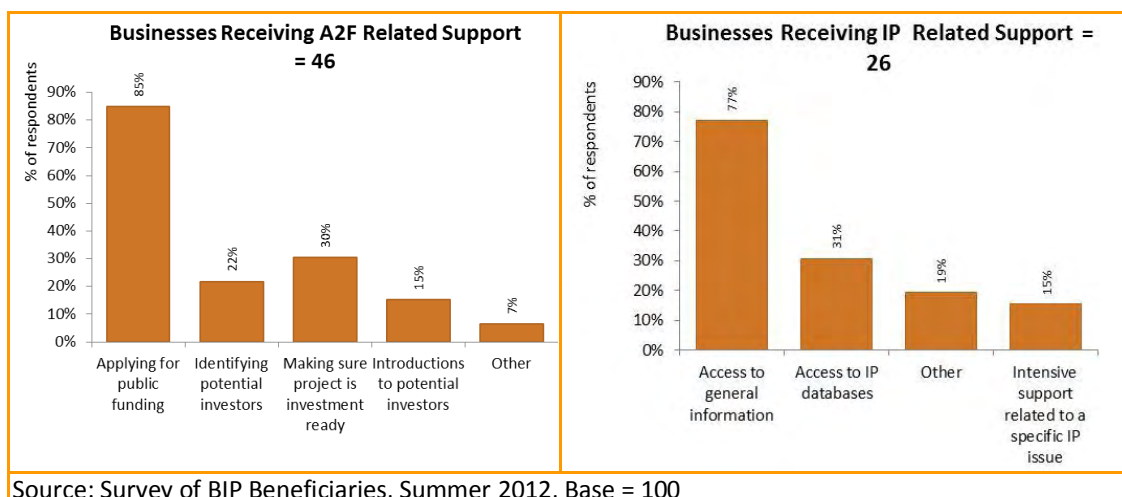
- For design related support in particular, **information on funding availability is prominent** within the mix of support provided.
- There is some evidence of a **blurring of the boundaries between different types of support**. For example, design for manufacture, and intellectual property rank highly amongst the focus of support provided to those receiving design related support. This is understandable given the extent to which the disciplines are interrelated but could suggest that delivering these strands of support separately may not be the most effective and efficient way to meet the needs of clients.
- The prominence of leadership amongst the focus areas for those receiving manufacturing related support suggests a focus on **strategic, as well as project specific support** (i.e. to deliver longer lasting change in the way that companies operate).



- The importance of **applying for public sector funding** is amongst those receiving assistance to finance their project could reflect a number of factors. This will be a reflection of the economic climate but also perhaps an indication of the extent to which some businesses remain dependent on public support.

The e-survey also identified the nature of support sought under BI-D and BI-M, as follows:



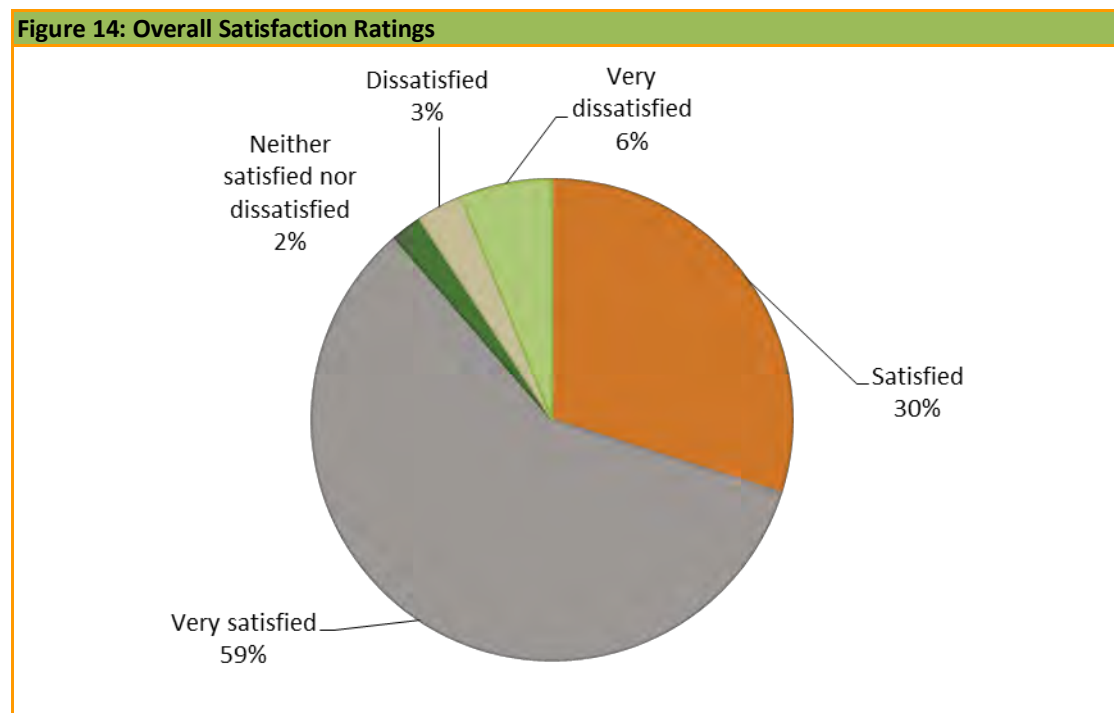


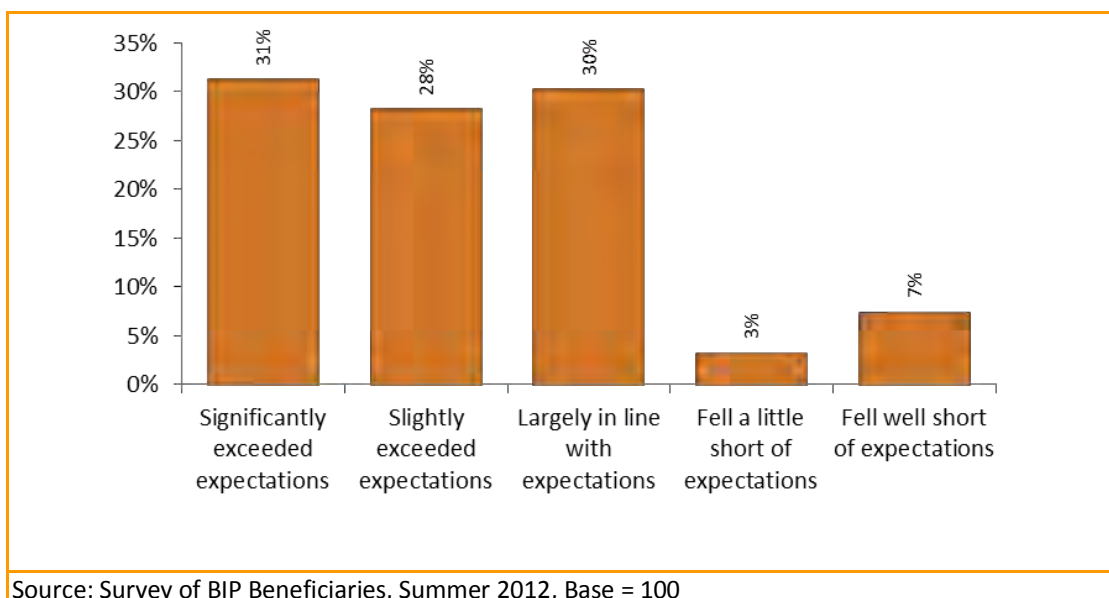
Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100

6.4.5 Beneficiary Experiences and Impacts

Satisfaction Levels and Reflections on Service

Overall, respondents report high levels of satisfaction with the support they have received through the Programme with the majority (89%) indicating that they are either very satisfied or satisfied with the support received through the Programme. A similar proportion of beneficiaries highlighted that the support met or exceeded their expectations, as shown in Figure 14.



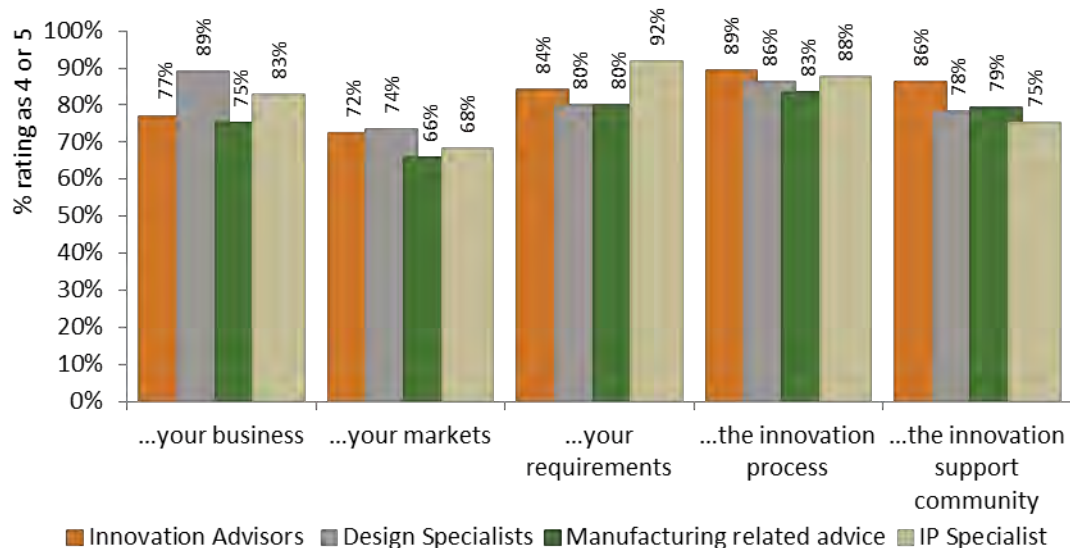


Beneficiaries of each type of support were asked to provide ratings between 1 and 5 for their satisfaction with different elements of the support. The summary in Figure 15 and more detailed breakdown of average ratings provided highlights a number of interesting points:

- Overall, **satisfaction with the advisor's knowledge and understanding is high** across all types of support.
- Performance was particularly strong in relation to the knowledge and understanding of beneficiaries' requirements and the innovation process in a more general sense.
- Broadly speaking, there is **very little variation in the ratings by type of support** although it is notable that businesses receiving support from the Intellectual Property Specialists tend to provide higher ratings.
- Clients' **ratings for the advisors' understanding and knowledge of their markets are lower than for other elements of the support**. While this undoubtedly reflects the inherent difficulty in providing support across a broad client base, operating in a variety of markets, this may also be a reflection of concerns expressed elsewhere about the level of business skill and experience that advisors are able to bring.



Figure 15: Overview of Satisfaction Ratings by Type of Support. “How would you rate the advisor’s knowledge and understanding of...”



Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100

The Consultants suggest that any score over 70% over such a large and diverse sample, and over a project period of three years, is good. As Figure 15 suggests, scores are consistently high, with only two marks below 70% for ‘understanding of markets’. This is not surprising as a company often views their market very narrowly.

Figure 16: Average Satisfaction Ratings

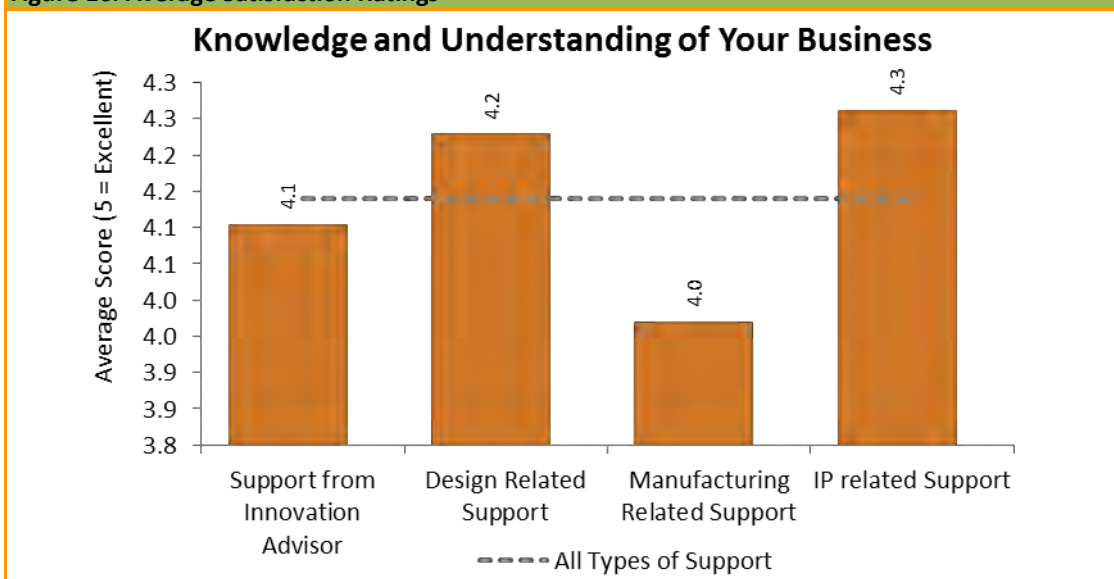
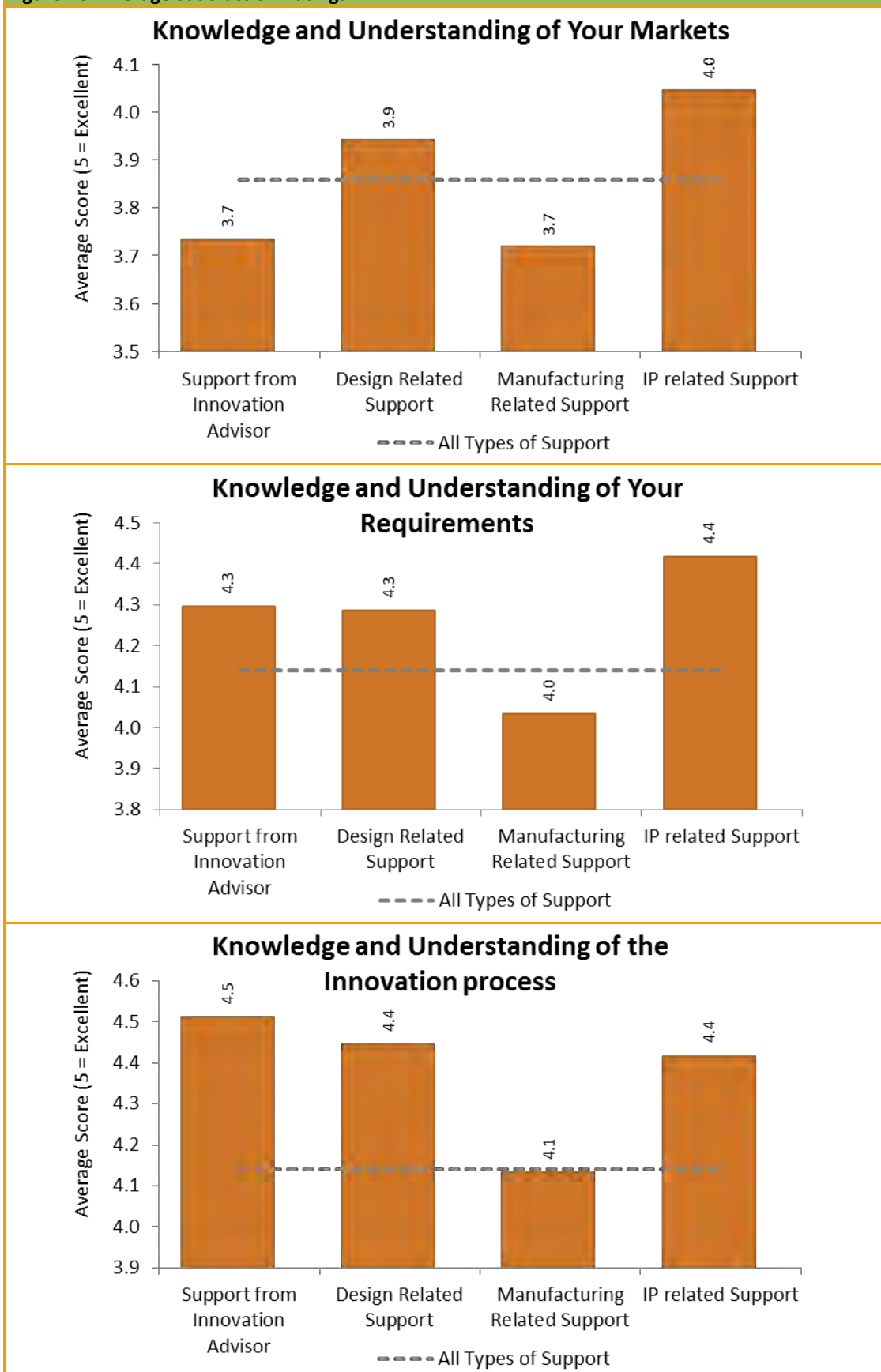




Figure 16: Average Satisfaction Ratings





Note: in Figure 16 above, the term Innovation Advisor refers to the Innovation Specialists.

Whilst overall satisfaction ratings with the service were high, many survey respondents offered constructive feedback and suggestions for ways in which the service could be improved. The most frequently cited suggestions related to:

- A need to **shorten and simplify the application process**. Responses highlight concerns that the level of detail in the information required from businesses to qualify for support was disproportionate to the intensity of the support itself. Responses highlight a need for advisors themselves to be empowered to make the decisions about which businesses can and should be supported, rather than undergoing a lengthy application process.
- An need to **simplify the process** of receiving support. Several respondents suggested that the number of people and organisations involved in providing assistance made the service complex and difficult to understand. Many also cited the frequent changes to structure and branding of the service as a further layer of complexity.
- A need to **develop closer links to other services**. In particular, sources of finance such as business angels and venture capital providers were highlighted here.

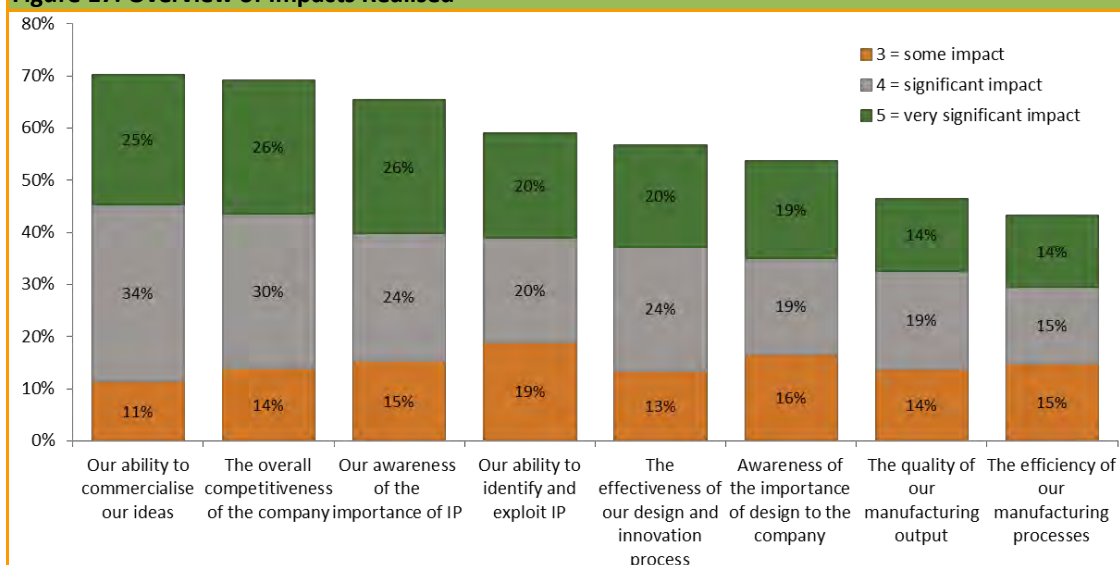
6.4.6 Impacts Generated

Responses to the survey provide strong evidence that the support available via the Programme has generated benefits for its clients.

Operational Impacts

Businesses were asked to provide a rating for the scale of different types of impact they realised as a result of the support provided. Figure 17 highlights the average scores given across the sample for different types of impact, with the headline finding that **a sizeable portion of clients report significant impacts on their ability to commercialise their ideas, and on the overall competitiveness of their company**. This is an important finding, which points towards the project having considerable success overall in delivering one of its core aims.

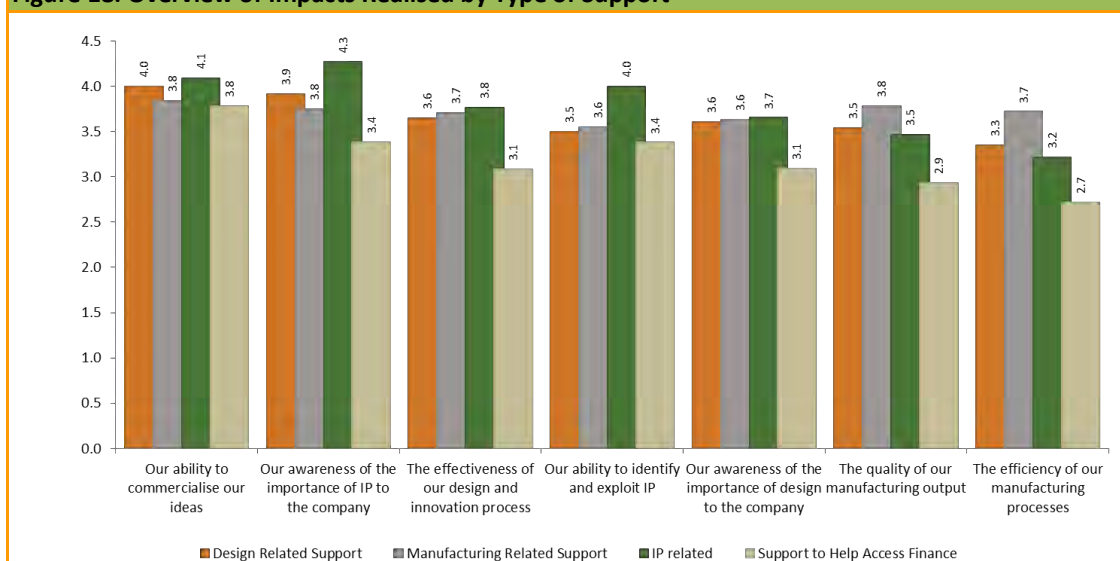
Figure 17: Overview of Impacts Realised



Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100

Looking in more detail at the average ratings provided by recipients of different types of support (Figure 18) indicates that the type of impact generated is driven by the mix of support provided. For example, average ratings for impacts related to IP are highest amongst those receiving IP support and likewise for manufacturing related impacts. However, in addition the data also suggests that impacts are being generated in areas in which support has not been explicitly focused.

Figure 18: Overview of Impacts Realised by Type of Support



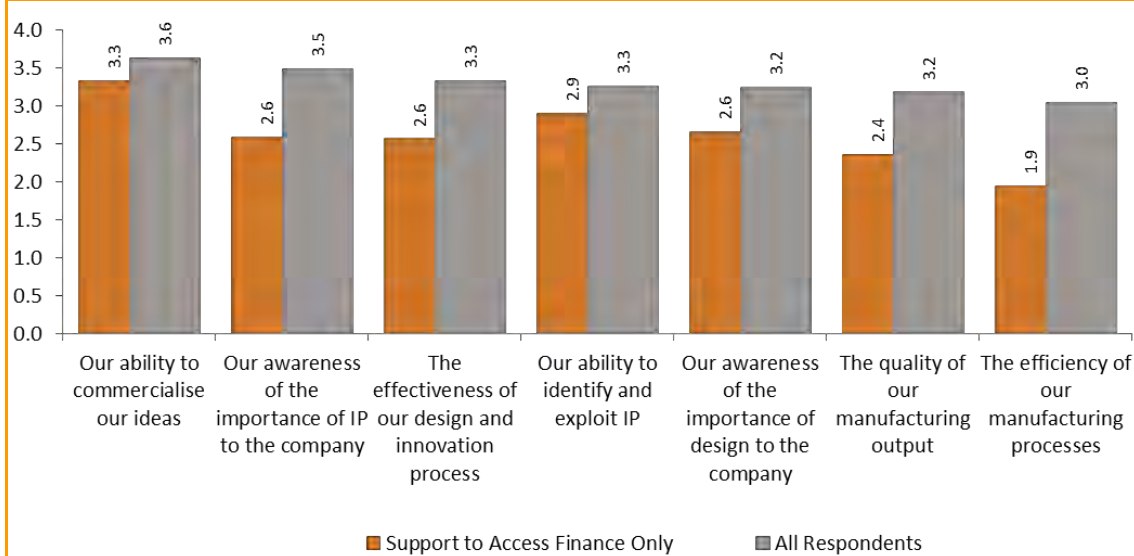
Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100



A further point arising from this analysis is that beneficiaries indicating they had received support to access finance for their project tend to report the lowest scores on average across all types of impact. As Figure 18 indicates, this trend is particularly pronounced amongst the businesses stating that the support they received from the Programme was purely related to finding finance for their project. Across all types of impact, this more narrowly focused support (most likely consisting of lighter-touch brokerage support to finance providers) does not appear to generate the change in business performance or process that more broadly cast support, covering a number of areas does.

A key test of benefits delivered is reviewing how the outputs and outcomes have impacted on the beneficiary businesses. This evaluation considered a number of metrics for associated impact, of which there were eight. The best scoring aspect was 'ability to commercialise products' where 25% of the sample claimed the impact was very significant, 35% significant and 17% some impact has been identified. The area where least impact was felt was 'improvements in manufacturing processes'. However, we believe this score to be high given the percentage of sample seeking such support. In this category 14% believe the impact to be very significant, 15% significant, and 15% some impact has been identified. What was also clearly demonstrated in the results was that when businesses receive one or more packages of support, we witness greater levels of long-term impact in the business overall.

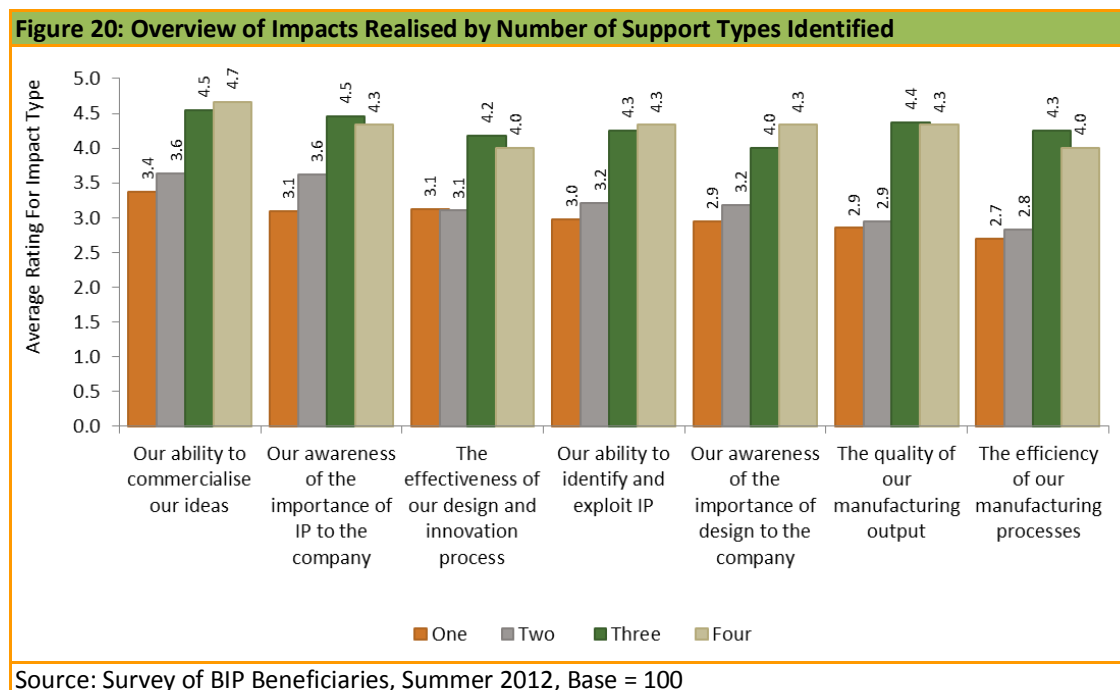
Figure 19: Overview of Average Ratings for Impacts Realised provided by Clients Receiving Support to Access Finance Only



Source: Survey of BIP Beneficiaries, Summer 2012, Base = 26



The charts underline this point and suggest that, across all types of impacts included in the assessment, the average rating for the significance of the impact will increase where a more extensive package of assistance across the full spectrum of the Programme's services has been provided. There is a marked increase in the average ratings provided by the clients indicating that their assistance from the Programme focused on three or more areas (e.g. design, IP and manufacturing).



6.4.7 Moving Innovation Project Forwards

There is clear evidence that the clients that approached the BI Programme with an idea for a new or improved product or service have been helped to make progress with their project. Figure 21 shows that prior to receiving support from the Programme, many clients were at an early stage in the innovation process (more than a quarter of the client group were at the initial idea stage). Looking at the stage that respondents indicate they are now at with their projects, there is clear evidence of progression – 28% indicate that they their new product or service has now been launched.

Almost 70% of clients with a specific innovation project indicate that they have moved their plans forward since receiving support from BI. Of these, 77% indicate that the support from the Programme was either very important or critical in securing this progress.



Figure 21: Progress Towards Implementation of Innovation Project

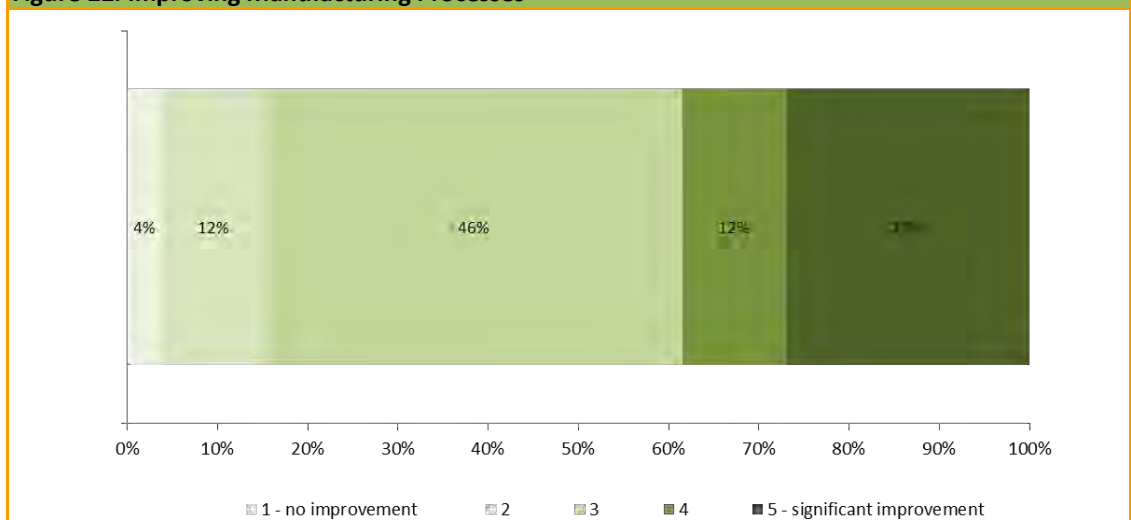


Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100

6.4.8 Improving Manufacturing Processes

Respondents indicating that they had received assistance with manufacturing were asked to provide a rating for the improvement in the effectiveness or efficiency of their manufacturing processes since receiving support from BIP. The proportion of businesses reporting a significant increase in this area is more limited. Only 39% of businesses receiving manufacturing related support rated the scale of the impact as 4 or 5). Although, it is encouraging that more than half of those who did report a significant impact indicated that the support from the Programme was critical in delivering this improvement.

Figure 22: Improving Manufacturing Processes



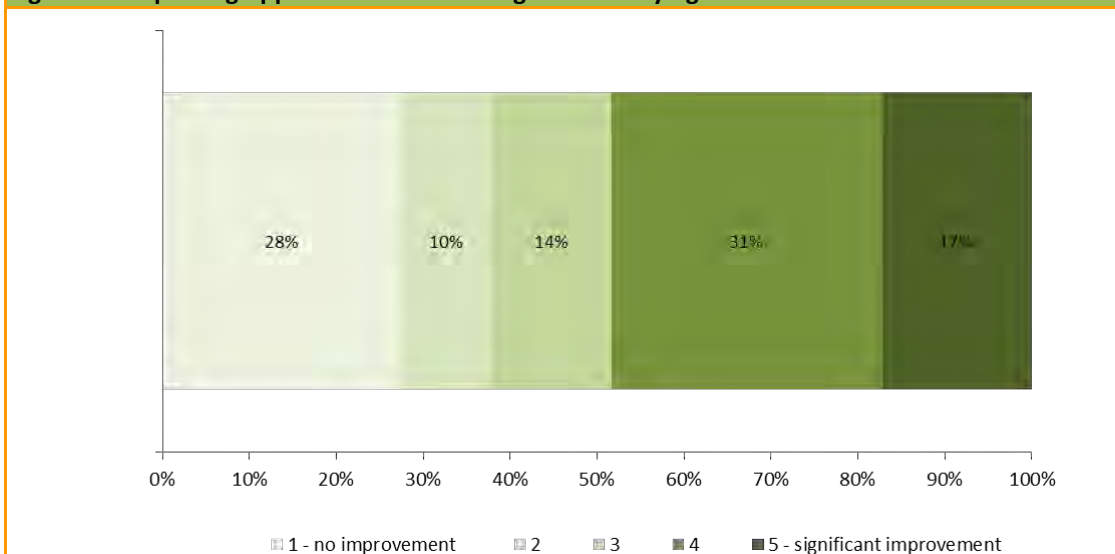
Source: Survey of BIP Beneficiaries, Summer 2012, Base = 26 businesses



6.4.9 Improving Approaches to Identifying and Protecting IP

Around half of respondents receiving IP related assistance report a significant impact on their company's approach to identifying and protecting IP. While this is encouraging, it is of some concern that almost 30% report no improvement in this area at all. This indicates that while the support provided might not have been sufficiently focused on embedding capability within clients, and focused too heavily on answering specific questions or queries.

Figure 23: Improving Approaches to Protecting and Identifying IP



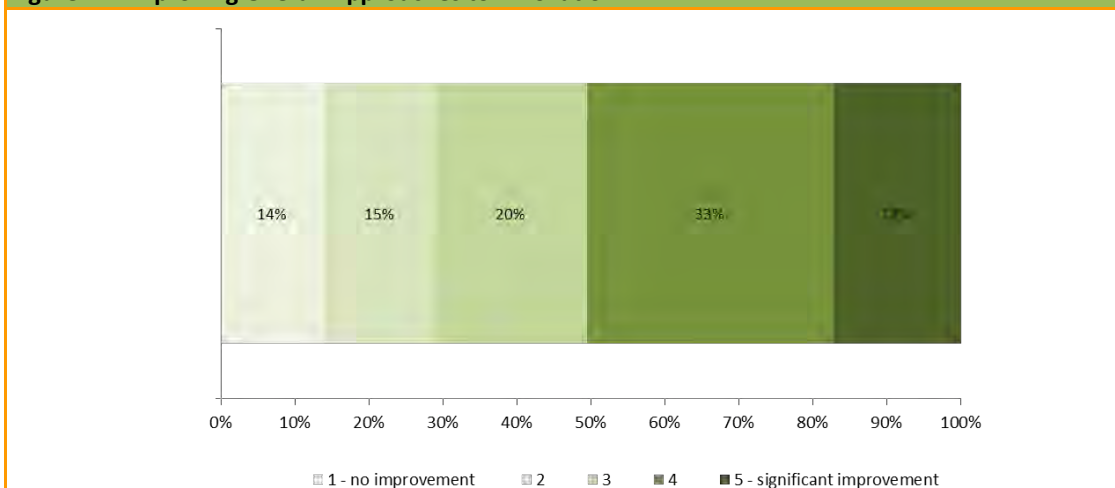
Source: Survey of BIP Beneficiaries, Summer 2012, Base = 27 businesses

6.4.10 Improving Overall Approaches to Innovation

All businesses were asked to highlight the extent to which their overall approach to innovation within their business has been improved as a result of the support via the BI Programme. As Figure 24 shows, there are clearly a sizeable proportion of businesses (29%) for which the Programme has had no, or very little, impact on the company's overall approach to innovation. This is an important finding for the Programme– while it is inevitable that innovation assistance will not always lead to change or improved capability within supported businesses, the proportion reporting no discernible impact on their approach to innovation appears high.



Figure 24: Improving Overall Approaches to Innovation



Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100 businesses

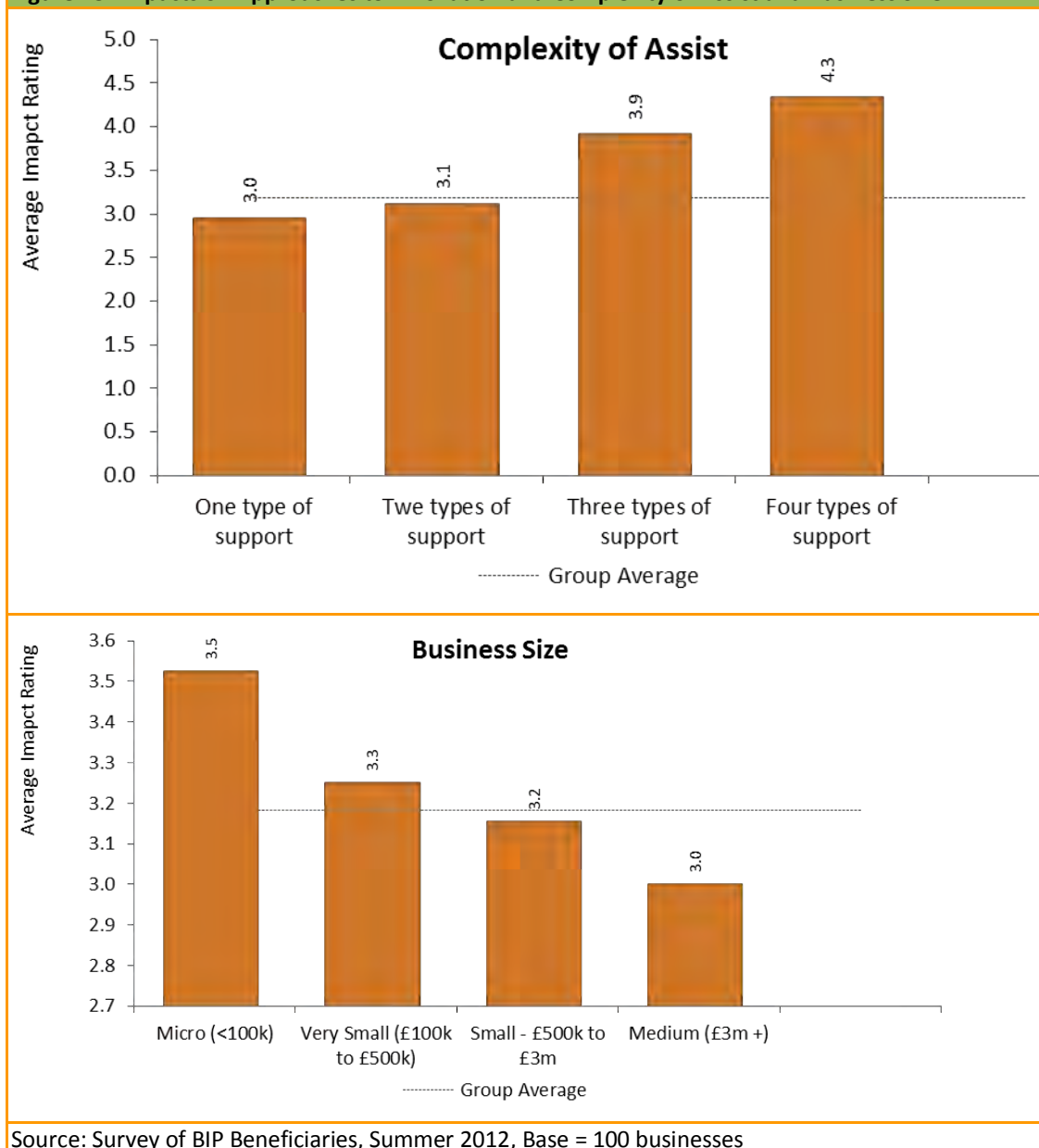
Overall, the average rating given for the scale of impact on the company's approach to innovation was 3.3. As Figure 25 shows, the average impact increases with the complexity of the assist, underlining the extent to which more broadly focused assistance is more effective in delivering impacts.

Interestingly, as the size of a business increases, the overall impact on innovation approaches and processes decreases markedly. Smaller businesses (turning over less than £500,000 per annum) report significantly larger average impacts.

This makes sense intuitively, given that it tends to be more difficult to alter innovation approaches in larger companies (not least because of the increased difficulty stimulating change or any sort in larger organisation, but also because of the increased level of complexity in innovation management in larger firms).

Survey data provides some indication that there will be reasonable levels of additionally associated with the support. Half of the survey respondents indicate that if the BI Programme support hadn't been available, they would not have accessed any external support and only 8% indicate that it would have been possible for them to access similar support from elsewhere, within a similar timeframe. This indicates that the project has successfully targeted the beneficiaries most in need of assistance.

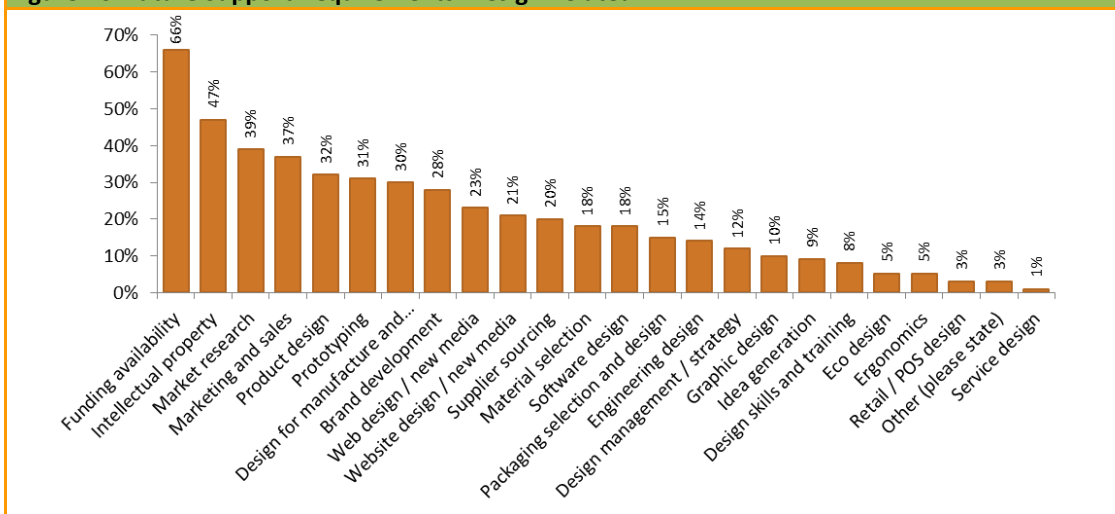
Figure 25: Impacts on Approaches to Innovation and Complexity of Assist and Business Size



6.4.11 Future Support Requirements

Businesses were asked to state what sort of advice and guidance they might require in future. For design related support, it is interesting that funding availability was most frequently cited (by two thirds of respondents) amongst the types of support required in future.

Figure 26: Future Support Requirements: Design Related

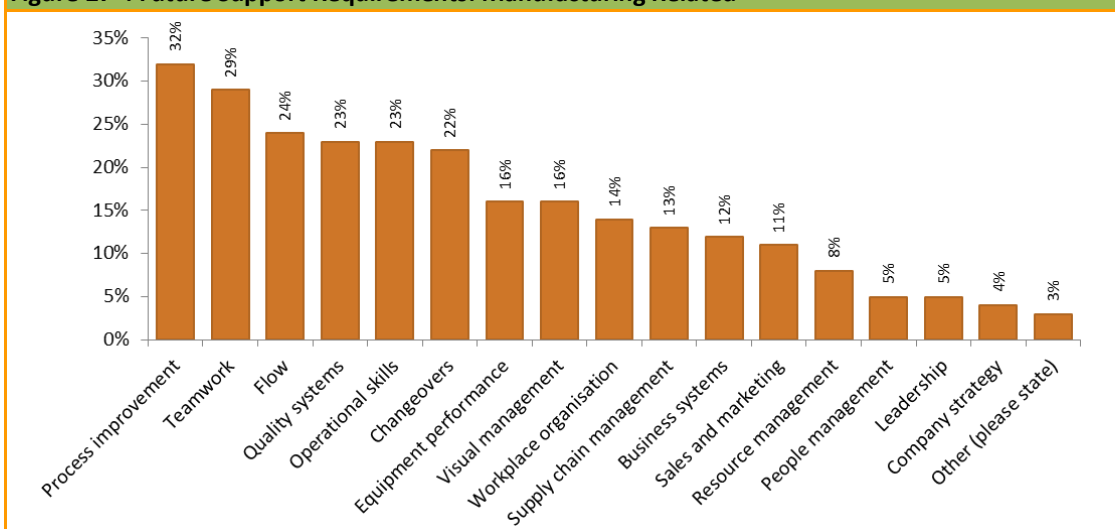


Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100 businesses

The blurring of the boundaries between design focused and wider types of support is also evident within responses to this question. After finance, the most commonly cited support types are outside of more technical aspects of product design and related to IP, market research and marketing approaches. This is perhaps an indication that many businesses are confident that they have the core skills and expertise in-house to deal with product and process design, it is in more generalised areas where support is needed.

Process improvement support was cited most frequently amongst future manufacturing support requirements. This is not surprising given the continued pressure for increased productivity and downward pressure on prices within the sector.

Figure 27*: Future Support Requirements: Manufacturing Related

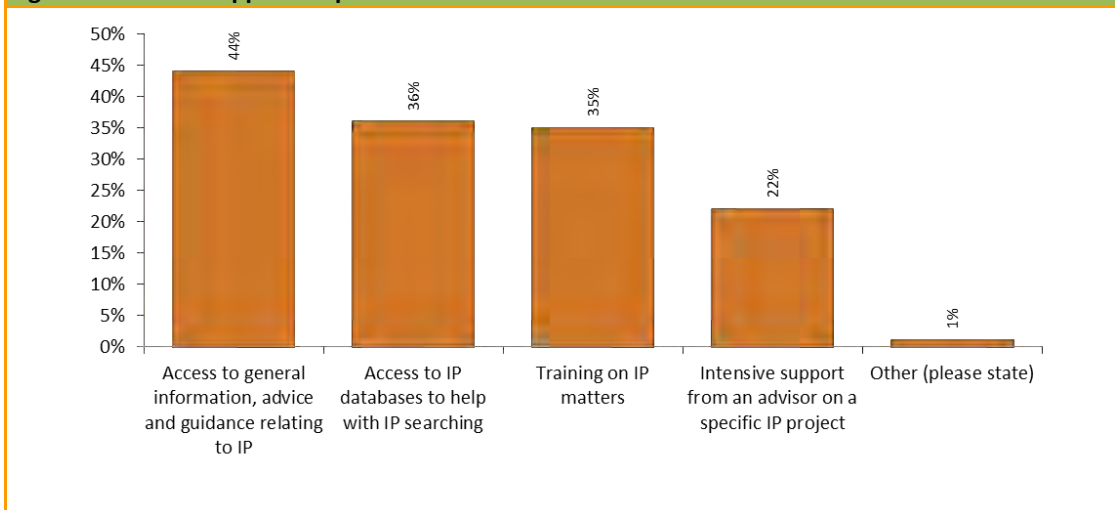


Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100 businesses



For IP, the emphasis of future needs is clearly focused towards access to information and guidance, although it is encouraging that more than a third of businesses expect to be looking to embed knowledge and understanding of intellectual property related issues within their companies through training on IP matters.

Figure 28: Future Support Requirements: IP Related



Source: Survey of BIP Beneficiaries, Summer 2012, Base = 100 businesses

6.5 Beneficiary Telephone Interview Results

The research questionnaire asked interviewees a series of questions relating to their experience during the BI Programme intervention. The survey focuses on identifying views, experiences and outputs. The results of the interviews have been summarised below.

For the purposes of this evaluation, the Consultants contacted those beneficiary companies whose opinions it was agreed would be worth a further, more in-depth discussion. Table 9 below, shows those beneficiaries who were successfully contacted for follow-up discussions:

Table 9: Beneficiary Companies: Follow-up Telephone Interviews

Name	Position	Organisation
Mike Shirley	Director	OSTC
Steve Kelly	CEO	SmartKem
Steve Penney	Director	Write Media
Tyrone Williams	Purchasing Manager	Yuasa battery
Ian Smith	Director	Q-Chip Ltd
Rob Hasse	Plant Manager	International Rectifiers
Peter Taylor	Managing Director	Acuitas
Professor Johns	Director	Haemir



Alex Lewis	Director	Surviva
Adrian Phillips	Managing Director	Adrian Phillips Engineering
Fiona Bennett	Office Manager	Alchemy Expo
Jane Whitehouse	Managing Director	IS Group Ltd
Jim Mowatt	Managing Director	Snowdonia Press Ltd
Ken Grant	Managing Director	Tiger Tim Products
John Bosworth	Managing Director	Fike Safety Technology Ltd
Steve Peace	Owner Director	Carmarthenshire Cheese

In addition to the completed interviews shown above, short discussions were undertaken with several individuals who were unable to spare the time for a full interview, namely Alan Rees of Analogue and Micro, and Phil Evans of Research and Marketing Group

6.5.1 Overall, what is your view of the promotion, management and execution of the BI Programme?

From evidence obtained during the telephone interview process, it is clear that there is limited recognition of BI Programme promotion or, indeed, the BI name itself. This was the case in over 50% of the interviews conducted. Interviewees were often unaware of which aspect of the WG support they had received had been provided under the Programme. If this level of recognition is representative of the beneficiary population as a whole we could clearly be under reporting the reach and benefits of the BI Programme.

It is possible to suggest that those companies who are more used to the process of applying for WG support were seen to be happier with the management and execution of the Programme. Ian Smith of Q-Chip, for example, stated that:

“Promotion of the Programme was through personal contact and although management suffers from the usual bureaucratic processes it was generally seamless and execution has happened without any issues.”

Interviewees were generally positive regarding the management and execution of the Programme and, in particular, the role of and support provided by the Innovation Specialists and delivery partners.

- “Overall our view of the management and execution of the Programme has been good. This is principally down to two people – our IS Mark, who has been a long-term supporter, and John Clement, with whom we have had direct contact and who is good at keeping us in touch with any developments.” Fiona did go on to make a general observation that if you don't know the individuals involved with the Programme by name, it can be extremely difficult to get any



understanding/advice from WG. Fiona put this down to the ever-changing nature of WG support, which makes things difficult for an SME to keep in touch. (Fiona Bennett, Alchemy Expo).

- “The programme seemed to be promoted well and our engagement with John Clement was excellent.” (Adrian Philips, Adrian Philips Engineering)
- “I have been very impressed with the management and execution of the support. I have regular meetings with Mark Davies (IS) who keeps me up to date with what is relevant to the company.” (Steve Peace of Carmarthenshire Cheese)
- “Hopefully, as we have seen with R&D schemes, the WG will now start to provide an open and coordinated way to support businesses. Dave Johnson did an excellent job and Nia Roberts was clearly very knowledgeable about IP issues. We will continue to use these people as they are very supportive and knowledgeable. Behind the individuals, things are less clear and that needs addressing, arguably sooner rather than later for the benefit of all Welsh Businesses.” (Steve Kelly, SmartKem)
- Whilst Steve appreciated that this was a pan-Wales programme, most of the knowledge that he has about the programme has been imparted directly by the IS. Clearly, Steve saw this relationship as being critical and one that has been built on mutual respect and trust. (Steve Penney, Write Media)

Some interviewees did, however, highlight issues relating to the management and application processes, and the lack of flexibility in the Programme structure, including:

- “My reflection of the process is that it was quite long-winded and, in parts, disjointed. This was probably due to the fact that we were moving between programmes and agencies.” Alex went on to comment that the wording required for the application forms was not business-friendly and, in his opinion, did not represent what an SME is trying to achieve. (Alex Lewis, Surviva)
- Steve believed the powers that be have recently taken the powers away from the IS for fear of them becoming too supportive of businesses. (Steve Penney, Write media)

When asked about the promotion and management of the Programme, Steve Kelly of SmartKem stated that:

- “It is fractious, unclear and ever-changing. This makes it difficult for innovative, potentially high-growth SMEs to plan ahead and be aware that support is likely to be available in a manner to suit the SME.”



Several interviewees stated that they would like to see more flexibility in the application and support process, particularly in relation to the industry-specific issues.

- “This situation (possible claw back of funding due to lapsed timeframe) has arisen because of the amount of time it takes to do things in this industry. For example, getting regulatory approval for such products can take upwards of £150K and months to achieve. We do wish that the programmes run by the Welsh Government could be more flexible to accommodate this type of industry-specific issue and to allow us to run (gain access for) two projects at the same time.” (Peter Taylor, Acuitas)
- “One of the problems with the Programme, which nearly caused us to withdraw, was the way that we funded the innovation. First of all we had to prove we didn't have the money, and then we had to prove that we had the full amount, i.e. £50k to purchase the product. They were suggesting various ways which were just inefficient and not what you would do. For example, selling an old machine to Heidelberg, getting paid, then finding the rest of the money to pay Heidelberg back. This just would not work and whilst the company wanted to be supportive we couldn't operate in this way. In the end, it was only because a friend of mine could lend me £15k that we could go ahead and purchase the equipment. Hopefully there are better ways to doing this, i.e. not through bank letters but maybe through the supply company, i.e. Heidelberg.” (Jim Mowatt, Snowdonia Press)

6.5.2 Why did you select the BI Programme in the first instance?

When this question was put to the interviewees, the most common response (11 companies, 69% of sample) was that the Programme was ‘the correct fit’ for the company or the intended project. Answers given to back up this statement included:

- We chose BI because of the Programme's applicability to our industry and specific NPD project (Ken Grant, Tiger Tim Products)
- “What we needed was an independent audit of our manufacturing processes and advice on lean manufacturing...and this is exactly what we got from John Clement.” John Bosworth, Fike Safety
- “We were in need of business process innovation.” (Fiona Bennett, Alchemy Expo)
- “We needed to identify the likely costs and risks of manufacturing process innovation.” (Ian Smith, Q-Chip)
- One company required IP advice specifically.



Five companies (31% of sample) responded that 'access to funding' was the key reason for choosing BI and this was followed by 'signposted by an advisor' (4 companies, 25% of sample), with comments including:

- "We are well-known to our IS, who tries to guide us at each stage of our company/product development." Steve Kelly, SmartKem

Three companies (Acuitas, Adrian Phillips and Write Media) suggested that the people involved with the Programme, i.e. IS and delivery partners, were fundamental in the decision making process:

- "We needed to deal with somebody that got what we were about, understood our complex processes and knew what support was applicable for us. Alan Davies was that person." (Peter Taylor, Acuitas)
- "John Clement came across as highly knowledgeable and the support we have received has been highly beneficial." (Adrian Philips, Adrian Philips Engineering)
- "The normal course of events is that we will come up with new ideas or suggestions, or indeed clients, and we will put opportunities forward to the IS and then discuss the most appropriate way forward with them in relation to grant and support." (Steve Penney, Write Media)

Surprisingly, only one company gave the key reason as being that the advice was free. This is a clear indicator as to the VfM proposition of the BI Programme.

6.5.3 What do you believe were the key deliverables/benefits from your project?

'Access to independent advice and expertise' was the most common benefit derived from the beneficiaries' intervention with the BI Programme. This response was given by five of the interviewees (31% of the sample – Fike Safety, Adrian Phillips Engineering, Q-Chip, Surviva and Tiger Tim).

'Improved efficiencies' was the second most identified benefit derived with four responses (25% - OSTC, SmartKem, Carmarthenshire Cheese and Alchemy Expo), with 'access to funding' joint third (three responses, 19% - Acuitas, Haemir, Snowdonia Press) with 'new product/process development' (Haemir, IS Group, Yuasa)

One comment of note in relation to new product development came from Jane Whitehouse of IS group who stated that:



- “We have developed a new manufacturing process which has significantly improved efficiency. This, alongside a leadership programme, has allowed the business to grow by 20% to £1.2m.”

Equipment/plant development was a key benefit for two beneficiaries (Carmarthenshire Cheese and Surviva), with International Rectifiers stating improved productivity was a key benefit for the company.

6.5.4 What were the outputs from the project?

When asked to outline the outputs generated as a result of the BI intervention, the following areas were identified by the interviewees:

Five companies (33% of the sample) stated that increased efficiency was a tangible benefit of BI support, with John Bosworth of Fike Safety technologies stating that, “product returns had decreased from 8.5/9% to 0.4% in the last 12 months and in some processes ppm (parts per million) levels have reduced from thousands to tens.”

Four companies (25% of sample - Tiger Tim Products, Haemir, Acuitas, Write Media) stated that new product development had been a tangible outcome of BI support. Tiger Tim stating that they now have a novel product, developed under BI, on the shelves at Sainsbury's, and Haemir and Acuitas have both developed prototypes under the BI support.

Four companies (25% - SmartKem, Alchemy Expo, Write Media and Snowdonia Press) identified a potential increase in profitability as a tangible outcome of the BI intervention:

- “The impacts will not be immediate but I suspect this could increase our profitability by 5% per annum (current t/o £515k)” (Jim Mowatt, Snowdonia Press)
- In our own way, as a result of this, we have ended up with products. These are products we would use ordinarily internally. If I was then asked what impact those products have, they have undoubtedly increased our turnover by an additional 15%, and will continue to do so.” (Steve Penney, Write Media)

Three companies (19%) stated that ‘up-skilling of the workforce’ was an impact/benefit of their time with BI, and three companies again saw ‘jobs created’ (Acuitas, OSTC and Write Media) as an output



- “We have taken on 5 post-grads from local universities in the last 12 months, and we would like to employ a further 10 over the next 12 to 24 months.” (Peter Taylor, Acuitas)
- Over the last two years we have probably doubled our staff numbers to 10 as a direct result of the intervention of the BI programme.” (Steve Penney, Write Media)
- “The key deliverable is that we have been able to switch off our Excel system and move to a more reliable, quicker and scalable system.” Mike thought about the impact of this and he went on to comment that, “in many ways, this will allow us to take our operation from the current 60 staff up to 200 staff in the next four years. It is as critical as that.” (Mike Shirley, OSTC)

Two companies (13%) stated ‘increased productivity’ and one company a piece saw ‘increased chance of industry accreditation’ (Adrian Philips Engineering) and ‘access to new markets’ as an outcome of the support.

6.5.5 What are the outcomes from the project and follow-on activity?

The answers provided for this question were very similar to those of question 6.6.4 above, with ‘improved efficiency’, ‘reduced R&D timescales’, ‘up-skilling of employees’, ‘new product development’ and ‘increased turnover’ all being put forward by no more than two companies (13% of the sample).

“Improved manufacturing processes” was an outcome stated by six companies (40% of the sample) and example comments included:

- “Outcomes – we are going to be better placed to win more business and indeed Siemens have recently indicated that they would like us to manufacture other products on their behalf. This is only possible because we are moving towards accredited standards.” (Adrian Phillips, Adrian Phillips Engineering)
- “The business has been relocated from China and all new growth will be built around new innovation, the manufacturing layout and the new production machine. This will move the business on to an entire different plain and will be the cornerstone of its future success.” (Alex Lewis, Surviva)

It should be noted here that the reason given by several interviewees for the general inability to comment on possible follow-on activity is that they would like to know more about what further support is available from BI and the WG in general and they would like further discussions with BI in the near future to see what work could be undertaken going forward. Specific comments to this effect included:



- “It is difficult to say what we can do with follow-on. There are lots of things that we can do that we wouldn't necessarily think of as R&D but through discussions with the Consultants clearly are.” Mike said he would love another chat to see if they could benefit from RD&I. He believes there are opportunities to improve the performance of the business which, in turn, would improve the likelihood of future job creation and profitability. (Mike Shirley, OSTC)
- “We have ideas about follow-on activity but not necessarily how we can be supported or funded. For example, we can only do 5m totems, it would be excellent if we could move to 7m or even 10m but this would require a revision of our manufacturing process and possibly further investment. Another opportunity we have considered is doing things with integrated photovoltaics. This would take us into a new area and we would need some support. We are very interested in the early stages of SMART Cymru and maybe a revisit of the BI programme.” (Jane Whitehouse, IS Group)
- “In terms of follow-on activity, we are now more favourably exposed to embedding more innovation, new equipment and new ways of doing things. We would like to know more about what we can do in the future. As a business, we had six people before the recession, now seven and soon to be eight. We think we are weathering the storm and could come out the end of it with a profitable and expanding business.” (Jim Mowatt, Snowdonia Press)
- “Without doubt there have been lots of positives from our first BI project. As a result of that we have gone on to make an application for BI design. Fiona went on to say that the nature of their business means that they need to innovate constantly. They are currently looking at the incorporation of a micro-tile into their display stands. These touch-screen micro-tiles can be arranged almost seamlessly and can deliver interactive content. This will allow the company to not only sell print in the future but also to produce local content and content management. This will open up another avenue of activity for the business.” (Fiona Bennett, Alchemy Expo)

6.5.6 Rating the impact that their experience with the BI Programme has had on their business?

The interviewees were asked to rate on a scale of 1 to 10 (with 1 being a negative impact, 5 being no impact, and 10 being a highly positive impact), the impact that their experience with the BI Programme has had on their business in the following areas?

**Table 10:** A greater understanding and aptitude for Open Innovation

Score	No of Responses	Weighted Score
3	1	3
4	0	0
5	3	15
6	4	24
7	3	21
8	2	16
9	0	0
10	3	30
Total	16	109
Weighted Average	-	6.8 out of 10

Overall, there is a noticeable 18% rise in the understanding of open innovation. Three companies (19% of the sample) indicated that it had a very positive impact, giving it a score of 10. Only one business said that it had a negative impact but did not go on to comment why (Tiger Tim Products) and the Consultants would suggest that this answer related to the interviewees attitude to competition as opposed to any negative affect provided by intervention from the BI Programme.

Table 11: A greater willingness to work with externals (professionals, HEIs etc)

Score	No of Responses	Weighted Score
3	0	0
4	0	0
5	2	10
6	1	6
7	3	21
8	5	40
9	1	9
10	4	40
Total	16	126
Weighted Average	-	7.9 out of 10

One of the stand-out benefits and likely long-term benefits of the BI Programme is the fact that beneficiaries recognised the benefits of working with externals, i.e. consultants, professionals, and HEI. For businesses to be prosperous they need to continually engage in innovation.

**Table 12:** View on the Welsh Government and its Engagement and Support

Score	No of Responses	Weighted Score
4	1	4
5	0	0
6	3	18
7	3	21
8	6	48
9	1	9
10	2	20
Total	16	120
Weighted Average	-	7.5 out of 10

This combined score had two key influences. On the positive side, the performance of the IS and indeed programme management to move projects forward and to provide a product that was considered to be fit-for-purpose. On the negative side, issues such as handling applications and the burden of information required for what was a number of respondents, relatively small amounts of funding.

Table 13: Confidence about the Competitiveness of your Business

Score	No of Responses	Weighted Score
4	1	4
5	2	10
6	0	0
7	4	28
8	5	40
9	3	27
10	1	10
Total	16	119
Weighted Average	-	7.4 out of 10

There has been some positive impact, again a deflationary factor on this was clearly the continuing economic situation, lack of funding to move new products and processes forward (new) and businesses desire to conserve cash.



Table 14: Insight into Possible New Product, Process or Service Opportunities

Score	No of Responses	Weighted Score
4	1	4
5	3	15
6	2	12
7	4	28
8	1	8
9	2	18
10	3	30
Total	16	115
Weighted Average	-	7.4 out of 10

Several businesses stated little impact in relation to greater insight into NPD. These were companies that had access to the Programme not specifically for developing new products or services but for other reasons. Again a high number of 10 (3) and 9 (2), i.e. a third of the sample, responses is encouraging.

Table 15: The Scale and Reach of the BI Programme

Score	No of Responses	Weighted Score
4	0	0
5	5	25
6	0	0
7	4	28
8	6	48
9	1	9
10	0	0
Total	15	110
Weighted Average	-	7.3 out of 10

We asked about recall and reach of the BI Programme based on the evidence obtained through the stakeholder and beneficiary survey. We would have expected a high score in this sample given that they have benefited on more than one occasion and are closely connected to IS in the majority of instances. Whilst we can view the score as positive, it is lower than one would expect. Again suggesting that, moving forward, marketing has to be stepped up so that overall outputs will be achieved.

It can be seen from the weighted averages provided above that the BI Programme scored consistently for each of the various aspects of the support included. "A greater willingness to work with externals" obtained the highest



weighted average score with four companies giving the maximum score of 10, suggesting that the Programme had been successful in encouraging increased collaboration within the mindset of the beneficiary companies.

“View on the WG and its engagement and support” came joint second in terms of weighted scores and this would back up the positive individual comments made during the telephone discussions, particularly that of Carmarthenshire Cheese (see 6.5.7 below) although it is obvious from the answers that more clarity of the different types of support available is required (again, see 6.5.7 below).

“A greater understanding and aptitude for open innovation” was the lowest scoring (6.8 weighted average) aspect of the Programme, although it was by no means a worryingly low score. It was the only question to register an answer of 3 or below (Tiger Tim Products) but the Consultants would suggest that this response was a result more of a cautious attitude in relation to competition shown by the beneficiary company rather than any issue with the support provided through BI.

6.5.7 Has your intervention with the BI Programme positively or negatively affected your attitudes to NPD, design, manufacturing and collaboration?

It should be noted here that, although some aspects of the Programme could possibly be improved going forward, all 16 beneficiary interviewees believed their intervention with the BI Programme had positively impacted on their attitudes to the above.

Not a single interviewee believed their intervention had resulted in negative attitudes, with example comments including:

- “It’s had a really positive effect! What we need now is to know about how BI can help and how we can plan this. There are lots of opportunities that we are looking at for which we need help. We would also like to know a little bit more about SAW and other strategic programmes.” (Mike Shirley, OSTC)
- “Any support often helps elevate NPD and manufacturing. As an anchor company we are at the heart of a lot of what is often happening and this positively contributes to our determination to work with the industry and government.” (Rob Hasse, International Rectifiers)
- “In the current economic times, this input can not be overplayed.” (Tyrone Williams, Yuasa)
- “Overall, we have to say positively affected our attitude to NPD, manufacturing and indeed collaboration. We have for some time



benefited from grants for R&D but the BI grant allowed us access to capital equipment and we could possibly use it again in the future.” (Steve Kelly, SmartKem)

- “This (experience) will make us highly competitive in the marketplace.” (Alex Lewis, Surviva)
- “Overall, it has strengthened our belief in NPD and design and will allow us to succeed in our chosen market space. We want to be seen as an innovative company and most of the ideas and support are being commercialised through support offered in one way or another by the WG.” (Fiona Bennett, Alchemy Expo)
- “We are a highly-innovative and forward-thinking company. In this regards BI has not added anything more but has certainly helped us along the way. In some regards it has de-risked for us, the process of using outside consultants and this has proved to be very useful.” (Ian Smith, Q-Chip)
- “This has definitely had a positive effect and has benefited the business tangibly. What we need now is to go on to do other things and we would welcome suggestions and relationships or indeed introductions made by the WG.” (Jane Whitehouse, IS Group)
- “The intervention has certainly positively affected our attitudes to collaboration and ‘open’ innovation, and the use of external partners. We have accessed expertise and equipment that we would not have done otherwise and we have developed new products as a result.” (Ken Grant, Tiger Tim)
- “We are always looking at developing innovative ideas to remain competitive. All our engagements with the IS have proved positive and we are extremely confident we can move forward. We hope the relationship with the IS will continue.” (Steve Penney, Write Media)

In addition to the above comments, one interviewee (Steve Peace, Carmarthenshire Cheese) stated that he did indeed have a positive experience during his time dealing with the BI Programme, and went on to state that this had restored his confidence in collaboration with WG as this was not the ‘norm’ within his own dealings with WG programmes. Steve commented that he “does now look more favourably on collaboration with WG”.

6.5.8 How could WG assist you more with Business Innovation?

Unsurprisingly, given the prevailing economic conditions, and the requirement for SMEs to manage cash flow through the business, continuing access to funding/grants (Innovation Vouchers) was the most popular answer to this question, although it should be noted that under half of the respondents (7



companies, 44% of the sample) gave this answer. Example comments included:

- “Overall, there are lots of ways that the WG should assist innovative businesses indigenous to Wales. In terms of grants, the higher proportion of grant the better. In future, if we were to be funded again from WG we would be prepared to accept a mix of grant and equity to get the business off the ground. This is an approach used by Wellcome Trust and there is no reason why this couldn't be adopted in Wales.” Professor Johns, Haemir
- “If this was open, possibly we would like to see things such as lower energy costs so that we can compete globally, continued R&D support and better tax regimes for R&D. Rob says they have had recent meetings with WG where he has aired some of his thoughts and concerns.”
- Steve concluded by stating that, as for all SMEs in the current climate, the Welsh Government needs to do its best to “keep the money flowing” and to support Welsh SMEs through these particularly difficult times. (Steve Peace, Carmarthenshire Cheese)

Six interviewees (38%) stated that more information on what support is available, and more clarity on the difference between support programmes is what is required going forward. Comments included:

- “The WG desperately needs to be more communicative, simplify things in terms of language, application processes, one point of call, and create an umbrella approach to what they do to support innovative high-growth SMEs.” (Steve Kelly, SmartKem)
- “When we had a relationship manager we knew what was available in general and what was available to us...that visibility has gone and certainly we don't get any insight into what is likely to happen in the future. Without this we can't plan to continue our growth in such a way.” (Fiona Bennett, Alchemy Expo)
- “From what I have learnt from this interview there is more within the WG that we could possibly benefit from.” Mike went on to suggest that another meeting with Alan, or possibly the Consultants themselves, to look at what is possible going forward. (Mike Shirley, OSTC)
- Tyrone did state that knowing what was available to Yuasa at any given time would be of great help going forward. The company has good relations with the Welsh Government and these can only be enhanced by increased communication and clarification on the support available, not just financial but advice and networking also. (Tyrone Williams, Yuasa)



- “I am unaware of the BI name and unclear as to all the different programmes of support offered by the WG. This is an area which could be promoted/outlined more to provide clarity and transparency.” (John Bosworth, Fike Satefy)

Three companies (Acuitas, Carmarthenshire Cheese and Surviva – 19% of the sample) suggested that more flexibility in the support provided, particularly in the application process, would be beneficial in the future:

- “We are coming to the end of a £1.2 SIF grant relating to a biomarker that facilitates the early identification of Alzheimer's disease. We still have £200k of this to spend and we have been given an extension until the end of December but, unless a further extension is given, we will lose this funding. This situation has arisen because of the amount of time it takes to do things in this industry. For example, getting regulatory approval for such products can take upwards of £150K and months to achieve. We do wish that the programmes run by the Welsh Government could be more flexible to accommodate this type of industry-specific issue and to allow us to run (gain access for) two projects at the same time.” (Peter Taylor, Acuitas)
- Steve also suggested that the various support programmes should possibly be a bit more flexible and should have the facility to respond to the needs of the individual company in question. Steve realises that this is difficult, especially in the current climate where all money needs to be vigorously accounted for, but does believe that fast-track options for successful companies and the ability to fund more than one project at a time should be manageable. (Steve Peace, Carmarthenshire Cheese)
- This has probably been said before but we need Government people that have previously been business people. What we need is more flexibility in the Scheme(s) to make it more expedient and possibly better knowledge of how all the schemes knit together for the benefit of businesses. (Alex Lewis, Surviva)

Two companies (Q-Chip and Tiger Tim Products) stated that they were happy with the support provided to date and just wanted to be kept informed of what was available going forward, with one company unable to provide an answer.

6.5.9 Any other comments, observations or recommendations?

Further information offered by the interviewees included:



- “I am very supportive about BI. The new capital equipment has just arrived and will have a positive impact on business performance.” Alan Rees, Analogue and Micro. *(Note: the Consultants did suggest that possibly by way of a case study we should return in 6 to 12 months time when Alan would be in a better position to specifically identify the outputs of the investment.)*
- “More than willing to play my part as a case study and help young manufacturing businesses throughout Wales.” Alex Lewis, Surviva
- “Just to say that WG has been very supportive of our business and our business has prospered as a result...long may it continue.” Fiona Bennett, Alchemy Expo
- “It is a good programme that through good individuals has been supported well.” Ian Smith, Q-Chip
- “We do welcome our engagements with WG and these have generally proved to be beneficial. We would like to know more and get further engaged, particularly to support our drive for innovation and product efficiency.” Jane Whitehouse, IS Group
- Overall, I can see these projects as positive, as many of them are, and can see the benefits in sustaining such an initiative.” Rob Hasse, International Rectifiers
- Steve’s personal view is that they (WG) have lost faith in the IS to deliver most of this at the coalface. It is Steve’s firm opinion that putting the power back into the IS to make decisions effectively and expediently would benefit the Programme no end. (Steve Penney, Write Media)



7 CONCLUSIONS

This mid-term evaluation is concerned with the performance of the BI Programme during its first three years. The Programme was designed in early 2008 when the economy and economic outlook was positive. However, the Programme has operated in vastly different global economic conditions, which have undoubtedly affected delivery and performance. The Programme was innovative in its own right in that it placed beneficiaries at the centre of the Programme and clearly recognised that innovation, specifically open innovation, is a non-linear process.

General Conclusions

Across all sample groups, satisfaction rates appear to be high for the Programme, with particular praise aimed at senior management, the IS, the breadth and expertise within programme delivery, perceived VfM and fitness-for-purpose. There were some minor issues reported in relation to management, delivery and appraisal, similar in extent to other programmes we have evaluated at the mid-term. It is correct to state that Programme management are continually reviewing the Programme in order to improve performance and this is recognised by the various stakeholders.

In relation to the delivery partners, overall performance during the first phase of BI was deemed to be good. BI-M support generally scored better in terms of knowledge and understanding of businesses, markets, innovation requirements, and the innovation process than BI-D. In the Consultants' view this is most likely to relate to content since manufacturing support is more developed and structured than design.

There is some criticism of Programme marketing, both internal and external. Due to the embargo on marketing, the BI Programme has clearly struggled to raise awareness, build understanding and stimulate deal flow. For example, our small telephone beneficiary survey identified that 50% did not recognise the Programme title and content. One result of this may be that outcomes and impact may be under-reported.

Beneficiaries represent all key sectors although manufacturing and the professional, scientific and technical sectors dominate support. There are a number of reasons for this including the fact that historically development and innovation has been focused on manufacturing businesses.



Some Sector Heads argued that innovation would best be supported vertically (i.e. within sectors) rather than horizontally with horizontally with centralised control. In our view a matrix approach is required, ensuring that key messages reach all target audiences (sectors) while at the same time tailoring these messages and marcoms techniques according to the various groups.

The BI Programme product offering was generally seen to be fit-for-purpose and meeting the needs of beneficiary businesses. The offer ranges from engagement and support through the IS and IP specialists, further engagement and delivery of programmes under BI-D and BI-M, and access to Innovation Vouchers. Some overlap was identified by beneficiaries due in part to the way that the Programme has been marketed by the PMT and delivery partners. This could be addressed by streamlining the portfolio together with a more coordinated approach to marketing communications (marcoms). The evaluation identified limited uptake of business process innovation and commercialisation and again this could be addressed through marcoms.

The e-survey identified access to finance related assistance as a dominant aspect of support, raising some interesting questions. As BI is not a provider of finance in its own right, with the exception of Innovation Vouchers, it is assumed that this refers to referrals by the Programme to other funding organisations/projects. We are aware that whilst WG supports businesses in this way, other UK regions have gone further to provide more hands-on, long-term support through a range of mechanisms and have run or piloted investment readiness workshops looking at the need to raise investment, its various forms, and identifying what finance is suitable to the business and the business environment.

When asked to identify future requirements for support, the standout requests from beneficiaries were for 'funding availability, including grant' (66% of the beneficiary sample), followed by 'intellectual property' (47%), 'market research' (39%), and 'marketing and sales' (37%).

Research identified confusion and frustration amongst beneficiaries in relation to assessment and evaluation processes and for Innovation Vouchers in particular. Processes are regarded as being longwinded, and requiring unnecessary detail and financial information. We know that this is a common criticism and understand that there are procedures all grant issuing organisations need to follow. That said, we believe that there are opportunities for streamlining without compromising rigour, a view expressed by some senior stakeholders.



Specific Conclusions

The specific aims of the evaluation have been to establish whether the model remains relevant and delivery successful, and to capture evidence and commentary on key performance metrics.

Performance of the Programme to date

Performance against target outputs (Table 16) is variable. Enterprise assists fall short (62% of target) due to the dramatically changed economic environment and delays caused by political changes. BI management believes that in the second phase most (if not all) of the shortfall can be made up. The process of 'catching up' on the E&D data is ongoing and programme management will continually analyse this data in order to make recommendations for improvements going forward, both for this programme and for other future programmes.

Table 16: Programme Performance against Target Outputs

	Mid-term Target	Mid-Term Actual	Deviance (Units)
New/improved products/processes/services	200	214	+14
Enterprise assists	820	511*	-309
Products registered	142	126	+16
Enterprises financially supported	165	178	+13
Profit benefit	£5.6m	£2.25m	-£3.35m
Investment induced	£2.2m	£1.4m	-£800k
Jobs created	23	40	+17

* Note: up to the point of this mid-term evaluation, 511 Enterprise Assists were completed. Out of these 511, 443 companies returned the E&D forms.

Apart from profit benefit and investment induced the Programme is on or slightly above target, indicating that performance in these areas is likely to be strong as the rate of enterprise assists increases.

Investment induced is 64% of target and as investment lags innovation-related business support there is every possibility that the shortfall will be addressed in the second phase. In turn profit benefit lags investment induced. Is good practice to measure investment induced and therefore profit benefit beyond the end of programmes to ensure that full impact is captured. Stakeholder Finance Wales indicated that the WG should review innovation-related interventions over a longer timeframe (longitudinal study, six years +).



It is clear that the PMT, key stakeholders and delivery agents are not unduly concerned about performance to date given the challenging environment. Given a more stable situation both inside and outside the Programme, and recognition and adoption of delivery improvements, management is confident about future performance.

Performance of Third Party Providers

In the first three years of the six-year Programme, BIC Innovation was awarded the contract for delivering design support, and Enterprise Consulting manufacturing support. Both contractors performed well, with Enterprise Consulting specifically excelling in a number of areas. At the mid-point, (3 years) contracts were re-tendered with Enterprise winning both contracts. Clearly offering three-year terms kept providers focused, benefiting the Programme and beneficiaries. According to the PMT second-term bids generally offered better VfM than those of the first-term and are configured to deliver the required outputs and outcomes.

Stakeholder Feedback

Stakeholders are aware of the central and increasing prominence of innovation in Government and EU strategy, policy and future programmes, and recognise that innovation will be a key driver in the economic recovery. Sector Heads welcome innovation support, with some wanting greater control in shaping delivery of BI within their sectors to ensure a targeted approach that will increase engagement and take-up.

Benefits Realised by Beneficiary Businesses

Participating companies identified a range of benefits with the e-survey and in-depth telephone interviews captured the following information:

On a scoring scale of 1 to 10 (1 being a negative impact, 5 being no impact, and 10 being of high impact), the telephone survey produced the following results:

Table 17: Weighted Scoring of Various Aspects of Impact

Type of Impact	Weighted Average
Greater understanding of Open Innovation	6.8
Scale and Reach of the Programme	7.3
Confidence about Competitiveness of the Business	7.4
Insight into NPD	7.4
View of the WG and its Engagement/Support	7.5
Greater Willingness to Work with Externals	7.9



When asked about their aims when they first started receiving support from the BI Programme, 84% of respondents stated that their aim was to develop or improve a product/service, with 39% stating it was to find finance for a project, 29% stating it was to identify or protect IP and 26% suggesting it was to develop or improve a manufacturing process.

However, when asked to highlight the focus of the support they received from BI to implement their project, although the headline aim for most was to improve or develop a product/service, the support they actually required and drew down often related to securing finance for the project, with 46% of the respondents giving this answer. 40% stated the focus of the support was design, 35% manufacturing, and 26% Intellectual Property.

When asked for an overview of impacts realised 25% of the sample identified that engagement had a very significant impact on the business' ability to commercialise ideas, with 34% stating **significant impact** and 11% **some impact**.

Overall, respondents reported high levels of satisfaction with the support they received from the Programme with 59% of the e-survey respondents stating that they were very satisfied and 30% satisfied, with only 9% suggesting any level of dissatisfaction.

Market Need and Economic Changes

British and Welsh Governments are committed to providing an environment in which businesses across sectors are encouraged and enabled to innovate to improve their competitiveness. In recent years the WG, focusing its support on key sectors, has demonstrated its commitment via the "*Science Strategy*" and soon to be published "*Innovation Strategy*". The British Government believes that innovative companies, particularly SMEs can help lift the country out of recession. There is also renewed enthusiasm for supporting the UK manufacturing sector with a specific ambition to become the leading high-tech manufacturing country within Europe.

The need for innovation support continues. Indeed, given the prevailing economic conditions it is even more important now than when BI was conceived. To become and remain innovative and competitive, business needs to be able to access new technologies, materials, processes, knowledge and management skills. And an open innovation model as exemplified by BI should be seen as de-risking and accelerating innovation within businesses. Support needs to encompass as much of the innovation process as possible (i.e. idea generation to profitability) and embrace associated activities that have significant bearing (i.e. investment ready, access to investment and support).



Beneficiaries have confirmed that BI adds value although a number of the new sectors have yet to see these benefits, a situation that can be readily addressed through a targeted approach and tailored messages.

Grant Aid and Beneficiary Contribution

We are aware of the WG's long-term agenda to reduce the value and reach of direct grant aid, as evidenced by the re-think on grants during the first phase of BI. However, it is clear that under the current economic conditions, programmes seeking to encourage and enable businesses to engage in innovation are receiving little or no take up unless there is a financial inducement to do so. During recessionary periods cash is king for businesses, their focus clearly on preserving cash. It is imperative that innovation is incentivised so that they are positioned to support indeed drive economic recovery.

The Consultants have discussed this with the BI team and agreement reached that the final impact evaluation of the Programme will include an exploration of grant aid and beneficiary contribution. At this point, businesses will be better able to judge the benefits of their innovation efforts and therefore provide balanced feedback.



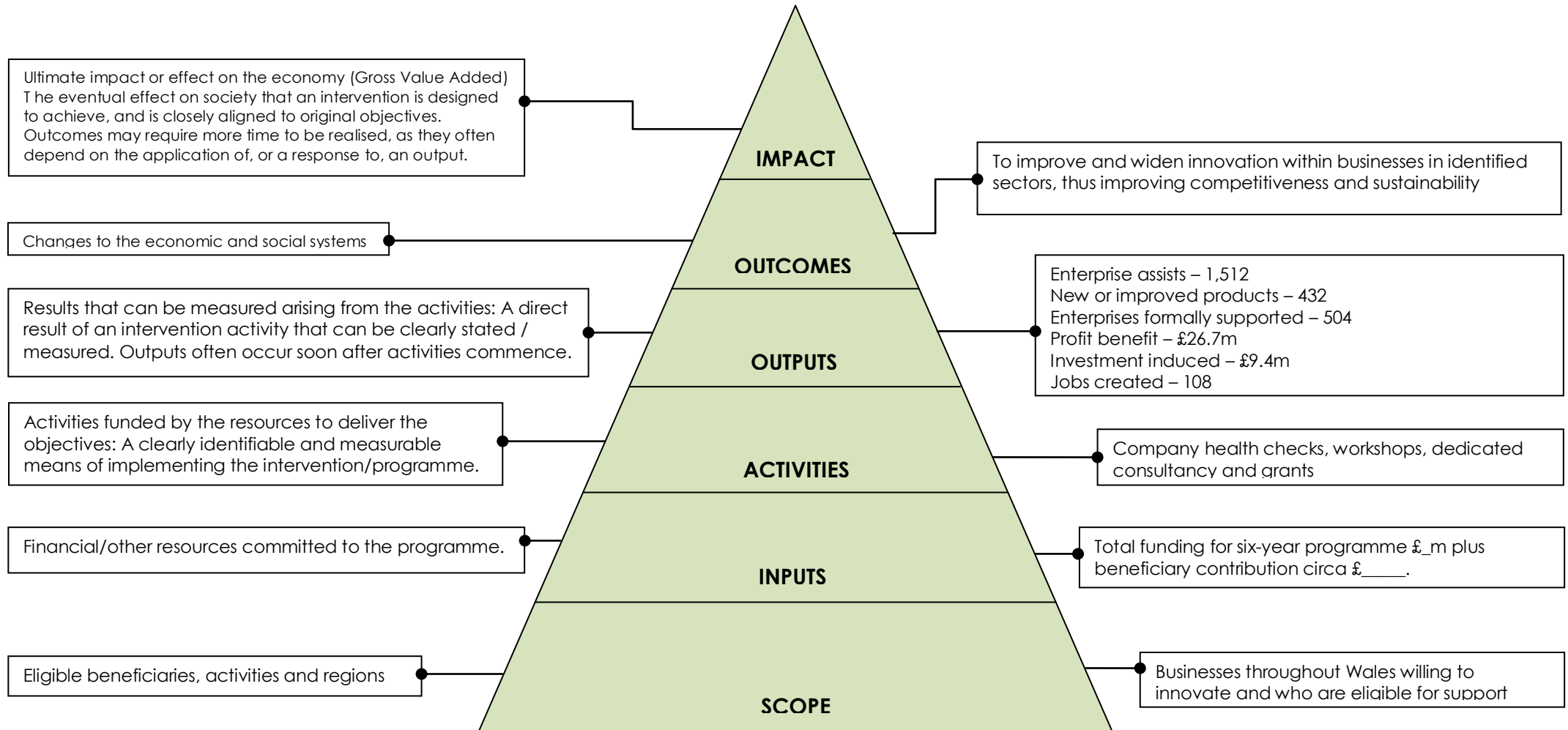
8 RECOMMENDATIONS

In order to strengthen the delivery of BI and increase the likelihood that outputs and outcomes will be realised, and economic impact maximised, it is recommended that the PMT:

1. Matrix approach to marcoms and engagement, encompassing coherent strategic messages that cut across all sectors, and tailored messages and appropriate engagement activities in individual sectors, particularly the new target ones. This should include closer collaboration between sector teams and IS.
2. Streamlining the portfolio to reduce overlap between individual products and avoid confusion amongst stakeholders and beneficiaries.
3. Placing an initial focus on business process innovation, particularly in new sectors.
4. Strengthening commercialisation support.
5. Re-assess the need for an investment readiness programme to support BI.
6. Streamlining application processes particularly for Innovation Vouchers.
7. Explore grant dependency and beneficiary contribution at final impact evaluation.
8. Extend the period over which impact is captured to three years beyond Programme completion.



Appendix I: BI Programme Evaluation Logic Chain





Appendix II: Business Innovation Cross Cutting Themes

The following activities have been carried out to address cross cutting themes:

- Collection of Equality & Diversity data for companies that have been assisted (enterprise assisted).
- As part of manufacturing reviews BI-Manufacturing advise companies on accreditation and standards. This includes advice on ISO9000 and ISO14000 for Environmental Management Systems.
- As part of design reviews BI-Design have provided advice on Environmental Management with particular focus on environmentally friendly design, materials and product lifecycle.
- Innovation Specialists, IP Specialist and BI-Design advisors offer bilingual support to Welsh companies. A list of companies that have received advice through the medium of Welsh is available.
- The BI Programme delivers a bilingual PATLIB service, which is the only one in the UK.
- The BI Programme has made the PATLIB service available to a wide range of clients that have difficulties accessing support due to care responsibilities, childcare and disabilities. One particularly effective and flexible way that this has been delivered is through the use of "GoToMeeting" allowing clients to access Innovation support in real time over the internet.
- The BI Programme, through PATLIB, has worked in collaboration with the UKIPO to produce the first Welsh language IP guidance notes. These guidance notes are available via the UKIPO website.

The BI Programme will carry out the following activities during the second half of the programme:

- Equality & Diversity forms will be analysed in detail. Initial analysis suggests that companies supported by the Programme have a strong technical bias in order to undertake technically challenging R&D projects. This naturally narrows the scope of participants and the loss of the Wales Innovation Network (WIN) has compounded the issue.



- Following recommendations by WEFO the BI Programme will formalise the referral route for companies to access further support to address Equality & Diversity issues.
- Once the Equality & Diversity forms have been analysed this information will be used to steer future activity. One action that would be particularly useful is a focus group session with a group of women engineers to gain their views concerning the accessibility of the programme and the suitability of the marketing information.
- Marketing activities were restricted as a result of ERP but the Programme is now able to produce brochures and marketing material for promotion purposes. It is suggested that the potential of new media (e.g. Twitter, LinkedIn and Facebook) is evaluated as traditional marketing material and activities tend to target the same groups of people.
- BI-Manufacturing and BI-Design will provide further data and analysis on advice given to companies to address Environmental Management issues.
- It is suggested that the Programme should evaluate the potential of engaging with organisations such as Women in Science and Engineering (WISE) to gain views on the accessibility of the Programme.



Appendix III: WEFO Definitions

Enterprise:

"Any entity engaged in an economic activity, irrespective of its legal form. This includes self-employed persons and partnerships or associations regularly engaged in an economic activity (EC, 2003a)

Financially supported:

"Receiving a minimum of £1,000 in loans, equity, investment or grants. This excludes grants which are for consultancy support. In this case the duration of consultancy support should be counted, cumulatively, towards assistance (WEFO 2004a). The amount of financial support should be counted on a cumulative basis."

Assist:

"Receiving a minimum of seven hours of consultancy, advice, guidance and information, through the following media:

- Face-to-face
- Telephone
- Web-based
- Dialogue
- Conference
- Seminar/Workshop
- Networks

The amount of assists should be calculated on a cumulative basis."

Gross Jobs Created - Job:

"A new permanent post, i.e. there is a reasonable belief that the post has no finite lifetime: that it is not of fixed duration. The post itself should be counted, not an estimate of the number of people that may occupy the post over time. A seasonal job may also be counted, so long as the job is expected to recur indefinitely. In this case, the project should report, in addition to number of hours per week, the proportion of the year worked. (WEFO, 2004)"

Investment induced:

"Measured in £, this is the gross amount of direct, tangible or intangible investment from the private sector: commercial, charitable and not-for-profit organisations and private individuals (WDA, 2004/5)."

New or Improved Products, Processes or Services:

Number of new or improved products, processes or services developed to market introduction (for products and services) or use (for processes) (DTI, 2005)"



For products and services: improved “with respect to its capabilities, such as quality, user friendliness, software or subsystems”. New to the enterprise, but not new to the market, “It does not matter if the innovation was originally developed by” the “enterprise or by other enterprises.” (DTI, 2005)

For processes: “improved methods for the supply of goods or services”. New to the enterprise, not new to the market, “it does not matter if the innovation was originally developed by” the “enterprise or by other enterprises.” (DTI 2005).

Products, Processes or Services Registered:

“The number of Intellectual Property (IP) rights for products, processes or services registered.

This indicator includes: the registration of IP rights for products, processes or services created, with the UK Patent Office or an equivalent office abroad, by assisted or financially-supported enterprises or research institutions; or the licensing of right to use of someone else's IP.”

Profit benefit:

Measured in £, profit benefit is the amount of increased profit enterprises make from savings or productivity benefits, which have resulted from the financial support.

Profit benefits may be one-off, i.e. a single cost saved or avoided, or continuing such as productivity improvements over time. One-off benefits should be recorded as the one-off benefit achieved. Ongoing benefits should be scored once as an annualised figure based on current performance.”