Impact Evaluation of ProspeKT / Informatics Ventures

Final Report for Scottish Enterprise

May 2011

EKOS Limited, St. George's Studios, 93-97 St. George's Road, Glasgow, G3 6JA
Reg 145099

Telephone: 0141 353 1994
Web: www.ekos-consultants.co.uk

Direct enquiries regarding this report should be submitted to:

Iain Jenkins, Director, EKOS

Email: iain.jenkins@ekos.co.uk

Tel: 0141 353 1994

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Executive Summary

This Executive Summary presents an overview of the evaluation report and relays the key messages and findings.

Background

The key objective of the study was to undertake an impact evaluation of the ProspeKT/Informatics Ventures (IV) Projects (2006 – 2012) to measure the performance and impacts achieved, but also to inform delivery of the new follow on project Informatics in Scotland.

The School of Informatics (SoI) at University of Edinburgh (UoE) is one of the jewels in the crown of the Scottish higher education and research sector. The Project's key objective was to support commercialisation, knowledge transfer and entrepreneurialism amongst Scottish businesses and start-ups and spin outs.

The ProspeKT Project was delivered alongside the construction of the Forum on the UoE campus (a new 12,000 sqm building to host researchers and research facilities) and was expected to complement this capital spend with a range of activities to support Scottish businesses and start-ups/spin outs.

The availability of European Regional Development Fund (ERDF) in 2008 offered the opportunity to expand the range of activities on offer. Through the IV element of the Project, activity could be expanded over the final three years to enhance the range of services available and the geographic reach of the project.

The delivery of the Project has comprised a range of complementary interventions, summarised below:

- **ProspeKT**:
    - knowledge transfer to support interaction with the wider informatics business community in Scotland
    - people and culture to promote entrepreneurship across the Schools activities, with support targeted at staff and students

  - PR, brand and public outreach to raise domestic and international awareness of the SoI, and to encourage interaction between the public and industry through appropriate events; and

- **Informatics Ventures**:
  - Pillar 1 Practitioner led education
  - Pillar 2 Innovative use of the web for enterprise creation and growth
  - Pillar 3 Connecting the community
  - Pillar 4 Special support for potential winners.

The Project was funded from a number of sources including Scottish Enterprise (SE) – 41%, ERDF – 31% and the UoE – 28%. The total combined Project cost was just under £11.8m. The SE investment represents an investment leverage ratio of 1:1.5 for other public sector funders.

Strategic Fit and Rationale

Throughout its lifetime, the Project demonstrated a strong fit with, and contribution towards the aims and objectives of relevant over-arching policy, including: the Government Economic Strategy (2007 and 2011); SE strategies and plans (Operating Plan 2005/08, Business Plan 2010/13, the Enabling Technologies strategy for Scotland (2009); Scottish Funding Council; and wider UK and European level policy.

In particular, the Project helped strengthen the linkages between the research sector and business base, promote and enhance innovation within the technology sector and help foster a business environment to support the growth of Scotland's globally competitive sectors.

The rationale for the Project was founded on two key areas:

- equity – Scotland underperforms relative to the UK on the linkages of its academic base with R&D performing companies, and has fewer R&D performing companies than other parts of the UK; and
- efficiency – the market for informatics does not operate as effectively as it could.

Equity

The key issues relating to equity include:

- Scotland performs poorly in relation to links with large R&D performing firms, with only two universities in the top twenty (and placed in position 13 and 18);
- Scotland does not appear to perform as well in relation to the location of large R&D performing links with UK universities. On this measure Scotland comes seventh from twelve UK nations and regions; and
- Scotland's institutions underperform in relation to links with R&D performing firms outside of the region. On this measure Scotland only has three institutions in the top twenty.

Efficiency

The key efficiencies or market failures the Project was designed to address are:

- issues relating to business start-up and growth - imperfect information:
    - lack of awareness of available support
    - lack of experience in sourcing and accessing relevant information
    - lack of skills in relation to business start-up and growth
    - costs of obtaining commercial information seen as too high
    - risk aversion of entering new markets and investing in new technology; and
- issues relating to R&D and innovation - imperfect information and externalities:
    - businesses do not recognise the benefits of engaging with the HEI sector
    - HEI sector do not recognise the commercialisation potential of research
    - lack of skills for successful engagement
    - risk averse behaviour in respect of R&D investment
    - intangible benefits not priced e.g. reputational benefits from commercialisation of research.

Consultation with beneficiaries and stakeholders identifies that the Project has made some gains in reducing/removing market failures and barriers for engagement.

However, feedback also suggests market failures continue to persist, in particular, the provision of information for business start-up/growth and a general reluctance to invest in untested and new/emerging processes, products and services - made even more acute given the impact of the economic recession.

Project Performance

Project performance was assessed based on monitoring data and identifies the following achievements:

Project Expenditure

The total Project investment was just under £11.8m, which represents a slight under spend. However, this does not tell the whole story as there was a significant amount of resource reallocation, with spend on ProspeKT significantly higher than the original budget allocation (budget - £3.1m and spend - £7m = 125%) and conversely IV experienced an under spend (budget - £8.8m and spend - £4.8m = 45%).

Progress towards Targets

The ProspeKT Board established a set of twenty performance indicators with which they monitored the performance of the Project. These indicators centred on a number of key themes: Culture of enterprise; Developing more businesses of scale; Increased involvement in global markets; Activity measures; and Outcome measures.

The targets set were to be achieved by 2016, however, impressively, all but two of the twenty targets were exceeded, and in many cases by quite substantial margins, in particular the number of individuals (1,637% achieved) and businesses (990% achieved) attending events. For the Board, the key Project successes related to the number of new start-ups (31) and spin outs generated (12).

Further, the Project achieved four out of five separate ERDF targets set for the IV element of the Project.

Stakeholder Feedback

The study team undertook consultations with a range of stakeholders including beneficiary businesses (35 completed), ProspeKT Board and Delivery Team (six completed) and wider stakeholders including SE and Scottish Development International (SDI) (five completed).

Beneficiary Feedback

Overall, the majority of respondents were positive regarding the Project and the support they received.

Businesses identified business start-up/growth and commercialisation issues as a key driver for their engagement in the Project. There were a larger proportion of beneficiaries reporting their engagement was to achieve business objectives rather than technical objectives.

Beneficiaries reported high levels of satisfaction with the support they received across the board from informal events like TechMeetup, formal entrepreneur training, to the accommodation and facilities they accessed at Appleton Tower.

The key benefits of engagement reported by the beneficiaries are broken down by five themes:

- networking benefits e.g. new contacts – reported by 88%;
- knowledge benefits e.g. improved technical understanding of informatics - reported by 68%;
- finance benefits e.g. secured new investment - reported by 59%;
- R&D/Innovation benefits e.g. improved production/processes reported by 56%; and
- sales benefits e.g. entered new or grew in existing markets - reported by 41%.

In addition, beneficiaries reported a number of quantifiable economic impacts including creating/safeguarding jobs, turnover and profit, considered further below.

Finally, based on their experience beneficiaries were asked to report the key strengths, weaknesses and areas of improvement for the Project:

- strengths:
    - networking opportunities
    - high value and targeted support
    - quality of support e.g. speakers at seminars were a high quality;

- weaknesses:
    - IP policy remains a barrier for engagement
    - lack of transparency and communication with regards to the eligibility criteria for certain elements of the support
    - there is a lack of aftercare/follow up support or help directing businesses to the next level of support; and
- areas of improvement:
    - ensure support content evolves and remains relevant
    - more bespoke and tailored support for specific industry sectors
    - hands on 'mentoring' support for businesses.

Stakeholder Feedback

Feedback from stakeholders was in the main positive, and the key feedback is summarised below:

- throughout its lifetime stakeholders felt the Project had a strong fit with relevant policy, in particular through encouraging innovation as a route to commercialisation and impact;
- changes to Project objectives were appropriate and reflected the shift in policy to focus on achieving the performance targets set for the Projects e.g. creation of jobs and GVA;
- there was, and continues to be a strong rationale for the Project focused around poor awareness of market opportunities or the competencies and capacities of academics and businesses to pursue them;

- mentoring support and entrepreneur education were seen as the key services that promoted a direct route to impact;
- changes in the external funding environment brought on by the economic recession and within the Proof of Concept programme were identified as the key issues impacting Project delivery;
- the majority of respondents felt that widening the Project to include IV was a positive and successful move that allowed the SoI to deliver a more complete support package;
- the Project's delivery has generated wider benefits including enhancing the reputation of SDI, SoI and UoE; and
- all stakeholders felt there is a need for the Project to continue in some capacity although recognised there would need to be changes given a likely reduced budget and take on board recommendations for service delivery that were as less successful.

Economic Impact Assessment

A bespoke Economic Impact Assessment (EIA) was undertaken based on responses from the 35 beneficiary businesses interviewed. They key impacts are reported as:

Net Impacts

- net additional impacts to date, 2010/11 (Yr 4):
    - 824 net additional jobs
    - cumulative GVA of £13.9m; and
- net additional impacts by 2016/17:
    - 983 net additional jobs created
    - cumulative GVA of £109.1m.

Overall, the Project is forecast to generate cumulative net discounted Present Value GVA of £85.3m over the ten-year period. If we set this against the discounted Project costs of £11.5m, the Project generates a return on investment of £7.40:1. This means that for every £1 SE invested in the Project, it generates £7.40 GVA in the Scottish economy.

Conclusions

Study conclusions were set against the detailed study objectives, as considered below.

1. Study Objective: Examine the Project's strategic rationale over time, the extent to which activity has promoted market adjustment and whether the rationale remains valid.

   Conclusion: The key market efficiencies/failures that are constraining activity relate to both demand (business) and supply side (university) issues – information deficiencies and externalities. These market efficiencies have remained throughout the lifetime of the Project, and therefore, the original rationale for intervention remains valid.

   While the Project has made some progress in removing these market efficiencies/failures, they continue to persist in both the demand and supply sides.

2. Study Objective: Examine how the Project fits with, and has contributed to the wider policy agenda. This extends to policies and strategies in place at the time of the funding approval and during the evaluation period, as well as the current policy environment as best captured by the recently updated Government Economic Strategy.

   Conclusion: The Project continues to have a sound fit with, and contributes to overarching economic and R&D/innovation policy objectives.

   In particular, there has been an increased focus on the benefits of supporting industry-university collaborations as a mechanism for driving innovation and sustainable economic growth.

3. Study Objective: Examine the linkages and dependencies between the Projects' various components and specifically between ProspeKT and IV.

   Conclusion: There was a high degree of complementarity between ProspeKT and IV, and the latter made available services that were of importance to existing clients, in securing wider access, and achieving objectives and targets. This is indicative also of a high degree of project linkages and interdependency.

4. Study Objective: Examine the extent to which the Project has achieved its SMART objectives and targets, and explain observed variances.

   Conclusion: The Projects were very successful in achieving most of the financial and performance targets set. This indicates that:

   - management and delivery arrangements were largely fit for purpose;
   - the Projects made good progress towards satisfying their objectives; and
   - the Projects made a substantial contribution to furthering the development of the informatics sector in Scotland.

5. Study Objective: Examine wider Project benefits, especially those of importance to the SG and SE, and identifying those accruing to the corporate and academic sectors.

   Conclusion: The Projects have generated a number of wider benefits for SG, SE, UoE and the business community. These include improved academic attitudes to commercialisation, relationship building, enhanced reputation, enhanced networking and contacts, and helping to build a cohesive community of interest.

   For businesses the key benefits centred around formal and informal networking and an increased awareness of how informatics/university engagement can support services.

6. Study Objective: Examine Project benefits including a full economic impact assessment, in line with the guidance issued by SE and HM Treasury.

   This is to include actual and forecast, gross and net GVA, turnover and employment impacts, using prescribed techniques, adjustments and time horizons.

   Conclusions: The overall net additional effect of the Project is estimated at 983 jobs and GVA of £85.3m over the ten-year evaluation period, an impact ratio of 1:7.4.

7. Study Objective: Examine usage, quality and demand of/for Project services across a range of stakeholder and target groups. This is to include stakeholders'/beneficiaries' perceptions of Project value, performance, customer satisfaction, responsiveness, consistency, etc. It is also to assess sources of enquiries, referrals, service gaps, possible improvements, and potential market size.

Conclusions: Overall, both stakeholders and beneficiaries reported high levels of satisfaction with the service.

Beneficiaries in particular were able to identify specific areas where the support had been most valuable – MIT workshops and informal networking through TechMeetup, etc.

However, it should also be noted that in terms of usage and demand, some beneficiaries identified issues with the communication and transparency of the support and therefore, may not have been able to access the full range of support services available to them.

8. Study Objective: Examine the effectiveness of management, communications, and reporting processes, the use of delivery contractors, identification of what has worked well, less well, and recommended improvements.

   Conclusions: Stakeholders were strongly of the view that the Projects had been well managed with appropriate governance, management and reporting procedures established. There was some limited criticism of the transparency of communications with beneficiaries.

9. Study Objective: Examine the effectiveness of management information and performance measures applied, focusing on their appropriateness and the strengths and weaknesses of systems and procedures used to generate data and information.

   Conclusion: Although performance monitoring data had an important and appropriate influence on decision-making, the systems and procedures in place could have been better designed.

10. Study Objective: Examine the contribution to the equity and equalities agenda, comprising the review of any Equality Impact Assessment, identification of areas for further review, assessment of the Project's contribution to rural diversification and growth, and identification of its contribution to sustainable development.

    Conclusion: The Projects' contributions to the equity and equalities agenda were at worst neutral, with some concern shown to engage female would-be entrepreneurs. The rural development and sustainable development agendas did not have a substantial influence on Project design and delivery.

11. Study Objective: Examine value for money, covering economy, efficiency and effectiveness and making use of standard VFM indicators and appropriate benchmarks.

    Conclusion: The Project generates a return of £7.40 GVA for every £1 invested by the public sector.

    If we benchmark the Project against similar interventions – SE enabling technologies and sector targeted Project evaluations which both delivered a ROI of 4.87:1 we can see that ProspeKT/IV is estimated to deliver a greater ROI for the public purse.

Recommendations

Based on a review of all the available evidence, we have presented a range of preliminary recommendations for future delivery of the successor Project.

1. Monitoring Systems and Procedures: there is an immediate need to review monitoring systems and procedures for the new Project to ensure that past weaknesses are addressed.

2. Data Access: The new Project should make it clear to all businesses that accessing support is conditional on agreeing that these details be available for use in future evaluation activity.

3. Survey Control: There is a need for increased flexibility in applying Survey Control policies with more weight given to the need to ensure valid and robust evaluation activity.

4. Service Priorities: Decisions regarding the allocation of resources across component services should take account of the likely benefits that could emerge, focused on identifying commercialisation opportunities and matching these with would-be entrepreneurs.

5. Aftercare and Integration: It would be useful to ensure that an appropriate level of aftercare support is available to businesses which the Delivery Team considers have progressed beyond the stage where it can provide further business mentoring help.

6. Nurturing a Community of Interest: The new Project needs to ensure that collaboration opportunities continue to be available to help to build the sector.

7. Accessing IP: SE should continue to work with university partners generally to explore ways of enabling easier access.

8. Transparency in Services and Eligibility: It is recommended that the new Project prepares clear and explicit service descriptions which communicate how to access them.

9. High Value Business Education: SE should examine the costs and benefits of the 'higher value' courses more closely and to consider future options on use.

10. Delivery Model: It is recommended that SE consider the benefits of the Project's devolved responsibility approach to project delivery and management and its wider applicability.

1. Introduction

This report presents the research findings and conclusions from an impact evaluation study carried out on behalf of Scottish Enterprise (SE) to assess the performance of the ProspeKT/Informatics Ventures projects ("the Project"). The evaluation will be used to understand the impact of the ProspeKT project, to identify key wider learning to better exploit the economic development potential of Scotland's academic and research base and inform the ongoing delivery of the follow on project Informatics in Scotland.

1.1 Background

The School of Informatics (SoI) at Edinburgh University is one of the jewels in the crown of the Scottish higher education and research sector. Consistently ranked as amongst the highest, if not the highest, rated computer science departments in the UK, it has also built an enviable international reputation for cutting edge research and high quality teaching. The School has one of the world's largest university-based research and teaching resource in its subject area, and continues to attract staff and students from across the UK and overseas.

The potential to better exploit the expertise resident in the School has long been recognised, and it has attracted substantial funding to support new infrastructure and support activities which align well with the policy thrusts of encouraging commercialisation, knowledge transfer and entrepreneurialism. The ProspeKT/Informatics Ventures project has been the core intervention, comprising a range of complementary activities in pursuit of these policy goals, but also to enhance international awareness of the School's offering. Funding for the Project has been provided from a mix of sources, including the Scottish Executive/Government (SG), Scottish Enterprise (SE), the European Regional Development Fund (ERDF) and the University of Edinburgh.

SE commissioned this economic impact evaluation of the Project, with a specific focus on company engagement activities. This was to inform decision making regarding the Project's future and to generate learning of value to other efforts being made to better exploit the economic development potential of the nation's academic and research base.

1.2 Study Objectives

The primary aim of the study was to undertake an economic impact evaluation of the Project for the period June 2006 to July 2011. This was to build on, and add value to, previous work, including the interim evaluation completed in January 2010. This study was to focus largely, but not exclusively, on the Project's company engagement components.

The study brief also identified 12 detailed study objectives, which can be summarised as being to assess:

- the validity of the Project's strategic/market failure rationale over time, the extent to which activity has promoted market adjustment and whether the rationale remains valid;
- how the Project fits with and has contributed to the wider policy agenda. This extends to policies and strategies in place at the time of funding approval and during the evaluation period, as well as the current policy environment as best captured by the recently updated Government Economic Strategy;
- linkages and dependencies between the Project's various components and specifically between ProspeKT and Informatics Ventures;
- the extent to which the Project has achieved its SMART objectives and targets, as articulated in approval papers and subsequent updates, and explain observed variances from target;
- wider project benefits, especially those of importance to the SG and SE, and identifying those accruing to the corporate and academic sectors;
- project benefits including a full Economic Impact Assessment (EIA) in line with the guidance issued by SE and HM Treasury, including the contribution to relevant Government Economic Strategy indicators from the National Performance Framework. This is to include actual and forecast, gross and net GVA, turnover and employment impacts, using prescribed techniques, adjustments and time horizons; and
- useage, quality and demand of/for project services across a range of stakeholder and target groups. This is to include identifying stakeholders'/beneficiaries' perceptions of project value, performance, customer satisfaction, responsiveness, consistency, etc.

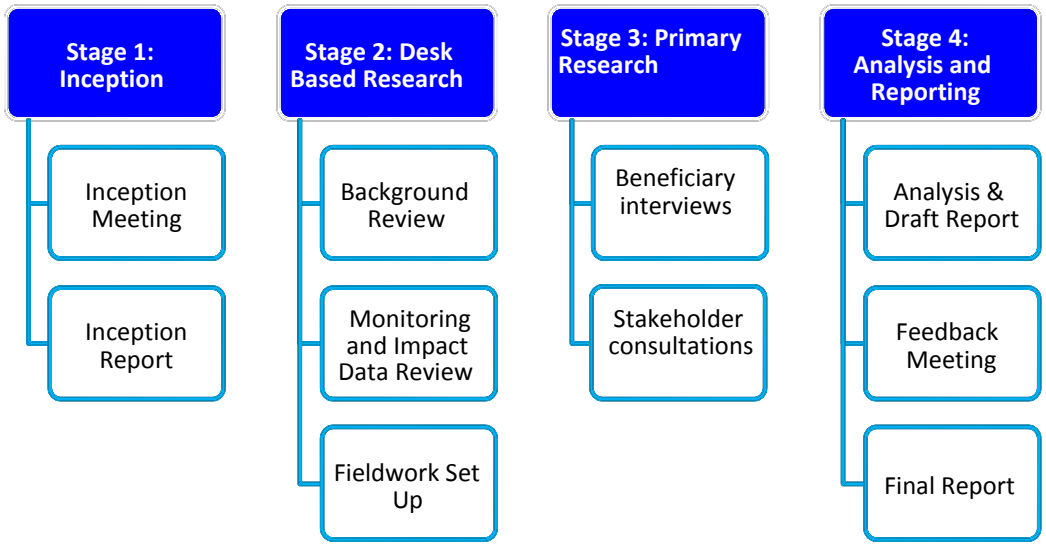
It is also to assess sources of enquiries and referrals, service gaps, possible improvements and potential market size;

- management and delivery arrangements, including the effectiveness of management, communications and reporting processes, the use of delivery contractors, identification of what has worked well/less well, and recommended improvements;
- management information and performance measures applied for the Project, focusing on their appropriateness and the strengths and weaknesses of systems and procedures used to generate data and information;
- project learning, both project-specific and transferable, on what has or hasn't worked well;
- contribution to the equity and equalities agendas comprising the review of any project Equality Impact Assessment, identification of areas for further review, assessment of the Project's contribution to rural diversification and growth, and identification of its contribution to sustainable development; and
- value for money (VfM), covering economy, efficiency and effectiveness, and making use of standard VfM indicators and appropriate benchmarks.

1.3 Study Method

The method adopted comprised four key stages as detailed in Figure 1.1 below.

Figure 1.1 Study Method



Stage 1: Inception: the study commenced with an Inception Meeting with the client to agree the detail of the study approach, method, milestones, timescales and to access relevant documentation, data and intelligence.

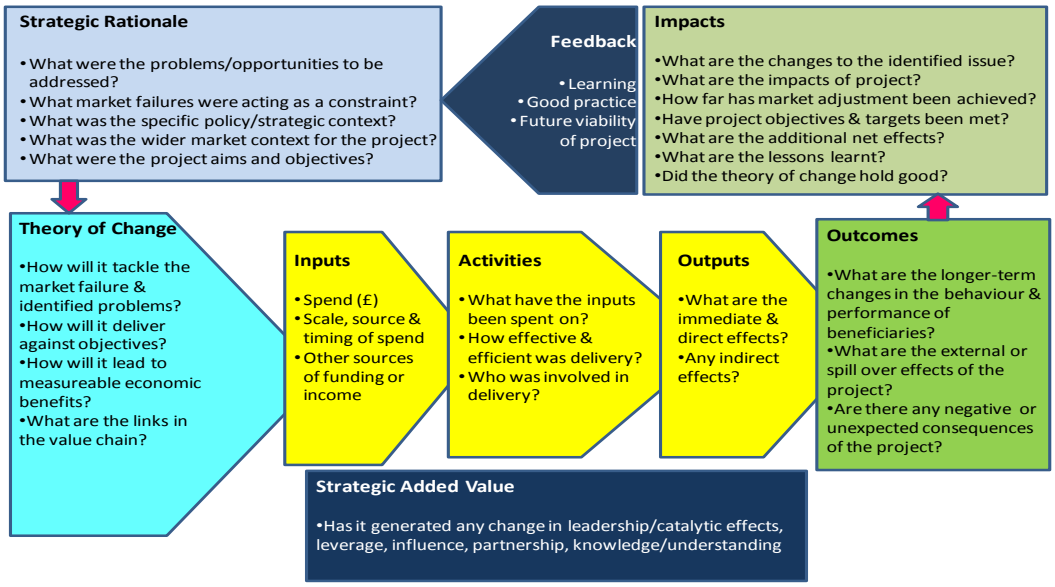
Stage 2: Desk-based research: this involved a review of available monitoring and performance information and data to provide the background and context to what the Project has delivered.

Stage 3: Primary research: the purpose of Stage 3 was to engage with a range of beneficiaries and stakeholders to provide key information to determine the Project's performance. This involved consultations with key stakeholders including: the ProspeKT delivery team, SE and wider stakeholders e.g. Scottish Development International (SDI) and a telephone and online survey with a sample of supported businesses – 'beneficiaries'.

Stage 4: Analysis and Reporting: this stage focused on the study outputs and comprised: submission of a draft report for commentary; feedback meeting with the client and delivery team to discuss the key study issues and agree conclusions/recommendations; and submission of a final agreed report.

The study method follows the Evaluation Logic Chain model, as illustrated in Figure 1.2 and is structured based on the interactions that exist within the Logic Model.

Figure 1.2: Evaluation Logic Model



1.4 Reporting Structure

The remainder of the report is structured as follows:

Section 2: Project Background;

Section 3: Strategic Fit and Rationale for Intervention;

Section 4: Project Performance Review;

Section 5: Economic Impact Assessment;

Section 6: Project Learning; and

Section 7: Conclusions and Recommendations.

2. Project Background

This section provides a brief description of the Project context covering: background; ProspeKT; Informatics Ventures; and summary.

2.1 Background

The SoI at the University of Edinburgh (UofE) has long been recognised as one of Scotland's leading academic departments and one that compares very favourably at the UK, European and global levels. This was recognised as early as 2001, when the results of the Research Assessment Exercise (RAE 2001)[1] showed it to be one of only five UK-based university departments of computer science awarded a 5*[2] rating, and the only one to be awarded a 5*A rating see Table 2.1.

Table 2.1: REA 2001, Computer Science Departments at UK Universities

University	Rating	Category A and A* Research Staff (FTE)	Research Power[1]
Institutions Achieving 5* rating for Computer Science			
Edinburgh	5*	87.1	609.7
Cambridge	5*	34.3	240.3
Imperial College	5*	42.6	289.2
Manchester	5*	55.4	388.0
Southampton	5*	26.2	183.1
Scottish Comparators			
Glasgow	5	30.0	-
St Andrews	5	13.0	-

1 Research rating times the number of active research staff. Research power data unavailable for Glasgow and St Andrews.

It is important to note that not only was the quality of research activity rated as internationally excellent, but that the SoI was home to the largest concentration of academic informatics researchers in the UK, with the number of research active staff at the SoI generally around double (or more) than that of the other 5* rated institutions. This can be taken to imply that the volume of high quality research conducted by the SoI was unrivalled in the UK.

[1] http://www.rae.ac.uk/2001/

[2] The RAE2001 defined 5* as "Quality that equates to attainable levels of international excellence in more than half of the research activity submitted and attainable levels of national excellence in the remainder".

The SoI steadily built its reputation during the 2000s, and its world class status was confirmed by the results of the RAE 2008. While the way in which results were presented did change[3], they also confirmed the continued strength of the SoI in terms of the number of active researchers and research quality, see Table 2.2. This again implies that the volume of world leading research being undertaken at the SoI was well in excess of that undertaken by any other computer science departments in the UK.

Table 2.2: REA 2008, Computer Science Departments at UK Universities

	FTE Category A staff submitted	4*	3*	2*	1*
Edinburgh	104.25	35	50	15	0
Cambridge	44.83	45	45	10	0
Imperial College	53.40	35	50	15	0
Manchester	72.05	30	55	15	0
Southampton	41.40	35	50	15	0
Glasgow	30.00	30	50	20	0
St Andrews	21.00	15	45	35	5

Given the quality and scale of activity at the SoI it is not surprising that the University of Edinburgh (UoE) and SE began to consider how best to enhance the contribution that this unique and world class asset could make to the local and national economy. For example, an earlier project "Edinburgh Stanford Link", co-financed by SE and UoE was introduced in February 2002 to foster collaborative research and commercialisation links between the SoI and Stanford University[4].

[3] Instead of a single indicator of research quality, the RAE 2008 used "quality profiles" which identified the proportion of a department's (or "unit of assessment") research outputs according to five categories: 4*: quality that is world-leading in terms of originality, significance and rigour; 3*: quality that is internationally excellent in terms of originality, significance and rigour but which nonetheless falls short of the highest standards of excellence; 2*: quality that is recognised internationally in terms of originality, significance and rigour; 1*: quality that is recognised nationally in terms of originality, significance and rigour; and unclassified: quality that falls below the standard of nationally recognised work or which does not meet the published definition of research for the purposes of this assessment. See http://www.rae.ac.uk/aboutus/quality.asp

[4] The project focused on the activities of the Human Communication Research Centre at the SoI, and the Centre for the Study of Language and Information at Stanford.

This project included many components that were subsequently included within ProspeKT, such as:

- joint research projects in speech and language processing;
- knowledge transfer activity with Scottish companies, and creating links with the USA including the promotion of Scottish companies within the United States through learning journeys and attendances at conferences and events hosted by Stanford University; and
- working to foster an entrepreneurial culture, including:
    - CEO Masterclasses which were small scale, invite only events with a prominent technology speaker, which tended to be those from the Silicon Valley Speaker Series
    - undergraduate and postgraduate entrepreneurship Courses
    - industrial research placements for staff and students
    - Silicon Valley Speaker Series; a series of talks by high profile Silicon Valley Entrepreneurs.

This project represented a major investment by the partners, with a total of £6 million available to fund activity over a five-year period. At the least, it confirmed the commercial potential of much of the research being undertaken at the SoI and encouraged the partners to think about how best to build on any successes achieved[5].

2.2 ProspeKT

Investment Programme

Over 2005 and 2006 the ProspeKT project was developed as part of the next major partner investment Project undertaken to better exploit the commercial potential of the SoI.

[5] http://www.evaluationsonline.org.uk/evaluations/Browse.do?ui=browse&action=show&id=41&taxonomy=ICO

The two main components of this Project were:

- the construction of the Forum on the UoE campus, a 12,000 m^2 new building to host researchers and research facilities. Built at a cost of c£42 million, the Forum was expected to:
    - enable the co-location of the various different research groupings within the SoI
    - provide sufficient capacity to accommodate the planned growth in researchers[6]
    - provide a focus for the development of future technologies; and
- enhanced commercialisation activities as part of a wider SoI Commercialisation Strategy to 2015, which is effectively the ProspeKT project, comprising:
    - knowledge transfer to support interaction with the wider informatics business community in Scotland
    - people and culture to promote entrepreneurship across the Schools activities, with support targeted at staff and students
    - PR, brand and public outreach, to raise domestic and international awareness of the SoI, and to encourage interaction between the public and industry through appropriate events.

Objectives and Targets

The investment Project was set a number of objectives which were articulated in the SE Board Paper submitted for approval in 2005[7] These were to[8]:

- respond to the threat from international competition, reflecting the heavy investment in facilities by key competitor institutions such as Massachusetts Institute of Technology (MIT), Stanford and Cambridge;

[6] The SE Board paper mentions that the plan was to increase the number of informatics researchers to 425 by 2015. See Maximising the Economic and Commercial Benefits of the School of Informatics, Scottish Enterprise (2006), SE(05)118.
[7] See again SE (2006).
[8] See again SE (2006).

- enhance Scotland's international reputation through brand development and PR activities to enhance the international flow of knowledge and talent to Scotland;
- attract and retain talent in Scotland, through better enabling SoI to attract the best of the international pool of mobile talent;
- achieve excellence in industry engagement, through more proactive engagement, better relationship building and maintenance, better alignment with industry needs and levering its alumni networks;
- increase levels of entrepreneurship, by improving attitudes to enterprise and providing direct support to those seeking to pursue the new start or spin out options;
- maximise interdisciplinary research, particularly through co-location of research groups at the Forum;
- exploit the benefits of co-location, through bringing researchers together; and
- take advantage of the spill over benefits for Scotland, especially through enhancing the capability of SoI to access research funding and through efforts to commercialise the IP emerging from research via spin outs and other start-ups, or licensing IP to existing Scottish companies.

Many of these objectives reflected the anticipated influence of the Forum as a major asset of international significance, although the ProspeKT component was also expected to make a substantial contribution.

As the Interim Evaluation highlighted, many of these objectives are not SMART, with particular weaknesses associated with their specificity, the measurement challenge of some, and the difficulties in assessing achievability, ex ante. Some of these weaknesses were, to some extent, addressed through target setting, with the UoE contracted to deliver benefits defined in terms of a wide range of indicators, which reflected the objectives set, by 2016. These indicators and targets are given in Table 2.3.[9],[10]

[9] See SE (2006) and Ekosgen (2010). These are the targets referred to subsequently as "Appendix 19 targets" from the contract between SE and UoE, although as will be shown later, actual performance monitoring did not focus on the same set of indicators.
[10] While the interim evaluation recommended that targets be recalibrated to reflect developments since the approvals stage, this was not undertaken.

Table 2.3: Forum and ProspeKT Output Targets 2006-2016

Research income and collaborations with international companies	
One-to-one engagements with international companies / organisations	150
Collaborative agreements signed	30
Additional research funding (of which industrial research	£24m (£3.5m)
R&D groups / businesses setting up facilities based around the School of Informatics	10
Additional income due to licensing activity	£4m
Collaborations with existing Scottish companies	
SMEs attending outreach Projects	No target
One-to-one engagements with CEOs / CTOs Scottish SMEs	150
Collaborative agreements signed	60
Additional income due to licensing activity	£150k
SMEs collaborating on site at Informatics	60
Collaboration with Scottish research-base	
Collaborative research projects won supporting SHEFC pooling strategy and value	5
Major research collaborative projects lead from the Forum	5
Entrepreneurship, new company creation and business building	
Significant number of attendees at events promoting cultural change	No target
New networks implemented by 2008	10
Proof of Concept projects supported by 2015	30
Spin-outs supported by 2010	20
Start-ups supported by 2010	40
Funding raised associated with above	£3m
Spin-outs and start-ups supported through SEEL account management	20
SEN High Growth Team “Start Ups”	5
New products developed by 2015	55
Talent attraction and retention	
Continued attraction and retention of world class researchers	No target
Additional research staff	105 (40 non-EU)
Additional postgraduate researchers	150 (55 non-EU)
Major international conferences	5
Student placements with international companies and Scottish SMEs	300
Alumni Relations	
Significant increase to Alumni network numbers	No target
Significant impacts of the Alumni network on research and talent income for Scotland	No target

Again, as noted by the interim evaluation, some of these are activity indicators while others relate to outputs and outcomes. However, more general observations are that:

- targets were set for the investment Project with no separate details provided for the Forum and ProspeKT components, although many could only be achieved through the types of commercialisation activities delivered through ProspeKT[11];
- some indicators are ambiguous and there was no guidance provided as to their interpretation and application;
- a large number of targets were set, with no initial indication given as to the relative importance of each; and
- no quantified targets were adopted for four indicators.

Beyond the "output" targets, two economic impact assessments/appraisals were also conducted to asses the Project's potential impacts and the results are summarised in Table 2.4.[12]

Table 2.4: Economic Impacts

	Employees in 2015		Annual GVA Contribution in 2015		Cumulative GVA Contribution 2006 to 2015	
	Total	Additional	Total	Additional	Total	Additional
Spin-outs	62	40	£3.29m	£2.14m	£18.05m	£11.73m
Start-ups	63	50	£2.22m	£1.78m	£12.98m	£10.38m
Researchers	170	104	£5.95m	£3.64m	£52.05m	£24.61m
Teaching Staff	85	35	£2.98m	£1.23m	£28.04m	£8.61m
Post-Graduate Researchers	255	150	£1.79m	£1.05m	£16.92m	£7.50m
Total	**635**	**379**	**£16.23m**	**£9.84m**	**£128.04m**	**£62.84m**

The Project was expected to make a substantial contribution in terms of both employment and GVA impacts, although it can be seen that a substantial proportion of these are related to increasing the number of researchers, teaching staff and post graduates based at the Forum.

11 The Forum was funded by Scottish Government to be managed by SE.

12 Economic Impact Assessment of Proposed Commercialisation Activities at University of Edinburgh School of Informatics , SQW Ltd, May 2005, and Economic Appraisal and Impact of the Proposed New Informatics Centre, University of Edinburgh and DTZ Pieda, July 2005. Table taken from SE(2006)

In terms of the benefits accruing from ProspeKT's commercialisation activities, the key impacts are those associated with spin-out and start-ups, which together were expected to generate 90 additional jobs and over £21 million in cumulative, additional GVA, by 2015.

While new SE guidance identifies that research activity should be considered when calculating employment and GVA impacts (where there is a clear case that it represents additional activity), the brief specifically highlighted the evaluation's focus on company engagement activities and their associated impacts. Therefore, while we recognise that the activity of the research staff is a benefit, we have not taken account of any additional impacts generated through these.

Funding

In 2005 the SE Board approved a total public sector funding package of £19.6 million towards a total investment Project valued at nearly £50 million, which was to be matched by a contribution of almost £30.5 million from the UoE.

Forum costs were to be met wholly by the UoE and the then Scottish Executive[13], which contributed £14 million towards the total construction and fit out costs of circa £42 million.

The ProspeKT component, specifically, was to be funded by SE and UoE, with the source, scale and phasing of funding over the five year Project shown in Table 2.5[14].

Table 2.5: Forecast Funding for ProspeKT

	2006/07	2007/08	2008/09	2009/10	2010/11	Total
Funding Contribution						
SE	1,609,528	1,001,336	792,613	639,677	788,078	**4,831,232**
UoE	625,177	620,253	635,416	800,236	644,635	**3,325,717**
Total	2,234,705	1,621,589	1,428,029	1,439,913	1,432,713	**8,156,949**
% Share of Funding						
SE	72.0%	61.8%	55.5%	44.4%	55.0%	**59.2%**
UoE	28.0%	38.2%	44.5%	55.6%	45.0%	**40.8%**

Source: SE (2006)

[13] The SE Board paper includes treatment of the Scottish Government's contribution to the Forum, reflecting that it had made.
[14] Figures taken from SE (2006). Please note, the figures only relate to the ProspeKT project.

Governance

A Board was appointed to provide strategic direction to the Project, agree the detail of activities to be implemented and to oversee performance monitoring and reporting.

It was expected to meet quarterly and members were selected to achieve an appropriate mix of funding partners and other stakeholders, including:

- senior UoE and SoI staff, including representatives from the SoI (normally the Head of School), Edinburgh Research and Innovation (ERI, the UoE's knowledge transfer and commercialisation directorate) and the Director of Commercialisation who headed up the ProspeKT Delivery Team;
- senior and project management staff from SE; and
- private sector representatives. These included the chief executive of Interactive Scotland and senior industry figures.

Crucial to the governance model adopted was the built-in flexibility that the Board could exercise in determining the exact nature of project activities and the allocation of funding to these within the constraint of the available budget. In effect, provided that the Project delivered on objectives and targets, there was less concern from SE regarding the detailed design of component services.

Delivery Team

Day-to-day project management and delivery was further devolved to the ProspeKT Delivery Team, based in Appleton Tower (adjacent to the Forum) on the UoE campus. Management authority was vested in the Director of Commercialisation and project activities were delivered by a team of four Business Development Executives (BDE).

It was envisaged that BDEs would be the critical project resource for:

- mining the SoI research to identify commercialisation opportunities;
- working with academics or students looking to pursue the spin out or new business start-up option; and
- providing informal early life mentoring support, although this did not form part of the 'defined job specification' and occurred on an ad hoc basis.

Given the roles envisaged, it was obvious that BDEs would need to bring an appropriate combination of technical insight and commercial acumen.

Activities

Prior to SE funding approval, there was relatively little detail prepared on the activities to be delivered. This mainly reflects the governance model adopted and the wish to empower the Board to take decisions on the appropriate service mix, as well as the potential opportunity to build on the types of activity delivered under the Edinburgh Stanford Link project. There was, however, an initial funding allocation made across fairly broad themes and service categories, as shown in Table 2.6.

Almost half of the total ProspeKT budget was allocated to Knowledge Transfer activities, and especially to secure BDE staff and other commercialisation support. In practice, this comprised a range of "services" including:

- mining the SoI research activity to identify possible opportunities for spin outs or other commercialisation options;
- working with nascent spin outs and start ups to help secure access to IP in which the SoI/UoE had an interest; and
- mentoring and assisting nascent new starts, including signposting to other assistance.

The other aspect of Knowledge Transfer refers in the main to the costs of refurbishing the top three floors of the Appleton Tower (against the original target set for two floors refurbished) to provide:

- offices for the ProspeKT delivery team;
- industry collaboration space, including rentable accommodation for spin-outs or start-ups; and
- industry events.

Table 2.6: Activities and Funding

	Funding (£)	% Funding
Knowledge Transfer: Commercialisation		
BDE staff	1,832,024	22.5%
Commercialisation support	675,000	8.3%
Total	**2,507,024**	**30.7%**
Knowledge Transfer: Industrial Relations		
Industry collaboration space	1,000,000	12.3%
Commercialisation offices	124,000	1.5%
Industry events	408,750	5.0%
Total	**1,532,750**	**18.8%**
All Knowledge Transfer		
Total	**4,039,774**	**49.5%**
People and Culture		
Entrepreneurism	355,000	4.4%
Student industrial placement	385,000	4.7%
Cultural change	90,000	1.1%
Total	**830,000**	**10.2%**
PR, Brand and Public Outreach		
Conference support	416,425	5.1%
Roadshow	1,270,750	15.6%
Alumni Relations	693,750	8.5%
In Space and Outreach	361,250	4.4%
PR and brand	545,000	6.7%
Total	**3,287,175**	**40.3%**
Overall Total	**8,156,949**	**8,156,949**

Source: SE (2006)

By way of contrast, the People and Culture theme was allocated just over 10% of the total budget, and this was spread across the three broad headings of entrepreneurism, industry placements and cultural change.

The final category, PR, Brand and Public Outreach, was allocated the remaining 40% of the budget, to cover the costs of, *inter alia*, conferences and brand development and management.

Late Start

While SE approval was granted for Forum and ProspeKT activities to commence at the beginning of financial year 2006/07, delays in identifying an appropriate candidate for the post of Commercialisation Director and then the further time required to recruit BDEs, with the new Directors' input, meant that the Project was not fully staffed and operational until early 2007.

2.3 Informatics Ventures

Origins

In October 2007, an opportunity was identified to attract further funding from the European Regional Development Fund (ERDF) through the Lowlands and Uplands Scotland ERDF Programme, 2007 - 2013. While negotiations with the European Commission did delay the start of that Programme, by late 2007 there was good knowledge of its priorities and the types of projects it would be most likely to support. Key amongst these were the strong foci on research, development and innovation, and on enterprise growth. Indeed, Commission guidance was bending ERDF Projects strongly towards the Lisbon agenda, with an expectation that 75% of Project spend would be in encouraging innovation and exploitation of the research base.

Given that much of the initial SE and UoE financial contributions were still available to be used as co-financing then further ERDF support could be levered with no additional input from the original funding partners. However, a presumption against capital spend (and potential issues around retrospective funding) meant that any application should relate only to ProspeKT-type activities.

Basis of the Application

It was recognised early on in the process of identifying the detail of the opportunity that accessing ERDF would require some changes to focus, in terms of the nature and targeting of support.

A critically important factor here is that the ERDF Programme has a remit to assist the development of the entire Lowland and Uplands Scotland region (effectively all of Scotland excluding the Highlands and Islands), while the early focus of ProspeKT was on exploiting the research base of the SoI.

There was also a perceived bias in participation towards businesses based in the Edinburgh and Lothians area (evidenced in the stakeholder and beneficiary feedback – Section 5), which partly reflects that the SE funding was originally from Scottish Enterprise Edinburgh and the Lothians (SEEL).

While feedback may have identified some regional bias, in the context of evaluating the project, it is important to recognise the changing context, from the original project which was built around the SEEL region and SoI, to the evolution of a wider national focused project (as SE's priorities changed).

That being said, the Project did engage with some companies not based within the Edinburgh and Lothian's region e.g. Graham technology, Slam Games, Glenkeir Whisky.

In order to access ERDF a decision was made to widen out the focus to include working with all member institutions of the now Scottish Informatics and Computer Science Alliance (SICSA), a research pool, comprising 13 university computer science departments, supported by the Scottish Funding Council (SFC)[15] and also to encourage participation among the business base beyond Edinburgh and the Lothians. The ERDF application predated SICSA and was part of the case made to the SFC to set up the research pool.

Also, any application needed to demonstrate how ERDF would add value to the ProspeKT project already in operation. A decision was therefore made to focus the application on activities which were complementary to those planned under ProspeKT. In particular, the theme of People and Culture was prioritised reflecting the relatively low level of funding allocated via ProspeKT resources.

The Four Pillars of Informatics Ventures

The Informatics Ventures project comprised four pillars, under each of which a number of specific activities were to be delivered. These were:

- Pillar 1 Practitioner led education, comprising:
    - MIT Entrepreneurship Seminars, a Project of seminars and workshops and the Doug Richards School for Start-ups Seminars/workshop series with a different curriculum

[15] See http://www.sicsa.ac.uk/about/SICSA_Universities for a list of members, and the SICSA site for details of mission, activities, etc.

- Silicon Valley Speaker Series, comprising master classes and events
- SICSA Entrepreneurship Summer School and Enterprisers, variant of the MIT EDP and Cambridge Enterprisers Projects (see below) targeted at PhD students and research associates;

- Pillar 2 Innovative use of the web for enterprise creation and growth, comprising:
  - Entrepedia.org, a web resource for start ups
  - Pod.ium, support to pre starts to pitch ideals to investors and general audiences
  - TechMeetup networking events and website, to help develop the community of interest; Open Coffee Morning networking events for CEO's, CTO, Funders;
- Pillar 3 Connecting the community, comprising:
  - BarCamp Scotland, an annual event targeted at the tech start-up community
  - Lifting the Lid, and annual event to encourage interactions between SMEs and SICSA
  - Engage/Invest/Exploit, another annual event with the opportunity for nascent and recent start-ups to display their product/service ideas to the investor community
  - Mobile Applications Group, aimed at students interested in pursuing this specific market opportunity
  - TechMeetup – a monthly networking event for 'geeks'
  - Girl geeks – a series of dinners, seminars and networking events to encourage women in Computer Science and women entrepreneurship; and
- Pillar 4 Special support for potential winners, comprising:
  - Entrepreneurs in residence, using "serial high tech entrepreneurs" from across Scotland to provide mentoring to nascent start-ups and spin outs from across the SICSA member organisations

- Ignite and MIT EDP, enabling the "best talent" to participate in the best intensive entrepreneurship development Projects in Europe and USA.[16]

Objectives and Targets

Informatics Ventures was designed to achieve the same objectives stated for the combined Forum and ProspeKT investment Project. However, given that ERDF was awarded to enable an extension to planned activity, further targets were specified which were additional to those set for ProspeKT. These are detailed in Table 2.7.

Table 2.7: Informatics Ventures ERDF Targets (by 2013)

Type	Indicator	Target
Output	Number of enterprises supported	300
Output	Number of research networks and collaborations supported	20
Result	Number of new products and services developed by supported enterprises and research centres	90
Result	Increaser in turnover in supported enterprises	15
Result	Number of gross jobs created	150

Governance and Delivery Arrangements

As it was intended that the Informatics Ventures would be a "sub-Project"[17], it was subject to the same governance arrangements as had been established for ProspeKT.

Similarly, responsibility for day-to-day management and delivery responsibility was devolved to the ProspeKT Delivery Team, albeit with additional BDE staff co-financed by the ERDF. While the ProskpeKT brand was commonly used to refer to all activity, in practice there was an operational distinction between ProspeKT and Informatics Ventures. For example, the "Informatics Ventures Team" focused on the events and other provision funded through the ERDF, while the "ProspeKT Team" continued to focus on the BDE roles of mining SoI research and working with would be new starts and spin outs[18].

[16] This listing makes extensive use of the Informatics Ventures Project Plan, February 2009.
[17] See again the Informatics Ventures Project Plan.
[18] The definition between the two delivery models is based on information provided by the ProspeKT team.

Funding

A commitment to provide £3.7 million in ERDF support was secured for the Project, which was to be delivered over the period April 2008 to March 2011[19]. The phasing and broad purpose of this additional funding is as shown in Table 2.8.

Table 2.8: Informatics Ventures ERDF Support (£)

	2008/09	2009/10	2010/11	Total
Staff costs	142,441	142,441	142,441	427,323
Core marketing	55,000	55,000	55,000	165,000
Staff travel	15,745	15,745	15,745	47,236
Workshops and events	410,000	410,000	410,000	1,230,000
Web outreach	118,000	118,000	118,000	354,000
ECP Winners	490,000	490,000	490,000	1,470,000
Total	**1,231,186**	**1,231,186**	**1,231,186**	**3,693,559**

This was to be co-financed by total contributions of £5,074,752 from SE and UoE, equivalent to an ERDF intervention rate of just over 42%. The phasing of this is shown in Table 2.9.

Table 2.9: Informatics Ventures Total Budgets Support (£)[1]

	2008/09	2009/10	2010/11	Total
SE	751,063	930,371	1,001,418	2,682,852
UoE	940,521	761,213	690,166	2,391,900
Partner funding (SE+UoE)	1,691,584	1,691,584	1,691,584	5,074,752
ERDF	1,231,186	1,231,186	1,231,186	3,693,559
Total	**2,922,770**	**2,922,770**	**2,922,770**	**8,768,311**

1 The split of match funding for the ERDF between SE and UoE is notional, and we have used the same proportions as for ProspeKT given in Table 2.5.

2.4 Summary

The ProspeKT project was introduced in order to better exploit the economic development opportunities associated with one of Scotland's most valuable academic assets.

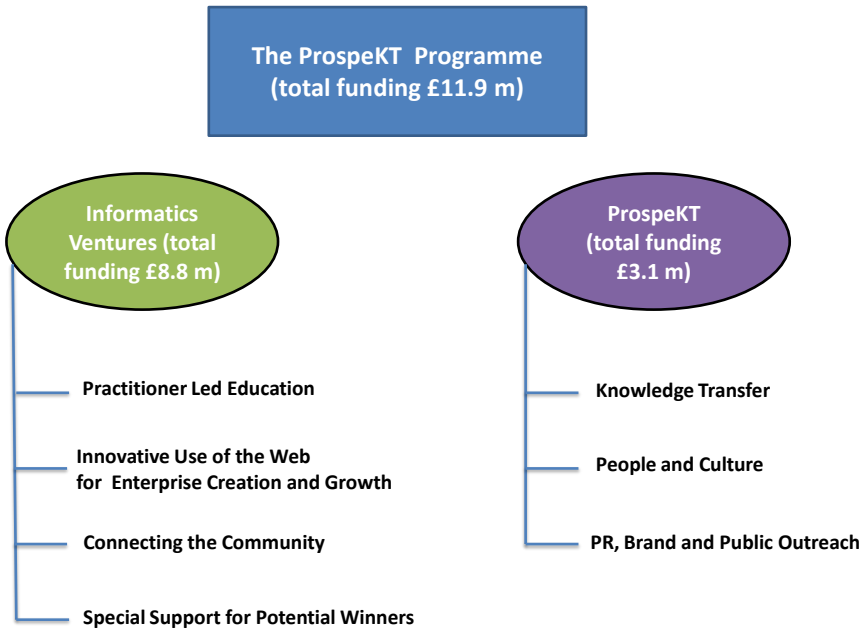
[19] Approval to extend the project end date to June 2011, to coincide with the closure of the ProspeKT project was granted subsequently.

It was introduced alongside the construction of the Forum, and was expected to complement this capital spend with a range of activities designed to address the barriers to commercialisation and entrepreneurship, encourage knowledge transfer, enhance the worldwide reputation of the SoI and build a community of interest around informatics and computer science involving the public, academic and business sectors.

The availability of ERDF offered the opportunity to expand the range of activities on offer, at no additional cost to the UoE or SE. Through the Informatics Ventures project, activity could be expanded over the final three years of the ProspeKT delivery period, to enhance the range of services available to further the aims and objectives of the partners.

The figure below illustrates the main components of both projects, which can be seen as essentially "sub-Projects" under the overarching ProspeKT brand, as illustrated below.

Figure 2.10: Programme Overview



A total of £11.9 million in funding was secured over the period 2006 to 2011, with envisaged contributions of:

- £4.8m from SE, equivalent to 41% of the total funding package;
- £3.5m from UoE, equivalent to 28%; and
- £3.7m from the ERDF, equivalent to 31%.

Of the total budget, almost three-quarters was allocated to Informatics Ventures.

The SE investment represented an investment leverage ratio of 1:1.5 for other public sector funders.

3. Strategic Fit and Rationale for Intervention

"Competitiveness is determined by a range of factors, but perhaps the most fundamental in the 21st century global digital economy is the ability to make efficient and effective use of technology to drive innovation and accelerate productivity growth ... there is overwhelming evidence that the smart use of tech, combined with complementary factors, such as good managerial practices and strong employee skills can lead to increased innovation, productivity growth and improved competitiveness." [20]

This section reviews the Projects fit with and contribution towards relevant over-arching policy and strategy. Further, we have identified a range of market failures i.e. barriers which are likely to constrain the private sector's ability to perform to its optimum level in the absence of public sector intervention.

In particular this section addresses the following study objectives:

- assess the validity of the Project's strategic/ rationale for intervention over time, the extent to which activity has promoted market adjustment and whether the rationale remains valid; and
- identify how the Project fits with and has contributed to the wider policy agenda.

3.1 Strategic Fit

This section reviews the Project fit with policy priorities at a Scottish and wider level, and also how this has changed over the period of implementation.

3.1.1 Government Economic Strategy 2007 and 2011

Although launched after the start of ProspeKT, for the majority of the Project delivery, the Government Economic Strategy (GES) has been the principal policy document guiding economic development within Scotland, setting out the priorities for sustainable economic growth.

[20] The Bootstrap Recovery, Intellect, 2011.

The GES highlighted that Scotland lagged behind other European nations in terms of R&D and innovation, and proposed a *"clear focus on strengthening the link between Scotland's research base and business innovation"*

In 2011 the GES was refreshed, focusing on economic recovery and growth. The refreshed GES re-emphasised the importance of supporting innovation and facilitating commercialisation in this process.

"Both innovation and commercialisation are key drivers of productivity and competitiveness, particularly in an increasingly interconnected global economy", GES 2011.

As well as Innovation and Commercialisation, the GES 2011 also identified providing a *supportive business environment* as a key strategic priority. This includes focusing attention on a business environment that:

- is attractive to *growth companies*;
- enables companies to take advantage of opportunities in new international *growth markets*; and
- helps to build up the *growth sectors* of the economy which have the potential to drive future growth.

The GES 2011 also brought to the fore the role of Higher Education Institutions in stimulating a knowledge economy, and the strength that Scotland has in this area, by identifying Universities as a 7th key sector.

ProspekT and Informatics Ventures help to support all of these aims, focusing as it does on innovation and commercialisation, maximising the opportunity from university strength, building a cohort of successful companies within a technology sector, and supporting company growth through information and access to growth markets.

3.1.2 Scottish Enterprise Strategies and Business Plans

Scottish Enterprise has a key role in implementing the Scottish government Economic Policy. As such the strategy and operational documents driving SE delivery are a core part of the policy review.

At the time of the project SE priorities were articulated in the Refreshed Smart Successful Scotland, and the operating plan (SE Operating Plan 2005-8) described three delivery themes: Growing Business; Skills and Learning; and Global Connections.

This changed in the SE Business plan 2010-13, which reflected more closely the demands from the GES. This therefore included a need to support globally competitive companies, building globally competitive sectors and establishing globally competitive business environment. The Business plan also identifies enabling technologies as a key sector, emphasising the opportunity and capability of underpinning technologies (such as informatics) in global markets.

The most recent Scottish Enterprise Business Plan 2011-2014 sets out the Scottish Enterprise plan for supporting economic recovery and supporting companies in driving the economy and jobs, in response to the refreshed GES 2011. This sets out objectives to build on Scotland's capabilities at a sub-sector level and to support niche companies operating in these sectors which are competitive locally, nationally and internationally. Enabling Technologies continues to be a priority sector, and there is a greater emphasis on joint working with universities, particularly where this results in additional business acidity through existing companies or new business creation.

Whilst there is a strong fit with SSS and GES policy documents over the period of the Project, it is also worth reflecting that there has been a shift in approach internally within SE during this time with regards to these types of investment. Previously there had been some investment in supporting research activity, therefore building the knowledge capacity generally in Scotland, particularly around certain sectors. In more recent times any investment of this type has had a stronger market focus built in, such that there must be a "line of sight to commercialisation".

Prospekt and Informatics Ventures have throughout their lifespan have always had a main focus on realising commercial potential from the research strength within the universities. In fact the greater emphasis on university-business collaboration, and supporting the translation of strong areas of research in Scotland to business benefit have strengthened this alignment.

The Enabling Technology Strategy for Scotland was launched in November 2009. The strategy identifies issues to be addressed including:

- bridging the capability gap in our level of knowledge between science and company know-how; and
- product and process development to convert company know-how into competitive products.

Informatics has been identified as an immediate priority technology area to address these challenges and therefore, the Project has a solid fit with the strategy.

3.1.3 Scottish Funding Council (SFC) Priorities

As the major funder of universities in Scotland, the SFC also has a role in promoting university – business interaction. Knowledge Exchange is identified as one of its key Outcomes in the latest SFC Corporate Plan 2009-2012.

Within this the SFC aims to:

"achieve an effective, demand-driven exchange of knowledge and expertise with business, public and third sector organisations, which enhances competitiveness and promotes economic growth....to support the formation of new business and easy access for small and medium-sized enterprises to the facilities and services of universities. We also seek to achieve continued investment in Scotland to exploit knowledge, develop solutions and demonstrate applications."

ProspeKT / Informatics Ventures help support just such a range of activities.

3.1.4 UK and European Policy

In the context of the evaluation, it is useful to review the policy changes at a UK and European level, particularly where it may impact on Scottish priorities and funding opportunities - other wider opportunities for the Project to leverage in additional resources or funding e.g. Technology Strategy Board, EU Framework Project monies, etc.

A Strategy for Sustainable Growth (July 2010), announced shortly after the formation of the coalition Government, focused on a framework for business and growth that can increase productivity through skills, innovation, ICT diffusion and new firm start-ups. It also reinforces it's commitment to the need for skills development in this area.

"The changing shape of the economy means that future growth will increasingly depend on the technology sector and the skills needed for these businesses to innovate. We are working with employers and across government to create the digital skills pool needed by business and innovators for technology exploitation and generation"[21].

In recognition of this, in October 2010 the UK Government announced that over £200m will be invested in a network of technology and innovation centres (TICs – subsequently renamed Catapult Centres – with applications invited across the UK), to be established and overseen by the Technology Strategy Board (TSB).

The first of these established was in advanced manufacturing. TICs are intended to:

- create a critical mass in centres of excellence for business and research innovation in a specific area and sector by focusing on a specific technology where there is a potentially large global market and a significant UK capability;
- allow businesses to access equipment and expertise that would otherwise be out of reach;
- help businesses access new funding streams and point them towards the potential of emerging technologies; and
- bridge the gap between universities and businesses, helping to commercialise the outputs of Britain's world-class research base.

Such objectives are absolutely at the core of the ProspeKT / Informatics Ventures approach. Further, as a result of the ProspeKT project, the SoI regularly engages with the TSB and Knowledge Transfer Networks (KTN's) through the Connected Digital Economy Catapult Centre to look at challenges facing the UK's digital economy.

[21] Blueprint for Innovation, BIS 2010.

At a European policy level there has also been an increased emphasis on the importance of maximising the opportunity of research strength and facilitating business benefit from this strength. EU policy has highlighted that if Europe wants to lead by example in the fields of innovation and enterprise it must improve the dialogue between the Education sector and the market-place, including building greater cooperation between Higher Education and business, to develop effective and close cooperation between universities and industry.

"Cooperation between universities and industry needs to be intensified by gearing it more effectively towards innovation, new business start-ups and, more generally, the transfer and dissemination of knowledge."[22]

Through the Project, ProspeKT and the SoI has helped to build capacity to allow other Scottish HEIs to engage with the European agenda. For example, the BDE team, through commercial connections developed as a result of the Project were heavily involved in supporting the EIT Knowledge Innovation Community bid, which although unsuccessful will help provide the basis for future bids.

Europe 2020, the EU's growth strategy for the coming decade, highlights Smart Growth as a key objective. Within this the strategy describes the need to strengthen "*every link in the innovation chain, from 'blue sky' research to commercialisation".*

In summary the aims and objectives of ProspeKT / Informatics Ventures continue to be well aligned with strategic priorities at a Scottish, UK and European level.

3.2 Rationale for Intervention

The rationale for public sector assistance in informatics if founded on two main areas:

- equity – Scotland underperforms relative to the UK on the linkages of its academic base with R&D performing companies and has fewer R&D performing companies than other parts of the UK; and
- efficiency – the market for informatics does not operate as effectively as it could.

[22] The role of universities in the Europe of knowledge, EU 2003

3.2.1 Equity Rationale

Firstly, Scotland performs poorly is in relation to links with large R&D performing firms[23], with only two universities in the top twenty (and placed in position 13 and 18). In addition:

- the University of Edinburgh (UoE) has 31 links with large R&D performers and the University of Strathclyde (UoS) 22, significantly behind the leading University (Imperial College London), with 93 links;
- UoE has 22 links with firms on the UK R&D list and UoS has 19, significantly lower than the top performer (University of Cambridge) with 58; and
- UoE has 19 links with firms on the global R&D list and UoS has 14, significantly lower than the top performer (Imperial College London) with 52.

The second area where Scotland does not appear to perform as well is in relation to the location of large R&D performing links with UK universities. On this measure Scotland comes seventh from twelve UK nations and regions. In addition:

- Scotland has 46 R&D performing sites, well below the South East, the top performing region with 129;
- Scotland has total R&D investment of firms with sites in the region of £15,427 million, 23% of the total in the top performing region (South East); and
- the total R&D investment per regional HEI FT employment amounts to 0.50, substantially below the East of England, the best performing region, with 2.26.

The final main area where Scotland's institutions underperform is in relation to links with R&D performing firms outside of the region. On this measure Scotland only has three institutions in the top 20. In addition:

- Heriot Watt University had 26 links outside the region (the top performing Scottish institute on this measure), lower than the top performer (Imperial) with 73; and

[23] Informatics in Scotland Approval Paper, Rationale for Intervention Appendix

- 81% of UoE connections were outside the region – lower than the top performing institute (University of Bradford) at 95%.

3.2.2 Efficiency Rationale

Market failures occur when there is an imperfection in market mechanisms which prevents economic efficiency[24]. Where there is clear evidence that markets cannot, or will not, provide the best outcomes there is a strong justification for public sector intervention.

When assessing market failure and therefore the justification for intervention, it is important to identify the root cause of the market failure as opposed to the effect. In the context of our evaluation there are two different types of barriers/market constraints to consider:

- issues relating to business start up and growth; and
- issues relating to R&D and innovation.

3.2.3 Business Start-ups and Growth

In considering market failure we have considered issues relating to both the supply and demand side and have identified the key market failure rationale based on imperfect information.

Imperfect information occur when there is a lack of (or perceived lack of) available information to both buyers and sellers. This will affect both business start-ups and business growth/development in a number of ways:

- many business, particularly pre-start/start-ups may not be aware of either where to access support (who is the appropriate organisation to approach) or be aware of what support is available to their business e.g. lack of awareness of the expertise in informatics in the SICSA universities – covering specific technology areas and research strengths;

[24] Appraisal and Evaluation in Central Government http://www.hm-treasury.gov.uk/d/green_book_complete.pdf

- for many potential entrepreneurs there is a lack of information and understanding around what support is required and how to access that support including private finance, developing a business plan, legal information, market opportunities etc;
- for technology company leaders in particular, there may be skills issues regarding the management and commercial acumen needed to grow an internationally competitive business;
- the costs (both financial and time) of obtaining commercial or market information to individual companies, particularly pre-start and start-up businesses, may be seen to generate insufficient benefits (returns) i.e. the perception is that the costs and risks are high while the returns are low;
- for established businesses there are identified information failures about the risks of entering new markets with many businesses believing that the risk is much higher than it actually is; and
- potential investors may not be able to access or able/willing to pay for information to fully assess the investment potential of businesses.

There are also significant barriers for SMEs relating to the capacity (resources) associated with engaging with universities, the timescales involved in securing benefit, and the uncertainties associated with potential benefits.

This was recognised in the New Horizons Taskforce report which states: "*Absorptive capacity is the ability of businesses to absorb external knowledge and for that knowledge to be translated into commercial processes, new goods and services. There is evidence to suggest that this is relatively low in indigenous Scottish firms, thereby creating a barrier for Scottish firms undertaking collaborative research with the science base*."

3.2.4 R&D and Innovation

There are a range of market failures that typically constrain the extent of effective interaction between universities and businesses. These relate mainly to imperfect information and externalities.

Despite the well documented perceived benefits of business-university collaboration on R&D[25], businesses often fail to value the innovations within Higher Education Institutions (HEIs) and academics often fail to realise the commercial potential of their work[26]. This is largely due to imperfect information, in which both have only limited information on the capabilities and requirements of the other.

There is also an issue of lack of skills for academics engaging successfully with businesses, or associated with starting up and growing a successful business.

Similarly for a technology business there are uncertainties about the benefits of engagement, and potentially issues around the uncertainty of any intellectual property generated through such engagement. Investment in R&D carries a degree of risk given the often unpredictable returns, particularly in relation to longer term R&D. As a result, many firms exhibit risk averse behaviour in respect of R&D investment.

In terms of externalities, this relates to intangible costs or benefits (positive or negative) that are not usually priced when business make investment decisions. Within established businesses there may be a reluctance to invest in innovative and new technology or processes that could easily be adopted or 'poached' by their competitors, or may not give a suitably immediate return on investment. This would typically lead to a position of under investment in R&D. Further, there may be a positive reputational benefit that comes from collaborating with the HEI sector that businesses have not 'priced on' to their decision.

3.2.5 Consultees Awareness of Market Failure Issues

As identified above, there are a range of barriers and issues that are promoting market failure. Through consultation with stakeholders and businesses, the evaluation sought to identify whether their engagement with the Project has helped to address any of these barriers i.e. has the Project promoted market adjustment.

[25] Sainsbury Review of Science and Innovation: The Race to the Top, HM Treasury, 2008.
[26] Lambert Review of Business-University Collaboration, HM Treasury, 2003.

Stakeholder Consultations

Stakeholders generally were able to identify the broad market failures that are constraining activity within high technology businesses, considered below:

- imperfect information and failures (8) especially around SME awareness of the potential value of collaboration with the research base, but also in relation to more general awareness of the market opportunities available within the sector, or on their managerial capacity to identify and exploit these;
- attitudinal and cultural barriers among academic staff (6) especially in relation to commercialisation and KT activity. Here, there was a strong hint that this reflects the information failure of being unaware of the opportunities and/or benefits that might accrue to them through engaging in such activity;
- externalities(3) especially in relation to the diffusion of the research outcomes and IP generated by the School of Informatics; and
- skills issue in relation to imperfect information (2) both among academics relating to the spin out option, but also in terms of the ability to access development finance from lenders who see new starts in high technology sector as a particularly risky investment option - academics often do not have business skills or know how/where to acquire them.

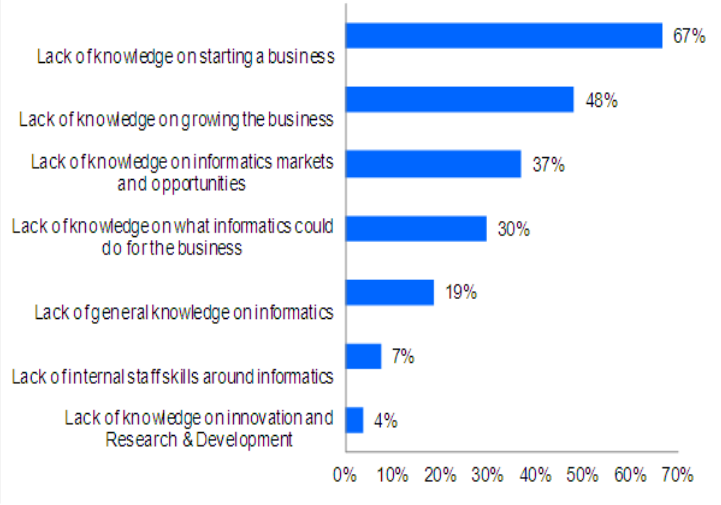
The second and last categories above can be interpreted in terms of the general category of information failures, but they do provide some insight into the symptoms that were believed to require addressing.

All respondents who offered an assessment (10) believed that there was a strong and valid market failure rationale for the Project at the time of approvals, and that this rationale continues to exist.

Beneficiary Survey

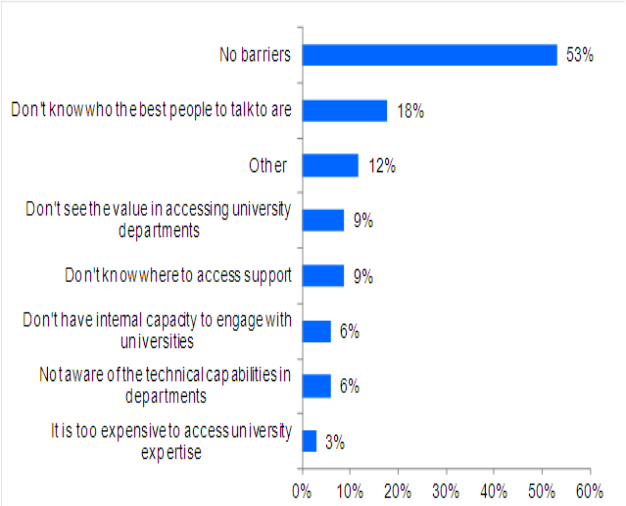
Businesses were asked to identify what they perceived as the key issues facing them with regards to businesses development, but also specifically any barriers they face to accessing university support or expertise. The responses are detailed below.

General Barriers/Issues



N= 27

Barriers Specific to University Expertise



N=34

Source: EKOS Beneficiary Survey

The business survey responses reiterate the market failure issues above in relation to information asymmetries/failures. Lack of awareness on business start-up and growth were the key issues, with around one third reporting issues relating specifically to informatics.

In terms of specific barriers relating to accessing university expertise, over half did not identify any barriers, however, this was primarily as they have never tried to access support through the HE sector. Therefore, based on the feedback from businesses, the market failures primarily centred around business start up/growth as opposed to R&D/innovation issues.

3.2.6 Progress to Addressing Market Failure Issues

It is not only important to identify the type and scale of the market failure, but also assess the extent to which the Project has addressed the issues - has the Project been effective in removing/reducing barriers for SMEs start-up/growth within informatics and encouraged HE participation in working with the private sector and spin out companies.

Stakeholder Consultations

Some (3) noted that although there had been a general improvement in the academic culture and attitudes towards commercial activity, there remain issues surrounding poor awareness of market opportunities or the competencies and capacities of academics to pursue them.

In effect, they will still face some of the information and management constraints on business formation and growth that are felt to be faced by would-be entrepreneurs more generally.

Beneficiary Survey

With regards to the Project promoting market adjustment at the individual business level, 71% of the sample reported that their engagement in the Project has had some/significant impact on addressing these barriers. Further, with regards to the Project's contribution to supporting businesses achieve their business (87%) and technical objectives (75%) the Project was identified as having an important role in this.

Summary

Overall, based on feedback from consultees, the Project has made some gains in reducing/removing market failures and barriers for engagement. However, feedback also suggests these market failures continue to persist, in particular, the provision of information for business start-up/growth and a general reluctance to invest in untested and new emerging processes, products and services - made even more acute given the impact of the economic recession.

4. Project Performance Review

This section provides a review of the Project's performance based on the monitoring data collected and reported by the ProspeKT Delivery Team, supplemented in places by feedback from the Team.

These data enabled comment on a number of the evaluation's objectives, including the:

- extent to which the Project has achieved its SMART objectives and targets;
- wider project benefits;
- linkages and dependencies between ProspeKT and Informatics Ventures;
- wider benefits generated through the Project;
- useage, quality and demand of/for project services;
- management and delivery arrangements; and
- the management information and performance measures applied.

4.1 Financial Performance

Total Expenditure

Total expenditure on the combined ProspeKT and Informatics Ventures projects was just under £11.8 million, where this is broken down by financial year in Table 4.1.

Table 4.1: Total Spend on ProspeKT and Informatics Ventures

	ProspeKT	Informatics Ventures	Total
2006/07	£2,603,960	-	£2,603,960
2007/08	£2,002,748	-	£2,002,748
2008/09	£1,388,348	£569,119	£1,957,467
2009/10	£1,649,061	£861,421	£2,510,482
2010/11	£1,724,213	£982,718	£2,706,931
Total	**£9,368,330**	**£2,413,257**	**£11,781,587**

Source: ProspeKT Delivery Team, based on audited figures

It should be noted, however, that the reported spend figures for the component projects are not as shown, reflecting that the figures for Informatics Ventures only capture the additional funding provided by the ERDF but excludes any match funding "reallocated" from ProspeKT to Informatics Ventures. Assuming that the ERDF intervention rate of 42.1% was achieved, the figures on total spend will be as shown in Table 4.2.

Table 4.2: Total Spend on ProspeKT and Informatics Ventures

	ProspeKT	IV	Total
2006/07	£2,603,960	-	£2,603,960
2007/08	£2,002,748	-	£2,002,748
2008/09	£606,282	£1,351,185	£1,957,467
2009/10	£465,323	£2,045,159	£2,510,482
2010/11	£373,792	£2,333,139	£2,706,931
Total	**£6,052,106**	**£5,729,482**	**£11,781,588**

Source: ProspeKT Delivery Team, based on audited figures

When adjusted for match funding, these figures imply that just over half of total expenditure (51.4%) was on ProspeKT activities, with the remainder (48.6%) on Informatics Ventures.

Total expenditure is compared against target in Table 4.3.

Table 4.3: Spend Against Target: Total Expenditure

			Variance	
	Total Budget[27]	**Actual Spend**	Amount	% of Budget
2006/07	£2,383,328	£2,603,960	£220,632	9.3%
2007/08	£2,186,981	£2,002,748	-£184,233	-8.4%
2008/09	£2,665,156	£1,957,467	-£707,689	-26.6%
2009/10	£2,667,498	£2,510,482	-£157,017	-5.9%
2010/11	£1,947,542	£2,706,931	£759,389	39.0%
Total	**£11,850,505**	**£11,781,587**	**-£68,918**	**-0.6%**

Source: ProspeKT Delivery Team, based on audited figures

Total expenditure was to target, at over 99% of the budgets allocated by the three main funding partners[28]. This is quite impressive performance, and indicates that financial management procedures were largely appropriate and effective.

[27] This is based on the final agreed phasing of SE spend, see below.
[28] Some of the difference may be explained by the fact that the SE Board Paper indicators that SE would retain £90,000 of the initial budget to fund an economic impact assessment/evaluation activity.

The aggregate figures do, however, hide a number of important details. In addition, the comparison of spending against target is complicated by:

- changes to the phasing of partner spend. For example, SE asked that elements of its spend be brought forward and these changes were agreed to by the ProspeKT Board; and

- a substantial reduction in the amount of ERDF grant available, reflecting an initial oversight on the eligibility of capital spend, that some other expenditures were deemed ineligible retrospectively, and reallocations of the ProspeKT budget in favour or other activities which were not ERDF eligible.[29]

Total expenditure by partner is compared against target in Table 4.4.

Table 4.4: Spend Against Target: Total Expenditure

	SE	UoE	ERDF	Total
Budget	£4,991,795	£3,165,152	*£3,693,558*	£11,850,505
Actual	£4,910,000	£4,458,330	£2,413,257	£11,781,587
Variance	-£81,795	£1,293,178	-£1,280,301	£68,918
% Variance	-1.6%	40.9%	-34.7%	0.6%

Source: ProspeKT Delivery Team, based on audited figures

While total expenditure was on target, there was some variation across partner. ERDF spend was almost one-third less than the original award, for the reasons given above, while SE expenditure was slightly below budget where this probably reflects the retention of monies for economic impact assessment/evaluation activity. By contrast, the UoE spent substantially more than it budgeted for, and in effect this additional expenditure was necessary to compensate for the loss of ERDF support[30].

Table 4.5, over, shows expenditures by ProspeKT and Informatics Ventures, separately.

[29] The ProspeKT Delivery Team explained the differences as being due to: a) more than £1.124 million in industry collaboration space was deemed ineligible; b) public outreach spend , which was legitimate ProspeKT costs, was deemed ineligible; c) internal transfers for ProspeKT related activity were deemed ineligible (Inspace support, alumni support, ERI legal costs); d) the number of assumed Informatics staff salaries (%FTEs) contributing to ProspeKT were deemed ineligible; and e) equipment / furniture costs not allowed.

[30] A request to vary the grant was submitted by ProspeKT in January 2011 and this was agreed to by the Scottish Government early in 2011.

The data show the extent of resource allocation in favour of ProspeKT, which accounted for over 58% of all spending. This contrasts with initial allocation of around 27% of total project budgets at the time Informatics Ventures was introduced.

Table 4.5: Spend Against Target: Total Expenditure

	SE	UoE	ERDF	Total
ProspeKT				
Budget	£1,886,206	£1,195,989	0	£3,082,195
Actual	£3,433,163	£3,521,910	0	£6,955,073
Variance	£1,546,956	£2,325,922	0	£3,872,878
% Variance	82.0%	194.5%	0	125.7%
Informatics Ventures				
Budget	£3,105,589	£1,969,163	£3,693,558	£8,768,310
Actual	£1,476,837	£936,420	£2,413,257	£4,826,514
Variance	-£1,628,751	-£1,032,744	-£1,280,301	-£3,941,796
% Variance	-52.4%	-52.4%	-34.7%	-45.0%

Source: ProspeKT Delivery Team, based on audited figures. Here we have assumed that the initial match funding for Informatics Ventures was split in proportion to SE's and UoE's contributions to the original ProspeKT budget.

4.2 Performance against Targets

As discussed in Chapter 2, the projects were set a wide variety of targets against which performance was to be monitored and reported. This section examines the performance monitoring data provided to the study to help assess the extent to which the projects' have achieved these targets.

Monitoring data

The performance data reported here were collected and collated by the ProspeKT Delivery Team. They were derived through a mixture of:

- record keeping for specific events, networks and courses; and
- ongoing, informal contacts with spin-outs and start-ups in which ProspeKT could claim some influence in helping them to become established. This "claim" would be triggered by outcomes such as securing a licensing agreement for the business from the UoE, helping them to build teams, or other significant contributions.

While the data are taken at face value, it is important at the outset to outline some caveats. First, there was no formal guidance issued to ProspeKT staff on appropriate monitoring procedures including the detailed interpretation of specific indicators. This must raise some minor concerns regarding the consistency of monitoring efforts across the different staff involved.

Second, the ProspeKT Delivery Team was unable to provide the study with any company-specific details that may be subject to Data Protection constraints. This meant that we were unable to validate the monitoring data during the study fieldwork and makes it difficult to fully assess whether or not they provide an accurate picture of performance.

Third, there was no effort made to monitor the benefits achieved **for** businesses participating solely in Informatics Ventures activities. Instead, monitoring efforts regarding the outcomes for businesses were restricted to those classified as either spin-outs or start-ups. The failure to monitor these outcomes may mean that the reported data understate the true extent of achievement.

Finally, while the monitoring data supplied by ProspeKT does indicate in places the basis for the performance claims, by giving details of the evidence base upon which the claim was made. However, there was no checking of the veracity of this evidence during the study.

In light of these comments, there is an obvious need to revisit monitoring arrangements for any future ProspeKT-type activity, and this is an issue we return to in the conclusions and recommendations Chapter of this report.

Priority Measures

The ProspeKT Board identified a narrower range of indicators, termed “Priority Measures” against which performance was discussed at quarterly meetings. This was highly appropriate: the projects were set a wide variety of targets, and while much of the information generated is useful in helping to understand the projects’ effects, they can sometimes give contradictory messages about where actions are required. These indicators and their associated targets and observed performance are shown in Table 4.6.

Performance against these targets was very good, especially given that these were expected to be achieved by 2016. Four of the six targets were exceeded, and in some cases by substantial amounts. For example, the target for the number of people attracted to the start-up process (comprising students on entrepreneurship courses and academics taking part in Proof of Concept) was exceeded by 303. This is a very encouraging result, indicating that the projects successfully engaged with large numbers of would-be entrepreneurs creating a deal flow for other project activity, much of which may yet result in new business formation.

Table 4.6: Priority Measures

	Target	Actual	% Achieved
Culture of enterprise			
Increase the no. people attracted to the start-up process (entrepreneurs)	200	503	252%
Increased business innovation and application of knowledge			
No. licenses acquired by businesses in Scotland	17	8	47%
No. licenses acquired by businesses Internationally	17	22	129%
No. new collaborative ventures (academia + business or business to business in Scotland)	45	105	233%
No. academic spin outs	10	12	120%
Increased involvement in global markets			
No. planned new jobs of a high value nature (R,D+D and/or >£27k p.a, jobs at the UoE.)	57	85	149%

Beyond this, the target for number of academic spin-outs was achieved, while the number of licenses acquired by businesses in Scotland was below half the target level. This potentially reflects an early decision by the ProspeKT Board not to pursue licensing activity to any great extent.

Programme Measures

The ProspeKT Board also adopted a range of indicators against which performance was tracked. Although these did not always correspond directly with the indicators in which targets were set initially, the ProspeKT Board felt these gave a better insight into what the projects were trying to achieve. While this may be seen as a criticism, it does reflect the governance arrangements in place and the degree of freedom the Board was granted.

Table 4.7 summarises performance against these indicators.

Table 4.7: Performance Indicators

	Target	Actual	% Achieved
Culture of enterprise			
No. business start-ups (excluding high growth and spin outs)	16	31	193%
Increase the no. people attracted to the start-up process (entrepreneurs)	180	503	279%
No. contacts by existing businesses	250	561	224%
Developing more businesses of scale			
Number of new products/services launched (from the FORUM)	40	91	222%
Increased innovation and application of knowledge			
No. licenses acquired by businesses in Scotland	17	8	47%
No. licenses acquired by businesses Internationally	17	22	129%
No. new collaborative ventures (academia + business or business to business in Scotland)	45	105	233%
No. academic spin outs	10	12	120%
Increased involvement in global markets			
No. planned new jobs of a high value nature (R,D+D and/or high value)	10	13	130%
No. high potential orgs within priority industry supported to participate internationally (UoE SoI = 1)	5	5	100%
Activity measures			
No. individuals attending events	340	5,565	1,637%
No. businesses attending events	195	1,930	990%
Outcome measures (from approved mandate)			
No. jobs created (in University)	6	33	550%
Additional Research Funding (£million)	30.1	55.5	184%
Startup/spin out funding raised (£000)	730	5,796	794%
No. Additional Research staff	42	75	179%
No. Additional Postgrad Researchers	45	200	444%
No. Student Placements	50	19	38%
No. major international conferences	12	42	350%
Increase in Alumni network numbers	350	1,976	565%

Note: The actual achieved figures reported for start ups and academic spin outs are taken from a different data set – internal monitoring data set. The project sponsor has evidence to support these claims and a list of start-up and spin out companies is reported in Appendix B.

Please note, Appendix B contains a list of the start-up and spin out businesses created/claimed through the Project.

Again, performance is impressive, particularly in light of the fact that the targets were to be achieved by 2016. All but two of the 20 targets were exceeded, and in many cases by quite substantial margins. In addition, the ProspeKT Delivery Team reported that it made less effort to capture information on some indicators once it was clear that the target had been exceeded. This implies that the monitoring data do not fully capture the extent of the projects' benefits.

A striking feature of these data is the large number of people reported as having been engaged in project activity. For example, almost 5,600 individuals and 1,930 businesses had been involved in events, although both these figures do include multiple participations by the same individual or business.

In general, it may be that the reported figures understate the true extent of the projects' achievements given that further benefits might be expected to emerge from the improved awareness of opportunities amongst the large community of potential beneficiaries who were engaged by the projects. At the least, what the monitoring data suggest is the projects have been very successful in generating a range of beneficial outcomes, both for the UoE and businesses.

ERDF Performance

Informatics Ventures was set an additional set of targets against which it was to report to the East of Scotland European Partnership (ESEP). Performance against these targets is shown in Table 4.8.

Table 4.8: ERDF Targets

	Target	Actual	% Achieved
Number of enterprises supported	300	402	134.0%
Number of research networks and collaborations supported	20	21	105.0%
Number of new products and services developed by supported enterprises and research centres	90	127	141.1%
Increase in turnover of supported enterprises	15	7	46.7%
Number of gross jobs created	150	273	182.0%

Source: Final claim submitted to ESEP

Four of the five targets were achieved, the exception being the turnover target. All other targets were exceeded, especially the number of gross jobs created.

Impacts

Beyond the employment data reported to ESEP in relation to the targets for Informatics Ventures, the ProspeKT Delivery Team also reported some performance data for the 43 spin-out and start-up companies it had worked with. The data reported was that by the end of the Project delivery period, these companies had, in aggregate:

- attracted £8,126,200 in investment finance;
- generated cumulative turnover of £3,261,711;
- introduced 92 new products; and
- generated 128 new jobs.

The jobs generated relates only to jobs with assisted businesses, and does not include employment of academics by the UoE.

4.3 Participation

Integration and Complementarity

The ProspeKT Delivery Team supplied a data file which mapped each organisation engaged against the services delivered through Informatics Ventures. This was to help identify the degree of integration and the extent to which Informatics Ventures complemented activity under ProspeKT.

Data were provided for 611 organisations that had been identified as having attended at least one Informatics Ventures events, and is summarised in Table 4.9.

Private businesses accounted for the vast majority of organisations participating and the number of participations at 93.8% and 89.5% respectively. Unsurprisingly, universities were the next most common category, with UoE accounting for 40% of all university participations. The total includes three English universities participating in three events in total. The remainder of this group comprised other Scottish universities, with representatives of the University of Glasgow participating in 10 events.

Table 4.9: Engagement with Informatics Ventures

	No Attending	No Participations[3]	% Attendees	% Participations
Businesses	573	1,385	93.8%	89.5%
Universities[1]	19	126	3.1%	8.1%
Development agencies/projects[2]	14	31	2.3%	2.0%
Local Authorities	1	1	0.2%	0.1%
Representative Bodies	4	4	0.7%	0.3%
Total	611	1,547	-	-

1 Includes all university representatives, including research institutes and three university commercialisation departments. UoE accounted for 51 of the no of participations, just over 40% of the total
2 Includes SE attendances at 11 events
3 No of time organisations participated in Informatics Ventures events, networks, etc.

To enable comment on the extent of complementarity between the two projects, the data file was further examined to identify the number and extent to which spin-outs and new starts engaged through ProspeKT also participated in Informatics Ventures activities. The results are summarised in Table 4.10.

Table 4.10: Start up / Spin out Engagement with Informatics Ventures

	Start Ups and Spin Outs	Other Businesses	Total
Number attending	38[1]	535	573
Number of participations	266	1,119	1,385
Average number of participations	7.0	2.1	2.41
% all business attendees	6.6	93.4	-
% all business participations	19.2	80.8	-

1 Five of the 43 businesses did not participate in Informatics Ventures
2 Participations refers to the number of individual events attended by beneficiaries.

Start-up and spin-out (businesses with whom ProspeKT has claimed a role in helping them to become established) accounted for a disproportionate share of total participations: these businesses represented less than 7% of the total attending Informatics Ventures events, but accounted for over 19% of all participations. This relatively more intensive use is also illustrated by the average number of participations, with start-ups and spin-outs averaging seven participations, as compared with the population average of just over two times.

These results indicate that the services provided through Informatics Ventures were relevant to the needs of those assisted through ProspeKT and were largely complementary: all but five participated in Informatics Ventures support services, and they tended to be relatively more intensive users of these services.

Engaging SICSA

Another of the justifications for Informatics Ventures was that it would enable the ProspeKT Delivery Team to engage with the wider community of university departments of computer science, via relationship building and other activity with SICSA members and through opening up participation to organisations from across the Lowlands and Uplands Scotland area.

In terms of SICSA member universities, Table 4.11, over, shows the number of times each was represented at Informatics Ventures events.

The data imply that the Project successfully engaged with SICSA. All SICSA member universities were represented at an Informatics Ventures event, and while it is not possible to identify the "type" of representative, feedback from the ProspeKT Delivery Team indicated that it comprised a mix of: commercialisation directorate personnel; academics from computing science departments some of whom were involved in commercialisation activity and academics from other disciplines.

Table 4.11: Participations by SICSA Member Universities

	No of Participations
Glasgow	10
Strathclyde	10
Aberdeen	8
Edinburgh Napier	8
Dundee	7
St Andrews	7
Heriot-Watt	4
Robert Gordon	4
Abertay	3
Glasgow Caledonian	1
Stirling	1
West of Scotland	1

The data also show a wide variation in the extent of participation and the pattern appears to confirm the views of the ProspeKT Delivery Team that while it was committed to working with all SICSA members, there were substantial differences in the scale and quality of computer science departments which needed to be reflected in the prioritisation of effort.

The largest and better quality departments (see Chapter 2) had been easier to engage at least to the extent that there were identified commercialisation opportunities to explore and/or immediate prospects that would benefit from Informatics Ventures support.

Wider Business Access

Just as Informatics Ventures was expected to engage with the wider SICSA community, it was also expected to provide access to services for businesses from across the ERDF Programme. The data on participants at Informatics Ventures events included post code information for 443 of the 535, equivalent to 83% of the total population when spin-outs and start-ups are excluded.

These 443 businesses accounted for 1,197 participations, equivalent to 86% of all business participations, indicating that this group tended to be relatively more intensive service users[31].

Table 4.12, shows the geographical distribution of these 443 businesses by broad post code region.

Table 4.12: Geographical Distribution of Businesses

	No. Attendees	No Participations	% Attendees	% Participations
Edinburgh	239	792	54%	66%
Glasgow	89	178	20%	15%
Fife	17	35	4%	3%
Dundee	16	45	4%	4%
Aberdeen	16	39	4%	3%
Falkirk	11	32	3%	3%
Perth	9	14	2%	1%
Borders	7	16	2%	1%
Ayrshire	4	9	1%	1%
Lanarkshire	4	5	1%	0%
Highlands	4	4	1%	0%
Paisley	3	4	1%	0%
England	12	12	3%	1%
Non-UK	12	12	3%	1%
Total	**443**	**1,197**	-	-

[31] The difference is not large: the average number of participations for this group of 2.7 compares to the figure of 2.1 for all participants, excluding new-starts and spin-outs

The data show that more than half of attendees were from Edinburgh post code areas and they accounted for over two-thirds of all participants. This is not a surprising result given that the ProspeKT project had already been working with local businesses before Informatics Ventures came on stream, and that it is likely to have been easier for those in the Edinburgh conurbation to access events.

However, the data also show that a substantial number of businesses from elsewhere in Scotland participated, and this was sometimes at events held outside Edinburgh, and particularly in Glasgow. This tends to support the conclusion that while the Project was likely to find it easier to engage with the local business community, Informatics Ventures was successful in securing participation from businesses from across Scotland.

4.4 Summary

The analysis of financial and performance monitoring data in this Chapter demonstrates a number of important points about the performance of ProspeKT and Informatics Ventures.

First, total spend on both projects was very close to budget, with a small under spend of 0.6%. However, when the figures are disaggregated by funding partner and project, they show that:

- SE spending was as anticipated, but the UoE contribution was above that planned, and this was necessary to compensate for a lower than anticipated contribution from the ERDF; and
- the distribution of spend was roughly even across the two projects, although it had originally been expected that the bulk of spending would have been on Informatics Ventures.

Neither of these issues is necessarily a cause for concern. Indeed, the willingness of the UoE to take responsibility for ensuring spending was to target is to be commended. Likewise, the ongoing reallocation of total budgets across different activities was led by the Board and indicates a degree of flexibility in responding to changing delivery context.

Second, performance in achieving against targets has been fairly impressive, across a wide range of indicators: most targets were met, or exceeded by substantial amounts. Although the validity of the monitoring data is subject to some caveats, taken at face value they imply that the delivery of both projects has been successful in encouraging participation, generating new start-ups and spin-outs and increasing knowledge transfer and general business-academia interaction.

Finally, the inclusion of Informatics Ventures appears to have been wholly appropriate in providing a complementary suite of services to further the overall objectives of ProspeKT. The data on participation show a high level of engagement with ProspeKT beneficiaries, and that members of this group tended to be the most intensive users of Informatics Ventures services. Beyond this, there is evidence that the Project has successfully engaged with all SICSA members and that businesses from across Scotland have participated.

5. Beneficiary and Stakeholder Feedback

5.1 Beneficiary Survey

Interviews were undertaken with businesses that had received support to gather feedback on their experience of engaging with ProspeKT/IV. The information collected around the economic impact of the support was also used to feed into the economic impact assessment, outlined in Section 6.

A total of 35 interviews were completed with businesses that had received support through the Project, 33 of the surveys were completed by telephone interview and two were completed online. The response to the online survey was relatively small; this is explained by the fact that the companies invited to participate in the online survey had only received light touch support and generic, rather than named, contacts were used.

> It should be highlighted that not all respondents were able/willing to answer all of the questions and, where appropriate, the number of respondents is noted.

Please note, there were a number of challenges in undertaking the beneficiary business surveys. These included:

- a number of contacts being withdrawn from the survey population due to SE 'survey control' measures (particularly businesses that had received more intensive support – start-up and spin out businesses);
- incomplete or missing company contact information which meant it was hard to identify the most appropriate contact within the business; and
- appropriateness of the contacts – a small number of the completed surveys were with businesses where it was difficult to 'untangle' their involvement with the Project, as some had a dual role of delivering support i.e. they were not a beneficiary of support in the 'normal' sense.

5.1.1 Business Background

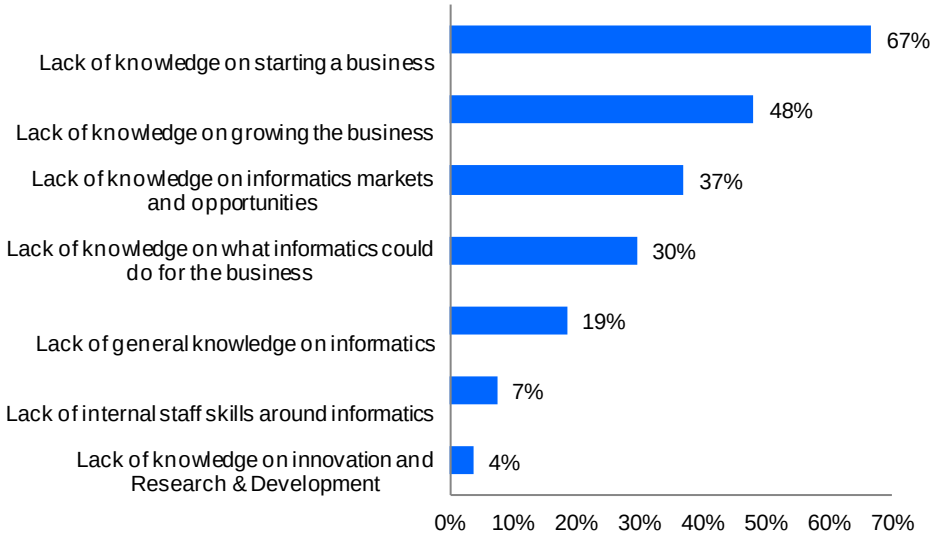
Just under half of the businesses were at the pre-start stage when first contact was made with ProspeKT/IV (47%, 16), with ten (29%) reporting their business was a start-up (i.e. had been trading for under one year), eight reported that their business had been trading for longer than one year. One business did not provide details.

A total of 26 businesses reported employment, with 85% (22) reporting employing one to nine members of staff with the remaining 15% (4) employing 10-49.

5.1.2 Pre-support

Businesses were asked the main reason(s) for accessing support from ProspeKT/IV, Figure 5.1 details the responses.

Figure 5.1: Reason(s) for Seeking Support

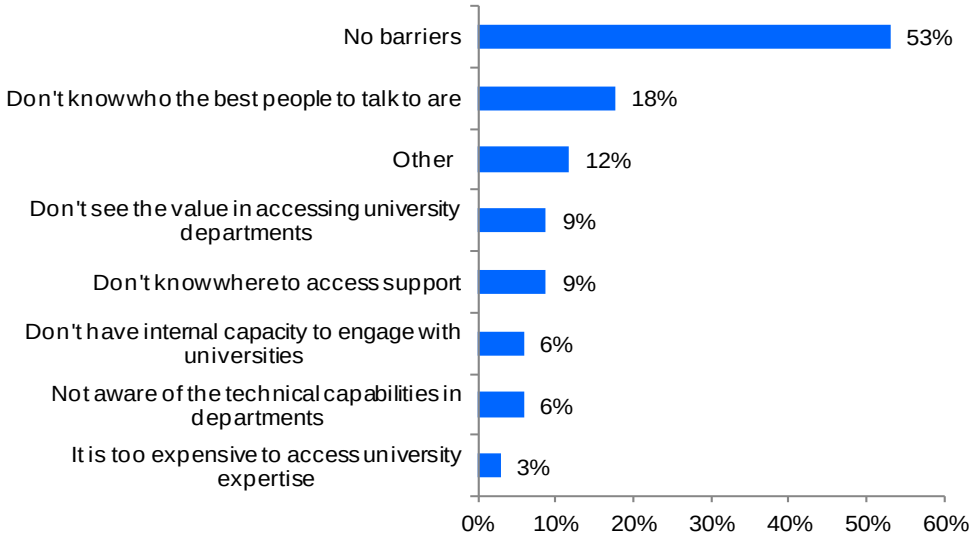


n=35

In the main, businesses identified business start up/growth and commercialisation issues, with two thirds of respondents reporting a lack of knowledge on starting a business (67%, 18); this was followed by just under half reporting a lack of knowledge on business growth (48%, 13).

In terms of specific barriers to accessing university support, over half of the businesses (53%) did not face any barriers with regards to accessing support from the HE sector. Of those that did, the most cited barrier was not being aware of the best contact (18%) shown below in Figure 5.2.

Figure 5.2: Main Barriers in Accessing University Expertise

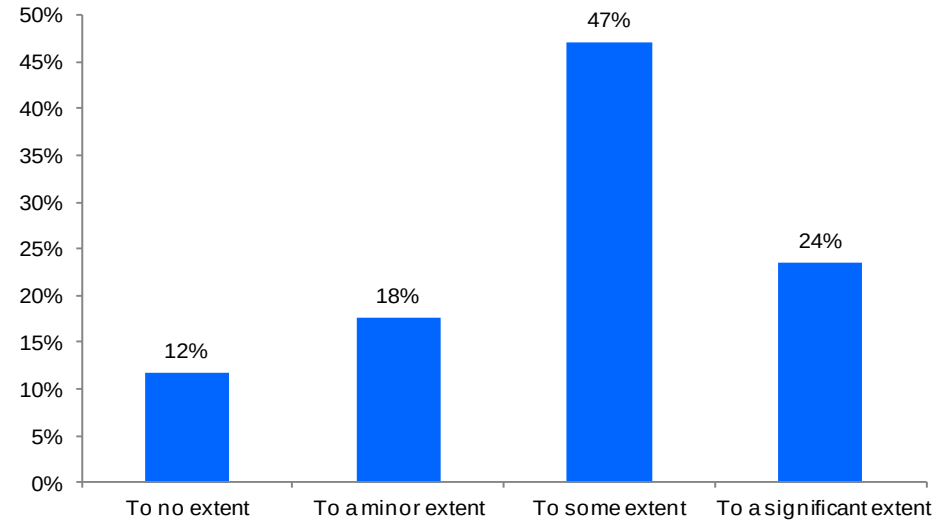


n=34, multiple responses allowed

Of the respondents that selected other barriers (12%, 4), two reported the IP challenges of dealing with universities to be a barrier, the remaining responses reported they had no previous experience of dealing with the HE sector, and therefore could not identify any barriers.

Of the 17 respondents that identified barriers to university engagement (71%) reported the Project had addressed these barriers to some extent/significant extent, detailed below in Figure 5.3.

Figure 5.3: Extent Project has had on the Barrier(s)/Constraints



n=17

Respondents were asked how they first found out about the ProspeKT/ IV project, 33 respondents provided an answer with the most commonly cited responses being:

- through being a student at University of Edinburgh (18%, 6);
- personal contact at University of Edinburgh (18%, 6); and
- through being a staff member at University of Edinburgh (15%, 5).

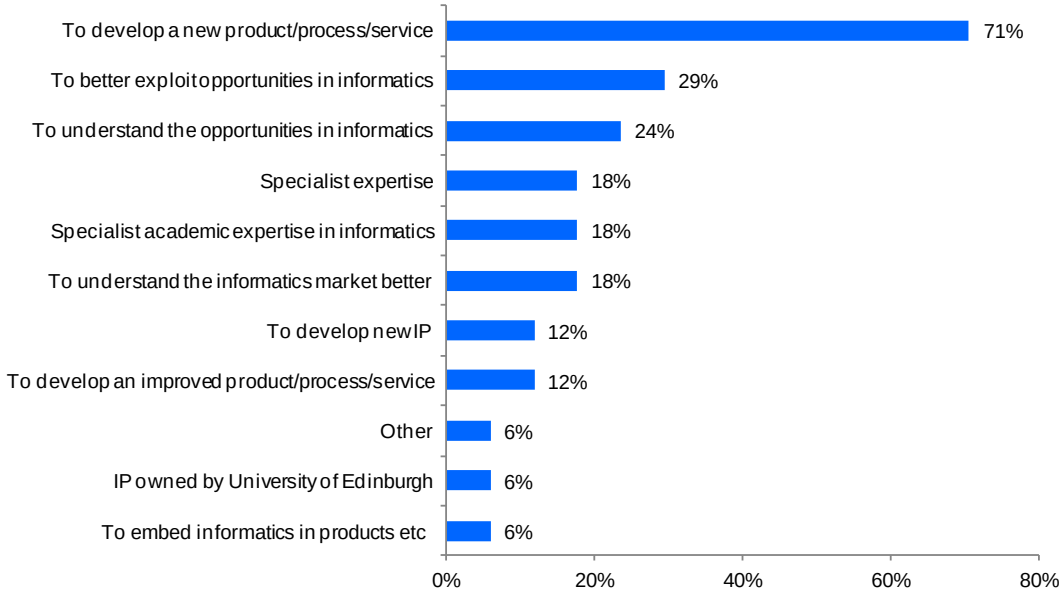
A total of 26 respondents commented on their satisfaction with regards to the initial and early contact they had with the Project, the majority of respondents rated their experience as satisfied/very satisfied (73%,19).

Of those that weren't satisfied, a small number reported that the information about what type of support available could have been clearer (3), one reported the marketing to be poor and another respondents reported the projects were disjointed.

5.1.3 Support

Businesses were asked what their main technical objectives were for accessing support, Figure 5.4 details the response.

Figure 5.4: Technical Objectives



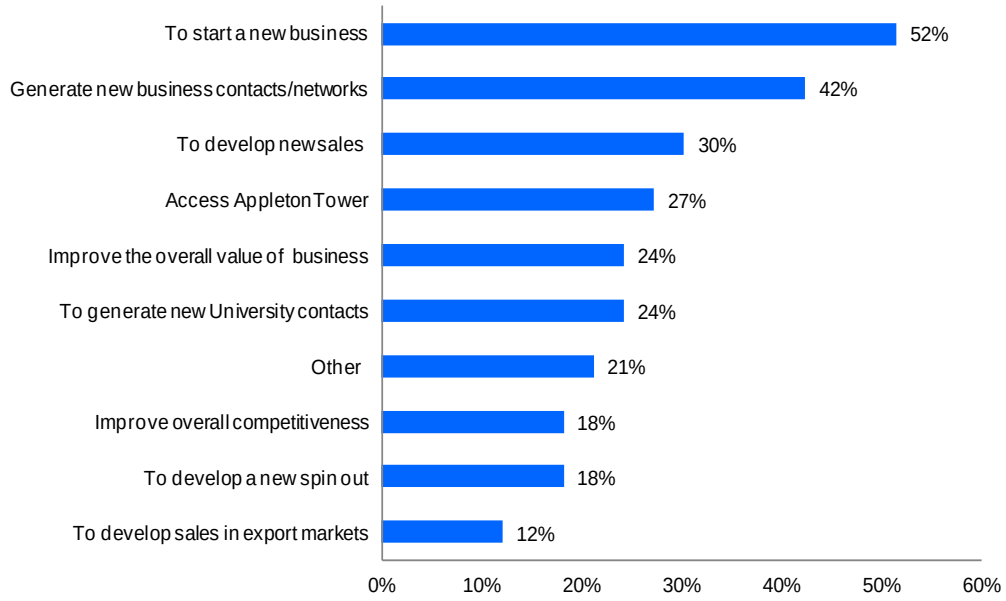
n=17, multiple responses allowed

Over two thirds of respondents reported their main technical objective was to develop a new product, process or service (71%, 11), followed by those who wanted to better exploit opportunities in informatics (29%, 5).

Respondents were also asked to outline their business objectives through engaging in the Project. Figure 5.5 below details the responses.

For over half the respondents their main business objective was to start a new business (52%, 17) followed closely by generating new contacts and or networks (42%, 15). Of the 21% (7) that selected 'other' objectives, this included to source funding for the business (2), for personal development (2), to access opportunities to recruit the right people (1) and to find companies to invest (1).

Figure 5.5: Business Objectives



n=33, multiple responses allowed

Table 5.6 details the different types of support received from ProspeKT/IV and events attended. Please note not all respondents were able to identify and/or recall all the support they had accessed, so this will likely underestimate the level of participation within the sample.

Table 5.6: Events Attended

Support	Number	%
Engage Invest Exploit	16	52%
MIT Entrepreneurship Seminars	16	52%
Tech Meet Up	12	39%
Start Up Support	7	23%
CEO Master Classes	6	19%
Entrepreneurs in Residence	6	19%
Silicon Valley Speaker Series	5	16%
Ignite	5	16%
Entrepedia	4	13%
BDE Support	4	13%
Barcamp	3	10%
Demofest	2	6%
Informatics Road Show	1	3%
Mobile Apps Group	1	3%

n=33, multiple responses allowed

Engage Invest Exploit and MIT Entrepreneurship seminars were accessed by the most number of respondents (52%).

Respondents were asked to rate their satisfaction with the support they received. Table 5.7 details respondents that gave a rating of satisfied/very satisfied. Please note, we have only included events/conferences that received five or more responses.

Table 5.7: Satisfied/Very Satisfied with Support Received

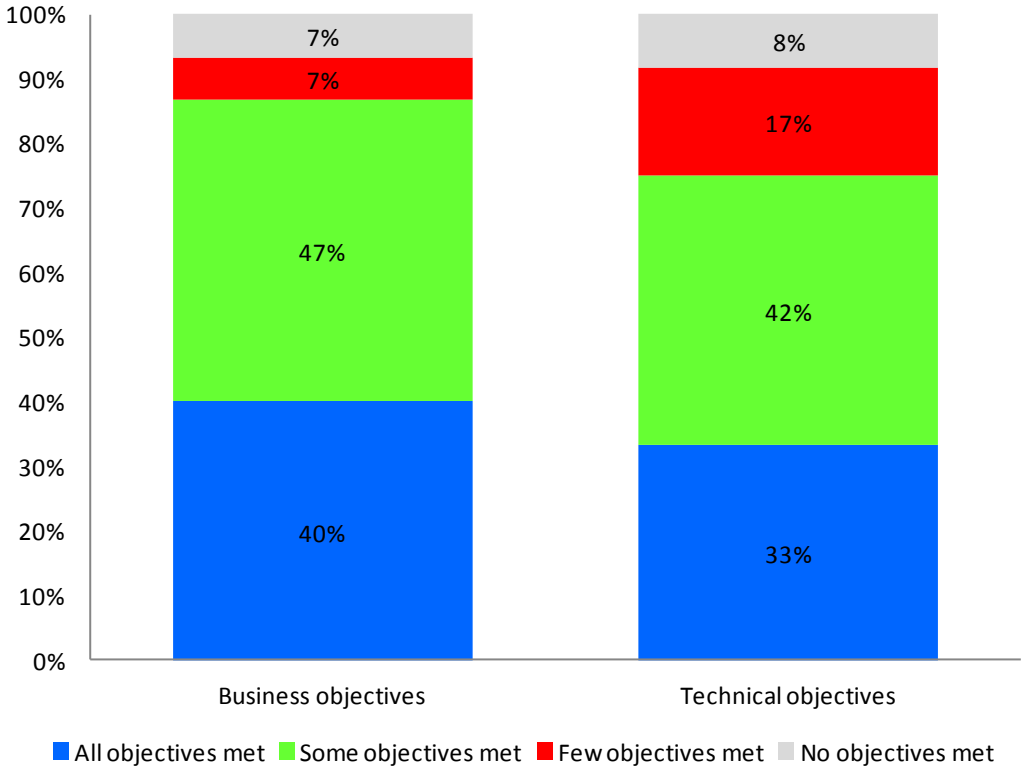
Support	Satisfied/V Satisfied	No of respondents
CEO Master Classes	100%	6
Ignite	100%	5
Entrepreneurs in Residence	100%	6
MIT Entrepreneurship Development Programme	93%	16
Silicon Valley Speaker Series	80%	5
Engage Invest Exploit	63%	16

Overall there were high levels of satisfaction with all the events/conferences, however, it should be noted that the number of attendees per event differ and some of the events were attended by a relatively small number of respondents, therefore the results are only based on a small sample.

Respondents were asked to provide more in-depth information regarding the support they received and the reasons for their rating. A total of 25 responded with the most cited responses being: the courses/events were well organised; they provided valuable new contacts and networking opportunities; and allowed for an outside perspective to re-evaluate the direction of the business.

Respondents were asked to what extent the support received had helped meet their business and technical objectives. Figure 5.8 details the results.

Figure 5.8: Extent Objectives Have Been Met



n=30, =12

The majority of respondents reported that the support had helped them achieve all/some of their original business objectives (87%, 26) and technical objectives (75%, 9). This indicates that's only a small proportion of beneficiaries did not achieve their expected goals/objectives.

A total of 27 respondents (77%) were able to identify the most valuable aspects of the support they received. The most cited responses were:

- MIT Entrepreneurship Course was good quality and had excellent presenters (6);
- the Project allowed beneficiaries the opportunity to network with like-minded businesses in both a formal and informal setting, and helped to create a community (5);
- TechMeetup was identified as a good networking event and has attracted a broad range of regular attendees which has further strengthened the community (3); and

- the overall Project content was well delivered and designed (2).

Other areas of support which beneficiaries identified as valuable to their business included: receiving personal support from a BDE, the opportunity to access facilities and network in Appleton Tower and the quality of the event/conference speakers.

In terms of elements of the support respondents found least valuable, just under half of the respondents (46%, 16) provided a response. The most cited responses were:

- the lack of transparency with regards to the eligibility criteria, in particular for accessing grant support through the Programme and how awards are communicated (3);
- some of the events were too generic and not sector or theme specific enough to provide any real value. In addition, the content was sometimes 'stale' (2); and
- IP remains a significant barrier for engagement and the Project does not offer a flexible approach to this.

5.1.4 Project Support Advisor(s)

Just over one third of respondents were allocated or engaged informally with a BDE (35%, 11), and respondents were asked to rate various aspects of their BDE's. Table 5.9, details the responses.

Table 5.9: Rating of BDE

	Very poor	Poor	Neither/nor	Good	Very good
Understanding of your/your company's needs	0%	18%	18%	45%	18%
Skills to deliver support	0%	0%	18%	45%	36%
Overall satisfaction	0%	0%	27%	45%	27%

n=11

BDE's were rated by the majority of respondents as very good/good for all three aspects. Five respondents reported that their expectations were exceeded by the service provided from their BDE, three reporting that it met their expectations and two reported it fell short of their expectations.

While the role of BDEs was primarily to assist with commercialisation (although there was an element of informal support for companies) there was potentially an issue with how their roles were communicated to beneficiaries – i.e. companies were not fully informed of the support provided through the BDE.

5.2 Other Support Levered In

A total of 80% of all respondents reported they had accessed other support while working with ProspeKT/IV. Table 5.10 details the different types of support accessed.

Table 5.10: Other Support Accessed

Support	%
Other	54%
SMART Grant	21%
SE Account Management	17%
Other SE innovation support	4%
Access to SDI Support	4%

n=24, multiple responses possible

Survey responses show that a number of the supported businesses have been successful in accessing support from a wide range of other public and private bodies. This includes SMART awards, SE Account Management support (for established business) and 'other' sectoral focused support e.g. NESTA, Interactive Scotland, RSA, etc.

Grant funding was identified as being the most valuable element of the additional support businesses have leveraged in.

In the main, respondents highlighted that the additional support they accessed complimented the support they received through the Programme, although a few respondents did comment more generally on the lack of integration at the overarching level of support available to Scottish businesses.

5.2.1 Benefits and Economic Impacts

Enabling Technologies

Scottish Enterprise has identified a number of key priority sub sectors within the broad Informatics areas including: Assisted Living, Future Internet, Smart Grids and Security. Respondents were asked to identify if they are active in any of these broad sub-sectors.

The response rate for this question was very low with many companies simply being unable to identify if they are in part or wholly involved with any of the sub sectors as defined by SE – this appears to be more an issue of beneficiaries understanding rather than a reflection of their standing within the sector in which they operate. Of those that were able to identify their relevant sub-sector, three were involved in Future Internet, one in Assisted Living and one in Smart Grids.

Benefits

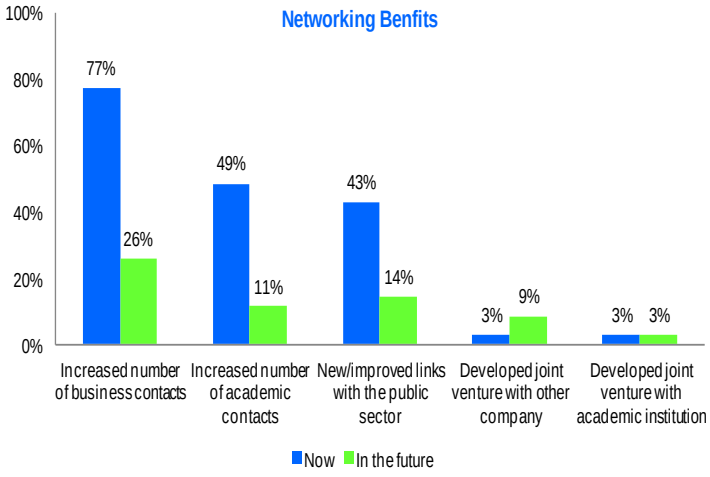
Respondents were asked whether they had achieved, or were likely to achieve, any benefits as a result of their engagement with the Project, detailed below in Table 5.11.

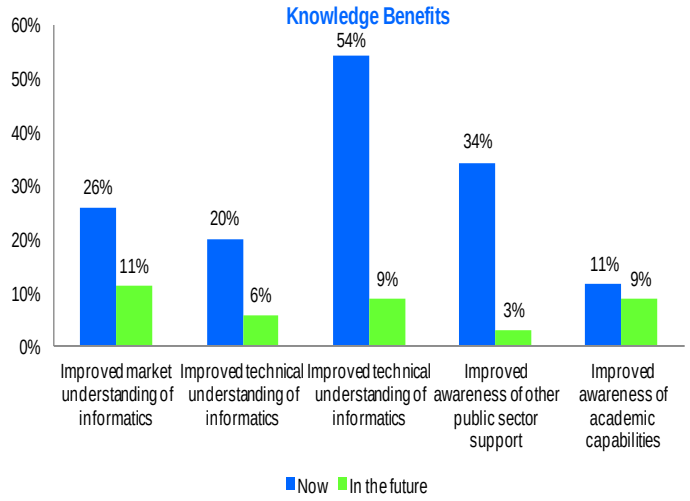
Table 5.11: Benefits

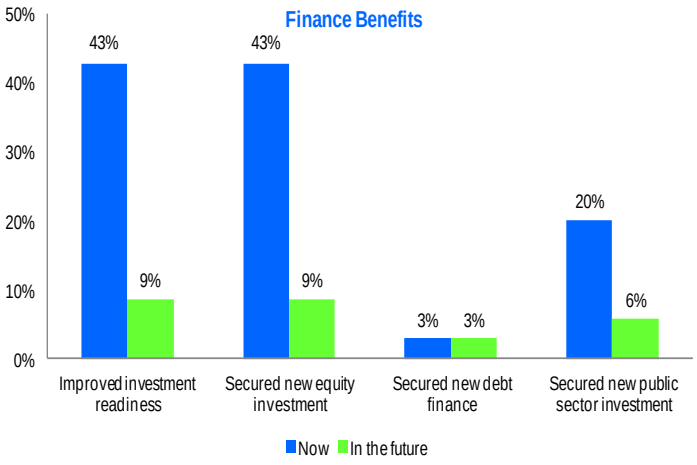
	Number	%
Networking benefits	30	88%
Knowledge benefits	23	68%
Finance benefits	20	59%
R&D / Innovation benefits	19	56%
Sales benefits	14	41%
None of the above	4	11%

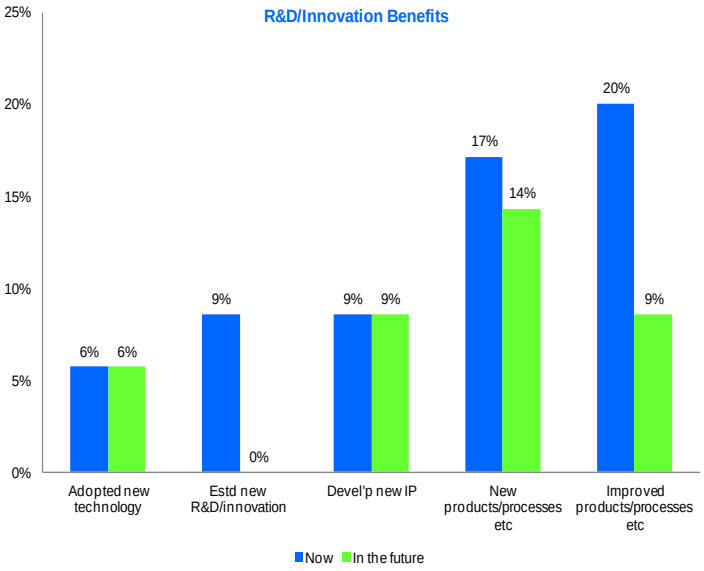
N=35, Multiple responses allowed

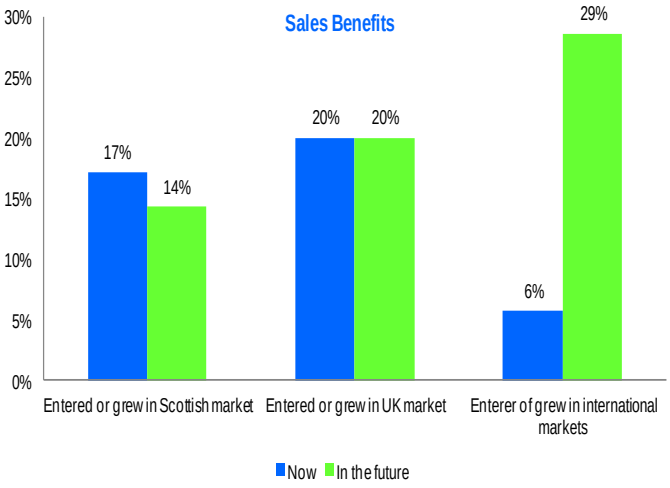
Four (11%) respondents reported there were no benefits of taking part in the support. Below we provide greater detail about the benefits generated through the Project


Networking Benfits
100%
80%
60%
40%
20%
0%
77%
26%
49%
11%
43%
14%
3%
9%
3%
3%
Increased number of business contacts
Increased number of academic contacts
New/improved links with the public sector
Developed joint venture with other company
Developed joint venture with academic institution
Now
In the future


Knowledge Benefits
60%
50%
40%
30%
20%
10%
0%
26%
11%
20%
6%
54%
9%
34%
3%
11%
9%
Improved market understanding of informatics
Improved technical understanding of informatics
Improved technical understanding of informatics
Improved awareness of other public sector support
Improved awareness of academic capabilities
Now
In the future


Finance Benefits
50%
40%
30%
20%
10%
0%
43%
9%
43%
9%
3%
3%
20%
6%
Improved investment readiness
Secured new equity investment
Secured new debt finance
Secured new public sector investment
Now
In the future


R&D/Innovation Benefits
25%
20%
15%
10%
5%
0%
6%
6%
9%
0%
9%
9%
17%
14%
20%
9%
Adopted new technology
Estd new R&D/innovation
Devel'p new IP
New products/processes etc
Improved products/processes etc
Now
In the future


Sales Benefits
30%
25%
20%
15%
10%
5%
0%
17%
14%
20%
20%
6%
29%
Entered or grew in Scottish market
Entered or grew in UK market
Enterer of grew in international markets
Now
In the future

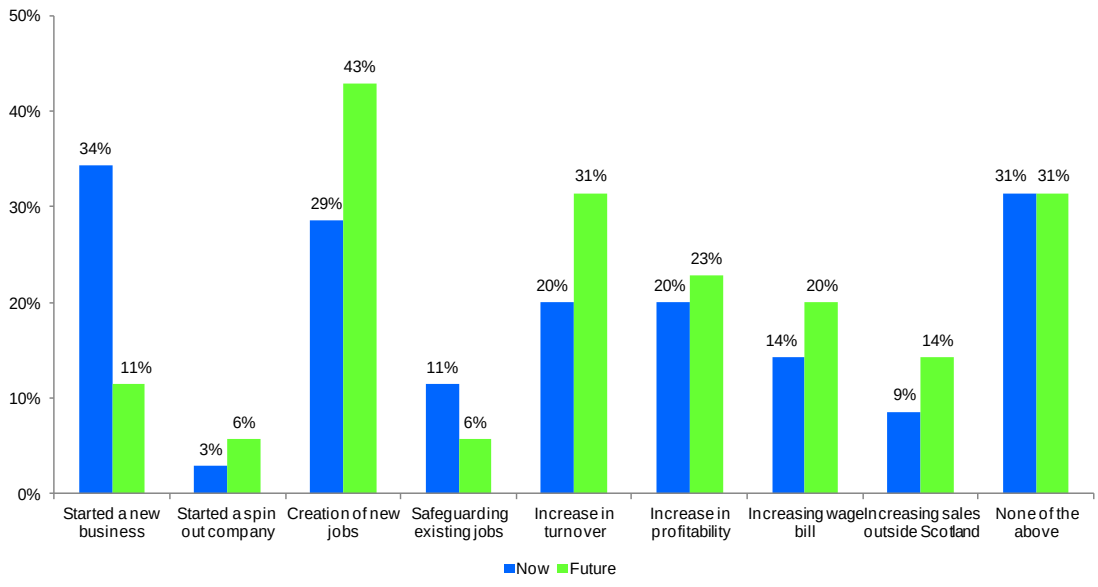
The key benefits the Project has helped generate are highlighted below:

- 77% of all respondents reported they had increased their business contacts as a result of the support, with a further quarter anticipating that their business contacts will increase in the future;
- over half of all respondents (54%) reported the support had improved their technical understanding of informatics;
- just under half of all respondents reported they had already improved their investment readiness and secured new equity investment as a result of the support (43%),
- 20% reported they had already developed improvements for a product, process or service;
- just less than one third of all respondents envisaged the support would allow for future entry/growth in international markets (29%); and
- 20% of respondents reported entry/growth in UK markets with the same number anticipating future entry/growth.

Economic Benefits

Figure 5.12 below details the current and future estimated economic impacts/benefits as a result of receiving support.

Figure 5.12: Now and Future Impacts/Benefits



The key economic benefits reported to date and forecast for the future include:

- key economic impacts to date:
    - one third of respondents had started a new business (34%)
    - 29% reported they had created new jobs
    - one fifth had reported an increase in turnover and profitability (20%); and
- key economic impacts for the future:
    - 43% anticipate the creation of new jobs
    - just under one third predict an increase in turnover (31%
    - just under one quarter predict an increase in profitability.

5.3 Impacts to Date

Of the twelve businesses that reported starting up a new business as a direct result of the Project, ten rated the support as being important/significantly important (83%).

Respondents were asked how much lower their employment and turnover levels would have been in the absence of the Project, Table 5.13 and 5.14 details respondents estimated percentage decrease – please note this is based on the number of responses.

Table 5.13: Estimated Employment without Project Support 2007 - 2011

	Lower by					
	1%-20%	**21%-40%**	**41%-60%**	**61%+**	**No impact**	**Total**
2010 - 11	13%	0%	13%	67%	7%	15
2009 - 10	25%	0%	13%	63%	0%	8
2008 - 09	40%	0%	20%	40%	0%	5
2007 - 08	0%	0%	100%	0%	0%	1

Table 5.14: Estimated Turnover without Project Support 2007 - 2011

	Lower by					
	1%-20%	**21%-40%**	**41%-60%**	**61%+**	**No Impact**	**Total**
2010 - 11	11%	0%	11%	78%	0%	9
2009 - 10	17%	0%	17%	50%	17%	6
2008 - 09	25%	0%	25%	50%	0%	4
2007 - 08	0%	0%	50%	0%	50%	4

Of those that were able to identify an additional impact[32], the majority indicated that the Project has had some positive impact on their employment and/or turnover i.e. without support they would likely be lower – this helps identify the additionality of the Project.

Of the 17 business that were able to provide details about their competitors, 15 reported that they did not have any competitors or that a minority of the businesses they compete with are based in Scotland, indicating that any new activity the Project supports is likely to have little negative displacement effects on other Scottish businesses.

Further, 18 respondents commented about the changes in the markets in which they have operated over the last three years, with the majority of respondents (61%, 15) identifying that there has been a moderate/strong improvement.

Respondents were asked to outline their annual total salary costs and profit for 2007-2011. Table 5.15 below details the responses.

Table 5.15: Total Salary Costs 2007 - 2011

	No. of responses	Total Salary Cost	Average Total Salary Cost	Average Salary Per Employee
2010 - 11	8	£695,000	£86,875	£15,795
2009 - 10	5	£408,000	£81,600	£15,692
2008 - 09	4	£45,000	£15,000	£5,000
2007 - 08	2	£49,000	£24,500	£6,125

Respondents were also asked to outline their profit/losses, however, the majority of companies were unable to provide a responses. From those that did, the ranges of responses are highlighted below:

- 2010-11 – profits/losses ranged from -£75,000 to £80,000 (5 responses);
- 2009-10 - profits/losses ranged from -£28,000 to £150,000 (3 responses);
- 2008-09 - profits/losses ranged from -£15,000 to £150,000 (3 responses); and
- 2007-08 - profits/losses ranged from -£5,000 to £100,0000 (2 responses).

As a number of the companies were start-ups or within the early stages of their lifecycle, a number reported making losses. However, positively some companies were able to attribute a positive impact on their profit levels to the Project.

32 Please note, in the EIA, Section 5, those that were unable to identify an additionality factor were presumed to have no impact i.e. 100% deadweight.

5.4 Future Impacts

Respondents were asked to estimate how much lower their employment and turnover levels would have been in the absence of the Project, Table 5.16 and 5.17 details respondents estimated percentage decrease.

Table 5.16: Estimated Employment without Project Support

	Lower by					
	1%-20%	21%-40%	41%-60%	61%+	No Impact	Total
2011 - 12	0%	0%	40%	60%	0%	10
2014 - 15	0%	20%	40%	40%	0%	10
2016 - 17	0%	13%	38%	38%	13%	8

Table 5.17: Estimated Turnover without Project Support

	Lower by					
	1%-20%	21%-40%	41%-60%	61%+	No Impact	Total
2011 - 12	0%	0%	43%	57%	0%	7
2014 - 15	0%	11%	56%	33%	0%	9
2016 - 17	0%	29%	29%	43%	0%	7

Further, respondents were asked to estimate their future salary costs and profit/losses, responses are provided in Table 5.18.

Table 5.18: Future Salary Costs

	No. of responses	Total Salary Cost	Average Total Salary Cost	Average Salary Per Employee
2011 - 12	8	£3,933,000	£561,857	£65,143
2014 - 15	9	£12,149,000	£1,349,889	£92,740
2016 - 17	7	£30,122,000	£3,765,250	£148,072

Only a small number were able to estimate their future profit/losses, as detail below:

- 2011-12 – profits/losses ranged from -£310,000 to £450,000 (3 responses);
- 2014-15 - profits/losses ranged from £29,000 to £1,000,000 (3 responses); and
- 2016-17 - profits/losses ranged from £100,000 to £2,900,000 (4 responses).

5.5 Future Support Requirements

The majority of respondents reported they would seek support in the future (90%, 27) with the most commonly cited types of support being sought:

- networking and events (6);
- raising finance/specific funding (4);
- marketing and sales (3);
- business/product growth and development (3); and
- training (2).

Almost all of those who reported they would seek support in the future reported they would seek support from a follow on project of ProspeKT/IV. This may be due to high levels of satisfaction with the Project, see Figure 5.12, and the positive impacts/benefits reported as a result of their engagement.

Strengths

Respondents were asked to identify what they perceive as the main strengths of the support based on their experience of engaging with the Programme, 30 respondents provided an answer with the most cited responses being:

- the Programme allowed beneficiaries to make a number of formal and informal networking contacts through creating an 'informatics community', particularly through being based in Appleton Tower and less structured events like TechMeetup (12);
- the individuals involved in the delivery, both the ProspeKT/IV team and the speakers at events/conferences were professional and provided valuable and targeted support (8);
- the quality of the events and speakers was good (4);
- the focused nature of the events contributed to direct changes in the way businesses operated (2); and
- it allowed for development of the business (2).

Weaknesses

Respondents were also asked to comment on what they perceived as the weak points of the Programme:

- the university's IP policy is still a significant barrier to businesses willingness to engage with the HE sector (3)
- there is a lack of transparency and communication with regards to the eligibility criteria for certain elements of the support, particularly funding support (3);
- there is a lack of aftercare/follow up support or help directing businesses to the next level of support – particularly for businesses within their first years of trading (2); and
- there is a lack of information about the range of support available through the ProspeKT/IV Programme, it is poorly communicated (2).

Area(s) for Improvement

A total of 20 respondents identified area(s) where the delivery of the Programme could be improved, the most cited responses were:

- the content of workshops needs to evolve with changing demand, the Programme has a tendency to deliver the same workshops and events – providing a significant element of duplication for those that have previously accessed support (3);
- some of the events/workshops are very generic in nature and could be tailored to specific sectors and opportunities within the wider theme of informatics (3). Further, the support could be more practical and 'hands on' to help grow businesses confidence (3);
- the Programme should look at the possibilities/opportunities of linking he support with what is being delivered across other Scottish HE institutions; and
- in terms of more hands on support, providing mentoring support to businesses (2).

Other areas in which some respondents felt the Programme could be improved include:

- better promotion of and linking up alumni of contacts to businesses accessing support;

- there is a perceived Edinburgh centric focus of the support – need to expand the geographic catchment; and
- some businesses that were previously involved in the now closed EPIS project felt there could be better linkages between the two support packages.

Overall, responses would suggest that the core and main activities of the Project appear to be targeted at the right level and are 'fit for purpose' - demonstrated by the comparatively fewer respondents that identified weaknesses of the Project and areas for improvement.

5.5.1 Conclusion

Overall, the majority of respondents, in the main were positive regarding the Project and the support they received. Of those respondents that reported a barrier to accessing university expertise, almost all reported their engagement with the Project had addressed these.

One of the reasons for the positive feedback may be that respondents were able to identify both a qualitative and quantitative benefit/impact for their business, with over three quarters of respondents reporting that all/some of their technical and business objectives had been met.

That being said, there were also negative aspects of the Project delivery identified through the survey, including: transparency with regards to the eligibility criteria for certain elements of support, in particular grant funding; the updating of workshop/event content; communication between the delivery team and beneficiaries as to the full range of support available; a lack of flexibility to the University IP policy; and a lack of follow up/aftercare support.

5.6 Stakeholder Feedback

This section provides a description of the feedback generated through the stakeholder consultations.

The sample of stakeholder representatives to be interviewed during the study was agreed with the Client at the inception meeting.

Here, the main aim was to secure representation from key groups, comprising:

- current and ex-ProspeKT/IV delivery staff;
- University of Edinburgh (UoE), in terms of the School of Informatics (SoI) and Edinburgh Research and Innovation (ERI);
- SE and Scottish Development International (SDI) staff who have been involved with the Project; and
- members of the ProspeKT Board, who were also expected to provide input from the private sectors' perspective.

Please note, the views and feedback expressed within this section are based on responses from stakeholders and not those of the study team.

Table 5.18 shows how the target and actual samples break down.

Of the initial target of 12 interviews, 11 were completed (10 through face-to-face delivery and one by telephone). The only gap was an ex-ProspeKT employee with whom an interview appointment was made but not fulfilled. Subsequent attempts to make an alternative appointment have failed.[33]

Table 5.18: Stakeholder Sample and Interviews Completed

	Sample	Conducted
ProspeKT/IV staff	3	2
SoI	1	1
ERI	1	1
SE	3	3
SDI	2	2
ProspeKT Board Members	2	2
Total	12	11

It should be noted also that the ERI representatives and the three interviewees from SE are either current or past ProspeKT board members.

[33] The target interviewee was out of the country for a time and has been involved in preparing the launch of a major new initiative.

5.6.1 Roles

The sample provided a range of perspectives on the projects, reflecting their roles, *inter alia* as:

- members of the initial SE design team. One interviewee had been involved with the SoI well before the ProspeKT project commenced, and had a leading role in project design and securing approvals:
- project champions within SE. All three SE interviewees have had a close involvement with the projects, either as SE project managers or as the person with ultimate responsibility for SE's investments;
- active participants in the project board. Eight of those interviewed had been or currently are, board members. Two of the board members were nominated to represent the views of the SME/corporate sectors;
- members of the ProspeKT/IV delivery team, from inception to date. This included the Director of Commercialisation and one Business Development Executive (BDE); and
- delivery partners, through joint events or close working relationships.

Despite this variation, there was a high degree of consensus regarding many of the issues discussed. This is not to say that there were no conflicting views but that these were restricted in the main to detailed aspects of practice or on individual issues.

5.6.2 Objectives and Fit

Main Objectives

There was a strong, shared understanding of the main objectives of the projects. All stakeholders reported that the overriding objective has been to *better exploit the commercial potential of the research excellence, and worldwide reputation, of the SoI*, Beyond this, there was various mentions of the project's detailed objectives, many of which can be considered as enablers of activity.

Responses were to:

- encourage and support new business formation activity (11);
- improve linkages between the academic and corporate bases either through building formal/informal networks at which members of both communities can engage, or via knowledge transfer, licensing or other commercial activity (9);
- effect positive cultural change and improve attitudes towards commercialisation activity among staff and students of the SoI (6) [34];
- enhance the SoI reputation as a world class centre for informatics teaching and research and its ability to attract the best staff and students (5);
- generate economic development gain for Scotland (4), with some mentions of the specific GVA target set for the projects;
- increase the amount and quality of research and teaching resources for the SoI (3); and
- become self financing (2).

Changes over Time

While not everybody felt able to comment on whether and how objectives have changed over time, those with a more intimate involvement reported that since the projects commenced there has been a tendency to focus more on the three themes of enterprise, commercialisation and outreach (5). Others, particularly those surrounding reputation and the attraction of talent, have been relegated to the status of "secondary" objectives as time has progressed. This was felt to reflect the wider action being undertaken elsewhere in pursuit of this objective by the SoI and UoE.

This trend was considered to be highly appropriate and was explained as reflecting the:

- recognition that it was important to focus efforts where there was likely to be a substantive contribution to achieving the performance targets set for the projects, especially those couched in terms of new businesses formed, jobs and GVA generated;

[34] From here on, numbers in brackets refer to the number of the 11 respondents responding in that manner.

- general trend within UoE of encouraging cultural change and better attitudes amongst academics towards, and more activity in relation to, commercialising research efforts and engaging with business; and
- introduction of the IV component, which encouraged greater focus on engaging businesses and those external to the SoI/UoE.

Fit with Wider Policy and Strategy

All those who felt able to comment (9) considered there to be a very strong fit between the projects and the policy/strategic environments in which they were introduced and in which they operated. All of these respondents mentioned some combination of:

- the strong strategic focus on encouraging innovation and in seeking to fully exploit the commercial potential of Scotland's research base, both of which were key themes in Smart Successful Scotland (the strategy in place at the time when project approval was sought) and the Government Economic Strategy (which was in place for much of the Project implementation period);
- the targeting of development resources at a key sector of the Scottish economy, in terms of baseline scale and future market opportunity. This fits well with the key industry approach, although there were comments around the lack of a separate status for software in the GES and SE's structures, and its inclusion within the wider Enabling Technologies sector[35]; and
- the contribution to the high growth agenda, and encouraging the emergence of new technology based SMEs with high growth potential.

Fit With Other Strategies

Respondents were asked to comment about the Projects' fit with other policies and strategies in place during design and delivery. Responses included that there was a very strong or good fit with the aims and objectives of:

- UoE, especially those relating to "becoming one of the world's top five universities" and general aims to more fully engage in commercialisation activity and with the business base.

[35] Although strictly beyond the remit of this study, there was a common complaint that software is not given the prominence it deserves by SE and the Scottish Government, and that there is a failure to fully understand the sector, its needs, or its growth potential. Generally there was perceived to be a need for more clarity and perhaps for a separate focus on "software enabled industries".

The latter has been given further impetus through changes to the Research Assessment Exercise (RAE) and the increasing bias in the allocation of Research Council funding towards activity which can demonstrate that it will achieve economic impact;

- SICSCA (whose goal is "to develop and extend Scotland's position as a world leader in Informatics and Computer Science research and education") and the general Scottish Funding Council policy of encouraging research pooling; and
- other thematic and organisational strategies including those for Enabling Technologies, SDI and the Digital Economy ("Scotland's Digital Future: A Strategy for Scotland").

5.6.3 Rationale

Main Weaknesses and Opportunities

Respondents were asked to identify the most important weaknesses and/or opportunities that the projects were introduced to address. The responses largely defaulted to the same themes as are addressed by the Projects' objectives, comprising:

- the opportunity to:
  - exploit the research excellence of the SoI
  - help grow the software cluster in Scotland in view of the substantial market opportunities that are believed to exist generally, and in specific technology areas
  - exploit the potential of the Forum building to create a focus for building a strong community of interest
  - in relation to IV, widen company engagement beyond the Lothians and build stronger collaborations between SICSA members; and
- the weakness of:
  - attitudinal and cultural barriers to commercialisation and business engagement among academics
  - poor awareness of the benefits of engaging with the academic sector among Scottish software companies

- deficiencies in the managerial capacity and competency of SMEs in the sector.

Market Failures

The market failures identified through stakeholder consultations have been referenced within Section 3 and relate to: imperfect information in relation to the value of collaboration; attitudinal and cultural barriers to commercialisation and KT; externalities in relation to diffusion of research; and imperfect information relating to skills of academics.

All respondents who offered an assessment (10) believed that there was a strong and valid market failure rationale for the project at the time of approvals, and that this rationale continues to exist. Some (3) noted that although there had been a general improvement in the academic culture and attitudes towards commercial activity, there remain issues surrounding poor awareness of market opportunities or the competencies and capacities of academics to pursue them. In effect, they will still face some of the information and management constraints on business formation and growth that are felt to be faced by would-be entrepreneurs more generally.

5.6.4 Activities

The Service Portfolio

Views were elicited regarding the Projects' service portfolio, with respondents asked in particular to identify the main services and those which they regarded as being peripheral to achieving objectives and targets.

In terms of main services, almost all key aspects of the Projects' service portfolios received a mention and indeed three respondents pointed out that it was more valid to consider the projects as a coherent whole, rather than as a mix of different, unrelated services. Specific responses were:

- mentoring and working with nascent/new start businesses was most commonly cited as a key service for delivering the study's objectives (8). There was also some recognition of the other work of BDEs such as their roles in mining potential commercial opportunities from the research base of the SoI (3);

- entrepreneur education which is pursued through various service strands (7) with CEO Masterclasses (5), the MIT (5) and Cambridge (4) courses singled out for specific mention (and unanimous praise);
- conferences, networking and other events, or the portfolio of IV events more generally (6). Specific services were identified as being of relatively greater value included Invest Engage Exploit (1), Demofest (1) and TechMeetup (2); and
- engaging investors (1).

There was a general reluctance to identify services that were "peripheral", although this should not be taken to imply that all services were considered to have delivered as expected. Specific mentions were:

- joint ventures, IP licensing and KT with external organisations (4);
- attempts to fully engage SICSA via IV (1); and
- Entrepedia (1).

5.6.5 Gaps, overlap and duplication

Gaps

The consensus view was that there had been no obvious gaps in the projects' service portfolios and many of the comments offered were regarding aspects of practices or linkages to other initiatives. Responses can be grouped into the following broad areas:

- one-to-one assistance with:
  - a general failure to help new starts and spin-outs to develop and implement longer-term growth strategies, especially for businesses which were not at the stage where they would meet SE's criteria for Account Management. To a large extent this reflects the ProspeKT team's view on where it is appropriate for them to intervene and provide assistance[36]
  - an over emphasis on technical development with new starts and spin outs at the expense of market development, design or other business functions;

[36] The ProspeKT team does not consider its role with new starts and spin outs to extend much beyond the period where they commence trading/conclude a licensing deal with the UoE.

- availability of complementary support mechanisms. Examples cited included:
    - the gap caused by the loss of EPIS, and changes in the terms and conditions of the PoC programme that made it challenging for the SoI to engage with the later stages of the PoC programme[37]
    - the general poor availability of start-up grants and loans
    - wage subsidies for highly qualified staff
    - funding for teams, rather than for individuals under Enterprise Fellowships;
- a general lack of follow up activity for events and courses. One example cited was the MIT course. One respondent viewed this as having been an exceptionally good service, which produced a "community of interest" comprising participants who had been highly enthused and motivated by the training they had received. No attempt has been made to follow up with participants, or to explore how best the outcomes from participation could be fully exploited; and
- limited activity to engage the investor community or to pursue linkages with SE and SDI.

Overlap and Duplication

Again there were few concerns raised regarding the projects' potential to overlap with, or duplicate, other services available from public or private sector providers. Two broad areas were identified:

- some events were similar in scope and content to those provided by others. These were variously identified as private sector suppliers, SE (especially the activities of some Industry Teams) and Interactive Scotland; and
- the activities of ERI or other support providers.

5.6.6 Issues and Challenges

Respondents raised a wide variety of issues and challenges which had been faced, although there was wide variation regarding the nature of these and the extent of their impact on Project performance.

[37] This decision relates to changes to the clawback arrangements in Proof of Concept contracts which the UoE considers exposes it to too much risk.

Those cited included:

- environmental factors, and specifically the constraints on accessing finance from mainstream lenders which has been a constant factor since the onset of the credit crunch (5);
- difficulties caused by changes to the terms and conditions of Proof of Concept, and the withdrawal of some SE products which would have been useful such as the Toolkit developed by SE Edinburgh and Lothians (5);
- a lack of buy in to the Project by SE beyond Edinburgh (4). This partly reflected perceptions that project activity was overly focused on Edinburgh with limited engagement with the wider company base – this may reflect that the original ProspeKT project was established by the LEC and had a regional remit while IV (which came along at a later date) had a national focus;
- sustainability and difficulties in generating income (3);
- the Project board becoming less innovative over time. While in the earlier years of operations the Board had a lot of flexibility in deciding on priorities and activities, and this was a positive influence, this reduced over time reflecting in the main SE concerns to focus on achieving performance targets (2);
- the uncertainties surrounding future funding led to difficulties in retaining key ProspeKT staff over the last nine months of the project (2); and
- the initial staff mix was not ideal although this was addressed over time (1).

5.6.7 Extension to Include IV

Respondents were asked about the extension to include ERDF funding through the Informatics Ventures project and whether this had been a positive development. Nine of the eleven felt able to comment.

All of the nine considered the change to have been very positive (7) or positive (2) development, the main reasons being that it:

- enabled a wider range of services to be offered. Indeed, it was seen as an essential development to fill some of the gaps in the services available under ProspeKT and was responsible for much of the momentum and “buzz” created for the projects;

- widened the focus, both thematically through the provision of an expanded service portfolio and geographically through opening access to participation to SICSA members and businesses across lowland Scotland. Generally, it was reported that engagement with SICSA had been very positive (although in some instances there were initial challenges in encouraging others to get involved) and some valuable lessons had been learned regarding how best to target future efforts via working in wider partnerships; and
- enhanced the profile of the SoI through engaging with these wider communities of interest.

Nobody considered the move to have diluted existing efforts and generally the change was viewed as having been well managed. The only negative comments made related to the administrative burden imposed by ERDF reporting and claims requirements.

5.6.8 Strengths, Weaknesses and Good Practice

Strengths

A wide variety of strengths were identified and these can be grouped in to the following main headings:

- ProspeKT team: this was mentioned as a key strength by eight respondents (excluding the ProspeKT staff interviewed), with various specific mentions of the Director of Commercialisation as "having been critical to the overall success of the projects", "providing strong and good leadership" and "bringing a wealth of past experience, knowledge and contacts and these were crucial in establishing credibility with partners and companies";
- generous funding: mentioned by seven, which meant, in combination with the delivery model, that the projects had the ability to "provide quality services directly and through use of world class providers without having to search around for funding";
- partnership working and buy-in: this was seen as a strength by seven respondents, especially the strong relationship which had been built up between SE and the SoI/UoE both at the planning and implementation stages.

The buy in from all partners was seen as a strength, although with some minor caveats regarding the relationships with SE HQ[38];

- ProspeKT board: mentioned by six and reflected variously "the good working relationships at board level", "the inclusion of some very influential people with insight and influence" and "the commitment from board members to their roles and the Project generally";
- delivery model: mentioned by five, especially the devolution of project responsibilities to the board, and through it to the ProspeKT team. This was felt to have enhanced flexibility and the Projects' ability to react;
- the Forum: this was mentioned by four as having provided an ideal focus for many ProspeKT activities, particularly networking and events; and
- events management: this was singled out for particular praise by three respondents and reflected a wider view that the organisation, quality and attendance at events had been excellent.

Weaknesses

There was less consensus on weaknesses, although again responses can be grouped according to the following broad categories:

- integration: four respondents said more could have been done to better link project services with wider provision by SE and SDI;
- converting activity to output: this was mentioned by four respondents and in part reflected that there were perceived deficiencies in the approach to individual company mentoring, or that there was little apparent effort to follow up with event attendees;
- monitoring: monitoring practices were regarded as poor by four respondents and while this had been highlighted as an issue by the interim evaluation there had been little improvement in practices;
- ProspeKT team: two respondents felt that either the staff mix was not wholly appropriate (with a perceived need for BDEs with more commercial/business experience) or that there were some weaknesses in leadership;

[38] This relates to the earlier mentioned issues with Proof of Concept, and the perceptions of it being an "Edinburgh" project.

- ProspeKT board: while generally seen as having worked well, two respondents felt that it was "overly dominated by the Director of Commercialisation" or that there was "insufficient focus on strategy";
- geographical focus: the earlier focus on Edinburgh and the SoI was seen as a weakness although this had been largely addressed through the introduction of IV;
- sustainability and income generation; while the projects had been set a target on generating income from services, this had not been pursued to any great extent; and
- environment: a few respondents highlighted some environmental factors. These included the difficulties in accessing debt or equity funding for new starts/expansion projects, the lack of start up grants and a lack of influence to retain talent/companies in Scotland.

Good Practice

A number of project practices or components were identified as possible examples of good practice and worthy of consideration for wider application. The Informatics in Scotland component was awarded a best practice Oscar by ERDF in November 2010 for best use of European Structural funds for example. Wider examples mentioned (with one mention unless otherwise indicated) were:

- the MIT (5) and, to a lesser extent, Cambridge (2) courses were considered to be expensive, but very good value for money in terms of the quality of provision and the outcomes for participants;
- the delivery model, especially partnership working and the devolution of power from funders to the ProspeKT board and through this to the delivery team (4). This model was used as the blueprint for the contract to deliver BioQuarter;
- that the resource available had provided the projects with freedom to take risk, and to focus on making high quality provision that can make a difference (3);
- the tight sectoral focus was seen as a big advantage in ensuring that all provision was highly relevant to many operating in the sector;
- the generally open and positive attitudes and approach of UoE toward licensing IP which has helped in negotiating licensing deals for spin-outs;
- networking events and opportunities were a key component in helping to build a community of interest.

5.6.9 Benefits and Value for Money

Wider Role

Respondents were asked whether the projects had played a role in generating wider benefits such as building the reputation of the SoI, leveraging other investment, etc Responses were that they:

- played a strong and valuable support role to SDI in seeking to attract inward investment (7);
- enhanced the SoI/UoE profile generally and awareness of its specific strengths in informatics (6);
- brought substantial and sustained cultural and attitudinal change toward entrepreneurship among staff and students of the SoI (4);
- attracted specific inward investments such as EADS (3);
- through the Forum acted as a magnet for building communities of interest (3); and
- helping to build the informatics cluster, although much remains to be done (3).

Wider Benefits

There was limited comment on the extent to which the projects had achieved the wider benefits, defined in terms of the indicators included in the revised monitoring and evaluation framework for the projects. Relatively few of these indicators had been applied in practice which meant that there was little awareness of either the range of indicators or the extent to which the types of benefits they define had been achieved.

Comments offered were that:

- benefits (not quantified) had been achieved in terms of attracting research and student talent, improved attitudes to entrepreneurship and commercial activity among academics, and a better understanding of business needs for the UoE; and
- the projects had not been successful in establishing many industry collaborations.

One theme mentioned more frequently, and which was raised mostly by the UoE and ProspeKT representatives, was the importance of the projects in enhancing the SoI's ability to attract research funding.

Given the importance attached to achieving impact from research funding, the projects' had proven extremely useful in demonstrating the SoI/UoE commitment to engaging with the business community and pursuing commercialisation opportunities, and in being able to demonstrate a track record of achievement.

Value for Money

There was a broad split between:

- the seven respondents who reported that the projects represented good or very good value for money. Three mentioned that while the projects might be considered to be on the "expensive side" they had achieved in proportion to the scale of inputs. A further two said that the positive changes to the culture and attitudes within the SoI had in themselves been sufficient to justify the investment as this was a change that would be sustained and built upon to generate a stream of future benefits; and
- the four respondents who felt unable to comment or that it was still too early to tell.

5.6.10 The Future

Recommendations

Respondents were asked to suggest recommendations for change that would improve Project performance. The main responses were that:

- all interviewees felt that the projects should continue in some form or other, and that SE should continue to provide financial support;
- business leadership and management capacity remain key issues constraining the development of the sector/cluster and this should be reflected in any future service portfolio;
- there is a need for better integration with what others are doing, especially SE and ERI, and in relation to aftercare and follow up to event participation;
- some emphasis should be placed on working more closely with individual new starts/spin-outs, and for an extended time period, either directly or via wider partner provision. In general, there is a need for the ProspeKT team to review its approach to working with new starts and spin-outs;

- future provision must balance the current emphasis on technical feasibility and development with increased emphasis on identifying longer-run development strategies and on establishing the market feasibility of new products/services;
- while a future project must continue to assist SDI, there remains a need to better coordinate and prioritise requests for assistance on specific inward investment prospects;
- the scope and depth of performance monitoring must be improved and move beyond the apparent emphasis on new starts and spin-outs assisted;
- more effort is needed on SME engagement in collaborative projects with the SoI;
- there is a need for more realism with respect to the projects' ability to raise income from service participants or via joint ventures; and
- the issue of succession planning should be addressed, given the critically important role of the Director of Commercialisation's post.

Move to Informatics in Scotland

Respondents were asked to identify the benefits and challenges arising from the move to "Informatics in Scotland". This move was seen by all respondents (all of whom were aware of the new project) as the logical extension to the projects, especially given the opportunities to capitalise on the qualities of other members of SICSA and to widen the population of SME beneficiaries. However a number of challenges were identified, comprising:

- academic willingness to engage may remain an issue, especially for some SICSA members;
- difficulties in managing the distribution of effort with two respondents commenting that there needs to be a recognition that not all SICSA members can be engaged fully and that in some cases their involvement in specific activities would not be appropriate. This might lead to "political" problems amongst members; and
- managing the change to an even wider geographical distribution of effort.

6. Economic Impact Assessment

This Section presents the Economic Impact Assessment (EIA), which reports the quantitative impacts generated by the Project.

Please note, the impact assessment focuses solely on the impacts generated through direct company engagement. While we recognise that the project will likely have generated further economic impact through hosting international events (bringing people into Scotland) and supporting new research activity – as per SE guidance we have not considered these additional impacts, although this will undoubtedly underestimate the wider impact of the Project.

A total of 35 beneficiary businesses responded to the telephone and online survey (33 telephone and 2 online). It should be noted that of the 35 businesses that responded five were start-up/spin out companies, and as such, received a greater intensity of support e.g. working with a BDE.

Impacts have been assessed over a ten year period (2006/07 – 2016/17 inclusive), although please note, since the Project started in 2006/07 we have assumed no impacts in the first year.

6.1 Method

The method used for our assessment is based on internal Scottish Enterprise Guidance Notes and using the standard additionality calculator. The impacts are reported at the Scottish level and take account of employment (created and safeguarded) and Gross Value Added, (GVA), created and safeguarded.

The additional effect of the Project is the difference between what would have happened anyway (i.e. the reference case) and the benefits generated by the support (i.e. the intervention case), adjusted for displacement, leakage, substitution, and multiplier effects. This is demonstrated in Figure 6.1 below, with definitions of the additionality factors outlined in Table 6.2.

Figure 6.1: Approach to Assessing Project Level Additionality

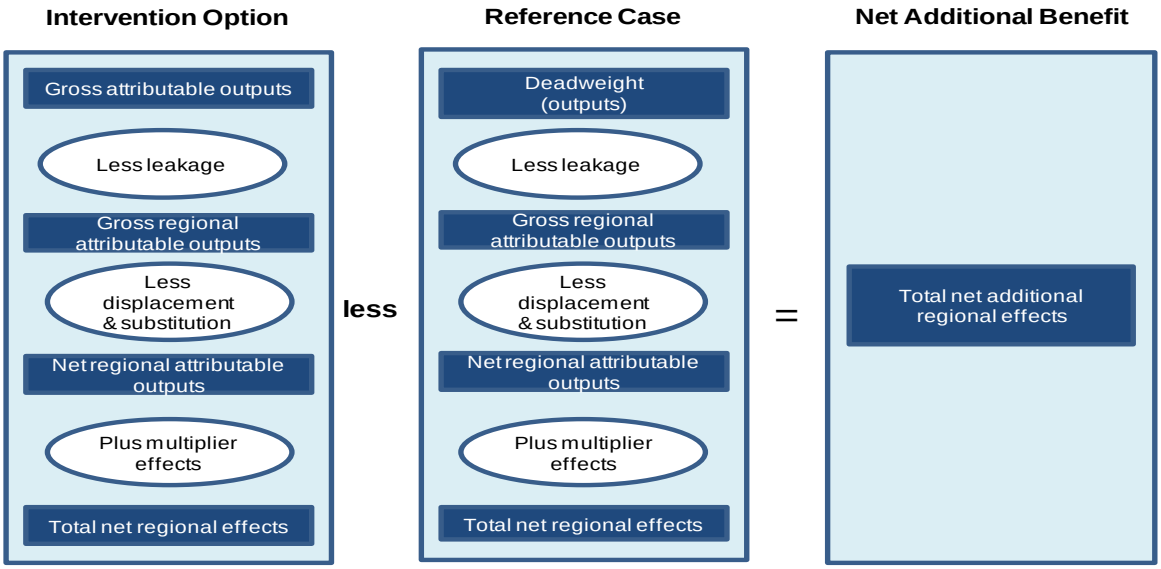


Table 6.1: Additionality Logic Chain

Term	Definition
The Intervention Option	This is the level of gross outputs and outcomes generated through the intervention, i.e. impacts that would not have happened in the absence of the intervention.
The Reference Case	This is the level of forecast outputs and outcomes that would be secured if the individual/business did not participate in the project.
Deadweight	The proportion of total impact (turnover and employment) that would have occurred anyway.
Leakage	The number or proportion of impact that benefits economies outside Scotland.
Substitution	This is a negative effect that arises when a firm substitutes one activity for another to take advantage of public sector support.
Displacement	The number or proportion of impacts that reduce value elsewhere in Scotland. These effects can occur in product markets (e.g. amongst non-assisted business competing in the same market) or in factor markets (e.g. in the labour market).
Multipliers	This is further economic activity (e.g. jobs, expenditure or income) associated with additional income to those employed by the project (income multipliers), with local supplier purchases (supplier multipliers) and with longer term development effects (dynamic effects e.g. induced effect).

Additionality factors were determined on a **case-by-case basis**, and therefore, only those that reported gross attributable impacts were included.

6.2 Gross Employment and GVA Impact

We were provided with a database of businesses that received varying levels of support through the Project. The respondents were then chosen at random to ensure a representative sample. The respondents were asked a number of questions aimed at establishing levels of turnover and employment (see Appendix A, beneficiary questionnaire).

In order to convert gross turnover to GVA, turnover to GVA ratios[39] were used on a company by company basis, based on a 'best fit' sectoral analysis.

Based on SE guidance, the optimism bias used within our assessment is taken from the R&D and Innovation Support Grant Evaluation undertaken by Frontline Consultants (2010).

An optimism bias of 34% was applied to all future impacts reported (those impact predicted to occur after 2011) i.e. only 66% of the future impacts were counted. This reflects the fact that individuals and businesses are typically over-optimistic about future prospects/impacts.

The gross impacts are reported at the Scotland level and include:

- employment created/safeguarded from 2006/07 – 2016/17; and
- GVA created/safeguarded from 2006/07 – 2016/17.

Table 6.3 details the gross employment and GVA impact of supported businesses (2006/07 – 2016/17.

Table 6.3: Gross Employment/ GVA Impact

	06/07 Yr 0	07/08 Yr 1	08/09 Yr 2	09/10 Yr 3	10/11 Yr 4	11/12 Yr 5	12/13 Yr 6	13/14 Yr 7	14/15 Yr 8	15/16 Yr 9	16/17 Yr 10
Employment *	-	8	20	64	88	79	79	79	119	119	249
Employment	-	8	20	64	88	119	119	119	181	181	378
GVA (£m)*	-	0	0.15	1.42	1.31	1.54	1.54	1.54	7.86	7.86	15.91
GVA (£m)	-	0	0.15	1.42	1.31	2.33	2.33	2.33	11.91	11.91	24.10

N = 35, *= taking account of optimism bias

[39] Scottish Annual Business Statistics, 2009

The key gross impacts at year 10 are outlined below:

- employment:
    - with optimism bias - 249
    - without optimism bias – 378; and
- GVA:
    - with optimism bias - £15.91m
    - without optimism bias - £24.1m.

6.3 Net Employment and GVA Impact

In order to calculate the net impacts of the Project, a number of questions were asked to identify deadweight, displacement and leakage. Multipliers were collected for each company based on a 'best fit' 4 digit SIC code, and then matched with the appropriate Scottish Government Input-Output Multiplier for GVA and employment.

As highlighted above, the additionality factors were applied on a case-by-case basis to those beneficiaries that quantified gross impacts.

Please note, the survey questionnaire asked respondents to identify impacts that only occurred in Scotland, therefore implying any leakage has already been accounted for. Further, no evidence of substitution was found in the evaluation and as such, has been assumed to be zero in the additionality calculations.

In order to move from gross impacts to net additional impacts, the additionality factors of deadweight, displacement and multipliers are considered.

Table 6.4 details the additionality factors of employment and GVA.

Table 6.4: Additionality Factors – Employment /GVA (2006/07 – 2016/17)

	06/07 Yr 0	07/08 Yr 1	08/09 Yr 2	09/10 Yr 3	10/11 Yr 4	11/12 Yr 5	12/13 Yr 6	13/14 Yr 7	14/15 Yr 8	15/16 Yr 9	16/17 Yr 10
Employment											
Deadweight	-	80%	69%	71%	57%	50%	50%	50%	48%	48%	51%
Displacement	-	8%	18%	20%	16%	8%	8%	8%	9%	9%	5%
Multipliers	-	64%	64%	64%	62%	62%	62%	62%	64%	64%	59%
Overall Additionality	**-**	**29%**	**42%**	**40%**	**59%**	**33%**	**33%**	**33%**	**37%**	**37%**	**35%**
GVA											
Deadweight	-	0%	28%	89%	70%	52%	38%	38%	52%	52%	55%
Displacement	-	0%	4%	12%	32%	21%	7%	7%	9%	9%	7%
Multipliers	-	0	1.61	1.61	1.62	1.62	1.61	1.61	1.65	1.65	1.63
Overall Additionality	**-**	**-**	**113%**	**15%**	**36%**	**26%**	**59%**	**59%**	**27%**	**27%**	**24%**

Note: For those businesses that were unable to identify the additional impact of the Project (deadweight) we have assumed the Project had no impact i.e. 100% deadweight.

The overall additionality of the Project ranges from (29% - 59%) for employment and (15% - 113%) for GVA. The average 10 year additionality (gross to net factor) is outlined below:

- employment - 38%; and
- GVA - 39%.

Applying the above additionality co-efficients, the impact assessment has identified the Project has generated/ is predicted to generate the following net additional impacts from the 35 respondents, see Table 6.5 and Table 6.6.

Table 6.5: Employment Gross to Net Adjustment

	06/07 Yr 0	07/08 Yr 1	08/09 Yr 2	09/10 Yr 3	10/11 Yr 4	11/12 Yr 5	12/13 Yr 6	13/14 Yr 7	14/15 Yr 8	15/16 Yr 9	16/17 Yr 10
Intervention Option											
Gross impact	-	8	20	64	88	119	119	119	181	181	378
Optimism Bias	-	0	0	0	0	40	40	40	62	62	129
Displacement	-	1	4	13	14	10	10	10	16	16	18
Multipliers	-	5	10	32	46	43	43	43	66	66	136
Net impact	**-**	**12**	**27**	**83**	**119**	**112**	**112**	**112**	**169**	**169**	**368**
Reference Case											
Deadweight*	-	6	14	46	50	59	59	59	87	87	191
Displacement	-	0	3	10	8	6	6	6	11	11	13
Multipliers	-	4	7	22	25	33	33	33	48	48	101
Net impact	**-**	**10**	**19**	**58**	**67**	**86**	**86**	**86**	**124**	**124**	**279**
Total Net Impact	**-**	**2**	**8**	**26**	**52**	**26**	**26**	**26**	**44**	**44**	**88**

*Includes optimism bias

Table 6.6: GVA Gross to Net Adjustment (£m)

	06/07 Yr 0	07/08 Yr 1	08/09 Yr 2	09/10 Yr 3	10/11 Yr 4	11/12 Yr 5	12/13 Yr 6	13/14 Yr 7	14/15 Yr 8	15/16 Yr 9	16/17 Yr 10
Intervention Option											
Gross impact	-	0.0	0.1	1.4	1.3	2.3	2.3	2.3	11.9	11.9	24.1
Optimism Bias	-	0.0	0.0	0.0	0.0	0.8	0.8	0.8	4.0	4.0	8.2
Displacement	-	0.0	0.0	0.2	0.4	0.2	0.2	0.2	1.0	1.0	1.6
Multipliers	-	0.0	0.1	0.8	0.6	0.8	0.8	0.8	4.4	4.4	9.0
Net impact	**-**	**0.0**	**0.2**	**2.0**	**1.4**	**2.2**	**2.2**	**2.2**	**11.3**	**11.3**	**23.3**
Reference Case											
Deadweight*	-	0.0	0.0	1.3	0.9	0.9	0.9	0.9	6.2	6.2	13.3
Displacement	-	0.0	0.0	0.2	0.3	0.1	0.1	0.1	0.7	0.7	1.4
Multipliers	-	0.0	0.0	0.7	0.4	0.5	0.5	0.5	3.6	3.6	7.5
Net impact	**-**	**0.0**	**0.1**	**1.8**	**1.0**	**1.3**	**1.3**	**1.3**	**9.1**	**9.1**	**19.4**
Total Net Impact	**-**	**0.0**	**0.2**	**0.2**	**0.5**	**0.9**	**0.9**	**0.9**	**2.1**	**2.1**	**3.9**

*Includes optimism bias

The impact assessment has identified the Project has generated/ is predicted to generate the following net additional outputs from the 35 respondents:

- net additional impacts to date, 2010/11 (Yr 4):
    - 52 net additional jobs
    - cumulative net Present Value (PV) GVA of £0.9m; and
- net additional impacts by 2016/17:
    - 88 net additional jobs created
    - cumulative net PV GVA of £11.7m[40].

Grossing Up Net Additional Impacts

To calculate the impact of all the beneficiaries receiving support through the Project, it is necessary to 'gross up' the impacts (of jobs and GVA) to reflect the entire population that received support.

In order to provide a robust assessment grossing up has been undertaken at two levels:

- start-ups/spin -outs – 5 businesses interviewed out of a total sample of 38, generating a response rate of 13.2%. This generates a grossing up factor[41] of 7.6; and
- other supported businesses – 30 businesses interviewed out of a total sample of 535, generating response rate of 5.6%. This represents a grossing up factor of 18.

In addition, outliers were removed from the sample when grossing up and added back in to the total grossed up impacts[42]:

- employment:
    - year 8 – one respondent = 50 gross jobs
    - year 9 – one respondent = 50 gross jobs
    - year 10:
        - one respondent = 80 gross jobs
        - one respondent = 100 gross jobs;

[40] Please note, the cumulative GVA has been discounted for future years by 3.5%.and past years have been inflated using the GDP deflator as recommended by HMT to generate Present Values (PV).

41 Please note, the grossing up factor is calculated as the inverse of the response rate i.e. 100%/response rate.

[42] Please note, the figures quoted are the gross attributable impacts and the optimism bias has not been discounted.

- GVA:
    - year 8:
        - one respondent = £2.1m gross GVA
        - one respondent = £2.4m gross GVA
        - one respondent = £2.7m gross GVA
    - year 9:
        - one respondent = £2.1m gross GVA
        - one respondent = £2.4m gross GVA
        - one respondent = £2.7m gross GVA
    - year 10:
        - one respondent = £2.7m gross GVA
        - one respondent = £2.8m gross GVA
        - one respondent = £3.4m gross GVA
        - one respondent = £5.5m gross GVA
        - one respondent = £6.7m gross GVA

Grossing up on this basis generates the following impacts as presented in Table 6.7.

Table 6.7: Grossed Up Net Additional Impact

	06/07 Yr 0	07/08 Yr 1	08/09 Yr 2	09/10 Yr 3	10/11 Yr 4	11/12 Yr 5	12/13 Yr 6	13/14 Yr 7	14/15 Yr 8	15/16 Yr 9	16/17 Yr 10
Employment	-	17	109	398	824	340	340	340	429	429	983
GVA (£m)	£-	£-	2.9	3.2	7.8	12.3	12.3	12.3	19.8	19.8	18.5

The impact assessment has identified that the Project has generated/ is predicted to generate the following grossed up net additional outputs:

- net additional impacts to date, 2010/11 (Yr 4):
    - 824 net additional jobs
    - cumulative GVA of £13.9m; and
- net additional impacts by 2016/17:
    - 983 net additional jobs created
    - cumulative GVA of £109.1m.

6.4 Return on Investment

In order to make an assessment of value for money i.e. what returns the Project generates for the public sector investment, we compare the total Project costs over the evaluation period set against the total net PV cumulative GVA generated.

The total Project costs are reported as £11.8m (undiscounted) over the Project period. Table 6.8 presents the total costs set against the net GVA impacts generated through the Project.

Table 6.8: Return on Investment (£m)[43]

	06/07 Yr 0	07/08 Yr 1	08/09 Yr 2	09/10 Yr 3	10/11 Yr 4	11/12 Yr 5	12/13 Yr 6	13/14 Yr 7	14/15 Yr 8	15/16 Yr 9	16/17 Yr 10	Total
Revenue costs	£2.6	£2.0	£2.0	£2.5	£2.7	-	-	-	-	-	-	**£11.8**
Inflator	1.10	1.08	1.05	1.03	1.00	0.97	0.93	0.90	0.87	0.84	0.71	-
Inflated costs	£2.87	£2.16	£2.05	£2.58	£2.71	£0.0	£0.0	£0.0	£0.0	£0.0	£0.0	**£12.4**
Discount factor	1	0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76	0.73	0.71	-
Discounted costs	£2.87	£2.08	£1.91	£2.33	£2.36	-	-	-	-	-	-	**£11.5**
Net impacts	-	-	£2.9	£3.2	£7.8	£12.3	£12.3	£12.3	£19.8	£19.8	£18.5	**£109.1**
Discounted net impacts	-	-	£2.7	£2.9	£6.8	£10.4	£10.0	£9.7	£15.1	£14.6	£13.1	**£85.3**

Overall, the Project is forecast to generate cumulative net PV GVA of £85.3m over the 10 year period. If we set this against the discounted Project costs of £11.5m, the Project generates a return on investment of £7.40:1. This means that for every £1 Scottish Enterprise invested in the Programme, it generates £7.40 GVA in the Scottish economy.

In order to provide an element of benchmarking we have compared the Project with similar public sector supported knowledge transfer and sector targeted interventions - Enabling Technologies and other sector specific projects. The evaluation evidence identifies that the comparable interventions deliver Return on Investment ratios of 4.87:1 over a ten year period.

[43] As per SE guidance notes, all costs have been uprated to PV (2011) values using the GDP Deflators series and subsequently discounted using the HMT discount rate of 3.5% for costs and impacts that occur after the Project start date / base year (2006).

Therefore, based on the impact appraisal evidence presented above, the ProspeKT/IV Project delivers a higher ROI than comparable projects over the same period.

Scottish Enterprise Apportionment

Please note, the above assessment considers the Project as whole, however, in order to assess the impacts attributed to the Scottish Enterprise investment we need to assign an attribution factor. Impact attribution has been linked directly with investment expenditure i.e. 1% of total Project costs = 1% of the total Project impact.

Scottish Enterprise has contributed funding support of £4.9m over the period representing 42% of total Project expenditure.

Therefore, based on the above, the Scottish Enterprise investment has helped generate the following impacts:

- employment:
    - Gross jobs (at year 10) – 983
    - Net jobs (at year 10) – 413; and
- GVA:
    - Gross cumulative GVA (undiscounted) - £124.2m
    - Net cumulative PV GVA - £35.8m.

7. Conclusions and Recommendations

7.1 Introduction

This Chapter presents the main conclusions and recommendations from the evaluation. These are preliminary at this time, and will be subject to review in light of Client feedback or other information being made available.

7.2 Conclusions

For ease of exposition, the main study conclusions are structured around the evaluation objectives. For each we outline the study objective, relevant findings and overall conclusions.

Rationale

Study Objective: Examine the Projects' strategic rationale over time, the extent to which activity has promoted market adjustment and whether the rationale remains valid

The evaluation has identified two key over-arching market efficiencies/failures that the Project is addressing:

- information deficiencies and externalities relating to business start-up and growth (demand side); and
- information deficiencies and externalities relating to university engagement (supply side).

Business Start Up and Growth

There are a number of well documented information deficiencies that negatively impact upon the demand side i.e. private sector enterprises. These most commonly relate to:

- businesses being unaware of what support they need, who to approach or where to access support, this issue may be particularly acute for pre-start and business start ups. A good example of this would be the private sectors' awareness of the expertise in informatics in the SICSA universities – covering specific technology areas and research strengths;

- the costs to individual companies (both financial and time) of obtaining commercial/market information or engaging with universities, particularly pre-start and start-up businesses, may be seen to generate insufficient benefits (returns);
- there are perceived risks about entering new markets and investing in R&D – with businesses unsure of the returns, an issue that has intensified since the onset of the economic recession; and
- potential investors may not be able to access or able/willing to pay for information to fully assess the investment potential.

In terms of externalities, this relates to intangible costs or benefits (positive or negative) that are not usually priced when businesses make investment decisions. Within established businesses there may be a reluctance to invest in innovative and new technology or processes that could easily be adopted or 'poached' by their competitors, or may not give a suitably immediate return on investment – leading to underinvestment.

University Engagement

On the supply side i.e. universities engaging with, and providing tailored support to the private sector. HEIs and academics often fail to realise the commercial potential of both their research and working with industry as a result of information deficiencies.

There is also an issue relating to academics lacking the necessary skills or entrepreneurial background/experience to successfully engage with industry.

In terms of externalities, these relate mainly to academics and HEIs not recognising the reputational value and benefits of collaboration and how this can also add value to and enhance their own R&D activities.

Market Adjustment

A review of the evidence collated through stakeholder, and business beneficiary consultations and from examining wider documents, including a review of informatics in Scotland by SE and the interim evaluation report would suggest that these market efficiencies/failures persist.

Based on feedback from consultees, the Project has made some gains in reducing/removing market failures and barriers for engagement – particularly for businesses accessing expertise relating to start-up and growth.

However, feedback also suggests these market failures continue to persist, particularly around investment in R&D and business entrepreneurship

Conclusion: The key market efficiencies/failures that are constraining activity relate to both demand (business) and supply side (university) issues – information deficiencies and externalities. These market efficiencies have remained throughout the lifetime of the Project, and therefore, the original rationale for intervention remains valid.

While the Project has made some progress in removing these market efficiencies/failures they continue to persist in both the demand and supply sides.

Policy Fit

Study Objective: Examine how the Project fits with and has contributed to the wider policy agenda. This extends to policies and strategies in place at the time of the funding approval and during the evaluation period, as well as the current policy environment as best captured by the recently updated Government Economic Strategy.

Overall, the Project has continued to demonstrate a strong fit with overarching national, UK and European policy guidance. In particular, the Project contributes to the objectives of the following key economic and technology/innovation policy documents:

GES 2007 and 2011:

- strengthening links between the research base and business innovation;
- promoting innovation and commercialisation as key drivers of productivity;
- creating a supportive business environment that is attractive to growth companies to help support/drive future growth; and
- enabling companies to take advantage of opportunities in new international growth markets.

Scottish Enterprise Strategies and Business Plan (2011 - 14)

The most recent SE Business Plan is closely aligned with the GES and similar to previous Plans, has a focus on building globally competitive; companies, sectors and business environment.

However, the most recent plan has a greater emphasis on joint working with universities, particularly where this results in additional business acidity through existing companies or new business creation.

The Enabling Technologies Strategy (2009) was launched by SE to help bridge the capacity gap between the private sector and R&D and support the commercialisation of innovative products and processes. Within this, informatics is identified as a key sub sector in Scotland.

Scottish Funding Council Corporate Plan (2009 – 12)

The SFC, as one of the principal funding bodies of the HEI sector identifies the exchange of knowledge and expertise with business, public and third sector organisations which will enhance competitiveness and promote economic growth as a priority outcome. In addition, the Plan recognises the strength in the Scottish academic and R&D base and puts an emphasis on further engagement with the private sector as a way of stimulating innovation and economic growth.

UK and European Policy

Further, the Project also ties in with wider pan European policies:

- A Strategy for Sustainable Growth (2010) which has lead to investment of £200m and the formation of Technology and Innovation Centres (TICs – subsequently renamed Catapault Centres; and
- Europe 2020:
    - Strengthen the 'innovation chain' including enhancing industry-academia collaboration.

Conclusion: The Project continues to have a sound fit with, and contributes to overarching economic and R&D/innovation policy objectives. In particular, there has been an increased focus on the benefits of supporting industry-university collaborations as a mechanism for driving innovation and sustainable economic growth.

Linkages and Dependencies

Study Objective: Examine the linkages and dependencies between the Projects' various components and specifically between ProspeKT and Informatics Ventures.

ProspeKT and Informatics Ventures were effectively operated as a single project under the overarching ProspeKT brand. This was appropriate to the extent that ProspeKT had already been operating for two years before Informatics Ventures was introduced, and awareness of the Project had been built among the target communities of interest, at least in Edinburgh and the Lothians.

The introduction of Informatics Ventures did present some management challenges, but the evidence is that this project:

- enabled the delivery of complementary services, where monitoring data imply that new start-ups and spin-outs emerging from ProspeKT activity were relatively more intensive users of Informatics Ventures services;
- widened the geographic scope of activity to encourage and enable participation by other universities and business communities, as evidenced by the data on university participation and the geographic spread of participating businesses; and
- was important in helping the ProspeKT Delivery Team to achieve its overall objectives and targets.

Feedback from the businesses survey identified that generally businesses were unaware of the differences or able to distinguish between the ProspeKT and Informatics Ventures projects. However, those that have accessed support through both projects did identify that they received a cohesive and complimentary suite of support and that there were no significant gaps in provision.

Conclusion: There was a high degree of complementarity between ProspeKT and Informatics Ventures, and the latter made available services that were of importance to existing clients, in securing wider access, and achieving objectives and targets. This is indicative also of a high degree of project linkages and interdependency.

Progress Against Objectives and Targets

Study Objective: Examine the extent to which the Project has achieved its SMART objectives and targets, and explain observed variances.

The projects were set a wide range of targets and the review of financial and performance monitoring data in Section 4 demonstrates that:

- expenditure was almost on target, with a small underspend of less than 1% of budget. Much of the explanation of this appears to lie in the fact that SE retained £90,000 to finance economic impact and evaluation activity; and
- the projects were very successful in meeting or exceeding all but a few of the targets set. To the extent that these provide an accurate reflection of what the projects set out to achieve, then this can also be taken to imply that excellent progress was made towards meeting objectives. The few targets that were not achieved were not missed by any significant margin.

The first of these findings reflects well on the projects' financial management and, in part, reflects positively the high degree of autonomy in decision making that was devolved to the ProspeKT Board. Also, partner commitment to the projects is to be commended, especially the flexibility shown by the UoE in increasing its financial contributions to compensate for the loss of some ERDF support.

The second conclusion also reflects positively on the projects' management and implementation arrangements. While a large array of targets were set, the ProspeKT Board's focus on priority measures was appropriate, although there may be some subsidiary questions around the range of indicators used for this purpose.

Perhaps the main "failing" was in relation to the number of license agreements reached with Scottish companies. This was explained by the ProspeKT Delivery Team as more a reflection on the capacity of Scottish business to absorb and exploit the IP emanating from the SoI than as a failure of the Projects to seek to achieve such outcomes.

To balance this, many targets were exceeded by a large margin, and in the main this reflected that many services proved much more popular that envisaged originally.

There is, however, a need to caveat these findings to the extent that the monitoring data could not be verified during the study fieldwork, due to restricted access to the information held on individual organisations, and some concerns about the detail of monitoring arrangements.

Conclusion: The projects were very successful in achieving most of the financial and performance targets set. This indicates that:

- management and delivery arrangements were largely fit for purpose;
- the projects made good progress towards satisfying their objectives; and
- the projects made a substantial contribution to furthering the development of the informatics sector in Scotland.

Wider Project Benefits

Study Objective: Examine wider project benefits, especially those of importance to the SG and SE, and identifying those accruing to the corporate and academic sectors.

The review of monitoring data and the study fieldwork identified a number of wider project benefits that have accrued.

From an SE and SG perspective, perhaps the most significant benefit has been the extent to which the projects have raised awareness of, and interest in, pursuing the enterprise option amongst a substantial population of students and academics. Given their backgrounds, this might also be expected to facilitate further the general policy aim of encouraging the emergence of new technology based firms in key sectors where there exists substantial market opportunity. Also, from SE's and UoE's perspective, their experiences of partnership working were mainly positive, and good relationships have been established.

From the perspectives of the UoE and SoI, other reported wider benefits include:

- improved awareness of and interest in commercialisation activity amongst academic staff. While the earlier Edinburgh Stanford Links project was important in starting this process, ProspeKT and Informatics Ventures have built substantially on earlier achievements;

- an important contribution to the SoI's ability to access research council funding, as the projects could be used to demonstrate that the SoI was serious about engaging with business and generating impact;
- an enhanced reputation for teaching, research and commercialisation that will be of value in attracting the highest quality staff and students, and interest from the business community in exploring knowledge transfer opportunities; and
- extension of its networking and contacts with other SICSA members.

For businesses, the key wider benefits identified were:

- the opportunity to develop networks and contacts and the building of strong communities of interest;
- improved awareness of the capacity and competencies of the SoI, the benefits of engaging with academia, and how to go about this; and
- the survey feedback identified the following general benefits for businesses:
    - networking benefits – 88%
    - knowledge benefits – 68%
    - finance benefits – 59%
    - R&D/innovation benefits – 56%
    - sales benefits – 41%.

Conclusion: The projects have generated a number of wider benefits for SG, SE, UoE and the business community. These include improved academic attitudes to commercialisation, relationship building, enhanced reputation, enhanced networking and contacts, and helping to build a cohesive community of interest.

For businesses the key benefits centred around formal and informal networking and an increased awareness of how informatics/university engagement can support services.

Economic Impact Assessment

Study Objective: Examine project benefits including a full economic impact assessment, in line with the guidance issued by SE and HM Treasury. This is to include actual and forecast, gross and net GVA, turnover and employment impacts, using prescribed techniques, adjustments and time horizons.

The key economic impacts the Project is forecast to generate are based on feedback provided through the business beneficiary survey and using SE impact appraisal guidance notes and excel model, the results are reported below:

Net Impacts

- net additional impacts to date, 2010/11 (Yr 4):
    - 824 net additional jobs
    - cumulative Present Value (PV) GVA of £13.9m (discounted); and
- net additional impacts by 2016/17:
    - 983 net additional jobs created
    - cumulative PV GVA of £85.3m (discounted).

Conclusions: The overall net additional effect of the Project is estimated at 983 jobs and GVA of £85.3m over the ten year evaluation period, an impact ratio of 1: 7.4.

Usage, Quality and Demand

Study Objective: Examine usage, quality and demand of/for project services across a range of stakeholder and target groups. This is to include stakeholders'/beneficiaries' perceptions of project value, performance, customer satisfaction, responsiveness, consistency, etc. It is also to assess sources of enquiries, referrals, service gaps, possible improvements, and potential market size.

The beneficiary survey identified that overall the businesses receiving support were satisfied, and the Project helped them to achieve both business and technical objectives - feedback from stakeholders and a review of monitoring data supports this.

If we examine this in more detail we can see that:

- the majority of respondents were initially made aware of the Project through Edinburgh University e.g. being a student or staff, word of mouth from a personal contact;
- 73% were satisfied/very satisfied with their initial contact/early engagement;
- 87% and 75% reported that all/some of their business and technical objectives had been met respectively;
- the MIT events and informal networking opportunities like TechMeetup were identified by beneficiaries as the 'most valuable' elements of the support;
- strengths:
    - creation of an informatics community
    - quality of events and speakers
    - targeted support
- weaknesses
    - inflexible IP policy
    - lack of transparency and communication with regards to the eligibility criteria for certain elements of the support
    - lack of aftercare or follow up support provision
- areas for improvement:
    - content of events needs to evolve as markets change
    - develop support and target events for specific key sub sectors within informatics
    - look at potential of linking the Project with other HEI's across Scotland.

Conclusions: Overall, both stakeholders and beneficiaries reported high levels of satisfaction with the service. Beneficiaries in particular were able to identify specific areas where the support had been most valuable – MIT workshops and informal networking through TechMeetup, etc.

However, it should also be noted that in terms of usage and demand, some beneficiaries identified issues with the communication and transparency of the support and therefore, may not have been able to access the full range of support services available to them.

Management and Delivery Arrangements

Study Objective: Examine the effectiveness of management, communications, and reporting processes, the use of delivery contractors, identification of what has worked well, less well, and recommended improvements.

Few issues were identified regarding management and delivery arrangements. There was some feedback from companies regarding a perceived lack of transparency regarding what support they might be able to access, but this applied in only a few cases.

Stakeholders were strongly of the view that the projects had been well managed, with appropriate governance, management and reporting procedures established early on. Indeed, the projects' management was highly praised, with much of the credit for this being down to the qualities of the Director, and the governance/delivery model was highlighted as a potential best practice exemplar.

Conclusions: Stakeholders were strongly of the view that the projects had been well managed with appropriate governance, management and reporting procedures established. There was some limited criticism of the transparency of communications with beneficiaries.

Management Information and Performance Measures

Study Objective: Examine the effectiveness of management information and performance measures applied, focusing on their appropriateness and the strengths and weaknesses of systems and procedures used to generate data and information.

The projects were set a wide range of targets and these formed the basis for regular performance reviews by the ProspeKT Board. Feedback from the ProspeKT Delivery Team and from Board Members also confirmed that the performance data were an important influence on decisions regarding the selection of activities and the allocation of funding. This is an appropriate use of performance monitoring information.

Given the range of targets set, there were also efforts to focus on what the Board considered to be "Priority Measures", and this decision and the indicators selected were appropriate. In any case, data on other important indicators, such as the number of new-starts, were captured and available for review by the Board and funders.

This is not to say that there were no weaknesses in the indicators selected, or in systems and procedures. For example:

- the number of targets set was excessive. It is important to strike an appropriate balance between generating information that is useful for management purposes and providing clear and unambiguous information that will have a positive influence on decision-making;
- no information was available on how targets had been set. This is important as in any evaluation a finding that targets have not been achieved can reflect either poor performance and/or that targets were overly ambitious. Likewise, overachievement may reflect an overly prudent target rather than that the project performed well. The absence of an audit trail for target setting makes it difficult to comment on the relative importance of the different explanations;
- there was no guidance issued on monitoring systems and procedures, although this was suggested by the interim evaluation as an appropriate action. Instead, the approach to monitoring was informal and this raises some concerns regarding the consistency and accuracy of the data collected and reported.

  Similarly, while the interim evaluation suggested that targets be recast, this was not done as it was considered to be too late in the delivery period to materially affect management and delivery behaviour; and

- the failure to secure business agreement that performance information and other details be shared with evaluators meant that the validity of monitoring data could not be assessed through fieldwork. It also impacted negatively on the conduct of study fieldwork.

Conclusion: Although performance monitoring data had an important and appropriate influence on decision-making, the systems and procedures in place were not wholly fit for purpose.

Project Learning

Study Objective: Examine both project-specific and transferable learning on what has or hasn't worked well.

See Project recommendations in Section 7.3.

Equalities Agenda

Study Objective: Examine the contribution to the equity and equalities agenda, comprising the review of any Equality Impact Assessment, identification of areas for further review, assessment of the project's contribution to rural diversification and growth, and identification of its contribution to sustainable development.

There was limited data available to fully assess the Projects' contributions to the equity and equalities agenda. For example, there were no monitoring data available for beneficiaries in terms of characteristics such as gender, ethnicity, disability, etc. In addition, no separate Equality Impact Assessment was conducted either before or during Project implementation.

It is important to point out, however, that discussions with stakeholders and businesses did not identify any issues surrounding access to services, beyond the necessity to meet obvious eligibility criteria or demonstrate that participation was justified[44].

The ProspeKT Delivery Team also pointed out that its operations were subject to the wider equality and equity policies of the UoE which requires an equal opportunities approach be implemented for all relevant university activities.

[44] For example, all applicants for MIT courses were subject to stringent prior appraisal, including the need to justify participation to an approvals panel.

Further, there was some effort to target support at specific groups, such as through the series of leadership and other courses for aspiring female entrepreneurs:

- funding for the 'Girl Geeks' – talks, and networking events specifically targeted at women in computer science and women entrepreneurs;
- specific targeting of Women as Entrepreneurial leaders to gain awareness and hopefully inspire activity; and
- a specially organised Women Entrepreneurial Leadership seminar as part of the MIT series.

In terms of the Projects' contributions to the rural agenda, again there was no specific spatial targeting beyond the earlier stages when ProspeKT did tend to focus on the relevant communities of interest within Edinburgh and the Lothians. Some postcode data on participants was made available which showed an unsurprising bias in favour of the major conurbations in Scotland, but it also showed that through Informatics Ventures participation had been widened geographically to include most parts of Scotland.

Sustainable development, in terms of the carbon agenda, was not a major driver of project activity although again the operations of the ProspeKT Delivery Team were required to be compliant with relevant UoE policies and there was some targeting of events at the renewable energy sector.

Conclusion: The Projects' contributions to the equities and equalities agenda were at worst neutral, with some concern shown to engage female would-be entrepreneurs. The rural development and sustainable development agendas did not have a substantial influence on project design and delivery.

Value for Money

Study Objective: Examine value for money, covering economy, efficiency and effectiveness and making use of standard VFM indicators and appropriate benchmarks.

The value for money or Return on Investment (ROI) is based on the Project costs set against the forecast impact (GVA) of the intervention.

Based on total PV discounted Project costs of £11.5m and cumulative discounted net PV GVA of £85.3m the Project is estimated to generate a Return on Investment of 6.70:1, which means that for every £1 invested in the Project by the public sector, it generates £7.40 in the Scottish economy.

In terms of the economy of the Project i.e. the cost per input (participation), if we divide the total project cost (PV) of £11.5m by the total number of participations (1,385), the project generates an average cost per individual participation of £8,338. Further, if we look at the cost per participant (535 individual participants), this generates an average cost per participant of £21,585. While this is a comparatively high cost per input, it helps to generate a comparatively high return on investment (cost effectiveness).

If we consider project efficiency i.e. could the same impacts be achieved by changing or reducing the scale of the inputs, feedback suggests that certain project elements were more successful in generating impacts and these should be the primary focus for the project in the future - this is considered further in Section 7.3.

Conclusion: The Project generates a return of £7.40 GVA for every £1 invested by the public sector. If we benchmark the Project against similar interventions – SE enabling technologies and sector targeted Project evaluations which both delivered a ROI of 4.87:1 we can see that ProspeKT/IV is estimated to deliver a greater ROI for the public purse.

7.3 Recommendations

A decision has already been taken to introduce a successor project to ProspeKT and Informatics Ventures, and we believe there is sufficient evidence from this evaluation to support this decision. The fundamental rationale for working with the SoI remains strong, in policy, strategic and market efficiency/failure terms.

Also, there is no reason for SE to withdraw from a close relationship with the SoI simply because of perceptions that “it has had its turn”. SE investment decisions should be influenced more by what can be achieved in the future and there is little doubt that the SoI still represents a world class asset with capacity to undertake research with commercial applications in a volume that would be hard to match elsewhere in the Scottish academic ecosystem.

The new project will be well placed to exploit these outputs, while also placing more efforts on engaging with other SICSA members.

Given this context, we provide below some preliminary recommendations which focus on pointers for the successor project, as well as some more general recommendations.

11. Monitoring Systems and Procedures: there is an immediate need to review monitoring systems and procedures for the new project to ensure that past weaknesses are addressed. Key components to this are:
    a. Identification of an appropriate range of indicators which reflect fully the objectives set for the new project
    b. Selection of a limited, subset of these indicators against which quantified targets are set, with care taken to focus on key indictors, such as new-starts and spin-outs, and the business benefits generated for this group and other participants;
    c. Preparation of guidance on the appropriate nature and scope of monitoring activity.

12. Data Access: data protection issues meant that the evaluators were unable to access information held on individual beneficiaries, and this impacted adversely on the conduct of the study. In future, the new project should make it clear to all businesses that accessing support is conditional on agreeing that these details be available for use in future evaluation activity.

13. Survey Control: this study was also impacted adversely by Survey Control constraints on which businesses could be included in the fieldwork. In future, there is a need for increased flexibility in applying Survey Control policies with more weight given to the need to ensure valid and robust evaluation activity.

14. Service Priorities: the design and implementation of services was not heavily influenced by resource costs or constraints. However, the funding environment has changed substantially and there is now a general need to focus scarce resources to best effect. This applies also to the new project: any decisions regarding the allocation of resources across component services should take account of the likely benefits that could emerge. Efforts focused on identifying commercialisation opportunities and matching these with would be entrepreneurs, as well as the assistance given to help start-ups and spin-outs become established - offers the most direct route to achieving impacts and in enhancing cost effectiveness.

It is recommended, therefore, that the new project maintains an appropriate degree of focus on this important service area, be it through working with the SoI or other SICSA members. In addition, the feedback from businesses was that there was a more pressing need for business rather than technical support and it was the former that businesses considered had made the biggest difference to performance. This observation should also inform service selection and design.

15. Aftercare and Integration: the ProspeKT Delivery Team highlighted that its approach to nurturing and supporting new-starts and spin-outs focused heavily on early stage interventions in areas such as building management teams and competencies, negotiating access to IP and securing access to funding. Its view was this was appropriate, given the Teams skills and the availability of subsequent support from other providers. This approach was appropriate for the previous projects, but in future it would be useful to ensure that an appropriate level of aftercare support is available to businesses which the Delivery Team considers has progressed beyond the stage where it can provide further help. This will require closer integration and liaison with SE and other partners.

16. Nurturing a Community of Interest: the prioritisation of services should also take into account the importance of nurturing a community of interest within the sector. Larger and growing companies reported using the networks and events as an opportunity to recruit, build contacts and identify collaborations. The new project needs to ensure that these collaboration opportunities continue to be available to help to build the sector.

17. Accessing IP: the feedback from some businesses is that there are still issues regarding university attitudes (not only on the part of UoE to releasing IP), and this acted as a barrier to capitalising on some opportunities. This is a well known issue regarding commercialisation of academic IP, however, as ProspeKT was set up specifically to exploit the research strengths at the SoI this was an added frustration that was not fully anticipated or addressed. The recommendation is that SE should continue to work with university partners generally to explore ways of enabling easier access.

18. Transparency in Services and Eligibility: feedback from businesses indicated that there was confusion over the range of services available and a lack of transparency regarding the eligibility criteria for participation. This was particularly the case for those businesses based in the Appleton Tower and this may have reflected awareness that others were accessing services of which they were not aware and had not been offered.

It is recommended that the new project prepares clear and explicit service descriptions which communicate how to access them.

19. High Value Business Education: stakeholders and participants were particularly enthusiastic about the quality of MIT and IGNITE courses, and the realised benefits of participation in terms of confidence, motivation, capability and contacts. These courses are not cheap, and resource constraints mean they are unlikely to be available under the new project. There is, however, justification for SE to examine the costs and benefits of these courses more closely and to consider future options on use.

20. Delivery Model: stakeholders were very supportive of the devolution of project responsibilities and the governance structures established. It is recommended that SE consider the benefits of this approach and its wider applicability.

Appendix A: Consultation Pro Formas

Beneficiary Survey

Background Information

Please complete prior to interview and confirm. All information is on the spreadsheet.	
1. Can I please confirm the following background details with you?	
Name	
Company Name (if appropriate)	
Position	
Main Product/Services	

2. At what stage was your business <u>when you first made contact with ProspeKT/IV</u>?	✔
Pre-start	
Start-up (<1 year)	
Existing (>1 year)	

3. How many people does your business currently employ(in 2011)?	✔
1-9	
10-49	
50-249	
250+	

Section 1: Pre-Support

Probe for different market constraints/failures	
4. What were the main reasons why you were needed support from ProspeKT/IV?	
Lack of general knowledge on informatics	
Lack of knowledge on informatics markets and opportunities	
Lack of knowledge on what informatics could do for the business	
Lack of internal staff skills around informatics	
Lack of knowledge on starting a business	
Lack of knowledge on growing the business	
Lack of knowledge on innovation and Research & Development	

Probe for different barriers	
5. What barriers are there in accessing university expertise specifically	
We don't know where to access support	
We don't know who the best people to talk to are	
We are not aware of the technical capabilities in departments	
It is too expensive to access university expertise	
We don't have internal capacity to engage with universities	
We don't see the value in accessing university departments	
No barriers	
Other (please specify)	

6. To what extent has your engagement in the Project addressed these barriers? i.e. do they continue to be a barrier/constraint	
To no extent	
To a minor extent	
No change at all	
To some extent	
To a significant extent	

Please select only one.	
7. How did you <u>first</u> find out about the ProspeKT/Informatics Ventures project?	
	✔
Through being a student at U of E	
Through being a staff member at U of E Personal contact at U of E	
Referral from other organisation (please specify)	
Scottish Enterprise (Account manager)	
Scottish Enterprise (other)	
Project website	
Other website	
Business Networks (please specify)	
Word of Mouth	
Don't know/can't remember	
Other (please specify)	

8. How satisfied were you with your initial / early contact with ProspeKT / IV on a scale of 1 to 5, with 1 being very dissatisfied up to 5 which is very satisfied?

v. dissatisfied →				**v. satisfied**	
1	**2**	**3**	**4**	**5**	**NA**

9. *Please give reasons for rating.*

Section 2: Support

Run through list and tick all that apply.

10. What were your main technical objectives from seeking support from the Project?

	✔
To understand the informatics market better	
To understand the opportunities in informatics	
To better exploit opportunities in informatics	
To access specialist academic expertise in informatics	
To develop a new product/process/service	
To develop an improved product/process/service	
To embed informatics in products/processes/services	
To develop new IP	
To access IP owned by UofE	
To access specialist expertise	
To access specialist equipment	
Other (please specify)	

Run through list and tick all that apply.

11. What were your main business objectives from seeking support from the Project?

	✔
To start a new business	
To develop a new spin out	
To access accommodation at Appleton Tower	
To generate new contacts/networks/collaborations with the university	
To generate new contacts/networks/collaborations with other businesses	
To develop new sales	
To develop sales in export markets	
To improve the overall value of the business	
To improve overall business competitiveness	
Other (please specify)	

Run through list and tick all that apply.

12. What types of support have you received from the Project, and how satisfied were you with this support, on a scale of 1 to 5, with 1 being very dissatisfied up to 5 which is very satisfied?

	✔	1	2	3	4	5
Events						
Informatics road show						
Engage invest exploit						
Demofest						
Mobile apps group						
Techmetup						
Barcamp						
CEO materclasses						
Silicon Valley Speaker series						
SICSA Summerschool						
Ignite						
Entrepedia						
KT Support						
BDE Support						
Student industrial placements						
Business support						
Entrepreneurs in residence						
MIT Entrepreneurship Development Project						
Start up support						

Please tell us about the support you received

13. Thinking about the objectives you hoped to achieve through engagement with the project, (outlined above in q11), to what extent has the support helped you meet these?				
	All objectives met	Some objectives met	Few objectives met	No objectives met
Business objectives				
Technical objectives				

Referring to the mapping spreadsheet and the answer to Q10 identify most/least and probe for reason.
14. What support would you say had been the most valuable to your business, and what support was least valuable and why do you say this?
Most Valuable **Least Valuable**

Section 3: Your Project Support Advisor(s)

15. Were you allocated a business development executive and if so, who was it?

Run through entire list and tick rating.						
16. Overall, how would you rate the following aspects of the BDE assigned to you (or project staff generally) on a scale of 1 to 5 with 1 being very poor and 5 very good on the following factors?						
	very poor → very good					
	1	**2**	**3**	**4**	**5**	**NA**
Understanding of your/your company's needs						
Skills to deliver support						
Overall satisfaction						

17. Why do you say this?

18. Accounting for all the support from the BDE, did the support exceed, meet or fall short of your expectations?	✔
Exceeded	
Met	
Fell short	

19. Can you please give reasons for your answer?

Section 4: Other Support Levered In

20. Did you approach any other organisations or individuals for similar types of support while working with ProspeKT/Informatics Ventures?	✔	
Yes		Go to .
No		Go to .

Run through list and tick all that apply.	
21. What other support did you access	
SMART Grant	✔
Scottish Co-investment Fund	
Scottish SEED fund	
Scottish Venture fund	
Proof of Concept	
Other SE Innovation support	
SE Account management	
Access to SDI Support	
Knowledge Transfer Partnership	
Innovation Voucher	
Other (please specify)	

22. From this other support, what do you think was the most valuable in terms of complimenting the support through ProspeKT? Why do you say this?
Most Valuable
Least valuable

23. If you did not access other support, why was this?

Section 5: Business Details and Impacts

24. Are you active in any of the following broad areas as a result of accessing PROSPEKT	
	✔
Assisted Living	
Future internet	
Smart grids	
Security	
None of these	

Run through entire list and tick all that apply.

25. Have you achieved any networking benefits as a result of the support (this may be wholly or in part attributable to the project

	Now	Future
	✔	✔
Increased number of business contacts		
Increased number of academic contacts		
New/improved links with the public sector		
Developed joint venture with other company		
Developed joint venture with academic institution		
NONE OF THE ABOVE		

Run through entire list and tick all that apply.

26. Have you achieved any knowledge benefits as a result of the support (this may be wholly or in part attributable to the project

	Now	Future
	✔	✔
Improved market understanding of informatics		
Improved technical understanding of informatics		
Improved understanding of growing the business		
Improved awareness of other public sector support		
Improved awareness of academic capabilities		
NONE OF THE ABOVE		

Run through entire list and tick all that apply.

27. Have you achieved any finance benefits as a result of the support (this may be wholly or in part attributable to the project

	Now	Future	
	✔	✔	
Improved investment readiness			
Secured new equity investment (venture capital, angel investors)			**Scale?**
Secured new debt finance(bank loans, trade credit)			**Scale?**
Secured new public sector investment			
NONE OF THE ABOVE			

Run through entire list and tick all that apply.

28. Have you achieved any R&D/innovation benefits as a result of the support (this may be wholly or in part attributable to the project

	Now	Future	
	✔	✔	
Adopted new technology			
Established new R&D/innovation activities			**Scale?**
Developed new Intellectual Property			
Developed new products/processes/services			
Developed improved products/processes/services			
NONE OF THE ABOVE			

Run through entire list and tick all that apply.

29. Have you achieved any sales benefits as a result of the support (this may be wholly or in part attributable to the project

	Now	Future	
	✔	✔	
Entered or grew in Scottish market			
Entered or grew in UK market			**Scale?**
Enterer of grew in international markets			**Scale?**
Secured new sales from licensing			
NONE OF THE ABOVE			

30. Can you please give more details

Probe for details

31. Regarding the following, as a direct result of support you received from ProspeKT/IV, did you experience any of the following impacts/benefits or are you likely to in the future?

	Now	Future	
	✔	✔	
Started a new business			**Go to Q31a**
Started a spin out company			
Creation of new jobs			
Safeguarding existing jobs			
Increase in turnover			
Increase in profitability			
Increasing wage bill			
Increasing sales outside Scotland			
NONE OF THE ABOVE			**Go to Q40 if ticked**

Current Impacts

31a If you started a new businesses or a start up company, on a scale of 1 to 5 with 1 being no importance to 5 which is very important, how important was the support you received in helping you achieve this?					
very poor →				very good	
1	2	3	4	5	NA

32. How many people have been employed in your business over the last few years?								
Thinking about the number of staff employed in Scotland in each year. How much **lower** do you think employment would have been if you had not accessed support from ProspeKT?								
	Jobs	1%-20%	21%-40%	41%-60%	61%-80%	81%+	No impact	Don't know
2010 - 11								
2009 - 10								
2008 - 09								
2007 - 08								

33. What has been your annual level of turnover over the past few years?								
		Thinking about your turnover, how much **lower** do you think turnover would have been if you had not accessed support from ProspeKT?						
	Turnover	1%-20%	21%-40%	41%-60%	61%-80%	81%+	No impact	Don't know
2010 - 11								
2009 - 10								
2008 - 09								
2007 - 08								

34. Thinking about competition in your main area of business which of the following statements best describes your business? (Please tick one)	
All the businesses I compete with are based in Scotland	
The majority of the businesses I compete with are based in Scotland	
Around half of the businesses I compete with are based in Scotland	
A minority of the businesses I compete with are based in Scotland	
None of the businesses I compete with are based in Scotland, or I have no direct competitors	

35. Thinking about the market conditions in your main area of business over the last three years, would you say that market conditions have?	
Declined strongly	
Declined moderately	
Are about the same	
Improved moderately	
Improved strongly	

36. Please can you outline what your salary costs and profit were in each of the following years? (£)		
	Total Salary costs	Total Profit
2010/11		
2009/10		
2008/09		
2007/08		

Future Impacts

37. How many people do you estimate will be employed in your business over the next few years ?								
		Thinking about the number of staff employed in Scotland in each year. How much **lower** do you estimate employment will be if you had not accessed support from ProspeKT?						
	Jobs	1%-20%	21%-40%	41%-60%	61%-80%	81%+	No impact	Don't know
2011 - 12								
2014 - 15								
2016 - 17								

38. What do you estimate will be your annual level of turnover over the next few years?								
		Thinking about your turnover, how much **lower** do you estimate turnover will be if you had not accessed support from ProspeKT?						
	Turnover	1%-20%	21%-40%	41%-60%	61%-80%	81%+	No impact	Don't know
2011 - 12								
2014 - 15								
2016 - 17								

39. Please can you outline what you estimate your salary costs and profit will be in each of the following years?		
	Total Salary costs	Total Profit
2011 - 12		
2014 - 15		
2016 - 17		

Section 6: Future Requirements

40. Do you think your company would seek support in the future?		
	✔	
Yes – definitely		Go to Q41
Yes – possibly		Go to Q41
No		Go to Q43
Don't Know		Go to Q43

41. If yes, what would you like support with?

42. If yes, would you seek the support from the follow on project called Aspect?	
	✔
Yes – definitely	
Yes – possibly	
No	
Don't Know	

43. Overall, what do you feel are the main strengths & weaknesses of the support from the Project? What about main areas for improvement?
STRENGTHS
WEAKNESSES
IMPROVEMENTS

Stakeholder Consultations

Background

1. What has been your involvement / role in the project, from design to implementation?

Objectives and Fit

2. What do you see as being the main objectives of the project? How have these changed over time, if at all?

3. How well, in your opinion, did the project fit with wider economic development policy and strategy in place when the project was first approved?

4. Does this remain the case today, and if so/not why so/not?

5. What about other policies and strategies, such as those of the University?

Rationale for intervention

6. What were the main weaknesses and/or opportunities that the project was introduced to address?

7. What were the market failures to be addressed and have they changed over time?

8. How valid do you think these arguments were at the time of approval?

9. Do you think these arguments remain valid and if so/not why so/not?

Activities

10. What is your view on the product/service portfolio? What do you see as being the main services and those which are peripheral to the project's objectives?

11. Do you think there are any:
    - gaps
    - areas of overlap/duplication with other provision
    - services which should be dropped
    - services which should be enhanced

12. What is your opinion on the progress and performance of the project generally and for specific services?

Processes

13. Have there been any issues and challenges encountered? What has been the influence of these on project performance and how have they been addressed?

14. How has the extension to include ERDF funding through Informatics Ventures impacted on the project? Has this been a positive/negative development and why do you say that?

15. Overall what would say are the strengths and weaknesses of the project?

16. Can you highlight any particular good practice/key successes that might inform practice more generally?

Benefits and Value for Money

17. Is there any evidence of the wider role of the project – for example, its role in building the reputation of the School, engagement with a wider partnership, leveraging other investment, and establishing a vibrant cluster?

18. Thinking of some of the wider benefits targeted by the project (show summary diagram of performance indicators), to what extent do you think these have emerged as a result of the project?

19. What are you views on value for money of the investment?

The future

20. Have you any recommendations for the future of the project, including improvement to enhance delivery and maximise the long term impact of the initiative?

21. With the proposed move to become “Informatics in Scotland”, what benefits and challenges do you think this change may bring?

22. Any other comments you’d like to add?

Appendix B: Start ups and Spin Outs

Incorporation Date	Company Name
18/03/2005	Linguit Limited
13/12/2005	Traak Systems Ltd
16/12/2005	Cereproc
30/01/2006	Mobile Acuity
13/06/2006	Likecube
26/06/2006	Mobile Healthcare Networks
12/12/2006	Dot Red Games Ltd
02/02/2007	Anarkik3D Ltd
20/02/2007	Geode Forensics Limited
06/08/2007	Sustainable Opportunity Solutions Ltd
05/09/2007	Brainwave-Discovery Limited
18/09/2007	Hillhouse Communications Ltd
23/10/2007	Yadster Ltd
05/11/2007	Loc8 Solutions Ltd
12/11/2007	Hubdub
25/03/2008	Vibio UK
10/04/2008	Affect Labs Ltd
24/07/2008	Wikijob Limited
30/07/2008	Flexpansion Ltd.
29/09/2008	Cloudsoft Corporation
25/11/2008	Spinsight Ltd
30/03/2009	Contemplate Limited
05/05/2009	Gymetrix
20/05/2009	Forage.RS
25/08/2009	Actual Analytics
17/09/2009	ProInnovate Limited
04/11/2009	Spatialle Limited
19/11/2009	Interface3
24/11/2009	Mobius Digital Limited
11/12/2009	Musemantik
23/12/2009	Angelfish Microfinance
29/01/2010	Recommo Ltd
12/03/2010	Peekabu Studios Ltd
29/03/2010	Heads Up Development
15/06/2010	TheoryMine
25/06/2010	Zoomatelo Enterprises
27/07/2010	Startup Cafe
08/10/2010	IntelliDzine Ltd
16/11/2010	Speech Graphics Ltd
16/11/2010	Tigatag Limited
30/11/2010	Bright Side FX
30/12/2010	Accendo Designs Ltd
26/01/2011	Nested Limited