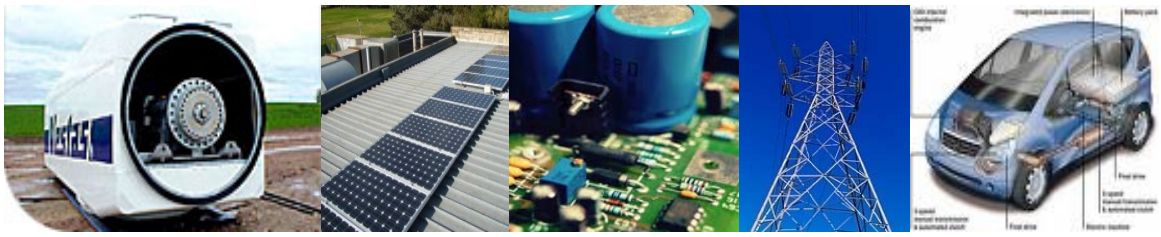
Scottish Enterprise

EVALUATION OF THE STAC PROJECT



Final Report

September 2009

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EXECUTIVE SUMMARY

1 Roger Tym & Partners (RTP) was commissioned by Scottish Enterprise (SE) in July 2009 to carry out an evaluation of the Scottish Technology and Collaboration (STAC) Project Phase 4.

2 STAC is a project which supports collaborative projects involving Scottish software SMEs. STAC Advisors provide an 'honest broker' service to SMEs, encouraging and facilitating collaborations with the aim of developing projects which are more efficient, more profitable and of enhanced quality.

3 Phase 4 of the project funded two facilitators, who worked with small technology firms (mainly software based). The facilitators aimed to support the formation of collaborative ventures between SMEs to enable them to compete more effectively in the market, and to identify suitable market opportunities to exploit through a STAC consortium. Funding for STAC Phase 4 amounted to £389,400.

Table 1 Cost Summary

Stage	Cost
STAC Pilot Phase and Phase 2	£579,500
Interim and Phase 3	£285,650
STAC Phase 4	£341,400
STAC Phase 4 extension	£48,000
Total	**£1,254,550**

4 Consultation was carried out with the two facilitators of the STAC project as well as the SMEs assisted by the project. Overall 12 businesses responded to the questionnaire, out of a possible 25 (48% response rate). From these responses and by estimating impacts on companies that did not respond to the questionnaire, economic impacts to date (adjusted for additionality) are estimated to be:

- £1.6m of sales;
- £0.87m GVA; and
- Around 13 jobs at the Scotland level

5 Economic impacts up to 2012 are estimated to be:

- £5.4m of sales (discounted);
- £3.2m GVA (discounted); and
- around 55 jobs at the Scotland level.

6 The STAC project has excellent cost benefit ratios: impacts to date are estimated at 1:2.24, 1:6.24 for future impacts and 1:8.49 for total impacts.

7 Qualitative impacts have also been highlighted by beneficiary companies and the facilitators, including:

- Improving products;
- Increasing the markets open to the companies;
- Better targeting of markets and product development;
- Improving the quality of pricing;
- Accessing new companies;
- Improving networking opportunities; and
- Improving business knowledge of the SMEs.

8 Areas of good practice have been identified, including: the flexibility given to the facilitators which has allowed them to select companies most likely to succeed and provide bespoke needs and support to the companies; and the long-term nature of the project which has allowed benefits time to accrue. However, the targeting of beneficiary companies could be improved through improved liaison and discussion between SE Account Managers and the facilitators.

9 Recommendations for improving future projects include:

- Continuing to carry out early market-validation to ensure SMEs have a viable product;
- Setting up interest groups around new technologies;
- More marketing of success stories by SE; and
- Linking SME products to the public sector as well as the private sector.

10 The STAC project has clearly achieved some tangible benefits to assisted companies in terms of impacts. There are further benefits to be accrued resulting from the STAC project. We suggest that should the STAC project be continued, there would be further companies to assist and existing assisted companies to assist further. It is likely further tangible benefits would be achieved through increases in turnover, resulting increases in jobs and qualitative benefits such as improvements in networking, product improvements and increasing markets open to the SMEs which in turn will lead to further increases in turnover.

1 INTRODUCTION

The Evaluation

1.1 Roger Tym & Partners (RTP) was commissioned by Scottish Enterprise (SE) in July 2009 to carry out an evaluation of the Scottish Technology and Collaboration (STAC) Project Phase 4.

The Evaluation Aims

1.2 The brief set out a requirement for a "light touch" evaluation, supported by telephone interviews with the supported companies. The aims were listed as to:

- Assess impacts to date and into the future as a result of STAC's intervention. This can build on, and extend, the information being collected in the current survey. Impacts need to cover turnover and jobs to be congruent with the 2007 evaluation and need to use SE's Intervention-Reference Case model as set out in the Guidance;
- Explore the softer impacts that come through STAC, its activities and processes;
- Assess the current relevance of the market failures identified in the 2007 evaluation as justification for the intervention;
- Assess the extent to which the 2007 evaluation's recommendations have been implemented;
- Identify good practices and areas for development; and
- Make recommendations for any successor project.

The Report

1.3 The rest of the report is set out as follows:

- Chapter 2 sets out the background information to the STAC Project;
- Chapter 3 shows results from the consultations with beneficiary companies;
- Chapter 4 estimates the economic impacts of the project, looking at quantitative impacts that have already happened and expected quantitative impacts up to 2012;
- Chapter 5 looks at the extent to which the 2007 evaluation's recommendations have been implemented; and
- Chapter 6 concludes the impacts of the project, sets out examples of good practice, lists areas for development and makes recommendations for any future projects.

2 THE STAC PROJECT

Overall Project Description

2.1 STAC is a project which supports collaborative projects involving Scottish software SMEs. STAC Advisors provide an 'honest broker' service to SMEs, encouraging and facilitating collaborations with the aim of developing projects which are more efficient, more profitable and of enhanced quality.

2.2 STAC began operating in 2004 following SE's formal approval in December 2003. It started with a pilot phase and developed into second and third phases of activity. The STAC Project Phase 4 ran from April 2007 until June 2009 (which included a 3 month extension period).

2.3 Some £341,400 was granted towards Phase 4 with a further £48,000 for the three month extension. Total SE investment therefore amounts to £1,245,550.

Table 2.1: Cost Summary

Stage	Cost
STAC Pilot Phase and Phase 2	£579,500
Interim and Phase 3	£285,650
STAC Phase 4	£341,400
STAC Phase 4 extension	£48,000
Total	**£1,254,550**

2.4 The overall aim of STAC was 'to foster, establish and promote collaborative ventures that bring together innovative, indigenous SMEs and larger companies to provide complete Scottish technology solutions or 'stacks' for industry and thus gain a greater share of domestic and international markets' (STAC Phase 4 Project Approval Paper, March 2007).

2.5 Its rationale is based on the argument that market failure has occurred (asymmetric information – see paragraph 2.15), with SMEs lacking access to the industry's large players, and the large players focussing on their own operational and research activities without looking to new developments from software SMEs.

STAC Phase 4

2.6 The Phase 4 project funded two facilitators, who worked with small technology firms (mainly software-based). The facilitators aimed to support the formation of collaborative ventures between SMEs to enable them to compete more effectively in the market. The facilitators also helped to identify suitable market opportunities, particularly with large organisations, that could be exploited through a STAC consortium.

2.7 The advisors supported other activity such as network building and buyer/end-user meetings to unearth opportunities. The focus of STAC Phase 4 was to work more closely with a group of 25 companies and the result was facilitation of 35 collaborative ventures. Advisor time and support was not charged to the companies and STAC did not provide any grants or other finance.

2.8 An example STAC scenario is set out in the Phase 4 Project Approval Paper, as below:

- An opportunity is identified, normally by the SME who has identified a market opportunity but is unable to take it further through lack of access to a larger company; or alternatively a larger software company has an opening with a client but needs specific expertise to complement their own;
- The STAC Advisor takes this opportunity forward, it is communicated on the STAC website and collaborative partners are identified;
- The STAC advisor fills the role of 'honest broker' throughout the various phases of the collaboration, advising on areas such as intellectual property rights, memorandums of understanding and non-disclosure agreements; and
- At the point where the product or service 'crosses the line' and is sold to customers, the collaboration is complete from a STAC perspective, unless there is further opportunity to expand the market range.

2.9 An example of this from STAC Phase 4 was an SME who identified an opportunity for their software product. The STAC advisor helped to carry out market research and looked at liaison with other partnership organisations on a non-partisan basis. The product was taken on by a large petroleum company.

2.10 The emphasis in Phase 4 was to move companies to completion stage, although 'prospecting' for new STACs was also carried out to keep the pipeline of opportunities active. The STAC Advisers tried to identify opportunities with the group of current STAC companies matching these to their existing network of contacts. This approach was seen as an accelerated 'picking winners' approach in order to maximise opportunities and make the best use of resources.

2.11 SE has already carried out a short survey of companies, asking for information on:

- Revenues generated as a result of the project (to date and forecast to 20011/12);
- STAC's impact in terms of improving project quality and increasing the speed of project implementation; and
- Views on STAC.

2.12 The impact and "views" questions were in the form of "Yes" "No" tick boxes.

Impacts of Phase 3 STAC

2.13 An evaluation was carried out in early 2007 which considered the impact of STAC Phase 3. This estimated the economic impact to be: £1.56m (net additional) in sales to date, £860,000 (net additional) in GVA and around 20 net additional Full Time

Equivalent (FTE) jobs at the Scotland level. Future impacts are estimated as £8.7m (discounted net additional) of sales for 2 years' time, £4.8m (discounted net additional) GVA and around 120 FTE jobs at the Scotland level.

Market Failure

2.14 The market failure rationale for the projects was identified in the previous STAC evaluation (February 2007). There were three main elements:

- **Information failure** – firms did not have the skills and did not find it easy to identify how or where to obtain them;
- **Scale barrier** – the image, and critical mass of larger competitors supplying to original equipment manufacturers and their associated 'presence' and good-will in the market creates a barrier for potential entrants, especially where these entrants are small; and
- **Risk aversion** – investment levels required by SMEs are too high given the uncertain returns while among larger organisations there is likely to be a perceived risk of engaging SMEs projects that are critical to future business performance.

2.15 In addition to these identified market failures, we suggest there is also **asymmetric information**, in that the smaller companies do not have contact details of the relevant people to contact at the larger companies and the larger companies are not aware of products being developed by the smaller companies.

3 SURVEYS AND CONSULTATION

Introduction

Facilitator Consultation

3.1 Consultation was carried out with the two facilitators of the STAC project and the findings are included in the findings and recommendations made later in the report.

Beneficiary Survey

3.2 SE provided a list of companies assisted by the STAC project, along with contact details, information about how much time they had been given by STAC facilitators, and any estimates of impacts provided by these companies as part of SE's initial evaluation.

3.3 The analysis below provides a summary of the key findings of the business survey. The survey was carried out by telephone end email by RTP during July and August 2009. A copy of the survey questions is attached at Appendix 1.

3.4 Overall 12[1] businesses responded to the questionnaire, representing a 48% response rate, which is regarded as a satisfactory level of response for this type of survey. One company stated it was too soon to estimate any benefits of STAC as the engagement was only 2 days; however, they were keen to continue engagement with STAC advisors in future to maximize potential of the scheme. One company's contact had left the company and the remaining staff could not complete the questions. One company suggested they had not had any benefit from STAC although they had a small amount of time spent with them. One company could not recall the STAC project. The remaining companies were unable to give time to respond to the survey.

3.5 More detailed comments provided by recipients are included in Appendix 2.

Beneficiary Company Survey Results

Profile of Respondents

3.6 Half of the companies which responded were located in either Edinburgh (three) or Livingston (three). The size of the companies varied between one and 34 employees, with the average company size being ten employees.

3.7 Two businesses became aware of the STAC project via the STAC facilitators, two through an account manager who had formerly worked in the e-business team, one through internet, two through their Account Manager at SE, two through unspecified contacts at SE and one through a presentation by a SE contact who presented at an

[1] One of these businesses only responded to a very limited number of questions

SE-run incubator. Two businesses could not remember how they became involved with STAC.

Type of Project and Support

3.8 The consultation process also required the companies to provide some background and brief overview of the STAC project. The companies were involved in a wide range of projects including: a project related to an upstream oil and gas consortium; software market research; presentation of a consultancy project to a company; Wireless Bistable LCD; and market prototyping of 'push to talk' technology.

3.9 The support from the STAC advisors was varied and included:

- Facilitating introductions to partner organisations (seven companies commented on this);
- Business development advice (six companies commented on this);
- Funding advice (three companies commented on this); and
- Assistance with researching markets (two companies commented on this).

Partner Companies

3.10 30% of the businesses stated that the partner companies they worked with as part of the STAC project were new contacts and 30% also stated that they liaised with large companies.

Increase in Staff, Equipment, Premises and Skills

3.11 One company (9%) stated that they will increase their workforce with one engineer this year due to STAC. They forecast an increase by two more employees next year and four the following year.

3.12 Only one company (9%) stated that they had increased their investment in plant or equipment due to STAC. This was represented by an increase in PC's.

3.13 None of the business had increased the size of/made investment in/upgraded their premises because of STAC.

3.14 Three companies (27%) stated that STAC had improved staff skill levels. This included better business planning, increased knowledge, and learning related to new technology.

3.15 One company (9%) stated that they have received grant incomes from other sources due to STAC.

Increase in Scope, Quality, Scale and Speed of Delivery

3.16 STAC resulted in an increase in the scope/quality/scale of the project for 64% of companies. Comments given relating to this increase include:

- Improving contacts (two comments related to this);
- Improving technical quality of projects (three comments related to this);
- Improving scale of projects (one comment related to this); and

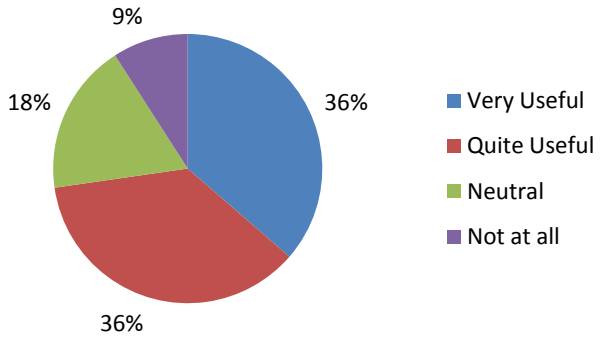
- Improving pricing (one comment related to this).

3.17 However only 22% of respondents believed it had increased the speed of delivery.

Facilitators

3.18 The survey sought the respondents' opinion on the facilitators; almost three out of four found the facilitators to be useful (see Figure 1).

Figure 1: How Useful has the Facilitator been?

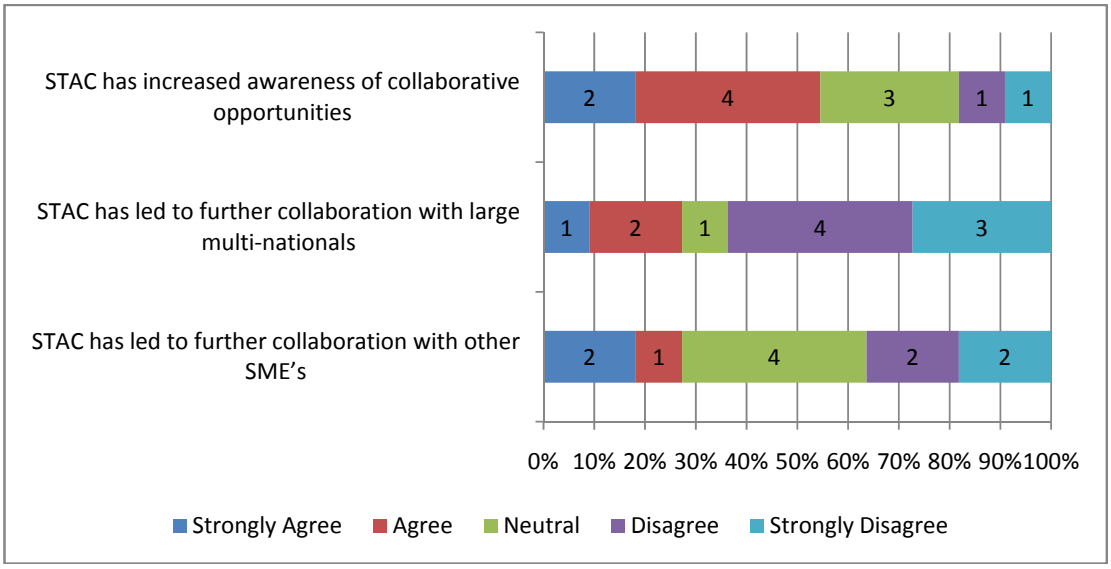


Qualitative Statements

3.19 The respondents were asked to what extent they agree with a number of different statements.

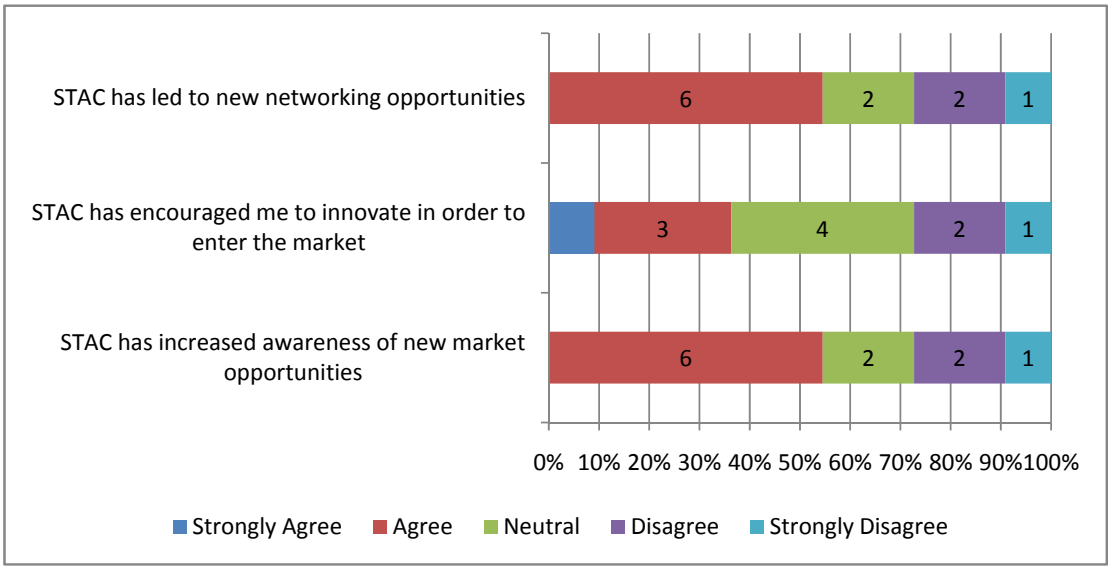
3.20 STAC has proven particularly successful in increasing awareness of collaborative opportunities. However, it has not been successful in leading to further collaborations with large multi-nationals. This could either be an issue of timing – there has been insufficient time for a second collaboration to occur – or it could be that the STAC project has been successful in linking the SME to the large company but the SME has been unable to continue the relationship. STAC has also had limited success in leading to further collaboration with other SMEs.

Figure 2: Collaborative Opportunities



3.21 STAC has been successful in leading to new networking opportunities and increasing awareness of new marketing opportunities. However, it has been less successful at encouraging innovation in order for the company to enter a market.

Figure 3: Networking, Innovation and Market Opportunities

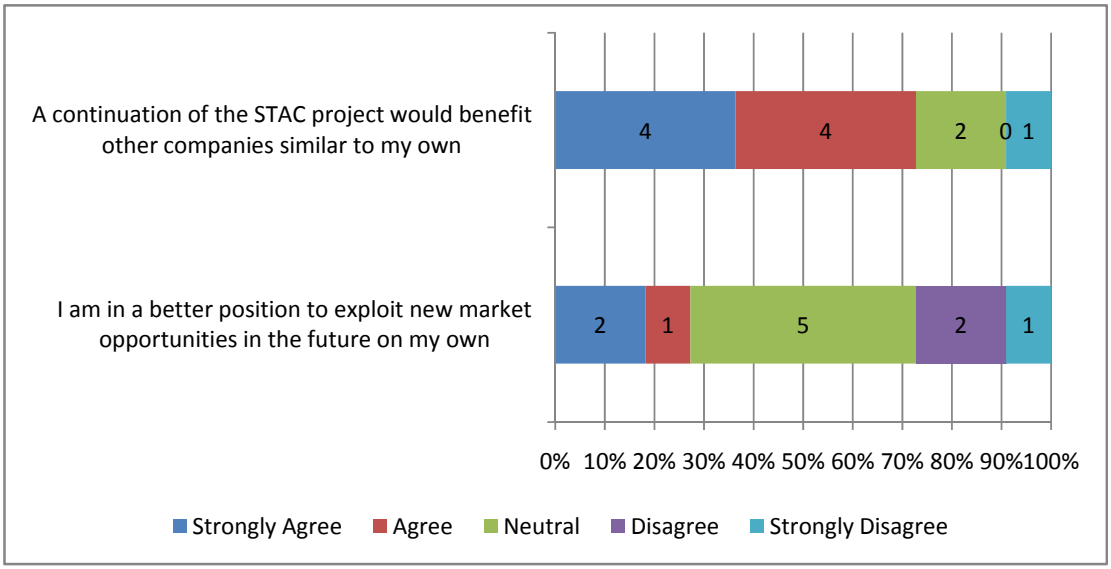


3.22 Only 3 companies thought they were in a better position to exploit new market opportunities in the future on their own, whilst 5 were unsure.

3.23 Respondents were also asked whether they thought a continuation of the STAC project would benefit other companies similar to their own; 8 of the respondents either agreed or strongly agreed to this statement. One respondent disagreed strongly and thought

the money for the project should instead be given directly to the companies seeking assistance.

Figure 4: Continuing STAC and Exploiting New Opportunities



Continuing the STAC Project

3.24 The survey asked whether the respondents thought it would be useful if the project continued. Nine companies responded yes and one no. Positive comments about the project include:

- Useful advice and information (five comments related to this);
- Increasing innovation (one comment related to this); and
- Bringing continuity to a complex sector (one comment related to this).

3.25 The survey respondents were asked if they had any suggestions to improve the scheme. The companies suggestions include:

- "Allow STAC advisors to continue their role."
- "Examples of STAC success stories, maybe case studies for example."
- "More networking events would be good for SMEs and would help to raise the profile of STAC."
- "It is under-resourced and needs more resources."

Further Comments

3.26 Two companies took the opportunity to leave further comments and both comments were in relation to the excellence of the STAC facilitators.

4 ECONOMIC IMPACTS

Baseline

Respondents

4.1 There are two sources of data for the estimated economic impacts of the STAC project: the SE survey carried out prior to this work, and RTP's survey carried out in July/August 2009.

4.2 There were 16 responses to SE's survey and a further 9 from RTP's survey (some of the 16 respondents to SE's survey also responded to RTP's survey). We have no data on 10 of the projects.

Quantitative Impacts – Past

4.3 Based on data collected through SE's questionnaires and RTP's questionnaires, we have estimates of impacts of 25 projects. In total, the estimated impact to date of these companies amounts to **£886,960**. This results from positive impacts for 7 of the projects; the remaining 18 projects estimate no impact to date.

Quantitative Impacts - Future

4.4 The data collected through SE's questionnaires and RTP's questionnaires suggests estimates of future impacts of 25 projects. This impact is set out below.

Table 4.1: Estimated Future Impacts of the STAC Project, Turnover

	Total Estimated Impact (£)
2009-2010	£1,700,000
2010-2011	£2,190,000
2011-2012	£2,380,000
Total estimated future impacts	£6,270,000

4.5 The total future impact of the STAC project is estimated to be **£6.27m**, with the impact increasing year on year to 2012.

4.6 Adding in the estimate for impacts to date of this phase of the STAC project gives a total impact of **£7.16m**.

Estimated Impacts

Higher Estimate

4.7 The impacts above relate to the 25 projects for which responses were received . However, a project-wide estimate can be extrapolated based on assumptions about

the level of impact of non-responding projects.. These assumptions are based on the amount of time spent with companies by the facilitators.

4.8 The 25 projects above amount to 173 days' input. This is used to estimate the impact per day spent, which is then applied to the 10 projects for which we did not receive responses (amounting to 55.5 days' input).

4.9 In addition to these estimates, we factor in for optimism bias.

Optimism Bias

4.10 Optimism bias describes the '*demonstrated, systematic tendency for project appraisers to be overly optimistic about project costs, duration and benefits (outputs and receipts/ income).*[2] It particularly applies to project costs, works' duration and benefits delivery. Guidance referred to in the Treasury Green Book suggests optimism bias adjustments should be based on data from past projects or similar projects elsewhere and adjusted for the characteristics of the project in hand. In the absence of such data, it suggests sensitivity analysis should be applied.

4.11 In line with CLG Guidance ('*Adjusting for Optimism Bias in Regeneration Projects and Programmes',* March 2007) we have applied a 17% optimism bias adjustment[3] and 50% optimism bias to the calculations. We set out below results from the 50% optimism bias as this is the most conservative estimate. Results for the 17% optimism bias have been provided to Scottish Enterprise.

[2] Source: Office of Project Appraisal Training (2005)*Project Advice Note 5/2005 Project Optimism Bias*

[3] This is the upper bound for revenue-based interventions (see Annex 1 of CLG, 2007). We do not have an empirical figure that we can apply to this project.

Table 4.2: Higher Estimated Future Impacts of the STAC Project, Turnover, 50% Optimism Bias

	Impact (survey - based)	Impact per Day Spent	Impact (Estimate)	Combined Impact
No. projects	25		10	35
Total days spent	173		55.5	229
Total to date, £	**886,960**	**5,127**	**284,545**	**1,171,505**
2009-2010, £	850,000	4,913	272,688	1,122,688
2010-2011, £	1,095,000	6,329	351,286	1,446,286
2011-2012, £	1,190,000	6,879	381,763	1,571,763
Total future, £	**3,135,000**	**18,121**	**1,005,737**	**4,140,737**
Total past and future, £	**4,021,960**	**23,248**	**1,290,282**	**5,312,242**

4.12 The total impact of the project is estimated to be £1.17m to date with a projected £4.14m in future. The overall total is estimated to be £5.31m.

Lower Estimate

4.13 It is likely that companies which gained the most were more likely to respond to the surveys, as they would have felt more favourably towards the project. We therefore set out a second estimate of impacts. We assume that the impact per day is at half the rate shown in the higher estimate. Again, we show results for the 50% optimism bias and results including 17% optimism bias have been provided to Scottish Enterprise.

Table 4.3: Lower Estimated Future Impacts of the STAC Project, Turnover

	Impact (survey - based)	Impact per Day Spent	Impact (Estimate)	Combined Impact
No. projects	25		10	35
Total days spent	173		55.5	229
Total to date, £	**886,960**	**5,127**	**284,545**	**1,171,505**
2009-2010, £	850,000	4,913	136,344	986,344
2010-2011, £	1,095,000	6,329	175,643	1,270,643
2011-2012, £	1,190,000	6,879	190,882	1,380,882
Total future, £	**3,135,000**	**18,121**	**502,868**	**3,637,868**
Total past and future, £	**4,021,960**	**23,248**	**787,413**	**4,809,373**

4.14 This lower estimate gives an impact of £1.17m to date, £3.64m in the future – a total of £4.81m.

Additionality Impacts

4.15 The figures from the low estimate above used as the basis for estimating additionality. SE's additionality calculator has been used to estimate economic impacts at the Scottish level. Detailed spreadsheets have been provided to SE. Summaries are shown below in the format of the 2007 STAC evaluation, as requested.

4.16 The deadweight, leakage, displacement and substitution figures are all taken from the 2007 STAC evaluation, as requested by SE at the inception stage. Additionality was assumed to be high and displacement negligible as there are few firms operating in this market.

Deadweight

4.17 The deadweight is the gross direct effects of the reference or base case. We suggest that 10% is a reasonable estimate, between 'none' and 'low' figures in the SE ready-reckoners, as consultees generally felt that in the absence of STAC, the benefits would not have been achieved.

Table 4.4: Deadweight Ready Reckoners

	Deadweight	Rate
None	All of the benefits are as a result of the intervention	0%
Low	The majority of the benefits are as a result of the intervention	25%
Medium	About half of the benefits are as a result of the intervention	50%
High	A high level of the outputs/outcomes are not as a result of the intervention	75%
Total Deadweight	None of the outputs/outcomes are as a result of the intervention	100%

Source: Scottish Enterprise *Additionality and Economic Impact Assessment Guidance Note,* November 2008

Leakage

4.18 The basis of the evaluation of leakage effects is taken from the Scottish Enterprise Economic Impact Assessment Guidance Note. Leakage effects are assessed as follows:

Table 4.5: Leakage Ready Reckoners

	Leakage	Rate
None	All of the benefits go to the target area / the target group	0%
Low	The majority of benefits go to the target area/ the target group	10%
Medium	A reasonably high proportion of the benefits will be retained within the target area/ the target group	25%
High	Many of the benefits will go outside the area of benefit / outside of the target group	50%
Very high	A substantial proportion of those benefiting will be outside the area of benefit / be non-target group members	75%
Total Leakage	None of the benefits go to members of the target area/ target group	100%

Source: Scottish Enterprise *Additionality and Economic Impact Assessment Guidance Note,* November 2008

4.19 Leakage levels are assumed to be around 5%, between 'none' and 'low' in the ready reckoners. This reflects the fact that almost all of the benefits are assumed to be felt within Scotland.

Displacement

4.20 The creation of new employment will potentially displace employment from elsewhere and between different areas. To provide a context for understanding relative displacement rates, the Scottish Enterprise Economic Impact Assessment Guidance

Note indicates that in the absence of specific information the level of displacement/substitution can be assessed as follows:

Table 4.6: Displacement Ready Reckoner

	Displacement	Displacement effect
None	No other firms/demand affected	0%
Low	There are expected to be some displacement effects, although only to a limited extent	25%
Medium	About half of the activity would be displaced	50%
High	A high level of displacement is expected to arise	75%
Total	All of the activity generated will be displaced	100%

Source: Scottish Enterprise *Additionality and Economic Impact Assessment Guidance Note,* November 2008

4.21 We suggest the 15% for displacement is reasonable, between 'none' and 'low' in the ready reckoners, reflecting the fact that there are few firms operating in this market.

Substitution

4.22 Substitution effects arise when a firm substitutes one activity for another to take advantage of public sector assistances (source: SE, 2008). As it is a specific market being targeted, we assume substitution to be 0%.

Table 4.7: Substitution Ready Reckoner

	Substitution	Substitution effect
None	No substitution takes place	0%
Low	There are expected to be some substitution effects, although relatively limited	25%
Medium	About half of the activity would be substituted	50%
High	A high level of substitution is expected to arise	75%
Total	All of the activity generated would be strongly affected by substitution	100%

Source: Scottish Enterprise *Additionality and Economic Impact Assessment Guidance Note,* November 2008

Multiplier

4.23 Multiplier effects show further economic activity associated with additional local income and local supplier purchases. These encompass: supply linkage multipliers due to purchases made as a result of the intervention and further purchases associated with linked firms along the supply chain; and income multipliers associated with local expenditure as a result of those deriving incomes from the direct and supply linkage impacts of the intervention (source: SE, 2008).

4.24 The multiplier is taken from the Scottish Government Type II Output Multipliers 2004, using the 'Computer Services' sector, as was used in the 2007 evaluation. The effect

of the multiplier results in the net GVA being higher than the gross GVA; whilst the deadweight, leakage and displacement result in lowering the GVA figure, the multiplier effects increase the GVA impact.

4.25 Future sales are discounted by 3.75% in line with the Treasury Green Book guidance.

4.26 A factor of 0.59 has been applied to the turnover to estimate the GVA impact, in line with the methodology used in the 2007 evaluation. This is based on a 5 year average of the GVA:turnover ratio for the sector 72 Computer and Related Activities (source: Scottish Annual Business Statistics).

Impacts to Date

4.27 Whilst the RTP survey asked whether companies had increased the number of staff due to the STAC project, only limited responses were received. We have therefore used SE data on turnover per employee for the Computer and Related Services sector of £109,761 to estimate the number of gross employment levels generated by STAC.

Table 4.8: STAC Impacts – To Date

	Factor value	Intervention option, £	Intervention option, jobs	Reference case, £	Reference case, jobs
Gross turnover impact		£1,171,505			
Gross new jobs			11		
Jobs safeguarded			0		
Total gross jobs			11		
Deadweight	10%			£117,150	1
Less leakage	5%	£1,112,930	10	£111,293	1
Less displacement	15%	£945,990	9	£94,599	1
Less substitution	0%	£945,990	9	£94,599	1
Plus multiplier	1.74	£1,646,023	15	£164,602	1
Net (additional) turnover		£1,646,023		£164,602	
Net (additional) employment			15		1
Total net additional turnover/ employment (less deadweight)		**£1,481,421**	**13**		
GVA factors		0.59			
Gross GVA		£691,188			
Net GVA		**£874,038**			

4.28 Economic impacts to date are estimated to be:

- £1.6m of sales;
- £0.87m GVA; and
- Around 13 jobs at the Scotland level.

Future Impacts

Table 4.9: STAC Impacts – Future and To Date

	Factor value	Intervention option, £	Intervention option, jobs	Reference case, £	Reference case, jobs
Gross turnover impact		£4,809,373			
Gross new jobs			44		
Jobs safeguarded			0		
Total gross jobs			44		
Deadweight	10%			£480,937	4
Less leakage	5%	£4,568,905	42	£456,890	4
Less displacement	15%	£3,883,569	35	£388,357	4
Less substitution	0%	£3,883,569	35	£388,357	4
Plus multiplier	1.74	£6,757,410	62	£675,741	6
Net (additional) turnover		£6,757,410		£675,741	
Net (additional) employment			62		6
Total net additional turnover/ employment (less deadweight)		**£6,081,669**	**55**		
GVA factors		0.59			
Gross GVA		£2,837,530			
Net GVA		£3,588,185			
Discount rate	3.75%				
Discounted Total Net Additional Turnover		**£5,445,760**			
Discounted Total Net GVA		**£3,212,998**			

4.29 Economic impacts are estimated to be up to 2012 (including impacts to date):

- £5.45m of sales (discounted);
- £3.21m GVA (discounted); and
- Around 55 jobs at the Scotland level.

Cost Benefit Ratio

4.30 The cost benefit ratios of the projects are set out below. With a 50% optimism bias, impacts to date are estimated at 1:2.24, 1:6.24 for future impacts and 1:8.49 for total impacts. Estimates of cost benefit ratios with a 17% optimism bias have been provided to Scottish Enterprise.

Table 4.10: Cost Benefit Ratios

	Cost	Benefit (net GVA)	CBR
Impacts to date	£389,400	£874,038	1:2.24
Future Impacts inc. Optimism Bias	£389,400	£2,338,960	1:6.01
Total Impacts inc. Optimism Bias	**£389,400**	**£3,212,998**	**1:8.25**

5 RECOMMENDATIONS FROM 2007 EVALUATION

Introduction

5.1 The 2007 evaluation set out a number of recommendations for future STAC projects:

- STAC should be considered for another Phase of funding;
- Maintain contact with the Scottish Executive and gain agreement on the need/opportunity that will exist. Use this to form a proposition that can be presented to SMEs;
- SE should work with the facilitator to encourage wider engagement;
- SE should continue to manage the facilitators and maintain contact with them between formal meetings;
- STAC's profile could be raised within SE and among partners;
- Maintain the presence of the website;
- Look for opportunities for Scotland based SMEs to supply to firms in England; and
- Employ a graduate to complete some guided desk research into opportunities to make inroads to the STAC database.

Implementation

Continuing Funding

5.2 The first recommendation has clearly been implemented as STAC was continued for Phase 4 funding with a further extension.

Scottish Executive Contact

5.3 The Scottish Executive recommendation was not mentioned as having been implemented by SE or the facilitators.

SE Engagement

5.4 Whilst the facilitators in Phase 4 suggest that links could be improved with SE further for better engagement of companies, many of the beneficiary companies were clearly brought into the project through SE engagement (see paragraph 3.6) demonstrating that these links were working to some degree.

SE Management

5.5 SE and facilitators worked well together, with positive feedback about the relationship being expressed by all parties when consulted. The level of management and level of flexibility accorded to the facilitators was noted as a positive aspect of the project.

Raising STAC's Profile

5.6 This was highlighted within this Phase of evaluation as something that should be improved, suggesting that even if the project had its profile raised within SE, more could be done to improve its position.

Website

5.7 It is notable that none of the beneficiary companies mentioned the website and the facilitators did not seem to make much use of it; it was clearly not central to the success of the project.

Supply to England

5.8 There was no notable improvement in links to companies in England following the evaluation.

Graduation Position

5.9 The creation of a graduate position to research opportunities to improve the database was not mentioned as having been carried out by SE or the facilitators.

Overall Recommendations

5.10 The recommendation for continuation of STAC funding for Phase 4 with a further extension was clearly carried out. However, not all of the other recommendations have been fully implemented. Moreover, the consultation findings indicate that some of those that have been implemented require further support in this Phase. Recommendations for any future project are set out in the next chapter.

6 CONCLUSIONS

Impacts

6.1 Economic impacts to date are estimated to be:

- £1.6m of sales;
- £0.87m GVA; and
- Around 13 jobs at the Scotland level

6.2 Economic impacts are estimated to be up to 2012 (including impacts to date):

- £5.45m of sales (discounted);
- £3.21m GVA (discounted); and
- Around 55 jobs at the Scotland level.

6.3 These estimates relate only to increased turnover estimated by the SMEs and do not include any benefits accruing to the large companies with whom the SMEs worked.

6.4 The STAC project has excellent cost benefit ratios: impacts to date are estimated at 1:2.24, 1:6.24 for future impacts and 1:8.49 for total impacts.

6.5 Qualitative impacts have also been highlighted by beneficiary companies and the facilitators, including:

- Improving products;
- Increasing the markets open to the companies;
- Better targeting of markets and product development;
- Improving the quality of pricing;
- Accessing new companies;
- Improving networking opportunities; and
- Improving business knowledge of the SMEs.

Good Practice

Flexibility of Facilitators

6.6 The flexibility given to the facilitators has been a strength of the project, allowing the facilitators to develop projects in a way which has not been over-prescriptive and has allowed them to select to work with the companies most likely to succeed. As each company has varied in its needs and support requirements, this flexibility has also allowed the facilitators to respond as necessary to the SMEs.

Long Term Nature of the Project

6.7 It has generally been established (through the 2007 evaluation report and confirmation of the facilitators) that successful projects take some time to come to fruition, estimated to be between 12-24 months. This has resulted in a requirement for the project to be longer term. Both companies and facilitators expressed regret that the project was not

lasting longer as there were companies that could be assisted further with an extension of support.

Areas for Development

Targeting Companies

6.8 SE Account Managers and the facilitators may be able to improve the target list of companies for STAC support with improved liaison and discussion. This had worked successfully in a number of cases and could be encouraged more in future by more formal methods of sharing company information between SE and the facilitators. The process of identifying target companies appeared to be somewhat ad hoc, relying upon the facilitators' personal contacts rather than a more defined process. This worked relatively successfully, but meant target SMEs tended to be located in narrow geographic areas limited to the facilitators' location. It is also likely there are many more companies that could have been contacted but were simply not in the radar of the facilitators' personal knowledge.

6.9 Recent other projects have also featured more formalised ways of increasing the opportunities for SMEs to be brought together to stimulate the approach of collaborating to meet particular market opportunities.

6.10 An example of this was developed through one of the original SEEKIT funded projects which was specifically looking at driving collaboration activity with SMEs, Academia and Multinationals. The approach identified the benefit of having some focus on key technology or market sectors and in particular those that had opportunities to cross fertilise and converge (e.g. Energy, Sports Technology and Medical Devices). The infrastructure required dedicated case officer resources and relationships with the wider economic development account managers.

6.11 The process involved development of wider interest groups through events and networking, developing these to specialist interest groups with a strong understanding of key "market pull" drivers which were often formed by understanding the technology road maps of the key Multinationals who operated within the sector. The results were accelerated when a clear relationship with the Multinationals and the SMEs and Academics formed either at a specialist theme workshop level or more focus project basis. The programme also had dedicated direct funding support for the SME to draw down to develop the idea, and was complimentary to the wider network support already available.

6.12 It could be possible to develop and enhance the future STAC approach by adopting some of these models.

Recommendations for Future Projects

Market Validation

6.13 Both facilitators suggested that early market-validation is vital to ensure the SMEs have a viable and marketable product. This should be continued in any future project as an integral part of the scheme.

6.14 Looking at more formalised approaches to market segmentation and consumer insight (even in Business to Business as well as Business to Consumer) might be a useful approach to improve the potential of developing the right product/service, driven by market pull and not technology push.

Interest Groups

6.15 It may also be useful to set up interest groups around new technologies, bringing companies together for networking opportunities.

6.16 New types of technology products are increasingly sophisticated and often are formed through convergence from different strands of technology. The selection of some of these interest groups might benefit from a wider or more oblique view in order to ensure that the future collaborations are delivering market ready services or products.

Marketing by SE

6.17 There could be better marketing of the project by SE to highlight success stories. For example, the website could have a section showing 'good news' case studies of companies that have been assisted successfully. This has the double benefit of advertising the scheme to allow other people to access the project and also pass on good news about successful work SE has carried out.

6.18 Other studies and reviews have highlighted the importance of case study material for both improving the external marketing reach to SMEs who particularly like this type of approach, but also have real benefits across account teams in the public sector. Often the case studies can also be used to highlight improved working within the SE/and Partner organisations. This supports the recommendation on targeting companies above. SDI/SE have undertaken a recent project to develop case studies for cross team working and the showcasing of the interventions and the network products used to support projects.

Links to the Public Sector

6.19 The SMEs could be linked to the public sector as well as the private sector, for example considering Commonwealth Games opportunities. This may be particularly useful in the current economic climate where private sector companies may be more reluctant to take on 'risky' projects or projects where the benefits are unknown.

6.20 There has been increased activity in the public sector (UK wide as well as Scotland) to look at Innovation in the procurement approach of public spending. There are a number of set guidelines and targets being set for government departments to look at

innovative approaches to their spend, to assist in efficiency and cost as well as to increase opportunities for the likes of smaller co-operative groups (such as those defined as STACs) of SMEs to be able to provide better solutions to government contracts and at the same time increase their chances of growth.

6.21 BIS is leading the Government's work to develop a public procurement culture that both stimulates innovation in the economy and helps the public sector to meet its future needs at better value for money for the taxpayer

6.22 The White Paper, 'Innovation Nation'[4], March 2008, sets out the Government's aim to make the UK the best place in the world to run an innovative business or public service. It argues that innovation is essential to the UK's future prosperity and the ability to tackle major challenges like climate change, and that the power of Government spending must be harnessed to create demand for new innovative products and services.

Overall View

6.23 The STAC project has clearly achieved some tangible benefits to assisted companies in terms of impacts. There are further benefits to be accrued resulting from the STAC project. We suggest that should the STAC project be continued, there would be further companies to assist and existing assisted companies to assist further. It is likely further tangible benefits would be achieved through increases in turnover, resulting increases in jobs and qualitative benefits such as improvements in networking, product improvements and increasing markets open to the SMEs which in turn will lead to further increases in turnover.

4 http://www.dius.gov.uk/innovation/demanding_innovation/~/media/publications/S/ScienceInnovation_web

APPENDIX 1

RTP STAC Questionnaire

Evaluation of the STAC (Scottish Technology and Collaboration) project for Scottish Enterprise
Business Survey Questions (Telephone)

RTP are a firm of Economists and Planners who have been commissioned by Scottish Enterprise to undertake an evaluation of the STAC project.

I wonder if you would be willing to answer a few questions about your business and how the STAC project impacted the business? The questions will only take a few minutes to answer.

1. **What is your name and job title?**

   ……

2. **Name of your organisation?**

   ……

3. **What is the address of your current premises?**

   ……

4. **How many staff does your company employ at your premises?**

   Total ……

   Of which are full-time? ……

   Of which are part-time? ……

5. **Where are they based?**

Edinburgh	Glasgow	Aberdeen	Dundee	Perth
Stirling	Livingston	Ayr	Fife	Other (pl specify)

   ……

6. **Does the business have other offices?**

   (Yes/No – Where?) ……

7. **How did you become aware of the STAC project?**

   ……

8. Please give a brief overview of the project your company was involved in with STAC?

…….

9. What was the STAC advisor's intervention/role?

…….

10. a) Who are the partner companies you worked with for STAC?

…….

b) Are any of these companies new contacts from the STAC project?

…….

11. With which large companies did you liaise?

…….

12. What is the additional company revenue due to STAC (If they do not k now this can they estimate % increase?)?

To date ……..…….

Forecast 2009/2010…..……..

2010/2011……..……

2011/2012……..……

13. What is the increase in the number of jobs due to STAC?

Total ……..…….

Of which are full-time? ……..

Of which are part-time? ….……..

14. Has there been any increase in equipment due to STAC? (Yes/No, specify)

…..……

15. Have you increased the size of/made investment in/upgraded your premises because of STAC? (Yes/No)

…….

16. a) Has STAC improved skills of staff? (Yes/No)

….....

b) If yes - what skills have they gained?

….....

17. a) Has STAC led to receipts of grant income from other sources? (Yes/No)

….....

b) If yes, where is the grant from?

….....

18. Did STAC result in an increase in the scope/scale/quality of the project?

(Yes/No)…….

Why?…….

19. Did STAC result in an increase in the speed of delivery of the project?

(Yes/No)…….

If so, by how much?…….

20. How useful has the facilitator been?

Very useful ☐
Quite useful ☐
Neutral ☐
Not at all ☐

21. To what extent do you agree with the following statements?

a) STAC has led to further collaboration with other SME's

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐

b) STAC has led to further collaboration with large multi-nationals

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐

c) STAC has increased awareness of collaborative opportunities

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐

d) STAC has increased awareness of new market opportunities

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐

e) STAC has encouraged me to innovate in order to enter the market

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐

f) STAC has led to new networking opportunities

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐

g) I am in a better position to exploit new market opportunities in the future on my own i.e. without STAC support

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐

h) A continuation of the STAC project would benefit other companies similar to my own

Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree ☐

22. In the absence of STAC, what do you feel would have happened to your project?

…….

23. Do you think this support would be useful to continue in the future?

(Yes/No) ……

Why? ……

24. Do you have any suggestions to improve the scheme?

…….

…….

25. Do you have any further comments?

…….

Thank you for your participation. I am very grateful for your assistance.

APPENDIX 2

Detailed Comments in Survey Responses

Q9. Support from STAC Advisors

- "Ongoing business development and advice on which markets to go for";
- "Advice on launching a new business";
- "Pricing a software service";
- "Making contact and arranging meetings with telecom companies in the UK";
- "Looking for managed service opportunities and following up where appropriate";
- "Supporting market research";
- "Facilitating introductions";
- "Introduction to potential partners";
- "Looking at liaison with other partnership organisations";
- "Providing a business plan";
- "Reviewing the company's approach";
- "Advice on seeking funding";
- "Encouraging businesses in software to collaborate";
- "One day consulting session launching company and business models";
- "Finding a contact to give advice on the pricing model";
- "Make contact and arranging meetings";
- "Helping with finance and market research"; and
- "Helped to introduce us to a potential future purchaser of the technology".

Q18. Improvements in scope/scale/quality

- "It gave us contacts and technical input."
- "It allowed us to improve technical quality of product offering."
- "The project was already there so there was no change in quality but improvements were in the scope (new technology) and scale (open up other market places)."
- "Quality – it allowed us to better target which markets and product development."
- "It helped us with quality of pricing."
- "It enabled us to speak to an organisation that we would otherwise not have had access to."

Q23. Continuing the STAC Project

- "It helps with the need for continuity in this type of multiple participant industry project."
- "It helps with focus and the mentoring support was very useful."
- "Useful advice - well informed."
- "More resources to get access to in the future."
- "Other areas to explore and may need help."
- "Good source of information."
- "It helps innovation."

Further Comments

- "The two gentlemen were first class."
- "Both STAC advisors have proved to be totally professional in their dealings with us and with potential partners".