

**Edinburgh Pre-Incubator Scheme:  
Evaluation and Options Appraisal  
Phase 1 Report**

**Scottish Enterprise Edinburgh & Lothian**

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## CONTENTS

EXECUTIVE SUMMARY .....	3
1 BACKGROUND TO EPIS PROJECT .....	8
2 EVALUATION OF EPIS DELIVERY .....	11
2.1 Method.....	11
2.2 Performance against Targets .....	12
2.3 Cultural Impact.....	16
2.4 Demand .....	17
2.5 Stakeholder Support.....	18
2.6 Implementation .....	20
2.7 Benchmarking.....	26
3 RECOMMENDATIONS.....	28
3.1 Method.....	28
3.2 Strategic EPIS Model.....	31
3.3 Performance targets .....	33
3.4 Output and Impact Monitoring .....	33
3.5 Best Practice in IP Issues .....	34
4 CONCLUSIONS.....	35
APPENDIX A LIST OF INDIVIDUALS CONSULTED .....	37
APPENDIX B LIST OF DOCUMENTS RECEIVED.....	38
APPENDIX C RESEARCH QUESTIONS.....	40



## EXECUTIVE SUMMARY

Scientific Generics (SG) has been asked by Scottish Enterprise Edinburgh and Lothian (SEEL) to perform a review of the Edinburgh Pre-Incubator Scheme (EPIS) that satisfies the detailed requirements of the SEEL's project review process and which provides an operational and strategic assessment of this pre-incubation model. We have executed a process that considers both external and internal views of EPIS and then combines and resolves those views in order to reach our conclusions. The purpose of this review is to provide an independent expert analysis of the project's performance and make recommendations for the future delivery of the scheme's outputs.

### Background

The EPIS project is part of the delivery of the Scottish Executive's *Smart, Successful Scotland* strategy. Accordingly, the goals of the initiative are to:

- Increase innovation and commercialisation of new technologies to boost productivity;
- Concentrate on technology-based start-ups with high growth potential.

The original concept was developed by Edinburgh Research and Innovation Ltd (ERI) as part of the University of Edinburgh's integrated commercialisation strategy. To deliver part of this strategy ERI and SEEL worked with project experts from Twente University's TOP pre-incubator scheme to establish a similar operation in Edinburgh. ERI and SEEL initiated the scheme with additional ERDF support in September 2003. The key elements of EPIS are:

- Hosting of the Entrepreneur for 12 months in the relevant University department;
- An academic Technical Mentor to help shape the technical elements of the idea;
- An experienced Business Mentor to help build the business model;
- A Programme Manager to organise placement and development of the Entrepreneurs;
- Access to a repayable loan of up to £10,000;
- Option of locating the resultant start-up business in the University incubation facilities.

The initial targets for the scheme, based on the above activities, were;

- |   |     |
|---|-----|
| • Number of programme participants supported  | 32  |
| • Number of assists to new businesses   | 32  |
| • Number of high-growth-potential businesses started  | 23  |
| • Number of high-technology businesses supported  | 23  |
| • Number of start-ups achieving high-growth criteria  | 12  |
| • Number of these progressing to super-high-growth status                                   | 4   |
| • Number of direct new jobs created (over a three-year period following business start-up). | 200 |

## Evaluation of EPIS delivery

The economic impact of the project was focused on the number of potentially high growth businesses created and the resultant jobs achieved three years after the business start up. In addition it is also clear now that the project has also had a significant impact in terms of leveraging private sector investment into the businesses.

In summary, EPIS is an imaginative scheme which sets out to adopt in Scotland a successful, best practice model from elsewhere in Europe. It aims to create development in high-growth and high-technology sectors. This has the potential to achieve high-value activity, which is very appropriate for an economy undergoing re-structuring, like Scotland's.

The general operation of the EPIS project is assessed as being excellent. The team is particularly well selected and balanced. The stakeholders and the hosted entrepreneurs indicate satisfaction with the hosting, business development and networking support activities provided by the scheme. The Project Manager and his team work together well and are particularly focussed on delivering assistance to applicants to enable the creation of a broad range of new businesses.

The achievements versus the targets set at the outset are illustrated in the table below.

Target Description	SEEL Project Target	March 06 Equivalent Target	March 06 Actual	Comments
No. of participants	32	26	22	4 new partners already selected
No. of start up companies	23	13	17	Ahead of target
No. of (FTE) jobs created	200	24.5 <sup>1</sup>	26.4 <sup>2</sup>	Ahead of target
Ratio SEEL funds to contributions from others	1:2	1:2	1:12.5	Exceptional leverage with large private sector additional funding

In terms of economic outputs EPIS is already well ahead of its business creation targets. There are 17 businesses now in operation and if this rate of new business creation is sustained, the potential outcomes would be a total of 34 businesses set up by September 2007 – although this will not be possible in practice, as the current

<sup>1</sup> Based on the targets of 12 and 37 at the start and finish of year three of the project, which implies a figure of 24.5 midway through year three, ie in March 2006.

<sup>2</sup> Estimate from current 33 jobs reported, with 80% of jobs being full time.

pilot only has provision for a total of 32 participants. However, at this early stage it is not clear how many of these start-ups will be high-growth businesses.

The 33 jobs recorded to date are ahead of target even when this figure is corrected – as it needs to be – to reflect the fact that not all jobs created are full time. In view of the application of ERDF funding, it is important that jobs created are accurately reported as FTE (full-time equivalent). If the revised target of 107 FTE jobs created is to be achieved by September 2007, the expectation that jobs will tend to come later rather than earlier will have to be borne out in practice.

Another major and somewhat unanticipated success of EPIS is the significant amount of private sector funding (debt and equity) that the hosted entrepreneurs have attracted. These new businesses have together raised almost £2 million representing a strong leverage between the public sector funds and the private sector investment; a factor that emphasises the quality of the business start-ups and the EPIS operation.

The cultural impact of EPIS has also been positive. The business networks have delivered connections to a wide range of external business experts and professional advisors that the entrepreneurs admit they could not have achieved without the support of EPIS.

Within the University of Edinburgh there has been a general raising of awareness of entrepreneurial opportunities within the staff, student and postgraduate population, and it is apparent that there is a growing mutual respect and collaboration between the business and academic partners. Looking ahead, more active promotion of the scheme, for example amongst recent alumni, would generate more applications and thereby enable EPIS managers to preferentially recruit those applicants with the potential to create high-growth companies.

Benchmarking EPIS against the TOP programme reveals that, even in its pilot phase, EPIS is meeting or exceeding a high proportion of the targets set and achieved by the much longer established Dutch initiative. Encouragingly, EPIS is also delivering a stronger business selection and growth focus, its networking events and Monday partner meetings are also stronger and the TOP team are impressed by the promotional and motivational leadership of the EPIS Programme Manager. In contrast the TOP mentor network is larger, and offers a broader range of skills than the EPIS network contains to date.

At the operations level the business processes are appropriate for the project's size (namely three staff, FTE =2). There are some areas that do need improvement to reflect the continuing growth of the scheme and these are highlighted in the recommendations made.

## Recommendations

A number of recommendations have been synthesised as follows:

- Improve the marketing of EPIS to attract a broader range of high-quality applicants for placement.
- As the number of applications increases, offer places preferentially to those where the opportunity for high-growth and high-tech business creation is greatest and where the fit with a potential Technical Mentor is good.
- Improve linkages with University of Edinburgh alumnus organisations to increase the uptake of the scheme by alumni;
- Involve the Business School within the scheme to enable Entrepreneurs to receive a formal element of business learning.
- Review the CPD activities, for example by considering whether a more formal learning element (cf that provided for SE/RSE Enterprise Fellows) should be included alongside the less formal Monday meetings and networking sessions .
- Review the Business Mentor offering to determine the scope for raising the breadth, availability and business experience of the schemes mentors. This review should include an assessment of:
  - the pros and cons of paid vs unpaid Mentors<sup>3</sup>;
  - ways of improving the match between Entrepreneur needs and Mentor skills
  - The feasibility of providing Entrepreneurs with access to a panel of Business Mentors following completion of the pre-incubation phase.
- Develop better links with next-stage business support initiatives at SEEL, Government Gateway and university incubators.
- Ensure that job creation outputs are reported as FTE (full-time equivalent).
- Keep the EPIS team focussed on the clearly defined job creation and business start-up targets
- Add financial leverage, company survival rates and GVA to the reported outputs to emphasise the value added by the EPIS intervention.
- The IP model is totally appropriate but EPIS should consider providing the Entrepreneurs with access to patent search tools and guidance in their use.

## Conclusions

Our evaluation exercise reveals the following conclusions;

- EPIS and its team are making a positive contribution to the health of local business start-ups, are playing an important role in improving academic-business cultural relationships, and are building a basis for high-value businesses.
- Client and stakeholder feedback is universally strong

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<sup>3</sup> The SE Life Science Business Advisory Service could be used as an example of a paid mentoring scheme

- The leadership, motivation, networking and pragmatic advice delivered to the entrepreneurs by the Programme Manager have received very positive praise from all stakeholders and project partners.
- The EPIS team has balanced this strength by providing good links and interaction with the academic hosts, as well as recent improvements in the reporting and administration of the project.
- The scheme is performing well and our recommendations are aimed at further improvements to the outputs and support offered.
- The level of private sector funding of EPIS companies is a very strong indication of the commercial quality of the intervention and of the value for money that the scheme is achieving for SEEL.
- Given the likely demand for start up business support in the Edinburgh and Lothian local region we recommend that EPIS is continued beyond its current four-year project timeline for at least a further two years.
- In addition, EPIS should be scaled up within the University of Edinburgh environment to support more applicants, widen the hosting opportunities and improve the creation of high-value businesses and jobs in the region.
- Finally, the broader Scottish market and additionality of EPIS indicates that this pre-incubator model should be used to provide wider support for new business creation across Scotland. Consequently, we recommend that the second phase of the EPIS evaluation, namely the forward look at options for extending the initiative, should now be commissioned.

## 1 BACKGROUND TO EPIS PROJECT

The Edinburgh Pre-Incubator Scheme (EPIS) is an economic development activity of Scottish Enterprise Edinburgh and Lothian (SEEL). As such, it is part of the delivery of the Scottish Executive's *Smart, Successful Scotland* strategy under the **Growing Business** theme. Accordingly, the scheme is designed to promote commercialisation, catalyse innovation and create high-growth start-up companies. The unique feature of this model is that it provides a package of support for innovative entrepreneurs that includes hosting in the University of Edinburgh's specialist facilities, the support of experienced business people as mentors and a financial loan to catalyse the creation of potentially high-quality, high-growth businesses.

The original concept was developed by Edinburgh Research and Innovation Ltd (ERI) as part of the University of Edinburgh's integrated commercialisation strategy.<sup>4 5</sup> The vision was to set up companies and an optimum economic development environment in order to increase R&D activity in the University of Edinburgh, to enhance the local economic impact of that activity and to deliver increased benefits to society in terms of products / services / environment. In exploring potential delivery mechanisms to achieve these strategic objectives ERI identified an internationally-renowned pre-incubator project at Twente University in Holland. The Tijdelijke Ondernemers Plaatsen (TOP) project was designed to help prospective entrepreneurs start their businesses from the Twente technology institute. Twente University saw spin-outs as a technology transfer bridge to business. To achieve this commercialisation route Twente developed a pre-start-up business support model that provided mentors, the use of university equipment and a loan to help the creation of businesses close to the Twente technology interests. They started TOP as a single-university government-funded project in 1984. Since then the TOP model has been implemented by other universities in the Netherlands and across Europe via "UniSpin", which was an EU FP4 project.

The TOP model has delivered impressive outputs in terms of new companies and jobs created<sup>6</sup>. In 17 years TOP has supported 250 innovators, created 170 knowledge-based businesses with an 80% survival rate. The project has also created 15,000 FTE (full time equivalent) jobs for the start up businesses with an average of 6-7 jobs per company created over a 4-5 year period after company incorporation<sup>7</sup>. Given the long-term success of this commercialisation model, ERI proposed the establishment of the same model, to be entitled "The Edinburgh Pre-Incubator Scheme" (EPIS). Within the UK similar models are now being operated by the Universities of Coventry and Warwick and the Wales Spin-Out Programme<sup>8</sup>.

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<sup>4</sup> The commercialisation strategy of Edinburgh University, ERI, D Charles & P. Benneworth, (2000)

<sup>5</sup> Company development strategy, ERI, Bob Smiles, (2002)

<sup>6</sup> Support of spin-off companies. *International Journal of Entrepreneurship and Innovation*. Van der Sijde, P.C. & Van Tilburg, J.J. (2000), 1 (1), 13 – 22.

<sup>7</sup> Quoted results from TOP internal review carried out by Jaap van Tilburg

<sup>8</sup> <http://www.spinoutwales.com/htdocs/homepage.asp>



SEEL worked with ERI to develop the EPIS project<sup>9</sup> with funding from SEEL, the University of Edinburgh and the European Regional Development Fund (ERDF).

The economic development goals of EPIS are:

- To increase innovation and commercialisation of new technologies to boost productivity;
- To concentrate on technology based start-ups with high growth potential.

These goals were defined in the context of *Smart, Successful Scotland* and represent an improvement on the TOP model. The Twente University entrepreneur selection process concentrates on ideas that are close to the university's technical and research interests, with the result that there is a preponderance of consultancy and lifestyle businesses within the TOP model. In Edinburgh, the concentration on entrepreneurs from outside the university with high growth potential ideas offers EPIS the potential of higher outputs in terms of jobs, sales and private sector finance than has been seen in the TOP project.

The EPIS model was developed with inputs from Twente University, and the key elements of the activity were set out as follows:

- Hosting of the Entrepreneur (ie innovator), for up to 12 months, in a relevant university department to develop their idea;
- A Technical Mentor from the hosting department to help shape the technical elements of the idea;
- An experienced Business Mentor to help build the business model and provide access to a network of appropriate commercial contacts;
- A Programme Manager to organise placement of the Entrepreneurs and co-ordinate a personalised CPD<sup>10</sup> programme;
- Access to a personal loan of up to £10,000, repayable over a maximum of five years following the completion of the placement;
- Option of locating resultant start-up business in the university incubation facilities.

The initial targets for the scheme based on its costs and the above activities are

• Number of programme participants supported	32
• Number of assists to new businesses	32
• Number of high-growth-potential businesses started	23
• Number of high-technology businesses supported	23
• Number of start-ups achieving high-growth criteria <sup>11</sup>	12

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<sup>9</sup> In this report, we use "EPIS" or "the scheme" to denote EPIS in operation, ie the scheme as it is experienced by the relevant stakeholders, ie (principally) the Entrepreneurs and their Mentors. We use "the EPIS project" or "the project" to denote the project set up by SEEL/ERI to manage and deliver the scheme over a four-year pilot period.

<sup>10</sup> continuous professional development

<sup>11</sup> The criteria which determine whether a start-up is a "high growth" start-up are defined in Section 2.4 below.

- Number of these progressing to super-high-growth status 4
- Number of direct new jobs created (over a three-year period following business start-up) 200

In addition, the EPIS contract outlines other indirect programme benefits which “cannot be readily quantified” and are considered as “collateral economic impact benefits.” These include:

- Positively influencing others in the University towards commercialisation;
- Mixing entrepreneurs with academic innovators will motivate the latter to exploit their research;
- New start-ups with university connections will improve academic-industry links;
- As the new businesses become established, they will bring cluster benefits and indirect job creation.

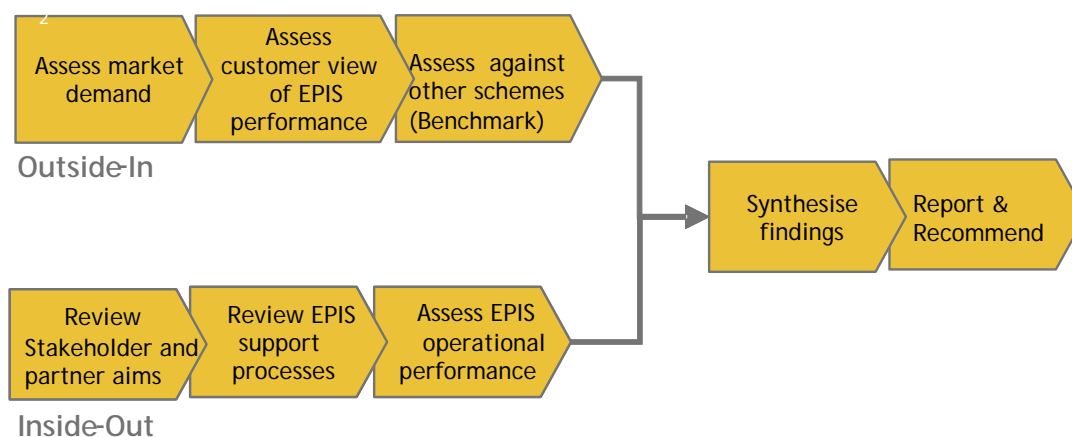
ERI and SEEL initiated the scheme after securing ERDF funding in addition to their own financial contributions. The project implementation started in September 2003, following the appointment of the Programme Manager. The rest of the team were in place and started the scheme’s operation in October 2003, and the formal launch took place in January 2004. For the purposes of this evaluation, we have assumed that the formal duration of the first, ie pilot, phase of the scheme is from 1 October 2003 until 30 September 2007. Hence the evaluation is effectively taking a snapshot of the scheme at the mid-point of its third year. However, given the finite number of placements available, and the need to complete these by the end of the pilot, it is important to recognise that any decisions as to the continuation or extension of the scheme will need to be made by the end of year three, ie by the end of September 2006, to avoid any interruption to the ongoing marketing of EPIS.

## 2 EVALUATION OF EPIS DELIVERY

### 2.1 Method

This evaluation of the EPIS project was carried out using a methodology, called “Outside-In, Inside-Out”, which Scientific Generics has successfully applied on a number of previous occasions in both the private and public sectors. One of the most recent of these was the evaluation of the Optocap project that we undertook for SEEL in late 2005. This methodology enables us to build a well-informed and evidence-based overview of the current status of the scheme. The approach then provides the basis for the analysis and synthesis of a realistic and practical set of recommendations for the future.

The overall process is shown in the figure below.



We have executed a process that considers both external and internal views of EPIS and then combines and resolves those views in order to draw conclusions. The internal view is drawn from interviews with EPIS and ERI staff, academic hosts and Business Mentors, whilst the external views were from interviews with the client Entrepreneurs, SEEL staff, other Scottish innovation deliverers and Dutch university staff. An example of the range of questions posed during the research phase is given in Appendix C.

In addition, we have overlaid our own judgement onto both the external and internal views as to what would be regarded as good practice in the public and private sectors. In the latter case we have used – *inter alia* – our experience in setting up and running high-technology businesses, using our *Investment Engine* model.

In addition to the principal interview research, a wide range of internal and external documents and reports were reviewed to identify the key issues and themes in the project.

## 2.2 Performance against Targets

The economic impact of the project as expressed in SEEL's approval paper<sup>12</sup> was focused on the number of potentially **high growth businesses** created and the resultant **jobs** achieved three years after the business start up. In addition it is also clear now that the project has also had an impact in terms of **leveraging private sector investment** into the businesses created.

### Start Up Businesses

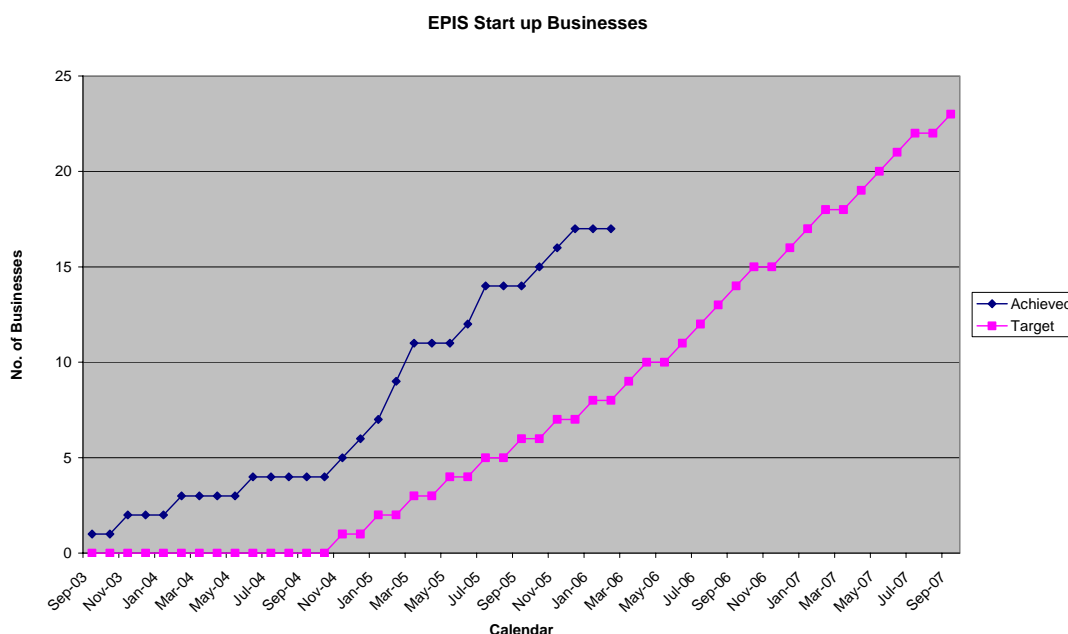
The four-year target for business start-ups was 23. It was wisely assumed that in the first year there would be no start-ups, given that the first Entrepreneurs would be in a pre-incubation model during this period. The current business targets are given in the following table<sup>13</sup>;

Programme Targets	2004-05	2005-06	2006-07	Totals
	(year 2)	(year 3)	(year 4)	
No. of participants	8	12	12	32
No. of standard company starts	3	4	4	11
No. of high-growth company starts	3	4	5	12

A review of the actual performance, as illustrated in the following chart, reveals that the project is currently exceeding these targets to a considerable extent. One reason for this was the unanticipated incorporation of four businesses during the first year of the scheme.

<sup>12</sup> The Edinburgh Pre-Incubation Programme PAG(02)129, D Caughey, S McClellan, SEEL October 2002

<sup>13</sup> EPIS companies and employees numbers, Kevin Johnston, SEEL, August 2004



There are 17 businesses now in operation, of which 15 are registered as private limited companies, one is a sole trader and another is a partnership. If this rate of new business creation is sustained, the potential outcomes would be a total of 34 businesses set up by September 2007 – although this will not be possible in practice, as the current pilot only has provision for a total of 32 participants.

What is not yet clear is the number of high-growth businesses that have been set up through the scheme. Of the 15 registered companies only two have created more than four jobs and none have reported turnovers above £100,000. The current targets require the creation of seven standard and seven high-growth companies by October 2006. The business performance so far suggests that the high-growth target will not be achieved but the standard target will be exceeded.

## Jobs

The original high added value jobs targets were revised in August 2004 by SEEL and the EPIS Programme Manager to reflect the likely practical profile of the business operations within the scheme. The basis of these targets and their time profile are shown in the table below. Note that the years indicated are “scheme years”, not financial years – ie they run from October to September. Hence (as described above) the evaluation is being conducted at the mid-point of year three.

No. of jobs created (Full Time Equivalent)					
	2004-05	2005-06	2006-07	2007-08	2008-09
<b>standard companies</b>	(year 2)	(year 3)	(year 4)		
yr 1 companies (3 started)	3	6	15	15	15
yr 2 companies (4 started)		4	8	20	20
yr 3 companies (4 started)			4	8	20
<b>high growth companies</b>					
yr 1 companies (3 started)	9	15	45	45	45
yr 2 companies (4 started)		12	20	60	60
yr 3 companies (5 started)			15	25	75
<b>Total Jobs (FTE) =</b>	12	37	<b>107</b>	173	235
<b>ERDF Target</b>			<b>107</b>		

Since August 2004 the project focus has understandably been on the ERDF requirement of 107 jobs created by the end of the fourth year of operation, rather than the previous targets that reflect the jobs created three years after the companies are incorporated, i.e. 235.

However, despite the date of this instruction, the monthly Directors Reports show that the jobs target was reduced to 100 in January 2004. The targets and dates required to meet the scheme's output requirements need to be made clearer.

Another issue that has emerged is that the SEEL contract documents and EPIS progress reports have not clarified that in government contracts (particularly ERDF funded projects) jobs are specified as Full Time Equivalents (FTE). This needs to be resolved and the outputs must meet the FTE requirements to avoid the risk of ERDF justifiably demanding repayment of part or all of the funding. ERI staff need to be aware that this risk is real even in the context of university commercialisation projects. Manchester University's incubator project company Campus Ventures went into receivership in December 2004 when an ERDF audit challenged some of the project outputs and demanded repayment of their funding.

In terms of the outputs achieved to date, which are currently recorded as 33 jobs, our estimate is that this figure corresponds to at most 27 FTEs. This analysis is based on ERI's comments that "about 80%" of the jobs created to date are full-time. The targets (shown in the table above) of 12 and 37 FTE at the start and finish of year three of the scheme imply a current figure (midway through year three) of 24.5. Hence the scheme is currently ahead of target with respect to job creation.

However, the table also shows that achieving the 107 target is critically dependent on high-growth start-up (HGSU) companies generating 18 jobs in year 3 and a further 53 jobs in year 4. Unfortunately, there is little evidence of high growth performance in any of the companies set up to date, and so the expectations as to

the proportion of start-ups which prove to be HGSUs may prove to have been unrealistic. Hence there is a real risk of not achieving the 107 target. Of course, once an entrepreneur has left the scheme after his/her “EPIS year”, there are no other mechanisms in place whereby the scheme can influence ongoing job creation within that entrepreneur’s company

## Leverages

The SEEL Board Paper indicates that the project will achieve the following leverages:

Ratio SEEL funds to total project costs : 1 : 3

Ratio SEEL funds to contributions from others : 1 : 2

Although the above are the relevant ratios from the approval paper, additional leverage ratios can be calculated from other information gathered by the project. Team. The mid-2005 statistics show that 14 Entrepreneurs had obtained or contributed additional funds totalling as follows:

Item	Amount (£)
Awards (SMART, RSA, IdeaSmart, etc)	174,000
Equity investment	990,199
Debt funding	780,000
<b>Total</b>	<b>1,944,199</b>
<i>Average per Entrepreneur (14)</i>	<i>138,871</i>

The table above shows that the 14 Entrepreneurs involved up to the date in question (31 July 2005) had together raised almost £2 million mostly from private sources, representing an average of nearly £140,000 per project.

If that pattern were to be repeated for the total project target of 32 participants, the total would be roughly as follows:

Item	Amount (£K)
Awards	398
Equity investment	2,263
Debt funding	1,783
<b>Total</b>	<b>4,444</b>

If that were achieved in practice, then the funding chart would look as follows:

SEEL	ERDF	UoE	Awards	Private funds	Total
£469,000	£464,000	£467,000	£398,000	£4,046,000	£5,844,000
Leverage of SEEL funds			1:0.8	1:8.6	1:12.5

*Sums in italics are speculative*

This substantially changes the leverage ratios for the project. Now, with almost half of the target number of participants engaged (14 out of 32), it is more feasible to make an estimate such as that above. This would yield new ratios of significance to understanding the project's *potential* impact, such as:

Ratio [SEEL]:[project total]	1: 12.5
Ratio [project sponsors & additional public]:[private]	1: 2.25

Looked at this way (assuming these conjectured outcomes are achieved in practice), the project looks to be a very efficient investment of SEEL money, and demonstrates an excellent ability to prise out private funding to go alongside public sector grants.

## 2.3 Cultural Impact

A scheme such as EPIS might be expected to have various cultural impacts, and to promote a number of improvements in business-academia relationships and networks, which will ultimately improve the technology transfer and spin-out performance of the university involved. To assess the cultural impact of EPIS, we addressed three key questions:

- Has the scheme created or strengthened links between academia and business?
- Have individual technical mentors within the university, and/or their departments, benefited from the integration of entrepreneurs within the host department?
- Have individual entrepreneurs benefited from the integration?

Our conclusion was that, even during this pilot phase, EPIS has already made a small but entirely positive cultural impact upon those academics who have come into contact with it.

Creation of the Business Mentor network and the introduction of a wide range of external business experts and professional advisors to the entrepreneurs has provided the entrepreneurs with the necessary networks to further their new ventures while introducing EPIS to the external professionals. From interviews with the entrepreneurs, it is unlikely that they could have developed these networks as effectively without the support of EPIS.

There has been a general raising of awareness of entrepreneurial opportunities within the student and postgraduate university population through active promotion



of EPIS by its administration<sup>14</sup> but to date this has not generated any significant number of applications for placement from recent University of Edinburgh graduates and postgraduates.

Through the departmental placements, individual hosts within the University have created strong links with the placed entrepreneur that, in some cases, have already led to an ongoing relationship between the host and the entrepreneur following completion of the pre-incubation phase<sup>15</sup>.

Not all placements have led to the creation of a strong link between the host and the entrepreneur<sup>16</sup>. The most successful relationships have been developed where there is a strong overlap between the research interests of the host and the technical needs of the entrepreneur.

The level of integration, and therefore the level of exposure which departmental staff and students have to the entrepreneur and his/her work, have varied from deep integration where the entrepreneur has played an active role within the department through to superficial, where the entrepreneur has had little departmental interaction beyond routine meetings with their host. Generally, where the level of integration of the entrepreneur and their activities has been strongest, the ongoing relationship following completion of the pre-incubation phase has been strongest.

## 2.4 Demand Analysis

In evaluating the potential impact of EPIS as a public sector intervention, it is important to look at the demand for creating high-value-added business start-ups in Scotland. Given that the major benefit would be in catalysing the creation of high-growth companies we begin by looking at this area.

The formal definition of a high-growth start-up (HGSU) company is that, by the end of year 3, it will have achieved a turnover in excess of £750,000 and / or will be employing 15 or more people, and will have at least one of the following characteristics:

- Market potential beyond the UK;
- Experienced management team committed to attracting external equity if necessary;
- Innovative product development with potential to protect intellectual property;
- Growth potential beyond the initial three-year period.

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<sup>14</sup> The current Programme Manager has been active in speaking with students about the Programme and the ERI office has been active in making available EPIS flyers and other information available to students.

<sup>15</sup> An example is the relationship between Mary Bownes, Vice Principal UoE, and Alison Blackwell, EPIS alumna.

<sup>16</sup> As an example, one Entrepreneur has focused upon access to facilities rather than academic support which has led to less integration into the department than is the case in some placements.

The economic statistics for Scotland<sup>17</sup> establish the size and strength of Edinburgh and Lothian as an economy (2002), with 23,360 registered enterprises and *circa* 2,000 new registered companies per annum. The City of Edinburgh contributes 12,250 of these enterprises and a start-up rate of 1,250 companies p.a. Estimates of the number of potential high-growth start-ups in some of the LEC (Local Enterprise Company) regions defined by Scottish Enterprise have been quoted in recent HGSU evaluations. The Grampian LEC estimate for 2004 is that, based on VAT registration figures, there are 59-86 potential high-growth start-ups<sup>18</sup>. A similar analysis for SEEL implies the creation of 79-115 high-growth start-ups p.a. Given that EPIS has already attracted entrepreneurs from outside the region, this analysis strongly indicates that EPIS should achieve the target of 3-5 potential high-growth companies per annum.

However, there is a need for caution on targets of delivering high-growth companies. The LEC analysis reports on HGSU also point out that these companies have a higher failure rate than standard companies and whilst the start-up rate for potential HGSUs can be 50-100+ per annum in each region, the actual survival rate of successful and sustainable companies meeting the criteria will generally be much lower. Indeed, the 2004 economic statistics report quotes that for the whole of Scotland, only 85 new companies which started with less than 10 staff in 2000 had managed to grow to 15 or over by 2003.

Edinburgh itself also has the advantages that 34% of its population hold degree level qualifications, making the city's workforce one of the most highly qualified in the UK<sup>19</sup>. One of the EPIS selection criteria is that the entrepreneur/innovator must be a graduate.

Finally, the regional economy is dominated by the service sector, particularly financial and business services - Edinburgh is the UK's second and Europe's sixth largest financial centre. Other key sectors in the region are biotechnology, electronics, IT and software and culture and media.

## **2.5 Stakeholder Support**

For the purposes of this report, we have addressed only SEEL and ERI as stakeholders. Clearly, ERDF is also a stakeholder (albeit essentially a silent partner) but no interviews were planned or carried out with any ERDF representatives.

The EPIS project is viewed as a pilot project by both SEEL and ERI, with value increasing over time. However, a decision is needed to agree if, and how the Programme should be taken forward following the initial four year period. This report in conjunction with part two of this review will provide additional information to SEEL to enable a balanced and justified decision on the future of EPIS.

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<sup>17</sup> 2004 Scottish Economic Statistics, Scottish Executive.

<sup>18</sup> High growth start ups – improving performance, SE Grampian management team paper.

<sup>19</sup> Economic Intelligence presentation by Veronica Noone of SEEL, October 2004.

Both stakeholders perceive that EPIS has been a very positive scheme, which has in principle met the initial ambitions that led to the scheme's inception, and delivered some additional benefits. For example, the university believes the scheme generates ideas and enables them to go to company formation stage, filling a gap in the company formation strategy. In addition, now that the scheme has been running for just over two years it is beginning to "feed" the incubation space available within the Edinburgh metropolitan region. And SEEL perceives that, in addition to the contract metrics, EPIS provides SEEL staff with valuable early insights into the issues facing high growth companies.

At the outset, SEEL were keen that the university fully engaged with the scheme. The evidence shows that the commitment of the university has been strong, and that their commitment has gone considerably beyond that which would have been necessary simply to collect the £5k paid to the relevant university department for each placement in respect of "bench fees".

ERI would like to see EPIS taken forward beyond the currently-agreed pilot project. ERI believes that future funding arrangements would again require shared investment (in kind from the University, in cash from other sources). Given the likelihood that the four-year pilot project will be perceived as a success in terms of its economic development objectives, ERI believes that a good case could be made for SEEL to continue to provide all of the cash funding for EPIS in subsequent years.

The ambition from SEEL was that the entrepreneurs seeking placement would mostly be wishing to develop 'high tech' opportunities. This was largely driven by the feeling that 'low tech' ventures would be less engaging for the University, in the sense that there would be less need to draw upon the University's high levels of academic excellence in science and engineering. It was also felt that 'high tech' ventures would create opportunities for incubation with the university before moving out to one of the many innovation parks within Scotland.

The definition of 'high tech' is not clear, but in conversation with the Programme Manager it became clear that, while he believes many of the applications for placement do not fit closely with his definition of 'high tech', they are nonetheless worthwhile opportunities and should therefore be supported.

## 2.6 Implementation

### 2.6.1 Operational review

The operation of EPIS can be viewed as falling into four broad areas:

- Marketing the scheme;
- Making placements;
- Providing entrepreneur support and continuing professional development;
- Reporting.

#### Marketing the Scheme

It is through the marketing of the scheme that potential placement applicants will hear of the support that EPIS could provide in assisting them to develop their entrepreneurial skills. Effective marketing is therefore a key element in ensuring both quantity and quality of applicants.

Effective marketing also generates awareness of the scheme within the wider academic and business community.

From interviews with the Entrepreneurs, there was no one channel through which they heard about EPIS. The strongest factor was that a number of the entrepreneurs already had direct contact with the Programme Manager, whose enthusiasm encouraged them to apply for placements.

The current EPIS operational team<sup>20</sup> recognises that better marketing to broaden the range of entrepreneurs and to attract more younger graduates would benefit the scheme. At the outset of the scheme, it was also hoped that recent University of Edinburgh alumni would be a source of demand for placements. We therefore recommend that the scope for increasing the volume of high-quality applications for placement be investigated during the next stage of work, as this may have a bearing upon recommendations for expansion of the scheme. For example, it would be useful to understand whether more competition for placements would enable the EPIS management to preferentially recruit entrepreneurs whose ventures have high growth potential.

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<sup>20</sup> From Interviews with EPIS Project Manager and EPIS Programme Co-ordinator

## **Making Placements**

For the placements to work effectively, it is essential that two good fits are in place, namely (a) between the Entrepreneur's technical support needs and the Technical Mentor from the host department within the university, and (b) between the Entrepreneur's need for support in creating and furthering the business proposition and the skills of the Business Mentor.

The scheme has built a good network of Business Mentors from industry and Technical Mentors from the host departments within the university. The creation of this network has very largely been down to the Programme Manager leveraging his extensive network of contacts, so much so that a warning bell can be heard – how well would the network survive if the Programme Manager were to change for whatever reason?

During our interviews with Entrepreneurs, Business Mentors and Technical Mentors the general feeling was that the 'fit' between Technical Mentor, host department and Entrepreneur was good, but that often, the Entrepreneur did not take full advantage of the skills offered by the Business Mentor. There were at least four reasons for this, not all of which applied in every case:

- The skills provided by the Mentor did not fit well with the stage that the business development was at. This may be because the "template" for the Business Mentors was set on the assumption (at the outset) that most projects would be "high-tech". This assumption turned out to be not entirely correct.
- The time the Mentor felt able to provide at no cost under the scheme was less than the Entrepreneur needed to take full advantage of the Mentor's expertise.
- The ranges of skills needed by the Entrepreneur were greater than a single Mentor could realistically provide.
- The benefits that the Mentor could give were needed following completion of the pre-incubation phase.

It is clear from the Mentor and Entrepreneur interviews that the effectiveness of the mentor system depends upon the state of maturity of the entrepreneur's ideas, and the nature of his/her ambitions.

## **Providing Entrepreneur Support and Continuing Professional Development**

Once Entrepreneurs have been accepted for placement on the scheme, the EPIS operational team provides the Entrepreneur with support for CPD over and above that provided by the Business and Technical Mentors.

All Entrepreneurs interviewed commented on the Programme Manager's enthusiasm, energy and deep and broad knowledge of the issues and potential solutions to the problems facing new ventures.

To assist the Entrepreneurs, the EPIS operational team has created a meeting space in the King's Buildings at the University of Edinburgh with access to computer

facilities, the Internet, a small library of relevant books and a plentiful supply of coffee and advice from the Programme Manager and the team.

During the week or so that the SG team was present for interviews etc, this resource was not heavily used, but several Entrepreneurs commented that they appreciate the facility.

At the early stage, the contract required a personalised CPD programme to be developed for each Entrepreneur, but no funds had been allocated to this element. This led to a fixed programme of CPD being developed for the scheme. The Programme Manager was able to use his friends and contacts to do this, principally via a series of regular meetings at King's Buildings on Monday mornings. The Entrepreneurs believe that the range of talks and other activities that take place during these meetings provides good coverage of areas pertinent to new venture creation and introduces them to a network that may provide support as their new ventures develop.

The major weakness identified by the Entrepreneurs, namely insufficient access to appropriate market research support, had been identified by the EPIS operations team and a team member is currently tasked with developing market research facilities to support the Entrepreneurs. SG can confirm that this is indeed a worrying shortcoming. Several times recently the poor availability of good market research in publicly-funded new business creation and development initiatives in Scotland has been mentioned - at seminars, in publications etc. The extent of the resources needed to provide robust market analysis for innovative and high-tech ventures should not be underestimated.

The CPD content of the scheme currently has no 'formal' education element such as is provided on the RSE/SE<sup>21</sup> Enterprise Fellowship scheme, which provides training in entrepreneurship and in the preparation of a professional and persuasive business plan. We recommend that the potential benefits (and costs) of the incorporation of such a formal element should be examined in the context of any continuation or extension of the scheme.

## **Reporting**

A range of monitoring and reporting is required by ERI and SEEL to ensure that the Project is on track. We are unaware of any issues with the level and quality of the monitoring and reporting carried out.

### **2.6.2 Financial effectiveness**

#### **Overall Costs**

The project budget for the first four years of operation, as stated in the SEEL Board paper of October 2002, was as follows:

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<sup>21</sup> Royal Society of Edinburgh / Scottish Enterprise

	£
SEEL	469,000
ERDF (applied for and underwritten by SEEL)	464,000
<i>Sub-total</i>	<i>933,000</i>
University of Edinburgh	467,000
<b>Total</b>	<b>1,400,000</b>

A fuller breakdown of the above is given on page 6 of the Board paper, but this does not clearly allocate which costs (left column) are being met by which funding sources (right column). A best-fit interpretation of these issues is given in the following table which has been prepared treating SEEL and ERDF money as the same funding source. The rationale for this is that SEEL applies for funding from ERDF, but then provides the funding from its own resources “up front”, prior to recovering the funds from ERDF retrospectively.

Cost category	Item	£K	Funder	Funds recipient	Output
Staff	Programme Manager	220	SEEL/ERDF	ERI Ltd	project management
Staff	Programme Administrator	64	SEEL/ERDF	ERI Ltd	project management
Direct programme	Laboratory hosting	462	UoE	businesses	Facilities and consulting services for participants
Direct programme	Re-payable grant	320	SEEL/ERDF	businesses	funds for participants
Direct programme	Bench fees	160	SEEL/ERDF	UoE	facilities for participants
Programme support	Marketing & promotion	51	SEEL/ERDF	ERI Ltd	project management
Programme support	Administration	37	SEEL/ERDF	ERI Ltd	project management
Programme support	Travel	37	SEEL/ERDF	ERI Ltd	project management
Programme support	Implementation fees	34	SEEL/ERDF	?	?
Programme support	ESEP management fees	10	SEEL/ERDF	ESEP (ERDF agent)	ERDF overhead
Programme support	Computer equipment	5	UoE ?	ERI Ltd ?	project management
	<b>TOTAL</b>	<b>1,400</b>			

A number of points and questions arise from this analysis, as follows:

- The cost categories used in the table are “standard” SE categories and are not ideal here because they disguise the fact that EPIS entrepreneurs derive benefit from some activities which are not listed as “direct programme”

- The only way in which the University’s funding of £467,000 can be attributed without splitting cost items is by assuming they are paying the £5000 computer costs. This means that the University funds £462,000 for lab hosting, plus the computers, although this is not explicit in the paper.
- The businesses participating in the scheme appear to be direct recipients of only two cost items, totalling £782,000, namely the facilities costs of lab hosting (contributed by the University), and the repayable grant (from SEEL/ERDF). These items account for 56% of the total project costs.
- What are “implementation fees” (£34,000) and who receives them?
- The University contributes £462,000 in kind for lab hosting, but receives £160,000 in bench fees from SEEL/ERDF. Therefore the University’s net contribution to the project is actually £302,000.
- How has the University’s £462,000 in-kind contribution been valued? In other words, what is the justification for the price put on it?
- Is the £160,000 for bench fees a fair valuation of the services provided?
- What arrangements are made for loan recovery and what assumptions are made about recovery success rate?

Another way of looking at the project cost structure, simplistic but also instructive, is shown below:

	£	£
Lab hosting benefits to participants		462,000
Re-payable grant of £320,000 (net cost zero ignoring interest benefits)		0
Income to University (bench fees)		160,000
Overheads (staff)	284,000	
Overheads (project support)	174,000	
<b>Total overheads =</b>		<b>458,000</b>
<b>Sub-total permanently disbursed =</b>		<b>1,080,000</b>
Temporary loan outgoings (and temporary benefit to participants)		320,000
<b>OVERALL TOTAL BUDGET =</b>		<b>1,400,000</b>

This method of presentation shows that considerable sums are apparently going into non-productive areas such as paying the University (and so reducing their net contribution), overheads which almost equal the lab-hosting benefits to participants, and a loan scheme which certainly brings some short- to medium-term benefits to participants, but is not a permanent disbursement.



## Cost Per Job (CPJ)

In assessing the effectiveness of the scheme the cost per job (CPJ) created by the intervention provides an important comparison with national and international government programmes. The SEEL board approval paper set the target at 200 jobs to be achieved three years after the initial four-year scheme (i.e. by 2010), giving a CPJ of £7,000 or – using the Net Grant Equivalent (NGE) at 10% discount – £3,700. These figures were regarded as competitive when compared to the CPJ of £8,100 which has been achieved by SEEL’s business development programmes and which was recently assessed as good value for money<sup>22</sup>.

This initial assessment did not take account of the loan repayments or the fact that the UoE contribution is in kind. Taking the 200 job target and evaluating the CPJ options provides the following results;

Analysis	Total Cost £	Jobs	CPJ £
Original approval full costs (SEEL, ERDF, UoE)	1,400,000	200	7,000
Original approval NGE 10%	1,400,000	200	3,700
Gross economic development spend (SEEL, ERDF)	933,000	200	4,665
Net economic development after loan repayment	613,000	200	3,065
Net + opportunity cost at 33% of loan value	719,667	200	3,598
Net + opportunity cost at 235 job target	719,667	235	3,062
Net + opportunity cost at 107 jobs ERDF timing	719,667	107	6,725

In economic development terms, one could take the view that the UoE’s funding is not primarily intended to create jobs, as the University has other motivations for supporting the scheme. Job creation is SEEL’s remit and the calculation of CPJ should therefore really only be done in relation to SEEL funding.

The above potential CPJ values can be used to assess the effectiveness of the scheme’s economic impact. For example, the 2001-2005 analysis of HGSU performance in the Grampian LEC region revealed a CPJ of £5,631 for Grampian compared with £4,572 for the whole of Scotland. A 2002 EU analysis of all publicly-funded incubators in Europe, where 900 incubators create some 30,000 jobs per annum, reveals a net CPJ of £2,750. Bearing in mind that this will include standard companies and some locations with a rental-space-only model, these figures show that EPIS is delivering a competitive performance.

The above analysis reveals that SEEL’s spending in achieving economic objectives demonstrates acceptable costs per job and shows good spending efficiency for economic development objectives, assuming that EPIS achieves its 200 or 235 FTE targets. However, if we consider EPIS in the context of a non-HGSU model, with an ERDF-only target of 107 FTE, the scheme’s performance is not competitive.

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<sup>22</sup> Report prepared by SQW Ltd.

## 2.7 Benchmarking

The main benchmarking is inevitably against the TOP programme, which is one of the longest-running university-based pre-incubator schemes and therefore has a proven operational model and robust “steady state” performance information. The following table examines the key features of the two schemes and combines the views of the internal and external interviews to examine the similarities and differences between the Edinburgh and Twente operations.

Process	TOP	EPIS
Pre-selection work	Help and advice to applicants	As TOP
Selection committee decision	Aim to accept every candidate. Only rejection if little or no fit to the University department’s research interests.	Selection committee use more demanding criteria. High growth aims regarded by TOP as an improvement
Progress meetings	Quarterly including client continuation gate process	Quarterly but no gate process
Academic hosting	Entrepreneur placed in most relevant research group. Technical support and facilities.	As TOP
Business support / counselling	Experienced Tutors, much broader range of experienced business people so they can match mentors to client needs.	Experienced Business Mentors but from a closed network.
Loan finance	£9.4K “very favourable conditions”	£10K five years interest free
CPD	No formal training through networks	No formal training programme, but offers meetings and presentations
Networking	170 businesses in partnership network after six years	Networking and contacts into finance and other sectors growing rapidly
Target entrepreneurs	Young graduates from university spin-out. Consultancies a target output. No high-growth or spin-ins as aims	Experienced business people, spin-in companies. High-growth businesses a target
Timing	Target 12 months but only if they meet gate performance. Can also extend in exceptional cases. Also can have two from same company at different 12 month periods.	12 months fixed. (Three month trial started in one case)
<b>Targets</b>		
Entrepreneurs	12 per annum	11 per annum
Jobs	Performance is 4-5 FTE per company after 4-5 years <sup>23</sup> .	Target average 7.3 jobs per company after 3 years.

Jaap van Tilburg, consultant to the Twente TOP programme, regards the EPIS project as one that is still too young to establish an international best practice reputation. He does believe that the following aspects of EPIS represent improvements over the TOP model:

<sup>23</sup> Interview with Jaap van Tilburg, 16 March 2006.

- Focus on growth;
- More promotion activities, annual meetings are good;
- Scope for target entrepreneurs is larger for EPIS;
- Monday meeting is very good and TOP should copy;
- Entrepreneurial leader to motivate team, clients and mentors.

Other similar projects include schemes in Zurich, Coventry & Warwick, the Dutch national KEB, BioScience Yorkshire Enterprise Fellowship and the Wales Spin-Out Programme. These models are all very close to the TOP/EPIS model but with different levels of personal funding (eg Wales = £25,000, Yorkshire = £30,000 grant + £10,000 loan).

## 3 RECOMMENDATIONS

### 3.1 Method

To enable analysis of the information gathered, both from background research and from the interviews, a strengths, weaknesses, opportunities and threats (SWOT) analysis has been prepared that highlights the main lessons learned to date on EPIS.

#### Strengths

The scheme has attracted a wider variety of applicants for placements than was originally envisaged. In particular, there have been more placements into the humanities departments within the university. This is seen by the university as a positive outcome.

The leadership, motivation, networking and pragmatic advice delivered to the entrepreneurs by the Programme Manager have received very positive praise from all stakeholders and project partners

The EPIS team has balanced this strength by providing good links and interaction with the academic hosts, as well as recent improvements in the reporting and administration of the project.

The long term relationship and detailed links with the academic research staff that the Programme Co-ordinator offers provides an effective link between newly selected entrepreneurs and the most appropriate academic hosts. This relationship is also key to the strong cultural impact of the EPIS scheme.

The wide network of business experts and professional advisors that the Programme Manager has been able to bring to, and keep engaged with, the scheme has been a key to the success of the scheme in supporting the Entrepreneur's professional development.

Entrepreneurs have raised almost £2 million mostly from private sources, representing an average of nearly £140,000 per project. The level of private sector funding of EPIS companies is a strong indication of the commercial quality of the intervention.

If the equity investment were to be included within the scheme monies, the leverages would change from:

Ratio SEEL funds to total project costs :	1 : 3
Ratio SEEL funds to contributions from others :	1 : 2

To

Ratio SEEL funds to total project costs	1: 12.5
Ratio project sponsors & additional public / private	1: 2.25

Which looks to be a very efficient investment of SEEL money, and demonstrates a good ability to prise out private funding to go alongside public sector grants.

## **Weaknesses**

Marketing of the scheme, although attracting enough applicants to fill the places available, has apparently not generated enough applicants whose ventures have high growth potential.

Following the initial single Programme Management and Administration Role, it has been recognised and the roles of Programme Manager and the administrative support requirement, should be separated. The administrative elements of the EPIS Scheme are now provided by the roles of Project Manager and Programme Co-ordinator .

The SEEL contract documents and EPIS progress reports have not clarified that in government contracts (particularly ERDF funded projects) jobs are specified as Full Time Equivalents (FTE).

Some of the key metrics by which success of the project will be measured are to a large extent outside of the control of the project, as they measure the growth of the new venture following completion of the pre-incubation phase. This has led to less focus being placed by the EPIS operation on meeting or exceeding these outcomes.

During the lifetime of the scheme, the SEEL manager with responsibility for EPIS has changed three times, introducing different management styles and changing the dynamics of the management team. It is important to minimise the frequency of changes in the team to provide a consistent and coherent management approach.

Business Mentors do not deliver the level of value that they are capable of. In part, this is due to a lack of understanding of what the mentor can provide by the Entrepreneur and in part it is due to a single mentor not being able to provide the range of skills needed by the Entrepreneur.

## **Opportunities**

Given that our analysis [see Section 2.4] concludes that there is a larger pool of potential applicants for placement than are currently coming forward, better marketing to broaden the range of entrepreneurs and to include younger graduates would benefit the scheme.

The strongest relationships between academia and the Entrepreneurs have been created where there is a strong overlap between the Technical Mentor's research interests and the Entrepreneur's opportunity.

Improve the marketing of EPIS to attract a broader range of high-quality applicants for placement.

As the number of applications increases, offer places preferentially to those where the fit with a potential Technical Mentor is good, and where the opportunity for high-growth and high-tech business creation is greatest, thereby improving the cultural and FTE job creation outcomes of the scheme.

Ensuring that Entrepreneurs have access to appropriate support following completion of the pre-incubation phase will increase the likelihood that the new venture growth targets are met.

The Business Mentor offering should be reviewed to determine the scope for raising the breadth, availability and business experience of the scheme's mentors. This review should include an assessment of:

- the pros and cons of paid vs unpaid Mentors<sup>24</sup>;
- ways of improving the match between Entrepreneur needs and Mentor skills
- The feasibility of providing Entrepreneurs with access to a panel of Business Mentors following completion of the pre-incubation phase.

The IP model is totally appropriate but EPIS should consider providing the Entrepreneurs with access to patent search tools and guidance in their use.

## **Threats**

The pool of budding Entrepreneurs with high quality ideas for new ventures is limited, leading to a drying up of the pipeline of applicants. There is no formal assessment of the number of potential Entrepreneurs (we have carried out a brief desk-based assessment in Section 2.4). This is particularly relevant given that the demographics of the applicants in terms of age, area of hosting within the university and source from which they are drawn has not matched the expectation set at the outset of the project.

It is not yet clear the number of high-growth businesses that have been set up through the scheme. Of the 15 registered companies only two have created more than four jobs and none have reported turnovers above £100,000. The current targets require the creation of seven standard and seven high-growth companies by October 2006. The business performance so far suggests that the high-growth target will not be achieved but the standard target will be exceeded.

There is a threat that the scheme will fail to deliver the expected FTE job creation targets within the timescales of the pilot project. The FTE job creation target needs to be resolved and the EPIS team focussed on the clearly defined job creation and business start-up targets to avoid the risk of ERDF justifiably demanding repayment of part or all of the funding as this would have serious implications upon the

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<sup>24</sup> The SE Life Science Business Advisory Service could be used as an example of a paid mentoring scheme

continued viability of the scheme. To highlight this issue, Manchester University's incubator project company Campus Ventures went into receivership in December 2004 when an ERDF audit challenged some of the project outputs and demanded repayment of their funding.

The specific personal strengths of the current Programme Manager have made a significant contribution to the success of the scheme to date. If he were to leave EPIS for whatever reason, there is a danger that the scheme may to some extent lose its way, unless someone of comparable quality could be found and recruited promptly.

## **3.2 Strategic EPIS Model**

Based upon analysis of the background documentation and a range of interviews covering all aspects of the scheme, a number of recommendations for modifications of the EPIS strategy and delivery have been synthesised as follows:

### **Marketing**

Improve the marketing of EPIS to attract a broader range of high quality applicants for placement. This will enable places to be offered where the fit to the Technical Mentor is good and where the opportunity is seen to align with the original concept of high growth and high tech, which will in turn improve the outcomes from placement.

To inform the EPIS team and ensure that the marketing is effective, we recommend a demand and market study is carried out to identify the:

- size of the potential entrepreneur pool
- demographics of the entrepreneur pool
- best ways to reach the target market
- key messages that will interest the target market in EPIS

The current portfolio of Entrepreneurs is largely older and contains relatively few University of Edinburgh alumni. Following the demand and market study, the demographic profile should be reviewed and a target demographic profile agreed and carried forward into the selection and placement of applicants.

### **Selection and Placement**

As the number of applicants for placement increases, only offer places where the fit to the Technical Mentor is good and where the opportunity is seen to align with the original concept of 'high growth' and 'high technology', which will in turn improve the outcomes from placement.

## **Entrepreneur Support and Continuing Professional Development**

Involvement of organisations such as the Business School at the UoE within the scheme, to enable Entrepreneurs to obtain a 'chalk and talk' element of business learning, was identified as a potential way of strengthening the business acumen of the Entrepreneurs.

To inform the EPIS team and ensure that maximum value is provided to the Entrepreneur during the placement year, we recommend that a review of the formal learning element of the RSE/SE Enterprise Fellowship scheme be carried out by interviewing past and present fellows to identify the impact that formal learning had on creating successful new ventures.

Following this review, the formal educational content of EPIS should be reviewed and changed if necessary.

## **Business Mentor Network**

Although working well at present, both Business Mentors and Entrepreneurs identified opportunities to further leverage the skills provided by the Mentors to assist the Entrepreneurs. Several opportunities were suggested, including:

- the creation of a more formal and possibly paid mentor role, such as provided by Scottish Enterprise through the Life Science Business Advisory Service;
- the provision to Entrepreneurs of access to a panel of Business Mentors following completion of the pre-incubation phase.

As discussed above, we recommend that a review be carried out to determine the scope for raising the breadth, availability and business experience of the scheme's mentors.

## **Length of Placement**

Almost without exception, the Entrepreneurs believed that extending the placement from 12 months to 24 months would significantly improve the chance of creating a successful new venture.

We do not subscribe to this view and believe that the current time frame provides a spur for Entrepreneurs to move their ideas forward quickly and that extending the time allowed would slow down the pace at which the idea is progressed (often, in accordance with Parkinson's Law). SEEL have observed that many projects achieve little in their first six months, and the 12-month deadline is a useful spur to greater activity in the second half of the placement.



### 3.3 Performance targets

Our analysis of the EPIS performance to date, the stakeholder interviews and the financial value suggests that the scheme is performing well at this early stage. It is important however that the project targets are maintained in a clear way to keep the team focussed on delivering a strong economic impact, at a high value for money as well as continuing the positive cultural changes inherent to the commercialisation of the Entrepreneur's ideas.

Our analysis suggests that the following targets should be maintained:

- FTE jobs at the end of the first phase of EPIS 107
- FTE jobs three years after last company incorporation 200
- Number of programme participants supported 32
- Standard start-up companies 11
- High-growth companies three years after last company incorporation 12

We recommend that the scheme be monitored by the EPIS/SEEL management team against a pipeline profile, not just the existing end targets. The figures presented in Section 2.2 are a good example of this approach. This timeline method will encourage the funding bodies and the management team to adapt the EPIS operation to the required outputs.

There are other output targets that would emphasise the strength and additionality of the scheme. We therefore recommend that the following targets are added;

- Financial leverage: private investment : public sector investment 12:1
- Company survival rate 75%
- GVA/FTE £33,500<sup>25</sup>

The Gross Value Add (GVA) figure is set at the existing average figure for Scotland and is intended to record and emphasise the economic value of the EPIS intervention. It will also highlight the need to select and support companies with a good market awareness and proposition.

### 3.4 Output and Impact Monitoring

The original inconsistencies and short comings in the reporting of outputs and activities of the EPIS project have been addressed through the re-organisation of the EPIS team. It is recommended that the improvements in the internal roles and responsibilities be continued. In particular the current development of the EPIS database is an important step forward and this should be completed and brought into use as a priority action.

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<sup>25</sup> Based on Scottish Economic Statistics, Scottish Executive, 2004

In the reporting of the outputs it is important that the job creation is recorded using Full Time Equivalent (FTE) values. The EPIS team also needs to keep a focus on the jobs created targets, as the uplift needed until September 2007 to achieve the ERDF is challenging.

In accordance with our recommended outputs the monitoring should continue with the inclusion of private sector funding (debt and equity). In addition the database should include sales and GVA figures.

### **3.5 Best Practice in IP Issues**

EPIS includes lectures from expert practitioners to raise the Entrepreneurs' awareness of the importance of protecting intellectual property and the various routes through which this can be achieved. In addition, the Entrepreneur is introduced to the practitioner thereby extending the Entrepreneur's network to include IP expertise. The level of support provided is therefore appropriate.

From the interviews, it emerged that generally the Entrepreneurs do not carry out patent searches to confirm that the area of their idea is novel and protectable prior to filing their own patent, at which time the patent attorney carries out a patent search.

Although, to date, this has not presented any of the Entrepreneurs with any issues, we recommend that EPIS consider providing budding Entrepreneurs with access to patent search tools and guidance in their use.

## 4 CONCLUSIONS

Our evaluation exercise reveals that the EPIS project and its delivery team represent a positive contribution to the health of the local business start-ups and they are playing an important role in improving the academic/business cultural relationships. EPIS is therefore a positive contributor to Scottish Enterprise's approach to delivering *Smart, Successful Scotland* economic development projects. Client and stakeholder feedback is universally strong and there are a number of examples of innovative companies being created with strong business and technical advice from the mentors and academic hosts respectively. The leadership, motivation, networking and pragmatic advice delivered to the entrepreneurs by the Programme Manager has received very positive praise from all stakeholders and project partners. The EPIS team has balanced this strength by providing good links and interaction with the academic hosts as well as recent improvements in the reporting and administration of the project.

The project is now ahead of its targets in company formation and Entrepreneur assists. The networking and CPD events are well supported by Entrepreneurs and Mentors, and have helped to build confidence in the scheme and its management. It is also encouraging to see the level of private sector investment funding that has been attracted by some of the EPIS companies, as this is a true indication of the commercial quality of the intervention. There is also interview evidence that some of the University of Edinburgh hosts have received income for technical support of businesses and a growth in research ideas and projects based upon their hosting relationships.

Given the likely demand for start-up business support in the Edinburgh and Lothian region, as well as the performance delivered by the project in only its third year of operation, we recommend that EPIS be continued beyond its current four year project timeline for at least a further two years. In addition, the quality and effectiveness of the intervention should in our opinion be scaled up within the University of Edinburgh environment to support more applicants, widen the hosting opportunities and improve the creation of high-value businesses and jobs in the region. This widening of the business/academic interaction will further enhance the University of Edinburgh's experience and capability in commercialising its own research.

In moving the existing scheme forward and further enhancing its performance we would also recommend that continuous improvements be made in the following areas:

- Marketing of the scheme;
- Focus on high-growth and high-value business ideas during the selection process;
- Linkages with University of Edinburgh alumnus organisations to increase the uptake of the scheme by alumni;

- Involve the Business School to enable Entrepreneurs to receive a formal element of business learning.
- Review the CPD activities to consider adding a more formal learning element;
- Review the Business Mentor offering to raise the breadth, availability and business experience of the schemes mentors. This review should include an assessment of:
  - the pros and cons of paid vs unpaid Mentors<sup>26</sup>;
  - ways of improving the match between Entrepreneur needs and Mentor skills
  - The feasibility of providing Entrepreneurs with access to a panel of Business Mentors following completion of the pre-incubation phase.
- Develop better links with next-stage business support initiatives at SEEL, Government Gateway and university incubators.
- Reporting and monitoring of the EPIS achievements and outputs, i.e.;
  - Ensure that job creation outputs are reported as FTE.
  - Keep the team focussed on clearly defined job creation and business start-up targets
  - Add financial leverage, company survival rates and GVA to the reported outputs to emphasise the value added by the EPIS intervention
- The IP model is totally appropriate but EPIS should consider providing the Entrepreneurs with access to patent search tools and guidance in their use.

Finally, the broader Scottish market and additionality of EPIS, and the excellent value for money delivered to Scottish Enterprise, indicate that this pre-incubator model should be used to provide support in other parts of Scotland. It is therefore recommended that work be carried out now to research into the opportunities and challenges in scaling up this intervention to deliver these benefits throughout

- i) Edinburgh and Lothian (ie involving the other three universities in the region)
- ii) The whole of the central belt (ie additionally involving the four universities in greater Glasgow and – probably – the University of Stirling)
- iii) The rest of lowland Scotland (ie additionally involving the four universities in Dundee and Aberdeen)

This will not be a straightforward process. The “nationalization” of TOP has already proven that some universities fail to deliver the benefits through issues around the cultural business/academic relationships, the local university goals and capabilities, the demand for pre-incubation and the local strengths of businesses. It is also very clear that the strength of outputs and performance are dependent on the skills and motivation of the key project staff. However, our recommendation is that identification and development of the correct partnerships and operational capability will offer a cost effective improvement in regional and national business start-ups as well as enhance the university commercialisation capabilities and commitment.

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<sup>26</sup> The SE Life Science Business Advisory Service could be used as an example of a paid mentoring scheme

**APPENDIX A LIST OF INDIVIDUALS CONSULTED**

<b>Name</b>	<b>Position</b>
Ross Clark	Alba Innovation Centre
Aidan Courtney	Business Mentor
Gordon Stuart	Business Mentor
Howard Marriage	Business Mentor
Alison Blackwell	Entrepreneur (completed pre-incubation phase)
Iain Robinson	Entrepreneur (completed pre-incubation phase)
Bruce Alexander	Entrepreneur (Xeroshield Ltd)
John Cosgrove	Entrepreneur ((Professional Scientific Ltd)
John Harris	Entrepreneur (Seven Things I Daren't Express Ltd)
Joe Halliwell	Entrepreneur Blootag Ltd)
Navine Suyal	Entrepreneur (Ankur Ltd)
Tim Douglas,	Entrepreneur
Prady Kuna	Entrepreneur (Syna-g Ltd)
Ian Apple	Entrepreneur (Unisil)
Adrian Smith	EPIS Programme Manager
Linda Brooks	EPIS Programme Co-ordinator
Rebecca Difford	EPIS Project Manager
Andrew Sijan	EPIS Company Formation Manager at ERI
Nigel Paul	University of Edinburgh
Derek Waddell	CEO of ERI
Bob Smailes	Former CEO of ERI – now at University of Leiden
Jim Scott	SEEL
David Caughey	SEEL
John Lee	Technical Mentor in host department of Arts, Culture and Environment
Mary Bownes	Technical Mentor in host department of Developmental Biology
Colin Cunningham	Technical Mentor in Contaminated Land Assessment and Remediation Research Centre
Jaap van Tilburg	TOPS

## APPENDIX B LIST OF DOCUMENTS REVIEWED

1. The Green Book, Appraisal & Evaluation in Central Government, Jan 2003, HM Treasury
2. The commercialisation strategy of Edinburgh University, David Charles & Paul Benneworth, ERI, October 2000
3. Company development strategy, Bob Smailes, ERI, November 2002
4. SE project approval paper for EPIS, David Caughey, Susan McClellan, SEEL, Oct 2002
5. EPIS Contract for ERI, June 2003
6. EPIS Directors Report, Adrian Smith, ERI, January 2004
7. EPIS Directors Report, Adrian Smith, ERI, February 2004
8. EPIS Directors Report, Adrian Smith, ERI, March 2004
9. EPIS Directors Report, Adrian Smith, ERI, April 2004
10. EPIS Directors Report, Adrian Smith, ERI, June 2004
11. EPIS Directors Report, Adrian Smith, ERI, July 2004
12. EPIS Directors Report, Adrian Smith, ERI, August 2004
13. EPIS Directors Report, Adrian Smith, ERI, September 2004
14. EPIS Companies & employees numbers, Kevin Johnston, SEEL, August 2004
15. EPIS Overview, Bob Smailes, ERI, April 2005
16. Entrepreneur record chart, ERI, 30/05/05
17. EPIS Questionnaire, Jaap van Tilburg, Top Spin International, June 2005
18. EPIS Halfway Evaluation Entrepreneurs, Jaap van Tilburg, Top Spin International, June 2005
19. Edinburgh Pre Incubation Scheme ("EPIS") Compliance review, Ian Lamb, ERI, July 2005
20. EPIS Mid-term review, Dr Bob Smailes, ERI, July 2005
21. Pipeline of candidates for EPIS and outlook for future achievement of programme targets., Adrian Smith, ERI, July 2005
22. Progress on contracted targets, SEEL, July 2005
23. EPIS Project update PowerPoint, Jim Scott, Andrew Sijan, Iain Robinson, Yuriy Zadyraka, SEEL, August 2005
24. EPIS progress bulletin, Adrian Smith Programme Manager, EPIS, 30 September 2005
25. Queen's Award for Enterprise Innovation 2006, Derek Waddell, 28/10/05
26. Minutes of 8th Quarterly review meeting, 14/10/05
27. Update to SEEL 24th October to 15th November 2005
28. EPIS Entrepreneur record December 2005,
29. EPIS 9th Quarterly review meeting agenda, 20/01/06
30. EPIS Stakeholders Director Report Qtr 4 2005, Rebecca Difford, ERI, 20/01/06
  - a. Appendix 1 EPIS Budget Analysis
  - b. Appendix 2 Company Creation Table
  - c. Appendix 3 Entrepreneurs Loan Repayment Summary
31. EPIS Stakeholders Quarterly Meeting, Discussion document for the continuation funding, 20<sup>th</sup> January 2006,
32. EPIS progress bulletin, Adrian Smith Programme Manager, EPIS, 16 February 2006
33. EPIS Enquiries and Progress Chart, Rebecca Difford, ERI, March 06

34. EPIS Companies record chart, ERI,
35. Early Detection of Fast Growth Potential, Workplan EPIS / TOP paper version 2.1, Jaap van Tilburg (TSI/NIKOS) and Geoff Gregson (Centre for Entrepreneurship Research)
36. EPIS Mentor personal profiles, Alex Ogilvie
37. EPIS Mentor personal profiles, Alistair Rutherford
38. EPIS Mentor personal profiles, Andy Crofts
39. EPIS Mentor personal profiles, Chris Galley
40. EPIS Mentor personal profiles, Colin Grant
41. EPIS Mentor personal profiles, David Walton
42. EPIS Mentor personal profiles, Gordon Stuart
43. EPIS Mentor personal profiles, Howard Marriage
44. EPIS Mentor personal profiles, Liza Sutherland
45. EPIS Mentor personal profiles, Paddy Scott
46. EPIS Mentor personal profiles, Patrick Andrews
47. EPIS Mentor personal profiles, Peter Grey
48. EPIS Mentor personal profiles, Richard Laming
49. EPIS Mentor personal profiles, Richard Skakel
50. EPIS Mentor personal profiles, Stephen Percy Robb
51. EPIS Mentor personal profiles, Steve Nutt
52. TOP Information/Application document, Ing. D.van Barneveld, TRD, University of Twente
53. Economic Intelligence Presentation, Veronica Noone, SEEL, 6/10/04
54. Comparison of exploitation performance of Scottish Universities with US institutions, Bob Smailes, ERI, January 05
55. Scottish corporate sector statistics, Department of Enterprise, Transport and Lifelong Learning, 16/06/05
56. Scottish Keyfacts February 2006, Knowledge Exchange, 13/02/06
57. Scottish Economic Statistics 2004, Scottish Executive, 21/10/04
58. SE High Growth Start Up Unit wins UKBI National Exemplar in Business Incubation Award PR Document, Kate Friel March 06
59. Small Business Gateway High Growth start-up evaluation, Renfrewshire, SQW, Feb 2003
60. High growth start ups – improving performance, Lorna Duguid , SE Grampian, 23/08/05
61. SE Forth Valley's High-Growth Start-Up (HGSU) Programme, Laura Finlayson, 01/09/04
62. Annual Report 2004/05, SE Glasgow
63. Regional gross value added, National Statistics, April 2004
64. Glasgow Economic Audit 2004, Oxford Economic Forecasting, March 05
65. Glasgow economic analysis and benchmark report, BAK Basel Economics, November 05

**APPENDIX C RESEARCH QUESTIONS**

<b>GROUP</b>	<b>INSIDE OUT</b>	<b>OUTSIDE IN</b>
<p>EPIS Staff</p>	<p style="text-align: center;"><b><u>Past</u></b></p> <ul style="list-style-type: none"> <li>• How was the project initialised?</li> <li>• Was the start-up appropriate, timely and effective?</li> <li>• Could SEEL's start –up process be improved and if so how?</li> <li>• Are the business targets fair and sensible given the level of financial and people resources available?</li> <li>• What economic outcomes were anticipated over the full four-year duration of the scheme and how far have they been met to date?</li> </ul> <p style="text-align: center;"><b><u>Present</u></b></p> <ul style="list-style-type: none"> <li>• How does the EPIS model work in practice? Is it efficient in helping new business creation?</li> <li>• What are the biggest successes in the delivery of the model?</li> <li>• How do you regard the actual performance against the original targets?</li> <li>• How would you like to see them change given the finances and resources available?</li> <li>• How far have any other stated or implied outcomes been met?</li> </ul> <ul style="list-style-type: none"> <li>• What are the real strengths of the operation and the team?</li> <li>• What are the major strengths of the scheme's planning and management activities?</li> <li>• How would you like to see the management and planning improved to increase the effectiveness of the project?</li> <li>• Are the facilities sufficient to deliver the Entrepreneur support?</li> <li>• Have issues arisen which were not predicted at the time?</li> <li>• As such issues have arisen, has the EPIS team had the capacity to deal with them?</li> <li>• What would make your role easier and more effective?</li> </ul>	<p style="text-align: center;"><b><u>Present</u></b></p> <ul style="list-style-type: none"> <li>• What are the biggest needs for supporting pre-start-ups?</li> <li>• What are the external views of the scheme's performance?</li> <li>• Where does the EPIS project stand in international pre-incubation scheme status?</li> <li>• Are there better incubator models in either national or international locations?</li> <li>• Is SEEL management appropriate</li> <li>• What are the relationships between EPIS, academia and business in Scotland?</li> <li>• How would you like to see these cultural relationships developed further?</li> </ul> <p style="text-align: center;"><b><u>Future</u></b></p> <ul style="list-style-type: none"> <li>• What are the main barriers to growing the Entrepreneur interest in EPIS?</li> <li>• How would you like to improve the numbers and quality of entrepreneurs applying to join the scheme?</li> <li>• What is the pipeline like?</li> </ul>



GROUP	INSIDE OUT	OUTSIDE IN
EPIS Staff	<ul style="list-style-type: none"> <li>• How are the financial controls operated and how are costs monitored and reported in the project?</li> <li>• Do they need any improvements and if so what would you recommend?</li>   <li>• What are the main criteria and issues in selecting entrepreneurs to enter the scheme?</li> <li>• Are the selected entrepreneurs of sufficient quality and quantity to deliver the project objectives?</li> <li>• How could the selection process be improved?</li> <li>• How are exiting business and entrepreneurs managed and how are the follow on communication and loan repayments managed?</li>   <li>• How well does the mentor model work? Is it possible to attract strong mentors when the role is unpaid?</li> <li>• Do the Business Mentors working with EPIS have the correct set of skills for the job?</li>   <li>• Is IP management properly supported?</li> <li>• How would you like to improve IP support in the scheme?</li>   <li style="text-align: center;"><b><u>Future</u></b></li>   <li>• Given the success of the scheme how would you like to see EPIS developed in the future?</li> </ul>	

GROUP	INSIDE OUT	OUTSIDE IN
<b>ENTREPRENEURS</b>	<p style="text-align: center;"><b><u>PAST</u></b></p> <ul style="list-style-type: none"> <li>• What were your personal objectives in applying for EPIS?</li> <li>• What skills or business support did you feel you needed before joining EPIS?</li> </ul> <p style="text-align: center;"><b><u>PRESENT</u></b></p> <ul style="list-style-type: none"> <li>• Describe your relationships with the academic hosts and have they delivered improvements in your business and or technology thinking/performance?</li> <li>• Is the ip management advice and support of sufficient quality to deliver confidence in your product protection?</li> </ul> <p style="text-align: center;"><b><u>FUTURE</u></b></p> <ul style="list-style-type: none"> <li>• How do you expect your own business to perform in the future?</li> <li>• What are the likely operational changes to your business and how will the scheme influence the future?</li> </ul>	<p style="text-align: center;"><b><u>PAST</u></b></p> <ul style="list-style-type: none"> <li>• How long have you had your idea?</li> <li>• Did EPIS catalyse the idea?</li> <li>• How did you find out about EPIS?</li> </ul> <p style="text-align: center;"><b><u>PRESENT</u></b></p> <ul style="list-style-type: none"> <li>• How do you grade the services and how does this compare with what you thought the services would be? <ul style="list-style-type: none"> <li>• £10k loan</li> <li>• Mentoring</li> <li>• Networking</li> <li>• University access</li> <li>• Funding networks</li> </ul> </li> <li>• Would you have set your company up without EPIS? If so what improvement in time or performance has EPIS delivered?</li> <li>• What is the additionality that EPIS has delivered to you?</li> <li>• What other government services have you received or applied for? Has EPIS helped in this process?</li> </ul> <p style="text-align: center;"><b><u>FUTURE</u></b></p> <ul style="list-style-type: none"> <li>• What parts of the EPIS scheme could be enhanced to improve your business performance?</li> <li>• How would you like to see the EPIS scheme developed to improve the benefits and performance of new entrepreneurs?</li> </ul>

<b>GROUP</b>	<b>INSIDE OUT</b>	<b>OUTSIDE IN</b>
<b>MENTORS</b>	<p style="text-align: center;"><b><u>PRESENT</u></b></p> <ul style="list-style-type: none"> <li>• What are your personal reasons for supporting EPIS clients?</li> <li>• Is the present model sufficient to allow you to help entrepreneurs in an effective manner?</li> <li>• Is non-payment of fees for your time an issue and if so why or why not?</li> <li>• What targets do you have and are they acceptable? If not what would you prefer?</li> <li>• What are the main benefits you have delivered to the clients?</li> <li>• What are the main successes and positive interactions that the project has delivered?</li> </ul> <p style="text-align: center;"><b><u>FUTURE</u></b></p> <ul style="list-style-type: none"> <li>• How would you like to improve the project mentoring operation?</li> <li>• Given the success of the scheme how would you like to see EPIS developed in the future?</li> </ul>	<p style="text-align: center;"><b><u>PRESENT</u></b></p> <ul style="list-style-type: none"> <li>• Has your role as an EPIS mentor improved your own opportunities?</li> <li>• Has the project had any impact on the demand for mentor services in the Scottish business network?</li> </ul> <p style="text-align: center;"><b><u>FUTURE</u></b></p> <ul style="list-style-type: none"> <li>• How will your EPIS experience impact your future activities and aims?</li> </ul>

GROUP	INSIDE OUT	OUTSIDE IN
HOSTS	<p style="text-align: center;"><b><u>PRESENT</u></b></p> <ul style="list-style-type: none"> <li>• What are the goals in participating in the EPIS project?</li> <li>• How has the project impacted the facilities, staff and organisation's performance?</li> <li>• What are the main benefits that EPIS has delivered to edinburgh university?</li> <li>• Are the financial rewards sufficient and if not how would you like to see this improved?</li> </ul> <p style="text-align: center;"><b><u>FUTURE</u></b></p> <ul style="list-style-type: none"> <li>• How would you like to improve the project operation model to enhance your department's effectiveness and outputs?</li> <li>• Given the success of the scheme how would you like to see EPIS developed in the future?</li> </ul>	<p style="text-align: center;"><b><u>PAST</u></b></p> <ul style="list-style-type: none"> <li>• At the outset, what were the vision and perceived outcomes for the project on the part of the university of edinburgh?</li> </ul> <p style="text-align: center;"><b><u>PRESENT</u></b></p> <ul style="list-style-type: none"> <li>• How significant are any differences between these two perspectives?</li> <li>• What impact has the project had on edinburgh university's reputation, from business/entrepreneurs, knowledge transfer and academic status?</li> <li>• What has been the cultural impact of the scheme?</li> </ul> <p style="text-align: center;"><b><u>FUTURE</u></b></p> <ul style="list-style-type: none"> <li>• How would you like to see the scheme developed to enhance your organisation's external reputation?</li> </ul>

<b>GROUP</b>	<b>INSIDE OUT</b>	<b>OUTSIDE IN</b>
SEEL	<p style="text-align: center;"><b><u>PAST</u></b></p> <ul style="list-style-type: none"> <li>• What were the goals and issues that were driving SEEL at the time of building the programme?</li> <li>• How was the idea started?</li> <li>• What were the key issues that were driving this concept and have they been borne out?</li> <li>• What were the government outcomes you were pursuing?</li> <li>• What economic outcomes were anticipated over the full four-year duration of the scheme and have they been met?</li> <li>• Was a realistic risk analysis undertaken and if so what were your main concerns?</li> <li>• Was sustainability sufficiently considered?</li> </ul> <p style="text-align: center;"><b><u>PRESENT</u></b></p> <ul style="list-style-type: none"> <li>• How far have any other stated or implied outcomes been met?</li> <li>• What process is being used to monitor and report project outcomes?</li> <li>• What procedures and reporting processes are in place for financial controls?</li> <li>• Is the scheme financially efficient and what value for money is being achieved?</li> <li>• What parts of the project do you regard as particularly successful/relevant?</li> <li>• In hindsight what parts of the process do you think could be improved?</li> <li>• Are the outcomes realistic?</li> <li>• You correctly identified ip as a key issue; has your approach been correct as the entrepreneurs have been developed?</li> </ul> <p style="text-align: center;"><b><u>FUTURE</u></b></p> <ul style="list-style-type: none"> <li>• How would you like to improve the project operation model to enhance the scheme's economic outputs and its efficiency?</li> <li>• Given the success of the scheme how would you like to see EPIS developed in the future?</li> <li>• What financial budget levels are potentially available for the next phase of the EPIS model?</li> </ul>	<p style="text-align: center;"><b><u>PAST</u></b></p> <ul style="list-style-type: none"> <li>• What market knowledge and stakeholder demand was driving the rationale?</li> <li>• Were you aware of any parallel UK and European initiatives apart from Twente?</li> </ul> <p style="text-align: center;"><b><u>PRESENT</u></b></p> <ul style="list-style-type: none"> <li>• Are there changes in the demand and type of start-up opportunities? If so, do these changes affect the validity of the rationale?</li> <li>• What market knowledge and demand is there for high-growth start-ups?</li> </ul> <p style="text-align: center;"><b><u>FUTURE</u></b></p> <ul style="list-style-type: none"> <li>• Is there sufficient demand across Scotland to require an expanded scheme?</li> <li>• How would an enhanced EPIS scheme be placed in an international benchmark?</li> </ul>