Scotland: A Global Connections Strategy
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MINISTERIAL FOREWORD

In January 2001 we published our new strategic direction for the Enterprise Networks. It set out our vision for a smart, successful Scotland and identified three priorities - growing businesses, learning and skills and global connections. At that time we promised a new global connections strategy for making Scotland the most networked small nation in Europe.

If Scotland is to thrive rather than simply survive in the rapidly evolving, knowledge driven, global economy we need to be more fully integrated within it: to be well connected physically, digitally and intellectually with the rest of the world. We need to tell the world about Scotland and tell Scotland about the world. This will enable us to learn from abroad and earn abroad. In improving the flow of products, technologies and ideas in and out of Scotland, the measure of our achievement will be how globally connected we are as a people and as an economy.

For a small nation, Scotland, and particularly its people, enjoys an incredible history of international activity and engagement. As missionaries, merchants and economic migrants Scots have long travelled the world, discovering new places, establishing vast trading concerns and taking education and a sense of social justice to a great many countries. Indeed, it is difficult to find a part of the world without some significant Scottish influence. Our people continue to travel, work and build all over the globe but from the mid to late 20th century our economic activity and institutions have tended to be more domestically focussed.

The creation of Locate in Scotland in 1981 represented a visionary attempt to create a single door for inward investment economic development activity. A decade later Scottish Trade International was established to bring similar benefits to export promotion. This approach has rightly been admired, and copied, around the world. Overseas companies currently sustain over 140,000 jobs in Scotland and through a variety of economic assessments have demonstrated that they provide some of the best rewarded, most highly trained and most productive workforces in the country. These jobs have been at the heart of the transition of the Scottish economy from a heavy industrial economy based around coal, steel and shipbuilding to a modern manufacturing and services economy.

Locate in Scotland's success in attracting inward investment reflected Scotland's attractiveness as a low cost market access point for US and Asian companies to the markets of the EU. But times have changed. Overall, US foreign direct investment is declining relative to the EU, the nature of global trade and trading relationships are changing, and strategic alliances and networks are becoming ever more powerful drivers of economic success. Other European locations now occupy the low cost niche aimed at securing untrammelled access to EU markets.

So it is time for a step change. To respond appropriately to the opportunities of the knowledge economy and to ensure that Scotland is a globally integrated economy we must be prepared to rethink our strategies, structures and approach. The new Scotland needs a "global connections" strategy, as visionary today as was the creation of Locate in Scotland over two decades ago. This will form a crucial element of our wider drive to maximise the benefits Scotland obtains from its contacts with the rest of the world.
We will not achieve all our ambitions overnight. But here we lay out the foundations. Our vision is for a fully integrated, world-wide organisation that brings together our economic development and international marketing activities. An organisation that will bring together the experience and expertise of Locate in Scotland and Scottish Trade International under the title of Scottish Development International. Within this single organisation there will continue to be three core specialisms: attracting high value, economic activity to Scotland; the internationalisation of Scottish companies; and a new capability based on the exchange of skills, ideas, intellectual capital and the networking of people. The people dimension will be increasingly important in an age when skills are our key competitive weapon - whether it be attracting people to Scotland, retaining Scots within Scotland or harnessing across the globe the skills of Scots and non-Scots alike with an affinity for Scotland.

We have recognised for a long time that there is a need to harness the experience, skills and energy of the Scottish business community overseas for the advancement of the Scottish economy. With the advent of the Scottish Parliament and increased international profile of Scotland the time is right to turn this long-held idea into reality and develop an international network of Scottish influencers that can assist Scottish economic success. Working with other groups such as the consulate network, university alumni and top Scottish companies with overseas operations we can start to stimulate economic and commercial opportunities that can benefit both Scotland and members alike.

Change on this scale is ambitious. Success will demand new capabilities. We will learn as we go along. The vision for Locate in Scotland was refined over more than a decade and, together with Scottish Trade International, has continued to evolve - it will be no different in the future.
1. INTRODUCTION

1.1 In January 2001, the Scottish Executive published ‘A Smart, Successful Scotland’. This sets out the Executive’s ambitions for the Enterprise Networks and provides them with overall policy direction.

1.2 ‘A Smart, Successful Scotland’ summarises the challenges facing the Scottish economy and Scottish business and outlines the contribution which the Enterprise Networks can make in meeting them. It sets out three key themes, namely:

- **growing businesses**
  "Our strongest businesses are on a par with the best in the world. However we have many more under-performing enterprises and we need to help others with potential to match the best, to improve our performance, create jobs, raise incomes and put Scotland on a new, higher growth path."

- **global connections**
  "Our approach to globalisation must not be to resist change, but to embrace it. We need to be globally connected, integrating the Scottish economy into the world economy."

- **learning and skills**
  "Our vision is of a high skill, high wage economy with a higher employment rate across many parts of Scotland. In an age where knowledge is a key competitive weapon, skills and learning need to be at the heart of the Network’s activities."

1.3 This policy direction defines a more strategic relationship between the Scottish Executive and the Enterprise Networks and commits these bodies to a process of joint strategy development. Specifically, it commits the Executive and the Enterprise Networks to produce a joint Global Connections Strategy. This response sets out that strategy for Scotland. It recognises, in particular, the four specific challenges highlighted within ‘Smart, Successful Scotland’ to ensure that Scotland is a globally connected nation. The strategic intent is to support the fullest possible Scottish participation in the global economy through: helping Scottish organisations increase their involvement in global markets; contributing to making Scotland a globally attractive location; attracting the most appropriate higher-value activities from overseas and encouraging more people to choose to visit, live and work in Scotland.

1.4 In addition, the strategy recognises that our international activities, in pursuit of the vision set out in ‘Smart, Successful Scotland’, will impact also on challenges within the other key themes: ‘Growing Businesses’ and ‘Learning and Skills’. At the same time, success in pursuit of these aims will to some extent be dependent on the success of domestic policy objectives. This inter-dependence of approach, activity and delivery illustrates the need for improved linkages in both strategy and operations across the Executive, the Enterprise Networks and other bodies such as VisitScotland.
1.5 The Enterprise Networks, whilst central to the delivery of ‘Smart, Successful Scotland’ do not, and cannot, operate in isolation within Scotland or overseas. Numerous other players and partners are involved in Scotland’s engagement with the world and greater connectivity within Scotland is critical if we are to move forward in a consistent and efficient way.
2. AIM

2.1 Our aim is to see Scotland recognised as the most globally connected small nation in Europe. This strategy works towards the vision of 'Scotland - A Globally Connected Nation' as set out in 'Smart, Successful Scotland'. Our approach will be to respond to the four objectives set out in that document:

- **Digital Connectivity**

  Scotland can be a leading digital nation and in so doing can become one of the best places in the world from which to do business electronically. Collaboration between the Enterprise Networks, the Executive and the private sector will be necessary to achieve this and the Networks will also promote on-line business models to ensure that all Scots can benefit from emerging digital technologies. They must be enablers, ensuring the widest possible dissemination of digital technology, and responding to the challenges of connectivity for more remote rural or disadvantaged urban locations.

- **Increased Involvement in Global Markets**

  Many Scottish businesses urgently need to become more global in their outlook and operations. The Networks will work closely with potential multi-national players to help them develop and implement globalisation strategies and to help instil greater ambition and confidence in the development of trading links, global alliances and strategic partnerships.

- **Scotland to be a Globally Attractive Location**

  All capital - physical, financial and human - is increasingly mobile. Scotland needs to be a world class business location in order to retain and attract leading global companies and people as well as providing the environment for Scottish companies to grow and internationalise. Skills, a competitive infrastructure and public sector support are vital, and continuing partnership between the public and private sectors will be required to improve Scotland's relative position.

- **More people choosing to live and work in Scotland**

  An ageing population and the continuing migration of many talented people can limit economic development ambitions. We need to offer the jobs to encourage the young to stay and the more experienced to return. We need to tap into the network of Scots around the world to ensure that knowledge of Scotland and its opportunities is current and well understood. This will be one part of a broader programme of action to portray a more contemporary view of modern Scotland.

2.2 This strategy recognises the need for new relationships between the Executive, the Enterprise Networks and many other players in the economic development field both at home and overseas.
2.3 It acknowledges that it is time to move on from addressing the problems of the past - such as mass unemployment, transition from traditional heavy industries and an over-reliance on primary industries in rural areas. It is time to meet the challenges of the future: a future where the productivity, knowledge and creativity of our people together with the flexibility and responsiveness of the public authorities, will together provide the sustainable competitive environment in which businesses can thrive.

2.4 Working together in Scotland and with our UK partners, we will seek to maximise support from UK and EU sources to assist in meeting these challenges.
3. THE GLOBAL ENVIRONMENT

3.1 In his address to the Scottish Parliament in June 2001 Mr Thabo Mbeki, President of the Republic of South Africa, paid tribute to the long-standing influence and contribution that Scots have made to his country. From a relationship spanning more than two centuries Mr Mbeki made reference to the work of Scots in laying a physical infrastructure across his country, in education and in instilling a sense of social justice.

"Scattered throughout South Africa are Scottish names that attest to the relationship between our people. … many of the roads that pass through some of our most famous mountain passes were designed and constructed by a Scot, Andrew Geddes-Bains. … John Phillip, a Scottish missionary … made a profound contribution with regard to exposing thousands of Black people to education, to various skills and to the promotion of a society of equal rights for all, irrespective of colour. … It was in education that Scottish influence was felt most … William Govan became the first Principal of Lovedale College, which was founded by the Glasgow Missionary Society. It remained a non-racial school until the 1890s … In truth, the School maintained an ethos and focussed on the need to create a non-racial South Africa until it was closed in the 1960s.”

Thabo Mbeki

3.2 This is but one example of the impact and influence that Scots have made in very many countries across every Continent. It is now more important than ever that Scotland is connected strongly to the world economy through people, capital, trade and investment. Technology, and particularly digital connectivity, is exercising enormous change on the pace and ability for such international engagement. We need to recognise both the challenges and opportunities that this presents.

Knowledge Economy

"As we enter the age of human capital, where firms merely lease knowledge-assets, firms’ location decisions will be increasingly based upon quality of life factors that are important to attracting and retaining this most vital economic asset. In hi-tech services, strict business cost measures will be less important to growing and sustaining technology clusters… locations that are attractive to knowledge assets will play a vital role in determining new economic successful regions.”

R C De Vol

3.3 It is now broadly recognised that today’s global economy is in transition from an industrial based society to a knowledge based or information society. This does not mean that manufacturing will cease to play an important part in the economies of most countries. It does, however, recognise the increasing role of information and knowledge, and particularly the role of Information and Communications Technologies (ICT), in improving productivity and national wealth. Just as agricultural output, diversity and efficiency expanded greatly as
an outcome of industrialisation, it is expected that manufacturing and business performance will enjoy similar gains from the knowledge based economy.

3.4 The Knowledge Economy is not a new concept. Knowledge and its application has always been central to economic growth and competitiveness. However, knowledge and information are now incorporated into all aspects of economic activity to such a degree that it is exercising profound changes in the operation of economies and transforming the basis of competitive advantage. The last 20 years have seen an extraordinary rise in the application of computing and communication technologies, driven by sharp cost reductions and the rapid development of applications. Digitalisation, open systems, and the development of software and supporting technologies for new applications, are realising more potential and driving the IT revolution. The internet has brought these technologies together. Its exceptional growth - from 159,000 internet hosts worldwide in 1989 to 43m within a decade - has greatly increased the intensity of knowledge available to modern economies. Advances in ICT not only improve the capacity to share knowledge extensively and quickly but are increasing the pace of knowledge acquisition and application, providing ever shorter production and technology cycles. This is making it increasingly easy for new entrants to compete effectively with established players in many markets and, conversely, exacting greater penalties on the uncompetitive. The same forces opening up new markets and opportunities for our companies are also exposing our domestic markets to the full force of global competition. This reinforces the need for our businesses to be active and competitive and in the international arena.

3.5 The ability to access, manipulate, store and distribute large quantities of information at very low cost is impacting on every area of the economy and the business chain. Whilst offering significant efficiency gains to business, it is also giving birth to new industries: fusing manufacturing and services in areas such as online and multimedia services and creating others, such as e-business services, which did not previously exist.

"The popular distinction between the old and the new economy completely misses the point. The most important aspect of the new economy is not the shift to hi-tech industries, but the way that IT will improve the efficiency of all parts of the economy, especially the old economy firms."

The Economist, September 2000

3.6 Networks and clusters of firms are a particularly important feature of the Knowledge Economy, where companies increasingly seek to work together and with institutions in technology based alliances. Despite the improved communications and information transfer capabilities now available, physical 'clustering' is increasing around recognised centres of excellence in different countries. This is due to the rising costs, complexities and scope of technology and providing an effective means of sharing tacit knowledge. Cost remains important but is not in itself sufficient for success. Locations need to develop a coherent set of advantages and find a niche in the global economy from which to attract the type of economic activity they wish to foster.
3.7 Innovation and knowledge are essential to creating and sustaining competitive advantage. Access to high quality research, skills and lifestyle are becoming increasingly important factors for businesses and people in considering where they locate and live. The growth, retention and attraction of key skills are likely to prove as important as direct support to business in securing future economic success.

3.8 The challenges posed by the knowledge based economy add further demands on both businesses and locations:

- a fundamental change of outlook and attitude within business;
- a need for competitively priced, world class broadband ICT infrastructure;
- attraction and retention of key skills;
- basic infrastructure improvements in transport, communications and education;
- improved collaboration with other institutions and governments internationally;
- competitive structures, including technological centres of excellence.

Globalisation

3.9 As a term, globalisation was first coined in the 1980s but as an activity the practice stretches back for centuries. Indeed the world was heavily globalised in the late 19th and early 20th Centuries, until the depression of the 1930s saw nation states withdraw towards more protectionist policies. The pace, depth and impact of globalisation in the modern era, however, is creating a new environment, requiring new responses from both business and governments.

“Globalisation and localisation - the integration of the world economy and the increasing demand for local autonomy - are 2 of the most important forces shaping development as we enter the 21st Century. These forces will affect trade, capital flows, global environment, decentralisation and urban development and will require countries to seek a dynamic equilibrium at both international and sub-national levels.”

World Development Report, 2000

3.10 Driven by market liberalisation and deregulation, fast reducing costs of transport and communications and rapid technological change, world trade and world foreign direct investment (FDI) continue to grow significantly faster than world GDP. Figures from the UN World Investment Report for 2000 show that between 1986 and 1999, growth in world FDI flows (25% pa) - the deepest form of economic integration and therefore a useful barometer for globalisation - was much faster than growth in the world economy (6% pa) and more rapid even than the growth in world trade (9% pa). This is a strong indication that current trends in globalisation are more about capital movement than trade, although the ultimate objective often remains to increase trade levels in overseas markets. It should also be recognised that the dominant proportion of these FDI flows (over 80% in 1999) are accounted for by non-contestable (in locational terms) mergers and acquisitions (M&A). As the pace of integration increases across the global economy, international competition is entering practically all markets.
3.11 Indications of the depth of integration include:

- the combined world stock of inward and outward FDI (providing a measure of internationalisation) as a proportion of world GDP has risen from 16% in 1990 to 31% in 1999;
- the volume of FDI, including cross-border mergers and acquisitions and the increasing numbers of non-equity strategic alliances (several thousand every year), indicate the deep integration of the world economy at both global and regional levels;
- the number of companies globally with overseas operations has risen from 7,500 in 1967 to around 60,000 to date;
- over the past 5 years much of the new investment into developed countries has been directed to high technology and information intensive services sectors.

3.12 Not only is the global economy continuing to grow, it is also changing in a number of significant ways:

- deregulation and customer development are encouraging substantial increases and flows of service-based FDI, a trend accelerated by advances in ICT;
- new competitors are emerging in all markets and with the overall lowering of tariff barriers and reduction in transport costs there is a real risk to business in remaining focussed on domestic markets;
- increasingly, smaller companies (especially those in technology-based segments) require to compete in international markets earlier in their life cycles. Technological change reduces costs of coordination and management - further reducing barriers and risks to such international economic engagement;
- international strategic alliances have seen a parallel increase to cross border M&A activity in recent years (in excess of five-fold growth between 1989 and 1999). These encompass a wide range of inter-firm links, including joint ventures, co-operative research, production and marketing. Such activities are providing firms with increased strategic flexibility and are, increasingly, replacing more traditional greenfield overseas investment;
- generous assistance, low cost skills and increasingly stable governments are seeing manufacturing/assembly operations increasingly locating to several central and Eastern European countries as well as the major developing economies of Asia and South America.

3.13 These trends simply underline that the need to be global is increasing, with opportunities for growth in both the developed and developing economies. As the Enterprise Networks, amongst others, seek to identify the areas for, and methods of, appropriate intervention they must also recognise:

- increasing competitiveness pressures within Scotland as domestic markets are no longer protected by trade barriers, regulation, distance or cost;
- the increasing trend for enterprises to globalise in a variety of forms, in order to understand better, and exploit more quickly, market opportunities, rather than simply rely on trade success;
• the increasing incidence of smaller companies requiring to globalise earlier in the business cycle;
• greatly increased competition for FDI across developed and lower cost developing economies, with the latter (particularly those in the process of joining the EU) capturing an increasing share of manufacturing investment previously destined for Scotland and much of Western Europe;
• that companies are exploring a much greater range of options than traditional greenfield FDI and exports which, together with increased competition in our traditional market areas, suggest a need to realign targeting and activities to meet this broader range of opportunity.

3.14 Despite some concerns to the contrary, we are likely to see the continuation of internationalisation across the world economy. This is underlined by recent and ongoing trends towards greater economic openness, along with current and emerging technological advances and the degree of transnational integration already achieved. The pace of growth, however, cannot be isolated from world economic conditions and it is clear that there is a significant slow down in growth at present. In April 2001 the International Monetary Fund (IMF) revised downwards its short term forecast for world growth in 2001 by 1% to 3.2%. As well as addressing broader changes in the global marketplace, therefore, we are likely to witness greater degrees of caution by companies at home and overseas in the short term until the general economic outlook is more certain.

3.15 The proposed enlargement of the EU will have a number of implications for Scotland. While access to the markets of the new members will be easier, such low-cost regions will pose a greater competitive threat for certain types of inward investment. As enlargement occurs, re-structuring of the EU in areas such as the Common Agricultural Policy and Structural funds will also impact on for Scotland, especially rural areas or areas that currently receive structural funds assistance. In addition, there are growing calls for further liberalisation and economic reforms within the EU markets such as financial services, energy and telecommunications. Demand for such reform is likely to increase in order to promote competition, avoid protectionism and encourage trade. Such reform is likely to be closely tied in with developments in global trade through the World Trade Organization.

"Positioning Scotland on a world stage through effective promotion of our businesses and people and maximum learning from abroad."

Smart, Successful Scotland

3.16 Scotland’s past record in international activities, with particular regard to inward investment, stands up well to scrutiny. Trade support, inward investment and tourism activities have all seen significant growth in the 1990s. They have also evolved in approach and targeting to meet change in overseas markets and domestic circumstance. In recent years inward investment efforts have sought to focus more on higher value development, design and business services projects. Export support has focussed more towards helping Small and Medium sized Enterprises (SMEs) establish and grow their export markets. Business Internationalisation has been the subject of considerable study leading to direct interventions to help companies establish themselves in overseas markets. Direct representation has been established in Brussels, enhancing business and enterprise agency representation to the EU,
promoting funding links and providing analysis and early warning of relevant policy developments, regulation and legislation.

3.17 More generally, the establishment of the Scottish Parliament and Scottish Executive has helped to increase Scotland's profile across the world - but we need to capitalise on this. The Scottish Executive is committed to maximising both the profile of Scotland around the world, and the benefits Scotland obtains from its international contacts. For example, the Executive is playing an active part in discussions at a regional level in Europe about the future of the EU and its institutions. This increases both Scotland's profile across Europe, and Scotland's and the UK's influence over future developments in the EU.

3.18 To date, the record has been one of success. To ensure continued success in the future, given the pace and depth of change internationally, the degree and type of activity undertaken must reflect and respond to emerging global challenges. This will involve winning higher value projects through earlier and more sophisticated forms of engagement as well as assisting successful Scots-based businesses to pursue different forms of internationalisation. It must also place people and skills at the heart of economic success. The Enterprise Networks’ approach to the international aspects of economic development must also change to support this.
4. THE DOMESTIC ENVIRONMENT

4.1 Despite the many positive changes and successes of the last 20-30 years the Scottish economy continues to underperform in some important areas:

- economic growth has averaged only around 2% per annum;
- productivity levels do not stand good international comparison (lower than the UK average and significantly lower than major EU economies);
- new business creation and entrepreneurship remain very low (business birth rate 30% behind the UK average);
- levels of business research and development spend remain very low (0.6% of GDP);
- the number of global companies headquartered in Scotland appears to be low in comparison to other developed countries of comparable size;
- Scotland remains an exporter of highly qualified talent;
- whilst recognising the huge opportunities of digital connectivity, Scotland has been slow to translate the need for greater and more extensive infrastructure into action.

4.2 Despite performing reasonably well in UK terms, in many areas Scotland remains far from the globally integrated economy envisaged within the ‘Framework for Economic Development in Scotland’ (FEDS), or the globally connected nation sought by ‘Smart, Successful Scotland’.

4.3 Present policies targeted at international business activities belong to the past. They are rooted in an era of declining economic performance and balance of payments difficulties, characterised by low levels of industrial investment, increasingly uncompetitive and outdated heavy industries, high levels of unemployment and a strong focus on regional development to address areas of serious industrial decline. Objectives were set to attract employment intensive FDI from new industries, particularly electronics, into areas of decline and to increase both the numbers of companies exporting and the volume of exports. At the same time, greater emphasis was placed on increasing the numbers of overseas tourists into Scotland. New structures were developed to support these objectives - first in Locate in Scotland (LIS) and subsequently in Scottish Trade International (STI) - as joint operations of central government and the economic development agencies. This in turn led to the establishment of modest but significant overseas representation in support of both FDI and export objectives. What was right for Scotland in the 1970s and 1980s, however is not sufficient for the challenges of the 21st Century (See Box 1).
As the table below indicates, the early to mid-1980s provided a huge challenge for West Lothian. In just over a year, unemployment more than doubled, to over 20%, following a series of major closures including British Leyland, Plessey and Polkemmet Colliery. It was clear that the economic and employment base would have to re-orientate from traditional strengths in engineering and mining towards more mobile, high growth manufacturing. New greenfield sites were acquired and developed, local infrastructure enhanced and road and rail links improved. With this product a focus on inward investment, particularly in electronics, began to pay dividends by the mid to late-1980s. The quality and adaptability of the workforce, together with the infrastructure in place, allowed a transformation of economic activity, West Lothian now demonstrating unemployment levels below the national average. This response was exactly right for the major and specific problems of the 1980s but is not necessarily what will be required for the 21st Century. The area must now build on this infrastructure and workforce expertise to rely less on commodity consumer products, and more on ideas, knowledge and innovation.

4.4 During the early 1990s, representation was established in Brussels to develop business and Enterprise Agency representation to the EU, promote funding linkages and to provide analysis of relevant policy developments, regulation and legislation. Following devolution, the Executive joined both Enterprise Networks in ‘Scotland House’, extending Scottish representation and establishing a direct policy presence for Scotland in Brussels. The Enterprise Networks have also developed their joint working with the Executive and other partner bodies with the aim of seeking maximum benefits from the European Funding Programmes available in Scotland managed by the Scottish Executive as well as pursuing wider funding opportunities in Brussels. Closer operational relationships have also been progressed with UK trade development interests (now British Trade International - BTI),
especially on export promotion where STI operates in Scotland as agent for Trade Partners UK (TPUK) services. As the map below (Figure 1) illustrates, Scotland provides a modest increment to the extensive geographic coverage of BTI, encouraging ever closer partnership to utilise fully this valuable UK resource.

Figure 1: Distribution of LIS and STI global presence

![Distribution of LIS and STI global presence](image)

Total Overseas Staff (including part-time representatives) - 61 as at June 2001
- Americas: 31
- Europe: 15
- Asia + Rest of World: 15

4.5 In terms of the objectives set, these policies have been and remain highly successful as evidenced by a strong track record in both export growth and inward investment success and from the conclusions of several economic analyses. Despite some very high profile and painful closures, Scotland continues to boast a significant stock of FDI. However, a substantial proportion of overseas investment continues to be in lower skilled manufacturing and assembly operations which would today go elsewhere and which are proving increasingly vulnerable to closure and relocation. Despite particularly impressive export growth in recent years, our export performance still relies heavily on a relatively few large companies involved in electronics assembly and whisky production.

4.6 In recent years, Scotland has successfully increased its focus on shifting FDI emphasis towards higher technology projects (particularly in RD&D related activities - see Table 1), together with positive action to ensure a broader spread of FDI into all parts of Scotland. At the same time, there would appear to be considerable potential for increasing export activity, and other forms of international economic engagement, in tradeable services. OECD data show that services are rapidly becoming more tradeable and thus exposed to international competition. The total volume of services FDI in the OECD area is now significantly higher than that of manufacturing FDI and services account for an increasing share of total business research and development. Particular growth areas include business services, creative media, electronics and software design, education and financial
services. The cluster and business priorities of Scottish Enterprise already match these areas and it will be important to consider this aspect of international business growth when considering future action plans.

Table 1 - Overseas R&D Projects into Scotland as proportion of total FDI

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<th>1997</th>
<th>2000</th>
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<tr>
<td>Scotland, R&amp;D Projects</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Scotland, overall FDI projects</td>
<td>89</td>
<td>56</td>
</tr>
<tr>
<td>R&amp;D projects as a %age of overall FDI projects in Scotland</td>
<td>6.7%</td>
<td>19.6%</td>
</tr>
<tr>
<td>UK, R&amp;D Projects</td>
<td>60</td>
<td>49</td>
</tr>
<tr>
<td>Europe, R&amp;D Projects</td>
<td>155</td>
<td>204</td>
</tr>
<tr>
<td>Scottish Market Share of UK R&amp;D Projects</td>
<td>10%</td>
<td>22.4%</td>
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<tr>
<td>Scottish Market Share of R&amp;D Europe Projects</td>
<td>3.9%</td>
<td>5.4%</td>
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Source: Ernst & Young European Investment Monitor

4.7 Export activity has recently focussed more on SME entry and growth and has taken considerable steps to improve local delivery through a network of Export Partnerships. A programme of engagement and support is also underway to assist more Scottish headquartered companies to grow internationally, including pilot initiatives such as the Scottish Technology and Research (STAR) centres, which have been put in place overseas to assist Scottish companies with local knowledge and market entry.

4.8 There has also been an increasing awareness of the need to create the abilities, structures and support that will allow organisations to take advantage of international opportunities through a range of activities including exporting, joint ventures, strategic partnerships, technology alliances and outward investment. This point of view was in part informed by the Scottish Enterprise Global Companies Inquiry (see Box 2) which recognised a weakness in Scottish economic performance associated with the relative scarcity of truly international companies headquartered in Scotland.

Box 2

The Scottish Enterprise Global Companies Enquiry (1997-1999) sought to identify the characteristics of successful global companies and to inform strategy on helping to improve the incidence and growth of such companies in Scotland. From research conducted in Scotland and internationally, most successful global companies were found to share a number of common characteristics, including:

- knowledge of global markets and competitors;
- excellence at matching company competencies with these markets;
- ongoing strategic management, benchmarking and integration of resources;
- entrepreneurship and opportunism in seeking new markets and acquisition but with a clear and methodical approach to evaluating the assessing risk;
- aggressive disposal of non core/non performing activities worldwide;
- building outwards from a base of expertise in the home country;
- strong commitment to R&D and technology adoption;
- strong financial position;
• recognisably global outlook amongst senior managers including the networks they use and the management education they seek.

The research also found such companies to have significant impacts on their local economy, particularly in respect of higher than average contributions to GDP and employment. Other qualitative impacts included:

• higher than average contributions to R&D&D and Innovation levels;
• increased sophistication of alliances and technology transfer collaborations;
• links to Higher Education Institutes (HEIs);
• raising the international profile of their 'home' location;
• raising the quality of their locally-based suppliers;
• acting as a magnet for inward investors.

It was found, however, that other countries studied (Sweden, Switzerland, Taiwan, Finland and the US) demonstrated bigger and better impacts than Scotland and a programme of joint activity has now been implemented with a number of Scottish companies that aspire to global operations.

4.9 These changes in focus over the past year or so are certainly moves in the right direction, but gaps do remain, particularly in the light of developments in the global economy discussed in the previous section. To respond appropriately to the opportunities of the Knowledge Economy and to ensure that Scotland is a globally integrated economy, we must be prepared to rethink our strategies, structures and approach.

"The key response to the productivity challenge is a smarter Scotland where creating, learning and connecting faster will ensure our success in the global economy."

Smart, Successful Scotland

4.10 Central to this challenge for Scotland is the need to maximise productivity within the world economy and to be more outward looking in approach to enterprise and business success. The challenge for the public sector is to assist in accelerating this process. This will impact not only on the operational activities of bodies such as LIS and STI but on the overseas interests of the Scottish Executive, the Enterprise Networks and bodies such as VisitScotland. A real advantage in moving forward is the potential for much greater connectivity and cohesiveness across these various interests - as well as their linkages (existing and potential) to UK and overseas bodies - to ensure a consistent and powerful message from Scotland.
5. RESPONSE

"These new priorities mean less about managing transition and more driving forward new directions for all forward looking sectors. Hence the Networks must be willing to pull back from those activities where market failure has been addressed or at least reduced. This decommissioning of past activities will provide further scope for realignment of effort. For example on better matching supply and demand in the labour market and supporting digital connectedness or sharing risks around Scotland’s potential in the new economy… Above all it will require constantly evolving skill sets within the Networks to rise to the new challenges, such as realising the potential of new growth areas.”

Smart, Successful Scotland

5.1 Each of the Enterprise Networks has its own priorities and focus for action determined by the opportunities and challenges arising from the topography, population and economic circumstance within their areas. Scottish Enterprise and Highlands and Islands Enterprise will work to the vision of Scotland as a globally connected location but the degree of emphasis on specific actions is likely to vary. Our ongoing trade and inward investment activities, with their Scotland wide remit, will continue to reflect the needs and aspirations of both Networks.

5.2 As we assist Scotland to respond to the developments in the global economic environment we must continue to redefine our international activities more broadly than simply export growth and greenfield/brownfield FDI success. We must acknowledge that these are only two elements of a much broader tapestry of international economic engagement. We must also recognise the impact of ICT on how Scotland and the world will interact and on how many of our services to business might be better and more efficiently delivered. This applies to both Enterprise Networks and to VisitScotland. Exports and inward investment will remain important, but will not in themselves fully serve our global aspirations. Rather, the primary strategic intent is to support the fullest possible Scottish participation in the global economy; helping Scottish organisations increase their involvement in global markets, contributing to making Scotland a globally attractive location, attracting the most appropriate higher-value activities from overseas and encouraging more people to choose to visit, live and work in Scotland.

5.3 The effort to achieve this broader strategic intent will focus on the following two overarching objectives:-

- helping Scottish knowledge generate value abroad for Scotland;
- helping Scotland realise value by attracting knowledge from overseas.

5.4 These broad objectives embrace the different flows of inward and outward trade, partnerships and investment. In addition, they are also key to the image of Scotland overseas and our attractiveness for tourism, for skilled workers, for students and for researchers.
5.5 ‘Smart, Successful Scotland’ sets out four specific challenges in terms of increasing our global connectivity. In many cases, specific responses will cut across two or more of these areas. Others will impact on the related strategic priorities of ‘Building Business’ and ‘Learning and Skills’. Global connectivity embraces a range of important broader issues such as fifth freedom rights for air transport, road, rail and sea connections. Responsibility for addressing these issues rests elsewhere within the public sector and in some cases involves non-devolved policy areas. Nevertheless, these areas are important influencers on our policy of global engagement.

**Digital Connectivity**

"Scotland can be a leading digital nation – not only a digital economy but a digital society."  
_Smart, Successful Scotland_

5.6 We need access to information and knowledge from around the world. We need our products and services to be available electronically, ensuring that existing and emerging companies in Scotland are not disadvantaged in their international business and trading aspirations. Our success within the knowledge-based economy will require companies to have available to them the telecoms services they need at competitive prices. Access to and exploitation of competitively priced, high bandwidth services are crucial to increasing numbers of companies within Scotland - for the business they do in the UK and for international business. Software companies, for example, need to transfer products electronically quickly and cheaply to overseas partners and customers. Telecoms infrastructure is also crucial to the perception of Scotland overseas. Access to competitively priced telecoms services will be a pre-condition to attracting more knowledge based businesses and processes to Scotland.

**Box 3**

On 27 July 2001 the Engineering and Physical Sciences Research Council (EPSRC) announced the award of £5.5m to establish the UK's National e-Science Centre at the Universities of Edinburgh and Glasgow. This Centre will co-ordinate the work of eight regional centres in developing the successor to the world wide web and is a key element of the Government's e-Science Core Programme.

By sharing both information and computational process, large geographically dispersed communities of specialists will be able to focus on complex problems in science, engineering, medicine and the environment. This will require a much more powerful infrastructure and new software technologies - called the Grid - to support it. The challenge is to create the technology, working practises and organisational thinking which will allow ready, secure and seamless access to all shared resources.

The National e-Science Centre, based in Edinburgh and Glasgow, working with the Regional e-Science Centres will seek to make the advances required ensuring that the UK maintains a leading role in Grid development.
5.7 Provision of infrastructure will be driven primarily by market demand and opportunity. There has been extensive investment by a number of companies in fibre backbone, and radio based services for the business market are increasing. But there is evidence of market failure in providing broadband connections outside the cities and larger towns and within the cities pricing appears to be less competitive than in the south of England. This impacts on the business community but also on the public sector and individual consumers. The Scottish Executive is leading action to extend the geographical spread of services, working closely with the Enterprise Networks. Scottish Enterprise (SEn) is taking steps to promote more effective competition in urban areas. Highlands & Islands Enterprise (HIE) is working with a variety of providers to secure innovative solutions to broadband provision across its area, including public private partnerships.

5.8 In acting for Scotland, the Executive and the Enterprise Networks have taken opportunities to learn from other countries but we have to adapt to our own circumstances. In Ireland there has been public investment in the core network which the market provided in Scotland. But Scottish Enterprise is, as noted above, seeking to achieve the more competitive supply achieved in Dublin. Both Scotland and Ireland want broadband connections to be more pervasive. Sweden offers an example but their route of municipal ownership may not be the answer here. In achieving top class digital connectivity we will use our international connections to learn from others.

Scotland to be a Globally Attractive Location

"Scotland needs to be a world class business location for the globalisation programmes of overseas and domestic companies."  

Smart, Successful Scotland

5.9 Our ambitions for Scotland to be a globally connected and integrated economy will demand equal levels of ambition in building a world class infrastructure: 'the Scottish product'. This is the case as much for businesses wishing to trade and invest in and from Scotland as it is for tourists wishing to visit. In developing this globally attractive location, many of the factors which support business and encourage tourists will be similar - access to Scotland through effective road, sea, rail and air links, positive images of Scotland overseas and an effective infrastructure and skills base within Scotland. In considering location competitiveness the following are important:

- the effectiveness of transport and communication links (especially air routes);
- the level of skills in terms of relevant and appropriate qualifications;
- the availability of appropriate buildings in the right places and environments;
- access to commercialisation opportunities and academic excellence;
- improved awareness and positive image of Scotland overseas;
- appropriate support mechanisms for R&D investment.

5.10 Direct responsibility for much of this lies outwith the immediate responsibilities of the Enterprise Networks. Nevertheless, even where responsibility lies elsewhere, the Networks have an important role to play in identifying those needs and barriers that are preventing stronger international linkages and creating partnerships to help address them. The joint venture arrangements with the Executive in respect of export promotion and inward
investment provide a ready channel for such issues to appropriate policy departments in Scotland, Whitehall and the EU. In developing the rationale in support of infrastructure investment and improvement it is important that the Networks work together with organisations such as VisitScotland to ensure that the case made is as comprehensive as possible. Our experience and contacts overseas can contribute to the assessment and prioritisation of these needs.

Transport and Communication Links

5.11 The importance of improving the availability of broadband telecommunications capacity within Scotland has been noted earlier. But in addition to this digital connectivity, physical connectivity is also crucial if Scotland is to be perceived as a globally attractive location. The Enterprise Networks do not carry primary responsibility for physical transport links and, whilst outwith the immediate policy scope of this document it is important to note that further efforts, relating particularly to the rapid and direct movement of goods and people between Scotland and major international locations, will be required.

Skills

5.12 A number of innovative responses to various skills issues in Scotland have been made in recent years and the Enterprise Networks provide significant support in responding to the particular skills needs of specific projects. Until now, however, there has not been a single, central body to respond to skills imbalances anticipated or detected. Recruitment difficulties are perceived to exist within Scotland for specific skills in areas such as higher end technology and analytical applications, multi-lingual capabilities, as well as more basic interpretation and processing capabilities in some parts of the country. Delays in recruiting necessary skills constrain the development and growth of our existing businesses and are likely to deter some inward investment projects. The Enterprise Networks will continue to seek to address these issues, where appropriate, at local level. Future Skills Scotland will work across the Enterprise Networks and with employers and the education and training system to enhance our understanding of labour market developments. In that context, it can help to identify the skills requirements of Scotland's internationalisation efforts. These include enhancing Scotland's competitiveness as a location for high quality investment and from which to trade. Future Skills Scotland will have a key role in predicting labour market movements, trends and demand, whilst Careers Scotland and its associated skills initiatives will provide a national capability to assist with a coherent Scotland-wide response to skills supply imbalances. The recent formation of both organisations will contribute strongly to the identification and promotion of good practise, improving the efficiency and effectiveness of the labour market in Scotland. They will help further and higher education institutions develop their provision in response to Scotland's future skills needs.

Buildings and Sites

5.13 Over the years, many parts of the public sector have retreated from the industrial property market as earlier market failure in provision was resolved. There is no need to return to the era of large scale public provision but we must ensure, where possible through leverage of private sector activity, that there is a sufficient supply of properties and sites. These must be available on the right terms, in the right places and suitable for the emerging knowledge intensive and service sector activities we seek to attract and grow. Generally the private sector is responding well in this area but difficulties still remain in relation to meeting
more specialist specifications (e.g., biotechnology) in advance of need and provision, generally, in more rural and disadvantaged areas.

Commercialisation

5.14 Considerable work continues across both Enterprise Networks in support of improving the commercialisation of the tremendous innovation and excellence within our universities and research institutions - most recently through the ‘Proof of Concept Fund’. This is an increasingly important factor in the location decisions of technology-based companies. We need to continue, and accelerate, improvements in the awareness of and willingness for strong commercial partnerships in this area. We will also seek to assist these centres of knowledge to interact better by exploring and collaborating on international business opportunities utilising, where appropriate, on-line information exchange.

Improving Awareness and Perception

5.15 Our new strategic priorities require a keen awareness and positive perception amongst key target audiences that Scotland is an innovative and inventive technology centre as well as an attractive place to visit, live, and work. Currently, there are some overlapping and potentially conflicting initiatives. These involve the ‘positioning’ of Scotland overseas, such as those which support our tourism ambitions and those which support our ambitions to attract knowledge in and support knowledge out of our economy. There is no single ‘image’ of Scotland which supports all our economic development objectives, nor should there be. It is clear, however, that the Enterprise Networks and VisitScotland will need to collaborate and coordinate more closely in establishing and reinforcing the images we want our overseas clients to have of us. That is not to suggest that the messages we wish to convey require to be the same, but to acknowledge that they should be mutually reinforcing - including the possibility of collaborative initiatives. It does suggest that the overseas activities of the Enterprise Networks should seek consistency of message and brand in order to avoid confusion in these markets and to strengthen the image that we seek to establish. UK Missions overseas also have a crucial part to play in promoting a positive and appropriate image of Scotland across the world and we need to work with them to support their efforts to do so. Also, Scottish Ministers travelling overseas on official business have opportunities to promote a positive image of Scotland beyond the confines of the subject of their visit.

Support for R&D

5.16 Reductions in EU state aid limits, together with a more limited Assisted Areas map, have reduced Scotland’s ability to provide financial support for some types of project compared with certain other parts of the UK and Europe. Of more concern is the increasing perception in the business community, including inward investment clients, that these reductions, together with the existing criteria of the Regional Selective Assistance (RSA) programme, limit the effectiveness of our support for research and development activities when set against the fiscal and specific R&D incentives available in some other locations. The Executive is currently re-examining the RSA programme with a view to addressing these concerns and further work might prove necessary to provide appropriate support to projects of particular merit.
Universities continue to represent an important part of the Scottish ‘product’ and can play an important role in exporting knowledge and attracting overseas investment. At the University of Dundee, Professor Sir Philip Cohen’s close working links with Upstate Biotechnology Inc (UBI) led to the establishment of Argonex Discovery Ltd (with £1.5m of investment) in the city in 1999. Dr Sue Dale, from Professor Sir Philip Cohen’s team, helped form the new company (now called Upstate Discovery Ltd) which currently employs 23 people, producing reagents for high throughput screening in the pharmaceutical industry.

Technologies produced by or licensed from the University of Dundee account for approximately 10% of UBI’s product portfolio and over 20% of its revenues. Sales of these products rose by 25% in 2000/2001 and are projected to rise further this year. Royalties from these sales support future research, commercialisation and infrastructure at the University of Dundee. This company was attracted to Dundee primarily for the quality of research and skills available but the support available locally for property and training assistance were also important factors in the final location decision.

Increased Involvement in Global Markets

"We need Scotland to show ambition and confidence, developing trading links, global alliances and strategic partnerships.”

Smart, Successful Scotland

5.17 The EU continues to play an increasingly important role in both macroeconomic policies and support of individual – and collaborative - regional initiatives. The Executive now has direct policy and advisory representation in Brussels co-located with the representatives of both Enterprise Networks. The role of the Networks continues to be of considerable importance, in raising the profile of Scotland within EU institutions and to other Member States and regions and in providing a valuable advisory service to business in Scotland. Representation also provides an important analysis and reporting function to both networks. This presence in Brussels also plays an important role in co-ordinating network interests in European Funding issues and in working with the Executive to develop further funding opportunities such as with the European Investment Bank. These activities remain important but will require ongoing co-ordination to ensure that duplication of effort is avoided.

5.18 As noted earlier, our international activities will involve a much broader range of mechanisms and activities than those previously undertaken - building, for example, on current assistance to outward investment as well as refining value added assistance to exporters.

5.19 A recurring theme from consultations on future trade strategy was the need to create an international mindset and overcome a fear of exporting within the Scottish SME base.
Consequently, the current strong emphasis of the Export Partnerships on encouraging new exporters should continue. However, at least in the short term, greater economic impact will be achieved by supporting existing exporters to develop new markets or to expand their existing markets. A more balanced approach will therefore be adopted in the forthcoming period. Alongside the strong focus on supporting the creation of new exporters, there will be increased concentration on working with existing exporters, particularly SMEs, to increase their international trading activities. There will also be greater recognition of the importance of support to companies in identified priority business areas and clusters. Work will continue with the Export Partnerships to ensure that issues of clarity, consistency and awareness of services, raised during consultation, are addressed effectively. This will be an important aspect of the Business Transformation work currently underway within SEn. Other priorities for action include:

- the development of on-line service delivery for STI and Trade Partners UK programmes;
- the development of appropriate e-business programmes for exporters and the establishment of a network of on-line learning centres in Export Partnership areas;
- the development of a skills programme for trade support staff and increased specialist support in areas such as distribution and financial advice.

5.20 The global companies research undertaken by SEn in 1998 (Box 2) indicated that if Scotland could grow more truly global companies, substantial benefits could accrue to the Scottish economy. It also indicated that there is the potential to grow more global companies headquartered in Scotland. In addition to pursuing existing development activities with individual companies, there will be increasing emphasis placed on promoting awareness of the implications, and benefits, of internationalisation to Scottish companies. Efforts will also be made to reduce the risks of globalisation through advice and support, both nationally and internationally, and we will seek to develop appropriate mechanisms to support a broader range of market entry needs - including technology licensing, distribution, joint research and other alliances. The current pilot programme of incubation support for companies as they enter the US market - STAR centres - is attracting positive feedback from Scottish companies. Subject to full evaluation we will consider extending the geographic reach of this programme. We will also look to offer similar types of outward investment assistance to academic and research institutions.

5.21 Strong linkages will continue to be required and expanded within Scotland. This will be achieved, for example, with the Scottish Council Development and Industry (SCDI) and the Export Partnerships across the Enterprise Networks, at UK level (BTI) and internationally with the EU and overseas economic development agencies. Stronger relationships with BTI should extend to closer working in areas of operational research and joint interest as well as leveraging the maximum benefit to Scotland of its much greater resource base and geographic coverage.

5.22 Geographic coverage, in respect of our overseas resource, is modest in UK terms but does need to be focussed in the areas which promise highest return over time. Tables 2 and 3 – see below - are instructive in that they demonstrate the particular significance to Scotland of markets in Europe and the Americas. These markets accounted for almost 86% of exports in 1999, with the EU alone accounting for over 60%. Both proportions have increased since
1994. The ability to retain and improve Scotland’s position in the European/US markets is therefore, highly important, as a 1% fall in export sales to these markets would require a 6% rise in exports elsewhere in order to compensate. Of the non-UK sourced FDI identified in 1999-2000, Europe and North America accounted for 94% of planned projects, 90% of planned investment and 95% of planned jobs. This was in part a reflection of the severe economic difficulties in Asia from the end of 1997. Such destination and source data do not tell the whole picture, but do illustrate the need to reconcile the level of resource deployed overseas with the returns expected and realised from these markets.

Table 2 - Destination of Manufactured Exports from Scotland

<table>
<thead>
<tr>
<th></th>
<th>1994</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£m - current prices</td>
<td>% total</td>
</tr>
<tr>
<td>Americas</td>
<td>2094</td>
<td>14.7</td>
</tr>
<tr>
<td>Europe</td>
<td>9567</td>
<td>67.1</td>
</tr>
<tr>
<td>Asia</td>
<td>2090</td>
<td>14.6</td>
</tr>
<tr>
<td>Rest of the world (Africa &amp; Middle East)</td>
<td>513</td>
<td>3.6</td>
</tr>
<tr>
<td>Total</td>
<td>14264</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Scottish Council for Development and Industry

Table 3 - Source of Foreign Direct Investment into Scotland

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Projects</td>
<td>% total</td>
</tr>
<tr>
<td>Americas</td>
<td>50</td>
<td>56.2</td>
</tr>
<tr>
<td>Europe</td>
<td>24</td>
<td>26.9</td>
</tr>
<tr>
<td>Asia</td>
<td>14</td>
<td>15.7</td>
</tr>
<tr>
<td>Rest of the world (Africa &amp; Middle East)</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Ernst & Young European Investment Monitor

5.23 In terms of FDI we must follow global trends as well as policy aspirations and move from the more traditional focus on foreign companies seeking to expand or relocate manufacturing capacity onto new sites for market access and cost reasons. Such projects are unlikely to fit with our aspirations for the Scottish economy and will see heavy competition from a variety of low cost, high grant assisted areas of Europe - in particular from those countries moving towards accession to the EU. A broader portfolio of inward flow is now required, including a further strengthening of our focus on projects involving the exploitation of knowledge and ideas and those which fit with the wider objectives for the economy. To compete for these more knowledge intensive FDI projects will require a clearer focus on those technologies and business segments where we have clear competitive strength and will involve changes in the way we approach and engage with companies. It will also require an ongoing commitment to creating the right product and environment to attract such activities. Targeting should be robust but also opportunistic, remaining
alert to new or emerging opportunities in areas such as renewables, tele-medicine, e-learning and the e-business services market.

5.24 We must also be aware of, and responsive to, the increasing incidence of internationalisation through research agreements, partnerships, strategic alliances and outsourcing. These areas can also involve higher education and research institutes and we must be aware of the increasing potential for international research collaboration.

5.25 Whilst increasing our focus on highly skilled and knowledge intensive projects we must not lose sight of inclusion issues and the continual need to provide opportunities for all parts of Scotland. We must recognise that the Knowledge Economy serves much more than technology based enterprises. It is important, therefore, that as well as research, development and design - particularly in support of our priority technology clusters - we continue to focus effort on sustainable, less technically demanding, employment growth in areas such as business and customer services.

5.26 Scotland has enjoyed considerable success across a broad range of service-based business areas and this is serving an increasingly important employment and upskilling function across the country - from our major urban centres to the most peripheral areas. Financial services, for example, currently account for almost 7% of GDP with over 10% of all jobs in Scotland related, directly or indirectly, to this business segment. In the past three years service related projects have accounted for over 17,000 of the planned new jobs announced by LIS, representing over 50% of all new jobs recorded from all sectors. We should not lose sight of the importance of this strength and the potential to build further on it.

5.27 There is also a need to develop further, and more deeply, our relationships with existing investors to help anchor and see them develop further in Scotland. Indeed, there is a need to explore greater flexibility of resource allocation and activity focus in order to meet the different challenges of times of high growth (providing increased new opportunities) and times of slower economic performance (requiring stronger ‘defensive’ activities).

5.28 International networks of supportive and interested individuals and organisations can realise significant potential in assisting our ongoing economic development aims. They can assist in many different areas, from market analysis and advice – including introductions to prospective inward investors and trade partners – to support and mentoring for young, outward looking Scottish companies and more general, positive, image building. There are also potential linkages to both skills attraction and tourism. The benefits that can flow from such networking are clear and whilst there have been a number of initiatives involving networks over the years, these have been predominantly cultural, charitable and social in nature. With the increased international profile of Scotland and the communications technology now available we believe that the time is right to pursue a more ambitious programme focussed on broader economic development goals. As a priority, we will seek to build an international network that will harness the willingness of senior Scots and friends of Scotland around the world to help in our efforts to stimulate Scottish economic development. The vision is a web-based network linking members to specific areas of business and technology interest. The aim will be to achieve a sense of collective ownership and benefit across the membership with members realising value through broader contact as well as contributing to Scotland’s ongoing development.
5.29 As we seek to deliver ‘the best of Scotland’ to prospective customers and partners, it is important that we use our international knowledge and market awareness to advise and inform relevant policy developments in order to ensure that Scotland does indeed stand as a globally attractive and competitive location.

**Box 5**

A seminar in Tokyo organised by STI in 1998, to promote Scotland’s capabilities in biotechnology, brought together leading Scottish players and key Japanese companies. Contact was initiated between the Director of Research for Kyorin and Scottish Biomedical and over the next two years this relationship strengthened, the potential for collaboration was recognised and the concept of the Kyorin Scotland Research Laboratory developed. A joint research agreement between the two companies (valued at over £5m) was signed and a purpose built laboratory, providing 12 research posts, was opened on the West of Scotland Science Park in February 2001. Government assistance was also made available to the project.

This project represents a good example of joint working between STI, LIS and Scottish companies and demonstrates the increasing importance of strong relationships in securing knowledge-based investments into Scotland. It also demonstrates a project where the more traditional ‘pitch’ for greenfield FDI would not have been appropriate.

**More People Choosing to Live and Work in Scotland**

“We need to offer the jobs to encourage the young to stay and the more experienced to return.”

**Smart, Successful Scotland**

5.30 Linked closely to the former two sections, an inflow of talent (as well as the retention of more home grown expertise) would contribute towards Scotland developing more self-sustaining, fast growing technology-based companies, thereby increasing the knowledge base for economic activity across the country.

**Table 4 - Graduate Destinations from Scottish HE Courses 1998/99**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Scotland</th>
<th>Other UK</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scottish Graduates</td>
<td>12,375</td>
<td>10,282</td>
<td>1,657</td>
<td>436</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>83%</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>All Graduates</td>
<td>15,957</td>
<td>11,161</td>
<td>3,422</td>
<td>1,374</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>70%</td>
<td>21%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Source: HESA & SFEFC

5.31 This will involve greater retention of existing skills within Scotland, influencing the return of Scottish talent currently working overseas and the attraction of new talent into Scotland. The international activities of the Enterprise Networks will play an important role in this. Ultimately, the image of Scotland and employment opportunities within Scotland, together with quality of life factors such as education, health, cultural activities and cost of living, will all impact on this.
Immediately after graduating in computing and electronics in 1989/90 Gordon Halliday left Scotland to join Thorn EMI in the South East of England. He developed his career and experience over the next decade in major electronics companies within the M25 belt. By 2000, and now with a young family, Gordon was keen to return to Scotland for lifestyle reasons hoping for employment opportunities to utilise his experience in electronics design that would continue to offer a personal challenge. He now works for Virtio, the US-owned leading edge, embedded systems design company, which moved onto the Alba campus earlier this year.

A clearly delighted Gordon has said "I have no regrets whatsoever in spending the first part of my career with major electronics companies in the South East of England. These posts offered me a considerable challenge and provided invaluable experience in important design areas. After 10 years, however, and with a young family, I felt it important to look also for quality of life factors. I was keen for us to return to the more relaxed and open lifestyle and excellent local education provision that I had enjoyed whilst growing up in Fife. I knew that Scotland was growing its reputation as a centre for electronics design and development as well as manufacture but was not fully aware of the depth and scale of opportunity being generated. I was absolutely delighted to be recruited into the terrific design team of Virtio in Livingston, a real exemplar of Silicon Valley 'can do' electronics design. The quality and breadth of employment opportunity in Scotland was really a pleasant and unexpected bonus to my return to Scotland."

5.32 Currently, work is underway through project Alba, the initiative to establish Scotland as a world-leading centre of excellence for system-on-chip semiconductor design, to attract high quality design talent into Scotland from around the world. Scottish Enterprise is working to extend this initiative to other priority industries where growth could be enhanced through the attraction of people from overseas. It is also collaborating with ‘Electronics Scotland’ in a pilot programme to recruit qualified people for the electronics industries in Scotland from former Eastern Europe. The Departments of Trade and Industry (DTI) and Education and Employment (DfEE) highlight UK wide programmes for skills attraction in the February 2001 White Paper ‘Opportunity for all in a world of change’. We will work closely with these Departments to ensure the full participation of Scotland within these programmes. These initiatives should provide considerable insights into opportunities and difficulties in this area and inform our future activities accordingly.

5.33 Action is also being undertaken to attract more international students to come to study in Scotland. Scottish Education and Training (SE+T) are working to promote Scottish education overseas. The Executive is also contributing to a UK strategy to attract international students including a global marketing campaign to promote the benefits of a UK education. Other initiatives include the expansion of the Chevening Scholarship Scheme and the creation of Enterprise Scholarships.

5.34 The Executive is also encouraging the development of links between Scottish higher education institutions and their international counterparts, in areas of key economic potential. Building these global links will encourage talented individuals from around the world to form connections with Scotland.
Conclusion

5.35 To meet the aims set in ‘Smart, Successful Scotland’ there is a need to broaden the range of activities undertaken both in Scotland and overseas. There is also a need to ensure that we are interfacing in the right way, at the right time and in the right areas, to engage appropriately with a rapidly evolving global marketplace. To do this effectively requires that our field operations are in the correct place with the right people engaged in areas of agreed priority. We also must ensure that this field resource is seen to be serving the needs of Scotland overseas.

5.36 The fundamental purpose of these efforts will be to help Scottish businesses take advantage of and from opportunities outside Scotland and overseas firms and individuals take advantage of opportunities within Scotland. In the past we have tended to focus on two specific areas - exports and greenfield/brownfield FDI - but now we see these as two elements of much broader, interwoven forms of engagement and acknowledge that our involvement should be extended. We will therefore bring together our economic development and international marketing activities under a single name to focus on three areas of international priority:

- the attraction of high value economic activity to Scotland;
- the internationalisation of Scottish business and ideas;
- the exchange of skills, knowledge and networking of individuals

Box 7

In May 2001, Epson opened its design centre on the Alba Campus in Livingston. This centre will employ 30 highly skilled staff by March 2002 working on the design of firmware (a combination of hardware and software) for mobile information terminals such as portable audio equipment and personal digital assistants. The centre will design and develop leading-edge core firmware/software to worldwide standards for LSI (large scale integration) businesses and will provide technical support for customers who develop their own firmware/software and undertake systems design for LSI’s.

Epson’s decision to base its design centre on the Alba Campus is a significant endorsement of the quality of the people, research and educational facilities within Scotland. The growth in employment opportunities at this level will help retain existing skills and attract highly qualified people back to Scotland.
6. IMPLICATIONS

Organisation

6.1 The objectives within ‘Smart, Successful Scotland’ provide a greater focus for the activities of the Enterprise Networks, whilst at the same time encouraging a broader remit in their international activities. They also demand greater awareness of and collaboration in the activities of both Networks and VisitScotland. Action will be taken to strengthen these links.

6.2 The overseas activities envisaged suggest a requirement for a much closer operational relationship than in the past and there is clear scope for greater integration between our outward and inward focussed activities overseas. To achieve this we will bring our international activities together in a single organisation operating under the title of Scottish Development International. This also has implications for the Scottish end of international activities, particularly within Scottish Enterprise, and some reorganisation will be required to provide appropriate support to the new and extended activities of overseas operations as well as improved interface with client businesses and partners. An improved interface between Scotland and our overseas operations will also be required in order that knowledge, opportunities and intelligence fed back from around the world can be acted upon swiftly. This will ensure that Scotland has the ability to adapt and respond quickly to changes in international markets.

6.3 The changes in activity envisaged will also have a significant impact on staff, particularly those in field posts overseas. As we accelerate the move, for example, from a role of promoting the business location benefits of Scotland for specific projects to a more formative, knowledge-based business relationship model, there will be considerable demand for additional skills, training and knowledge management systems.

6.4 Great care will be required in the selection of areas prioritised for intervention to ensure that the needs and opportunities across Scotland are considered, whilst gaining the best possible results from resources deployed. It will be necessary to review regularly, against robust criteria, both the countries and business areas on which our international efforts should focus.

6.5 Decisions on where, and to what extent, to deploy overseas resources will always be difficult, inexact and will tend to involve relatively long lead times in terms of new locations. Our intervention in export markets is additional to, and provides deeper support than, the much broader geographic assistance available from Trade Partners UK. This does not mean that our intervention will always be required in the most popular export destinations. We need to understand better SME needs and activity (where export support is primarily focussed) and to establish if this mirrors that of overall export destinations. On FDI, annual results can vary widely with single, very large investments, obscuring trends. This situation will be further complicated when considering the broader functions noted above, including: the internationalisation of Scottish business and academia to developing and developed economies; developing international networks; seeking closer linkages with overseas development agencies. In reaching decisions on resource deployment it will therefore be important to quantify and analyse a variety of factors such as potential market size and maturity, alignment of opportunity with Scottish strengths, track record of performance and, at least for exports, the degree of difficulty in market engagement.
6.6 We will require to be continually alert to ensure that our activities are additional to, and build on, the work and information flows already available from other UK and EU activities. Close partnership will continue to be required with:-

- appropriate UK bodies such as BTI with its network of 228 posts overseas;
- various policy and development functions of the Executive and the Enterprise Networks;
- a broader variety of institutions and organisations across Scotland in terms of product delivery, image marketing and our aspirations for a strong international network of supportive individuals.

6.7 Much of our success will rely on infrastructure, skills, sectoral knowledge and the ongoing support of many local partners. This will require close collaboration with appropriate parts of the Enterprise Networks, Export Partnerships, Local Authorities, VisitScotland, Careers Scotland, Future Skills Scotland and Scotland’s further and higher education institutions.

6.8 VisitScotland is an important partner, not simply in ensuring a coherent overall positioning of Scotland as an attractive place to live, work and visit. VisitScotland’s priority geography markets already mirror those of our principle export markets and current inward investment focus. Other possibilities of linking resources, for example in broader marketing activities, should also be explored. Business tourism, for example, including the growing strengths of Scotland as a location for international exhibitions and conferences, provides a potential opportunity to convey broader messages about opportunities within Scotland to a visiting business audience.

6.9 ‘Smart, Successful Scotland’ also places responsibilities on the Enterprise and Lifelong Learning Department (ELLD) in terms of working with the Enterprise Networks on innovative policy development, ongoing monitoring and evaluation and encouraging the Networks to focus better and to prioritise activities. In terms of international activities there is also a requirement for ELLD to go beyond a policy focus in view of its shared operational responsibility for both inward investment and export support activities. Policy linkages and responses will be increasingly required to other parts of the Executive, UK departments and the EU. As policy aspirations change and grow to reflect the need for broader international engagement, it will be important for ELLD to remain aware of relevant developments and their implications.

**Reporting & Governance**

6.10 This strategy is seen as a country-wide response to Scotland’s need to connect better with the world. As such it has implications for the Executive, the Enterprise Networks and other bodies such as VisitScotland.

6.11 Historically both STI and LIS have enjoyed joint venture status between the Scottish Executive and Scottish Enterprise, but with the responsibility to provide services across the whole of Scotland. This has provided considerable benefits to both organisations through for example:-
• presentation and representation of themselves as ‘part of Government’;
• lines into functions of enterprise agencies with equal lines into Government systems;
• direct deployment of Government assistance schemes;
• STI operating as the agent for Trade Partners UK in delivering its full range of export services in Scotland.

6.12 These JV bodies encompass the vast majority of current field operations world-wide, representing Scotland to the world and the world to Scotland and operating on behalf of the Executive and both Enterprise Networks. **These existing linkages should be retained and the joint reporting of these functions to the Executive and Scottish Enterprise should be continued.**

6.13 Currently, governance over LIS is exercised through a Supervisory Board chaired by the Minister for Enterprise and Lifelong Learning. No such analogue exists for STI although it is served by an Advisory Board. **In recognition of the greater integration of our inward investment and export support functions in future, particularly in terms of overseas activities, these functions should both come under a single Supervisory Board chaired by the Minister and including representation from the Executive, Scottish Enterprise and Highlands and Islands Enterprise.** The Scottish Export Forum continues to provide a valuable contribution on trade issues, however, and there is a strong case for the retention of such a body to provide business perspectives on export activities.
7. MONITORING AND EVALUATION

7.1 ‘Smart, Successful Scotland’ established a framework for rigorous reviews of performance against stretching targets agreed through the recently established Joint Performance Team (JPT). Based on past experience, it is important that, whilst maintaining lower level operational targets to guide and assess the activities of the various teams involved, the strategy itself is judged against broader international benchmarks than those adopted previously. These targets should also be clear and easily understood to allow all staff involved a sense of ownership and the ability to identify their activities against them.

7.2 The targets should be as ‘smart’ and absolute as possible rather than simple year-on-year increases in activity or comparisons with the rest of the UK, although the UK will provide a useful benchmark in some areas.

7.3 The JPT is consulting on detailed proposals for ‘Global Connections’ which will follow the four areas of challenge set out in ‘Smart, Successful Scotland’:

- Digital Connectivity;
- Involvement in Global Markets;
- Globally Attractive Location;
- Choosing to Live and Work in Scotland.
8. SUMMARY

8.1 International economic activity, together with the opportunities for economic growth and development, is in a period of rapid change. Globalisation is increasing in pace and depth whilst the modality of international economic engagement is widening. Scotland needs to respond to these changes rather than resist them. To help meet these challenges we will integrate and widen our international activities and address key areas involving infrastructure and skills. This will have implications for our economic development Networks and the Executive in terms of activity, relationship and structure.

8.2 The attached diagram (Figure 2) summarises the key factors accelerating the pace of change in the world economy, together with the main impacts that this is having on business.

Figure 2
Global Connections Strategy: the changing environment
The operational response to the challenges posed by ‘Smart, Successful Scotland’, recognising the changing economic and technological drivers at work within the global economy, is summarised at Figure 3.

Figure 3

Global Connections Strategy: the challenge and the response

The primary strategic intent is to support the fullest possible Scottish participation in the global economy.
8.3 Figure 4 summarises the implications of this response for organisation, structures and governance.

Figure 4

Global Connections Strategy: the organisational implications