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Introduction

In 2004 the European Union is set to undertake a major development with its greatest single enlargement since the foundation of the European Economic Community, with 10 new countries set to become EU Member States. Two further states (Bulgaria and Romania) will join within a further few years and the prospect of accession in the medium-term is already raised as an issue for discussion in several other countries such as Turkey and Croatia. This process began in 1993 when the Copenhagen European Council opened up the prospect of an enlarged European Union. Since then there has been an active process of “pre-accession” preparation during which time the candidate countries have, with the direct financial and institutional support of the EU, committed themselves to meeting the requirements of EU membership.

There are major political and historical factors driving the process of unifying Europe. However, EU enlargement is not only changing the political map of Europe, it also has major economic implications; including significant effects upon the way business is conducted.

In this context, the South East England Development Agency (SEEDA) commissioned Bradley Dunbar Associates to provide an initial assessment of the implications of EU enlargement for the economic and business development of the South-East of England. The impact on structural funds within the South East of England was already being addressed by SEEDA, but this work focused on the opportunities for business development. Therefore, the purpose of this report is to, specifically, provide a basis for SEEDA to develop its own strategy for action by setting out the background to the following areas:

- ▶ A general background on the accession process in relation to business development;
- ▶ An outline of the main issues in certain key sectors for the South East of England and identification of a limited number of priority sectors where the impact of accession is likely to offer particularly strong opportunities;
- ▶ Background analysis of certain key “horizontal” issues related to EU enlargement that are of particular relevance to SEEDA. This includes assessment of labour market issues (labour availability, skills, training, etc), Technology Transfer, and Inward Investment;
- ▶ Advice on potential regional partners, to fit within SEEDA’s “global regions” approach;
- ▶ Outline recommendations for the development of a strategy by SEEDA.
- ▶ The information in the report is based on the experience built up by Bradley Dunbar Associates Ltd over several years, and also includes specific additional research carried out in spring 2003 by Bradley Dunbar Associates’ offices in Glasgow, Brussels, and in Central & Eastern Europe. In addition, there were discussions with staff members from SEEDA and with certain companies in the South East of England.



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Executive Summary

The Context of EU Enlargement

- ▶ Subject to the ratification of the process by the candidate countries and the EU Member States, ten countries (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Malta and Cyprus), are set to become full members of the EU during 2004. Bulgaria and Romania are likely to follow sometime after 2007. Negotiations with Turkey should begin in 2003 and a formal application has been submitted by Croatia.
- ▶ Enlargement is a *process* not a “big-bang”, and it is a process that has been underway for several years. Much of the legislation is already in place and large numbers of contracts related to enlargement are already being awarded. Moreover, many of the effects on the economy and the specific changes of business will impact steadily for many years after the date of entry.
- ▶ The candidate countries will add over 100 million people to the European Single Market. This means a considerable increase in potential consumers, representing an increase of 20% of the EU’s total population.
- ▶ All the candidates will join the Exchange Rate Mechanism (ERM) at the time of their accession to the EU, or shortly after, and they will all eventually join the Euro zone (none have requested an ‘opt-out’). However, they will need to spend a minimum of two years in the ‘waiting room’ and show that they meet the Maastricht convergence criteria before they adopt the single currency.

EU funding as an opportunity

- ▶ After membership, EU direct funding will rise to around €8bn per annum for 2004-2006 and, perhaps, up to €20bn per annum from 2007 onwards. Therefore, the markets are not “one-offs” with accession.
- ▶ The scale of the increase in funding and the “transparency” of the process mean that in certain sectors it is possible to see real and sustainable expansion of business opportunities; the opportunities are starting now and it is necessary to begin to establish a presence at this time.
- ▶ The nature of EU funding means that the types of projects to be funded are known well in advance and the nature of the transition process means that funding is directed towards clearly agreed priorities; this means that across all accession countries there is, and will continue to be, major direct investment in specific areas such as waste water treatment, waste management, development of business infrastructure, and transport infrastructure (currently road and rail).
- ▶ The majority of contracts are in areas that require skills and expertise that are by definition lacking in the accession countries. This balance is, of course, changing as local supply of services improves, but it still remains and leaves open real opportunities for those companies that can combine quality added-value to local skills and expertise.

EU legislation as a market driver

- ▶ It is clear from existing EU member states that there are certain markets that are heavily driven by European legislation, and this will undoubtedly be the case in the



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accession countries. The legislation and the approaches to implementation are known, thus it is easy to predict the broad nature of the opportunities for business.

- ▶ With regards to EU legislation, new areas of business are developing in certain types of services; including quality systems, environmental management, health & safety regulations etc; equipment supply related to areas such as recycling, pollution control, measurement & instrumentation etc; and construction/engineering in waste-water, landfill etc.
- ▶ Many South-East companies have expertise in areas related to the application of EU legislation. As with the market for EU funds, the fact that this new market is developing simultaneously in 10 - 12 countries where the domestic suppliers are relatively weak means that there are opportunities for new market entrants or for companies already present to achieve growth in business volumes or in market share.
- ▶ EU legislation in itself does not create business. It will be the growing realisation by the public and private sector that they will face penalties for non-compliance that is so important. Therefore, the effectiveness of implementation is crucial as to whether legislation produces action and therefore produces business.

Accession countries as a place to do business

- ▶ The perception that the accession countries of Central and Eastern Europe are difficult places to do business, with perceived fears of getting paid, difficult legislation, local political control over decision-making on all contracts, state domination of markets etc, is, in practice, far removed from reality.
- ▶ In certain countries, the regulations and procedures for company set-up are far easier than in many EU member states, and in most of the accession countries the banking system is sound and many are offering services on a par with UK banks. Application of the Community *acquis* and preparations for the Single Market are having major effects and this is increasingly in line with EU practice.
- ▶ Most countries are preparing openly for entry into the Euro zone at an early date and many of the currencies are pegged to the Euro and are able to demonstrate effective macro-financial management and currency stability. Moreover, English is widely spoken as the language of business and there is a growing pool of young graduates offering high-quality language skills, and Internet usage in some countries (e.g. Estonia) surpasses that of most member states.

Accession and South-East England Development Agency (SEEDA) – An overview of sectors.

Against the background to this study, nine 'sectors', as agreed with SEEDA, were profiled. Following this, an analysis was carried out to prioritise these sectors against the general nature of the business development issues linked to the EU enlargement. Four priority sectors were chosen for further investigation; Environmental Technologies, Technology (ICT and Telecoms), Life Sciences and Healthcare, and Building and Construction. A detailed synopsis of each is given in the report and an overview of the remaining 'secondary' sectors is provided in annex.



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Accession and 'Horizontal' Issues

In addition to the sectors, the study has considered three main horizontal issues - Labour Market issues, Technology Transfer and Inward Investment - in order to give SEEDA sufficient basis for broad strategic decisions about its own priorities in responding to EU enlargement. A short summary of each is provided in the report with additional information given in annex.

A Regional Approach for SEEDA

As emphasised by SEEDA during the initial briefing, a key feature of SEEDA's response to the enlargement of the EU will be the regional dimension; i.e. forging regional partnerships in relation to the identified key sectors. Within the scope of this report, however, we were not able to provide a definitive answer to the questions on strategic alliances for SEEDA (the reasons for this are outlined in the relevant section). However, we do make a number of proposals about how this issue could be moved forward and give further information to assist SEEDA in this process.

Recommendations for Strategy and an Action Plan

- ▶ The nature of the EU enlargement process in itself is clearly driving markets in certain specific sectors that offer considerable opportunities. Moreover, it is clear that there will be major benefits from taking early action to take advantage of the enlargement-related opportunities that exist.
- ▶ A major factor in this is the importance of working with local partners in the markets. The newly-emerging local companies, the regional agencies, the universities, etc, and the pool of capable individual entrepreneurs are ready *now* to create strategic or specific partnerships with international companies and organisations, and this local link will be a crucial element in achieving success. If companies from the South-East of England are to reap the benefits over the coming period then their chances of success will be greatly enhanced if they are actively creating links in the local markets at this time.
- ▶ The starting point to this is companies. It will be companies themselves that will make the business happen and it will be companies that will make the decisions about whether specific markets do offer potential for their particular products or services. However, an insufficient number of companies currently have access to valuable market information about EU enlargement to enable them to make informed decisions. SEEDA and its partner agencies, therefore, have a role in providing facilitation and support to promote a process of improved information.
- ▶ The approach we propose for the development of a strategy for action is the use of existing channels for business support and development, together with a sector/cluster based approach where priority focus in relation to EU enlargement is kept within a sector- or cluster-based approach. The actions we propose SEEDA takes within this are detailed in five main categories; Sector/cluster based analysis, Awareness-raising, Development of information tools, Supporting action, and Initiatives for Partnership.



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The Context of EU Enlargement

EU Enlargement – Who, when, how...

EU Enlargement; Who, when, how - Key points

- ▶ Subject to the ratification of the process by the candidate countries and the EU Member States, ten countries (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Malta and Cyprus), are set to become full members of the EU during 2004.
- ▶ Bulgaria and Romania are likely to follow sometime after 2007. Negotiations with Turkey should begin in 2003 and a formal application has been submitted by Croatia.
- ▶ In order to become members, each country will have had to meet political, economic and legislative criteria and, with the exception of certain exceptional areas where transitional arrangements will apply, each country will be required to implement and enforce the full weight of EU legislation, regulations, etc.¹
- ▶ Enlargement is a *process* not a “big-bang”, and it is a process that has been underway for several years. Much of the legislation is already in place and large numbers of contracts related to enlargement are already being awarded. Moreover, many of the effects on the economy and the specific changes of business will impact steadily for many years after the date of entry.
- ▶ Although enlargement will add over 100 million people to the European Single Market, the overall GDP of the EU will increase by only 4.5% after enlargement. However, growth rates should continue at up to 5% - higher than the EU average.

EU Enlargement; who, when, how – Background

Thirteen countries are currently formally seeking to join the EUⁱⁱ. Twelve of these have been involved for several years in an extensive negotiation process and, as part of this, the European Commission has conducted regular assessments of the readiness of each of the countries to become members.ⁱⁱⁱ Following the Copenhagen summit in December 2002, it was formally stated that the process of enlargement should be completed with ten of the countries with a target date of mid-2004 for entry. The 18-month “gap” between completion of negotiations and actual membership is due to the need for finalisation of Accession Treaties for each country and also the ratification process in both the Member States and the Candidate Countries.

Each of the countries will become full members of the European Union. In the negotiation process, there have been certain, very specific, areas identified where the candidates would not be able to meet the full obligations of membership and “transitional” periods have been agreed. Examples of these include certain ‘investment-heavy’ European directives (urban waste water legislation in areas requiring particularly high levels of investment). However, these transitional periods are extremely limited and cover a tiny fraction of the full legal, political and financial obligations of EU membership – new member states will be full member states, fully integrated into the Single Market, applying the full body of European legislation.



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The “first wave” of enlargement and remaining hurdles

Of the ten that are, therefore, expected to be in the first wave of enlargement, eight are countries of Central Europe (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia) with Cyprus and Malta also included. It is expected that the timetable of mid-2004 will be achieved, with the only remaining hurdle being the ratification of the accession treaties in the Member States and also in the candidate countries, including referenda in all of the candidate countries themselves.

The general consensus is that this first wave will go ahead on schedule and the ten new members will join the EU around May 2004.

Enlargement after the first wave

In the opinion of the European Commission, Bulgaria and Romania are not yet ready to meet the economic requirements of membership and nor are they ready to apply in full the so-called European *acquis* (laws/regulations etc). There is no formal deadline agreed by the Commission or the European Council, but in its recent strategy statement the Commission set out its intention to do all it can to assist Bulgaria and Romania in meeting their own target date of 2007. This target is, almost certainly, an optimistic view; although it is clear that there will be a re-direction of funds to these two countries to try to achieve accession for Bulgaria and Romania at the earliest date possible.

Turkey has formally applied to join the EU but has yet to begin negotiations^{iv}. In addition, Croatia has now submitted its intent to join the EU and the other Balkan countries (Serbia, Montenegro, Macedonia, Albania) could constitute a further wave of enlargement 10 to 15 years hence; and even Ukraine has now adopted membership of the EU as a medium- to long-term aim.

Enlargement as a process

It must be noted that enlargement will not be just a “big-bang” impact with everything changing on the date of entry. It is a gradual process and many changes have been underway since the process began in the early 1990s. Most of the national legislation in each country has already been harmonised to fit with EU requirements, institutions and agencies required to enforce legislation are in place, and there has also already been much freer and increased trade between the EU and the Candidates resulting from the ‘Europe Agreements’. The adoption of the EU single market and other legislation as part of the detailed accession negotiations is also an ongoing process and many of the investment opportunities offered by privatisation and de-regulation have already been taken. The impact of accession on economic activity, though, will continue for many years after joining. The full benefits of this enlarged Union will only be felt some years after 2004 (as was the case when Spain and Portugal joined the then EC in 1986). Single market legislation will take time to be implemented fully and effectively, some specific transition periods will hinder the implementation of full legislation and (for example) there will be some restrictions on the free movement of labour at first. Also, from a trade perspective many aspects of current border controls will not disappear the day after accession.



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Enlargement – GDP size and Growth

The candidate countries will add over 100 million people to the European Single Market. This means a considerable increase in potential consumers, representing an increase of 20% of the EU's total population.

However, the majority of these consumers will not bring major spending power. Looked at in terms of overall existing GDP the candidate countries are relatively insignificant, with the total GDP of all accession countries currently less than that of the Netherlands. Thus, the overall GDP of the EU will increase by only 4.5% after enlargement.

The growth rates in candidate countries over the recent years have however, in relative terms, been impressive. Although there will be specific issues in individual countries (e.g. limited overall growth in Poland in the short-term), the effect of accession is likely to lead to continued growth rates higher than the EU average at up to 5% and this "catch-up" will provide opportunities in general for business in relation to growth markets.

Enlargement and the Euro

A key issue for business will be the relationship between enlargement and the Euro. At present, the vast majority of candidate countries operate currencies that are pegged to the Euro in one way or another and so, whilst not formally within the Euro zone, the Euro is already dominant in relation to macro-financial management and business activity.

All the candidates will join the Exchange Rate Mechanism (ERM) at the time of their accession to the EU, or shortly after, and they will all eventually join the Euro zone (none have requested an 'opt-out'). However, they will need to spend a minimum of two years in the 'waiting room' and show that they meet the Maastricht convergence criteria before they adopt the single currency. Economically, they may be more advised to remain even longer in ERM before joining the Euro but political pressure to become a 'full member' of the EU may force the pace and there are also very clear business benefits from being in the Euro zone (lower transaction costs, interest rates etc). Either way, the new members are not likely to join the Euro until 2007 at the very earliest.

Enlargement and internal borders

All candidates must meet the Schengen requirements on border controls. For those that will have external frontiers of the enlarged EU, this requires a major effort in strengthening borders and, as with the single currency, there are no "opt-outs". However, border controls between existing and new members will not disappear at the date of accession. Participation in the Schengen area needs to be approved unanimously by the EU Council of Ministers and Italy and Greece both had to wait between seven and eight years to join. Whilst in theory new member states can join individually, in reality it may be more practical for most to join at the same time rather than have individual countries joining and having to build up temporary 'internal' border controls between new members.



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Various transition periods negotiated by candidates in the application of the single market mean some existing members may be reluctant to open their borders. For example, Poland has arranged a five year delay in applying excise on cigarettes on condition that checks are in place to ensure no-one brings more than 200 in to other EU countries.



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EU funding as an opportunity

EU funding as an opportunity - Key points

- ▶ Current pre-accession funding is around €3bn per annum, although as at January 2003 there were contracts worth over €8bn that were still open;
- ▶ After membership, EU direct funding will rise to around €8bn per annum for 2004-2006 and, perhaps, up to €20bn per annum from 2007 onwards. Therefore, the markets are not “one-offs” with accession;
- ▶ In both the general sense and also in terms of individual contracts, it is possible to see well in advance what opportunities do exist;
- ▶ The scale of the increase in funding and the “transparency” of the process mean that in certain sectors it is possible to see real and sustainable expansion of business opportunities;
- ▶ The opportunities are starting now and it is necessary to begin to establish a presence at this time.

EU funding as an opportunity - Background

Pre-accession funding

There is currently direct EU investment of around €3 billion per annum via the “pre-accession” funds Phare, ISPA and SAPARD. The focus for Phare has mainly been on institutional development and in particular on helping the countries meet the formal and legal requirements for membership of the EU. In addition to this institutional work, however, since 2000 Phare has also begun to fund investment projects as part of the preparation of countries for the future European Union “Structural Funds”.^v The ISPA programme is focused on larger single investment projects in transport and environment, whilst SAPARD is targeted on rural development and agriculture.

The figure of €3bn per annum actually relates to so-called “commitments”; i.e. the final decision on specific programmes or projects has been taken and agreed between the accession country and the European Commission, and the money is now available to be contracted. However, since 2000 the accession countries have been learning how to deal with the new funding instruments (ISPA and SAPARD were only introduced from 2000 onwards) and this, combined with delays traditionally associated with EU contracting, mean that there has been a build-up of projects for tendering. At the present time, there is over €8 billion of contracts that are still not yet contracted and are, therefore, open for companies from the South-East of England to target^{vi}. To give an idea of the specific areas, there is now around €1 billion of contracts in the Water sector in Poland alone!^{vii}



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Levels of EU funding after accession

The level of direct EU funding in the accession countries will increase significantly from the current levels after they join the European Union. The specific budgets are still to be finalised, although the recent agreement of the European Council in Brussels sets the overall total for regional aid at €23bn for the three-year period of 2004-2006 for the new member states. This total of around €8bn per annum does not include agricultural funding, and also this figure is only for ten countries (money for Bulgaria and Romania is not included in this as they will not join in 2004). The figures for the next EU budget period (2007-12) is not yet fixed and will depend on future budget agreements with the new Member States themselves playing a full part in the negotiations. There are a number of factors that can influence this figure, but it is quite likely that it will be close to the ceiling of 4% of total GDP of the accession countries; this would mean €20 billion per annum.

After the first wave of membership there will, of course, still be countries in the “pre-accession” phase, including most notably Bulgaria and Romania. These two countries will continue to receive funding via the pre-accession programmes (Phare, ISPA, SAPARD) and the recent Commission report has stated that it will direct even greater funds to these two countries from 2004 onwards to assist them. No specific figures have been agreed yet, but it is almost certain that such funding will grow by a significant amount during 2004-2007. ^{viii}

What types of projects? What types of contracts?

The nature of EU funding means that the types of projects to be funded are known well in advance. This is not just true of the general picture as monitoring of the process highlights specific contracts many months before a tender is issued and on many occasions even up to 18 months or 2 years before a contract is awarded.

As part of the accession process, there is investment in physical infrastructure (buildings, roads, etc), equipment and services. The nature of the transition process means that funding is directed towards clearly agreed priorities that reflect both the development needs of the countries but also the requirements of EU membership and the nature of EU financial instruments. This means that across all accession countries there is, and will continue to be, major direct investment in the following areas:

- ▶ Waste water treatment;
- ▶ Waste management, especially municipal waste, landfill and recycling;
- ▶ Development of business infrastructure (business parks, industrial zones, logistics centres, tourism facilities);
- ▶ Transport infrastructure (currently road and rail).



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How are EU Contracts tendered and awarded?

The funding may be European, but the market for contracts is very much local in each country. Over the last years, as part of the preparation for membership, there has been a process of decentralising decisions on contracts away from Brussels to the accession countries themselves.

At the level of individual tenders and contracts, the European Commission in Brussels has no direct role at all and only the EC Delegation in each of the countries has a monitoring and approval role. The tendering of contracts, the evaluation of bidders and selection of contractors, and the management of contracts are all done directly by the national or regional public authorities in the accession countries. Moreover, the Commission will cease to have any direct role in the approval of contracts and contractors from the middle of 2003 onwards.^{ix}

This means that it is, for example, Polish officials and Polish experts who are evaluating bids for contracts and selecting companies in tender procedures. This localisation of the process, which is strengthening all the time, means that the real influence lies in the markets themselves with the national and regional officials and, therefore, that businesses need to be able to demonstrate real capability to local decision-makers.

The process for awarding contracts based on EU funding is, as would be expected, very structured and governed by specific and standard procedures.^x This means that for the vast majority of contracts information is available online via the *Official Journal* and also through a specific *Europe Aid* website. The Commission is now required to publish forecasts in advance of tendering so that companies are able to prepare more effectively than was previously the case. In addition, for those that have a specific interest in this area it is possible now to view online the documents that are the legal basis for allocating the EU funds and therefore to see future projects many months in advance.

There are, however, a large number of contracts that are either tendered via a pre-determined list of preferred bidders (framework contractors) or are only announced in the country where the project is to take place. For example, for construction projects it is possible for tenders of up to €5 million to be awarded by what is known as “local open procedure”; this means that it is open for South East England companies to take part in the bid, but the information will only be published in the accession country itself and not in the *Official Journal* and/or on the *Europe aid* website. There are similar processes for contracts to purchase equipment or services, although the financial ceilings are lower.



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Who is winning the business (and who can)?

In terms of what kinds of companies are winning contracts, it is of course impossible to give a very specific picture that covers all countries and all sectors. However, a number of key points must be borne in mind:

- ▶ There are an increasing number of contracts which are being awarded to local companies or to consortia led by local companies, but this still represents a relatively small minority of overall contracts awarded by value. Although there may be an understandable inclination amongst decision-makers to favour local companies, there is still a relatively small pool of local companies that have the capability to deliver the appropriate services or products. Also, the formal procedures and requirements of EU projects often discriminates against local companies that may have the necessary skills and expertise but who cannot demonstrate the relevant track-record or be of a sufficient size,^{xi} and so the natural and understandable inclination amongst decision-makers to favour local companies is not able to overcome this;
- ▶ The nature of EU funding means that, with the exception of many projects in construction for example, the contracts are in areas that require skills and expertise that are by definition lacking in the accession countries. This balance is, of course, changing as local supply of services improves, but it still remains and leaves open real opportunities for those companies that can combine quality added-value to local skills and expertise;
- ▶ There is a perception that many of the EU funded markets are now “tied-up” by the international companies that are already there or that companies from the South-East of England are too late and cannot compete with, for example, German companies established in the market. There is, of course, a competitive advantage for those companies that are already in the market, but the sheer scale of business that will come in the priority areas for EU funding means that neither the established international companies nor the local businesses will be able to meet the demands and there will be real scope for companies to expand existing business and for many new entrants to the market. If we exclude figures for government-to-government institutional work, the total value of EU funded contracts awarded in 2000-2001 would have been not more than €700 million per year. For 2002-03, given the delays on contracting mentioned above, this figure will increase by around sevenfold! Moreover, for the period after membership, the figures will increase again to around €8 billion a year initially and potentially €20 billion a year from 2007 onwards. Whilst not all of this money will end up as contracts of interest to companies from the South-East of England, it is clear that this expansion does offer real opportunities in focused areas.



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EU legislation as a market driver

EU legislation as a market driver - Key points

- ▶ It is clear from existing EU member states that there are certain markets that are heavily driven by European legislation, and this will undoubtedly be the case in the accession countries. The investments in strengthening the implementation systems to force compliance with EU directives will, along with other factors, mean that there is no reason to assume that implementation will be any less strict than in many existing member states;
- ▶ Although the legislation is in some cases already effective, the implementation is not yet really fully operational. So, although there are already opportunities in these markets, they will almost certainly begin to show more considerable growth in the period after membership;
- ▶ The particular timing will depend partly on the transition periods for specific legislation and partly on national approaches to implementation. However, even where there are longer transition periods, investment by the public sector in particular is already beginning to be put in place;
- ▶ The legislation and the approaches to implementation are known, and so it is easy to predict the broad nature of the opportunities for business.

EU legislation as a market driver - Background

Although there are transition periods in certain key areas, the vast majority of EU legislation will apply in accession countries from the date of accession and in most cases suitable legislation is already in place.

The introduction and implementation of legislation will be a major market driver in those markets that are linked heavily with European regulation. New areas of business are developing in:

- ▶ Certain types of services such as quality systems, environmental management, health & safety regulations, etc;
- ▶ Equipment supply related to areas such as recycling, pollution control, measurement & instrumentation, etc;
- ▶ Construction/engineering in waste-water, landfill, etc.

This legislation-led market is at the very early stages and will undoubtedly grow in the years after membership as the enforcement of EU-led legislation takes hold. It should also be noted that this particular aspect of the changes relates equally to both the private and the public sector, whereas direct EU funding investment via grants will be channelled via public authorities with relatively limited activity undertaken by the private sector.^{xii}



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With regard to the public sector, it is important to recognise that although there will be significant direct EU funding on assisting national, regional and local authorities to meet the European “acquis”, this will by no means be sufficient to meet the overall requirements. If we look at the issue of the Urban Waste Water Treatment directive, for example, EU funds are, and will be made, available for large urban areas or for smaller areas facing specific problems (i.e. in areas of particular environmental importance, etc). Yet, this will still mean that almost all smaller municipalities that after the transition periods must meet the relevant legal requirements of the Directive will face the task of financing their own investments in waste-water treatment plants. This process is already ongoing with, for example, Poland establishing mechanisms for municipalities to access loan funding and also investing national environmental funds in this area.

EU legislation in itself does not create business. It will be the growing realisation by the public and private sector that they will face penalties for non-compliance that is so important. Therefore, the effectiveness of implementation is crucial as to whether legislation produces action and therefore produces business. There has been considerable investment by the Commission in strengthening implementation structures in each of the countries and the monitoring of this is a key part of the accession negotiations (and is a condition of membership). Also, there is, in certain areas, considerable motivation on the part of the government agencies to achieve effective implementation as a means of fund raising (e.g. pollution charges in Poland are a major source of funds for the Governments Environmental Fund).

In reality, there will be a period during which implementation of relevant legislation will need to “settle down”. In addition, there will be differences between the countries in the strength of implementing EU legislation, as there is between existing Member States. However, there is no reason to assume that implementation will be any less strict than in many existing member states.

In considering the implications of this “legislation-led” market development on the opportunities for business for the South-East of England, a number of factors are important:

- ▶ Many South-East companies do have expertise in areas related to the application of EU-legislation. As with the market for EU funds, the fact that this new market is developing simultaneously in 10 - 12 countries where the domestic suppliers are relatively weak means that there are opportunities for new market entrants or for companies already present to achieve growth in business volumes or in market share;
- ▶ The timing of opportunities will vary according to the specific legislation and the relevant strengths of the implementation arrangements. It is clear that in many cases the real growth will come only after several years as companies and public authorities begin to see the costs of non-compliance with new legislation. However, even in areas such as waste-water treatment where there are transition periods of several years before the Directive will apply, the long “lead-times” for investment projects



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means that the non-EU funded market is already growing in several of the accession countries;

- ▶ The process of awarding contracts and winning business is, of course, very different from that which applies to EU funding. Although the larger-scale public investments will, after membership, be tendered openly under the EU public procurement rules, the vast majority of this business will result from individual investment decisions by companies and institutions. Local “presence” via some kind of on-the-ground network and local partners are therefore even more of a necessity in this area.



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Strategic Investment as a market driver

Strategic investment as a market driver - Key points

- ▶ New inward investments into the accession countries are a key market driver and, therefore, the process of strategic investment also offers opportunities (and of course threats) for companies from the South-East of England and to the South East of England's economy;
- ▶ Whilst the specific "package" of attractions for strategic investors will change after accession, the improved infrastructure and access to major markets within the EU will mean that accession countries will remain a very competitive destination for foreign inward investment for many years to come;
- ▶ Without exception, the strategies of the accession countries are to be able to compete not only on cost but also as attractive locations for high-quality, knowledge-based, "new economy" investments. The programmes for pre-accession funding and also in particular the future Structural Fund investments will be focused on improving their position in this regard;
- ▶ Companies that are already in the supply-chain of companies who are relocating can see the importance of responding to this once decisions are made. This "defensive" approach will continue to be important, but could and should also be combined with a more positive approach to winning supply-chain work for relocating investors;
- ▶ For the South-East of England this aspect also offers significant opportunities for assisting companies that are headquartered in the South-East to strengthen their businesses by themselves investing in sub-contracting, manufacturing, support services in accession countries.

Strategic Investment as a market driver - Background

The accession countries have been able traditionally to offer many advantages to potential inward investors. Low labour costs and attractive tax incentives are two of the biggest pulls, as is closeness to the major European markets. The nature of the "attraction" is already changing and this process will continue to change after accession.

Some advantages will decrease. Labour costs are currently one seventh of the EU in the manufacturing sector and this gap will close as EU membership drives up wages along with other business costs. The gap will remain for several of the new Member States, however, with countries such as Bulgaria, Romania, and Latvia remaining low cost production centres in an enlarged EU for the next 10-20 years. Also, many of the tax advantages and other investment incentives will be reduced in line with EU rules on state aid and competition.



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However, other advantages will come into play. The major investment in business infrastructure will be used to provide high-quality facilities and investment in training and technologies will continue to increase labour productivity (which is a problem at present, at 2.5 times less than EU levels). Full and unlimited access to the single market will be a major benefit, particularly given the favourable geographical location of many countries.

What is more, the national strategies for development in each of the countries are based on maximisation of these strengths via both national programmes for investment but also utilisation of EU funds. The accession countries are not aiming to only get low value manufacturing and will be using all their (and our!) considerable resources to increase their attractiveness in new markets.

Major EU projects to improve the business infrastructure are not mainly targeted at attracting low-cost manufacturing but at developing new technology businesses. Examples include the use of pre-accession funds to develop broadband coverage in rural areas of Lithuania and investment in industrial/business parks in many countries that offer technical infrastructure that is the equal of facilities on offer in many parts of the UK or in other Member States of the EU. In terms of transport, too, large amounts of EU funds are enabling the accession countries to maximise their geographical location by providing more modern and effective links to the larger and wealthier markets of the EU. In addition, the investment in “soft” developments via education and training are also a major feature of development programmes in the accession countries, and this will also have an impact in the years to come.

Many major corporations and companies currently operating in South-East of England and other areas of the EU are placing new investment into central Europe and/or are relocating manufacturing/assembly - this will continue in the run-up to accession and for several years to follow.

This process raises a challenge for the South-east of England. Firstly, with regard to competition for inward investment, the perception has often been that central/eastern Europe and the UK occupy different ends of the FDI ‘market’. In reality, the accession countries of central and eastern Europe are now entering a phase where they are actively seeking to close this gap and, with the use of EU funds, will almost certainly achieve considerable success in certain specific areas. Secondly, however, the improved environment for inward investment does enable companies headquartered in the SE and facing certain constraints on growth (access to labour, etc) to secure a basis for further growth via developing their presence in accession countries.



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Clearly there is a time factor in this as it takes time for the new investments to feed in. It is difficult to be specific in these estimations, but it may be between 5-10 years before the combination of factors (modern infrastructure, full access to single market, etc) is in place. In this respect, though, it is very important to acknowledge that the accession countries are not all at an equal level. In certain areas the accession countries are already able to offer a more sophisticated and competitive investment profile than is sometimes recognised. Parts of western Hungary and western Poland, the greater Prague area in the Czech Republic, and Estonia are already able to offer a very attractive location for modern investments.

This investment has so far been traditionally driven by foreign capital and has mainly focused on lower-cost production/manufacturing targeted towards third markets (re-export to EU, US, etc). This will continue and will in some cases gain momentum as central Europe becomes part of the EU single market, but we will also now begin to see increases in investment (inward and also domestic) targeted at exploiting the growing markets within the accession countries. In this respect, potential areas for investment will include sectors which will be directly affected by EU membership due to regulatory changes, restructuring and loss of subsidies (e.g. telecoms, electricity and gas, postal services, steel, transport and pharmaceuticals where major changes will take place in patent legislation). There are likely to be fewer opportunities within sectors where liberalisation and restructuring has already taken place (banking, car manufacturing, and food).



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Accession countries as a place to do business

Accession countries as a place to do business - Key points

- ▶ The reality is that in terms of fundamental business framework, the accession countries are reaching a situation which is on a par with many existing EU member states. Some, such as Estonia, are much more business-friendly than most EU countries, whilst a country such as Romania still offers challenges in negotiating the various procedures;
- ▶ The *perception* of these markets as “difficult” is important and is, in itself, a barrier to certain companies approaching the accession countries.

Accession countries as a place to do business - Background

There remains a fairly widespread perception that the accession countries of central and Eastern Europe are difficult places to do business. They are sometimes still categorised as “eastern bloc”, with perceived fears of getting paid, difficult legislation, local political control over decision-making on all contracts, state domination of markets, etc. This cautious view tends also to suggest that the markets are only for larger companies and certainly should not be first export markets for companies. The reality is, in fact, very different from this perception in almost all accession countries.

Whilst there are, of course, differences between the countries, the process of market development over the last twelve years combined with the active preparations for EU membership for the last five years have generally produced a clear and transparent framework and, in certain cases, a very “business friendly” environment. In this context, it is important to go beyond the “regional” approach which groups the countries into one block and to recognise the major differences in business culture and environment between, say, Estonia and Romania, or Hungary and Lithuania:

- ▶ In certain countries, the regulations and procedures for company set-up are far easier than in many EU member states. The banking system is for the most part owned by international investors, systems are sound, and increasingly the banks are offering services on a par with UK banks;
- ▶ Other aspects of “business” legislation may still be in a process of transition, but the application of the *acquis* and preparations for the Single market are having major effects and this is increasingly in line with EU practice in most areas;
- ▶ As stated above, most countries are preparing openly for entry into the Euro zone at an early date and many of the currencies are pegged to the Euro and are able to demonstrate effective macro-financial management and currency stability;
- ▶ English is widely spoken as the language of business, and there is a growing pool of young graduates offering high-quality language skills. Internet usage in some countries (e.g. Estonia) surpasses that of most member states.



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Accession and South-East England Development Agency (SEEDA) – An overview of sectors

Sectors

The background provided above has set out a broad context that is intended to give a clear framework for the discussion of specific issues raised by SEEDA in relation to this study.

Against this background, the study has considered 9 “sectors” or clusters (as agreed with SEEDA). These were:

- ▶ Aerospace and Defence
- ▶ Building and Construction
- ▶ Advanced and High Performance Engineering
- ▶ Environmental Technologies
- ▶ Financial Services
- ▶ Life Sciences and Healthcare Technologies
- ▶ Multi-Media
- ▶ Rural and Other industries (including tourism & hospitality)
- ▶ Technology



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Prioritisation Process

On the basis of discussions with relevant staff from SEEDA and other related agencies, as well as with some specific companies, an outline profile of each sector was established by Bradley Dunbar. It should be stressed that this profile focused on identifying those elements that in principle may have some direct relevance to the accession process.

Using this information, the profile was 'mapped' against the general nature of the business development issues linked to the EU enlargement and four priority sectors were chosen for further investigation. In this process it should be stressed that:

- ▶ It was necessary within a limited study of this nature to adopt a methodology which enabled a simplification of what is a very complex process. In particular, Bradley Dunbar considered only those aspects of business development that are specifically linked with the three main drivers for accession-related business: EU funding, the application of European Legislation, and Strategic Investment;
- ▶ This means that those sectors identified as "non-priority" may offer specific business opportunities in Central Europe. However, they are not listed as priority as these opportunities are not being specifically driven by the EU enlargement process itself but by normal development of the markets in these areas;
- ▶ In addition, the emphasis was on sectors where there were seen to be specific trade/export/business development opportunities and not broader opportunities linked to the horizontal issues such as labour availability or technology transfer. In this way the information provided in this report on labour issues will be directly relevant both to priority sectors (Building/Construction) and also to non-priority areas such as Financial Services or tourism.

Overview of Priority Sectors

On the basis of the above analysis, four priority sectors were identified:

- ▶ Environmental Technologies
- ▶ Technology (ICT and Telecoms)
- ▶ Life Sciences and Healthcare
- ▶ Building and Construction

Detailed information on each of these sectors is given below. For those sectors not deemed priority, a paper providing a general summary is attached in annex to this report.



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Environmental Technologies

This new SEEDA sector group represents over 500 companies. As an initial development, the Sector Group Manager has proposed a “Virtual Enterprise” project, something which could clearly link with the content of this report.

This sector was identified as a major growth area for the South-East of England and it offers considerable market development potential in relation to EU enlargement.

The key points are:

- ▶ A considerable proportion of the EU funds provided during the pre-accession period have been allocated to expenditure in the area of the environment. This focus will continue after the countries join the European Union as the new Member States will use a considerable element of the Structural Funds programmes for environmental work. Direct EU support both pre- and post-accession is focused mainly on helping the countries to meet the requirements of the ‘investment heavy’ directives, i.e. those European Directives that involve very high levels of investment in order to meet the full requirements for implementation. This means that the emphasis for this funded work is in the following areas: drinking water supply, the treatment of waste water, solid waste management and air pollution;
- ▶ The number one sector where the application of EU legislation raises the greatest short-, medium- and long-term business opportunities is the environmental technologies sector. In all of the accession countries there will have to be considerable investment (state budget, private, EU funds) to be able to comply with the acquis. Areas where there will be acquis-led pressure to invest are very broad, including all areas where there is considerable European regulation. Key areas include the following: Waste (waste management, end-of-life vehicles, waste incineration, packaging waste, landfill, etc), Industrial pollution (solvents, IPPC), Pollution from agricultural sources (nitrates, etc), Public Health, Nature protection, Air quality, Water quality, Chemicals and GMOs;
- ▶ Investment is not driven by legislation alone but by effective implementation and there are, therefore, some concerns about how the new Member States will behave in these areas. There seems to be a strong basis for the assumption that there will be reasonably effective implementation of the environmental acquis and that this will, thus, represent a real driver for business/economic activity.

In relation to these areas, a key issue is to ensure that companies have access to the necessary information about tenders to enable them not only to see specific opportunities but also to be able to respond effectively with local partners, etc. This market is not only for larger companies and, given the commitment to develop this sector by SEEDA, a focus on these markets may be very worthwhile.



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General Overview

The major relevant opportunities related to direct EU funding are in the field of **environment**, where the central EU programme is ISPA in the period prior to membership and will be Structural (Cohesion) Funds after enlargement. Direct EU support is concentrating on the 'investment heavy' directives, i.e. European Directives that will be costly to implement.

The EU support is and will be for works, service and supply contracts within large-scale projects for the following:

- ▶ drinking water supply
- ▶ treatment of waste water
- ▶ solid waste management
- ▶ air pollution.

Technical assistance contracts to fund preparatory studies and general assistance services which are directly related to the projects approved for funding are also supported.

The Market

Poland

It is forecast that around €30 billion will be allocated for the adoption of EU aquis in the coming 10-15 years.

In certain specific sub-sectors (such as water management) the market is already very developed and highly competitive. However, there are still certain areas that do offer significant commercial opportunities where the level of existing capacity in the market is relatively limited (e.g. renewable energy, landfill reclamation, recycling).

Many of the domestic companies active in the sector are in need of foreign partners to assist in relation to both financing but also in new technologies and specialist expertise. This links to the fact that as markets are local, the strong preferences amongst institutional clients is to use local companies. International – local partnerships therefore bring real mutual benefits.

Main investments, especially with regard to public funds, will be in two main environmental areas of waste and water.

A number of government incentives exist to assist foreign companies developing activity in certain key sub-sectors, and there are also no real formal barriers to entry for foreign companies.



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Baltic States

Considerable EU funds are allocated to this sector, with few foreign companies active in the waste and energy sectors.

There is strong international presence, particularly from the Nordic countries and from Germany. This presence is particularly strong in the water sector with less current international capacity in waste, air and environmental issues related to energy.

In terms of local capacity, there is a particularly competitive situation in Estonia where the private sector is well developed in these areas, whilst in Latvia and Lithuania many aspects are still dominated by municipal-owned companies and thus the private sector is relatively under-developed.

Romania

The scale of the market for environmental technologies in Romania is estimated to be around 22 billion EUR (water treatment – 10 billion, air pollution – 6 billion and waste management – 6 billion)

Seven different components raise opportunities, including Water, Waste, Air, Industrial Pollution and Risk Management.

Considerable investments will need to be secured over the medium and long-term in order to ensure the implementation of the environmental acquis. In the medium-term the Romanian National Programme for Adoption of the Acquis (NPAA) provides over 716 million EUR to be spent on the environment, of which 540 million EUR is for improving the environment-related infrastructure. It is expected that these resources will increase considerably in the future.

Romanian companies as a whole are not ready to meet the challenges of accession, requiring UK advisors, partners and suppliers.

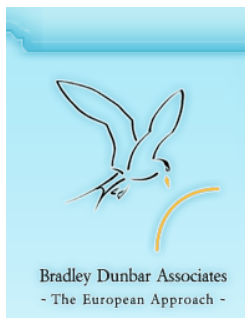
Bulgaria

The total amount for environmental projects under ISPA has been planned at 350 million EUR by the end of 2006. 209 million EUR will be available for the next 3 years as EU funds. The sector needs more than 3 081 million EUR investments up to 2015.

The main environmental problems plaguing Bulgaria are air quality, water quality, water supply, waste management and industrial pollution.

Local presence is vital, but the active local companies need environmentally related technologies and equipment.

Current market opportunities include municipal waste, bio-wastes and hospital waste.



EU Funding

ISPA funds allocated to specific environment projects are a total of around €500 million Euro per annum (at 1999 prices), with this being matched by national co-financing to produce total contract values of almost €700 million per annum.

Projects are publicly tendered following the EU rules. Companies from all EU and candidate countries are eligible to apply. In the environment sector, there are currently projects for about €1.76 billion¹ forecasted and likely to be tendered within the coming months. In Poland alone there are currently €930 million worth of projects forecasted, with another €400m forecasted for Romania. The majority of these are in the waste water sector.

Research has shown that most of the tenders are won by consortia between EU and locally based companies, normally with the EU company leading. This has proved to be the best combination, as the local companies tend to provide good understanding of local problems as well as cheaper labour, while they lack the expertise, experience and financial soundness required according to the tender rules which are provided by the EU partners.

Companies can react to tender publications launched by the candidate countries. The information on tenders can be found on the [EuropeAid co-operation office website](#). Replies to the invitation for tenders have to be sent to the countries concerned.

After accession countries join the EU the ISPA programme will no longer apply but there will continue to be considerable direct EU funding for environmental projects within the so-called “cohesion” element of the European structural funds. The specific level of this is still being fixed, but it will represent an increase on the annual sums currently available via ISPA. In terms of focus, it will continue to be directed towards the remaining investments in investment-heavy directives (as above). Also, whilst the details of the tendering processes will change, it is clear that the key points made above with regard to the need for EU-local partnerships will remain a key factor for many years to come.

Recent years have seen a marked increase in cooperation between the public and private sectors for the development and operation of infrastructure for a wide range of economic activities. Such Public-Private Partnerships (PPP) arrangements were driven by limitations in public funds to cover investments needs but also by efforts to increase the quality and efficiency of public services. The efforts of the Accession Countries to reform and upgrade infrastructure and services could potentially benefit from the PPP approach. However, PPPs

¹ Please note, that this figure is not exact, it is an estimation based on the total costs planned for each project.



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should only be considered if it can be demonstrated that they will achieve additional value compared with other approaches, if there is an effective implementation structure and if the objectives of all parties can be met within the partnership.

EU Legislation

The number one sector where EU legislation raises the greatest short-, medium- and long-term opportunities is the **environmental technologies** sector.

In all countries there will have to be considerable investment (state budget, private, EU funds) to be able to comply with the *acquis*. In this respect it is important to note that all candidate countries have negotiated some transitional periods within the Environment chapter, mostly with regard to: treatment of urban waste water, recovery and recycling of packaging waste, integrated pollution prevention and control, emissions of volatile organic compounds from storage of petrol.

Even in these “transitional” areas, however, the pressure for investment will be there from the beginning of membership as investment decisions will need to be taken several years before the deadlines to achieve compliance. It should also be noted that investments have already started and immediate opportunities are available.

In terms of scale, it is useful to highlight the situation in two countries at different levels of development: Poland and Romania. Due to the size of the country the biggest market in this area will be **Poland**.

To illustrate part of the scale of legislation-led investment, the most recent version of the Polish National Programme for the Adoption of the *Acquis* (NPAA) planned €4.6 billion to be spent in the next 3 years. Also, it is estimated that in the period immediately after membership Poland will have to spend at least €30 billion to adjust to the main existing EU regulations in the environmental sphere. With regard to **Romania**, the country currently has severe environmental problems which it has already started to address but the present resources allocated are absolutely insufficient.

Considerable investments will need to be secured over the medium and long-term in order to ensure the implementation of the environmental *acquis*. In the medium-term the Romanian NPAA provides over €716 million Euro to be spent on *acquis*-related environmental issues, of which 540 million Euro is for improving the environment-related infrastructure.

It is expected that these resources will increase considerably in the future. The scale of the market in key investment-heavy areas is estimated to be around



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€22 billion (water treatment – €10 Euro, air pollution – €6 billion and waste management – €6 billion)

Strategic Investment

The countries in general offer many advantages. Low labour costs and attractive tax incentives are two of the biggest pulls, as is closeness to major European markets.

The level of investments in **environmental technologies** is different in the various countries with the Czech Republic, Baltic States and Poland to the forefront. Although the demand is growing this sector hasn't yet seen sufficient investments in countries like Romania and Bulgaria, as the market is rather young there, but this is likely to change in the longer term as the sector is declared a priority for both country's governments.

Types of local investment projects

Czech Republic: Adoption of legislation is still needed in order to complete transposition in the fields of horizontal legislation (environmental impact assessment), waste management (titanium dioxide, implementing legislation), industrial pollution and risk management (implementing legislation), water quality (alignment of the Public Health Act and the Water Act, implementing legislation), and nature protection (transposition of the habitats and birds directives).

Efforts are also needed to implement the *acquis* with regard to horizontal legislation (co-ordination among different permitting systems such as nature and IPPC, implementing guidelines), air quality (preparation of programmes, enforcement in existing installations), waste management (implementing guidelines, waste management plans), water quality (clarification of competencies and co-operation, upgrading of monitoring systems, application of the permits for List I substances), nature protection (management and protection of habitats), industrial pollution and risk management (permitting of new installations, guidelines for major accident hazards) and chemicals and GMO's (funding of laboratories).

Many funding opportunities are focused on equipment, software and hardware supplies. So, there is a degree of overlap between the environmental sector and the electronics sector. The amount of ca. CZK 1.2 billion p.a. has been allocated for the Czech Republic from the ISPA programme, which is intended for the establishment of the environmental infrastructure. An important source for supporting the infrastructure building in municipalities in the area of water is a loan provided by the European Investment Bank (EPB) equalling to CZK 3 billion.



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Bulgaria: Since 1997 the country has made steady progress in aligning its legislation with the *acquis* in most environment sectors and in preparing for its implementation. But achieving full implementation still poses a major challenge for the country and will take significant time and effort. Significant investments will also be needed.

The environmental technologies sector needs more than 3 081 million EUR investments up to 2015.

141 million EUR under ISPA 2000 and 2001 is forecasted and is likely to be launched within the next 3 – 6 months. The total amount for environmental projects under ISPA has been planned at 350 million EUR by the end of 2006. 209 million EUR will be available for the next 3 years as EU funds.

There is a considerable variance within industry and the general public in terms of awareness of environmental issues. As industry must play a key role, particular attention is being placed on the integrated pollution prevention and control directive.

Romania: At present the majority of tenders still to be forecasted amount to about 397 million EUR, of which about 370 million EUR is in the drinking and waste water sector. Considerable investments will need to be secured over the medium and long-term in order to ensure the implementation of the environmental *acquis*. In the medium-term the Romanian NPAA provides for over 716 million EUR to be spent on the environment, of which 540 million EUR is for improving the environment-related infrastructure. It is expected that these resources will increase considerably in the future.

Adoption of legislation on environmental impact assessment has been delayed and it is expected to be treated as a priority by the Romanian authorities.

Poland: In 1998, spending on environmental protection represented already 8% of the total investments and 1.6% of the Polish GDP.

Investment in environmental protection and water management in Poland should be recognised as a highly dynamic sector with a big attraction for investors. The main line of investments, as adopted in the 2nd State Environmental Policy document by 2010, is protection of water resources against pollution and waste utilisation to meet EU requirements.



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To achieve this, the shares of environmental investments in the GDP and total investments will be maintained at respectively 1.6% and 8%. The National Environment Protection Strategy 2000-2006 predicts that in the pre-accession and immediate post-accession period or until 2006, demand for investment capital needed to comply with the EU standards will total in the minimum scenario 20 billion Euros, or 3 billion Euros per year, against 2 billion Euros spent in 1999.

The value of ISPA projects in the field of environment already agreed for Poland is more than 963 million EUR. The EU will finance 59%, with the remainder financed mainly from the central budget. Smaller environmental projects are financed also by PHARE and SAPARD pre-accession funds. Consequently, the amount of funding available for environmental projects in Poland exceeds currently 1.1 billion.

According to studies completed by Polish and foreign researchers, within the coming 10-15 years, it is estimated that Poland will spend at least 30 billion EUR to adjust to the EU regulations concerning the environment.

Baltic States: FDI in **Estonia** 0,6 billion EUR; in **Latvia** 2,1 billion EUR; and in **Lithuania** 2,4 billion EUR. The most developed market for foreign technology providers in the Baltic States appears to be the water sector.

The conclusion drawn is that generally speaking, local companies supply environmental services (design, laboratory analysis, research, consulting, etc.) but not environmental technologies.

The use of foreign environmental technologies in the Baltic's tends to result from the forming of joint ventures with local representatives. Danish, German and Swedish companies have the largest market share in waste and water related technologies. Market shares in other areas are distributed among all countries more evenly, but still German and Scandinavian companies are dominant.

Currently in **Estonia**, tenders are opened to the value of ca 43 million EUR. The new financial memorandum will be signed by the end of this year with the value of 18 million EUR. Most of those contracts are wastewater treatment plant building or Technical Assistance, some also for supply of different equipment. In **Latvia**, the tenders open are to the value of ca 104 million EUR, with many still at forecast status. In **Lithuania**, the tenders currently open are to the value of ca 79 million EUR, with again many still at forecast status.



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In **Estonia** considerable investments need to be secured, also in the medium-term, to ensure the implementation of the environment acquis (in particular as regards waste (end-of life vehicles, waste incineration, and packaging waste and landfill), noise, industrial pollution, nature protection, biocides, nitrate pollution from agricultural sources, GMOs and chemicals).

In **Latvia**, work is still needed to complete transposition in the fields of air quality, waste management, nature protection, water quality, chemicals and genetically modified organisms and nuclear safety and radiation protection, and to realise full implementation of some of the above mentioned fields (waste management, air and water quality, chemicals) and industrial pollution control.

Lithuania continues to make investments to achieve full compliance but close attention is required for the transposition and implementation of legislation in all the above mentioned areas.

Hungary: In total, there are about 280 million EUR worth of projects within the ISPA 2000, 2001 and 2002 which are not yet tendered. Another 9 million EUR are secured through Phare. Projects worth about 60-65 million EUR are forecast and likely to be tendered within the coming months.

The most important piece of legislation that has still not been adopted is the National Waste Management Plan (NWMP). Corresponding delays occurred as regards the establishment of regional and local waste management plans, the separate collection and sorting of municipal waste, and the programme for the separate collection and disposal of spent batteries and accumulators, which are all dependent on the NWMP. A comprehensive system on the selective collection of packaging waste from communal sources still needs to be established.

Slovakia: The country still needs to complete transposition, most urgently in the field of industrial pollution, in particular for the Solvents Directive and the IPPC Directive. Considerable investments need to be secured, also in the medium-term, to ensure the implementation of the environment acquis.

The **Slovak** government has estimated that investments worth of 4 221.961 - 4 678.717 million euro will be needed for the period 2000 - 2008 in the environmental sector.



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Conclusion

The Environmental sector offers one of the best areas of business potential for SE companies driven by Funding, Legislation and Investment.

Many major corporations and companies currently operating in the UK and other areas of the world are placing new investment into central Europe and/or are relocating manufacturing/assembly, and this will continue in the run-up to accession and for several years to follow

Whilst the specific “package” of attractions (low labour costs and attractive tax incentives) for strategic investors will change after accession, the improved infrastructure and access to major markets within the EU will mean that accession countries will be a very competitive destination for foreign inward investment for many years to come.

Companies already in the supply-chain of companies relocating can see the importance of responding to this once decisions are made. This “defensive” approach will continue to be important, and could/should also be combined with a more positive approach to winning supply-chain work for relocating investors. The accession countries are not aiming only at attracting low value manufacturing, and will be using all their considerable EU resources to increase their attractiveness in new markets.

The difference in labour costs will decrease, although it will continue to be a major factor in relation to some countries such as Bulgaria, Romania, Lithuania and Latvia and even for the more developed areas there will remain differences in key production costs.

However, other advantages will come into play. The major investment in business infrastructure will be used to provide high-quality facilities, and investment in training and technologies will continue to increase labour productivity (a problem at present).



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Technology (ICT & Telecoms)

The key points to note are:

- ▶ Investment in the development of the IT sector is a priority for government programmes and will be a priority for future Structural Funds. This will involve support for direct infrastructure investments for the development of new companies, with possible foreign partnerships from South-East England, active in the IT sector and in assisting existing companies to increasingly invest in IT as part of the growing move to support innovation. In addition, as labour costs rise in the more advanced countries (Czech Republic, Hungary, Slovenia) then the pressure to use technology to reduce production costs will increase – this process is already very much underway in certain sectors where FDI has been present for some time;
- ▶ There is a reasonably strong, though small, capability in ICT-related areas. A number of countries are profiling this capacity (e.g. Estonia), many have already successfully attracted inward investment (Hungary, Czech Republic and Lithuania) or have strong academic traditions such as Bulgaria (the old IT-base within the eastern bloc). The growth in ICT courses within the university sector is also producing an increasing number of graduates;
- ▶ There is a wide skill base in areas such as software development, internet/intranet solutions, mobile applications, telecoms software, hardware assembly, etc. Given the low salary levels (see annex on inward investment) this can often provide significant advantages for companies looking to develop production/development capacity away from the home base in the SE of England;
- ▶ The telecoms sector is still developing on the basis of earlier privatisations, ongoing de-regulation and sales of operating licences, etc. The relatively limited and poor quality “hard” infrastructure has led to relatively strong growth in mobile telephony whilst also leading to high levels of interest at the local level in investing in the digital infrastructure.

To summarise, we believe there is considerable potential in this sector for companies from the South-East of England in two key areas:

- ▶ Growing demand for IT services/products as investment (public and private) is geared more towards promoting innovation;
- ▶ Accessing low cost and skilled local labour that will enable companies from South East England to access both these local markets and supply/service existing markets in a more cost effective manner.



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General Overview

The Infrastructure required to develop the information society in the short- and long- terms is a key issue in Central and Eastern Europe. With the exception of Estonia, Slovenia and perhaps Hungary, considerable investment is necessary for the countries to catch up with the EU.

Within the *telecommunications market* the fastest growing segment is the cellular telephone. Use of mobile telephones has increased greatly; penetration rates in mobile services range between 70% in the Czech Republic, around 50% for Estonia and Hungary, although they are as low as 16-18% in Romania and Bulgaria.

In general, all Central and Eastern European countries view themselves as offering high potential for *IT* development and the sector is in most cases identified as one of the pillars for sustainable economic growth.

Estonia, for example, is viewed as the high-tech country of the CEEC. Hungary, the Czech Rep. and Lithuania have attracted significant foreign investments. Bulgaria has over 35 years of experience in IT development (before 1990 she was specialising in this field under the Council for Mutual Economic Assistance). Lithuania was the leader of the electronic sector within the former Soviet Union.

In 2001, the total amount of ICT expenditure in the CEE countries was about 9,153 million EURO, with a growth of about 19% in the services area.

The CEEC IT sector produces highly qualified specialists and companies developing various equipment and software at very competitive rates. Skills are within the whole spectrum of IT activities and services: computer system software, complex Internet/Intranet solutions, mobile applications, telecommunication software, web design, CAD/CAM/CAE software, hardware – computer and systems assembling, peripherals, digital and analogue printed circuits design, PCB manufacture, systems for industrial automation, etc.

EU Funding

There is no direct EU funding available for the development of ICT or telecoms. However, EU funding is available under other headings, such as administrative reform, investments or strengthening of the government institutions, which is basically spent on supplies of various IT equipment and software.

Compared to EU funding in sectors like environment and construction the amounts are insignificant, yet there are current tenders open and on forecast that are worth around 100 million Euro. In Bulgaria and Romania, for example, the IT projects funded by EU and the World Bank have a considerable share of the local IT markets.



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Most of the demand is, and will be, met by local companies, but yet there are projects requiring highly specialised software packages where local skills are limited (software for veterinary and/or phytosanitary laboratories, software for spectrum monitoring, marine waters monitoring software etc.)

Also, within the current Economic and Social Cohesion element of the Phare programme and within the future structural funds allocation, there are, and will be, investments in establishing and upgrading the regional business-related infrastructure, a lot of it focusing on the technology sector – building of Hi-Tech Incubators, broadband systems, etc.

Developing a local presence and strategic alliances with local companies is the best way for the South East England companies to benefit from the opportunities.

EU Legislation

In most of the countries technology sector related legislation is largely in line with the *acquis*. In theory, the liberalisation of the market is already in place but it is not expected to be effective across all countries for another 1-5 years.

However, some countries like the **Czech Republic** are well ahead of the others as the telecommunications policy there was developed strongly along EC lines with an emphasis on competition, development of the telecommunications infrastructure and diversification of the market.

Whilst in **Bulgaria** and **Romania** the telecommunication sector is restructuring slowly, network modernisation is seriously delayed. However, heavy investments are planned by the Bulgarian incumbent operator mainly in building of a new telecommunication infrastructure, aiming to reach 60% digitalisation by 2005.

As aforementioned, the mobile sector is already well advanced but UMTS licences, with the exception of the Czech Republic, have not been issued yet which presents good opportunities for companies working in this field.

Since 2000, most of the CEE parliaments have adopted laws on electronic signatures, thus fulfilling another EU directive, although these are still far from being enforced effectively (the exception being Estonia where electronic ID cards were introduced in 2001)².

² On 18 December 2001, the Riigikogu established an ID-card as a compulsory identity document, which makes the Estonian passport only a travel document for traveling abroad. The purpose of the Estonian ID program was to nationally accept and implement electronic identity in Estonia. On 28 January 2002 the first ID-cards were issued to the Estonian citizens. By 1st June 2002 20,000 ID-cards have been issued and by the end of 2002 100,000 ID-cards are expected to be issued.

Strategic Investment



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The technology sector is the one sector that, arguably, offers the highest potential with regard to strategic investment. Multinationals such as IBM, Nokia, Ericsson, Philips, Sony, Alcatel, Motorola, Siemens are already present in the market (mainly concentrated in Poland, Hungary, The Czech Rep. and Lithuania). These companies have founded affiliations in the CEEC so as to benefit from more efficient production and good access to export markets.

Greenfield investments have also already attracted some of these companies' traditional suppliers (for example the Korean company Young Singh, which is one of Samsung's most important suppliers, invested 6 million USD in a plant in north eastern Hungary).

National telecommunication companies have been privatised (apart from Lattelecom in Latvia) which has attracted foreign investment from the mobile operators. Telecommunications infrastructure, however, remains underdeveloped in most countries in comparison to the EU member states. Thus, the local governments are investing heavily in the sector and/or a playing a central role to attract strategic investments.

In Bulgaria for example, a modern digital transit and international telecommunication infrastructure has been constructed in order to create conditions stable growth for the Internet industry. In addition, the government has launched the "e-government project" where the investment is expected to be (approx) 10 million Euro.

In Poland, the potential of the mobile telephone market and the, still, relatively low degree of its saturation makes it the largest and most promising market within the Central and Eastern European countries.

At present new applications are being elaborated in public service and private businesses (<http://www.pass.ee>). ID-cards also carry a certificate for allowing the use of digital signature. It is the size of a bankcard and, in addition to numerous security features, the card has a machine-readable code and electronic cryptochip to carry the holders' private keys and certificates.



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Conclusion

In general, the technology sector is not highly affected by the enlargement process. However, the expected increase of public expenditure, together with contributions from the EU and other external funds, could provide potential business for South East England companies in terms of the possibilities for re-location linked to strategic opportunities for better market access and more-cost effective production.

Thus, future business potential, although not directly linked to the criteria for prioritisation, remains high. Local companies are expected to go more hi-tech in the future – buying equipment and software.

Further, more specific, information could be provided. This would require additional information about the companies from the South East working in this sector which, within the scope of this report, has not been possible.



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Life Sciences and Healthcare

From the discussions with SEEDA staff, particular emphasis in this sector was placed on the potential implications for the medical devices market although there was also interest in the wider markets linked to biotechnology and pharmaceuticals. Specific key points to note are:

- ▶ The healthcare sector in general is undergoing major structural reform, involving in many cases the generation of higher levels of private investment and also high levels of public investment allocated to this sector (national and EU funds);
- ▶ Markets for medical devices in all of the countries are growing steadily as part of this broader growth;
- ▶ With regard to the potential for local sub-contracting, there is already a local capacity. Local production capacity is currently unable to fill the requirements (e.g. in Czech Republic domestic production satisfies only around 50% of the overall demand, with the balance coming from imports from US and the EU). There are large numbers of local companies involved in the production of a range of devices (inhalers, infusion pumps, dental units, artificial limbs), with Poland in particular having around 600 manufacturers, mainly small-scale. A large number of these companies have the CE mark and already export their products.
- ▶ Biotechnology markets are relatively underdeveloped, but there are relative strengths in Hungary, Estonia and Bulgaria and a strong potential capability in the academic/university fields. Details of institutions are listed in the annex on 'centres of excellence'.
- ▶ Relatively high growth figures are being experienced in pharmaceuticals and there is strength currently in Poland, the Czech Republic and Latvia (the latter used to design around 25% of drug technologies for the Soviet Union).
- ▶ In this field, there is potential EU funding for the overall restructuring/development of the health sector and also for specific areas (including the potential for RTD within the 6th Framework programme).
- ▶ The changing regulatory framework means that the pressure on local companies to invest in R&D in this field will grow and the final removal of process patents in 2011-2019 (last countries) will also act as a stimulus to further Europeanisation of the industry.

In this sector, therefore, there appears to be real strength in the development of arrangements for SE England companies to develop manufacturing/assembly activities in areas where there is demonstrable local capacity (e.g. medical devices in Poland/Czech Republic) and relatively low costs (see annex on 'inward investment' for details of average salaries). In addition, there also appears to be scope for considerable expansion of partnership/licensing arrangements to develop capacity in areas such as biotechnology.



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General Overview

Healthcare Services

The healthcare sector has undergone a major structural reform in most CEECs. Much of it is ongoing in some countries, including Romania and Estonia.

Due to the shift of ownership the sector now is a mixture of private medical practices (mainly outpatient), state-owned/municipal hospitals, private hospitals, and private and state-owned ancillary businesses. Special public healthcare funds have been created in most countries aimed at funding and monitoring the healthcare services. In the **Czech Republic** 7.3% of the GDP is officially spent on healthcare annually with less than 1% being privately funded.

In **Poland** public expenditure on healthcare has slightly exceeded 5% of the country's GDP in the last few years. However, in general the healthcare systems are characterised by continuing under funding, resulting in poor infrastructure and lack of staff incentives. There is an extensive programme of reform in the Polish sector, involving new legislation (mainly now adopted), commitment of significant national budgets, establishment of a new single National Healthcare Fund, with a notable shift from public to private ownership of healthcare units and clear intention to build a network of private medical services.

The health status of the CEEC population is still below the average for the EU, with the exception of the **Czech Republic** and **Slovenia** where indicators like life expectancy and infant mortality are only marginally behind those in the Western European states. The poorest expectations are found in **Romania** where a lack of sufficient resources and the continuous organisational changes limits the quality of and the equality of access to health services. However, the **Romanian** health system is in a process of a major structural reform with the Biochemistry market developing at a rapid rate.

The medical sector in **Latvia** is highly developed, with 25% of the Soviet drug technology designed in Latvia, and offers an attractive market to foreign companies



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According to sector several trends can be distinguished in the healthcare sector in most CEE countries³:

- ▶ Changing method of financing from central budgetary control to centralised insurance-based reimbursement systems;
- ▶ The gradual introduction of market principles between providers of care and the central insurance fund payers;
- ▶ An increasing acceptance that the public system will remain under-funded and will, therefore, be complemented with private funding and insurance;
- ▶ An increased involvement of employers regarding the health status of their employees;
- ▶ An increased awareness and demand from the public for an accessible, humane and affordable system;
- ▶ A gradual increase in life expectancy to Western European levels, which will substantially increase demand for health services.

There is a reasonable level of clinical competence and training in most of the CEE countries and in some countries there are world class practitioners in certain specialities. This underlines the conclusion that the main problem regarding the reform of the health sector in CEE is not primarily the medical competence among the healthcare professionals, but instead the funding allocations and financial motivation, along with the integration of the different components of health care, in order to provide the best possible care as cost efficiently as possible. This requires appropriate funding mechanisms, integrating public and private contributions.

With regard to the above, the healthcare market in most of the CEEC is currently still quite limited but is likely to grow in the short to medium term due to the considerable public investments planned for the sector, on the one hand, and the expected increase of the local purchasing power on the other.

Medical Devices

As a result of the historic and continuing under funding of the public health care infrastructure in the CEEC, there is a vast demand for modern facilities and equipment. Markets for medical devices are growing steadily in the more advanced CEE countries, with local companies developing fast. However, in the **Czech Republic**, for example, domestic production satisfies only about 50% of the demand so the country relies heavily on imports.

The following main product groups are considered to be the best for sales prospects in the coming years: daily care equipment, devices for immobile

³ Medicover, private healthcare organisation with clinics in Poland, Hungary, Romania, Estonia



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people, bathroom safety equipment and hygienic devices, incontinence care products, etc. Local companies' production mainly includes adjustable beds and furniture, inhalers, drain pumps, infusion dosing machines, hygiene seating baths, WC-chairs, etc.

In **Poland** there are about 600 manufacturers, most of them small companies; 65% have the CE mark and export their products. Two of the most popular products are infusion pumps and electrocardiographs. Polish companies also specialise in the production of basic diagnostic devices, i.e. the so-called medium range medical apparatus. These products meet EU requirements both in terms of technology and quality. 36% of all products of this group are manufactured in Poland, 38% are imported from EU and 17% from USA and Canada. There are several Polish companies manufacturing orthopaedic equipment but the majority of the supply is imported.

Poland exports, in the main, simple medical tools and devices, whereas the imported goods include high-tech electro-medical equipment. The value of imports exceeds the value of exports 3.6 times. Main importers are the US (24,6%) and Germany (24,6%); the UK has a 3,9% share. Orthopaedic equipment and apparatus, prostheses and hearing aids constitute 17.3% of the imports. According to data published by the Ministry of the Economy for the year 2000, there were 245 manufacturers of medical equipment, of whom 44 were large companies with over 50 employees. However, the production of medical and surgical equipment and orthopaedic devices in Poland is still dominated by small business entities.

The largest Polish manufacturer of such hospital equipment as beds, cabinets, examining tables, bedside cabinets, doctor's surgery equipment, dental chairs, dental units, gynaecological chairs and operating tables is *FAMED SA* – Factory of Hospital Equipment in Zywiec. Their latest range of products includes dental units, electrical gynaecological chairs and operating tables. Other significant manufacturers of hospital equipment are *FAMED LODZ*, *FAMED Ltd* from Stolno and *FAMOR SA* from Bydgoszcz. The leading Polish manufacturers of surgical tools include *MIFAM SA* from Milanowek and surgical equipment factories from Nowy Tomysl and Rudnik. Sterilisation and disinfection equipment is manufactured by Warsaw based SMS Co-operative of Mechanics. Poland exports mainly such medical equipment as medical, dentistry and veterinary tools, orthopaedic devices and artificial limbs.

The main suppliers of imported medical goods are USA (24,6%) and Germany (24,4%). UK share is 3.9%.

In **Romania** the share of the market for medical equipment covered by domestic production is estimated at about 10%. Local companies have lost competitiveness since 1989 and export sales have declined. The value of the market was 307.5 million USD in 2000, with the huge share of the imports -



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91%. Priority medical equipment sectors are radiological equipment, diagnostic equipment for cardiology and radiotherapy equipment. Main importers are Western European companies with USA holding 15% market share.

In the **Baltic States** the medical equipment market is small but stable. It is also largely reliant on imports from German companies who hold the lead positions in most areas.

Biotechnology sector

Although declared to be one of the fastest development areas in countries like **Hungary** (with over 50 companies working in the sector), **Estonia** (which is also offering good links with Russia, Scandinavia and the other Baltic states) and **Bulgaria** (which has strong R&D traditions in this field), the biotech market in Central and Eastern Europe is limited compared to those in the EU. Nevertheless, most of the CEEC can offer considerable academic/university background and experienced scientists as well as a favourable scientific & business environment.

In **Estonia**, this will also be one of the priorities for future structural funds as the Estonian healthcare sector will be reorganised. For example, there are 15 different research institutions working in the field of biotechnology, with over 1700 staff and 30 innovative small biotechnology companies directly linked to the research centres.

Pharmaceuticals

The total CEEC pharmaceutical market is estimated to be around EUR 10 billion, about 50% of which is in **Poland** alone. The expectations are for this market to grow 13% annually⁴. Privatisation is almost complete and leading international manufacturers are already holding large shares of the market.

The pharmaceutical industry is a leading sector in the **Czech Republic** and **Latvia** (the latter used to design 25% of the Soviet drug technologies and holds patents for 12 new drugs). In **Poland** there are 80 pharmaceutical companies, 15 of them which previously formed the POLFA concern are the most significant manufacturers (around 70% of the domestic supply). There are also two scientific research institutes – the Institute of Biotechnology and Antibiotics and the Pharmaceutical Institute. Despite the vast local production the import of medicines exceeds the value of export 13 times according to 2001 data.

Privatisation of the Polish pharmaceutical sector is now complete (started c. 1994) and a large number of international concerns have well established subsidiaries in the country. Within Poland there is considerable emphasis on improved health monitoring, but limited local capacity. There is a well-established framework for co-operation in the field of science and technology,

⁴ IMS Health



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and now access in Poland to 6th Framework programme for healthcare projects. Currently, there are relatively low levels of expenditure on R & D in this area. Public expenditure is almost 7.6% of GDP, which is comparable with Western European countries.

Food Processing

The food and drinks sector in the CEEC has traditionally been one of the most important for the local economies. In **Poland** the sector accounts for 21% of the GDP and is the largest labour market with over 430 000 employees. In **Bulgaria** it accounts for 18.4% of the GVA as of 2001 and in the **Baltic States** its share is over a quarter of the industrial output. The sector is nowadays restructured and largely privatised with foreign companies being deeply involved in the process.

Although many Bulgarian companies are active in this sector, many lack modern equipment and technologies. SAPARD funding can be accessed through the sub-programme for improvement of the production, processing and marketing of agricultural and forestry products, as well as the processing and marketing of fishery products in compliance with EU acquis.

The Food Processing sector is mainly located in central and west Bulgaria, around the cities of Gabrovo, Sliven, Plovdiv and Sofia. The food industry share in Bulgaria's total GDP at current prices declines from 16% in 1997 to 14,5% in 1999, with 209 processing plants in the Vegetables and Fruit Sub-Sector of which 147 are newly established.

Investment Opportunities exist in relation to meat production; improving some existing meat processing plants, starting up export to East European countries, potential for exports to neighbouring countries, etc. Expertise is required in know-how, marketing/management etc. especially with regard to processing technology and preserving fruit/vegetables.

EU Funding

There is relatively little direct EU funding in the healthcare and life sciences cluster. Within the Phare programme there are currently projects primarily for supplies of veterinary and medical equipment, test kits, etc. and there are also a number of technical assistance contracts (both worth about 30 million EUR). Funding is expected to increase within the future structural funds allocations from 2004 onwards for most of countries excl. Bulgaria and Romania.

The healthcare sector will be one of the priorities in the **Baltic States**, where in **Estonia**, for example, the national public expenditure eligible for the EU structural funds for the period 2004-2006 is 45.96 million EUR. One of the main measures will be the re-organisation of the hospital network.



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With regard to the food industry sub-sector, each of the candidate countries is eligible to receive support under the SAPARD programme in the period before membership and also will be supported from the Rural Development/Agricultural funding after joining the EU. Funding under SAPARD is available to locally-based companies (which can be with 100% foreign shares) and it normally amounts to 50% of the eligible costs. Amongst other things, it can be used to support investments in equipment/systems/training in farms (including agricultural machinery) and food processing plants. It is not “tendered” openly as such, but relies on local companies/organizations making applications for grants to support their own investments.

In the period after membership, although the form of support will change (as SAPARD is replaced by internal EU funds) there will continue to be considerable direct EU support available to develop investment in food production and processing. The SAPARD programme has an annual budget of 520 million EUR and there are also opportunities for funding innovative partnerships within the 6th Framework Programme, measure: “Genomics and biotechnology for health”.

EU Legislation

EU Legislation has important implications for the healthcare and food industry sectors as so much activity in these areas is heavily regulated by European legislation and, thus, operators in these markets will be required to undertake new investments to meet the new requirements and challenges of EU membership. The legislation has largely been adopted and in most countries the main issue now is its implementation. Efforts are increasingly focusing in this direction and both public and private funding is expected to considerably increase across all countries.

Romania, which has enormous problems in this respect, has planned 830.2 million EUR within its National Programme for the Adoption of the Aquis to be spent on measures related to the healthcare sector.

In **Estonia**, the restructuring of hospitals will take place step-by-step over the next 10 years where the estimated expenditure is about 255 million EUR. The enforcement of EU standards for the protection of intellectual property will present a major challenge to the local pharmaceutical companies.

In **Bulgaria**, for example, 23 pharmaceutical companies are currently forced to stop 36 production lines in relation to the new rules and regulations. Although patent rights will not be fully comparable to the EU norms until 2011-2019 (when the last local process patents expire) the market for innovative products will become much more competitive. In addition, the companies would need to devote further R&D resources to ensure their products comply with the EU regulations.



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EU legislation has implications also for sectors like **healthcare and food**, as so much activity in these areas is heavily regulated by European regulations and legislation and, thus, operators in these markets will be required to undertake new investments to meet the new requirements and challenges of EU membership. In relation to both sectors, however, there will be considerable pressure on the private sector to invest in meeting the new standards and also in taking advantage of the opportunities presented by access for locally produced products to the full EU Single market.

Strategic Investment

Medical equipment manufacturers from Sweden, Germany, USA, UK, Belgium, and Switzerland have already established a presence in the CEECs and offer a variety of high quality products. However, most of them have not established manufacturing bases in Central and Eastern Europe but import their products via local distributors.

Pharmaceutical companies in the CEECs have largely been privatized and have attracted considerable investments. This might present opportunities for companies already in supply chain of multinationals to organise local production lines if they have not already done so.

The food and drinks sector in the CEECs is mostly privatised and many multinationals like *Danone*, *Nestle*, *Coca Cola* and *Procter & Gamble* have acquired key local manufacturers, with **Poland** alone attracting over 500 foreign companies, the value of investments totalling 4.9 billion USD as at the end of 2000. Retailers like *Metro*, *Tesco*, *Rewe*, and *Carrefour* have mainly focused on Greenfield investments. Although not largely affected by enlargement, this market is expected to growth with the increases of the purchasing power of the CEE population.

Conclusion

Healthcare sector presents real opportunities for the SE companies with regard to the expected growth of the market in three directions:

- increased public investments required by the CEE countries in order to enforce and comply with the EU regulations;
- the considerable pressure on the private sector to invest in meeting the new standards and;
- in taking advantage of the opportunities presented by access for locally produced goods to the full EU Single market.

The sector can also potentially offer plenty of well-trained and experienced specialists to help reduce the existing skills shortage in the SE healthcare industry.



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Building and Construction

Building and construction is an area that will experience strong growth across all the accession countries due to the ongoing growth of the economies, which are growing at faster rates than within the EU, and also the specific focus of Structural Funds.

Key points to note are:

- ▶ It is forecast that the growth in the building and construction sector in the accession countries will be as high as 9.6% for 2005, with these high rates continuing for the short- to medium-term hence (this compares with around 1.7% within the EU). This growth will happen across all areas of civil engineering, civil & residential, and new non-residential construction;
- ▶ There is a strong base of local construction companies in the accession countries, with several companies very active outside their own countries. There is general availability of a full range of skills (designers, civil engineers, plumbers, carpenters, unskilled labourers) with labour rates being relatively low. The major growth in the sector with accession, however, is likely to lead to a situation where there is a limited supply of local labour at all levels and, in parallel, upward pressure on wage levels;
- ▶ A significant amount of building and construction work is linked to EU projects (around €2bn per annum currently) and this will rise between five- and seven-fold after accession with Structural Funds being available for construction of major transport infrastructure, business support infrastructure (logistics centres, business centres, etc) and also other key areas such as health buildings, etc. [This particular area can often place a premium on combinations between UK companies that either provide the financial/corporate structure to meet the formal requirements and who bring a degree of high-value professional service not available in sufficient quantity in some of the local markets;](#)
- ▶ The way to move forward in this area, as with others, is to develop partnerships with local companies to bring the appropriate balance of skills, experience, capability, and costs. A large number of EU firms are already registered in the building sector in Central Europe, but there is still scope for further work.

The key implications for South-East England are:

- ▶ The development of a rapidly growing market for EU-funded construction work will provide real opportunities for the skilled and high-value professional service organisations in the South-East of England to win business in partnership with local partners. The current players in the market will not have the appropriate capacity to meet all the needs in the coming period and there will be space for new entrants. Focused support in identifying the tenders but also, more importantly, the real “routes to market” and success factors will be important in a very competitive market place.
- ▶ Although local wage levels are likely to rise due to the massive increases in demand, there will still be significant differentials between labour costs in accession countries and South East England at all levels. There are, therefore, real potential benefits in increasing competitiveness (see annex on ‘inward investment’ and the section on labour issues for more background on this).



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General Overview

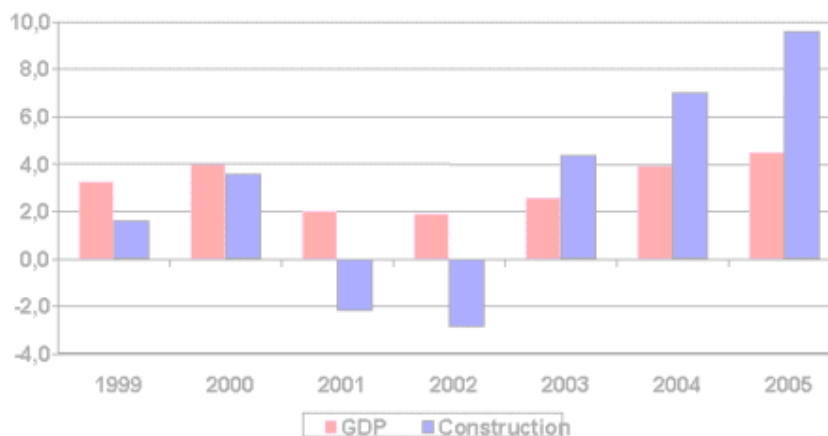
The building and construction sector in Central and Eastern Europe registers higher growth than that in the EU. For the period 1996-2000 the Western European construction market increased with only 1.7% per year on average, thus, remaining lower than the GDP growth (2.6%). In contrast, four of the CEE countries - Hungary, the Czech Rep., Slovakia and Poland - have registered an annual average growth in construction of 5.2% for the same period; higher than the annual average GDP of these countries (4%). Despite the projected contraction of the market for 2002 (-2.9%) a sharp recovery is expected for 2003 and 2004 with acceleration to as much as 9.6% for 2005.⁵

GDP and Construction Annual Growth Rate (CEEC – 4)

The construction market in **Poland** currently accounts for about 7.7% of the country's GDP. In 2003, the **Romanian** construction market is expected to grow to 13.7% of the country's GDP⁶.

In terms of sub-sectors, prospects look best for the new civil engineering (16.1% for 2005), civil and residential R&M (7.9% for 2005) and new non-residential construction (7.4% for 2005).

Local CEE construction companies are performing well, some of them increasingly winning projects abroad. Polish construction companies, for example, are exporting their services to over 50 countries. Local labour within the sector is largely available: from highly qualified experts (designers, civil engineers) through to plumbers, carpenters and low-skilled workers.



⁵ Institute for Economic Research, Munich; projections by V.Russig

⁶ CEE economic data outlook for 2003, published by Bank of Austria Creditanstalt



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The Market

A valuable insight into the markets is provided by looking at the **Bulgarian** market in some detail. The timing is excellent for foreign companies to pursue the Bulgarian building materials and housing markets. Despite the country's population of only 8 million and fewer than 14,000 housing starts in 2001 (30 percent single-family and 70 percent multi-family), the Bulgarian building materials market is expected to grow substantially. The statistics released by the National Statistical Institute and the Ministry of Regional Development and Public Works also show a significant increase in housing starts during the past year, and the housing market is expected to show further growth in the year 2002.

Real estate prices have remained stable, in the \$20,000-30,000 range for a 100 square metre two-bedroom apartment. Construction costs are in the \$250 - \$400 per square metre range, with building materials accounting for 49 percent of the total cost of a typical \$39,000 house including land. However, low personal incomes have made home or apartment purchases difficult for working people.

There is strong interest among Bulgarian builders in EU and USA construction technology and building materials. Local companies are interested in new, faster, cheaper, more energy efficient, and sturdier ways to build more comfortable and aesthetic houses and apartment buildings.

New Bulgarian building construction is primarily steel-reinforced concrete and brick, but some home builders are starting to look at American-style platform-frame wood construction and prefabricated housing for their different styles, superior energy performance in Bulgaria's climate, soundproofing, earthquake resistance, and price-competitiveness with European products. As most modern building materials are imported, Bulgaria has no applicable standards or testing in this sector. Materials from well-known manufacturers that have certificates from the country of origin are accepted in the market based on technical merit.

Transport

Bulgaria has an important geographical location. Four of the Pan-European transport corridors (Corridors IV, VIII, IX and X) cross the country and corridor VII, the Danube river, forms its Northern border. Transport and related infrastructure are relatively advanced. Bulgaria has developed all basic means of transport – road, rail, river, sea and air. Nine international roads cross the territory of the country, thus approximately 2500 km Bulgarian roads are part of the European road network. The railway network is wide with 7 major railway terminals able to handle large tonnage containers.



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In the context of Bulgaria's accession to the EU, the transport sector will have to provide adequate conditions for the transit traffic and, when integrated in the Union, to become part of the common EU transport system. In order to serve this new role, Bulgaria will have to develop a national transport system, adequate to the European needs and standards. This requires both physical and institutional investments.

State of the road network

The total length of the road network in Bulgaria is about 40 000 km (average road density -0.36 km per sq km). Approximately 90 % of the roads are paved with asphalt. The roads in Bulgaria are classified as motorways, I, II and III class roads. For I and II class roads prevailing is the overall width of 7.50/10.50 m and for III class – 6.50/9.00 m. Most common are the two lane roads.

The roads on the routes of the Pan-European corridors are with a total length of 2241 km, of which: 1511 km two lane roads, 130 km four lane roads and 600 km motorways. At present about 24% of the roads are in poor condition, and regardless of the fact that this group includes mainly sections with lower class roads, they present a serious problem. Road building and maintenance in Bulgaria is generally difficult and costly as some 40% of the country's territory is mountainous.

The roads in the border regions are also a great concern. A typical feature of the border area road links is that most of the high-class roads basically end to the frontier line. The western and southern borders go almost entirely through mountain areas and the constructed road links there are mainly low class, with technical parameters not corresponding to their cross-border role.

State of the rail network

The railway network of Bulgaria consists of about 4 300 km railway lines, 4 055 of which are with normal gauge (1 435 mm), and the rest with narrow gauge (960 mm). About 960 km (22% of the whole network) are double tracked and 2 640 km (about 61.4%) are electrified. The system includes about 400 stations and 300 stops. The length of the lines along the Pan-European corridors is 2,333 km.

A lot of investments are needed to improve the unsatisfactory state of the railway infrastructure. The freight depots, container terminals and passenger stations are not able to manage rapid increases in traffic.

The Bulgarian National Plan for Economic Development (NPED) and the National strategy for the transport sector lay down the priority areas and the guiding principles for the effective use of the new pre-accession financial instrument of the European Union – ISPA - for the transport sector, as well as



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the use of the Phare funds, national contributions and other external financial aid.

The major areas of intervention are in the field of rehabilitation and modernization of the rail transport and the national road network with the priorities focusing at:

- 1) Infrastructure development along Pan-European Transport Corridors IV and VIII
- 2) Infrastructure development along Pan-European Transport Corridors VII, IX and X
- 3) border infrastructure with neighbouring countries
- 4) business related infrastructure

The National plan for economic development 2000-2006 provides for 2 254 million EUR investments in building and upgrading the transport infrastructure. From this provision, 1 218 million EUR will be allocated to priority projects funded through ISPA, the national budget and the EIB.

EU Funding

There are huge funds allocated for infrastructure projects for all candidate countries. The central programme here is ISPA (pre-accession) with annual indicative budget for the period 2000-2006 of 1.040 billion EUR reserved for large scale infrastructure projects within the transport and environment (construction and/or rehabilitation of roads and rail, drinking water and sewerage systems, landfills, etc).

For the period 2000-2002 the total number of signed projects exceeds 8.7 billion EUR with less than 40% of them already contracted. The biggest markets are **Poland** (with projects worth over 3 billion EUR) and **Romania** (1.58 billion EUR projects signed). In addition, smaller funds are available within the other pre-accession instrument Phare, allocated mainly for business related and cross-border infrastructure (construction/renovation of vocational training centres, business incubation facilities, tourist sites infrastructure, logistics facilities, border check points, etc).

Tenders within ISPA and Phare are equally open to EU and CEE companies and are publicly announced. Opportunities are known well in advance and the selection process is transparent; although managed locally all tenders follow EU rules. Larger construction tenders (within ISPA) would most often require EU expertise and partners as there are high requirements for financial and technical capacity of the applicants which limits the chances of local companies. However, local businesses are increasingly starting to meet these requirements, so the best approach to the market for western companies will be forming of EU-CEE alliances and establishing local presence. With regard to technical assistance



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contracts these tend to be won by EU professional service providers (with part of the work subcontracted to local companies)

ISPA and Phare will cease funding from 2004 onwards for all countries included in the first wave of accession to be replaced from the even larger EU structural and cohesion funds that will also include significant expenditure on physical infrastructure development. The pre-accession instruments are expected to substantially increase funding for Romania and Bulgaria up to their joining in 2007.

EU Legislation

Environmental legislation is largely adopted but enforcement and implementation requires huge public and private investments, the majority of which are focusing on construction of drinking water and sewerage networks to comply with standards (the biggest markets here are again Poland and Romania).⁷

In the transport sector the candidate countries face the challenge of taking over and implementing a very substantial body of transport law, which represents about 10% of the total EU acquis. The road transport-related acquis covers a vast area of social, technical, fiscal, safety and environmental requirements. Across all sectors there is an economic need to promote, develop and upgrade the transport infrastructure in the candidate countries, with the support of financial assistance from the EU. Upon accession, the main infrastructures of the candidate countries will form part of the enlarged Trans-European transport network. As most CEECs have nearly completed the process of legislative adaptation, the main issue now is enforcement which requires stronger administrative capacity and vast investments in improving transport related infrastructure.

Strategic Investment

Significant public and private investments are taking place in all CEECs; economies are modernising, the scale of expansion is and will be far beyond the capacities of local companies and, thus, there is scope for new investment and new entrants. Major infrastructure projects are starting with combined public and private investment (e.g. Tran Balkan Oil Pipeline) with huge resources needed which local companies are not always capable to provide.

At present there are 2500 joint ventures in the building sector in Poland. Foreign firms which have already established presence on the market *include Bilfinger and Berger, Bau AG, Hochtief, Bouygues, Skanska, PORR, Ilbau, Brickhardt, Teerbau, Strabag, Herman Kirchner, Holzmann, Cerutti Lorenzo, and Sacic.*

⁷ For further details please refer to the environment sector overview

Conclusion



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Apart from being one of the fastest growing, the building and construction sector in the CEEC affords a great many opportunities emanating from the process of enlargement with huge funds allocated for infrastructure projects and additional public investments planned in order to for those countries to comply with EU standards.



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Accession and “Horizontal Issues

In addition to sectors, the study has considered three main horizontal issues:

- ▶ Labour Market issues
- ▶ Technology Transfer
- ▶ Inward Investment

In each of the three areas we provide below a short summary of the overall situation. For each aspect, further information is provided in annex in relation to specific aspects such as research centres of excellence, national regulations and conditions relating to labour issues, etc.

It should be stressed that the relatively limited scope of this study has meant that we are able to provide an overview of the key issues in relation to each aspect. The aim has been to give sufficient basis for broad strategic decisions by SEEDA about its own priorities in responding to EU enlargement. It would be necessary to undertake further investigation in order to develop specific initiatives in relation to concrete matters (e.g. availability of particular skills for specific company investments, etc).



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Labour Market issues

In this section we set out some background information to provide key information in relation to the following issues:

- ▶ Availability of labour;
- ▶ Attitudes to relocation;
- ▶ The situation regarding freedom of movement and work permits;
- ▶ The broad situation with regard to education.

The key points to note are:

- ▶ There is, in general, a strong pool of available labour within the candidate countries and there are already examples of specific recruitment campaigns in sectors such as health and construction that have targeted specific markets;
- ▶ There is, in the main, a positive attitude to relocation, with key factors being both the potential to earn higher salaries (see the section on 'inward investment' for local salary levels) and also the opportunity to develop a higher-quality career profile and gain professional development;
- ▶ The accession process has led to a strong system of mutual recognition of qualifications which broadly speaking provides a framework for assessing the equivalence of local qualifications;
- ▶ In general, the education system in Central Europe is strong. The base from the former times was good, and the sector has experienced significant changes to meet the new requirements. There is a lot of strength in the key area of engineering. Engineering graduates are particularly strong in certain centres, e.g. Czech Republic, whereas in some countries such as Bulgaria, the interest in this area is currently declining due to limited local job prospects. The supply of graduates is also growing in ICT;
- ▶ It is likely that the UK will provide full labour market access for citizens of the candidate countries immediately after they join the EU' although there is formally a transition phase allowing up to 7 years for Member States to retain some controls of free movement (see the section on 'freedom of movement');
- ▶ With regard to work permits for countries prior to membership, these are readily available via the standard system.



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Availability of Labour

There is clearly a very strong supply of both skilled and un-skilled labour across the Central European candidate countries. This covers a range of areas including health service specialists, construction workers, teachers, etc. As an example of this, Romania and Bulgaria offer an important medical research potential within the network of researchers and auxiliary personnel of their institutes and universities. More than 60% of them are highly qualified scientists with academic and scientific degrees. Many of these qualified staff are leaving these countries primarily for Western Europe, and to a lesser extent, the United States, generally because of low in-country wage levels.

Most of the candidate countries have set up bilateral arrangements with various countries (including EU member states) for sending temporary workers to these countries. Examples include:

- ▶ The Polish Regional Labour offices are currently recruiting and sending employees to a number of different countries, the main destinations being Germany and Norway (especially for healthcare – nurses, hotel/restaurant sector, and the IT sector);
- ▶ The Bulgarian Employment Services, as well as licensed local private companies, are sending workers to over 20 countries. Main destinations for medical specialists are UK, Ireland, and Libya; for IT experts, Germany; for construction workers, Russia and Israel; low skilled workers, Greece and Spain;
- ▶ In the case of Estonia, many construction workers are being recruited to work in Finland and the other Scandinavian countries but also in the UK and USA. In fact, there was recently a programme to recruit Estonian nurses in Norway. This proved highly competitive due to the very low salary that nurses generally receive in Estonia.

Attitudes to Relocation

In general, the opportunity for studying and/or working in one of the more advanced EU member states and/or in the USA has long been a dream and is now becoming a reality for more and more young people from the candidate countries. The motivation for this is complex, but includes the following:

- ▶ The desire to receive high-class education and the possibility to gain work experience in another more developed country (these being particularly important for skilled, qualified staff);
- ▶ For both skilled and unskilled, access to higher salaries and increased standard of living is also a strong reason for temporary relocation or permanent emigration. If we take the case of Bulgaria, for example, there are about 500 000 Bulgarians who are currently working in Western Europe, the main countries being the UK (England and Northern Ireland), Spain and Greece. Statistical data shows that 754,000 Bulgarians aged between 15 and 60 would like to live, work or study abroad for more than a year. This figure constitutes 15% of the active population.



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Freedom of Movement and Work Permits

With regard to freedom of movement, the Community *acquis* covers the four broad areas of mutual recognition of professional qualifications, citizens' rights, free movement of workers and the co-ordination of social security schemes. The specific situation with regard to individual accession countries is set out in the related annex, but the general picture is set out below in relation to three key areas:

- ▶ Mutual recognition of professional qualifications
- ▶ Free movement of workers
- ▶ Work permits

Mutual Recognition of professional qualifications

The basis within the *acquis* is that, via a general system of mutual recognition, the Community seeks to eliminate obstacles to the taking up and pursuit of regulated professions; accepting the principle that a person fully qualified to practise a regulated profession in one Member State should be entitled to do so anywhere in the Community.

The approach taken to this is that mutual recognition by EU member states is based on two forms of evidence:

- ▶ a declaration by the relevant candidate country bodies of the equivalence of the qualifications in question to their diplomas (which, upon accession, would be automatically recognised in the EU);
- ▶ an attestation that the holders of the qualification have been recently engaged in the activities in question.

There has been considerable work on the harmonisation of qualifications now provided within candidate countries and for those individuals graduating now this double approach - declaration and attestation - is felt to provide the necessary guarantees.

For professional qualifications obtained before harmonisation, candidate countries are expected to take measures to ensure that all their professionals can meet the requirements laid down by the directives and can therefore benefit from professional recognition throughout the EU following accession, in line with the procedures applied in past accessions.



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Free movement of workers

With regard to the free movement of workers *into* accession countries, the applicant countries are now required to ensure that there are no provisions in their legislation which are contrary to Community rules and that all provisions, in particular those relating to criteria on citizenship, residence or linguistic ability, are in full conformity with the *acquis*.

With regard to the free movement of workers *from* accession countries (new Member States) *to the UK* or other Member States of the EU-15, the political and practical importance of this area of the *acquis* and the sensitivities and uncertainties surrounding mobility of workers led the EU to propose a transitional measure.

The essential components of the transition arrangement are as follows:-

- ▶ A two year period during which national measures will be applied by current Member States to new Member States. Depending on how liberal these national measures are, they may result in full labour market access;
- ▶ Following this period, reviews will be held, one automatic review before the end of the second year and a further review at the request of the new Member State. The procedure includes a report by the Commission, but essentially leaves the decision on whether to apply the *acquis* up to the Member States;
- ▶ The transition period should come to an end after five years, but it may be prolonged for a further two years in those Member States where there are serious disturbances of the labour market or a threat of such disruption;
- ▶ Safeguards may be applied by Member States up to the end of the seventh year.

Within this framework, the UK government is on record as being committed to providing the minimum transition periods for new Member States after accession and it is expected that full labour market access will be achieved very quickly if not immediately after entry to the EU by the accession countries.



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Work Permits

Until the date of entry the current system of work permits will apply; given that for Bulgaria and Romania this will be for at least a further 3 years it is worth summarising the current situation.

Work Permits – General

Citizens of all accession countries require a work permit to work legally in the UK. A permit should be obtained before entry. Families and dependents of those who hold a valid UK work permit are eligible for employment unless their passport/visa states otherwise; although they may require pre-entry clearance before entering the UK.

Where particular individual circumstances require a visa (not normally required), approval of a work permit usually leads to a visa or, where appropriate, an extension of a visa being granted. However, the issuance of a work permit does not grant an absolute right to enter the UK; an application still has to be made for entry clearance.

Work Permits – Eligibility

A work permit is approved on a discretionary basis. The policy is based on 'striking a balance between enabling employers to recruit or transfer skilled people from abroad and protecting job opportunities for resident workers'.

You can make a work permit application if you are an employer based in this country and you need to employ a person to work in the United Kingdom. You should make a work permit application for a named person to do a specific job for the employer, normally on a full-time basis. The person cannot transfer a work permit to a different job or to work for a different employer.

To qualify for a work permit the job is expected to require an individual to have:

EITHER - the following **qualifications**:

- a) a UK equivalent degree level qualification; or
- b) a Higher National Diploma (HND) level qualification which is relevant to the post on offer; or
- c) a HND level qualification, which is not relevant to the post on offer plus one year of relevant work experience;
- d) **OR** the following **skills**: 3 years experience of using specialist skills acquired through doing the type of job for which the permit is sought. This should be at National/Scottish Vocational Qualification (N/SVQ) level 3 or above.



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For some professions where the employee needs to be registered with the appropriate UK professional organisation (e.g. GMC, NMC, GDC, RCVS) it is acceptable to provide registration as proof to show that the individual meets the criteria. It is expected that the employer and the employee, however, should obtain any registration or licensing necessary for the employment which is the subject of the application.

Permits are not issued for unskilled jobs or for self-employment. The person for whom the permit is being applied for should have the skills, qualifications and experience to do the job as outlined above.

Work Permits – Cost

As of April 2003, there is a charge of £95 per application for a UK work permit. This covers consideration of initial Work Permits, Work Permit Extensions, Change of Employment and Appeals. Under normal circumstances, prospective employers would be expected to pay the fee. However, under European Law, the UK is obliged to exempt prospective employers of overseas nationals from countries who have signed and ratified the Council of Europe Charter or the European Social Charter.

Therefore, employers making work permit applications to employ nationals of the Czech Republic, Hungary, Slovakia, Bulgaria, Estonia, Lithuania, Romania, Slovenia, Poland, Turkey, Cyprus, Malta, Latvia and Moldova will be exempt from the charge.

Education

Historically, the quality of education has been one of the strongest advantages of the Central and Eastern European countries. At the beginning of the 1990's the sector had been structured in relation to the requirements of the command economies at the time, but during the transition period the sector has undergone significant change and reform. The state-owned schools and universities have experienced severe budget shortages, relatively large numbers of new private educational entities (universities, colleges) have appeared, and the sector as a whole has had to become much more market oriented. In response to this, the entire education sector has modernised its policies and practices in order to respond to the changing environment and the needs of the changing societies.

Higher education in the Central European countries is developing fast. In the 2000/2001 academic year there were a total of 783 universities, 49% of them private, with some 3 million students attending courses in various subjects. The following table gives a breakdown of the numbers:



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Higher Education: Number of students and teaching staff

(academic year 2000-2001)⁸

Country	Number of students					Number of teaching staff
	Public	%	Private	%	Total	
Bulgaria	215676	88.5	27916	11.5	243595	23329
Czech Republic	213207	99	2000	1.0	215207	14890
Estonia	38511	74.8	12963	25.2	51474	3715
Hungary	255943	85.7	42561	14.3	298504	22873
Latvia	78156	87.3	11353	12.7	89509	5160
Lithuania	99140	...
Poland	1106798	70.1	471443	29.9	1578241	80208
Romania	322129	71.1	130492	28.9	452621	26977
Slovak Rep.	125054	99.3	842	0.7	125896	11559
Slovenia	64989	95.7	2900	4.3	67889	...

From SEEDA's perspective, engineering and related subjects are amongst the most widely taught and information technology is also a strong growth sector with drawing more and more interest amongst young people.

Engineering graduates

To illustrate different aspects of the situation, it may be helpful to provide examples from the following three countries: Czech Republic, Romania, and Bulgaria.

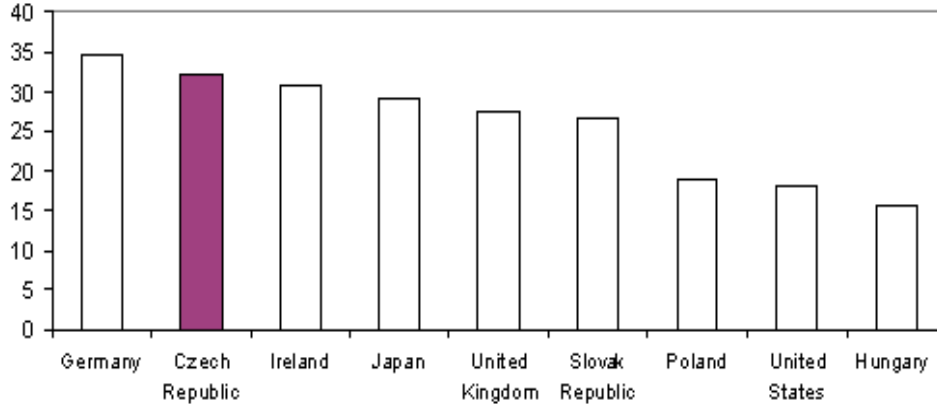
For many years the former Czechoslovakia produced the highest percentage of science and technical graduates in the world. This tradition continues in the Czech Republic; in 1998 the proportion of university degrees awarded in science and engineering was among the highest in Europe (see chart below). The Czech government is committed to sustaining this and there will be a real attempt to maintain or increase funding in these areas.

⁸ Source: European Centre for Higher Education, UNESCO



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**Science and Engineering
% of Total Degrees Awarded in 2000**



Within the Czech Republic, there are currently nearly 70,000 students studying in technical disciplines. Around 8,000 university graduates in technical and scientific subjects enter the workforce every year, of which more than 2,000 have studied, primarily, *engineering or informatics*.

The biggest and most advanced institution is the Czech Technical University in Prague (www.cvut.cz), where around 20,000 students are currently taking degrees in civil engineering, mechanical engineering, electrical engineering, nuclear sciences and physical transportation sciences, and architecture. Other major universities include the University of Technology Brno (www.vutbr.cz), the Technical University of Ostrava (www.vsb.cz), and the University of West Bohemia (www.zcu.cz).

The situation is different in Romania and in Bulgaria. Whilst students pursuing a purely technical degree in Romania constitute roughly one fourth of the total number of students, the trend is clearly declining. The majority of Romania's engineers graduated from technical institutes in Bucharest, Cluj, Iasi, and Timisoara, with Bucharest accounting for 70% of Romania's technical resources while Bucharest combined with the main university centres accounts for 90% of Romania's technical resources.

In Bulgaria, until the start of the reforms, a degree in engineering was the most attractive university education for young people, thus the majority of the universities were 'technical institutes' in the past. Today, interest in this area is declining mainly because of the difficulties to find a job due to the reduced local industrial production and also because there is no specific policy in place to change this process at present.



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ICT graduates

The number of universities providing ICT related degrees is progressively growing across all candidate countries. It is difficult to provide an overview of this sector within the cope of this report, but the key points to note are:

- ▶ Romania currently ranks 6th in the world for its number of certified ICT specialists (16,122 in 2001). This number is even more significant if the population-to-professional ratio is taken, showing it to be twice larger than the one reported for India (currently 2nd in world rankings on overall numbers). Every year approximately 8000 new ICT graduates are released to the job market.
- ▶ Bulgaria is also renowned for its well-qualified IT specialists. The Global IT IQ Report of March 2002 of *Brainbench Inc.* ranks Bulgaria 8th with regard to the number of certified IT professionals - 8,844. Out of the 42 universities in Bulgaria around 50% have computer and IT related studies. Over 6,000 Bulgarian students are currently graduating each year.
- ▶ Since 1991, the total graduate output in Slovakia has increased by 40% to circa 12,000 students per year of which 20% are IT related. The quality of graduate output has always been, and still is, consistently high.
- ▶ The three Baltic States are also strong in IT specialists. In Estonia the Tallinn Technical University is one of the main private educational establishments with over 2100 IT students, whilst in Latvia there are around 5000 IT students.

Bio/Pharmaceutical Graduates

Some key points to note here are:

- ▶ There are currently 4,790 bio / pharmaceutical students in the Czech Republic graduating from four main universities, the biggest of which is Charles University (<http://www.faf.cuni.cz>).
- ▶ About 15% of all educational institutions and 10% of all graduates in *Romania* are dedicated to medical and pharmaceutical studies. University records show that a stable proportion (10%) of students pursue a degree in medical studies annually. Prominent universities include the Timisoara University of Medicine & Pharmacy and the University of Medicine and Pharmacy in Craiova. The number of qualified professionals, however, is on a level approximately 50% lower than the EU average, according to the WHO.
- ▶ In Bulgaria there are 5 medical universities with over 4000 students. The leading institutions are the Medical University of Sofia (www.medun.acad.bg) with about 800 graduates each year, Medical University – Varna (www.muvar.acad.bg), and the Higher Institute of Medicine in Plevna (www.vmi-pl.bg). In addition to these, several other universities also teach life science studies.
- ▶ In Poland about 750 students graduate annually specifically in Bio/ pharmaceutical studies from three leading universities at Warsaw, Cracov and Poznan.
- ▶ In Estonia the biggest universities that produce graduates in Bio/Pharma are Tartu University (<http://www.ut.ee>) and Tallinn Technical University (<http://www.ttu.ee>). The number of graduates in Tartu University in 2002 was 1413 students.



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Inward Investment

With regard to the climate for inward investment, we provide in annex a detailed breakdown of information relating to the following key aspects:

- ▶ Incentives
- ▶ Grants
- ▶ Loans
- ▶ Average Rates of Pay
- ▶ Employers Costs
- ▶ Employee Benefits
- ▶ Priority sectors for FDI

The key points to note are:

- ▶ There are a range of incentives available to support inward investment in each of the target countries. The specific conditions are often complex and also the nature of the incentives are changing as the countries get closer to membership of the European Union and many of the former schemes (which were in several cases not compliant with state-aid rules, etc) are replaced by new arrangements funded in large part via Structural Funds. In each case, the countries have developed specific national inward investment agencies that are able to give specific advice to potential investors; these agencies are in general very professional.
- ▶ The countries have set up many grant schemes to support inward investors, especially in the areas of training/re-training of staff but also in relation to standard business development costs (especially in target sectors). The grants available will change significantly in the coming years as the new ERDF and ESF programmes are put in place. Although there is broad information about the nature of these programmes, the details are not yet available and, therefore, it will be important for this aspect to be assessed further during 2004. (The information provided in annex relates to the current pre-accession situation).
- ▶ The banking system is developing in relation to loan funding to support business development, although this still remains a potentially difficult area with large differences between candidate countries. In several countries, there are governmental schemes to support access to finance although this usually requires full legal registration in the country.
- ▶ Average monthly salaries are low, with averages ranging from just over €100 a month in Bulgaria/Romania, up to around €500 a month in Poland/Czech republic/Estonia.
- ▶ The tax systems vary enormously between the countries, with the particular 'packages' making it difficult to give a general picture of which system is most appropriate. Decisions such as this will depend on the nature of the investment planned (forms of activity, time period, etc).



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Technology Transfer

Freer trade links and accelerated economic integration has contributed enormously to the upgrading of technologies in the less advanced candidate countries since the beginning of the accession process. New potential sources of technological inputs have become available with the gradual abolishment of the trade barriers with the EU and this is gathering speeding as accession nears. This process has involved direct purchase of technologies (new machines, foreign investments, skilled personnel,; increased know-how from trading with more technologically advanced partners, improved access to information on foreign markets, and closer links and joint projects between research institutions. Apart from the increasing public support and investments in R&D, one of the most important technology transfer channels since the start of the reforms in the candidate countries has been the foreign direct investments, introducing in most cases new quality products, modern technology and management techniques.

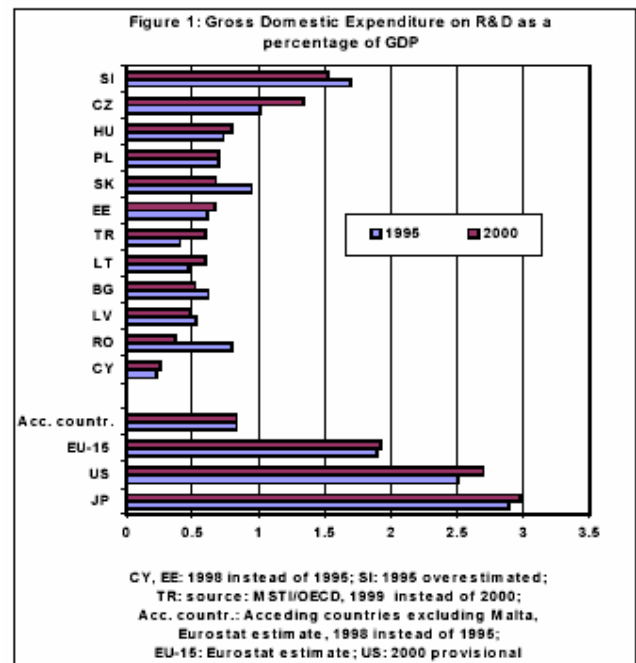
R&D statistics

Gross Domestic Expenditure on R&D (GERD) varies widely across the candidate countries, but as a whole remains lower than the average for the EU (0.84% in contrast to 1.93% for the EU-15). The Czech Republic and Slovenia showed the highest GERD figures in 2000 as a percentage of GDP (1.33% and 1.52%, respectively) while Latvia and Romania had ratios lower than 0.50%⁹.

In absolute terms, the biggest R&D spending candidate country in 2000 was Poland, with over 1 billion EUR, followed by the Czech Republic, Slovenia and Hungary.

Most R&D efforts in 2000 were directed towards *engineering and technology* in all candidate countries, except for Latvia and Lithuania, where the share of R&D expenditure spent on natural sciences was higher than in the other fields of science (see adjacent table).

Gross domestic expenditure (GERD) on R&D by main field of science in Mio EUR and as a percentage of total.



⁹ Eurostat publication - Statistics in focus, Science and Technology, 1/2003



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In terms of workforce, overall the acceding countries

have experienced increases in their R&D personnel, except for Bulgaria and Romania who have seen their R&D workforce

shrink by almost half between 1995 and 2000¹⁰. The number of R&D personnel (head counts) as a percentage of the active labour force in the candidate countries still remained below the EU average, although Slovenia almost reached the same level as the EU in 2000. The two candidate countries with the highest percentages of R&D personnel to the total active labour force in 2000 were Hungary and Slovenia. An interesting fact is that The Baltic countries, Bulgaria and Romania have the highest proportions of female workers among their R&D personnel.

Field of science	Acc. c. (1)		BG		CZ		EE		HU		LV		LT		PL		RO		SK		SI	
	Mio EUR	%	Mio EUR	%	Mio EUR	%	Mio EUR	%	Mio EUR	%	Mio EUR	%	Mio EUR	%	Mio EUR	%	Mio EUR	%	Mio EUR	%	Mio EUR	%
Natural sciences	629,6	22	15,4	22	185,9	25			59,1	15	12,9	34	17,9	25	261,9	22	12,1	8	37,6	26	45,9	15
Engineering and technology	1473,1	50	22,5	32	438,8	59			191,4	47	11,7	31	14,6	20	596,4	50	106,9	72	67,2	47	151,0	51
Medical sciences	302,6	10	4,9	7	51,5	7			30,6	8	1,5	4	5,6	8	146,4	12	5,6	4	11,5	8	54,3	18
Agricultural sciences	224,9	8	21,2	30	34,9	5			37,1	9	3,0	8	6,0	8	109,6	9	14,4	10	16,9	12	10,7	4
Social sciences	139,1	5	2,4	3	8,8	1			26,0	6	6,5	17	6,2	8	49,2	4	7,8	5	8,3	6	30,5	10
Humanities	104,1	4	5,0	7	24,0	3			29,1	7	1,9	5	7,2	10	33,2	3	2,0	1	1,3	1	4,9	2
Total GERD	2921,2	100	71,5	100	744,0	100	37,0	100	405,3	100	37,5	100	73,1	100	1196,6	100	148,7	100	142,9	100	297,3	100

R&D Personnel in head count by occupation, 2000

	Total	number of females	Number of Researchers	number of females	Number of Technicians	number of females	Other R&D personnel	number of females
BG	16853	8906	10527	4797	4192	2683	2134	1426
CY	1630	594	792	208	423	158	415	228
CZ	48004	16992	26173	7055	13972	5864	7859	4073
EE	6531	3279	4570	1969	936	619	1025	691
HU	45325	20407	27876	9537	8313	4844	9136	6026
LV	8229	4211	6117	3033	931	519	1181	659
LT	14592	7338	10100	4542	2052	1345	2440	1451
PL	125614	54326	88189	33572	20298	10578	17127	10176
RO	37241	17114	23179	9841	6754	3982	7308	3291
SK	22256	:	15747	:	4406	:	2103	:
SI	12220	4962	6562	2358	2512	1129	3146	1475

¹⁰ Main reasons being the reduced public finding for scientific projects due to the increased budget deficits and the high percentage of emigration of such specialists to more advanced countries

Centres of Excellence



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Although R&D expenditure in the candidate countries remains considerably lower than the average for the EU, in many disciplines these countries have developed a strong science base and, if favourable conditions are created, they can contribute substantially to the European technological potential. Public financial support for scientific activities and a high status of scientists in the candidate countries has led to the creation of many research centres which employ well-qualified and talented scientific personnel.

Technological development has traditionally in most of the countries been concentrated in the academic centres/universities. Almost all countries have national academies of science, normally uniting numerous research institutes specialising in different areas of science. These academies, strongly supported in the past, have faced serious challenges during the transition process due to dramatically reduced government subsidies, particularly in Bulgaria and Romania. At the same time, industrial demand for R&D results has remained very low.

Industrial companies were much deeper involved in the day-to-day problems of productivity, administration, marketing, etc. and, in general, the desire to improve competitiveness through technological developments was non-existent. This situation is gradually changing with more and more public and private funds being allocated to the R&D sector.

Accession countries are particularly strong in **engineering and related technology** with the leaders being Poland and The Czech Republic, followed by Hungary, Slovenia and Romania.

Life science/Biotech research is also headed by Poland and The Czech Republic but is widely present throughout all countries.

Environmental technologies are still quite new area of interest, while **ICT** is one of the fastest developing research areas across all countries, with particular support devoted to it in Romania, Bulgaria, Estonia, and Slovakia.

In the related annex we provide a list of centres of excellence and research institutes active in the key sectors identified by SEEDA.



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Sixth Framework Programme

As stated above, a key area for the development of technology transfer will be the operation of joint research projects. To date, co-operation in candidate countries has, in theory, been possible for EU based institutions within the EU's main research programme; although the financial conditions made it difficult in practice to develop full projects. However, within the Sixth Framework Programme (FP6) the accession countries are all full participants and this provides a major opportunity for companies, universities and research institutes to build collaborative arrangements with counterparts in central Europe.

Academic Exchange

Since the reforms which largely affected the candidate countries' education sector, local universities have been extremely active in technology transfer and exchange projects with their western counterparts.

At present all leading universities in the accession countries are co-operating with foreign institutions with regard to developing their curricula, adopting new teaching methods and learning techniques, introducing innovative training methodologies, exchanging experience, and conducting joint research.

In this respect, the most popular programmes for students and academic exchange are *Socrates* and *Leonardo da Vinci*, managed by DG Education and Culture of the European Commission. Since the opening of the programmes over 13 000 students from CEE universities have participated in exchange projects with Western European universities within the Erasmus programme (part of *Socrates*).¹¹ About 32% of these were Polish students, followed by Romania, Hungary and the Czech Republic.

In terms of the subjects areas of interest to SEEDA, the majority of the students' exchanges were in the sphere of *engineering* and *life sciences*. With regard to the university teachers, a total of 2300 teachers were placed in Western European universities for the academic year 1999/2000, the majority of them coming from Romania and Poland. One of the most popular types of exchange was in the field of language studies and training.

Some examples of the most active universities in exchanging students and lecturers with western companies and universities in the fields relevant to SEEDA are: The Czech Technical University in Prague (The Czech Republic), The Tallinn Technical University (Estonia), Poznan University (Poland), Bucharest University (Romania), Rouse Technical University (Bulgaria).

¹¹ Data is at the end of 2000, source DG Education and Culture.



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A Regional Approach for SEEDA

A key feature of SEEDA's response to the enlargement of the EU, as stressed by SEEDA during the initial briefing, will be the regional dimension; i.e. forging regional partnerships in relation to the identified key sectors.

In response to this we have found it difficult, within the scope of this initial report, to be specific about ways forward. There are a number of difficulties that make it problematic at this stage in the process to provide clear and specific guidance in relation to a strategic regional approach, especially if it means adopting single initiatives with one or two 'priority partner regions'. Key amongst these difficulties are:

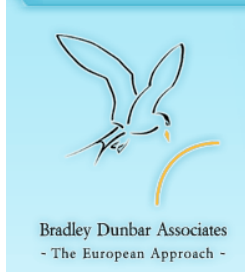
- ▶ In terms of statistical information to support any strategic decisions, there is relatively limited detailed information about business activity at the regional level in the accession countries. Overall GDP figures are available in relation to regions, as are some specific figures such as employment figures for example, but beyond these broad indicators it is extremely difficult to provide meaningful analysis of the specific issues such as nature of FDI by sector, actual salary levels, numbers of graduates, etc, at the regional level. This raises difficulties in identifying regions that fit a profile that may match with the requirements of the South East of England;
- ▶ The relatively underdeveloped regional policy in the accession countries and the former dominance of the main centres (capitals) means that in most cases the level of development outside of these capital centres is quite low and, whilst there are specific exceptions for individual indicators (i.e. specific cities/regions with IDT graduates or capacity for call/support centres), there is no non-capital region that would offer the quality and breadth of resources required by South-East England. This, therefore, tends to favour a focus on capital regions which are in themselves not likely to involve the breadth of coverage to match that of a diverse region such as the South East of England and are almost exclusively focused on urban issues;
- ▶ Several of the accession countries are very small, with lower populations than the South-East region. In addition, for the purposes of future Structural Funds many of the countries are classified as being one region (Nuts II) with a single regional programme. In this context, where there is value in strategic alliances we would see SEEDA as considering this at a national level rather than with regions. For example, there are considerable benefits to be gained from strengthening links with a country such as Lithuania, but it would be difficult to justify considerable investment in developing a strong alliance with any one region in Lithuania;
- ▶ The requirements of the South East of England in relation to EU enlargement are still incredibly diverse and broad. This report is intended to be a first step in assisting SEEDA, with its partners, in achieving greater definition of certain priorities for development. Moreover, these priorities may vary according to the specific sectors (RTD links for some industries, access to low-cost production for others, markets for value-added services for others) and it is likely that the best 'match' will vary depending on the particular set of priorities;



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- ▶ Identifying the specific 'tools' to assist in the development of the appropriate strategic alliance is also difficult without more specific guidance on the overall priorities. For example, the EU funds available to support such work vary according to the type of activity (Interreg IIIB/C are appropriate for certain activities, whilst for others there may be assistance via accompanying measures for FP6 or from specific calls from the relevant sector DGs). In addition, the type of institutional partner will vary depending on the type of activity involved as, in most cases, there are not really full regional development agencies that would provide an ideal single partner for a wide range of issues.

For the above reasons we are, therefore, not able to provide a definitive answer to the questions about strategic alliances for SEEDA. However, we would wish to make a number of proposals about how this issue could be moved forward and also give some further information to assist SEEDA in this process.



Proposals for consideration

- ▶ It will be essential as a pre-condition for any establishment of strategic alliances to decide upon broad strategic priorities for the South-East of England in relation to EU enlargement. This report in itself should assist in that process and should help SEEDA to identify the requirements they would require from a strategic partner region/country in Central Europe.

As part of this process it will almost certainly be necessary to identify specific requirements in relation to each of the priority sectors. For certain industries the main issue is access to local labour sources and investment incentives for specific activity; for others it will involve research capability; whilst for some it will be a local company base that offers strong partnerships for joint business development.

It would also be necessary to prioritise between the competing requirements, although the degree of competition will depend on the resources available to take any initiatives further.

- ▶ Once such priorities are identified and there is a clearer view of the requirements for a strategic partner, then consideration should be given to a range of 'types'. Examples could include:

Access to lowest-cost labour with language skills where full access to EU markets is not a pre-requisite – certain key centres in Bulgaria/Romania (Varna, Rousse, Iasi, etc) or in certain cases, parts of Lithuania/Latvia (Klaipeda).

Access to specific types of graduates would almost certainly require close proximity to capital centres, although there are specific regional centres as shown in the annex on 'centres of excellence' (Poznan, Iasi, Tartu, etc).

Access to existing expertise/skills in a specific industry, for example support centres – Greater Prague, Western Hungary, etc.

As a very concrete step forward, we would propose that after the prioritisation is done Bradley Dunbar would lead a one-day workshop with key SEEDA staff to bring together the broader priorities and the information about regions to facilitate a tangible discussion about the appropriate regional partnerships and tools to be used for development (EU funds available, timetables/criteria). Input into this day from Bradley Dunbar would be included as part of the work done to prepare this report. If any additional subsequent work or investigation were required, this would involve additional costs.



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Recommendations for Strategy and an Action Plan

This report is intended to provide background information for SEEDA in key areas of interest and to give a basis for further considerations within SEEDA about a future strategy in this area. The scope of the project has only enabled an overview to be given of the key areas and this in itself is not a basis for full proposals with regard to a future strategy. However, in order to stimulate discussions within SEEDA about future work, we have set out below some thoughts on future action.

Firstly, in general terms, we have compiled some answers to the following two questions:

- ▶ Is there a need for action?
- ▶ When is the time for action?

We then go on to set out some specific areas where there could be action.



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Is there a need for action?

Whilst the relatively low incomes and GDP figures for the accession countries mean that enlargement does not present major opportunities in many general markets for companies from the South-East of England, the nature of the EU enlargement process in itself is clearly driving markets in certain specific sectors that do offer considerable opportunities.

It is, therefore, important that any actions or strategy to be developed by SEEDA should be based on three key elements:

- ▶ Caution in terms of the promotion of the markets in a general sense. In the short term, it is clearly not appropriate to encourage a general “rush eastwards” by many companies. For many companies it is much more appropriate to develop domestic markets or to target international markets where GDP and consumer spending power is far greater;
- ▶ Positive and targeted action in those sectors and areas of business that, due to the enlargement process, offer real potential in the short- to medium-term;
- ▶ Recognition of the strategic benefits offered by the accession countries to a region such as the South-East of England (access to labour, RTD development potential etc.).

In particular, these areas should focus where companies are able to offer competitive advantage and that include the following:

- ▶ Those sectors and types of activity that are being and will be directly funded by EU pre-accession funds and, after 2004, larger-scale EU Structural Funds;
- ▶ Markets or types of services/products driven by the application and implementation of EU legislation;
- ▶ Markets linked to strategic investment (either supply-chain services/supplies and/or sub-contracting) that is connected with future EU membership in direct or indirect ways. In the short-term this investment is not primarily driven by domestic markets in central Europe, but is based on the accession countries as a location for manufacturing/servicing for other “third” markets within the EU or beyond.



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When is the time for action?

It is clear that there will be major benefits from taking early action to take advantage of the enlargement-related opportunities that exist. The reasons vary according to the specific type of markets:

- ▶ With regard to EU funded work, the expansion in funding activity is already translating into contracts, with around €10 billion's worth of contracts currently open and likely to be awarded in the coming year. Given the importance of local partnerships as the basis for winning work it is likely that those not "present" in the market in the next 2 years are likely to face considerably higher barriers to entry after that as the opportunities increase.
- ▶ Concerning markets driven by legislation, whilst there are already opportunities in certain areas, the main expansion in business will not come until the implementation of EU legislation begins to really have an effect some years after membership. However, as with other areas of business, one of the keys to success will be local partnerships and, therefore, there will be a real premium on developing a presence sooner rather than later.
- ▶ For the market linked to strategic investment, the opportunities and challenges are already facing many UK companies. This will continue for many years after accession as the countries will be able combine a residual "low-cost" advantage with the new attractions of improved infrastructure, greater access to and integration with the Single Market, growing domestic markets and improved local productivity.

In short, there are clearly benefits from early action. A major factor in this is the importance of working with local partners in the markets. The newly-emerging local companies, the regional agencies, the universities, etc, and the pool of capable individual entrepreneurs are ready *now* to create strategic or specific partnerships with international companies and organisations, and this local link will be a crucial element in achieving success. If companies from the South-East of England are to reap the benefits over the coming period then their chances of success will be greatly enhanced if they are actively creating links in the local markets at this time.



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What types of action could be promoted?

The starting point to this is companies. It will be companies themselves that will make the business happen and it will be companies that will make the decisions about whether specific markets do offer potential for their particular products or services. However, an insufficient number of companies currently have access to valuable market information about EU enlargement to enable them to make informed decisions. SEEDA and its partner agencies, therefore, have a role in providing facilitation and support to promote a process of improved information. There are essentially two issues to address here:

- ▶ The level of company driven demand for development support in relation to accession countries is currently relatively limited. This lack of demand and pro-active work is, in our view, in part a result of the lack of awareness of South-East companies of the real nature of opportunities available;
- ▶ Given the relative lack of activity in this area in the past, the specialist expertise or knowledge within the wider business support network in the South-East of EU-enlargement and central/eastern Europe is not high. Given the current level of support activity this is not a major barrier, but this would be a limiting factor if there were to be specific initiatives and/or if company demands for support were to increase.

If it is accepted that there would be clear benefits from taking action in the very short-term to gain competitive advantage in the target markets linked to EU enlargement, it would seem necessary to take action on the following two issues;

- ▶ Targeted stimulation of demand, focused on raising awareness of the main areas of opportunity;
- ▶ Strengthening the capacity of the support networks to be able to provide more effective assistance.

Relatively low-cost activities in these areas could bring major returns on investment and support SEEDA, its partner agencies and local companies in taking advantage of the business opportunities offered by EU enlargement. In considering this we would propose the following areas for consideration:

Using existing channels

It is essential that maximum benefit is taken of the main existing channels for business support and development. This will include:

- ▶ Trade Partners
- ▶ The Business Link network, the Small Business Service and, where appropriate, Skills Insight
- ▶ Other key Business Support agencies



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Sector/Cluster based approach

In terms of pro-active work by the SEEDA or other agencies, the priority focus in relation to EU enlargement must be kept within a sector- or cluster-based approach. As set out in the earlier context paper, the nature of the opportunities within the countries of Central & Eastern Europe is heavily influenced by the accession process itself. This is acting as a major market driver and, given the nature of the process (funding and legislation), the scale and type of effect varies significantly between and within sectors.

In this respect, within this study we have set out four key sectors for prioritisation; Environmental Technologies, Technology (ICT and Telecoms), Life Sciences and Healthcare, and Building and Construction.

We would wish to stress that within the framework of this study there has been no specific analysis of the specific structure of the above sectors/clusters within the South-East of England and, therefore, further work is required before the specific opportunities can be assessed at a detailed level. It is hoped that the information provided within this report will enable SEEDA to assess whether it is appropriate to commit resources to this further work.



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Areas for Action

In terms of the kind of activities that could be undertaken by SEEDA and/or the sector/cluster teams, there are five main categories:

- ▶ Sector/cluster based analysis
- ▶ Awareness raising
- ▶ Development of information tools
- ▶ Supporting action
- ▶ Initiatives for Partnership.

Cluster/Sector Analysis

As has been stated above, the main basis for any pro-active approach by SEEDA should be work at the cluster/sector level. Information provided within this report should enable decisions to be taken on the broader market opportunities within Central & Eastern Europe for specific sectors.

What is essential, however, if there is to be really effective action, is for specific teams to move beyond this information and to undertake a more detailed 'mapping' of the opportunities against the real structure of the sectors/clusters within the South-East of England.

Only on the basis of such work can the various initiatives set out below be effective. Without more detailed work that is based on the real profiles of local businesses and which would involve more detailed work on specific areas within Central & Eastern Europe, it will, of course, be impossible to develop business development initiatives that are relevant to the needs of the South-East.

Specifically we would, therefore, propose consideration of the following:

- ▶ **Development by SEEDA or relevant agencies of sector/cluster-specific market studies.** These studies would have a dual function. Firstly, and very importantly, they would assist the further development work of SEEDA and the sector teams in targeting their own resources in relation to these markets. Secondly, they would be made available to local companies to enable them to make more informed judgements about the market opportunities in their specific business area. The work could be undertaken using the standard tools; namely in-country specialists within commercial sections of UK embassies and external sector/region specialist consultants.

OUTPUT: 3-4 detailed market reports focusing on priority sectors/clusters and matching in detail the specific opportunities to local capabilities.



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Awareness raising

An important barrier to entry is the limited knowledge and also the persistent misconceptions of the central European markets. There are a number of myths that need to be dispelled before a more realistic assessment of the markets can be made by agencies and companies in the South-East of England.

It would be entirely inappropriate at this stage to send wholly positive signals that may suggest a 'rush eastwards' by local companies and organisations. However, a well-managed and targeted campaign of information that focused on providing an informed and balanced picture of contemporary central Europe would enable people to make better informed judgements themselves about the real potential.

Public Information events

According to our information, there has been a very limited set of events in the South-East of England promoting business in relation to EU enlargement. These have taken a general overview, all countries - all sectors approach. These general events do play a valuable role, especially where they include concrete input from companies involved in the markets acting as "case-studies".

In addition to that, as part of the European Commission's own information campaign, the Euro-Info Centres will be required to develop their own information programmes in relation to enlargement and these general events can be valuable.

There would be value in SEEDA considering working with regional partners and with Trade Partners UK to set up a specific, though small-scale, programme of such events.

We would also see real benefit in SEEDA taking an active lead in promoting the following activity:

- ▶ **Cluster specific workshops.** The more general events should be complemented by with much more focused events aimed at very specific target groups and involving a more workshop-based approach. These could build upon the market research set out in the section above and provide much more targeted and concrete information about particular industries/sectors. It would also enable the workshops to address issues specific to certain industries, e.g. financial services and support centres, labour questions for specific industries, energy/environmental infrastructure, and PPP/PFI. Obviously, this approach should focus on those clusters chosen as "high-priority" in relation to Central and Eastern Europe. Such events may also promote joint-working and informal consortia amongst South-East companies/organisations within a particular cluster or sector.

OUTPUT: 3-4 cluster-specific one-day workshops, with potential follow-up events depending on demand.



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Whether a “general” event or a cluster-specific workshop, it is essential that the appropriate target groups are reached. On this point we would highlight the following:

- ▶ The primary focus must be on attracting *companies* to the events.
- ▶ The events do have a valuable role to play in raising the awareness of the support agencies (Trade Partners representatives, Business Advisers, Chambers of Commerce, etc) so these bodies should also be encouraged to take part.
- ▶ A key group currently under-represented at these information events are financial institutions or other key agencies providing key support for business development. This will include the main banks, venture capital institutions, individual investors, etc. If local companies are to be dynamic in responding to the challenges and opportunities of EU enlargement then they will need to find a supportive response from their financial backers. Although there has been no specific survey of this group’s attitude to Central Europe, our own personal experience and also “common sense” supports the conclusion that financiers also have limited information about the new markets and share a number of misconceptions about the business environment. This target group, including crucially the specific account managers in the regions and not just ‘European’ teams at headquarters, should be made more aware of the real situation.

Development of Specific Information Tools

It will be important to complement any one-off events with a limited package of information tools that will also provide information and enable companies, organisations, universities, etc, to make their own informed decisions about the opportunities linked to EU enlargement. It will be important to link this work to national initiatives being planned by Trade Partners and it may be that this work can be combined with such national-level activity.

We would suggest that any work should be focused on producing very practical, user-friendly tools which would cover three main “types” of information:

- ▶ **Sector/cluster-specific market information.** Using the market studies referred to above, information packages could be prepared on a sector/cluster basis.

OUTPUT: As above (3-4 detailed market reports focusing on priority sectors/clusters and matching in detail the specific opportunities to local capabilities), with also summary documents produced in more user-friendly formats.

- ▶ **Improved access to key information** about the EU funding and legislative framework which is driving specific markets. There are currently public information sources providing similar information, but this is often provided as “raw” information and is also not packaged in a way that makes it easy for companies to use in an integrated way. There could be a role for SEEDA (working with Trade Partners?) to bring the relevant information sources together in a way that is customer-driven and easy to use. Initially, such a service would need to be focused on priority clusters-sectors where there was a clear value for SEEDA in providing this service.

OUTPUT: The development of an on-line “gateway” tool, accessed via the SEEDA website. This would group together key information and give dedicated access to key added-value information on legislation, markets, tenders, etc.



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Supporting action

The initiatives described above are all designed to raise awareness of companies and other relevant agencies, and to provide decision-makers with the basis to make more informed decisions about whether these specific markets are of importance to them. On the assumption that many more companies will see real opportunities for business development in Central & Eastern Europe, then it is also essential to address the support programmes available for those that decide to take action.

In this respect we would propose the following:

Business support via existing support tools

To the extent that SEEDA and its partners may be involved in specific company developments in relation to Central & Eastern Europe, the main basis for providing active support to local companies and organisations should be the existing tools. These include:

- ▶ Trade Partners UK
- ▶ The Business Link network, the Small Business Service and, where appropriate, Skills Insight
- ▶ The Euro Info Centres
- ▶ Other key business support agencies

In order to get maximum value from this network in the South-East of England, it would be important to strengthen the capability of the various support agencies in relation to the specific issues of enlargement.

Any initiative should be closely co-ordinated with Trade Partners but, in general terms, we would propose that consideration be given to the development and delivery of a short and focused skills development programme on specific issues related to business development and EU enlargement. This programme, which should be integrated with any ongoing staff development work for the agencies, should be targeted at those individuals providing support to companies in the South-East.

In addition to covering key issues of content, it should also include guidance on how to access other specialist support within the South-East and from other related agencies, e.g. Trade Partners UK. Ideally, this would include the development of a simple “self-access” kit that could be accessed and used interactively online.

OUTPUT: Short “in-house” training programme and online materials.



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In-country promotions, trade missions, exhibitions/fairs.

As with any international market, there is clearly benefit in Central Europe in visiting the market and for certain companies there may be benefits in the participation in general trade development activities of this type. There are many Trade Partners standard missions for Central Europe and other Chambers and agencies do put together specific missions. In addition, there are national stands taken at certain trade fairs which may be relevant to specific companies.

In our view, any promotion of business in relation to central Europe should include the active promotion, where possible, of such general events. In addition to this, however, it may be worth considering the development of specific **Cluster missions** for South-East companies. Where there is a specific group of companies developing a common or related interest in a entering or developing a clearly identifiable market in central Europe then there would be real value in providing more focused support to working with such companies as part of a business mission to Central Europe. Such missions would typically include more than one target country (covering cross-border clusters in Central Europe) and would need to include focused support in the pre- and post- mission phase.

OUTPUT: 3-4 Cluster-based missions.



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Specific Initiatives for Partnership

Promotion of RTD, technology, academic links

It is important to include the promotion of technology and research links within the strategy for responding to EU enlargement. There is considerable medium- to long-term potential in building technology/research partnerships between South-Eastern and Central European companies, research bodies, and universities.

There are opportunities across many of the priority “sectors” to achieve valuable partner arrangements and the fact that the accession countries are now part of the EU 6th Framework Programme offers considerable potential (although applications for the period 2004-2006 will involve some difference from purely internal EU partnerships).

Whilst there are university links in place, the RTD community will face a range of concrete issues in developing work in this field and there may well be value in some limited added support and intervention by SEEDA and its partners. More specifically, we would propose consideration of the following:

- ▶ SEEDA, working with the relevant partners, could sponsor an initial small-scale but focused workshop involving the key stakeholders to highlight the needs and consider ways in which a local partnership could bring value.

OUTPUT: Workshop focused on RTD / Technology Transfer with Central Europe, with particular emphasis on using EU 6th Framework programme.

Institutional links for SEEDA

Within this report, there is an emphasis on strengthening support to local companies and organisations. To complement and strengthen this there will be considerable mutual benefits in SEEDA itself developing institutional links with appropriate development agencies in Central Europe.

This will, of course, be closely linked to the regional approach (see the section above), and it is proposed that SEEDA actively considers developing a major ‘institutional’ project to provide focused business links with several agencies in Central & Eastern Europe. Such a project should clearly target the sectors/clusters of real interest to the South-East of England and include concrete business-led work.

In this context it should also be noted that, although there is currently no specific programme open, several pre-accession programmes are available to support such an initiative and it is likely that SEEDA could secure EU funding support to assist in this process.

OUTPUT: Stronger institutional links with relevant development agencies in Central Europe, with potential application for EU pre-accession support for specific initiatives.



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Inward Placement Scheme

In line with the broader target of encouraging more skilled people to choose to live and work in the South-East of England we would propose that SEEDA considers working with the relevant local partners to develop a specific initiative to attract high-quality central European graduates on to targeted work placement schemes within local businesses to support market development.

As described in this report, there are a large number of highly-talented and innovative graduates in Central & Eastern Europe that offer good basic skills, high levels of motivation, and very good English and other language skills. For many of these individuals, the prospect of a work placement period in the South-East of England would be extremely attractive and it is likely that a very high calibre of graduate would be found.

There are, of course, existing schemes available to support placement periods and this programme should be designed to complement these.

What we are proposing, however, is to develop a targeted programme that links together the placement with other business support initiatives to help South-East companies use the scheme to give practical assistance in the development of their businesses in relation to EU enlargement. We would also argue that there should be a focus given to supporting such a programme within the priority sectors, although this should not be exclusive. Such a scheme could involve the following:

- ▶ SEEDA, with the relevant partners, develops basic marketing/promotional materials and set up a basic management/administration structure;
- ▶ The recruitment process would probably be supported by the British Embassy staff in Central & Eastern Europe who would have access via the commercial staff to the relevant business sectors, universities, etc;
- ▶ The business support network and other partners can identify companies requiring specific support, in which the management/administration structure would help with matching;
- ▶ Support during the implementation phase would be given (in line with similar international schemes).

OUTPUT: New scheme targeted at graduate placements from Central & Eastern Europe working with South-East companies targeting the developing markets in these countries.



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Sources

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Sources

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ⁱ Each accession country has negotiated specific transitional arrangements. Details of these can be obtained from the DG Enlargement website in the section dealing with negotiations.

ⁱⁱ Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Slovenia, Romania, Bulgaria, Cyprus and Malta have been conducting formal negotiations. Turkey has applied for membership but the EU has not yet formally opened negotiations, and Croatia has submitted its application but discussions on negotiations have not yet started.

ⁱⁱⁱ The process of preparing for enlargement, for all of the countries, has involved meeting specific criteria ("Copenhagen criteria") set out in 1993. These required all potential member states to be able to satisfy political and economic criteria and also to establish, implement and enforce laws/regulation/systems fully in line with the European "acquis" (the full body of laws, regulations, procedures, etc). Over the last 5 years the European Commission has supported the countries in meeting all these obligations, whilst also assessing in a rigorous way the extent to which each country meets the general criteria and also how far they have progressed in each of the "chapters" of the acquis – this involves a sector-by-sector assessment which has been set out annually in Regular reports. Copies of these reports are available online at the website of DG enlargement.

^{iv} Several member states have now indicated that a date to begin negotiations with Turkey will be agreed at the Copenhagen summit in December 2002.

^v Phare investment of this type is within the so-called Phare Economic and Social Cohesion (ESC) programme. This has created investments in specific business infrastructure such as industrial zones / brown field site development, as well as setting up grant schemes similar to EU Structural Fund programmes where individual companies or institutions can apply for grants to assist in areas such as tourism development, e-business, innovation, vocational training, etc.

^{vi} This total of €8bn includes contracts that are already "open" for companies to tender, are still at forecast stage (i.e. it has been publicly announced that the tender is to be launched in the near future), or are not yet even forecast publicly but for which funds are allocated.

^{vii} A sample list of projects in specific areas is provided in annexe to this report.

^{viii} The greater budgets for Bulgaria and Romania will become available as the pre-accession funds were allocated to the 12 countries for the budget period 2000-2006. Once the "ten" join in 2004 they will immediately not be eligible for this pre-accession budget which is separate from, and additional to, any budget set aside for Structural Funds. Of course, not all or even the majority of the "unused" funds from ten will be re-directed to Bulgaria and Romania; there will be scope to add considerably to the existing annual allocations if this can be justified by effective demand and capacity in the countries themselves.

^{ix} This process is part of the preparation for the situation after membership when the countries will approve programmes and overall packages with Brussels but then as Member States will be responsible themselves for the specific way in which funds are spent and contracts are awarded (subject of course to the relevant regulatory framework and the overall monitoring procedures of the European Commission and the Court of Auditors). For several years, Phare and ISPA have been operating under the so-called "Decentralised Implementation System" (DIS) under which accession countries manage the process but the Commission via the Delegation in-country still has to provide ex-ante (i.e. advance) approval of tender documentation, contracts, and decisions on contractors. From 2003 onwards each of the countries will be moving into "Extended Decentralisation" or EDIS. EDIS means that the Commission will only have ex-post



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approval, in other words they monitor and check what has been done after decisions are taken, contracts awarded and projects are ongoing or completed. EDIS has already been applied within the SAPARD programme.

^x Bradley Dunbar Associates produced a business guide to the pre-accession programmes for the UK Development Business Team (now Trade Partners UK), and this includes a user-friendly description of relevant contract award procedures. Copies are available from Trade Partners. The full Commission procedures manual for awarding contracts, the “Practical Guide to Phare, ISPA and SAPARD Contract Procedures” (PRAG) is available online at the Europe Aid website. Procedures for the award of contracts after the countries become members will be governed by exactly the same rules and procedures that apply in Scotland or in other Member States at present.

^{xi} A significant number of EU projects set very clear formal requirements for companies that wish to bid. For example, in many Phare service contracts there is a requirement for bidders to have annual turnover of between two and five times the size of the contract for at least three years prior to the contract.

^{xii} The introduction of EU pre-accession grant schemes and also, after membership, the Structural Funds programmes will of course also include grants given to the private sector for investment in areas such as innovation, development of business competitiveness, training and human resource development, e-commerce, etc.