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Final evaluation report for the Welsh Government Business Innovation Support project

FINAL EVALUATION REPORT FOR THE WELSH GOVERNMENT BUSINESS INNOVATION SUPPORT PROJECT

Prepared by: The Innovation Partnership Ltd and CM International
Date: January 2015

(Views expressed in this report are those of the researcher and not necessarily those of the Welsh Government)

For further information please contact:
Dr Gwion Williams, Operations Manager
Business Innovation, Department for Economy, Science and Transport (EST)
Welsh Government
Sarn Mynach
Llandudno Junction
Conwy
LL31 9RZ
Tel: 03000 625419
Email: gwion.williams@wales.gsi.gov.uk

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Europe & Wales: Investing in your future
European Regional Development Fund

CONTENTS

Glossary of Acronyms

Academic Expertise For Business	A4B
Advanced Manufacturing and Materials	AM&M
Business Innovation Support	BI
Chartered Institute of Patent Agents	CIPA
CM International UK Limited	CMI
Continuing Professional Development	CPD
Department for Economy Science & Transport	ES&T
Welsh Government	WG
Economic Renewal Plan	ERP
European Regional Development Fund	ERDF
European Social Fund	ESF
Evaluation Steering Group	ESG
Experimental Development	ED
Finance and Corporate Services	FCS
General Block Exemption Regulation	GBER
Growth Accelerator Programme	GAP
Industrial Research	IR
Information And Communications Technology	ICT
Innovation Specialists	IS
Intellectual Property	IP
Knowledge Transfer	KT
Local Investment Funds	LIF
Manufacturing Advisory Service	MAS
National Aerospace Technology Exploitation Programme	NATEP
New Product Development	NPD
New Product Innovation	NPI
Research, Development & Innovation	RD&I
Research and Technology Organisations	RTOs
Technical and Commercial Feasibility	TCF
The Innovation Partnership Ltd	TIP
Wales Economic Growth Fund	WEGF
Welsh European Funding Office	WEFO
Work Package	WP

List of Tables

List of Figures

Executive Summary

The Business Innovation Support Project (BI or 'the Project') is a six-year (2009-2014), pan-Wales, revenue and capital project that provides a beneficiary-centric, integrated support package focusing on the discrete stages of the open innovation process. The Project has a total budget of circa £30m, funded by a mix of Welsh Government (WG) and ERDF funds, and private-sector match funding.

On 18 July 2014, WG issued an Invitation to Tender to undertake the Final Programme Evaluation of Business Innovation Support and The Innovation Partnership Ltd (TIP) and CM International UK Limited (CMI), collectively referred to as 'the Consultants', were successful in their bid to undertake this work.

To complete this evaluation, the Consultants employed a work package approach consisting of a contextual and performance review, personal interview programmes with key internal and external stakeholders, a telephone survey of 400 beneficiary companies, a review of impact, and production of a final evaluation report. The key findings from this evaluation have been summarised below.

Project Context

The BI Project has faced significant challenges resulting from the economic, policy and organisational context, adversely affecting Project performance. The economic downturn and associated decline in business R&D expenditure contributed to lower than expected demand for the Project, compounded by the changes brought about by the implementation of the ERP. These factors have, at times, prevented the BI team from effectively promoting the Project, resulting in confusion with regards to what the Project can deliver.

Whilst confusion levels have subsided with the decision to revert back to grant funding and to relocate the Innovation Specialists back within the Innovation Team, the Project has faced significant challenges in generating sufficient demand to meet its activity targets. Despite this, the Project has performed well, has made significant gains and, indeed, will meet key targets.

In terms of fit with other WG initiatives, the Project is very much consistent with innovation and science policy in Wales. Indeed, the policy agenda for business support is one that highlights the importance of innovation as an enabler, and the importance of creating an environment in which it can flourish.

Project Performance
Full target and actual figures for the Project, with outputs being drawn from monitoring data to the end of October 2014, have been provided in the main report and have been split between the convergence and non-convergence regions.

Figures indicate strong pan-Wales performance with respect to key indicators such as jobs created (336 against a target of 179), investment induced (£22.9m against a target of £11.6m), and the number of new, improved products, processes launched/registered (730 and 564 against respective targets of 504 and 432). Collectively these indicators point towards strong economic benefits emerging from the Project at the final stage. The strong jobs created outputs are complemented by a similar number of jobs safeguarded (circa 300). This is indicative of the economic downturn of 2008/09, where many companies prioritised retention of staff, over job creation/loss.

Other notable outputs include the high level of repeat contacts evident (circa 951). This is a key feature of WG innovation programmes and reflects the complex and multistage nature of the innovation process, as well as the relationships developed by the Innovation Specialists over time. The levels of Innovation Voucher applications and offers further illustrates the role of the BI Project in helping to strengthen links to the knowledge base in Wales.

There are a number of indicators that fall below the final target, including ‘activity’ indicators such as ‘enterprises assisted’ (1217 against a target of 1310) and ‘enterprises financially supported’ (396 against a target of 434). The Consultants would suggest these are a result of the difficulties and challenges faced in delivering the Project, with other shortfalls, ie Profit Benefit within the non-convergence region, likely to reflect the long-term and uncertain nature of the innovation process.

The results of the performance review indicate that the Project has, despite lower than expected demand due to reasons previously stated, achieved generally strong results. This strong performance is evident in both innovation outputs (new products registered and launched) and economic outputs (jobs created and investment induced).

As with project performance figures, projections are made within the full report regarding economic impacts. The stipulated projections are achievable provided there are no great market fluctuations in the next 3-5 years.

Key Stakeholder Interview Programme
For the purposes of this exercise, the Consultants undertook personal interviews with 30 key internal and external stakeholders, with discussions focusing on key areas such as project offering and management, delivery channels, and future direction.

It was clear from evidence obtained during the interview programme that, as a continuation of what was observed during the mid-term evaluation, the requirement to support and, indeed, accelerate innovation take-up throughout Welsh businesses was universally acknowledged by all stakeholder groups.

BI is perceived as a worthy project that is well managed, which meets the needs of key sectors (particularly those involved in manufacturing) but has the opportunity to widen its scope in terms of innovation content and target sectors. There was little identified by way of private-sector displacement and there was an acknowledgement that "market failure" will continually exist. Stakeholders see BI as an excellent way of increasing economic activity and employment within Wales.

Several interviewees recognised that there is a growing need to encompass 'process innovation' and to broaden and redefine 'innovation' to make the Project more far-reaching. It was also believed, however, that BI should focus resources on those sectors that it can clearly support and that align with the BI offering.

There was acknowledgement that programmes such as BI need to capitalise on and exploit recent investment in infrastructure, such as the SA1 campus in Swansea, and potentially undertake more-focused interventions, ie look at interventions that have greatest impact on businesses and involve the business-support community as often as possible.

A number of stakeholders believe the Project should be integrated with other programmes going forward, although it was acknowledged that the issue of 'ownership' of clients needs to be clearly set out and established throughout the relationship. The intention of WEFO to align EU-funded programmes more closely under the next funding period, to avoid duplication and to streamline support provision, was seen as the correct way forward.

Overall, BI was seen as a critical and crucial project that warrants further support.

Beneficiary Survey Results

The beneficiary survey explored the views of businesses that have received assistance from the Project. The aim was to discover whether BI has made a difference to the beneficiary organisation and examine how the service can be improved for future clients. The telephone survey was undertaken with 400 firms in late November/early December 2014 and comprised of:

- 245 firms from the Convergence Programme (61%)
- 155 firms from the Competitiveness Programme (39%)

The key findings of the beneficiary survey were:

- Awareness of the BI Project came mainly from word of mouth and by direct approaches made to business by WG and by personnel in the BI Team;
- BI appears to deliver more assistance on general innovation and guidance on access to finance than it does on specific targeted solutions. Businesses appeared to prefer this type of support to more targeted assistance;
- The expertise and knowledge of Innovation Specialists/advisors was rated as very high by businesses with over 80% scoring them as excellent or near to excellent;
- Nearly 70% of businesses received two days support or less from the BI Project;
- After assistance, beneficiary businesses moved much closer to the

market and the launch of their product or service;

- Of the three main technology groups surveyed, design appeared to be the easiest to affect improvement. Manufacturing is slower to achieve improvement because of the capital investment required but displays more improvement to innovation/productivity;
- IP assistance scored lower in terms of satisfaction of advice, with lower levels of improvement and progress towards the market. The Consultants confirm that this is not a reflection on the quality of delivery, which is still very high, but the fact that the IP Specialists can no longer provide advice, being, as they are, restricted to guidance and signposting. It is therefore less likely that the issue for the beneficiary company will be resolved instantly, resulting in lower scores for satisfaction;
- 85% of businesses were either satisfied or very satisfied with the quality of assistance provided. There was no difference in the level of satisfaction between convergence and competitiveness projects;
- Levels of expectation were largely met by the Project and exceeded in at least a third of the cases supported;
- Companies would welcome further innovation support and assistance with the design and production of new products;
- In terms of suggested enhancements, the combination of a simplified application process and a higher number/level of adviser support could lead to further improvements in the overall service.

Recommendations
Following analysis of the evidence obtained during this evaluation, the Consultants propose the following recommendations for the continuation of the BI Project in future funding rounds.

Recommendation 1: Branding – Research has identified that there is confusion amongst some beneficiaries with regards to WG programmes that provide RD&I support. To avoid such confusion in the future, we recommend that WG's RD&I business support services should be generically branded SMART and promoted as **SMARTCymru** (no change), with **BI** following its lead and becoming **SMART Innovation** and the new **A4B** programme, we believe, being entitled **SMART Expertise**.

Recommendation 2: Intellectual Property Support – IP focus has had to change to comply with State Aid Regulations and IP support is now based on guidance and signposting, as opposed to advice. IP advice is adequately covered by the private sector and, taking into account the resources available, we believe PATLIB support should now be delivered online. The online PATLIB can be generally promoted by Business Wales, the Innovation Specialists and other programmes, and where online resources do not meet the requirements of businesses, enquiries could be scaled-up.

Recommendation 3: BI Extension to Integrate Quality – The BI Project clearly provides opportunities for businesses to engage with professionals to improve manufacturing and design. However any business now looking to design for manufacture/expand their product portfolio automatically includes 'quality' aspects. Evidence of quality procedures and standards are becoming an ever-increasing requirement for customers and we recommend that 'quality' is part of the BI offering going forward, sitting alongside manufacturing and design.

Recommendation 4: Business/Process Innovation – BI occasionally needs to support 'process' or 'service' innovation, an area in which beneficiaries could benefit from support and that would deliver gross added value. It is likely that a business/process innovation programme could be designed to sit alongside that of design, manufacturing and quality and would widen the appeal of the Project.

Recommendation 5: Project Sector Focus – We recommend that the Project focuses on the Grand Challenge areas as identified by Science For Wales, namely Advanced Manufacturing, Life Sciences and Health, and Energy/Environment. BI management accepts that these areas provide sufficient scope for future programmes.

Recommendation 6: Engagement with Universities and RTOs – Research identified that universities are not as engaged with BI as first indicated, primarily because they are unsure of the BI offering and about how they can participate/prosper. We recommend that future marketing activities reach out and engage specifically with universities and RTOs.

Recommendation 7: Innovation Specialists – The Innovation Specialists enjoy a unique role within innovation support across Wales. They are highly regarded individuals because of their knowledge of innovation, their networks and their appreciation of business needs. They are seen as honest brokers and their role overall enhances the innovation support delivery. We advise that numbers be increased to facilitate more time spent with beneficiaries, particularly during the early stages of engagement and for roadmapping/blueprinting purposes.

Recommendation 8: Roadmapping – Research has indicated that businesses are becoming fatigued by diagnostics, which do not necessarily cement further working relationships. We believe that there is an opportunity to develop a 'roadmap' methodology, which serves a number of purposes - it secures an intensive business assist, a likely target for follow-on, ERDF-supported programmes, and it provides greater engagement, securing long-term delivery.

Recommendation 9: Marketing – The Project has suffered from various internal actions and the inability to directly deliver a professional marketing campaign, resulting in a misunderstanding in the market about BI, its availability, targets and purpose. It is also recognised that programmes that deliver over several years need to continually remind audiences of their purpose. We recommend that WG produces a detailed marketing strategy and action plan for BI, and that this goes out to tender. We believe that an external marketing and PR consultancy would provide significant added value as they will have challenging targets on which they will have to deliver on a monthly or quarterly basis.

Recommendation 10: Alleviate Grant Dependency – In terms of BI, the

Consultants still believe that there is a role for grant where risk and significant innovative steps are key outputs. However, we do not recommend that WG continually offer grants to businesses that have a history of applying for such assistance. If a company has previously received a grant, it is imperative to ensure that the company is able to demonstrate best endeavours to commercially exploit its outputs. If not, further requests for grant support should be refused.

Recommendation 11: Level of Innovation – BI requires a clear definition of innovation, which both meets the WEFO guidelines and is as accommodating as possible. This will facilitate support of all businesses that are taking a high degree of risk. SMART Specialisation and GBER help to frame those innovative businesses and, equally, innovative businesses with less than 10 employees can be accommodated by association with the Growth Accelerator Programme via SMART Specialisation or by other means.

Recommendation 12: Innovation Voucher (Capital) – Evidence suggests that Innovation Vouchers for capital expenditure have proved successful and have significantly contributed to RD&I expenditure and business growth. Evidence also indicates that there is a funding gap and that the ability to introduce external funding has influenced companies to move forward on such investments where there is still a considerable amount of risk. We recommend that the capital element be taken forward in any future programme.

Recommendation 13: BI Processes – Businesses, and indeed stakeholders, still believe that the application and assessment processes for BI are long-winded and, in part, unnecessary. When an understanding of BI management's position is obtained, it is clear this is not the case and that, in many instances, WG, WEFO and the auditors govern such processes. Our recommendation is that the processes are reviewed to see if efficiencies can be identified but, equally, increased transparency for beneficiaries, advisors and stakeholders is required, so as to provide realistic timescales and manage expectations.

1. INTRODUCTION

1.1. The Business Innovation Support Project (BI or 'the Project') is a six-year (2009-2014), pan-Wales programme. It provides an innovative, beneficiary-centric integrated support package, which focuses on the different stages of the open innovation process. 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."*

1.2. The BI Project is a revenue and capital project with a total project budget of circa £30m, funded by a mix of Welsh Government (WG) and European Regional Development Fund (ERDF) funds and private-sector match funding.

1.3. On 18 July 2014, WG issued an Invitation to Tender to undertake the Final Evaluation of the Business Innovation Support Project (contract no: C087/2014/2015) and The Innovation Partnership Ltd (TIP) and CM International UK Limited (CMI), collectively referred to as 'the Consultants', were successful in their bid to undertake this work. This document represents the final evaluation report for the BI Project.

1.4. The ITT, prepared by the Department of Economy, Science & Transport's (ES&T) **Innovation Division**, presented a clear and comprehensive specification and a list of aims and objectives for the final evaluation, including Welsh European Funding Office (WEFO) requirements in terms of project delivery and confirming outputs, outcomes and impact. The Innovation Division also set out five key questions that the evaluation is required to address and that the Consultants have covered in the main body of the report, namely:

1. How and to what extent did Project activity reflect the commitments set out in the business plan?
2. What are the perceived outcomes of the Project from the perspective of beneficiaries? How, and to what extent, is this making a difference compared to if the improvements had not been implemented?
3. Based on evidence, what would be the outcome, and potential long-term impacts, of withdrawal of project funding for beneficiaries of the Project?
4. Which aspects of Project delivery have led to positive outcomes, or could be viewed as 'good practice'?
5. What barriers and constraints has the Project faced? What are the 'lessons learnt' from dealing with such barriers and constraints?

1.5. The scope of the evaluation was to examine Project performance pan-Wales, and to review the approach taken – with specific regard to Open Innovation, the

SME-centric model, programme management, understanding of market needs, value of the integrated support packages, programme delivery (Innovation Specialists (IS) and subcontractors: Enterprise Consulting), outputs, outcomes and impact, and the delivery of crosscutting themes. This evaluation was undertaken in context alongside WG's key strategies and other support programmes, in relation to meeting changing market conditions and wide-ranging SME needs. Finally, the evaluation was required to determine the nature of unintended outcomes, which will be identified and grouped with the aim of establishing their impact and their legacy on this and indeed future programmes.

1.6. In addition to the stated WEFO/WG evaluation objectives, the Consultants added value to the exercise by expanding the areas of research and reporting beyond those indicated in the ITT.

2. EVALUATION METHODOLOGY

2.1. To successfully complete this final evaluation, the Consultants employed a Work Package (WP) approach (**Figure 1**); a process that follows accepted evaluation best practice. This approach was discussed, refined and agreed with the Evaluation Steering Group (ESG) during the project inception meeting and throughout the evaluation.

Figure 1: Final Evaluation WP Methodology

Work Package	Activity	Outputs
WP 1	Evaluation Inception Meeting	Inception Document / Workplan / Data Collection/ Methodologies Agreed
WP 2	Business Innovation Management Meetings	Meetings with key staff: Phil Allen, Gwion Williams and Joanne Coates
WP 3	Data Review	Performance, Context and Literature Review
WP 4	Stakeholder Interview Programme	Total: 30 interviews completed
WP 5	Innovation Specialists Interviews/Group Sessions	South Wales and North Wales workshops/reports
WP 6	Delivery Partner Interviews	Report on interview with Enterprise Consulting, including COO and six advisors
WP 7	IP Support Review	Report on discussions with the two IP Specialists
WP 8	Beneficiary Business and Counterfactual Telephone Survey	400 beneficiary interviews
WP 9	Thematic Case Studies	8 thematic case studies
WP 10	Impact Assessment	Assessment of impact to date
WP 11	Analysis, Reporting and Presentation	Final evaluation report, presentation and dissemination

Work Packages

WP1: Inception Meeting

2.2. A project inception meeting was held on 19 September 2014 between two consultants from TIP, Nigel Woodruff and Mike McManamon, and the ESG, consisting of senior staff at WG – Department for Economy, Science and Transport (ES&T), namely Gwion Williams, Business Innovation Operations Manager, and Jacky Doran, Business Innovation Support; and WG – Finance and Corporate Services' (FCS), namely Joanne Coates, Social Research and Information Division.

2.3. The meeting allowed the Consultants and the ESG to discuss the evaluation proposal in detail, make suitable agreed amendments and to commence gathering of all relevant background information necessary for the evaluation.

2.4. Following the meeting, the Consultants prepared an 'Inception Report' on 24 September 2014 that summarised the inception meeting discussions and clarified the research methodology agreed for this evaluation exercise.

WP2: BI Management Meetings

2.5. Several face-to-face meetings and telephone conversations were undertaken between Nigel Woodruff and the BI Project Managers, namely Phil Allen, Gwion Williams and Joanne Coates to discuss evaluation progress, changes and emerging impacts. Specific areas covered in these discussions included Project management, performance, delivery and marketing, and its impact and contribution to economic activity. Topics such as best practice, lessons learnt and sustainability of the Project, particularly in reference to applicable future funding sources, were also covered.

WP3: Data Review (Performance and Context)

2.6. The Consultants collected and analysed all WEFO and management reporting data and gathered evidence on outcomes and outputs for review. This information included original and updated Project business plans for both the 'Convergence' and 'Competitiveness' regions, details on Innovation Voucher (IV) applications, and potential case study material. In addition, the Consultants received details of significant change requests and activities actioned as a result of mid-term evaluation recommendations.

2.7. Performance was compared with targets and any variance/anomalies were discussed with management and detailed in this final written evaluation report.

2.8. The Consultants undertook a brief desktop review of internal communications and how the Project is linked to other WG ERDF/ESF projects and other innovation providers.

2.9. Finally, the Consultants undertook a contextual review to examine how the Project fits with EU, UK and WG's innovation-support agenda and likely future activities and strategies. For Wales, the strategies cited as providing good baseline measures included '**Economic Renewal, One Wales'**, and '**Wales: A Vibrant Economy'**.

WP4: Stakeholder Interview Programme

2.10. The Consultants completed interviews with key stakeholders between September and November 2014. Discussions covered issues such as the perception and fit-for-purpose of the BI Project, its marketing and engagement with other Welsh programmes and sectors, and future needs and requirements for innovation support. To guide interviews and record responses, the Consultants designed a detailed semi-structured questionnaire, which was approved by the ESG prior to commencement of the personal interview programme.

WP5: Innovation Specialist Group Sessions

2.11. The Consultants held two group sessions with the IS (one in North Wales, one in South Wales) to obtain their views on various aspects of the Project and its delivery, not least:

- How the BI Project could improve the customer journey;
- Are there areas of Open Innovation that appear to be more critical today than when the BI Project was originally conceived?
- How successful the implementation of recommendations provided in the mid-term evaluation had been.
- Direction and activities of any future innovation support programme.

WP6: Delivery Partner Interviews

2.12. As of the midway point (2012) of the Project, the delivery of both the 'Manufacturing' and 'Design' support aspects have been managed by one partner, 'Enterprise Consulting Ltd'. The Consultants held face-to-face interviews with the COO of Enterprise and several members of the advisory team.

WP7: IP Support Review

2.13. A key aspect of the BI offering is the Intellectual Property (IP) advice and support provided to beneficiary businesses via two dedicated IP Specialists. The Consultants interviewed both IP specialists, with discussions focusing on value for money, possible alternative forms of delivery, support services and business needs.

WP8: Beneficiary Business and Counterfactual Telephone Surveys

2.14. The Consultants undertook telephone interviews with 400 beneficiary businesses.

2.15. The telephone survey allowed the Consultants to analyse key aspects of the Project's target audience and offering, 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 and forecast over the short- to medium-term.

WP9: Thematic Case Studies

2.16. The Consultants developed 8 case studies from beneficiary companies identified during the evaluation process. The case studies sought to demonstrate the positive impact on beneficiary businesses as a result of BI intervention, and will provide useful insight into how to implement different kinds of BI support and how to promote such interventions and achieve maximum impact under future funding streams.

WP10: impact Assessment

2.17. The Consultants sought to provide a sense of the true added value of the BI Project, taking into account additionality, likely displacement and possible multiplier effects. A comprehensive assessment of economic impact was undertaken comprising:

- Impacts to date and projected future impacts
- Convergence and competitiveness impacts
- ERDF and total public cost impacts
- Commercial (Turnover, GVA, Profits) and employment (jobs created and safeguarded) impact
- Gross and net impact
- A counterfactual assessment looking at impact by intensity of support

WP11: Analysis, Reporting and Presentation

2.18. A draft report was presented to the ESG in January 2015 so that the research results/analysis and relevant conclusions and recommendations could be discussed and agreed.

2.19. Following agreement of the draft report, the Consultants have provided this final evaluation report, detailing the results of the evaluation, including responses to the key questions posed and key conclusions, recommendations and actions.

3. PROJECT OVERVIEW

3.1. Innovation, defined as the '*profitable exploitation of new ideas'* has been identified by WG as playing a vital role in maintaining and improving the competitiveness of Welsh enterprises. Initiated in 2009 and set to run until the end of 2014, the ERDF part-funded BI Project provides a package of support for businesses focused on different stages of the innovation process, namely:

- The recognition, development and exploitation of new ideas
- Development of ideas into new products, processes, technologies
- Design support
- Manufacturing support
- Commercialisation and exploitation of ideas
- Identification, protection and licensing of intellectual property

3.2. Support is provided to technologically focused SMEs and a number of large businesses (20 per cent allocation of resources permitted) that can be primarily aligned to one of the nine WG key sectors, namely:

Table 1. WG Nine Key Sectors

Key WG Sectors	
Advanced Materials and Manufacturing	Food and Farming
Construction	Information & Communication Technologies (ICT)
Creative Industries	Life Sciences
Energy and Environment	Tourism
Financial and Professional Services	

3.3. To provide this support, the Project is delivered through a number of linked elements, delivered as an integrated package of support, namely:

1. Free impartial innovation advice & diagnostic
2. Specialist innovation consultancy & capital equipment procured from the private sector
3. Support for the acquisition and implementation of new technologies, processes and equipment
4. Intellectual Property (IP) advice & support
5. Support with commercialisation and licensing

3.4. It is the WG's intention that the support/advice provided results in the development of new products, processes and technologies. The Project is based on the key WG principles of 'economic renewal' and 'innovation support' and is delivered by a pan-Wales team of IS who provide access to specialist support to help identify, protect and exploit IP, create new products, make effective use of design, increase productivity and efficiency in manufacturing and introduce new technologies.

Strategic Components of the Project (Updated from Mid-Term Evaluation Report)

3.5. As stated, support is principally accessed via a pan-Wales network of eleven IS and one key delivery partner (Enterprise Consulting), 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.

3.6. As stated during the mid-term evaluation, the BI Project is not linear but seeks to meet individual and dynamic business needs and link to other government and non-government programmes. That said, the Project does have clear strategic components and resources, as presented in Project business plans. These have been presented in **Table 2** below.

3.7. In difference to the mid-term stage, there is increased focus on resources relating to ‘open innovation’ and the introduction of Innovation Vouchers for capital grants now facilitates capital investment to support the introduction of transformational technologies to support innovation. In addition, both key areas of support (manufacturing and design) are now managed by one delivery partner, Enterprise Consulting, as opposed to two separate partners in the early stages of the Project.

Table 2. Strategic Components of the BI Project

Key Components	Related Resources
R&D/New Product Development	• 11 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	• Introductions between businesses and IP Specialists • Raise businesses awareness of IP • Maximise opportunities to commercialise IP • IP diagnostics • IP training • Open innovation activities
Design Support (External Consultants)	• 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)	• 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 • Open innovation

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

- '**Academic Expertise 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.

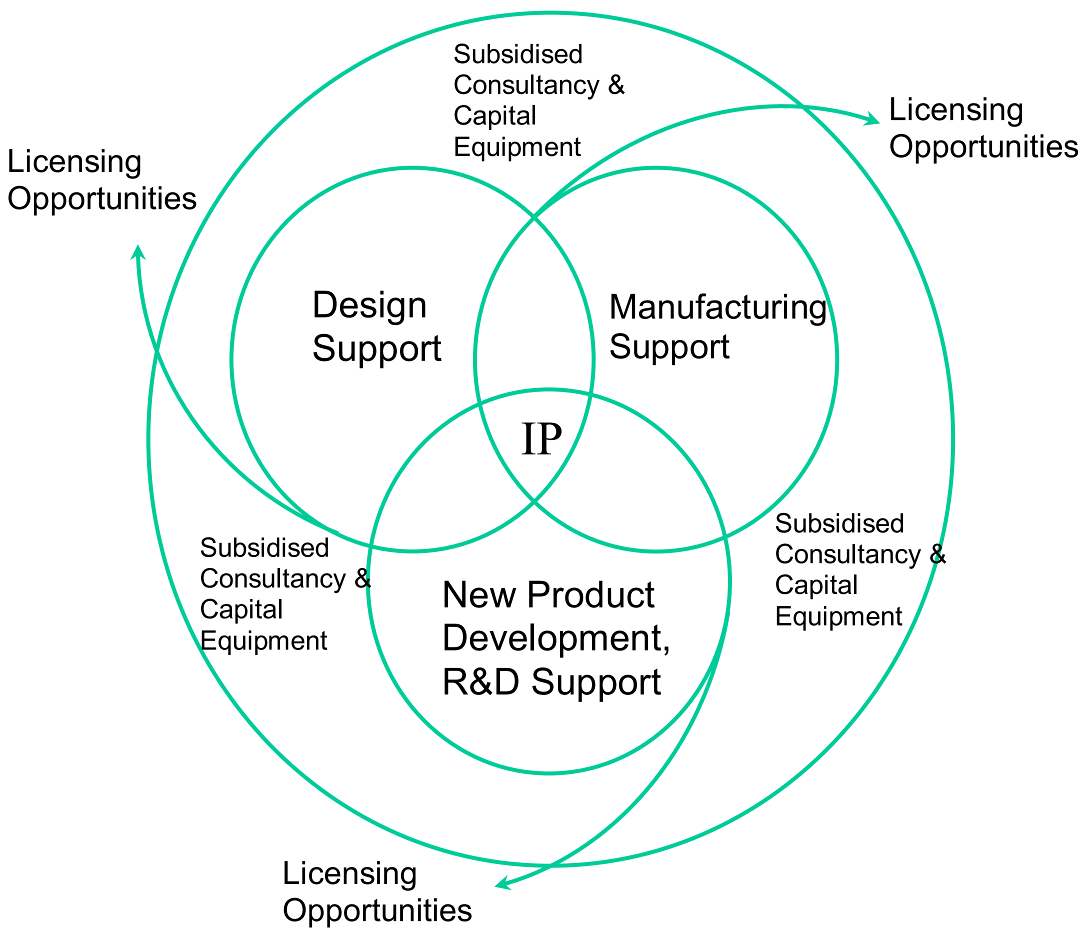
3.9. An in-depth examination of the Project's positioning and context has been undertaken in Section 4 of this report.

The BI Project Model

3.10. As stated in the updated Project Business plans (Competitive and Convergence), the Project will be delivered through a number of key elements, namely:

1. Free impartial innovation advice and diagnostic – specialist innovation consultancy and capital equipment procured from the private sector
2. Support for the acquisition and implementation of new technologies, processes and equipment
3. Intellectual Property advice and support
4. Support with commercialisation and licensing

Figure 2: The Business Innovation Model



3.11. **Free impartial innovation advice and diagnostic**: beneficiaries receive free impartial advice on all aspects of innovation, specifically open innovation, via a network of 11 experienced IS employed by WG and seconded to the Project. Project business plans state that the IS focus principally on new product development/introduction (NPD/I) through business-based R&D. The IS will provide businesses with the following assistance:

- Identify opportunities within a business for NPD funding
- Guide and assist businesses with their IP related to NPD
- Assist in the development, implementation and progress of R&D projects
- Encourage businesses to adopt a logical, structured approach to assessing the benefits of engaging in an R&D project, which can improve the chances of a successful outcome. Conversely, this approach can identify at an early stage potential nugatory effort and consequential cost avoidance
- Identify technology and skills needs relating to the NPD/NPI
- Guidance and funding for the acquisition and implementation of new technologies processes and equipment
- Facilitate collaboration with businesses or academics and provide linkage and co-ordination with the other elements of the innovation process
- Links with other support programmes including e-business, university-led projects such as ASTUTE, ILS, WISE, BEACON, LCRI, SEACAMs, visualisation facilities.

3.12. Normally, beneficiaries engage in a 'Technical Review' at the outset of the process. This review 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 Technical Review 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 though new product, process, service development for commercial advantage.

3.13. Once a Technical Review 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.

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

3.15. **Support for the acquisition and implementation of new technologies, processes and equipment:** as part of the technical review conducted by the IS at the start of a beneficiary company's engagement with the BI Project, the need for additional external expertise or services may be identified. Subject to the appraisal procedure, the Project may support the acquisition of these services financially via Innovation Vouchers. The identification of such a need may also arise from the ensuing interaction with the IS (or design, manufacturing or IP experts employed by the Project). In difference to the mid-term evaluation, the use of the Innovation Voucher element of the Project has been extended to support capital investment in addition to its use for revenue projects.

3.16. The financial support towards the acquisition and implementation of new technologies, processes and equipment focuses on capital purchases that have the potential to significantly transform a business, in terms of enhanced operating capability or capacity for growth.

3.17. **Intellectual Property advice and support**: the BI Project utilises two dedicated IP Specialists employed by WG – one based in North Wales and one based in South Wales.

3.18. At a beneficiary level, they can provide one-to-one advice and can undertake an IP Diagnostic, taking up to two days, for the beneficiary 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 per cent of their time supporting other WG programmes.

3.19. The Project also supports a PATLIB Centre based in Llandudno Junction, North Wales, opened in March 2011, which 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 IP Specialist (Nia Roberts, North Wales) also sits on the UK PATLIB Board.

3.20. As stated at the mid-term evaluation, the original intention was to operate two PATLIB Centres, however, the decision was taken not to open the second dedicated centre, with alternative arrangements now in place. The Project will continue its links with IP Wales and will be utilised as and when required to support SMEs in protecting, making the best use of, and commercialising their intellectual assets.

3.21. **Support with commercialisation and licensing:** the current BI business plans state that the Project provides a more innovative and proactive approach to supporting businesses with commercialisation. BI will look to introduce businesses to potential customers and/or licensors at a much earlier stage in the innovation process to increase the opportunities for commercial success.

3.22. Traditional commercialisation routes include:

- Taking the new product or service to market alone or in joint venture with another business by raising the necessary capital
- Selling or licensing the new product or service to another business to exploit

4. PROJECT CONTEXT/POSITIONING

4.1. BI Project planning took place during 2008 when the Government was providing direct and indirect Research & Development support for businesses, but also recognised that there was a need to provide direct support for innovation and, ideally, to promote open innovation.

4.2. In terms of context, in 2008 the economy and economic outlook were considerably healthier than has since transpired, and the aim of the Project was to continue to support economic growth. No one could have predicted the economic downturn in 2008. Unlike other parts of the UK and the rest of Europe, Wales suffered from the global economic downturn and slow recovery in the early part of the Project's delivery. **Table 3** highlights the impact of this downturn on Gross Value Added – a principle economic indicator.

4.3. This indicates that Wales' GVA per workplace fell between 2008 and 2009, before gradual recovery in the 2010 to 2012 period. Wales' GVA performance is, however, amongst the lowest in the UK (equivalent to 76.1 per cent of the UK average).

Table 3. Workplace-based GVA at current basic prices

Workplace based GVA (£ million)	2008	2009	2010	2011	2012[1]
United Kingdom	1,312,112	1,280,261	1,327,923	1,360,925	1,383,082
North East	40,261	38,866	40,271	41,188	41,874
North West	124,105	124,586	127,745	127,868	130,618
Yorkshire & Humber	90,882	89,317	91,005	92,457	93,339
East Midlands	75,182	73,425	77,144	79,703	79,698
West Midlands	93,508	90,624	95,196	97,086	98,346
East of England	110,824	108,326	112,151	114,270	116,125
London	285,638	278,453	289,376	303,369	309,339
South East	186,525	183,325	192,621	196,105	202,597
South West	96,492	96,423	100,372	100,392	101,576
England	1,103,416	1,083,346	1,125,881	1,152,438	1,173,512
Wales	44,299	43,751	44,524	46,450	47,344
Scotland	103,897	102,652	102,275	105,940	106,342
Northern Ireland	29,388	28,447	28,945	29,063	29,410

Source: Office for National Statistics, 2013

1 Provisional data

4.4. Business R&D expenditure data provides further evidence of the contextual issues facing the BI Project. The latest National Statistics data shows that business expenditure on R&D in Wales is one of the lowest amongst the UK regions and devolved administrations. **Table 4** below, for example, indicates that business R&D expenditure in Wales declined between 2009 and 2010, before recovery in 2011 and 2012. Wales' business R&D expenditure continues to lag behind other regions and devolved administrations.

Table 4. Business Expenditure on R&D

Business Expenditure on R&D (£ million)	2009	2010	2011	2012
United Kingdom	15,532	16,045	17,468	17,107
North East	315	308	259	282
North West	1,926	2,074	2,220	1,784
Yorkshire and the Humber	454	488	551	603
East Midlands	992	1,137	1,145	1,203
West Midlands	847	886	1,282	1,461
East of England	3,812	3,846	3,665	3,449
London	907	877	1,118	1,477
South East	3,758	3,798	4,580	4,086
South West	1,349	1,454	1,359	1,364
England	14,360	14,868	16,179	15,708
Wales	243	234	256	272
Scotland	631	619	680	707
Northern Ireland	297	324	352	420

Source: Office for National Statistics, 2013

4.5. These data highlights the challenging economic, research and innovation context facing the early stage implementation of the Project.

4.6. In addition to the challenges brought about by the economic downturn, the Project had to respond to new delivery arrangements brought about by the Economic Renewal Plan (ERP) and external programme activities. This resulted in key changes such as:

- Changes in WG delivery, notably 'Flexible Support for Business', (followed by 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 (subsequently reversed). From an external perspective, WEFO has supported a number of programmes which entered and partly competed in this space, such as the ASTUTE programme, SAW, etc.

4.7. These context points illustrate the substantial difficulties and internal/external challenges facing the implementation and management of the Project.

BI Project Fit with the Welsh Government Strategic Agendas

4.8. The policy context for the Project has evolved substantially, as noted above. In addition to the introduction of the ERP, a number of important innovation and science strategic statements were published during the life of the Project. These are reviewed below:

4.9. **"*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

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

4.11. *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 population 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 provided throughout the innovation process by the BI Project.

4.12. 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.

4.13. *Science for Wales* also recognises the core functions of IP and IPR. It specifically recommends that Government should adopt the BI Project's comprehensive plan for IP management in Wales. It goes on to welcome the BI Project'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), a review which 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.

4.14. 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.

4.15. ***"Innovation Wales"****:* in 2013[2] the WG set out a comprehensive strategy for innovation. Based on a wider definition of innovation, the Strategy highlights the importance of innovation to productivity growth and high-value jobs. The Strategy identifies a series of strategic priorities for innovation in Wales, including:

- Improving collaboration
- Promoting a culture of innovation
- Providing flexible support
- Finance for innovation
- Innovation in government
- Prioritising and creating critical mass

4.16. Underpinning these priority areas, the Strategy identifies priority areas of action for both WG and its partners. These actions, it was proposed, should build on existing strengths in so-called 'grand challenge' areas such as life sciences and health, low carbon energy and environment, advanced engineering and materials, and ICT and the digital economy.

4.17. The Strategy sets out a number of specific actions relevant to the BI Project area including its commitment to providing 'a wide range of interventions designed to increase levels of R&D within businesses located in Wales.' (Action Area 8), and 'support for research and innovation needs to be delivered in a clear, flexible and business friendly manner' (Action Area 9). It also indicates that 'Wales should seek to develop a culture of open innovation'.

4.18. Innovation Wales represents Wales' response to the EU's requirements for Specialisation[3], and was developed through extensive consultations and research. The principles of Smart Specialisation are reflected in the priorities and actions established, and the focus placed on making large-scale interventions to 'create critical mass in the areas where Wales already has capability and can see significant opportunities'.

2 Welsh Government (2013) 'Innovation Wales'. Available from: http://gov.wales/docs/det/publications/130714innwalesen.pdf

3 European Commission – Research and Innovation Strategies for Smart Specialisation, May 2012

4.19. Based on this review of strategic statements, the Consultant's view is that the BI Project is strongly consistent with innovation and science policy in Wales. Indeed the policy agenda for innovation is one that highlights the importance of innovation as an enabler, and the importance of creating an environment in which it can flourish.

Innovation Support and Funding Context

4.20. The operational context facing the BI Project includes a range of innovation and technology programmes focusing on R&D subsidy and support. This includes a range of WG programmes that are harnessed by the BI Project.

4.21. *SMARTCymru* (WG) offers all-Wales support for businesses at different stages of the RD&I process, including Technical and Commercial Feasibility (TCF), Industrial Research (IR), Experimental Development (ED), and Exploitation. It represents the WG's core support for RD&I, and provides a source of grant funding for businesses supported by the BI Project.

4.22. *Innovation Vouchers* (WG) provide financial support for SMEs (up to £25K) to work with third-party sources of expertise in the development of new product and processes. Partners for such programmes may include higher or further education institutions. Vouchers can also be used to fund capital investment in 'transformational technology'.

4.23. The BI Project is also aligned to the *A4B programme* (WG). This programme provides support to transfer knowledge and commercialisation. Support through the programme includes knowledge exchange and networking, Collaborative Research, and commercialisation of IP.

4.24. Other programmes providing support for innovation in Wales include the university-led *ASTUTE* programme. This programme supports technological development, sustainability and growth in businesses in the aerospace, automotive and high technology sectors (in West Wales and the Valleys). Comprising a partnership of Wales' universities in the Convergence area, ASTUTE provides support to manufacturing companies to create sustainable, higher value goods and services and bring them to a global market.

4.25. Given the potential to offer financial support for relatively small programmes in the Convergence area, there is some potential for ASTUTE to overlap with the BI Project.

Summary

4.26. The findings from this section suggest that the BI Project has faced significant challenges resulting from the economic, policy and organisational context and, as a result, these challenges have adversely affected Project performance. The economic downturn, and associated decline in business R&D expenditure contributed to lower than expected demand for the Project. This was compounded by the changes brought about by the implementation of the ERP, notably the decision to move towards repayable finance in place of grants and the reorganisation of the then Innovation Specialists into sector teams. Together these factors prevented the BI team, at times, from effectively promoting the BI Project, and resulted in confusion, both internally and externally, about the availability and offer of the Project.

4.27. While the confusion surrounding the Project's availability and offer has subsided, with the decision to revert back to grant funding and relocating the Innovation Specialists (back) to within the Innovation Team, the Project has faced significant challenges in generating sufficient demand to meet its activity targets. Despite this, the Project has done very well, particularly over the last year, where it has made significant gains and will meet key targets.

5. PROJECT PERFORMANCE REVIEW

Outputs

5.1. The tables below contain the targets for the BI Project with the outputs being drawn from monitoring data to the end of October 2014. Official WEFO/EU definitions of the output categories have been reproduced in **Appendix I** of this report. Targets are split between the convergence and non-convergence regions, and have also been collated to form a consolidated results table.

5.2. **Table 5** indicates strong pan-Wales performance with respect to key indicators such as the number of jobs created, investment induced, and the number of new, improved products, processes launched, and products, processes and services registered. Collectively these indicators point towards strong economic benefits emerging from the Project at the final stage. The strong jobs created outputs are complemented by a similar number of jobs safeguarded. This is indicative of the economic downturn of 2008/09, where many companies prioritised retention of staff, over job creation/loss.

5.3. Other notable outputs include the high level of repeat contacts evident. This is a key feature of WG innovation programmes, and reflects the complex and multistage nature of the innovation process, as well as the relationships developed by the IS over time. The level of Innovation Vouchers applications and offers further illustrates the role of the BI Project in helping to strengthen links to the knowledge base in Wales.

5.4. Despite the generally strong performance of the Project there are a number of indicators that are below the final target. These include ‘activity’ indicators such as ‘enterprises assisted’ and ‘enterprises financially supported’. These are likely to be below the target due to the difficulties and challenges faced in delivering the Project (see section 4 for full details). Other performance shortfalls are likely to reflect the long-term and uncertain nature of the innovation process – for example the indicators for Profit Benefit.

Table 5. Pan-Wales Total Outputs & Targets, October 2014

Output Indicators	Outputs achieved	Final Target	Variance
New/improved products, process launched	730	504	+226
Enterprises Assisted	1217	1310	-93
Products/processes/services registered	564	432	+132
Enterprises financially supported	396	434	-38
Profit benefit (£)	£23.0m	£22.4m	+£0.6m
Investment induced (£)	£22.9m	£11.6m	+£11.3m
Jobs created	336	179	+157
Jobs safeguarded	300	n/a	n/a
Sales of products (£)	£2.3m	n/a	n/a
Technical enquiries (new contacts)	720	n/a	n/a
Repeat contacts	951	n/a	n/a

5.5. **Tables 6 and 7** below, break down Project performance according to the core ERDF indicators in the Convergence and Competitiveness areas. This data indicates that the Convergence area programme produced comparatively stronger Profit Benefit and Jobs Created. The Competitiveness area programme, however, accounted for a larger proportion of innovation outputs – New or Improved Products or Processes Launched/Registered for example. The profitability of such programmes was noticeably lower than those supported in the Convergence area, suggesting full/successful commercialisation has not yet been achieved in many cases (to date).

Table 6. Performance Data - Convergence Area

	Outputs achieved Oct 14	Convergence Target	Variance
Enterprise Assisted	752	806	-54
Enterprise Financially Supported	232	290	-58
Products, Processes or Services Registered	297	288	+9
New or Improved Products or Processes Launched	494	360	+134
Jobs Created	246	144	+102
Profit Benefit	£21.0m	£17.3m	+£3.7m
Investment Induced	£19.5m	£8.0m	+£11.5m

Table 7: Performance Data - Competitiveness Area

	Outputs achieved Oct 2014	Competitiveness Target	Variance
Enterprise Assisted	465	504	-39
Enterprise Financially Supported	164	144	+20
Products, Processes or Services Registered	267	144	+123
New or Improved Products or Processes Launched	236	144	+92
Jobs Created	90	35	+55
Profit Benefit	£2.0m	£5.1m	-£3.1m
Investment Induced	£3.4m	£3.6m	-£0.2m

Funding

5.6. Funding data for the Convergence and Competitiveness areas is set out in **Tables 8 and 9** below. This indicates that both programmes are currently below their final budgets (at October 2014), although Convergence areas are closer to their final targets. Revenue spend in both programmes accounts for the highest proportion of total spending (96 per cent and 89 per cent respectively).

Table 8. Programme funding data – Convergence Area

	Convergence spend – Oct 14	Final budget	Variance
Capital	£ 2.2m	£3.0m	-£0.8m
Revenue	£10.6m	£11.0m	-£0.4m
Total	£12.8m	£14.0m	-£1.2m

Table 9. Programme funding data – Convergence Area

	Competitiveness spend – Oct 14	Final budget	Variance
Capital	£1.8m	£ 2.6m	-£0.8m
Revenue	£6.5m	£7.3m	-£0.8m
Total	£8.3m	£9.9m	-£1.6m

Summary

5.7. The results of the performance review indicate that the Project has, despite lower than expected demand, achieved generally strong results. This strong performance is evident in both innovation outputs (new products registered and launched) and economic outputs (jobs created and investment induced).

5.8. The Convergence area programme has produced comparatively stronger Profit Benefit and Jobs Created. The Competitiveness area programme, however, accounts for a larger proportion of innovation outputs – New or Improved Products or Processes Launched / Registered. This suggests that full commercialisation of Competitiveness area projects has yet to be fully achieved. Against funding targets, both programmes have spent less than anticipated (at the final stage).

6. EVALUATION FINDINGS

6.1. For the purposes of this exercise, the Consultants undertook a personal interview programme with key internal and external stakeholders identified and agreed with the ESG. This interview programme was run in tandem with a telephone survey of the beneficiary base (Section 7), and the results have been presented in discrete sections below, namely:

- Innovation Specialists
- Delivery Partners
- IP Support
- Key Stakeholders (Internal and External)

Innovation Specialists

6.2. The Consultants held two workshop sessions, the first was held in Penllergaer, South Wales on 27 November, and was attended by eight IS. The second was held in Llandudno Junction, North Wales on 4 October and was attended by three IS.

6.3. When the Consultants interviewed the IS as part of the mid-term evaluation, their major concerns and frustrations centred on the constraints imposed by the ERP. Discussions undertaken for this final evaluation identified that the IS generally believe that the impact of ERP is still resonating around the BI Project and adversely affecting delivery and staff morale. Under the ERP, the IS were prevented from working with individuals and microbusinesses, instead having to signpost them to the WG's Enterprise Division. The feedback received from individuals and microbusinesses led the IS to suggest that Enterprise Division did not have the necessary skills to handle innovative businesses and often seemed to have too few people and resources to do so. Several of the IS, as in the mid-term evaluation, believed that as part of the WG there is less freedom to operate with increasing, often seen as unnecessary, procedure and regulations, which require increased time commitment and slows the intervention process down.

6.4. The key points from each workshop session undertaken for this final evaluation have been outlined below:

Coverage of the Nine Key Sectors

6.5. During both meetings, the interviewees recognised the dominance of the Advanced Manufacturing and Materials sector (AM&M) but believed that some inroads had been made into the financial and ICT sectors. The interviewees do, however, clearly see AM&M as a very important and cross-sector grouping that is worthy of support and, going forward, any repositioning of the Project should not be detrimental to this sector.

6.6. The IS believed that they had been making progress since the mid-term evaluation in terms of general support to the sector teams, and that sector teams appreciate the BI offering more. This was a view that was supported in interviews with the sector representatives. It was mentioned, however, that some sectors are very difficult to support due to their notion of innovation not fitting in with the technological innovation model that underpins BI's support. A specific sector example was ICT companies who often adopt/apply what is already known, but in a creative way. Such creativity is innovative for the ICT businesses but does not fit the model and therefore does not generally qualify for Innovation Vouchers.

6.7. It was recognised that each sector has its specific needs, and that with a generic future BI Project, BI first needs to identify which sectors to support (if not all) and mould its offering to suit those chosen sectors. This is a process that would benefit from the definition of innovation and innovation support being clarified for the specific sectors.

6.8. Others sectors where noticeable engagement had been witnessed included Energy and Environment, Construction and Life Sciences. Food and Farming was a sector identified as requiring innovation, however little engagement had so far taken place.

6.9. One issue identified by the IS was that the Project was marketed too narrowly and was not defined enough to target all sector needs. It was recognised that to appeal to a wider market, the Project needs to accommodate other forms of innovation, particularly business process innovation. Again, this is an opinion that was further supported during the stakeholder interviews.

6.10. The IS team expected that State Aid changes would make things even more difficult. The team's reading of them (a view apparently shared by WEFO) is that unless fairly strict criteria and definitions of innovation are met, the companies cannot be supported. SMART Specialisation is also seen (by the team) as a possible limiting feature where, unless the company is developing innovation in areas where Wales already has a leading position (in the SMART Specialisation meaning) then they cannot be supported.

6.11. Going forward, the issue here is that any opportunity to support business innovation would need to be accepted by SMART Specialisation and the General Block Exemption regulation (GBER). In discussions with the BI Project manager, whilst accepting that BI has a role to play, it was clearly indicated that under the current funding stream business process innovation would be ineligible. Our conclusions therefore must suggest that business process innovation be considered, possibly outside of the main funded programme but to run, where possible, alongside innovation support for manufacturing and design. When this opportunity was discussed with the IS, the vast majority believed this suggestion made sense.

Can the BI delivery be improved?

6.12. A fundamental aspect of the IS' role is to help handle the expectations of companies and move them forward in a manageable way. The IS believe that the sector teams tend to 'cherry pick' the good businesses or at least those that will give them the outputs or that will 'tick boxes', commenting that, "Unfortunately we are not provided with access to those businesses that we could truly support. Getting access to those businesses, at the right time, would be very beneficial."

6.13. It was noted that the BI team is no longer restricted to only working with certain sectors, rather they operate geographically and this has been a major improvement. However, it was commented that sector teams often call on the IS to help them appease companies who have been over-promised by the sector team/senior officials who cannot deliver. "The BI package is often used as the last resort to get funds into companies for projects that don't really fit the purpose for which BI was created. BI then gets blamed for this."

6.14. The IS stated that there are also times when the Wales Economic Growth Fund (WEGF) takes projects away from the BI team to grab the outputs but, equally, the IS confess there may have been instances when the BI team should really have given a project to the WEGF so that the company could get more funding than the BI Innovation Voucher scheme allows.

6.15. Despite the problems outlined above, the IS state that, generally, on the ground, they have good working relationships with the sector teams and that, "It's only when senior managers get involved who are focused on target outputs and 'box ticking' that problems arise."

6.16. Despite the unclear landscape, the IS believe that delivery could be improved and could be more customer-centric if they had greater visibility and control in relation to the process. The IS mentioned that when they were Innovation Technology Councillors they could provide more of a bespoke service as they generally dealt with fewer businesses, being able to greatly improve the innovation journey as a result. The IS accepted that today's conditions are different to those of five years ago, however, they felt that any future programme needed to be beneficiary-centric.

Areas of innovation that are more critical today

6.17. The Consultants thought it would be beneficial to ask the IS if there were any areas of innovation that have increased in importance since the Project began, thinking particularly of open innovation. The Consultants were made aware that the Innovation Team has created an Open Innovation Initiative, which was being successfully delivered. Therefore during the interviews we focused on areas of innovation worthy of support. Clearly the IS viewed this as an opportunity to discuss the likelihood of including other forms of innovation support in future programmes. Several suggestions were made, however it was also identified that ‘business innovation’ in its widest sense is what a lot of the companies would benefit from. Indeed, it was said that ‘business innovation’ would present the opportunity to engage with more businesses and engage more profitably with those sectors where, to date, success has been limited. In discussions with BI management and the IS, it was agreed that business innovation would need to be defined and that it would generally include all areas relating to the operations of a business to deliver a more innovative product, process and service.

Innovation Vouchers

6.18. Evidence from discussions would suggest that the Innovation Vouchers are becoming less useful. The relatively new requirement regarding a Procurement Policy for all companies has simply added a further barrier to the marketing of the Vouchers. It was suggested that WEFO and WG always point to the ‘auditors’ who must be satisfied but never to the businesses that have needs. This also gives a bias towards the IS team working with larger companies who will have corporate policies and procedures in place and can easily ‘tick the box’ for the WEFO auditors.

6.19. The IS team accept that there is a need to be realistic and to interpret such audit requirements appropriately but say that they would not be supported if they got it wrong and that the lack of clarity about what is acceptable to take a risk on is not helpful, hence it is easier to do nothing. The old Technology Exploitation Programme at least had a joint decision making process that won an award for good management, which was then abandoned. The IS are not sure why this happened.

Grant Dependence

6.20. The IS are acutely aware that other EU-funded programmes are operating in the innovation support space. Some of these programmes, ASTUTE being one specifically mentioned, are marketed in a way that is financially more attractive to a business than BI. Asked whether it is possible to get SMEs away from grants, the answer was ‘not in the short-term’. It was the IS’ opinion that, if this was attempted, referrals would dry up in a similar way to when the move was made to repayable loans, for example. The IS appreciated the background to the question and appreciated that over time they need to wean companies off grants. The IS believed that this would be best achieved once a company had obtained and benefited from a grant, which would de-risk future innovation projects.

6.21. This could be done in a staged approached within diminishing intervention rates. It was suggested that, as in the case of SMARTCymru, intervention rates could diminish in line with the perceived degree of risk through a staged process. The IS generally recognised that Wales is particularly grant rich, that Welsh companies do not generally fare well in securing UK grants, and that the current situation is possibly unsustainable over the longer term.

6.22. When asked whether the BI Project being so reliant on SMART and Innovation Voucher funds is resulting in a focus on audit and approval processes, rather than on helping companies to innovate and advising them on how to manage their innovation, the answer was again, “This sounds correct in theory but in practice we would find ourselves with little workload and we could not get anywhere near meeting the required output targets”.

Delivery Partner Interviews

6.23. On 5 November 2014, the Consultants visited Enterprise Consulting Ltd at their temporary offices in Regents Court, Ocean Way, Cardiff. The Consultants initially interviewed the Contract Manager and COO of Enterprise Consulting, followed by interviews with a group of Manufacturing and Design Advisors.

6.24. We have summarised the results from both interviews below, in terms of addressing the evaluation areas outlined at the Inception meeting, namely:

- BI Project Positioning
- Sector Coverage
- BI Delivery
- Best Practice
- BI Promotion
- Beneficiary Grant Dependency

- Alternatives to Direct Grant Funding
- Marketing
- Future Product Positioning
- Recommendations for Improved Delivery
- Innovation Environment

BI Project Positioning

6.25. Both the COO and the Advisors stated that there is a real gap in the market, which is partly addressed by the BI Project, specifically for direct grant support, namely Innovation Vouchers. They stopped short of suggesting that there is overall market failure, as they are acutely aware of private companies that are based in Wales and the rest of UK that (in part) occupy the innovation-support space. Several of these private-sector companies have benefitted from being BI suppliers. According to Enterprise Consulting, the private-sector providers have reported that BI intervention has introduced new businesses to professional support.

6.26. In terms of BI, the Advisors framed the gap that BI is addressing as independent guidance and support for businesses that are investing in innovation (often for the first time with external support) to improve their business competitiveness and the Welsh economy.

6.27. Enterprise Consulting believes a good portion of BI beneficiaries would not have the inclination or confidence to deal directly with the private sector in the first instance. The BI Project does not just give these businesses confidence to proceed, but also gives them confidence to know that they are heading in the right direction. The continuous support provided by the WG also provides them with confidence and security. Equally, it was felt that unsophisticated businesses find it difficult to clearly articulate their needs and priorities, are inexperienced in the innovation journey and have varying, usually unrealistic, expectations. Support provided by the Advisors and the IS can communicate the journey and help to manage expectations.

6.28. In terms of the provision of innovation support, the Advisors generally accepted that whatever the WG delivers, gaps in provision would always exist. This is attributed to the increasing speed of scientific advances, invention, innovation, market/consumer demand and the need for Welsh businesses to innovate to remain competitive. A key part of the BI Project is its role in educating and encouraging businesses to be innovative and to be able to move to a position where they have the expertise to deliver innovation and create a culture of innovation within their organisation.

6.29. The BI Project is seen as an effective way of promoting innovation and encouraging companies to invest time, resources and money specifically where there is a degree of risk and outcomes may be seen as being uncertain, thus justifying grants.

6.30. However, one advisor mentioned that BI could be seen as supporting the less risky end of innovation, ie manufacturing and design. BI intervention will often produce a range of benefits, even if the ultimate objectives are not reached. When challenged, the Advisor stated that there were generally more uncertain innovation challenges that should be considered in future programmes. For example, if a completely new product or process is unsuccessful, nothing will be achieved.

6.31. The Advisors also believed that the businesses that they had come into contact with were often seeking **continuous** stage improvements rather than **significant** paradigm shifts. This often meant that these *'continuous improvement'* projects were less likely to be supported due to such projects not being judged as 'significantly innovative'. It was also suggested that definitions of 'novelty, invention and innovation' need to be set in the context of the size, type, style, capabilities and lifecycle of the company – something that was suggested as possibly being an unachievable task.

6.32. Overall, the consensus of opinion was that where companies clearly met the criteria and have a clear purpose and end goal, the support that they receive clearly adds value.

Sector Coverage

6.33. It was clearly recognised that BI is still dominated by the AM&M sector, followed by those sectors that employ manufacturing processes, including construction, life sciences, food and farming and energy.

6.34. Enterprise Consulting believed that BI could profitably support all sectors and that the BI service could be marketed sectorally. Enterprise Consulting also believed that communicating using the business and developmental language of choice for each sector should engender more interest and also facilitate closer and better working relations with the sector teams, contributing to GDP.

6.35. The COO at Enterprise commented that, when tendering for the second half of the BI contract, his company was very conscious of perceived requirements to cover and provide equal access to eligible businesses within each of the nine key government sectors. He mentioned that Enterprise had included resources specifically for covering sectors such as construction, food and farming, financial/professional services and the creative industries in their mid-term bids for both the manufacturing and design delivery contracts. It was felt that positive proposed actions, which would widen BI's market, were not taken up by the WG in the way intended.

6.36. In terms of non-manufacturing sectors, it was commented that there had been little interest and participation, highlighting what they perceived to be the least engaged sector 'tourism'. Tourism was described as a sector that they had "dipped their toe into", specifically "digital tourism". The outlined difficulties with this sector and others such as food and farming were the generally low levels of innovation sought, which would still have an immediate or short-term businesses impact. A specific example cited was Oakley Arms, a hotel that was looking to improve its business performance by developing a booking and EPO system. The company applied for an Innovation Voucher and managed to get the support of the e-business team, however the application was eventually refused. This experience is quite off-putting in terms of perceptions of continued support.

6.37. The COO at Enterprise is of the view that BI should target those sectors that it can clearly support and those that align with the BI product and service offering in the next funding round. "This deliberate targeting will probably gain more support from sector teams and create greater engagement and support."

6.38. For the unsupported sectors, it leaves them to design programmes themselves or via partnerships, which could include the Innovation Team's experience, and which are likely to have different definitions and forms of support that fit more closely with their industry needs. As stated, Enterprise Consulting believed that the WG's Innovation Team would be in a position to assist and help set these programmes up.

BI Project Delivery

6.39. Both the COO and the Advisors believed that Enterprise Consulting was doing an excellent job at marketing, delivering and managing the BI support project (hence fulfilling their contractual obligations). They believe that their engagement and knowledge significantly adds to that of the IS and provides another level of detail to the delivery of manufacturing and design-focused innovations.

6.40. In terms of the delivery of support via the Innovation Vouchers and 3rd parties, the Advisors believed that this is good overall but that there are several opportunities for improvements. It was stated that they regularly discuss these with BI management, for example the three quote rule, which, whilst understood, introduced delays and there was indication that this approach was occasionally been abused by collusion between suppliers.

6.41. It was recognised that streamlining business engagement using a blueprinting/roadmapping activity to deliver an intense 'Business Assist' would make sense, the purpose being to gather a greater detail of understanding of the business needs agenda with the beneficiary and to provide more focus on provisions and signposting to create a more seamless journey for the beneficiary, to reduce management and administration involvement, and to secure outputs sooner.

6.42. The concept of roadmapping, introduced by the Consultants as a result of discussions with BI management, generally made a lot of sense in terms of delivering progress and impact in its own right. It was generally believed by Enterprise Consulting that the IS did not have the skills to undertake the roadmapping (diagnostic) exercise.

Best Practice

6.43. In terms of other approaches, possibly representing best practice, the Advisors described the approach employed by Construction Futures Wales (CFW) (http://www.constructionfutures.org.uk) as being more direct, having reduced drop-out rates, and being a more rounded and complete offering, merging manufacturing and design.

6.44. The Advisors felt that it was important to point out that bringing significant added value through their skills and experience largely goes unnoticed. This is due to the fact that they begin with a great understanding and knowledge of current manufacturing technologies, better manufacturing processes, and an understanding of the influence of design, which means that they are starting from a strong base.

BI Promotion

6.45. In terms of BI promotion, the Advisors agreed that the general marketing and promotion of the Project has not been good, using terms such as: "no strategic market planning, fractious, basic, not innovative (no use of new media), too general and unconnected to others". The COO of Enterprise believed this to be a general view and did not see this as a direct criticism of BI's management but more of a result of the internal environment and high levels of change.

6.46. One Advisor mentioned that generally for such a large project (in terms of value, scale and reach), details are hard to find. It was explained that BI details can be located on the Expertise Wales website, and that this is probably not the best place for them to be. The Advisors accepted that there had been issues that had affected marketing and communications performance, which had been outside of the BI team's control. They also claimed (note: marketing activity is also part of the Enterprise Consulting contract) that it is their own marketing efforts (for example, a recent telemarketing campaign) that is producing the new leads and not those of the BI central marketing team, other stakeholders or of the IS. Enterprise advised BI management to study how the marketing has been undertaken for the Manufacturing Advisory Service (MAS) in England, via Grant Thornton (note: MAS in England is now part of the Accelerator/High Growth Programmes). All agreed that a centrally produced and coordinated marketing and action plan would prove to be very useful to drive internal and external communications.

6.47. To ensure wider dissemination and uptake, Enterprise Consulting suggested that, in future programmes, there is a need to engage directly with specific industry, public and private sector stakeholders, to attend key conferences, exhibitions, events, and to introduce below-the-line and digital campaigns.

Beneficiary Grant Dependency

6.48. We discussed the concept of grant dependency and how this could be addressed or avoided. The Advisors could not think of an alternative to grants to deliver greater levels of innovation. A number of the Advisors mentioned that when the grant was stopped, becoming repayable loans, very few applications were received.

6.49. "We accept that this is an immediate response", claimed one of the Advisors, "the question to answer is should significant interest return during an extended period without grant, will this indicate how dependent businesses are on external support and grants?"

6.50. The Advisors accepted that grant expectancy/dependency existed and that in all likelihood in the next major EU funding programme (2020+) that there would be little by way of grant to support such activities. One advisor commented that if a grant has been used-up or becomes unavailable, a good number of those businesses would look elsewhere, ie chase grants instead of accepting training. There was discussion about reducing the intervention rate as we move to a new situation but that did not produce any conclusions.

Alternatives to Direct Grant Funding

6.51. The Consultants then introduced the possibility of training/CPD as a potential way of encouraging innovation within businesses. The Advisors generally felt that this would only work with a proportion of businesses. It was then suggested that training and consultancy could run side-by-side, which may prove to be successful.

6.52. The Consultants introduced the concept of training (NVQ Level 4, CPD, even modular Masters), which benefits the individual and the Company. The Advisors felt that this was a good suggestion but recognised the likely requirement to work across different funding streams/criteria and potentially different delivery partners. It was suggested that, in the first instance, we should also consider courses that are run by the University of South Wales (Level 4), accredited by the Institute of Leadership and Management (www.i-l-m.com)

Marketing

6.53. Over sustained periods, the central marketing of the BI Project has been non-existent and often ineffective, especially in terms of getting the messages across to target businesses, resulting in actions. It was specifically identified as very weak when compared with that of competitive programmes. The Advisors are well aware that the Project has been subject to internal influences, which has affected marketing performance.

6.54. In terms of marketing activity, it was identified that a good way to promote BI is not by case studies but by "glory stories". Enterprise Consulting produces a newsletter for the construction sector, which is based on "glory stories" and has a circulation of 6,000, including councils, architects, builders and professional specifiers. This works extremely well and, according to Enterprise Consulting, could be adopted for general RD&I. An alternative, 'Advances Magazine' was mentioned, but it was decided that it carries too much research (blue sky) and was not necessarily the market that Enterprise Consulting needed to tackle.

6.55. One Advisor commented that there are a number of businesses that generally do not engage with the WG. It was believed that to gain exposure to these businesses, BI needed to market to them directly, with an effective method being to piggyback other events (sector teams, WG, Enterprise Consulting, industry-specific, university, national events, etc.). Equally, more could be achieved in terms of indirect marketing by working with and supporting other initiatives/organisations, such as the Local Authorities, other EU-funded programmes, universities and private business support organisations, e.g.

banks, accountants and consultants (design, manufacturing and general business development).

6.56. Enterprise Consulting has developed both a light-touch and a more detailed diagnostic. The more detailed diagnostic works on the principle of asking questions of people at different levels within the organisations and presents the results to management and/or the owners. This often presents surprising results in that the lower levels of operations can and often have a different perspective on issues such as company strengths, weaknesses, opportunities, threats, RD&I capabilities, products, process and service innovation. Enterprise Consulting would like to offer up this diagnostic for use in future business-support programmes.

6.57. The COO of Enterprise Consulting suggested that marketing success comes from using a well-managed, clean database (note: the Enterprise Consulting database includes 2,500 companies – 1,500 specifically for design and 1,700 specifically for manufacturing, with a degree of overlap). That said, Enterprise Consulting stated firmly that, "The key interest, initially at least, is grant, with the sales task being that as soon as we are in front of those businesses, we can explain in greater detail and clarity how we can help in non-financial ways".

6.58. In terms of moving forward, it was recognised by all stakeholders that a future programme, especially one of the size and reach of BI, requires a stand-alone, costed, and independently managed market strategy and plan. Such a strategy/action plan should include identified and costed actions and should include all stakeholders. It was also suggested that it makes sense to subcontract marketing to a third party so as not to be influenced by internal factors and to ensure consistency of delivery.

6.59. It should be noted here that BI management informed the Consultants that marketing activities needed to be managed and delivered by WG communication services. That being the case, the Consultants recommend that BI's management should produce/commission a highly detailed (actions, budgets, targets, specific responsibilities, partners, media etc.) marketing strategy and action plan, which can then be agreed with central communications. The plan should last for three years, with the first 12 months being highly developed, agreed with internal communications and managed on a monthly basis. This approach will mean that the communications team understands what needs to be achieved and it can be delivered as a constant and managed against plan.

6.60. This may be perceived as being too pedantic, however, entering into a service level agreement about marketing would benefit the Project significantly as it would then always be actioned, measured and be made patentable by BI, in terms of overall WG marketing activity. Currently, it appears that marketing is sporadic and does not receive the attention and action that it requires.

Future Product Positioning

6.61. The Advisors had two views on the product positioning; one was that it was fit-for-purpose for what it sets out to achieve and the parameters that it works in, and the second was that, maybe as a result of this exercise, it requires a complete refresh. It was suggested that, if an EU-funded project was to go forward, there was a requirement to cover all sectors and to, quote, “be more adventurous in terms of support”. Equally, this would need to be the case if a more targeted and intense approach is adopted.

6.62. As mentioned by various groups, opening up the definition of innovation in an attempt to encompass more businesses would be a distinct advantage for the Project and its ability to deliver. It was suggested that a greater audience means that maybe the Project is in a position to cherry pick those businesses that display the greatest growth potential and hence economic benefit.

6.63. In terms of going forward, grants could be positioned more strategically to work with high-growth businesses, with high-growth potential being the determining factor, not the level of innovation. Equally, the output of the grant should be to lead the company to a position where it is willing to undertake similar innovative activities for economic gain, either by itself or being supported elsewhere, but at full cost to the company. It was also mentioned that if BI had less to offer, other programmes that were probably less able would move into this space through ESF and ERDF funding.

6.64. Overall, the Advisors believed that the BI Project should develop and support journeys or mechanisms that are able to graduate companies away from grants at the earliest convenience, in case grants were to be significantly reduced or disappear after 2020.

6.65. The COO at Enterprise Consulting also commented that there are a lot of businesses in Wales that BI, WG or other schemes have not reached, with many being less expectant of grants but potentially just as worthy. He also mentioned that there were young businesses that required support more than grants during the period of establishing their venture and early growth.

6.66. In terms of delivery, we questioned the engagement with the universities and it was stated that the universities are excellent at two things, namely 1) getting access to up-to-date technology and good facilities, for example PDR and state of art 3D printing; and 2) research for new knowledge. The COO at Enterprise accepted though that universities are not as engaged as they could be and that this should be addressed in future programmes.

Recommendations for Improved Delivery

6.67. The Advisors had many suggestions as to how you could make incremental improvements to the BI Project. These were offered to enhance delivery going forward and included client handling, marketing and delivery.

6.68. In terms of client handling and the beneficiary journey, the Advisors, like the IS and the BI management, felt that if it was possible just to have one contact point throughout the journey this would be seen to be more seamless, potentially quicker and throughout the journey the key support individual would gain greater understanding of the business and therefore be in a better position to provide guidance and advice. At this stage, once again, the Consultants introduced the roadmap approach, which the Advisors believed to be a very worthwhile idea. The Advisors also felt that maybe they more than the IS were in a position to identify the tasks required and, indeed, the likely solutions.

6.69. The Advisors also felt that there was an opportunity to go through the BI team direct to the provider, rather then obtaining three quotes, which makes great sense. They also accepted that three quotes was probably a WEFO requirement but believed now that there are instances where suppliers are clearly collaborating and that the independence engendered by the three quotes rule is not realistically there. An improved method for recruiting the right consultants could add value and reduce the process timeline.

6.70. One of the Advisors said that the most positive activity that has had an impact over recent years has been the introduction of the Innovation Vouchers for capital grants. Equally, it was claimed by other advisors that it was the ability to make exceptional awards and, whilst possibly not the most desired way, clearly this could be successful.

6.71. It was generally agreed that a number of new routes to market were available in which, to date, the Project has had little traction/success. The main route to market identified was through the universities. As we have identified in the stakeholder interviews, universities such as Cardiff touch 1,000 businesses per year, Bangor in excess of 600. They admit that there has been very little engagement with BI and that for this to happen, there is a need to communicate with universities and, where appropriate (skills and capacity), inform them that they could indeed deliver Innovation Vouchers and support/training. Other routes to market touched upon included the professional business-support community (banks, solicitors, patent agents, industrial/commercial marketing companies), Local Authorities, and specialist groups via digital/social media. Clearly greater cross-referencing and integration will benefit businesses. On a more cautionary note, it is necessary to communicate wherever possible that client confidentiality will be respected and that the universities can operate within and outside of the Project.

6.72. It is expected that engaging with the universities could produce a regular and qualified deal flow.

Innovation Environment

6.73. It was noted that the environment for innovation support is changing as the country is leaving the recession. During the recession, it was observed that many businesses pulled back significantly on their RD&I activities and now need to be encouraged to start reinvesting. This could be achieved by being more proactive with marketing and more tailored messages.

6.74. 2015's new funding and economic conditions are being seen as an excellent opportunity to encourage businesses with the introduction of a new fund that should have a new and more focused marketing campaign. A number of the Advisors felt that businesses are becoming more bullish about their future and are possibly more likely to invest as cash flows and forecast income become more positive. This has generally resulted in more positive attitudes about the future and in innovative activity generally.

Intellectual Property Support Services

6.75. During the mid-term evaluation, the Consultants reported that the BI provision of IP advice was highly regarded by businesses and other parts of the WG, and this clearly remains the case. At the midpoint it was delivered by two IP Specialists and via the first PATLIB Centre, based at the WG offices in Llandudno Junction. In the mid-term evaluation we also reported that the decision to support a second PATLIB centre in Aberystwyth had just been made.

6.76. PATLIB is a European patent office sponsored pan-European initiative and was created to reach out to many audiences to provide advice and guidance on all IP matters.

6.77. PATLIB offices, throughout Europe, tend to be hosted within libraries or research organisations and they are often an extension of information services where people are qualified to give guidance, occasional advice and signposting. The Centres tend to have telephone, online and call-in based services and deliver IP workshops, clinics and general promotional activities.

Current Provision

6.78. The PATLIB located at Llandudno Junction (WG offices) was based in the general reception/meeting area and was run by WG librarian staff. Unfortunately, WG cuts meant that there were no effective operational staff members available, therefore the Centre has now been closed. Llandudno Junction still has literature available in regards to IP but no directly manned services and it is for the same reasons that the centre at Aberystwyth did not go ahead.

6.79. We discussed the provision of IP guidance at some length with the two IP Managers, representing North Wales and South Wales respectively, who briefly explained the recent history and their activities and going forward where they felt their resources could best be placed. Both explained that they deliver a professional service and they are fully employed providing IP guidance to businesses and IP guidance and advice to internal WG stakeholders and associated groups, i.e. Health.

6.80. The Specialists commented that, within their remit, they should not necessarily be giving "advice" in difference to guidance to external organisations and businesses. This is more a role for independent qualified specialists from the private sector, which is something encouraged by WG. It was also commented that the WG does not have the appropriate IP cover. It was identified that over recent years they have also moved away from guiding individuals to working with more high-growth businesses. This was seen as a legitimate activity as activity here can have a more immediate and greater impact on the Welsh economy.

6.81. The Consultants enquired as to what delivery looks like and it was identified as being delivered on three generic operational levels:

- **Level one** was described as being entry level and was seen as directly guiding businesses, commonly micro-businesses. This is normally delivered by way of telephone support and identifies position, objectives and issues, after which signposting is used. It was mentioned that there are limits as to what can be delivered over the phone and that the Specialists generally present the beneficiary with a few action points. Increasingly, they are also supporting other divisions of WG, and the public sector at large, in similar ways.
- **Level two** was described as being more engaged with larger SME organisations and large enterprises, possibly spending up to two hours.

This is often delivered when the IP situation is more complex as there may be more actors involved and several forms of IP. This shapes an IP approach and strategy, rather than specifically dealing with one issue.

- **Level three** was described as being where the Specialists become more directly involved as they see a rationale and an economic reason to do so. This could often involve running workshops for organisations so that they can start on an IP journey that ultimately produces an IP strategy for that organisation. The Specialists stated that this sort of informal approach tends to work.

6.82. One of the Specialists went to great lengths to explain that, “If you imagine a super highway, many of the businesses that we deal with on a day-to-day basis have only just got off the hard shoulder”, indicating that delivery is much in line with end-user needs and requirements and can be escalated as and when. A lot of the advice given seems to be focused on the basics, explained as making sure that the beneficiary is aware of IP and its many forms of protection. It was explained that the Specialists need to create awareness and, where issues are likely to occur, to move them on to professional support as quickly as possible.

6.83. One of the Specialists commented that, “As a civil servant, I am more likely to take a cautious approach and I do so when I give guidance but I recognise that I am dealing with entrepreneurs who are less cautious and more willing to take risks.” The Specialist went on to say that when dealing with large organisations, “We are probably providing more impact and long-term benefits. Having recently run a half-day event with a medium-sized manufacturing company in North Wales, we outlined IP and talked about IP search tools and how a business could improve their understanding of the technology landscape and market opportunity.” The Specialists said that despite it being a large company, they had learnt a lot from that day and are convinced they will move forward in a number of ways.

6.84. It was said that IP is a significant subject that can affect businesses in many ways. However, the Specialists believed that for maximum benefit for Wales they were better placed investing their time and attention where it has the greater impact. It was suggested that the Specialists and the IS, who also deliver basic IP guidance, need to have the ability to cherry pick to add value. Having said that, the Specialists recognise that they need some metrics/ targets to be measured against and, importantly, on which to focus their efforts. They were suggesting that this should be considered and be part of a future programme.

Key Stakeholders

6.85. For the purposes of this final evaluation, the Consultants conducted face-to-face interviews with key internal and external stakeholders of the BI Project. In total, 30 interviews were conducted (**Table 10**), guided by a semi-structured questionnaire that was agreed with the ESG beforehand.

Table 10. Stakeholder Interviews Completed

Name	Department or Position	Organisation
Phil Allen	Head of Knowledge Transfer & Commercialisation	Welsh Government
Gwion Williams	Operations Manager, BI	Welsh Government
Brian Thorne	Innovation Funding Senior Manager	Welsh Government
David Rosser	Director of Anchor Companies and Innovation	Welsh Government
Alastair Davies	Head of Innovation Policy	Welsh Government
Duncan Hamer	Deputy Director, Entrepreneurship & Delivery	Welsh Government
Jon Linford	Senior Manager, High Growth Starts Service	Welsh Government
Steve Holt	Deputy Director, London Office	Welsh Government
Iain Willox	Head of Business Development, AM&M	Welsh Government
Rachael Blackburn	Senior BDM, AM&M	Welsh Government
Russell Pycroft	Senior BDM, ICT	Welsh Government
Ifan Evans	Head of Healthcare Innovation	Welsh Government
Cari-Anne Quinn	Head of Life Sciences	Welsh Government
Gwenllian Roberts	Deputy Director, Energy & Environment Sector	Welsh Government
Dafydd Hughes	Head of Construction	Welsh Government
Geraint Green	Head of Business and Innovation	WEFO
Natalie Owen	Project Development Officer	WEFO
Gavin Cawood	Operations Director	Design Wales
Gareth Evans	Head of Business Development, Research & Consultancy Division	Cardiff University
Mick Card	Glyndwr Innovations	Opto-Electronics Forum
Debbie Davies	Business Incubation Manager	Opto-Electronics Forum
Andrew Hopkins	ASTUTE – Cardiff University	Cardiff University
Mike Wright	Business Engagement	Cardiff University
Ian Barwick	COO, Life Sciences Hub Wales	Cardiff University
Steve Smith	Director of Early-Stage Investments	Finance Wales
Dr Trefor Wyn Jones	Project Development Manager	Bangor University
Gareth Mayhead	Commercialisation Manager	Bangor University
Bryn Jones	Lecturer in Primary Education (Science)	Bangor University
Bridget Day	Deputy Project Manager (NATEP)	Midland Aerospace
Paul Byard	National Director	EEF

6.86. As a continuation from what was observed during the mid-term evaluation, the requirement to support and, indeed, accelerate innovation take-up throughout Welsh businesses was universally acknowledged by all stakeholder groups interviewed. The results of the stakeholder interviews have been generalised and reported by exception in the following sections:

Project Positioning and Fit-for-Purpose

6.87. Evidence obtained from the stakeholder interviews identified a belief that the BI Project is addressing market need and should, in some form, be continued into future funding periods. There is an acknowledgement that, particularly in combination with A4B and SMART, BI provides a holistic offering that is both relevant and applicable to the targeted business base, including large enterprises. The introduction of Innovation Vouchers for capital projects was generally seen as a positive move. Equally, strategic support for large enterprises was acknowledged as likely to produce significant benefits to the enterprise and the local economy.

- "The Project had the right mission, purpose and key components when aligned with and delivered alongside SMARTCymru and A4B. BI's purpose is to address market failure, which still exists and will continue over the long-term."
- "The BI Project is one of the best innovation offerings in the EU, it absolutely warrants support and grant as there is market failure and it provides the gap funding required. In terms of the future it should be extended, and all forms of innovation included and marketed."
- "As a project, BI is fit-for-purpose, is very flexible, and there have only been a few occasions with little commonality when BI has not been in a position to help."

6.88. Whilst clearly addressing market need, there is a common view that for future funding periods, the Project needs to be less risk averse and needs to broaden the scope of its offering to include such factors as new product/process development, adoption of disruptive technologies and 'new to the company' techniques, and open/process innovation, whilst providing more focused interventions that bring real added value to the beneficiary.

- "We need to look at more focused interventions instead of being lots of things to lots of people and possibly need to look at topics within that, e.g. eco design is a particular hot subject at present."
- "Talking about other potential opportunities, and certainly in terms of ASTUTE, they are talking about things such as process innovation, which for a number of non-traditional industries can produce the metrics and measurable returns. These are company collaborative projects in which

outputs are difficult to identify at the start but do embed new technologies, processes and an element of learning and repeatability."

- "Open Innovation needs to be a critical aspect of any future activity."
- "Business Process innovation is currently difficult to support under the BI Project – engineering companies are particularly badly served in this respect. Many people hear 'engineering' and think of technology – this is a mistake because engineering is as much focussed on production, management and business processes as on technologies and products."

6.89. As at the mid-term stage, it was mentioned that a possible re-profile/rebrand to reduce the emphasis on manufacturing companies (whilst acknowledging the importance of the AM&M sector) would make the Project more inclusive and would increase further engagement with other key sectors. Success would also be boosted by further engagement with larger companies, especially anchor and strategically important businesses that, in turn, would facilitate access to supply chains and partner companies.

- "There will be a perpetual need to address and support the uptake of innovation across all of our key sectors. This includes large companies, particularly anchor and strategically important business. We are providing a service where, clearly, the private sector is not "operational" and businesses lack the understanding and equally the vision of the short and long-term benefits of investment in innovation. We need to preach things like open innovation and connectivity to our scientific and R&D&I base."
- "We need to look at widening our target market away from just technology/manufacturing. We need to adopt organisational businesses and serve process innovation; providing the freedom to operate independently across sectors, across business sites, in clusters and supply chains. Service sectors that can retain key jobs should be a go-to target for BI going forward."
- "The BI offering is very manufacturing-centric as demonstrated in the language. We need to make it more SME-focused and focus on the needs of smaller companies. We need to have a look at the obstacles in the way of businesses and now is a good time to do so before we launch a follow-on programme. The focus of the ICT sector is not around relationship management but capacity building. That leaves a gap for BI to work on an individual company level. The ICT sector team are not close to businesses."
- "The Project needs to be reinvigorated, needs to be better engaged and needs to have a bigger playing field to deliver what the clients want and not what is currently acceptable to WEFO."
- "I am a big fan of BI and maybe something needs to be redesigned for the healthcare sector. It's a big-spend sector that lags behind others in terms

of innovation and understanding, but it could easily have some small but immediate impacts, with significant long-term benefits."

- "This is a specialist skill-set, which needs to be retained and built on, and which needs to work with as many programmes, initiatives, sectors and departments as possible."
- "Going forward, if there is the opportunity to get larger companies on board then that makes great sense and I can see the emergence of open innovation having a marked impact on a greater number of our businesses."

6.90. BI management, WG and WEFO in particular, are well aware that over recent years, EU-funded projects can be seen to be offering the same or similar services to the same target markets. This is resulting in confusion in the market and also competition, as the programmes seek to meet similar objectives. WEFO has indicated that they will ensure this will not happen in future programmes, claiming that they would rather see gaps in provision than a similar situation arising.

Longitudinal study of impacts

6.91. During the mid-term evaluation, and then again during this final evaluation, it was commented by a representative of Finance Wales that you really cannot plan and move forward unless you have a clear understanding of the long-term impact of such interventions, expressing the opinion that there was a critical need to undertake longitudinal studies in relation to impact.

6.92. Research has shown that BI management has moved forward on researching and recording the long-term impact of beneficiary businesses. This is the first time that the Consultants have witnessed this in Wales, and it is a positive move forward. This was introduced in 2013 following the mid-term evaluation and in the 'Innovation Impact Process'. This process has been discussed with a representative of WG and is summarised as follows:

6.93. In 2013, the Business Innovation Project successfully introduced an Innovation Impact Process. This analyses the economic impact of innovation support to businesses and academia provided by the Project and previous programmes delivered by the WG and Welsh Development Agency.

6.94. An evidence-based, continual, longitudinal evaluation process was developed which analyses information for innovation activity from the year 2000 onwards. This has considerably increased and improved the information available on the long-term outcomes and impacts of supported innovation projects. It has also provided valuable benchmarking data on business performance and innovation activity.

6.95. Evidence has been collected via interviews with supported organisations and reported in a range of formats. A Team of two people within the BI Project have been dedicated to the implementation and management of this process and also develop best practice for innovation programme evaluation.

6.96. The Innovation Impact Process objectives are to:

- Measure programme performance – post programme completion
- Communicate management information to inform programme planning, policy and strategy decisions
- Identify patterns and trends
- Establish potential innovation, commercialisation and collaboration opportunities
- Exploit promotional opportunities
- Maximise lead generation

6.97. To date, over 150 businesses have been analysed during the process, including over 500 innovation and technology projects. The businesses were selected randomly and had all accessed one or more innovation support programmes since 2000. The process included analysis of economic inputs, outputs, outcomes and impacts over the short, medium and long term. A summary of the analysis of the first 100 businesses is shown below:

Inputs	
WG Investment (grant)	£15.5m
Private Sector Investment (PSI)	£23.0m
Outputs	
Completed projects	465
Businesses supported	100
Outcomes	
Successful projects*	300
Jobs created	230
New products/processes launched	368
Impacts	
Sales of new products	£176m
Total growth in business turnover pa	£161m
Total growth in employees	1171

* Successful projects are those commercialising one or more new products/processes

6.98. The above economic impact results were created by the Innovation Impacts team analysing and collating the reports prepared via interviews with businesses.

6.99. The process has also successfully analysed behavioural additionality, in terms of the effect of innovation support on behaviour, such as increased technical risk during a supported project or an increase in innovation activity following completion of a supported project.

6.100. Key findings to date are:

- Completed innovation projects achieved a high (70 per cent) success rate of launching or implementing new products or processes.
- Completed R&D projects achieved a high (58 per cent) success rate with a further 20 per cent having potential for future success.
- All businesses surveyed, achieved implementation of a new product of process or had potential for this in the future.
- A minority of businesses achieved the majority of outcomes and impacts identified.)
- 91 per cent of businesses confirmed that the WG support was critical to starting their innovation projects.
- 96 per cent of businesses highlighted that the support had led to further innovation activities and follow-on projects.
- A key component of access to innovation support and the success of projects has been the Innovation Specialist role.

6.101. Levels of research and activity in the impact of innovation policies and programmes are currently high. One key issue that has been identified is the timing of evaluations and the long-term nature (several years) of effects such as new product introduction to market and organisational/behavioural changes. Another issue is that less tangible outcomes such as skills, innovation capabilities/capacities and spill over effects are difficult to capture in the form of quantitative indicators. The Innovation Impact Process is developing methods to address these issues.

6.102. The longitudinal nature of the process means that continued and repeated analysis of selected businesses is necessary to provide evidence of changes in economic performance and innovation activity. In summary, the process is continuing to be developed and to establish best practice. This approach will be integral to future innovation programmes and ongoing contact with businesses supported.

BI Project Management

6.103. Evidence obtained from the interview programme shows that the Project management team is clearly valued by internal and external stakeholders. It was acknowledged that this aspect of the Project has been successful under difficult internal and external conditions. It was also acknowledged that the Senior Innovation Management Team has the skills and understanding to develop the next generation of innovation support programmes. Indeed, it was the opinion of several interviewees that this is an area that should see an increase in resource during the next funding period, possibly with the introduction of new staff to bring a fresh perspective/ideas to the team:

- "In terms of Phil and his team, they are doing an excellent job with a relatively small team. When you look at what Phil is doing for the longer term, he is creating highly paid jobs. If you look at our (Wales) work force, we are heavily self-employment dependent, we are 25 per cent behind the French in terms of GDP per head of population and something like 50 per cent behind the USA. We need to create more high-paid, sustainable, knowledge-based jobs and not chase seasonal employment, which does not deliver the base for long-term growth we need."
- "Going forward we need to strengthen and expand the team, bringing in some new blood."
- "In terms of the BI Project, it is an excellent programme, beneficiaries get a high quality response, staff (particularly IS) are very professional and predominantly they meet sector needs."
- "There is a continual role for BI and there will always be market failure for which BI has to continually adapt to meet the needs of industry. They have done that extremely well, they have very good people and it is a very well-managed programme."
- "The BI team are good people but have to operate within rules that are not 'fit for purpose' at present. The BI management are obviously frustrated by State Aid rules and auditor interference."

6.104. It should be noted that, in difference to the mid-term evaluation, there would appear to be better knowledge and recognition of the BI Project within the sector teams. Through discussions with representatives of several key sectors, namely AM&M, ICT, Construction, Environment & Energy, and Life Sciences, it is clear that the BI Project as a whole, and more specifically the IS team, are viewed as a valuable and accessible resource

- "In North Wales, we are well aware that innovation drives business competitiveness and business growth. Innovation is key to our sector and we work very closely with the IS, which are an excellent resource. Whilst admittedly jobs are important targets, the innovation team works on a much larger agenda and creates growth opportunities.”

- “BI’s objective is to improve the uptake of innovation. The conduit is to get the IS into businesses. They are good at looking at the businesses, identifying and articulating clearly where there could be short- and long-term improvements. They understand their own suite of products and those delivered by others. Although I have just described the front end of the BI process/service, I am equally au fait with what products the Project offers and how it links with SMARTCymru and A4B. This is principally due to the fact that we do joint presentations with Ann Sudder and attend similar meetings.”
- “We are aware of the overall objectives of the BI Project as we work closely with BI.”
- “We have a good understanding of the BI Project and its performance. For us, it gives us the facility to help manage risks. This is always going to be the case for the life sciences businesses and those that support life sciences. In terms of support therefore the BI vouchers are very well received. They could be improved, for example if the due-diligence and application process was more light touch, by contrast, things tend to be a bit smoother with SMART but BI takes a while.”
- “At the time of the ERP, there were tensions between the sector Teams and the BI team – to do with a lack of clarity about who should take the lead on meeting SME needs. The Construction team recognised that the BI team had more ‘weapons’ at its disposal and they should be involved early on in sector team contacts with their sector clients. The Construction Sector team now has close contacts with the BI team – particularly in North Wales – and there are frequent discussions and referrals amongst the two teams.”
- “The impact of the BI Programme could be improved by taking a more Project or Theme-based approach, where areas of collaboration between sector teams and the BI teams can be focussed – this may mean lower targets for the BI team but higher quality and impact results. ‘SMART Cities; Retro-fit technologies for valleys housing’ and ‘design and development of Components in offsite construction’ could be a few of the areas that would aid BI, the Construction sector team and other WG targets to be achieved. This could also help make a strong link into Horizon 2020 activities and knowledge transfer from the Universities.”

Project Delivery

6.105. Internal stakeholders believed there to be good project delivery overall but with areas that could be improved still further, including administration and validation to speed up processes, marketing to gain greater penetration, and extending the scope and applicability of projects. Interviewees understood that there are valid internal reasons for these aspects requiring improvement, however, going forward this situation does need addressing.

- "This is the best time we are likely to have to model the Project to be more fit-for-purpose and to extend reach. In terms of additional resources, these would be available, probably not through an increase in staff headcount but, ideally, gaining greater business engagement via consultants."
- "In terms of BI delivery, it is seen as an excellent service, professionally run and really adds value. If all the sector teams embraced BI in the way that they should it would need to have considerably more resources, but I accept this is difficult under current conditions."
- "In terms of the three quote rule for Innovation Vouchers, we were told that in the future there will not be the need for three quotes, which should speed up the application process."
- "In terms of Project delivery, there are too many back-end systems (checks and balances). This slows the process down and makes it frustrating. There should be more jurisdiction within the IS team. We are giving this support so let's accept that there will be a degree of risk. We need to promote/create the mindset that we have a defined innovation support ecosystem that should be predicated in open innovation in its widest sense."
- "It is inevitable that there is often a lot of discussion and therefore delay before support from the BI Project can be confirmed – we know why this occurs but it is frustrating. This is why it is vital to get early engagement of the BI team in designing the WG approach to an SME."

6.106. It was evident from the discussions that the IS are seen as critical, with many interviewees acknowledging the need for an increase in IS numbers

- "The team of IS are crucial, in that they deliver an impartial, up-to-date understanding of the support infrastructure and an understanding of where technology and innovation is going."
- "We now have sector teams that have been operational for two or three years and perhaps consider they are capable to deliver innovation. This is not true and I do know that the IS work with sector teams' business development managers quite openly and regularly. The truth is that the sector teams are not equipped, don't understand innovation and are not really geared-up to support businesses on an individual level."

- "In terms of the IS, these are excellent people, limited by their numbers, which is disappointing. From a clients' perspective they come across as being very professional and it is an incredibly well respected service."
- "The key/standout factor of this Project is the Innovation Specialists who are extremely knowledgeable and well networked. I am well aware of the Welsh Government's intention to have a network of IS that cover regions, sciences, technologies, and application/expertise, ie business planning, IP, etc. Numbers have dwindled and the matrix of skills now is not as strong as it has been previously. This can and should be addressed. A stronger IS network covering new and emerging technologies would enhance the overall product offering significantly."
- When describing the bigger picture, ie at a Wales/EU funding level, WEFO identified a larger, possibly gatekeeper role for BI and the IS. The Innovation Unit, we are told, is being seriously considered for the role of overseeing all SME/RD&I projects and coordinating access to the most appropriate programmes, the example cited being ASTUTE. It was recognised that, for this to work effectively, IS numbers will have to increase. When questioned on precise numbers, 20 was deemed to be acceptable.
- "Innovation Vouchers are only one part of the package that the construction team wants to bring into play – Innovation Specialists also have an important role to play when they can be brought in as part of the overall WG approach to the SME. WG staff are mostly generalists – Innovation Specialists are really only the only specialist resource the sector teams can call in."

6.107. It should be noted here that one interviewee did highlight an area of concern, which was that some High-Growth Starts Programme businesses have turned to TSB/InnovateUK for funding, as opposed to SMARTCymru, and are enjoying greater success (applications). Some comments that were made in this area include:

- "The perception in the market is 'don't bother with SMARTCymru', seek support elsewhere."
- "Overall, the only one small niggle is that paperwork/due-diligence is time consuming (not sure if this can be addressed?)."

6.108. It was generally acknowledged that the beneficiary journey could be better streamlined and as such, would be more effective to manage from an overall BI, beneficiary (client), IS, contractor, Innovation Voucher and Consultants' perspective.

6.109. Usually in final-term evaluations, specifically when programmes/initiatives have been in place for many years, it is the case that you can look at processes and find areas of improvement, as also identified by internal and external stakeholders. This is often the case as what starts off as a well co-ordinated process is then adapted to accommodate the needs and requirements of funders, of evaluation teams, government and auditors, and are adapted in a 'Heath Robinson' fashion. This has evidently fuelled the belief by stakeholders that processes now take longer and involve more due diligence then should be required. This view is not necessarily shared with management. Management should consider addressing this issue, firstly to see where efficiency gains can be made but also be ever mindful of the requirements of managing large sums of money.

6.110. Via our discussion with BI management, we introduced the concept of 'Innovation Roadmapping'. It was generally accepted that this would be a suitable way of organising a 'business assist', not as a seven-hour activity, but as an 'Intensive Assist' of 14 hours.

Future Direction

Reducing Dependence on Grant

6.111. It is clear that the future direction of initiatives such as BI will be heavily impacted by the need for sustainability, longevity and a reduction of grant dependence, a key concern for WG being that enterprises are becoming dependent on grant support. Throughout this evaluation we have explored ways of reducing grant dependency and those methods identified and discussed included:

Table 11. Reducing Grant Dependency

Methodology	Comments	Practicality
Repayable Loans	• Recently used unsuccessfully • Appears on company balance sheet • Difficult to manage/audit • Possible conflict with State Aid rules	Low
Reducing Intervention Rates	• Based on a staged journey of success and therefore reduced risk • Benefits clearly identified	High
Work in Groups, Supply Chain Clusters	• Engenders commitment • More visible commercial objectives	Medium
Move to non-Welsh, EU Grants, ie Horizon2020	• Very limited experience • Effort-intensive • Low success rates • But is a WG objective	Medium
Training & CPD	• Can be delivered and accredited • Provides skills to continue to innovate	High
Closer Relations with Other Programmes	• High Growth Programme: similar aims and objectives, move beyond grants, ie graduation	High

6.112. A key stakeholder, when addressing the question of reducing grant dependency in Wales commented, "Teach them to Fish", ie provide the companies with the skills to continue to innovate post intervention. It was agreed during discussions that programmes that encompass a training/CPD element will have a better chance of success in this respect and, as a result, training/CPD will see increasing levels of importance:

- "I see innovation support in the context of total business support and by this I mean training, access to funding, access to equipment, networking and working very much in an open innovation manner."
- The Consultants talked about a training and CPD element and the WEFO representative stated that this is generally being discussed, as it is a logical way forward and a way in which to engage with the universities and training providers also. It was commented that, "We would be was pushing against an open door when pursuing this opportunity, which needs to be planned and managed effectively".
- "When linking skills with innovation, ESF and ERDF will be more interchangeable and maybe skill support is a good idea. Consultants can help by spec'ing manufacturing processes or design processes, but if we give them the tools and the learning, perhaps there will not be the need for a second intervention. Maybe they can carry that through themselves

or at the very least make minor moderations as they go along. Linking both ESF and ERDF makes good sense."

- "Going forward, this is where we need to re-educate businesses to recognise the value of investment across all sectors and activities. For this we really need to engage with all stakeholders including local authorities and universities. Education is the way to move forward and that is to educate in doing what is necessary, having the right skills, but importantly creating the demand for RD&I within the business and its people (ie skills)."
- "Overall, we want the Project to continue, there could be links to training going forward which would give it a different and possibly more personal angle."
- "Grant support is not going to be around forever, or at least we need to think and plan that way. Let's show businesses/beneficiaries the way to undertake innovation and then train them up (groups or individuals) to be able to be innovative."

Better use of Available Capacity

6.113. During the Consultants' discussions with WEFO, it was commented that there has been significant recent investment in infrastructure and capacity, with projects such as Swansea University's SA1 campus given as an example, and that programmes such as BI are now being called upon to help exploit such investment.

Closer Programme Alignment

6.114. Information obtained from WEFO during this interview programme identified that there is an intention to eliminate overlap and redundancy in future funding periods. The overall drive is for greater long-term sustainability, with the future range of support being described as a "stairway to excellence."

6.115. This 'stairway to excellence' will be achieved by closer alignment of programmes, and by programmes becoming more clearly defined. Comments included:

- "Discrete projects have to draw out specialisms and demonstrate added value/impact."
- "We have to adopt Smart principles across the board and we need to be more inclusive. We need to cross the boundaries between ESF and ERDF and the skills agenda needs to add value (programmes including KES and ATM were referenced). We also need to link with programmes like Horizon 2020. How we promote that within WEFO will potentially provide and coordinate a possible funding role."

6.116. In relation to programmes being more clearly defined and aligned, it was agreed that the establishment of 'gatekeepers' that are aware of the skills and competencies held in each programme would be beneficial. It was acknowledged that the IS would be well suited to fulfilling this role, and that the engagement process would probably need to begin with a '14-hour intensive business assist'. This would give the IS sufficient time to engage with key representatives of the beneficiary business, win their trust and demonstrate an ability to deliver. This is seen as a fundamental necessity of any long-term beneficiary engagement.

6.117. It was also proposed that any such gatekeepers must understand the private sector and be able to graduate businesses to the private sector when the need/opportunity arises, thereby avoiding displacement. Innovation Vouchers, for example, should be used to help a company progress to a position where it is more likely to pay more (less intervention) or engage with the private sector.

6.118. As stated, it is the intention of WEFO to align EU-funded programmes more closely under the next funding period, primarily to avoid duplication and to streamline support provision. This is a view that is clearly supported by those interviewees currently in roles in alternative support programmes/initiatives to BI.

6.119. **ASTUTE**: there are clearly opportunities for BI and ASTUTE to work more closely going forward. During discussions, it was confirmed that there will be a second ASTUTE bid and that they recognise the need to, and the benefits of, working more closely with BI in the future. There was also a recognition, however, that the two programmes have competed in the past, or have worked with the same companies and that often the WG will get the 'credit' for that work:

- It was mentioned that ASTUTE possibly touches 1,000 businesses per annum. Of those, very few are also beneficiaries of BI and other support. Clearly there is a mismatch here and it is believed that closer cooperation could provide access to this business base.
- "When considering the BI offering, the universities can play a unique and important role, however, there needs to be assurances that clients are dealt with appropriately, and ownership of that client is maintained where necessary. We would like to get closer to BI when the next programme begins and if universities are allowed to work with BI that would make for a more productive relationship, further benefiting the client".

6.120. **NATEP**

- A representative of NATEP stated that they have been speaking to WG and the Innovation Team for some time about the possibility of Wales joining the network (National Aerospace Technology Exploitation Programme). The issue here being that Wales would need to find the financial contributions, in as much as the same way as the RGF supported England.
- As far as NATEP is concerned, once funding can be found and sourced, Wales will be invited to the programme. Whilst still early days, they have undertaken a quick analysis of activity thus far, for which NATEP can provide a PowerPoint presentation. The headline figures are that approximately 50 per cent of projects are to do with the latest manufacturing technologies, and maybe slightly surprisingly, about a third of projects are to do with software and electronics.

6.121. **OpTIC Technium:** for the purposes of this evaluation, the Consultants interviewed the Head of Business Development at the OpTIC Technium, who confirmed that the Technium had been involved with BI since the Project's inception and that Dave Johnson (IS) was, for all intents and purposes, based in the OpTIC Technium, supporting a range of businesses through BI and other intervention measures. It was, however, acknowledged that activity has "dropped off" since Dave's role changed to part-time. The stakeholder is supportive of both the continuation of BI Project and strengthening the relationship between the two programmes, confirming that the Technium would be interested in becoming a delivery partner going forward, and certainly becoming more engaged with BI. It was mentioned that one concern relates to the 'independence' of the BI Project, and the need to ensure that the client keeps control of the work it brings in:

- "There will always be a reason to have access to RD&I funding on behalf of innovative businesses. The more acute issue is our general definition and understanding of innovation. It probably requires an IS to guide businesses through the various private and public sector community. Glyndwr also delivered ASTUTE and that seriously impacted on the incubation support regime."

6.122. **Life Sciences Hub Wales:** the Life Sciences Hub very much welcomes BI support, seeing the offering from the innovation team, ie SMARTCymru, A4B and Innovation Vouchers, as being critical to establish and de-risk ventures that are being incubated or supported through the life sciences hub. The Hub representative stated that they are keen to understand more, potentially contributing to thinking and planning, commenting that this initiative is being heavily backed by the minster Edwina Hart, has a strong powerful board and is a beacon to promote Life Sciences in Wales worldwide.

6.123. **Growth Accelerator Programme, 2015-2020:** it was also suggested that the BI programme should be aware of the WG's anticipated Growth Accelerator Programme (GAP), which is currently out to tender. This programme could work closely alongside BI due to having similar aims and objectives, not least the aim of reducing grant dependency and working with high growth businesses.

Conclusions: Stakeholder Interview Programme

6.124. From the stakeholder interviews, it is clear to see that BI is perceived as a worthy Project that is well managed, which meets the needs of key sectors (particularly those involved in manufacturing) and has the opportunity to widen its scope in terms of innovation content. The stakeholders clearly believe that there is a continuing role for innovation support, delivered and supported the BI way. Furthermore, there was little identified by way of private-sector displacement and an acknowledgement that "market failure" will continually exist. Stakeholders see BI as an excellent way of increasing economic activity and employment within Wales.

6.125. Several interviewees recognised the fact that there is a growing need to encompass 'process innovation' and to broaden and redefine what is classed as 'innovation' to make the Project more far-reaching.

6.126. There was acknowledgement that programmes such as BI need to capitalise on and exploit recent investment in infrastructure, such as the SA1 campus in Swansea, and potentially undertake more-focused interventions, ie look at interventions that have greatest impact on businesses and involve the business-support community as often as possible.

6.127. The majority of interviewees, both internal and external, believed that the Project would benefit from further investment in, and expansion of, the IS team and their involvement with businesses/projects. There was also general recognition, however, that an increase in the headcount, if not resources in general, was possibly unlikely in the near future, with more use being made of outside consultants.

6.128. A number of stakeholders could see how the Project could be integrated with other and future programmes, and how it would be possible to reduce grant dependency through skills development and CPD. There is clearly a willingness from other programmes/institutions, such as ASTUTE, to become more engaged with BI going forward, however, it was acknowledged that 'ownership' of clients needs to be clearly set out and established throughout the relationship. It was also proposed that some form of ‘gatekeeper’ system, possibly undertaken by the IS, would be a highly beneficial addition in terms of focusing on client needs, ensuring the right delivery at the right time, and that the longer-term needs of businesses are accommodated in an open innovation environment.

6.129. Stakeholders could also identify the role that BI would play in supporting enterprises in key sectors but realised, more so than during the mid-term evaluation, that innovation should remain a specialist division within WG. In difference to the mid-term evaluation of the BI project, there would appear to be better understanding of what BI can offer throughout the Sector teams, a situation which is certainly aided by the IS and their regular contact with the teams.

6.130. Overall, it was felt that BI is seen as a critical and crucial project, which warrants further support. Furthermore it was indicated that the Innovation Team and the BI Project can tactically and strategically take on a greater and more important and inclusive role going forward, in terms of overall RD&I support coordination and delivery.

7. BENEFICIARY BUSINESS SURVEY RESULTS

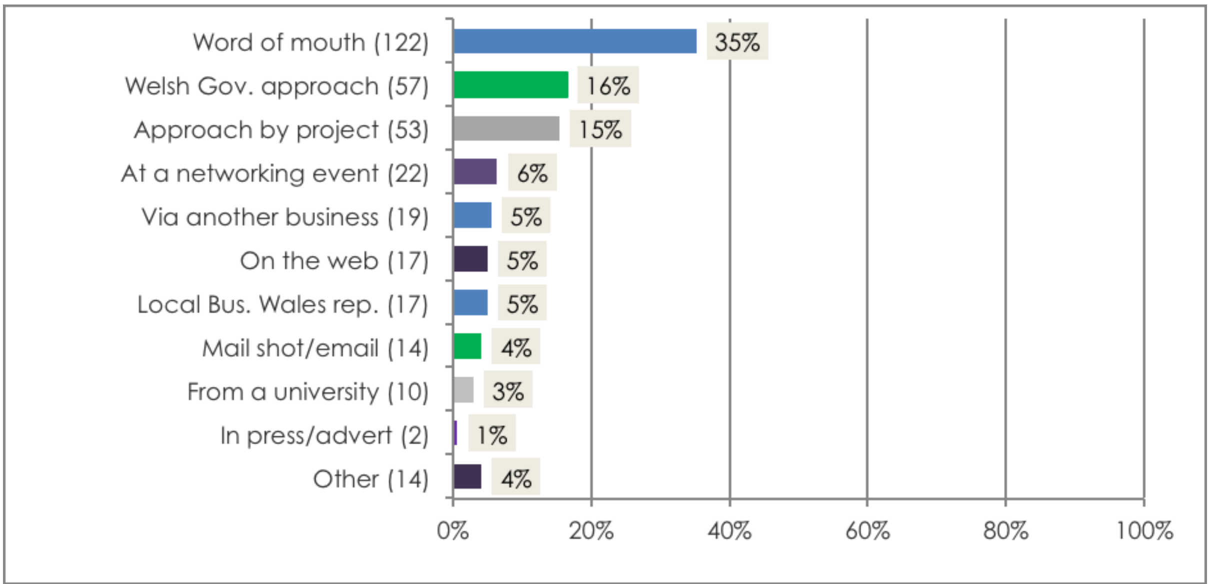
7.1. This chapter provides summary descriptions of the results of the survey illustrated with supporting charts and tables. The survey explored the views of businesses that received assistance from the BI Project. The aim was to discover whether the Project has made a difference to the beneficiary organisation and to discover how the service can be improved for future clients. The telephone survey was undertaken with 400 firms in late November / early December 2014 comprising of:

- 245 firms from the Convergence Programme (61 per cent)
- 155 firms from the Competitiveness Programme (39 per cent)

Involvement with the BI Project

7.2. Over a third (35 per cent) of participants on the Project became aware of the service through word of mouth. A further third (31 per cent) were approached directly by either the WG (16 per cent) or members of the BI team (15 per cent). Advertising (1 per cent) and mail shots/emails (4 per cent) were less effective.

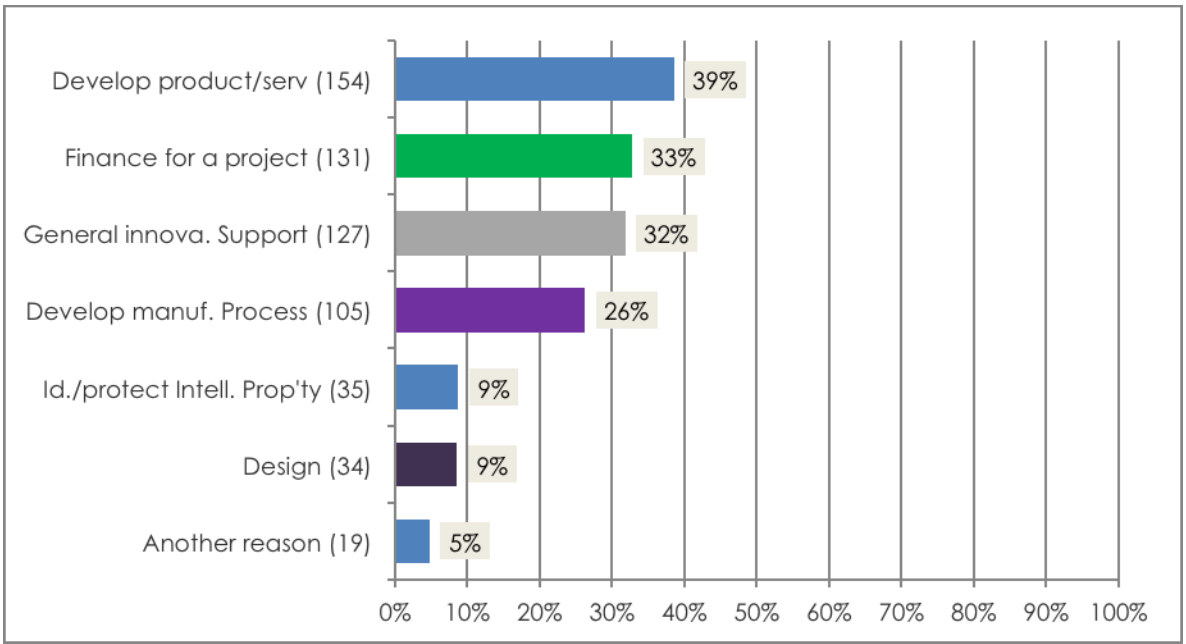
Figure 3. First became aware of Business Innovation (BI) services (number of firms in brackets)



Source: Welsh Business Evaluation: Base 347 (no. of responses) out of 400 businesses

7.3. When businesses were asked what they need, they said they needed help to develop their product or service (39 per cent), look at ways of financing a project (33 per cent), general information on supporting innovation (32 per cent) and ways of developing their manufacturing processes (26 per cent). Most wanted a combination of these services. Fewer numbers were looking for assistance on intellectual property (9 per cent) or design (9 per cent).

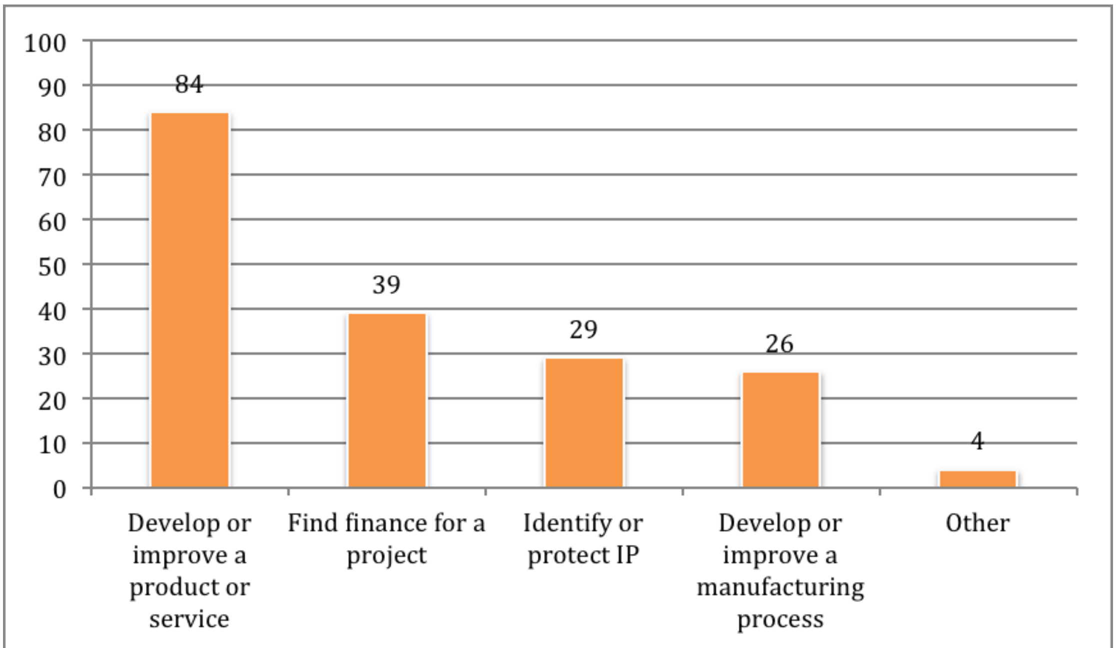
Figure 4. Business needed assistance on …(number of firms in brackets)



Source: Welsh Business Evaluation: Base 400 out of 400 businesses (multiple responses)

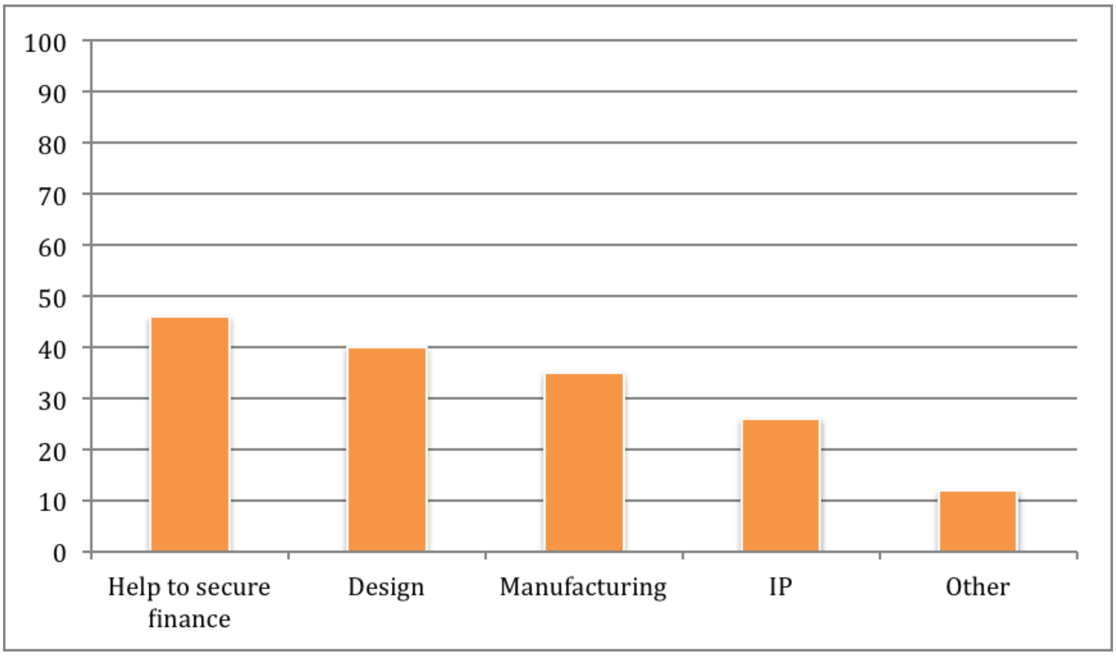
7.4. During the mid-term evaluation, we proposed a different question, that being to highlight the focus of the support that they receive from the BI Project. Businesses indicated more than one area (**Figures 5 and 6**):

Figure 5. Aims of Businesses at Outset of Support



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

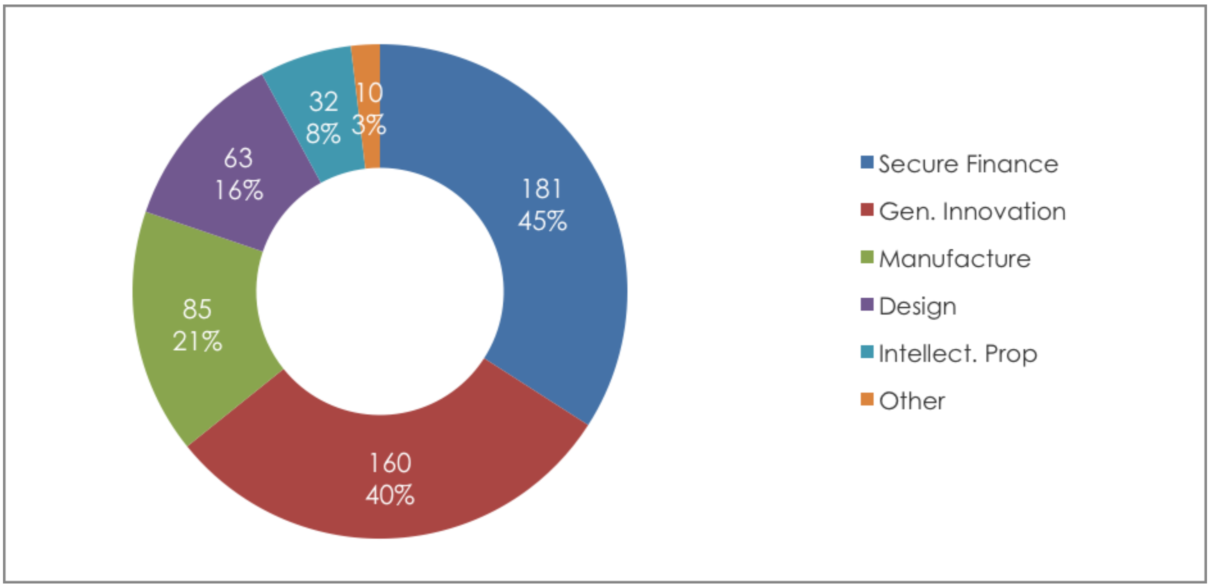
Figure 6. Focus of Support: Overview



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

7.5. During the final evaluation, the main level of support obtained was either on securing finance for their project or process (45 per cent) or for general support and information on innovation (40 per cent). One in five received support on manufacturing (21 per cent) and 95 firms received assistance on design (16 per cent, see example below) or Intellectual Property (8 per cent).

Figure 7. Main focus of support received from BI



Source: Welsh Business Evaluation: Base 400 out of 400 businesses (multiple responses)

7.6. ***An entrepreneur from South Wales had design support from BI to develop a heated seat cover anticipated to generate over £1m in turnover by year five.***

7.7. Some respondents elaborated on this question. Those that responded in more detail claimed they were looking to secure financial support in the main, but there was also considerable demand for advice and support on a range of internal key business objectives.

7.8. ***A gearbox manufacturer in mid Wales anticipates future turnover improvements of over £2.2m following intensive support and finance for a specific piece of equipment.***

7.9. In terms of financial assistance, companies were most interested in accessing funding for purchasing equipment (see example above), developing products, securing compliance/accreditation credentials, R&D, testing and prototyping and improving manufacturing systems.

7.10. ***A global wealth management company from South Wales claim they will be able to create 74 jobs by year five as a result of support to develop a sophisticated new web tool.***

7.11. The requirement to access new and improved equipment covered the whole spectrum of needs from purchasing individual components for machinery through to specialist equipment to improve the manufacturing process, including software or IT equipment (see example above).

7.12. ***A well-established, international tooling company in North Wales receiving design, CAD and prototype assistance reported £250,000 of turnover benefits to (and an additional £400,000 by year three) as a result of intensive BI support, safeguarding 87 jobs.***

7.13. ***A biotechnology company in North Wales which is pioneering anti-cancer drugs received assistance towards a new isolator predicted to create 18 jobs, safeguard 48 jobs and generate £4.5m in turnover by year five.***

7.14. New product development is a key driver for many applicants, so it is unsurprising that there was significant demand for financial support and advice on research and development, testing and prototype building (including clinical trials, see above example) and developing investment cases for product proof of concept. By their very nature, companies driven by innovation are constantly evolving and looking for ways to create new product ideas and develop existing ones to appeal to wider markets. Companies were keen, therefore, to access advice and support on improving/streamlining manufacturing systems and processes (see example below), assessing market potential, keeping up with industry trends and bringing new products to market.

7.15. ***A well-established metal manufacturing and automotive engineering company from South East Wales claimed turnover had increased by £0.5m since BI support to increase its manufacturing capabilities, with a projected £2.1m anticipated by year five.***

7.16. Given the emphasis on product design and creation, companies were keen to access support on developing strategies for protecting IP, securing patents and applying for trademarks. Similarly, compliance and accreditation were common themes with companies looking for support to meet regulatory requirements and/or gain accreditation for ISO standards, ASME, HSO and CE marking.

7.17. ***A global switchgear company in South Wales received intensive support to grow the business involving a 'complete cultural' change. It has already safeguarded 240 jobs and claims this will rise to over 800 by year five.***

7.18. Assistance with procurement, recruitment and other HR issues also featured in some responses (see above), but were less prominent than those already mentioned. Examples included setting up a computer based Pre-Qualification System for contractors, establishing staff mentoring and training schemes and identifying criteria for sub-contracting out packages of work. Some illustrative quotes from the responses appear in the following box:

- *'It was a very complex project we were working on and we wanted support on how best to identify the best way forward with it and financial support to protect the intellectual properties of it.'*
- *'Support with the launch of a new project development. We wanted to get a better feel for it.'*
- *'A grant to purchase a 3D printer and IP support to decide to progress a patent for part of an instrument.'*
- *'Support and advice to understand a customer base in United States prior to us going over to present our project.'*
- *'Purely just to access finance to support with protecting our intellectual property with a new process in cleaning and lining lead water pipes. We are specialists in our field so we didn't expect or need any specialist support.'*

Type of Support Received

7.19. More specifically, two thirds (68 per cent) wanted general advice and guidance on the innovation process and 58 per cent wanted help with access to finance for specific projects. Support to implement an innovation project (35 per cent) was also important. Methods of understanding the business or project and diagnostics were less prevalent but over one in six businesses (55 firms) still received this service. These results are similar to the mid-term undertaken in 2012.

Table 12. Type of support received from innovation advisor

Support	Rate	No.
General advice to assist with innovation process	68%	209
Help to access finance for a specific project	58%	179
Support from advisor to help implement project	35%	107
A business review / diagnostic	18%	55
Other [please specify]	2%	6

Source: Welsh Business Evaluation: Base 300 (multiple responses) out of 400 businesses

7.20. Participants were asked to rate from a scale of 1 to 5 the advisor's level of knowledge and understanding for several different aspects of the business. Very poor was 1 and excellent was 5. The results suggest that the advisors were generally well equipped to provide assistance. Between 83 per cent and 89 per cent of businesses scored their advisor either a four or a five, on the excellent side of the scale. This is similar to the position at the mid-term evaluation stage.

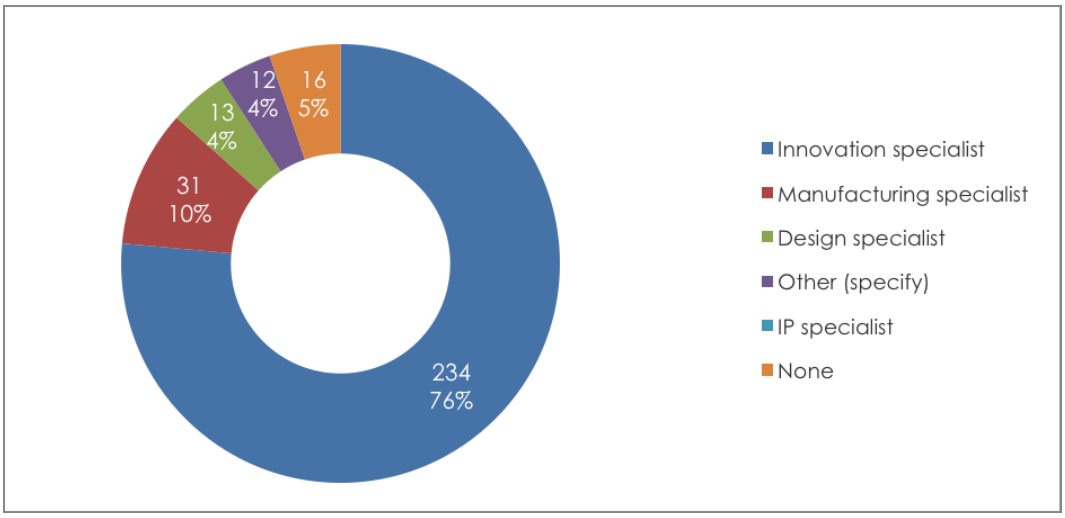
Table 13: Rating of advisor's level of knowledge and understanding

	V. Poor				Excellent	
Rating	**1**	**2**	**3**	**4**	**5**	**Base**
Your business	1%	2%	13%	39%	46%	303
Your markets	0%	2%	10%	32%	56%	135
Your requirements	0%	2%	9%	36%	53%	304
The innovation process	2%	2%	11%	30%	56%	299
Locally available innovation support	2%	3%	13%	29%	54%	295

Source: Welsh Business Evaluation: 400 businesses

7.21. Companies mainly sought the advice of the IS (76 per cent). One in 10 sought manufacturing advice while design and IP specialists represent 5 per cent and 4 per cent of the expertise provided respectively.

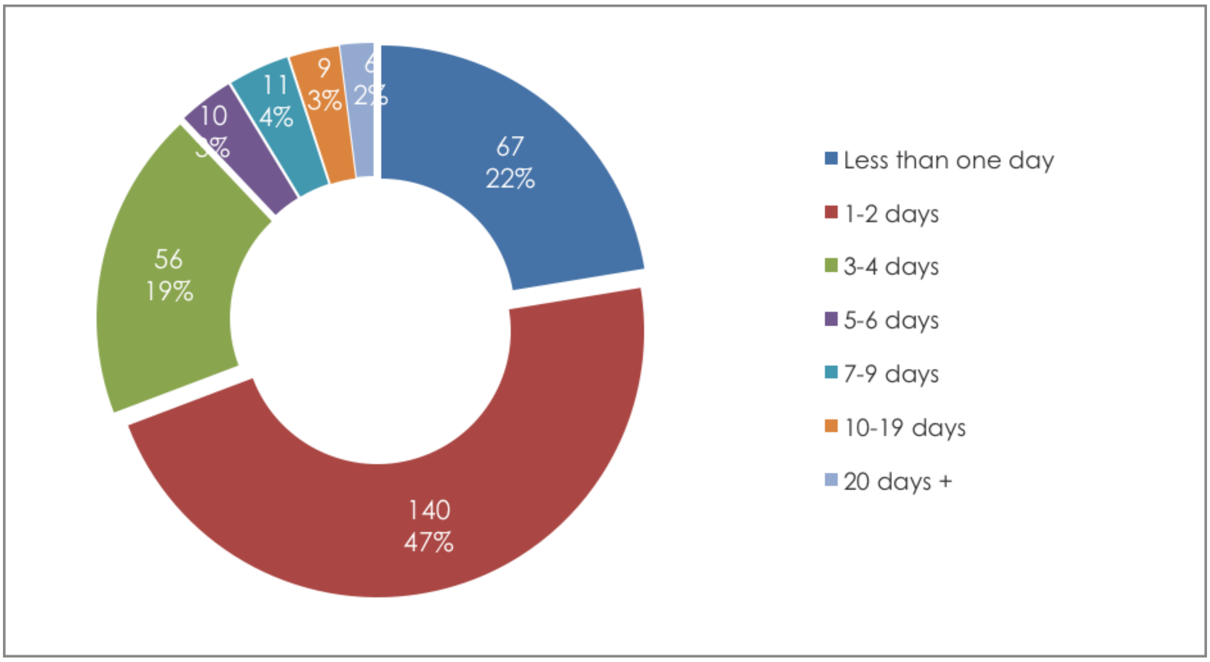
Figure 8. Specialist advice received



Source: Welsh Business Evaluation: Base 306 out of 400 businesses

7.22. Almost half (47 per cent) received between one and two days of support; over one in five (22 per cent) received less than one day; and a further 19 per cent received between 3 and 4 days assistance. The impact of differing levels of support is assessed at the end of the impacts chapter.

Figure 9. Number of days support from advisor



Source: Welsh Business Evaluation: Base 299 out of 400 businesses

7.23. Overall the ratings of specific types of support were again positive in all four of the following categories. The clients scored the advisors slightly higher on their knowledge and clarity of advice and lowest, but still a high score, on the quality of business advice given.

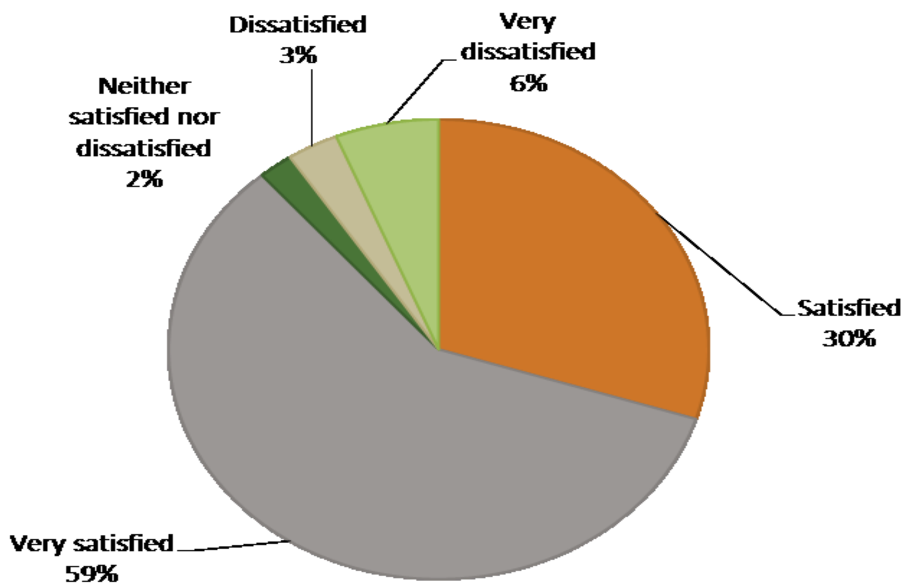
Table 14: Rating of the assistance received

	V. Poor				Excellent	
Rating	**1**	**2**	**3**	**4**	**5**	**Base**
Quality of business analysis	2%	3%	18%	38%	39%	250
Relevance of issues covered	2%	3%	11%	35%	49%	292
Knowledge of the adviser	1%	1%	8%	37%	53%	302
Clarity of advice provided	2%	1%	10%	30%	57%	300

Source: Welsh Business Evaluation: 400 businesses

7.24. During the mid-term evaluation, respondents reported high levels of satisfaction with the support they have received through the Project, with the majority (89 per cent) indicating that they are either very satisfied or satisfied with the support received. A similar proportion of beneficiaries highlighted that the support met or exceeded their expectations, as shown in **Figure 10.** From initial inspection it appears that the levels of satisfaction have declined. Therefore, in the final-term evaluation, a numeric score means that a three is above the 'mean' score (2.5), whereas the 'mean' at the mid-term evaluation was neither satisfied nor dissatisfied, which received a very low response rate.

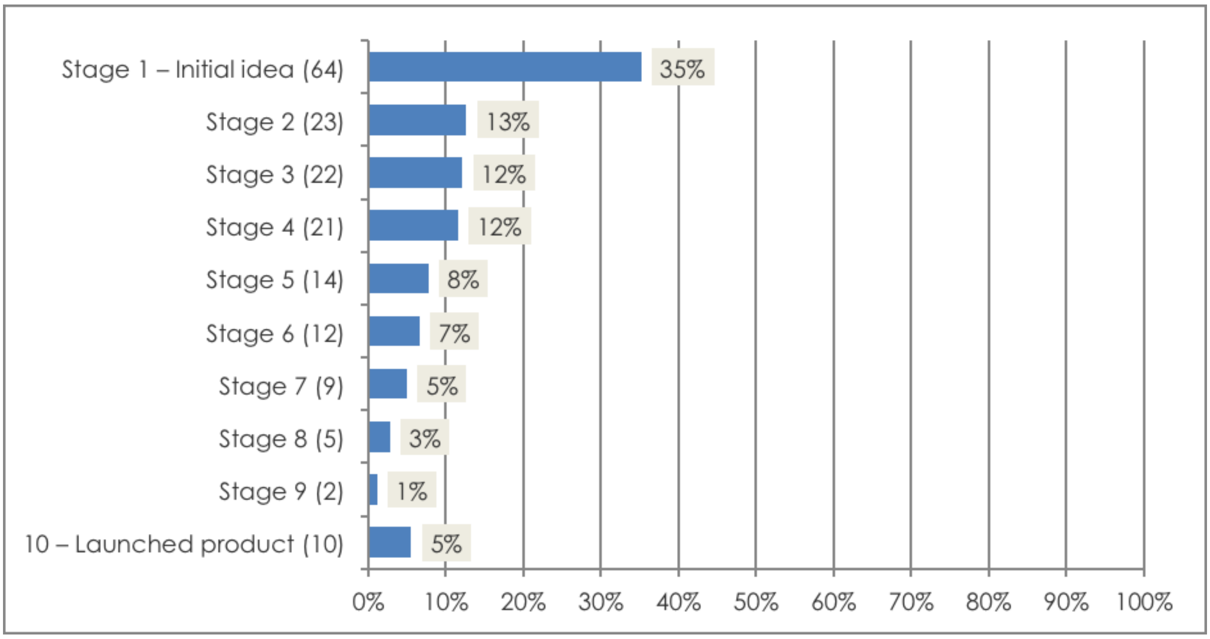
Figure 10: Overall Satisfaction Ratings



Innovation Improvements

7.25. The following two charts represent the before and after case of support obtained from the BI Project providing a measure of improvement. A scale of 1 to 10 was used to represent a continuum of the journey from 'idea' to the 'launch' stage in the manufacturing, process or service. More than a third (35 per cent) were still at the ideas stage after the intervention and a further 37 per cent were in the next three early stages of the process. The Project was therefore helping three-quarters of participants in the early stages of the journey to market suggesting the targeting was broadly right. Only 8 per cent were in the final three stages of launching the product or service to the market.

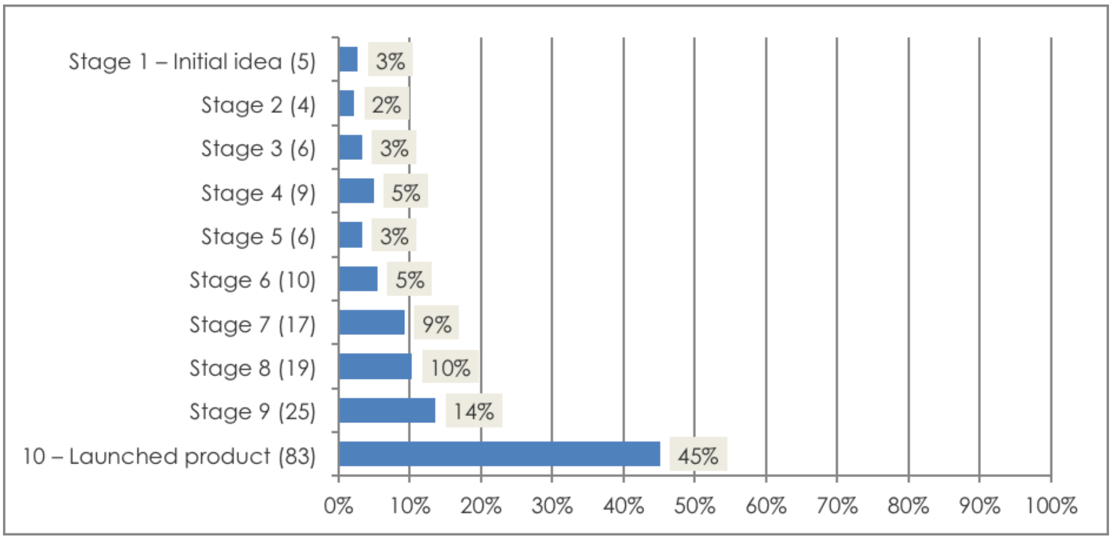
Figure 11. Distance from market at start of assistance (number of firms in brackets)



Source: Welsh Business Evaluation: Base 182 out of 400 businesses

7.26. At the date of the interview, businesses would have been at various lengths of time past the BI Project. However, the next chart clearly indicates that there was substantial movement. Only 3 per cent were still at the initial ideas stage and just 13 per cent were at the first four stages of the process, compared to 72 per cent at the start of the intervention. By the time of the interview almost half (45 per cent) had already launched their product or service and a third (33 per cent) were at the final three stages before launch. Although it is not possible to tell how much influence the BI Project had over the progress made from this question alone, and in the absence of other factors, the improvement still appears to be significant.

Figure 12. Distance from market after assistance was given (number of firms in brackets)

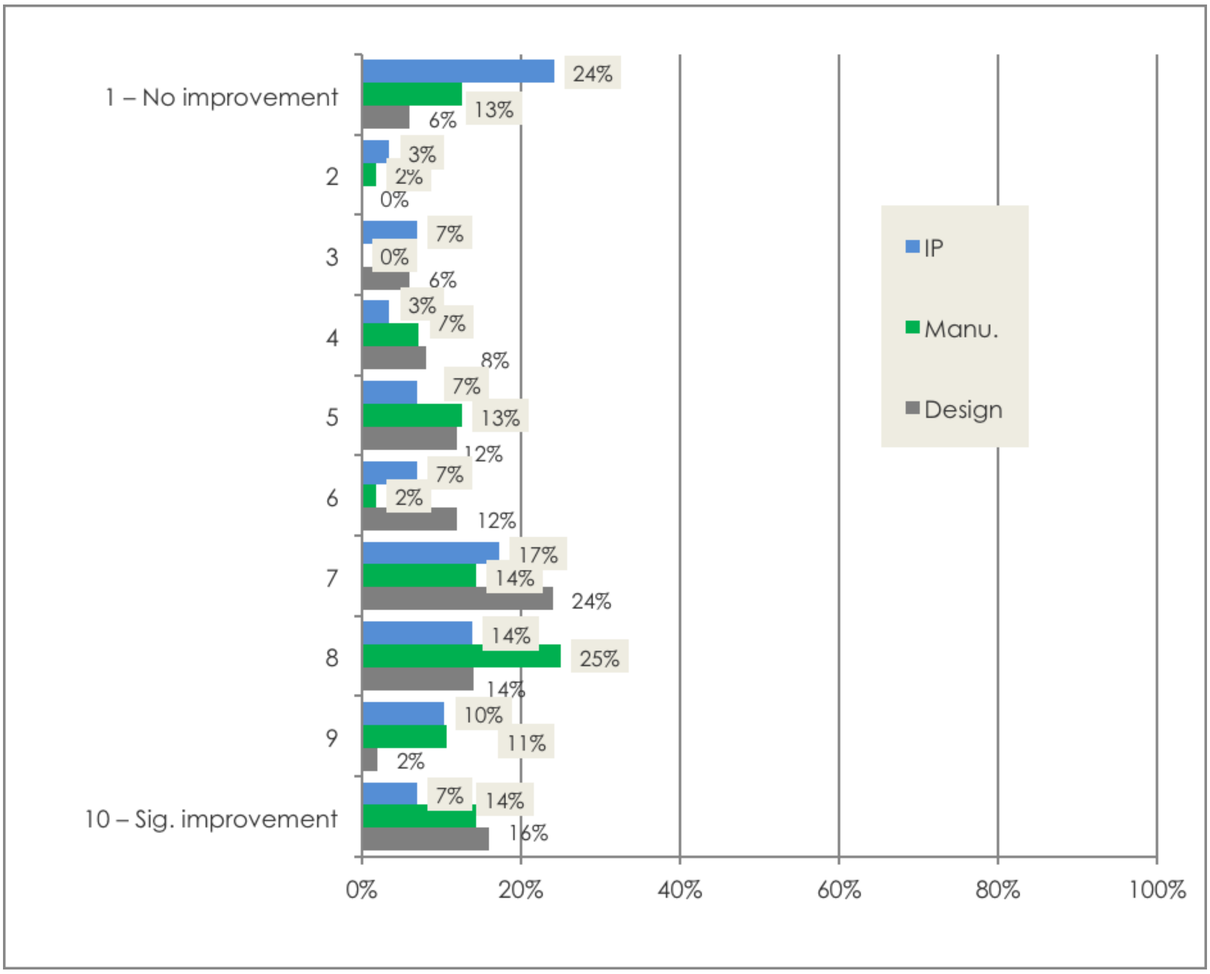


Source: Welsh Business Evaluation: Base 184 out of 400 businesses

Assistance to Design, Manufacturing, Intellectual Property & General Innovation

7.27. **Figure 13** provides a comparison of improvement made in three of the assistance categories, namely IP, manufacturing and design. IP appears to have provided the least progress with 24 per cent showing no improvement at all (please note that the sample size of 29 is rather small). Design has made the most significant progress, closely followed by manufacturing. Future programmes may wish to consider how to enhance the impact of intellectual property assistance. Broadly however the shape of the graph is skewed towards showing significant improvement.

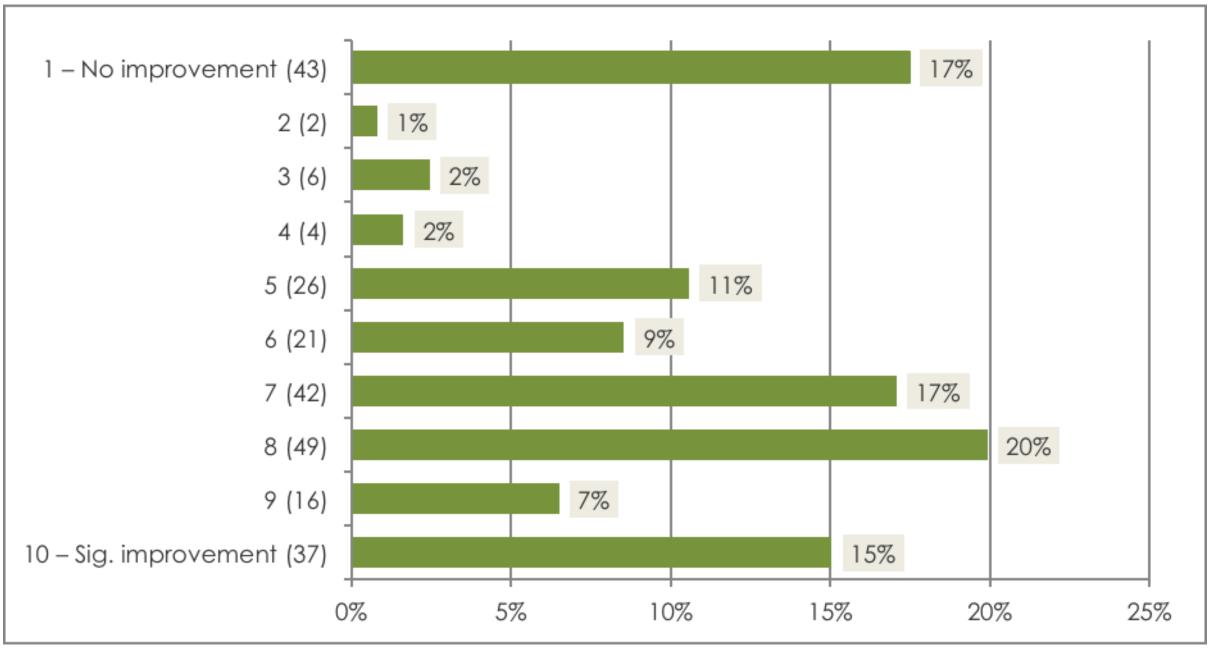
Figure 13: Rating the improvement felt by clients receiving support for intellectual property, manufacturing and design



Source: Welsh Business Evaluation: Base for Design 50 (12.5 per cent), manufacturing 56 (14 per cent) and IP 29 (7.25 per cent), (total: 33.75 per cent) out of 400 businesses

7.28. Perhaps disappointingly, in the following graph (**Figure 14**) 17 per cent of businesses indicated that there was no improvement in their approach to innovation following assistance. This, in part, is likely to do with the companies themselves not taking offered advice and opportunities forward. The chart still shows broad improvement across the sample and in the approach taken to improve innovation.

Figure 14: Rating the improvement in company's approach to innovation after BI support



Source: Welsh Business Evaluation: Base 246 of 400 businesses

Commercial and Employment Impact

7.29. Although the answer to the following question on whether there has been an impact on the business has resulted in more 'no' than 'yes' answers, the responses are still encouraging (and the impacts chapter shows that collectively the Project is achieving considerable economic impacts). It is in jobs created and jobs safeguarded where there has been the greatest impact with just under half experiencing improvement. Sales improved in 39 per cent of businesses and over a quarter (27 per cent) reported an increase in profits.

Table 15. Has assistance from the BI Project had any commercial impact on your business?

	Yes		No		Don't Know		Base
Increase in sales	107	39%	165	60%	1	0%	273
Increase in profit	82	27%	210	68%	17	6%	309
Jobs created	192	48%	201	51%	3	1%	396
Jobs safeguarded	152	49%	143	46%	14	5%	309

Source: Welsh Business Evaluation: 400 businesses

Wider Benefits

7.30. Green and environmental achievements were greatest in *improved efficiency and helping reduce costs*. 35 per cent had already achieved this and a further 21 per cent are expected to achieve it in the future. Reducing business travel is however less likely, despite the communication and technological strides made in the past two decades. Reducing the use of energy is also a major challenge for businesses.

Table 16. Have or might you achieve these environmental/green benefits due to the BI Project?

	Achieved already	Will achieve at a future date	May achieve at a future date	Not achieved and unlikely to	Not sure
Reduce energy usage	18%	14%	1%	63%	4%
Improve efficiency/reduced costs	35%	21%	3%	38%	3%
Reduced carbon footprint	20%	13%	1%	59%	7%
Reduced business travel	11%	7%	1%	78%	3%
Waste reduction	22%	14%	2%	57%	5%

Source: Welsh Business Evaluation: Base 309 of 400 businesses

7.31. More encouraging is the achievements made or likely to be made as a result of innovation enhancements. About half the businesses in the sample have already achieved *exploiting new ideas and technologies* as a consequence of the BI Project. Over half have already invested time or resources into R&D activities; and 46 per cent have used existing technologies and processes to improve their performance. Less encouraging is the application of processes and materials in other sectors.

Table 17. Have or might you achieve these innovation enhancements due to the BI Project?

	Achieved already	Will achieve at a future date	May achieve at a future date	Not achieved and unlikely to	Not sure
Exploitation of new ideas/technologies	49%	19%	5%	24%	4%
Improved customer understanding	41%	14%	2%	40%	4%
Make better supply chain links	40%	15%	3%	37%	5%
Invest time/resource in R&D activities	52%	14%	4%	27%	4%
Network/collaborate more on innovation	42%	14%	5%	35%	5%
Apply processes/materials in other sectors	36%	14%	4%	42%	3%
Undertake existing technologies/ processes to improve performance	46%	17%	4%	26%	7%

Source: Welsh Business Evaluation: Base 309 of 400 businesses

Those Receiving Design Advice (12.75)

7.32. Design achievements and expected achievements appear to be the most positive benefits resulting from the BI Project. Between 70 per cent and 74 per cent of businesses have either achieved or will achieve each of the categories listed below. Design would also be a quicker fix than manufacturing outcomes because of timescales, and capital investment components.

Table 18: Have or might you achieve any of these design benefits as a result of the BI project?

	Achieved already	Will achieve at a future date	May achieve at a future date	Not achieved and unlikely to	Not sure
Acceleration of research to market	45%	25%	6%	16%	8%
New products/services transformed existing or opened new markets	37%	37%	2%	16%	8%
Establish improved or new processes	49%	22%	2%	18%	10%
Stronger/more compelling brands in the market and improve your market position	37%	33%	8%	12%	10%

Source: Welsh Business Evaluation: Base 51 of 400 businesses

Those Receiving Manufacturing Support (14.25 per cent)

7.33. Nevertheless, although lead times to launching a manufacturing product or process are much greater, the people related impacts in manufacturing are even better than in design. Two-thirds of businesses say they have already achieved higher staff productivity and skills. There has also been much better staff engagement and a positive cultural shift.

Table 19. Have or might you achieve any of these manufacturing benefits as a result of the BI project?

	Achieved already	Will achieve at a future date	May achieve at a future date	Not achieved and unlikely to	Not sure
Improved machinery/space utilisation	53%	12%	0%	33%	2%
Increased efficiency via lean processes	47%	12%	2%	33%	5%
Reduced rejection/rework rate	47%	5%	5%	37%	5%
Capital invested/poor capital avoided	35%	14%	5%	42%	4%
Improved on-time delivery	40%	11%	4%	42%	4%
Improved people productivity/skills	65%	14%	0%	19%	2%
Improved staff engagement/culture	56%	18%	2%	21%	4%

Source: Welsh Business Evaluation: Base 57 of 400 businesses

Those Receiving Intellectual Property Assistance (7.5 per cent)

7.34. The most achievable benefits in IP support are the *development of new knowledge and processes* and the combination of existing technologies and processes. There seems to be more resistance to changing the organisational structure and being able to create new products. However, about a fifth of this small sample gave a response of 'not sure'.

Table 20. Have or might you achieve any of these IP benefits as a result of the BI project?

	Achieved already	Will achieve at a future date	May achieve at a future date	Not achieved and unlikely to	Not sure
Manufacture new products	33%	13%	3%	27%	23%
Develop new knowledge/processes	47%	17%	0%	17%	20%
Combine existing technologies/processes	50%	10%	0%	20%	20%
Introduce new organisational structure	20%	7%	0%	53%	20%

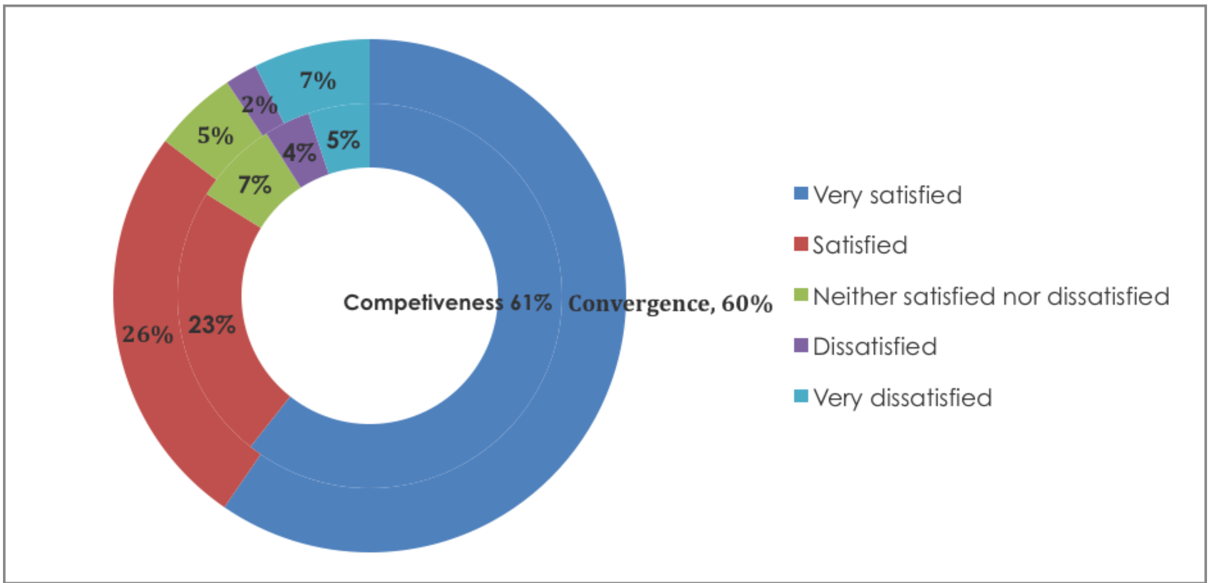
Source: Welsh Business Evaluation: Base 30 of 400 businesses

Overall Satisfaction

7.35. The level of satisfaction for the BI service is very high throughout the Project. About 85 per cent of the businesses were either 'very satisfied' or 'satisfied' with the quality of the service. Only 9 per cent were 'dissatisfied' or 'very dissatisfied', similar to the results of the mid-term evaluation. We also compared convergence and competitiveness businesses against this scale of satisfaction and found very little difference between the two, which is demonstrated by the following pie charts. The satisfaction levels (satisfied and very satisfied) of the various services including design, manufacturing, finance and general innovation were all around the 85 per cent mark for each of these. Although still high, it was Intellectual Property that attracted the lowest satisfaction scores, averaging at 74 per cent. Evidence would appear to show that the more a beneficiary accesses IP assistance, the less impact is perceived. It is the Consultants' opinion that this is not a reflection on the quality of support provided, which is continually high, but rather is due to the fact that beneficiary companies have relatively low levels of IP knowledge/awareness at the start of BI intervention and, as a result, impact is perceived as significant. As the beneficiary receives guidance and becomes more aware of IP issues/processes, it becomes more difficult to achieve the same levels of perceived impact.

7.36. Finally, there was no clear trend to indicate whether businesses were more satisfied with longer, more intensive periods (in terms of days) of support.

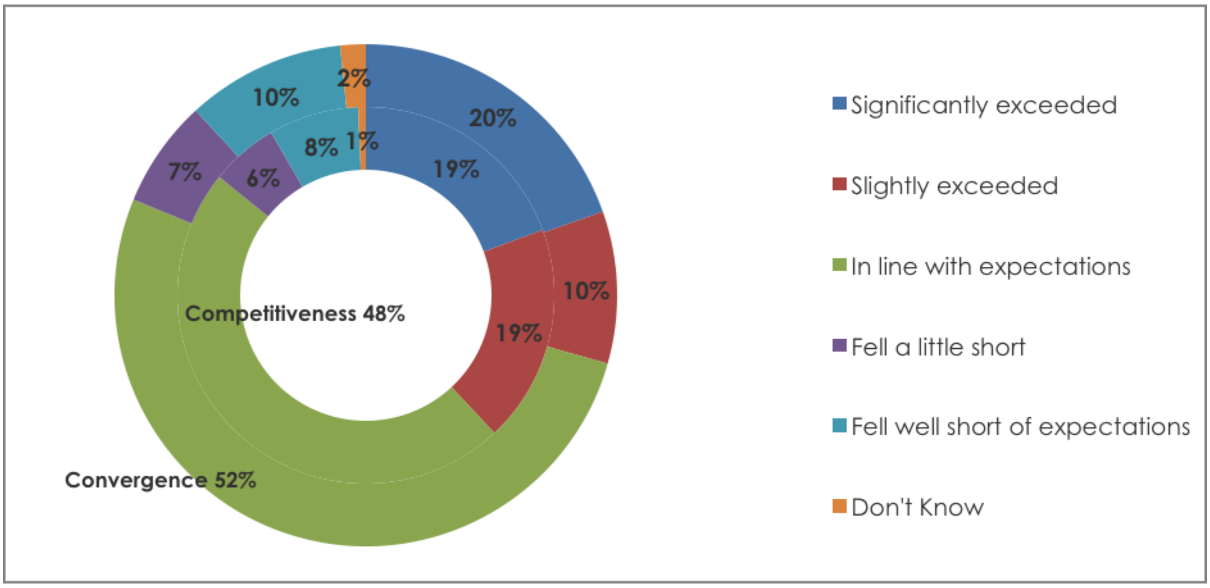
Figure 15. Overall satisfaction with the quality of the service received



Source: Welsh Business Evaluation: Base for Convergence 245 and Competitiveness 155 out of 400 businesses

7.37. **Figure 16** measures the extent to which the levels of expectation were met. Half of the businesses (51 per cent) said that the service was in line with what they were expecting. A third (33 per cent) reported that expectations were either exceeded slightly or significantly. 16 per cent said the service fell below their expectations. The comparison between convergence and competitiveness was also fairly consistent. The Project exceeded expectations a little more in the competitiveness camp. These results are very similar to the mid-term evaluation undertaken in 2012.

Figure 16: Level of expectations met



Source: Welsh Business Evaluation: Base for Convergence 245 and Competitiveness 155 out of 400 businesses

Suggested Programme Enhancements

7.38. The overwhelming response to this question was that the application process could be simplified which would help to reduce the length of time to administer. This echoes findings from the mid-term evaluation. Reducing the length of the application process would make it more attractive to companies, particularly smaller organisations. Companies will be more inclined to expend effort on the application if it is not too time consuming and that the preparation time is viewed as reasonably proportionate to the chances of successfully receiving a grant.

7.39. There is room for improvement around the role of the adviser and communications between companies and advisers. Some respondents felt that there are not enough advisers available to support the Project, which made it difficult to manage the sizeable caseloads. Having the right pool of expertise (e.g. sector knowledge, accreditation expertise, generic marketing and business know-how) as well as a sufficient number of advisers is crucial to ‘matching’ the right adviser to the individual company and their specific project request. It will also help to improve communication between advisers and companies, building in more face-to-face time for advisers to work with companies directly and to respond to messages and information requests at each stage of the application process. This combination of a simplified application process and the right number/level of advisers should lead to noticeable improvements in the overall service. The make-up of the adviser community could also benefit from input from venture capitalists or successful entrepreneurs who have a strong understanding of investment opportunity for innovative projects.

7.40. In terms of process improvements, there were calls where feasible/practicable to introduce more flexibility on some of the rules (e.g. the requirement for gathering quotes) and requests to simplify the form/process even further for smaller scale projects. Taking this notion further, introducing an initial screening process via a shorter ‘stage one’ application could help filter out unsuitable projects earlier and avoid companies spending unnecessary time on the full application process.

7.41. A final point on service improvement, again relating to communication, was around managing expectations. Companies need to make informed decisions on whether to spend time on applications. Fundamentally, it will be beneficial to all parties if there is clarity upfront on the intent of the funding and the actual availability of funding for different types of project. Companies will then feel more confident in their decision-making regarding whether to apply. Some illustrative quotes from the responses appear in the following box.

- *It would be better to have support through to completion of project. I feel that support after the report would be invaluable to small businesses and could change the dynamic of how they work. It would increase business potential.*
- *Reduce the amount of paper work. The paper work is disproportionate to the size of the grant.*
- *Some sort of initial screening would be better so that applicants know at an early stage whether or not they may get help.*

Future Support Requirements

7.42. Companies where asked an open question “Where do you think your innovation priorities might lie in the future and where do you think you might need support next?”

7.43. In terms of future priorities, responses tended to focus on a few key categories. The majority of respondents were focused on continuous innovation and the design and production of new products. New product development – and the process of research, testing/prototyping and design that sits behind that – was a key priority for most of those who replied. Some companies have big plans to expand their business both in terms of introducing new product ranges, perhaps through diversifying into new industry sectors and also expanding their premises. A handful of companies were actively looking at purchasing new factories, expanding existing plant and/or investing heavily in new machinery. They also expressed a strong interest in exporting into new international markets. Identifying more effective and efficient ways of packaging products was another popular priority.

7.44. Related to the ambition to develop new products, there is also a priority to introduce more advanced manufacturing processes and/or new technological developments to enable rapid development and production of new innovations. For those companies not considering new product development or rapid business expansion at this time, their focus is on either a continuation or evolution of their current business objectives. These companies feel they need some time to see how things evolve before making any decisions on future priorities or support needs. A couple of respondents were focused on business survival; at least a couple had gone out of business. Some other popular responses on priority were around seeking relevant accreditation, increasing opportunities for collaboration (e.g. with universities, NHS, European projects), improving overall efficiency, carbon footprint reduction, in house training and seeking private investment.

7.45. With regard to what type of support might be required as a next step, companies were keen to look at further funding opportunities to support new projects, new product development and capital equipment. The majority were seeking funding for machinery and equipment, including IT systems (e.g. CAD/3D design software). Assistance with marketing was another common response, including accessing grants to help enter new markets. Some companies were also keen to be kept abreast of emerging trends, to receive assistance with attending overseas trade shows and to get advice on opportunities in specific sectors (e.g. life sciences).

7.46. Given the strong interest in new product development, there is considerable demand for technical assistance in areas such as trials, R&D, product testing and approval/accreditation.

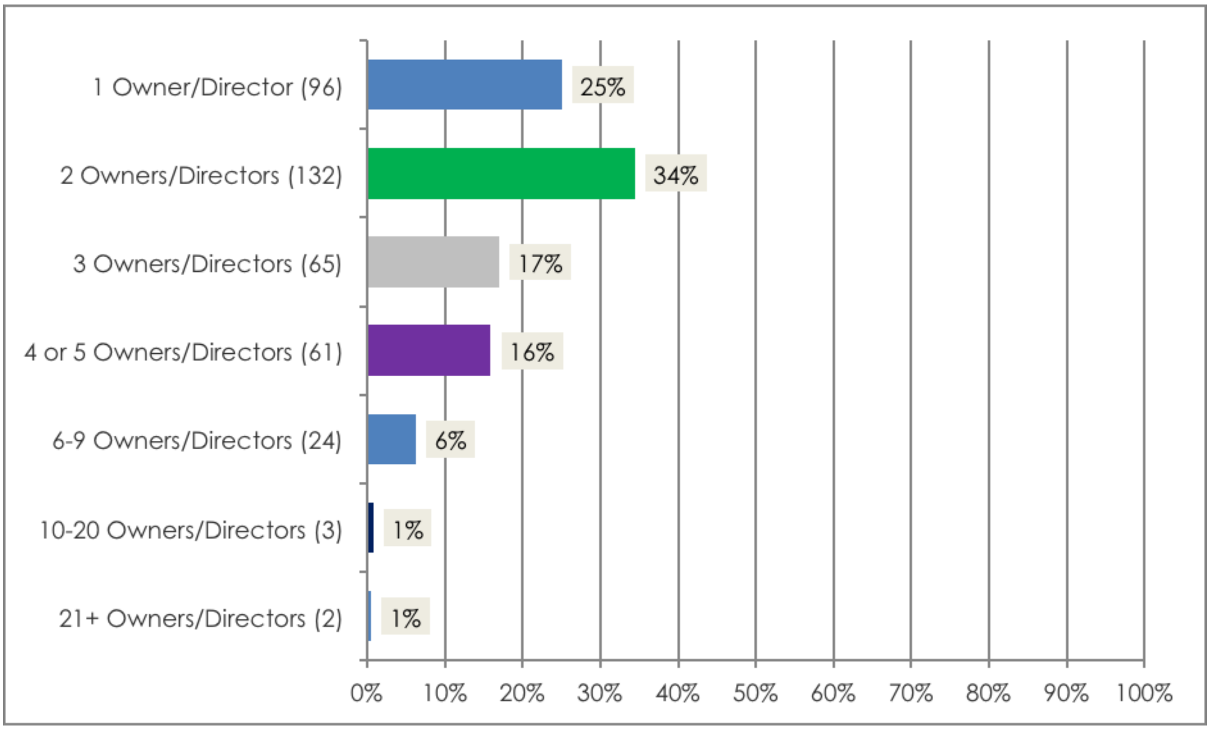
7.47. There was some interest in businesses being assisted in other ways, not necessarily focused on innovation but more generic business support on smaller projects.

7.48. There is a small amount of interest in support with recruitment, training or other HR matters. Not unlike the earlier question on priorities, it is not unusual for businesses to have some consolidation time for new products and processes before making any decisions on any further support.

Business Profile

7.49. The number of owners/directors in our sample is concentrated in either one-owner/director businesses (25 per cent) or two-owner/director (partnerships) businesses (34 per cent). Larger businesses with 10 or more owners/directors number just five or 1.3 per cent of the sample and 92 per cent of businesses were employing less than six owners/directors.

Figure 17: Proportion of the number of owners or directors in the company



Source: Welsh Business Evaluation: Base 383 of 400 businesses

7.50. The characteristics of owners/directors in our sample indicate that 58 per cent of firms have no females; 96 per cent have no black or minority ethnic people; 98 per cent have no disabled; 94 per cent do not have work limiting health conditions; and young people are underrepresented in such senior positions. The majority of business leaders (58 per cent) cannot understand Welsh. Other observations include at least three quarters of owners/directors in 40 per cent of all firms contain people aged 50 and above; and in 27 per cent of firms women make up more than half the owners/directors.

Table 21: Owner or director characteristics

	0%	1-24%	25-49%	50-74%	75-100%
Are Female	58%	5%	11%	22%	5%
BME	96%	2%	1%	1%	1%
Consider themselves disabled	98%	1%	0%	1%	0%
Have work limiting health conditions	94%	1%	2%	2%	1%
Understand Welsh	59%	5%	9%	13%	13%
Aged 16-25	97%	1%	1%	1%	1%
Aged 50+	25%	4%	10%	21%	40%

Source: Welsh Business Evaluation: Base 383 of 400 businesses

Cross-Cutting Themes

7.51. Following on from information provided in Sections 7.5 and 7.9 above, since the mid-term evaluation, businesses have been asked the following questions:

- Does your business have an equal opportunities monitoring policy?
- Does your business have an environmental policy?
- Has the business been referred for equal opportunities advice/assistance? (If yes please state where & date of referral)
- Has the business been referred for environmental sustainability advice/assistance? (If yes please state where & date of referral)

7.52. Where the businesses have answered in the negative, or they feel their policies could be updated, they have been referred on to suitable third parties, such as WISEII or Ecostudio.

7.53. The Consultants only know of five referrals due to the fact that companies are time limited and do not see these activities as a priority.

7.54. **Key Points from the Business Survey**

- Awareness of the BI Project came mainly from word of mouth and by direct approaches made to businesses by the WG and by personnel in the BI Project;
- The BI service appears to deliver more assistance on general innovation and guidance on access to finance than it does on specific targeted solutions. Businesses appeared to prefer this type of support to more targeted assistance;
- The expertise and knowledge of advisors was rated as very high by businesses with over 80 per cent scoring them as excellent or near to excellent;

- Nearly 70 per cent of businesses received two days support or less from the BI Project;
- After assistance, businesses moved much closer to the market and the launch of their product or service;
- Of the three main technology groups surveyed, design appeared to be the easiest to affect improvement. Manufacturing is slower to achieve improvement because of the capital investment require but display much more improvement to staff productivity and the innovation culture;
- Assistance on Intellectual Property scored lower in terms of satisfaction of advice, low levels of improvement and progress towards the market. The team may wish to consider how to enhance the effectiveness and impact of this type of support;
- 85 per cent of businesses were either satisfied or very satisfied with the quality of assistance provided. There was no difference in the level of satisfaction between convergence and competitiveness projects. Intellectual property attracted the lowest satisfaction scores;
- Levels of expectation were largely met by the programme and exceeded in at least a third of the cases supported.
- Companies would welcome further innovation support and assistance with the design and production of new products.
- In terms of suggested enhancements the combination of a simplified application process and a higher number/level of adviser support could lead to further improvements in the overall service. The BI team may wish to consider an initial screening process via a shorter ‘stage one’ application.

8. ECONOMIC IMPACTS

Introduction

8.1. This chapter looks at the business impacts of the investment in the BI Project. The economic impacts are based on telephone survey responses from 400 businesses/organisations that have received support of one form or another through the Project. This includes 91 businesses that got advice but did not take it forward (we explore the reasons why in the survey chapter). The Consultants believe that these impacts are achievable provided that there are no significant market fluctuations in the next three to five years.

8.2. A comprehensive assessment of economic impact was undertaken comprising

- Impacts to date and projected future impacts.
- Convergence and competitiveness impacts.
- ERDF and total public cost impacts.
- Commercial (Turnover, GVA, Profits) and employment (jobs created and safeguarded).
- Gross and net impact.
- A counterfactual assessment looking at impact by intensity of support.

8.3. A diagrammatic representation of key economic (commercial and employment) impacts for the Project has been provided in **Appendix II.**

The Sample

8.4. Table 22 indicates that the survey covered a third of all businesses supported in some way, which included 91 (22 per cent) of businesses who sought advice but did not take it forward, providing a confidence interval with an acceptable margin of error. In other words we can be reasonably confident that the findings broadly reflect the behaviour of the whole sample accepting that this diminished as smaller cohorts are assessed.

Table 22. Telephone Sample

Sample	Number	Total BI business assists	Response Rate	Confidence Interval
Total sample interviewed	400	1217	33%	95% +/-4%
Convergence	245	752	33%	95% +/- 5%
Competitiveness	155	465	33%	95% +/- 6%

The Approach

8.5. The net impact is the difference between what would have happened anyway and the benefits generated by the support, adjusted for displacement, leakage, substitution, and multiplier effects (see the following two tables).

Table 23. Additionality Logic Chain

Term	Definition
The Intervention Option	This is the level of gross impacts generated through the intervention (in this case commercial and employment impacts).
Deadweight	The proportion of total impact (commercial or employment) that would have occurred anyway. An additionality factor was applied to account for various degrees of pure, scale and time additionality. This was informed directly by the survey findings.
Displacement	The number or proportion of impacts that reduce value elsewhere in Wales. A displacement factor was applied to account for the number of firms or demand affected (informed by survey evidence).
Leakage	The number or proportion of impact that benefits economies outside Wales (using a benchmark).
Substitution	This is a negative effect that arises when a firm substitutes one activity for another to take advantage of public sector support (again a benchmark was used for this adjustment factor).
Multipliers	This is further economic activity associated with additional income to those employed by the beneficiaries, with local supplier purchases and with longer-term development effects. In this instance multipliers were assessed based on the reported strength of local supply chains.

8.6. In order to calculate the net impacts of the Programme, a number of questions were asked to identify deadweight, displacement and multipliers. Impacts were calculated on a case-by-case basis, increasing the robustness of the calculations.

8.7. In order to move from gross impacts to net impacts, the additionality factors of deadweight, displacement and multipliers were considered. To calculate the impact of all the beneficiaries receiving support through the project, it was necessary to ‘gross up’ the impacts (commercial and employment) to reflect the entire population that received support. A grossing-up factor just over three was applied. Further technical detail about the assumptions underpinning the economic impact assessment is provided in **Table 24**. The impacts have been calculated for all public sector investment and ERDF investment to date. ERDF accounts for just under half total investment.

Table 24. Technical Note on Key Aspects of the Net Impact Methodology

Aspect	Approach
Commercial and Employment Impacts	Companies were asked to provide their commercial impacts since they joined the BI project (Turnover, profit and jobs created and safeguarded).
Attribution	Survey respondents were asked whether BI support had helped them to increase reported. Impacts were only considered for those firms that said 'yes' and were able to provide a figure. These respondents were asked to assess what proportion of this increase in impacts has occurred as a result of the assistance they received from the BI project
Additionality	Survey respondents were asked about the degree to which the impact would have happened anyway. From these answers the consultant team were able to assess the indicative level and type of additionality from pure additionality (where none of the impacts would have occurred) to scale and time additionality (they would have occurred at a smaller scale or later date) or instances where no impacts would have occurred at all. The answers were converted to an appropriate additionality factor and applied to each company/respondent.
Persistence	Survey respondents were probed about attributable future benefits – at the 1, 3 and 5 year points– again these responses were applied on a case by case based to determine likely future impacts.
Displacement	Using English Partnership Guidance the displacement effects were calculated using intelligence from the survey about the perceived degree to which other firms or demand might be affected elsewhere in Wales. The displacement effects were generally found to be low.
Leakage	Again using English Partnership Guidance we calculated a supply chain multiplier based on the reported strength of local supply chains for each respondent. These ranged from low (generating a multiplier of 1.3) to high (1.7). The average for the whole sample was 'medium' generating a multiplier of 1.4. Whilst other adjustments are taken away from the gross estimates multipliers are the only adjustments generating additional impacts.
Grossing up	The responses were grossed up from the 400 respondents' consulted to the total number of reported occupants to date (1217) with appropriate grossing up factors applied to both Competitiveness (a factor of 3.2) and Convergence (3.1) Programmes.
Return on Investment	The ROI calculated are expressed as a ratio against each £1 of public (or ERDF) funding spent to date. Total expenditure figures were illustrated against total predicted net impact (ie impact to date and predicted). To calculate GVA deriving from employment benefits we have applied at 2013 GVA figure from ONS for Wales (£16,893)

8.8. The following sections look at a series of economic impacts: turnover, employment and jobs created and safeguarded.

Economic Impacts: Turnover

Table 25. Summary Turnover Impacts – Convergence Programme

Convergence	To Date	Future	Total To Date & Future
Gross Attributable Turnover/GVA	£31,104,817	£112,885,88	£143,990,70
Less Deadweight	£21,569,269	£71,570,334	£93,139,603
Less Displacement	£21,104,269	£69,997,351	£91,101,620
Less Leakage	£20,450,036	£67,827,433	£88,277,470
Less Substitution	£20,000,134	£66,335,232	£86,335,367
Plus Multipliers	£26,579,127	£89,522,948	£116,102,07
Total Net Impact	**£26,579,127**	**£89,522,948**	**£116,102,07**
Total Costs (Public)			£12,977,673
RoI (to date and projected)			**8.9**
Total Net Impact (ERDF only)	**£12,553,512**	**£42,282,330**	**£54,835,843**
Total Costs (ERDF Only)			£6,129,448
ERDF RoI (to date and projected)			8.9

8.9. The Convergence programme has generated the following net attributable turnover benefits: £26.6m to date and £89.5m in the future giving a total of **£116.1m (to date and future impacts).** When considering ERDF investment only, this amounts to £12.6m, £42.3m and £54.8m respectively. Taking into account the total estimated public sector cost this gives a return on investment ratio of 1:8.9 (i.e. every £1.00 of public investment the Convergence Programme is predicted to generate approximately £8.90).

Table 26. Summary Turnover Impacts – Competitiveness Programme

Competitiveness	To Date	Future	Total To Date & Future
Gross Attributable Turnover/GVA	£21,794,18	£104,610,26	£126,404,4
Less Deadweight	£13,446,22	£69,581,179	£83,027,39
Less Displacement	£13,337,25	£68,839,154	£82,176,41
Less Leakage	£12,923,80	£66,705,141	£79,628,94
Less Substitution	£12,639,47	£65,237,627	£77,877,10
Plus Multipliers	£17,033,73	£90,144,824	£107,178,5
Total Net Impact	**£17,033,73**	**£90,144,824**	**£107,178,5**
Total Costs (Public)			£8,392,653
Net RoI (to date and projected)			**12.8**
Total Net Impact (ERDF only)	**£8,271,758**	**£43,775,258**	**£52,047,01**
Total Costs (ERDF Only)			£4,075,559
ERDF RoI (to date and projected)			12.8

8.10. The Competitiveness Programme has generated the following net attributable turnover benefits: £17.0m to date and £90.1m in the future giving a total of **£107.2m (to date and future impacts).** When considering ERDF investment only, this amounts to £8.2m, £43.8m and £52.0mm respectively. Taking into account the total estimated cost this gives a return on investment ratio of 1:12.8 (i.e. every £1 of public investment the Competitiveness Programme is predicted to generate approximately £12.80).

Table 27. Summary Turnover Impacts – Competitiveness and Convergence

Competitiveness and Convergence	To Date	Future	Total To Date & Future
Gross Attributable Turnover/GVA	£52,899,005	£217,496,147	£270,395,152
Less Deadweight	£35,015,489	£141,151,513	£176,167,002
Less Displacement	£34,441,526	£138,836,505	£173,278,031
Less Leakage	£33,373,838	£134,532,574	£167,906,412
Less Substitution	£32,639,612	£131,572,859	£164,212,471
Plus Multipliers	£43,612,864	£179,667,772	£223,280,636
Total Net Impact	**£43,612,864**	**£179,667,772**	**£223,280,636**
Total Costs (Public)			£21,370,326
Net RoI (to date and projected)			**10.5**
Total Net Impact (ERDF only)	**£20,825,271**	**£86,057,588**	**£106,882,859**
Total Costs (ERDF Only)			£10,205,007
ERDF RoI (to date and projected)			**10.5**

8.11. The two Programmes have collectively generated the following net attributable turnover impacts: £43.6m to date, £179.7m in future and **£223.3m in total.** When considering ERDF investment only this amounts to £20.8m, £86.1m and £106.9m respectively. Taking into account the total estimated costs (£21.4m

Public) this gives a return on investment ratio of 1:10.5 (i.e. every £1 of public investment the Programmes are predicted to generate approximately £10.50).

Economic Impacts: Profit

Table 28. Summary Profit Impacts – Convergence Programme

Convergence	To Date	Future	Total To Date & Future
Gross Attributable Profit/GVA Impact	£14,671,553	£15,324,95	£29,996,509
Less Deadweight	£4,197,828	£8,781,605	£12,979,433
Less Displacement	£4,089,595	£8,508,618	£12,598,213
Less Leakage	£3,962,818	£8,244,851	£12,207,669
Less Substitution	£3,875,636	£4,308,603	£8,184,238
Plus Multipliers	£5,211,253	£10,891,91	£16,103,171
Total Net Impact	**£5,211,253**	**£10,891,91**	**£16,103,171**
Total Costs (Public)			£12,977,673
RoI (to date and projected)			**1.2**
Total Net Impact (ERDF only)	**£2,461,312**	**£5,144,331**	**£7,605,643**
Total Costs (ERDF Only)			£6,129,448
ERDF RoI (to date and projected)			1.2

8.12. The Convergence programme has generated the following net attributable profit benefits: £5.2m to date and £10.9m in the future giving a total of **£16.1m (to date and future impacts).** When considering ERDF investment only this amounts to £2.7m, £5.1m and £7.6m respectively. Taking into account the total estimated public sector cost this gives a return on investment ratio of 1:12 (i.e. every £1.00 of public investment the Convergence Programme is predicted to generate approximately £1.20 in net profit).

Table 29. Summary Profit Impacts – Competitiveness Programme

Competitiveness	To Date	Future	Total To Date & Future
Gross Attributable Profit/GVA Impact	£3,695,544	£5,826,082	£9,521,625
Less Deadweight	£2,731,756	£4,255,783	£6,987,538
Less Displacement	£2,731,756	£4,255,783	£6,987,538
Less Leakage	£2,647,071	£4,123,854	£6,770,925
Less Substitution	£2,588,836	£4,033,129	£6,621,964
Plus Multipliers	£3,407,664	£5,316,500	£8,724,164
Total Net Impact	**£3,407,664**	**£5,316,500**	**£8,724,164**
Total Costs (Public)			£8,392,653
Net RoI (to date and projected)			**1.0**
Total Net Impact (ERDF only)	**£1,654,797**	**£2,581,747**	**£4,236,544**
Total Costs (ERDF Only)			£4,075,559
ERDF RoI (to date and projected)			1.0

8.13. The Competitiveness Programme has generated the following net attributable profit benefits: £3.4m to date and £5.3m in the future giving a total of **£8.7m (to date and future impacts).** Taking into account the total estimated cost this gives a return on investment ratio of 1:1.0 (i.e. every £1 of public investment the Competitiveness Programme is predicted to generate approximately £1.00 in net profit).

Table 30. Summary Profit Impacts – Competitiveness and Convergence

Competitiveness and Convergence	To Date	Future	Total To Date & Future
Gross Attributable Profit/GVA Impact	£18,367,096	£21,151,039	£39,518,135
Less Deadweight	£6,929,584	£13,037,388	£19,966,972
Less Displacement	£6,821,351	£12,764,401	£19,585,752
Less Leakage	£6,609,889	£12,368,705	£18,978,594
Less Substitution	£6,464,471	£8,341,731	£14,806,203
Plus Multipliers	£8,618,916	£16,208,418	£24,827,335
Total Net Impact	**£8,618,916**	**£16,208,418**	**£24,827,335**
Total Costs (Public)			£21,370,326
Net RoI (to date and projected)			**1.2**
Total Net Impact (ERDF only)	**£4,236,544**	**£7,605,643**	**£11,842,187**
Total Costs (ERDF Only)			£10,205,007
ERDF RoI (to date and projected)			1.2

8.14. The two Programmes have collectively generated the following net attributable profit benefits impacts of £8.6m to date, £16.2m in future and **£24.8m in total.** When considering ERDF investment only this amounts to £7.6m, £4.2m and £11.8m respectively. Taking into account the total estimated costs (£21.4m Public) this gives a return on investment ratio of 1:1.2 (i.e. every £1 of public investment the Programmes are predicted to generate approximately £1.20 in net profit).

Economic Impacts: Jobs Created

Table 31. Summary Employment Impacts – Convergence Programme Jobs Created

Convergence	To Date	Future	Total To Date & Future
Gross Attributable Jobs Created	880	2030	2910
Less Deadweight	478	1508	1986
Less Displacement	460	1443	1903
Less Leakage	446	1398	1844
Less Substitution	436	482	918
Plus Multipliers	620	1994	2615
Total Net Impact (Jobs FTE)	**620**	**1994**	**2615**
Total Costs (Public)			£12,977,673
GVA			**£44,168,805**
GVA RoI (to date and projected)			**3.4**
Total Net Impact (ERDF only)	293	942	1235
Total Costs (ERDF Only)			£6,129,448
ERDF GVA			£20,861,243
ERDF RoI (to date and projected)			3.4

8.15. The Convergence programme has created 620 net jobs to date and is projected to generate 1994 in the future giving a total of **2615 (to date and future impacts) generating GVA of £44m.** When considering ERDF investment only this amounts to 293, 492 and 1235 respectively. Taking into account the total estimated public sector cost this gives a GVA return on investment ratio of 1:3.4 (i.e. every £1.00 of public investment the Convergence Programme is predicted to generate approximately £1.34 in net GVA).

Table 32. Summary Employment Impacts – Competitiveness Programme Jobs Created

Competitiveness	**To Date**	**Future**	**Total To Date & Future**
Gross Attributable Jobs Created Impact	358	744	1102
Less Deadweight	248	480	728
Less Displacement	244	476	720
Less Leakage	237	461	698
Less Substitution	232	451	682
Plus Multipliers	316	627	943
Total Net Impact (Jobs FTE)	**316**	**627**	**943**
Total Costs (Public)			£12,977,673
GVA			**£15,922,444**
GVA RoI (to date and projected)			**1.9**
Total Net Impact (ERDF only)	153	304	458
Total Costs (ERDF Only)			£4,075,559
ERDF GVA			£7,732,104
ERDF RoI (to date and projected)			1.9

8.16. The Competitiveness Programme has created 316 net jobs to date and is projected to generate 627 in the future giving a total of **943 (to date and future impacts) generating GVA of £15.9m.** When considering ERDF investment only this amounts to 153, 304 and 458 respectively. Taking into account the total estimated public sector cost this gives a GVA return on investment ratio of 1:1.9 (i.e. every £1.00 of public investment the Competitiveness Programme is predicted to generate approximately £1.90 in net GVA).

Table 33. Summary Employment Impacts – Competitiveness and Convergence Jobs Created

Competitiveness and Convergence	To Date	Future	Total To Date & Future
Gross Attributable Jobs Created Impact	1238	2774	4012
Less Deadweight	726	1988	2714
Less Displacement	705	1918	2623
Less Leakage	683	1859	2542
Less Substitution	668	933	1600
Plus Multipliers	936	2621	3557
Total Net Impact (Jobs FTE)	**936**	**2621**	**3557**
Total Costs (Public)			£21,370,326
GVA			**£60,091,249**
GVA RoI (to date and projected)			**2.8**
Total Net Impact (ERDF only)	**1235**	**458**	**1693**
Total Costs (ERDF Only)			£10,205,007
ERDF GVA			£28,593,347
ERDF RoI (to date and projected)			2.8

8.17. The two Programmes have collectively created 936 net jobs to date and are projected to generate 2621 in the future giving a total of **3557 (to date and future impacts) generating GVA of £60m.** When considering ERDF investment only this amounts to 1235, 458 and1693 respectively. Taking into account the total estimated public sector cost this gives a GVA return on investment ratio of 1:2.8 (i.e. every £1.00 of public investment the two ERDF Programmes are predicted to generate approximately £2.80 in net GVA).

Economic Impacts: Jobs Safeguarded

Table 34. Employment Impacts – Convergence Programme Jobs Safeguarded

Convergence	**To Date**	**Future**	**Total To Date & Future**
Gross Attributable Jobs Safeguarded	2966	9356	12323
Less Deadweight	1180	4094	5274
Less Displacement	1156	4023	5179
Less Leakage	1120	3898	5018
Less Substitution	1095	1686	2782
Plus Multipliers	1524	5315	6839
Total Net Impact (Jobs FTE)	**1524**	**5315**	**6839**
Total Costs (Public)	-	-	£12,977,673
GVA	**-**	**-**	**£115,523,58**
GVA RoI (to date and projected)	**-**	**-**	**8.9**
Total Net Impact (ERDF only)	720	2510	3230
Total Costs (ERDF Only)	-	-	£6,129,448
ERDF GVA	-	-	£54,562,618
ERDF RoI (to date and projected)	-	-	8.9

8.18. The Convergence programme has safeguarded 1524 net jobs to date and is projected to safeguard 5315 in the future giving a total of **6839 (to date and future impacts) generating GVA of £115.5m.** When considering ERDF investment only this amounts to 720, 2510 and 3230 respectively. Taking into account the total estimated public sector cost this gives a GVA return on investment ratio of 1:8.9 (i.e. every £1.00 of public investment the Convergence Programme is predicted to generate approx £8.90 in net GVA through safeguarding jobs).

Table 35. Summary Employment Impacts – Competitiveness Programme Jobs Safeguarded

Competitiveness	**To Date**	**Future**	**Total To Date & Future**
Gross Attributable Jobs Safeguarded	1582	3717	5299
Less Deadweight	893	1686	2579
Less Displacement	891	1666	2556
Less Leakage	863	1614	2477
Less Substitution	844	1578	2423
Plus Multipliers	1170	2211	3381
Total Net Impact (Jobs FTE)	**1170**	**2211**	**3381**
Total Costs (Public)	-	-	£8,392,653
GVA	-	-	**£57,111,618**
GVA RoI (to date and projected)	-	-	**6.8**
Total Net Impact (ERDF only)	568	1074	1642
Total Costs (ERDF Only)	-	-	£4,075,559
ERDF GVA	-	-	£27,733,992
ERDF RoI (to date and projected)	-	-	6.8

8.19. The Competitiveness Programme has safeguarded 1170 net jobs to date and is projected to safeguard 221 in the future giving a total of **3381 (to date and future impacts) generating GVA of £15.9m.** When considering ERDF investment only this amounts to 568, 1074 and 1642 respectively. Taking into account the total estimated public sector cost this gives a GVA RoI ratio of 1:6.8 (i.e. every £1.00 of public investment the Competitiveness Programme is predicted to generate approximately £6.80 in net GVA through safeguarding jobs).

Table 36. Summary Employment Impacts – Competitiveness and Convergence Jobs Safeguarded

Competitiveness and Convergence	To Date	Future	Total To Date & Future
Gross Attributable Jobs Safeguarded	4549	13073	17622
Less Deadweight	2073	5780	7853
Less Displacement	2047	5688	7735
Less Leakage	1983	5512	7495
Less Substitution	1940	3265	5204
Plus Multipliers	2694	7525	10219
Total Net Impact (Jobs FTE)	**2694**	**7525**	**10219**
Total Costs (Public)	-	-	£21,370,326
GVA	-	-	**£172,635,203**
GVA RoI (to date and projected)	**-**	**-**	**8.1**
Total Net Impact (ERDF only)	**1288**	**3584**	**4872**
Total Costs (ERDF Only)	-	-	£10,205,007
ERDF GVA	-	-	£82,296,609
ERDF RoI (to date and projected)	-	-	8.1

8.20. The two Programmes have collectively safeguarded 2694 net jobs to date and are projected to safeguard 7525 in the future giving a total of **10219 (to date and future impacts) generating GVA of £172.6m.** When considering ERDF investment only this amounts to 1288, 3584 and4872 respectively. Taking into account the total estimated public sector cost this gives a GVA return on investment ratio of 1:8.1 (i.e. every £1.00 of public investment the two ERDF Programmes are predicted to generate approximately £8.10 in net GVA).

Economic Impacts: Jobs Created and Safeguarded Combined

Table 37. Summary Employment Impacts - Convergence Programme Jobs Created & Safeguarded

Convergence	To Date	Future	Total To Date & Future
Gross Jobs Created & Safeguarded	3847	11386	15233
Less Deadweight	1658	5602	7260
Less Displacement	1616	5466	7082
Less Leakage	1566	5296	6862
Less Substitution	1532	2168	3699
Plus Multipliers	2144	7309	9453
Total Net Impact (Jobs FTE)	**2144**	**7309**	**9453**
Total Costs (Public)	-	-	£12,977,673
GVA	-	-	**£159,692,390**
GVA RoI (to date and projected)	-	-	**12.3**
Total Net Impact (ERDF only)	**1013**	**3452**	**4465**
Total Costs (ERDF Only)	-	-	£6,129,448
ERDF GVA	-	-	£75,423,861
ERDF RoI (to date and projected)	-	-	12.3

8.21. The Convergence programme has created and safeguarded 2,144 net jobs to date and is projected to generate or safeguard 7,309 in the future giving a total of **9453 (to date and future impacts) generating GVA of £159m.** When considering ERDF investment only this amounts to 1013, 7309 and 9453 respectively. Taking into account the total estimated public sector cost this gives a GVA return on investment ratio of 1:12.3 (i.e. every £1.00 of public investment the Convergence Programme is predicted to generate approximately £12.30 in net employment generated GVA).

Table 38. Summary Employment Impacts – Competitiveness Programme Jobs Created & Safeguarded

Competitiveness	To Date	Future	Total To Date & Future
Gross Jobs Created & Safeguarded	1940	4461	6401
Less Deadweight	1141	2166	3307
Less Displacement	1135	2141	3277
Less Leakage	1100	2075	3175
Less Substitution	1076	2029	3105
Plus Multipliers	1486	2838	4323
Total Net Impact (Jobs FTE)	**1486**	**2838**	**4323**
Total Costs (Public)	-	-	£8,392,653
GVA	-	-	**£73,034,062**
GVA RoI (to date and projected)	-	-	**8.7**
Total Net Impact (ERDF only)	721	1378	2099
Total Costs (ERDF Only)	-	-	£4,075,559
ERDF GVA	-	-	£35,466,095
ERDF RoI (to date and projected)	-	-	8.7

8.22. The Competitiveness Programme has created or safeguarded 1,486 net jobs to date and is projected to generate 2,838 in the future giving a total of **4323 (to date and future impacts) generating GVA of £73.0m.** When considering ERDF investment only this amounts to 721, 1378 and 2099 respectively. Taking into account the total estimated public sector cost this gives a GVA return on investment ratio of 1:8.7 (i.e. every £1.00 of public investment the Competitiveness Programme is predicted to generate approximately £8.70 in net employment generated GVA).

Table 39. Summary Employment Impacts – Competitiveness and Convergence, Jobs Created & Safeguarded

Competitiveness and Convergence	To Date	Future	Total To Date & Future
Gross Jobs Created & Safeguarded	5787	15847	21634
Less Deadweight	2799	7768	10567
Less Displacement	2751	7607	10358
Less Leakage	2666	7371	10037
Less Substitution	2607	4197	6805
Plus Multipliers	3630	10146	13777
Total Net Impact (Jobs FTE)	3630	10146	13777
Total Costs (Public)	-	-	£21,370,326
GVA	-	-	£232,726,452
GVA RoI (to date and projected)	-	-	10.9
Total Net Impact (ERDF only)	1734	4830	6564
Total Costs (ERDF Only)	-	-	£10,205,007
ERDF GVA	-	-	£110,889,956
ERDF RoI (to date and projected)	-	-	10.9

8.23. The two Programmes have collectively created or safeguarded 3,630 net jobs to date and are projected to generate or safeguard 10,146 in the future giving a total of **13,777 (to date and future impacts) generating GVA of £232.7m.** When considering ERDF investment only this amounts to 1734, 4830 and 6564 respectively. Taking into account the total estimated public sector cost this gives a GVA return on investment ratio of 1:10.9 (i.e. every £1.00 of public investment the two ERDF Programmes are predicted to generate approximately £10.90 in net employment related GVA). When looking at future impacts, figures are predicated on there being no significant market fluctuations in the next three to five years.

9. RESPONSE TO MID-TERM EVALUATION RECOMMENDATIONS

9.1. We have reproduced below each of the **recommendations** from the mid-term review**,** followed by the BI team's written **response** to the recommendation. The Consultants then discussed the delivery and **impact** of these actions with the BI Manager on 12 December 2014.

9.2. **Recommendation 1:** Develop a matrix approach to marketing and communications 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.

9.3. **Response 1:** The BI Project is now in a position to market the offering and participate in events. This activity was placed on hold as a result of ERP.

9.4. IS are now cross-sector and therefore sector teams have access to the whole team of IS. Recent meetings with the Head of Life Sciences and E&E sectors resulted in positive feedback concerning cross-sector support and further meetings are to be held with other sector heads to explain this approach. The IS have also been allowed to work with Local Authorities within regions.

9.5. **Impact 1:** The BI Manager informed us that the IS now generally have closer relations with the majority of key sector teams generally. In the last two years, many IS have been assigned to Sector Teams and the Enterprise Division, attend Sector Team meetings and work more closely with business development managers within those sectors. This was generally confirmed by sector representatives from AM&M, E&E, ICT and Life Sciences. Those interviewed, including Enterprise, commented that they would like more IS if possible.

9.6. BI management has also made greater efforts to work with Local Authorities by attaching IS to their economic development teams. The IS manager commented that mutually they have received some success but because of funding cuts some of the Local Authorities have significantly reduced their economic development departments. Gwion Williams is knowledgeable about this and believes that regional future activity could be increased, subject to those regions receiving Local Investment Funds (LIF) under the current framework.

9.7. It is also evident from this final-term evaluation's results that the IS are working closer with the sectors, Enterprise Division and the BI contractor Enterprise Consulting. We spoke to representatives of four sector teams who identified and commented on better engagement levels. It was also suggested by the

ICT and E&E sectors that the IS possibly have a better understanding of SME needs in the sector.

9.8. Overall, the Consultants conclude that there has been greater activity but also recognise that the resources available to BI management and the IS do restrict the amount of progress that has been and can be made. However, this is not the same for all sectors and there is limited evidence of individual champions and success. We are aware that part of the marketing responsibility falls with Enterprise Consulting, who claim to have been active in terms of dedicated marketing and telesales campaigns.

9.9. What counts and what is evident is the fact that the Project has achieved its targets and that lessons have been learned that will be taken forward in the next programme.

9.10. **Recommendation 2:** Streamlining the portfolio to reduce overlap between individual products and avoid confusion amongst stakeholders and beneficiaries.

9.11. **Response 2:** We are now in a period of stability following ERP, which caused confusion concerning the BI offering. BI is the main brand for innovation support with Innovation Vouchers and SMART funding mechanisms. RD&I being rebranded as SMART (2015) will avoid future confusion.

9.12. **Impact 2:** Evidence suggests that there are still levels of confusion and misunderstanding of the position of BI and other WG and non-WG programmes. This is clearly known to BI management, who have demonstrated efforts to address this, and to WG and WEFO. We accept that this could not be addressed in full over a short period of time and that our observations and those of notable others were taken on board. The Consultants are aware of the likely future Project positioning which will go some way to reduce confusion amongst stakeholders and beneficiaries. To develop this further, more dedicated marketing of the overall Project would help to differentiate it from others.

9.13. In terms of moving forward, the opportunity to umbrella brand SMART Innovation as a suite of products (as proposed) is welcomed and will produce greater clarity within the extended marketplace and amongst stakeholders. In terms of future marketing, and indeed evaluation, an umbrella project ‘SMART Innovation’ makes great sense. The Consultants believe that BI management has taken on board these issues and will be mindful when planning and executing a follow-on programme.

9.14. **Recommendation 3:** Placing an initial focus on business process innovation, particularly in new sectors.

9.15. **Response 3:** Whilst this comment is accepted for general innovation support “advice and guidance”, the Project needs to be mindful of the requirement for a “technology step” particularly for R&D projects where the focus is on innovation through technology. Innovation Specialists are now cross sector and will deal with all sectors.

9.16. **Impact 3:** The Consultants acknowledge the BI management team’s response/actions and accept that some progress has been made in terms of general guidance and support in covering the sectors, specifically Construction, Food and ICT. As this evaluation recommends, this could neatly be carried forward and documented in an ‘Innovation Roadmap’. However, the Consultants still believe that there is a significant, albeit latent, market opportunity to support “business innovation” alongside that of manufacturing and design. We have evidence that business/process innovation in itself can be as productive as, and potentially have more immediate impact than, that of manufacturing or design. Equally, we also believe that business innovation, which requires a broad and accepted definition, will increase the potential market significantly and be more attractive to several of those sectors that presently appear to be difficult to penetrate and to add value.

9.17. The Consultants also recognised that the ERDF programme requirements have difficulty in accommodating business/process innovation but suggest that it should be considered and funded appropriately. Business innovation support will chime with more sectors and is likely to need a different process and framework of delivery. It is also more likely to benefit from a training perspective and for inclusive delivery with the sector teams.

9.18. **Recommendation 4:** Strengthening commercialisation support

9.19. **Response 4:** During the first half of the Project, BI supported a number of early-stage R&D projects. A number of these projects are moving through the product development process towards commercialisation. As a result, BI will naturally be able to support more commercialisation activity towards the end of the Project as individual projects reach maturity towards commercialisation. For example, BI supports the exploitation phase of SMART R&D but the majority of these projects will not be in a position to seek commercialisation support until the final stages of the BI Project.

9.20. Commercialisation support is expected to increase during the final two years of BI as R&D projects move towards the exploitation phase. As a result of this, BI will investigate options to assign additional resource to strengthen commercialisation activities.

9.21. **Impact 4:** In discussing progress with the BI Manager, it was recognised that activity has changed, has been more focused, and that impact is now being witnessed. According to the BI Manager, this has been evidenced by the fact that the Project has performed better against outputs, particularly in its last two years. The evaluation research also shows that more intensive business support produces better economic return. Management also commented that they are still looking for additional ways to strengthen, where possible, commercialisation activities across a suite of EU-funded projects subject to Smart Specialisation and GBER guidelines.

9.22. **Recommendation 5:** Re-assess the need for an investment readiness programme to support BI intervention.

9.23. **Response 5:** The need for an investment readiness programme will be evaluated. It should be noted that the IS regularly receive feedback from companies concerning the lack of conventional funding for R&D activities. In the past, companies could approach banks for overdrafts and loans to support R&D projects but this type of funding has been withdrawn for SMEs without personal guarantees. As a result, it is difficult for SMEs to secure investment for R&D and therefore an investment readiness programme may prove to be beneficial.

9.24. If there is merit in introducing an investment readiness programme then this will have a cost, which is unknown at present. However, it is likely to involve consultancy to develop the programme and should not exceed £10,000.

9.25. Impact on targets: unlikely to influence targets for this Project but may influence future programmes.

9.26. **Impact 5:** In discussions with BI management, it is evident that they have considered investment readiness on a number of levels. At a basic level, it is assisting businesses in making grant/funding applications for BI. Other associated programmes have encouraged the IS to become more active in this area and believe that there is evidence to substantiate this in positive outputs.

9.27. In terms of overall investment readiness, ie investment into the business, BI management are aware that companies have, up until very recently, found it difficult to secure investment to support their overall projects and ambitions.

Management say that this situation has improved, but not significantly. They and other programme managers believe this to be a more universal problem and believe that they can work with other initiatives to reduce the need for external investment but also help businesses to become more investment ready.

9.28. Moving forward, they have identified the opportunity to work more closely with initiatives such as the High Growth Starts Programme, who will be better placed to assist, meaning that both projects would ultimately benefit.

9.29. There are a number of businesses that need external investment to maximise their potential. Exactly how many is unknown but it is likely to be circa 20 per cent of the beneficiaries supported.

9.30. During discussions with management, they accepted that BI and other projects should not solely focus on whether funding is in place for the company's financial contributions to the project, but that the company has an investment plan in place to bring the end product to market. If they do not, they need to be seeking advice and understanding on all issues relating to raising funding and investment. The BI management team recognises the need to link-up with organisations in Wales and further afield so that businesses can have access to all forms of investment.

9.31. **Recommendation 6:** Streamlining the application processes, particularly for Innovation Vouchers.

9.32. **Response 6:** The application process for Innovation Vouchers is relatively swift (less than three weeks). The main comments concerning the process relate to the requirements for financial due diligence and the number of quotes required for projects of differing value. BI management have now agreed with WEFO that three quotes is acceptable for projects up to £45,000, with two quotes required for projects of less than £5,000.

9.33. **Impact 6:** Although, the research indicates that the process is still perceived to be cumbersome by some stakeholders, the Consultants would suggest that this is arguably a result of a lack of understanding of the processes and guidelines for due diligence and appraisal. We are confident that the BI team are managing this issue.

9.34. **Recommendation 7:** Explore grant dependency and beneficiary contribution at final impact evaluation.

9.35. **Response 7:** This will be investigated and will include a review of grant levels and private sector investment (PSI). The BI Project and past ITC programmes have focused on the importance of embedding a culture of R&D within companies and ensuring they recognise the value of R&D investment and are not grant dependant. BI offers financial support via Innovation Vouchers up to a maximum of £25,000 and 50 per cent intervention rate. However, it is recognised that this only forms part of the overall investment in R&D and therefore the actual grant intervention rate is often much less than 50 per cent. It would be useful to evaluate the data in order to record the level of private-sector investment versus grant to prove that companies are committing private funding for R&D.

9.36. **Impact 7:** Still to be evaluated

9.37. **Recommendation 8:** Extend the period over which impact is captured to three years beyond Project completion.

9.38. **Response 8:** Process to be implemented for long-term evaluation with input from the BIS Impacts Team.

9.39. Timescales: Process to be finalised during the last two years of the Project.

9.40. Costs: It has not yet been confirmed how funds would be allocated to review the impact of BI after the end of the Project. However, this is a key element of innovation support and therefore it is expected that the WG Innovation Department would prioritise this activity. Indeed, BI has instructed one of the IS to review and start this process; resulting in the 'Innovation Impact Process' as reported in Section 6.4.2 of this report.

9.41. **Impact 8:** Impact on targets – no change**.**

10. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Conclusion 1: Project Correctly Positioned

10.1. Based on this review of strategic statements, the context and the economic conditions, it appears that the BI Project is still well positioned so as to meet business and economic needs. It is the Consultants' view that the BI Project is strongly consistent with the WG's economic, innovation and science policies. Indeed the policy agenda for innovation is one that highlights the importance of innovation as an enabler of economic growth, and the importance of creating an environment in which open innovation support can flourish.

Conclusion 2: Project Challenges

10.2. The BI Project has faced significant challenges resulting from the economic, policy and organisational context. In turn, these have adversely affected the marketing, development and performance of the Project. The economic downturn, and associated decline in business R&D expenditure contributed to lower than expected demand for the Project and this was compounded by the changes brought about by the implementation of the ERP, notably the decision to move towards repayable finance in place of grants and the reorganisation of the then Innovation Specialists into sector teams. Together these factors prevented the BI team, at times, from effectively promoting the BI Project, and resulted in confusion, both internally and externally, about the availability and offer of the Project.

10.3. Whilst the confusion surrounding the Project's availability and offer has significantly reduced with the decision to revert back to grant funding and relocating the Innovation Specialists (back) to within the Innovation Team, success is due to the Project Management, the trust and support of the IS, the WG's realisation of the specialist roles played by innovation, and the flexibility and hard work of Enterprise Consulting.

Conclusion 3: Project Performance – Outputs

10.4. The Project has, despite difficult conditions, achieved generally strong results. This strong performance is evident in both the BI Project's WEFO outputs (new products registered and launched) and, importantly, its economic impacts (jobs created, investment induced and GVA).

10.5. The Convergence area programme has produced comparatively stronger Profit Benefit and Jobs Created. The Competitiveness area programme, however, accounts for a larger proportion of innovation outputs – New or Improved Products or Processes Launched / Registered. This suggests that full commercialisation of Competitiveness area projects has yet to be fully achieved. Against funding targets, both programmes have spent less than anticipated (at October 2014).

Conclusion 4: Definition and Expansion of 'Innovation' Supported

10.6. It was suggested by the majority of stakeholder groups that any future programme should clearly define what is meant by innovation to clarify the target audience and the support offering. It was agreed that future support should incorporate the undertaking of 'business/process innovation', possibly outside of the main funded programme but to run, where possible, alongside innovation support for manufacturing and design. It was recognised that any re-profile of support would need to align with WG thinking on Smart Specialisation and GBER.

10.7. In discussions with BI management and the IS, it was agreed that 'business/process innovation' would need to be defined and that it would generally include all areas relating to the operations of a business to deliver a more innovative product, process and service. It was also suggested that the inclusion of 'business innovation' might open up those sectors, such as tourism, in which the BI Project has traditionally had little impact.

Conclusion 5: Gaps in Support Provision

10.8. In terms of the provision of innovation support, it is generally accepted that whatever the WG delivers, gaps in provision will always exist. This is attributed to the increasing speed of scientific advances, invention, innovation, market/consumer demand and the need for Welsh businesses to innovate to remain competitive. A key part of the BI Project is its role in educating and encouraging businesses to be innovative and to be able to move to a position where they have the expertise to deliver innovation and create a culture of innovation within their organisation.

Conclusion 6: Project Language

10.9. It was stated that BI could profitably support all sectors and that the BI service could be marketed sectorally. What is required is the ability to communicate using the business and developmental language of choice for each sector, which should engender more interest and also facilitate closer and better working relations with the sector teams, contributing to GDP. There is still the feeling that the language currently used by the Project is very much manufacturing-focused and possibly excludes other sectors.

Conclusion 7: Requirement for a Detailed Marketing Strategy

10.10. It was agreed that, in terms of promoting any future programme, a centrally produced and coordinated marketing and action plan would prove to be highly beneficial in driving internal and external communications. The Consultants suggest that a costed and detailed marketing strategy and action plan be constructed for any future programme.

Conclusion 8: Reduction in 'Grant Dependency'

10.11. It was recognised that 'grant dependency' is an issue that needs to be tackled going forward and, indeed, is an issue that the WG itself wishes to address. The output of a grant should be to lead the company to a position where it is willing to undertake similar innovative activities for economic gain, either by itself or being supported elsewhere, but at full cost to the company. BI should develop and support journeys or mechanisms that are able to graduate companies away from grants at the earliest convenience, with the possibility that grants are to be significantly reduced or will disappear after 2020.

Conclusion 9: More Streamlined Processes and Beneficiary Journey

10.12. It was generally acknowledged that the beneficiary journey could be better streamlined and as such, would be more effective to manage from an overall BI, beneficiary (client), IS, contractor, Innovation Voucher and Consultants' perspective. Via discussions with BI management, the Consultants introduced the concept of 'Innovation Roadmapping', which was generally accepted as a suitable way of organising a 'business assist', not as a 7-hour activity, but as an 'Intensive Assist' of 14 hours.

Conclusion 10: The Need to Exploit Infrastructure

10.13. There was acknowledgement that programmes such as BI need to capitalise on and exploit recent investment in infrastructure, such as the SA1 campus in Swansea, and potentially undertake more focused interventions, ie look at interventions that have the greatest impact on businesses and involve the business-support community as often as possible.

Conclusion 11: Expansion of IS team

10.14. The majority of interviewees, both internal and external, believed that the Project would benefit from further investment in, and expansion of, the IS team and their involvement with businesses/projects. There was also general recognition, however, that an increase in the headcount, if not resources in general, was possibly unlikely in the near future, with more use being made of outside consultants.

Conclusion 12: Alignment with Other Business-Support Programmes

10.15. A number of stakeholders could see how the Project could be integrated with other and future programmes, and how we could reduce grant dependency through skills development and CPD. There is clearly a willingness from other programmes/institutions, such as ASTUTE, to become more engaged with BI going forward, however, it was acknowledged that 'ownership' of clients needs to be clearly set out and established throughout the relationship. It was also proposed that some form of 'gatekeeper' system, possibly undertaken by the IS, would be a highly beneficial addition in terms of improving outputs for Wales and for beneficiary support in general.

Conclusion 13: General Conclusions from the Beneficiary Survey

10.16. Awareness of the BI Project came mainly from word of mouth and by direct approaches made to business by the WG and by personnel in the BI Project;
10.17. The BI service appears to deliver more assistance on general innovation and guidance on access to finance than it does on specific targeted solutions. Businesses appeared to prefer this type of support to more targeted assistance;
10.18. The expertise and knowledge of advisors was rated as very high by businesses with over 80 per cent scoring them as excellent or near to excellent;
10.19. Nearly 70 per cent of businesses received two days support or less from the BI Project;
10.20. After assistance, businesses moved much closer to the market and the launch of their product or service;
10.21. Of the three main technology groups surveyed, design appeared to be the easiest to affect improvement. Manufacturing is slower to achieve improvement because of the capital investment require but display much more improvement to staff productivity and the innovation culture;
10.22. Assistance on Intellectual Property scored lower in terms of satisfaction of advice, low levels of improvement and progress towards the market. The team may wish to consider how to enhance the effectiveness and impact of this type of support;
10.23. 85 per cent of businesses were either satisfied or very satisfied with the quality of assistance provided. There was no difference in the level of satisfaction between convergence and competitiveness projects. Intellectual Property attracted the lowest satisfaction scores;
10.24. Levels of expectation were largely met by the Project and exceeded in at least a third of the cases supported.

10.25. Companies would welcome further innovation support and assistance with the design and production of new products.

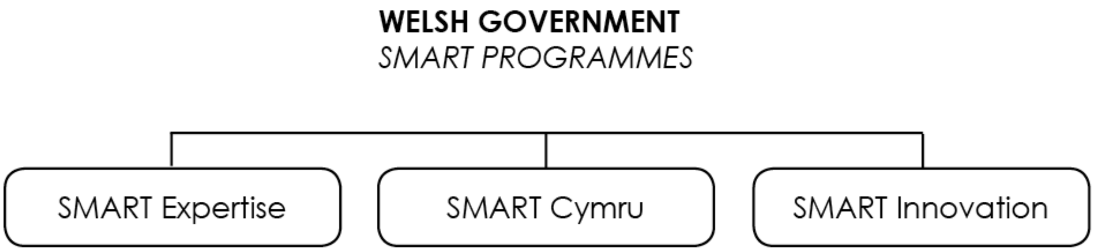
10.26. In terms of suggested enhancements the combination of a simplified application process and a higher number/level of adviser support could lead to further improvements in the overall service. The BI team may wish to consider an initial screening process via a shorter 'stage one' application.

Recommendations

Recommendation 1: Branding

10.27. Research has identified that there is confusion amongst some of the beneficiaries with regards to WG programmes that provide RD&I support and indeed with the various stakeholders and third parties. To avoid such confusion in the future, we recommend that WG's RD&I business support services should be generically branded SMART and promoted as follows:

Figure 18. Umbrella Brand for WG RD&I Business Support



- **SMART Cymru** should remain the same: previous evaluations of SMART (2007 & 2011) have indicated that the brand is strong, and that it is well recognised and understood. (Note: a further evaluation of SMART Cymru is due to take place in early 2015)
- **BI** should follow this lead and become **SMART Innovation**; and
- We believe the new **A4B** programme will be entitled **SMART Expertise**.

10.28. These three programmes clearly have close connections and provide assistance to support the open innovation journey for beneficiaries.

Recommendation 2: Intellectual Property Support

10.29. The IP support provided to businesses has always been highly regarded (this was specifically quantified in the mid-term evaluation). However, IP support and focus has had to change to comply with State Aid Regulations and IP support is now focused on guidance and signposting, but not in terms of specific advice, as the BI Project can no longer advise businesses which, unsurprisingly, results in less impact.

10.30. IP advice is adequately covered by the private sector and BI should not displace the private sector. As there are no staff resources available to manage the PATLIB library, PATLIB support should be delivered online. The online PATLIB can then be generally promoted by Business Wales, the IS and other programmes, and businesses should be advised to use online resources. In the instances where online resources do not meet the requirements of businesses, enquiries could be scaled-up.

10.31. **Level one** enquiries will be dealt with by an IS who has had the appropriate training. Here discussions may also identify where WG can help and signpost or, alternatively, the enquirer may be referred to the private sector for specific advice. There will be occasions where the enquirers' technicalities are more complex, in which case they will be escalated to Level two. **Level two** enquiries are to be handled by one of the IP Specialists. We also recommend that the businesses are encouraged to use accredited IP specialists by providing access to the Chartered Institute of Patent Agents (CIPA) website.

<u>Recommendation 3: BI Extension to Integrate Quality</u>

10.32. Evidence obtained during this evaluation clearly identified the value of BI's design and manufacturing support stream and approach. The BI Project clearly provides opportunities for businesses to engage with professionals to improve manufacturing and design. However it is clear that beneficiaries, particularly small businesses, integrate other elements when they are looking to create competitive advantage. Any business now looking to design for manufacture and to expand their product service portfolio, automatically includes quality aspects. Evidence of quality procedures and standards are becoming an ever-increasing demand by customers. We therefore recommend that 'quality' is part of the service offering, sitting alongside manufacturing and design. Typically, businesses need to constantly improve all aspects, including quality from the supply chain, management systems, production and the delivery of products and services.

<u>Recommendation 4: Business/Process Innovation</u>

10.33. Throughout the research, it is clear that businesses also identified that BI occasionally needs to support 'process' or 'service' innovation, an area in which they could benefit from support and that would deliver gross added value. It is likely that a business/process innovation programme could be designed to sit alongside that of design, manufacturing and quality. This may require a different skillset from future framework providers or may require a new ERDF bid. Providing business/process innovation support widens the appeal of the Project and provides a broader canvas to work with, not only the selected sectors, but also effectively across all nine WG priority sectors.

10.34. The origin of the BI Project was in supporting manufacturing and that still dominates activity. It is recognised that to fully engage with other sectors would require specific marketing and an adoption of the language of choice from the various sectors. Equally, some sectors are difficult to engage with because of the levels of innovation employed by businesses involved in those sectors. Our recommendation is that BI management is more selective and should communicate with those sectors where the Project can add most value (see Recommendation 5).

Recommendation 5: Project Sector Focus

10.35. We recommend that the Project focuses on the Grand Challenge areas as identified by Innovation For Wales. The four key Grand Challenge areas include Advanced Manufacturing, Life Sciences, Health and Energy. BI management accepts that these areas provide sufficient scope for future programmes.

10.36. It is also recommended that the Innovation Team supports sector teams in their endeavours to create their own innovation support programmes. The Innovation Team is recognised by the sectors as having the core skills and understanding and these should be passed onto other sectors that have identified the need for Innovation.

Recommendation 6: Engagement with Universities and RTOs

10.37. Research identified that the universities are not as engaged with BI as first indicated. This is due to a number of reasons, not least that the universities were unsure about the BI offering and about how they can participate and prosper. We therefore recommend that marketing reaches out to the universities and research and technology organisations (RTOs), and engages with those universities to the point where they are comfortable with recommending BI support. Once BI has assessed a business, such organisations can benefit by tendering for work.

Recommendation 7: Innovation Specialists

10.38. The IS enjoy a unique role within innovation support across Wales. They are highly regarded individuals because of their knowledge of innovation, their networks and their appreciation of business needs. The IS are very much seen as honest brokers and their role overall enhances the innovation support delivery. We advise that, where possible, their numbers should be increased to facilitate more time spent with beneficiaries, particularly during the early stages of engagement and for roadmapping/blueprinting. As research identifies, there is a role for them to front other programmes so as to ensure that potential beneficiaries understand and prioritise their needs, and so that those beneficiaries are signposted to programmes that can deliver in relation to needs that have been prioritised and that can provide long-term growth. For the IS to have complete coverage, we believe that there numbers would need to grow, possibly by two or three new members within the next six months.

Recommendation 8: Roadmapping

10.39. Research has indicated that businesses are generally becoming fatigued by diagnostics and that the diagnostic does not necessarily cement further working relationships. We are well aware that the IS employ a technology review form, but these are very rarely shared with the beneficiary organisations. We are also aware that a number of IS have improved on this form and indeed Enterprise Consulting has created both a short- and long-form business appraisal approach. We believe that there is an opportunity to merge and develop these to create what we call a roadmap. The roadmap serves a number of purposes - it secures an intensive business assist, a likely target for follow-on ERDF supported programmes, and it also provides greater engagement, which secures long-term delivery.

10.40. We recommended that this exercise requires at least two days. This can be delivered by the IS or, alternatively, consultants from the framework. The roadmap principle requires the consultant to spend at least half-a-day with the company so that they fully understand their situation, future needs, capabilities and limitations and, importantly, through that process gain a degree of trust with the owner/managers within those organisations. The consultant will then identify key actions which they, others programmes, or the company themselves can undertake and will also establish what the likely outputs of those actions will be. This can be written up in a short-form report and then presented back to the beneficiary business. The report will document actions that the company can undertake, will list other programmes that are in a better position to support them, ie non-WG programmes such as ASTUTE, or WG programmes such as SMART Expertise. The company will then be expected to sign-off, as that will keep a true record of the business engagement/intensive business assist. It also creates a starting point for any longitudinal impact studies and provides the company with a clear overall appreciation on how the business could benefit through RD&I.

Recommendation 9: Marketing

10.41. The Project has, during its lifetime, suffered from various internal actions and the inability to directly deliver a professional marketing campaign. This has resulted in a misunderstanding in the market about BI, its availability, targets and purpose. It has also recognised that programmes that deliver over several years need to continually remind various audiences of their purpose.

10.42. We recommend that WG produces a detailed marketing strategy and action plan, and that this goes out to tender. We believe that an external professional marketing and PR consultancy would provide significant added value as they will have challenging targets, which they will have to deliver on a monthly or quarterly basis. The contract will be reviewed on an annual basis to ensure value for money, reach and impact. In terms of budgets we recommend that an annual budget of £150,000 is set aside for at least the first six years, possibly less in the seventh year, reducing to nothing in the eighth year. We also recommend that in Year 1 there is a further £50k set aside to cover set-up costs and materials. The marketing organisation would need to respond to Phil Allen and Gwion Williams and would work alongside central marketing within WG.

Recommendation 10: Alleviate Grant Dependency

10.43. Throughout the evaluation, we have researched ways and means of significantly reducing grant dependency. It is clear that grant does have a role to play, when its key purpose is to mitigate risk and/or improve the capabilities of an organisation. Whilst this research has identified and considered ways of lessening the use/need of grants, one that is clearly favoured is that of the introduction of CPD and training. Training and personal development falls outside of the remit of the Innovation Team, potentially funded differently through ESF and delivered by the HE and FE sector. Such training should be of the order of NVQ Level 4 and 5, diploma and modular masters level.

10.44. In terms of BI, we still believe that there is a role for grant where risk, significant innovative steps and improved competitiveness are key outputs. However, we do not recommend that WG continually offer grants to businesses that have a history of applying for grants. If a company has previously received a grant, it is imperative to ensure that the company is able to demonstrate best endeavours to commercially exploit its outputs. If this is not the case, then the request for grant support should be refused.

Recommendation 11: Level of Innovation

10.45. A clear definition of the level of innovation necessary to access support, a definition of innovation, and a definition of innovative steps should be created for the purpose of BI. Clearly, the applied definition needs to meet the guidelines set by WEFO but also be as accommodating as possible. This will allow support of all businesses that are taking a high degree of risk but that are highly likely to receive investment. SMART Specialisation and GBER help to frame those innovative businesses and, equally, innovative businesses with less than 10 employees can be accommodated by association with the Growth Accelerator Programme via SMART Specialisation or by other means.

Recommendation 12: Innovation Voucher Capital

10.46. Evidence suggests that Innovation Voucher Capital has proved successful and has significantly contributed to RD&I expenditure and business growth. Evidence indicates that there is a funding gap and that the ability to introduce external funding has influenced companies to move forward on such investments where there is still a considerable amount of risk. We believe that a capital element should also be taken forward.

Recommendation 13: BI Processes

10.47. Businesses, and indeed stakeholders, still believe that the application and assessment processes for BI are long-winded, cumbersome and in part, unnecessary. When an understanding of BI management's position is obtained, it is clear that this is not the case and that, in many instances, they are following processes that have been put in place by WG, WEFO and the auditors.

10.48. Going forward, we are now aware that the budget responsibility will move from BI to be undertaken independently within WG. Whilst this may speed up the process, businesses still have to follow detailed procurement rules and regulations. Our recommendation is that the processes are reviewed to see if other efficiencies can be identified. Equally, the process needs to be made more visible to beneficiaries, advisors and stakeholders through promotional material so as to provide realistic timescales and expectations. Clearly, whatever is proposed needs to meet with EU and WEFO requirements.

Appendix I: Official WEFO/EU Output Category 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 that 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 top 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.

Appendix II: Summary Economic Impacts