

# The Regional Economic Strategy Intervention Framework Technical Paper Number 2

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## ***The Regional Economic Strategy Intervention Framework***

### **1. Introduction**

To guarantee the efficient and equitable provision of goods and services provides a key rationale for government intervention in the economy. However this does not mean that it is always appropriate for the government (or other public body) to intervene. Intervention is only justified if the market fails to provide an appropriate level of goods and services. The market may fail to deliver because of various imperfections or failures in market mechanisms. In addition public intervention may introduce or exacerbate distortions and this should also be considered when considering intervention.

This paper introduces the concept of market failure and applies the concept to each of the priority actions set out in the new RES. The purpose of this paper is to satisfy a requirement of the Department of Trade & Industry and HM Treasury when assessing public policy interventions<sup>1</sup>. Following the articulation of market failure the paper sets out the framework for intervention that underpins the new RES. This framework is evidence based, assesses market failure, and allows for a consideration of options before arriving at final RES policy.

### **2. Market Failure<sup>2</sup>**

This section sets out a detailed explanation of market failure. Market failure refers to those situations in which the conditions necessary for the achievement of the market efficient solution either fail to exist or are contravened in some way. Markets rarely operate efficiently in practice- markets can produce too much or too little of a good or service and in some cases markets fail completely so that certain goods and services may not be produced at all. There are a number of ways in which markets can fail (not all of these will be a consideration in the development of RES policy):

#### **2.1 Market Power**

Market failure can occur when a firm develops a degree of monopoly power. This is the ability to influence the price of a particular good or service. If a business has a degree of monopoly power, then by pursuing profit maximising policies it will supply a smaller quantity of a good at a higher price than a competitive market would.

A business may acquire a degree of monopoly power through collusion with other businesses and failures of this kind are addressed through the competition regime.

However there are cases where monopoly supply is the only feasible way of providing a good or service. This tends to be where an industry has significant fixed costs that would not be covered by the revenue generated at the socially desirable level of output. These industries are not able to support a large number of suppliers. These are known as 'natural monopolies', an example of which is the railway system. The existence of these natural monopolies provides justification for public intervention.

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<sup>1</sup> This requirement was articulated by DTI at a meeting with *emda* on September 21<sup>st</sup> 2005.

<sup>2</sup> This section draws upon *Public Policy: Using Market Based Approaches*, Economics Paper 14, Department of Trade & Industry, September 2005

## **2.2 Public Goods**

Public goods have distinct characteristics that provide a rationale for public intervention. Public goods are non-excludable (which means that it is not possible to prevent those who have not paid for the good or service from consuming it- the free rider effect) and non-rival (which means that the cost of supply does not change when the number of consumers changes).

These characteristics of non-rivalry and non-excludability mean that suppliers may not be able to earn a sufficient amount of revenue to cover their costs and therefore have no incentive to provide goods or services that are nevertheless valued by society. This is the rationale for the public sector provision of these goods and services (examples of which would include street lighting or national defence).

## **2.3 Externalities**

Externalities (or spillovers) exist when the economic activity of one person or business impacts on others. Externalities can be beneficial or detrimental. They result in a discrepancy between the marginal private cost (or benefit) and the marginal social cost (or benefit) of production. This can lead to over-production or under-production compared to the socially optimal level of output. An example of a negative externality is pollution, while a positive externality would be the effect on neighbours of a well kept property.

The presence of externalities provides a further rationale for public sector intervention to ensure the provision of an optimal amount of a good or service.

## **2.4 Information Failures and Uncertainty**

Information failures can cause uncertainty and prevent transactions that would be beneficial from taking place. A person or business may not have enough information about a transaction and decide not to go ahead with it or to go ahead with an alternative that would provide a lower level of benefits. There can also be 'asymmetric information' where one party has more information relevant to a particular transaction than the other party. This can lead to moral hazard with more of an undesirable activity than is optimal taking place. These information failures and resulting uncertainties and mismatches provide a further rationale for public intervention.

## **2.5 Equity Considerations**

The above market failures may not exist but there still might be a requirement from society for some form of public intervention. This may arise as a result of the distributional consequences of market activities. There may be a view that all members of society should have access to a particular minimum standard of living. In this case the public sector can intervene to ensure that these desired equitable outcomes are achieved.

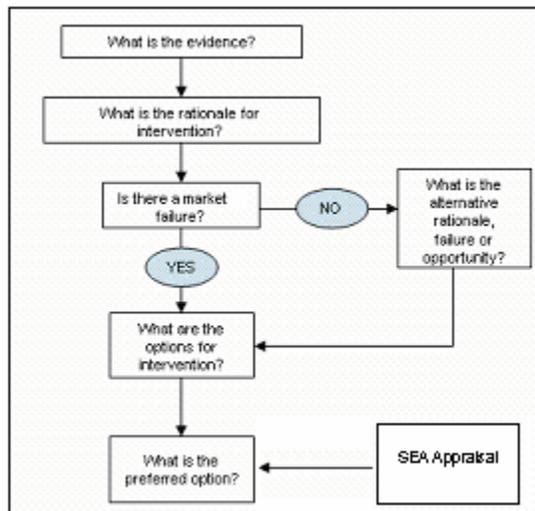
### 3. Public Failure

In the introduction to this paper it was noted that public intervention could also have undesirable outcomes. This section briefly notes how public sector failures might occur:

- Information problems: the operation of market mechanisms provides information (e.g. through price changes) that can determine the quantity and quality of a good or service to be produced. Public sector intervention can interfere with these signals;
- Inefficiency: market mechanisms direct production towards the most efficient producers of a good or service. Again public intervention can interfere with these market signals and direct public provision may not be as efficient as private provision;
- Principal-Agent problems: principal-agent problems can occur in both the public and private sectors and arise when the interests of the managers charged with implementing policy are not aligned with that policy. This can lead to inefficiencies;
- Capture: the public sector can be 'captured' by special interest groups that pursue an agenda that may be at odds with what is best for society as a whole. This is particularly the case where the public sector is involved in regulatory activities.

### 4. The Intervention Framework

The intervention framework has been prepared following discussions between *emda* and the DTI on the need for clear, evidence based justifications for RES actions. The framework sets out the evidence for intervention, a market failure argument to justify its inclusion, alternative options for intervention and identifies the preferred option. The basic model used can be set out as:



Each of the preferred options has been assessed against the objectives of the Strategic Environmental Assessment to ensure that the environmental effects of policy have been considered during the development of the RES. The remainder of this document applies this intervention framework to each of the priority actions identified in the new RES.

## Structural Theme 1: Raising Productivity

### Strategic Priority 1- Employment, Learning and Skills

#### 1a) Developing the Skill Levels of the Current and Future Workforce

##### Priority Action 1a-1: Engage Schools and Colleges with Businesses

<b>Evidence:</b> The Learning and Skills Council's <i>National Employer Skills Survey 2003</i> highlighted a lack of generic skills such as communication, customer handling and team working.
<b>Rationale:</b> Information and coordination failures exist that lead to mismatches in the demand for and supply of skills, which result in skills gaps in the workforce.
<b>Options:</b> Continuation of current policies Work with employers to integrate their requirements into the curriculum
<b>Preferred option:</b> Equip school and college leavers with the skills and knowledge that businesses require by: <ul style="list-style-type: none"><li>• developing stronger linkages between education providers and employers;</li><li>• working with businesses to ensure that every young person has access to a weeks work experience every year from the age of 14;</li><li>• improving the delivery of the provision and coordination of STEM (Sciences, Technology, Engineering and Maths) subjects, along with work-readiness of school leavers.</li></ul>

##### Priority Action 1a-2: Developing Adult Workforce Skills (Pathways for Learning)

<b>Evidence:</b> The East Midlands has an above average proportion of the working age population with no qualifications (12.2% compared to 10.7% for the UK), particularly among older workers. There is also a below average proportion of the working age population with NVQ Level 4+ qualifications (25.0% compared to 28.6% for the UK).
<b>Rationale:</b> Information and coordination failures exist that prevent people from engaging in and progressing through different levels of learning activities throughout their working lives.
<b>Options:</b> Continue to work within the current complex learning framework Work to simplify the system
<b>Preferred option:</b> Increase the proportion of the adult workforce studying for and gaining new qualifications through <ul style="list-style-type: none"><li>• developing clear learning pathways for people in work to progress from Skills for Life through to Foundation degrees by:</li><li>• improving the integration of existing qualifications;</li><li>• providing access to further opportunities to develop high level skills that are relevant to the economy;</li><li>• providing meaningful information to young people and those in work about the likely outcome of their chosen learning pathways including information on potential earnings, career opportunities and further skills needs</li></ul>

## **1b) Stimulating Business Demand for Skills**

### **Priority Action 1b: Stimulating Skills Demand**

**Evidence:** Data from the *East Midlands Life and Work Survey 2003* reported that the workforce in the region is under-employed (i.e. comparing qualifications that an employee has with what is required to do their current job). The survey suggests that only 24.1% of those with a Level 3 qualification and 52.1% of those with a Level 4 qualification felt that these qualifications were needed in their current jobs. *The Contribution of Skills to Business Performance*, published by the Institute for Employment Studies, discusses the benefits that accrue to individuals and organisations from investment in skills, qualifications and training.

**Rationale:** Information on the benefits of higher skilled workforce is frequently not clear to businesses. This causes businesses to adopt unsustainable business strategies and can lead to a lower demand for skills than is optimal.

**Options:** There is no viable alternative.

**Preferred option:** Encourage employers to stimulate demand for high level and transferable skills by:

- promoting the adoption of innovative working practices, including effective work organisation and employee development;
- using public procurement to promote skills development;
- providing support and ensuring easy access to information about how to develop the skills of the workforce (including a published network of named contacts in further and higher education that businesses can contact directly to diagnose and discuss their needs);
- providing consistent and relevant business support, advice and guidance;
- working with partners to improve management skills in the region.

## **1c) Improving the Infrastructure and Responsiveness of Skills Supply**

### **Priority Action 1c: Matching Skills Provision to Employer Demand**

**Evidence:** The Foster Review (*Review of Further Education*, Department for Education and Skills, June 2005) suggested that the primary purpose of publicly funded adult training should be to improve employability and supply economically valuable skills. Research undertaken by Lifelong Learning UK, the sector skills council responsible for education and training providers, suggest that teaching staff make up a smaller proportion of the sector's workforce in the East Midlands than in any other region. (*Further Education Workforce Data for England: An Analysis of Staff Individualised Records for 2003/04*, Lifelong Learning UK, 2005.).

**Rationale:** Information and public policy failures mean that mismatches between the demand and supply of skills can occur. Asymmetric information could mean that businesses do not access the optimal amount of training.

**Options:** Continuation of current supply side policy  
Work to align supply side and demand side policies

**Preferred option:** Prioritise resources in order to further develop the education and training infrastructure, capacity and quality assurance in order to deliver the skills demanded by employers in a growing economy by:

- ensuring courses are aligned to an ongoing assessment of skills needs;
- developing new management and leadership programmes from a regional strategy based on generic and sectoral input;
- ensuring that the design and delivery of vocational based learning is fit for purpose, delivering programmes that are up to date, use industry relevant technologies and a mix of learning techniques to improve flexibility of learning options;
- developing a specific programme of activity aimed at matching the type and supply of future higher level skills in further and higher education institutions to the needs of business.

## **1d) Improving the Infrastructure and Responsiveness of Skills Supply**

### **Priority Action 1d: Exploiting the Opportunity of Higher Education**

**Evidence:** The Leitch Review estimates that there must be an increase from 27% to 38% of adults with Level 4 and above qualifications if the government is to meet its national productivity targets by 2020. However, most of the workforce required for 2020 is already in employment. This means that adult skills need to be addressed.

**Rationale:** This action contributes to the development of adaptive capability in the region- the ability to develop new paths of economic development and avoid economic decline.

**Options:** There is no viable alternative to this- it contributes to government policy.

**Preferred option:** Ensure that adult learners, irrespective of age, gender or location, have access to academic and vocational qualifications to Level 4 and above whilst remaining engaged in the workforce by

- developing Lifelong Learning Networks to link further and higher education to improve access to skills provision; and
- supporting HEIs to increase the flexibility of their offer so more people already in the workforce have an opportunity to gain higher level skills.

## Structural Theme 1: Raising Productivity

### Strategic Priority 2- Enterprise and Business Support

#### 2a) Building an Enterprise Culture

##### Priority 2a: Harness a Culture of Enterprise

**Evidence:** Enterprise has been identified by the Government as one of the five drivers of productivity. There is a mixed picture in the East Midlands on indicators of entrepreneurial activity- VAT registration rates are below average whilst Total Entrepreneurial Activity is above average.

**Rationale:** As one of the key drivers of productivity, enterprise is also a key element of the region's adaptive capability. Creating a more entrepreneurial culture will strengthen the region's ability to adapt to change and create new paths of economic development. It will also seek to maximise the spillover benefits that are associated with enterprise education such as increased employability.

**Options:** There is no viable alternative.

**Preferred option:** Create a continuous path of enterprise education and awareness available to all in the region, linked to the provision of start-up assistance for those who wish to access it.

## 2b) Creating a Dynamic SME Base

### Priority 2b-1: Targeted Provision to Improve Business Creation

<p><b>Evidence:</b> The level of VAT registrations in the East Midlands is below the UK average (35 per 10,000 population compared to 38 in 2004) and levels of business starts (as measured by the Global Entrepreneurship Monitor) are relatively low among the 35-55 age group, who tend to be the most successful in terms of creating value and business survival rates.</p>
<p><b>Rationale:</b> There are a number of areas where the market fails for business starts. This priority action seeks to maximise the positive spillover benefits from enterprise education such as increased employability, and to overcome information failures around the provision of start up support.</p>
<p><b>Options:</b> Direct involvement in business creation  Promotion of an enterprise culture</p>
<p><b>Preferred option:</b> Create a coordinated long-term campaign to develop enterprise skills, raise the profile of enterprise and help people identify opportunities; focusing on people aged 35-55, particularly women. The 35-55 age group are proven to have the capital, competence and ideas to successfully start a new business (See priority action 9a(2) which relates to business support for under-represented groups and communities).</p>

### Priority 2b-2: Increase Business Survival

<p><b>Evidence:</b> The level of business start ups is below average in the East Midlands and business survival rates fall after 12 months (<i>Creating an Entrepreneurial Region: Exploring the Entrepreneurial Capacity of the East Midlands</i>, A Atherton and K Frith, University of Lincoln, 2005).</p>
<p><b>Rationale:</b> There are a number of areas where the market fails for business starts. This priority action seeks to overcome information failures that exist around the provision of business support.</p>
<p><b>Options:</b> To provide start up support only.  To provide support to all businesses.</p>
<p><b>Preferred option:</b> Provide best practice support through the Business Link brand, linked to the enterprise campaign, to ensure that all people are offered:</p> <ul style="list-style-type: none"> <li>• consistent high quality advice prior to setting up their businesses, irrespective of where they are based in the region, that is tailored to their individual needs;</li> <li>• ongoing business support as their business grows that is targeted at increasing survival rates amongst the businesses that are 12 to 36 months old.</li> </ul>

## **2c) Supporting Innovation and Diversification in Manufacturing**

### **Priority 2c: Supporting Innovation and Diversification in Manufacturing**

<p><b>Evidence:</b> The manufacturing sector accounts for approximately 23% of economic output in the East Midlands and directly employs more than 300,000 people. Despite there being areas of strength (such as the manufacture of transport equipment and food &amp; drink) much of the manufacturing sector has low levels of productivity and is vulnerable to continued economic re-structuring.</p>
<p><b>Rationale:</b> A large part of the manufacturing sector in the region is engaged in the production of standardised products that compete in markets on a cost basis. This is increasingly unsustainable and the sector risks further decline which will impact on regional economic performance.</p>
<p><b>Options:</b> Generic support for the manufacturing sector Targeted support for the manufacturing sector</p>
<p><b>Preferred option:</b> Through the national Manufacturing Advisory Service, target support to firms that are ready and willing to innovate and assist their investment in diversifying their products, processes or markets and link these firms to wider Business Link support for growth and skill development.</p>

## 2d) Overcoming Barriers to SME Growth

### Priority Action 2d-1: Providing High Quality Business Support

<p><b>Evidence:</b> Business advice works- businesses that take up any form of advice report profits of double those who do not. However only one third of businesses in the East Midlands take advice of any form, and this figure is even lower for micro-businesses (<i>The Advice Dividend</i>, Business Link, 2004).</p>
<p><b>Rationale:</b> This priority action seeks to address information failures that exist around the provision of business support.</p>
<p><b>Options:</b> HM Treasury, in the 2006 Budget, recognised the complexity of business support arrangements and have set a target for their simplification. As this is government policy there is no alternative.</p>
<p><b>Preferred option:</b> Develop an integrated regional business support network that:</p> <ul style="list-style-type: none"> <li>• helps SMEs to overcome the knowledge based barriers that can prevent them from maximising growth opportunities;</li> <li>• provides access to relevant advice and guidance to businesses as they grow; is easy for businesses to understand and access.</li> </ul>

### Priority 2d-2: Improving Access to Finance

<p><b>Evidence:</b> Despite recent progress, SBS research indicates that there are still gaps in funding provision for new or growing firms in the East Midlands (<i>A Mapping Study of Venture Capital Provision in SMEs in England</i>, Small Business Service, 2005). SBS research also points to a lack of 'investment readiness' as a barrier for firms to access growth (<i>A Government Action Plan for Small Business: The Evidence Base</i>, Small Business Service, 2003)</p>
<p><b>Rationale:</b> There is a degree of risk and uncertainty associated with new and growing firms that means that the market fails to provide an adequate level of finance at certain levels. HM Treasury and the Small Business Service suggest that this is for amounts up to £2m. (<i>Bridging the Finance Gap</i>, HM Treasury, 2003 and <i>Improving Access to Finance for Small Business</i>, Small Business Service, 2003).</p>
<p><b>Options:</b> Maintain current provisions  Work with private sector to improve provision</p>
<p><b>Preferred option:</b> Create a regional 'escalator' of funding sources, from both the public and private sectors, so that businesses have access to appropriate finance as they grow, delivered through:</p> <ul style="list-style-type: none"> <li>• programmes that ensure that they are "investment ready" to maximise opportunities available to them;</li> <li>• targeted financial support packages for specific business groups</li> </ul>

## 2e) Supporting Firms to Become Internationally Competitive and Attracting Foreign Investment

### Priority 2e-1: Increasing International Trade

<p><b>Evidence:</b> Businesses that operate internationally, whether foreign owned or domestic exporters, tend to have higher levels of productivity compared to those who operate in domestic markets only. (see, for example, <i>Multinationals and US Productivity Leadership: Evidence from Great Britain</i>, C Criscuolo and R Martin, OECD, April 2004 and <i>Science, Technology and Industry Outlook 2004</i>, OECD, 2005).</p>
<p><b>Rationale:</b> Risk and uncertainty associated with a lack of information on how to move into overseas markets can act as a barrier to businesses.</p>
<p><b>Options:</b> Rely on current trade promotion activities.  Re-position trade promotion activities to take into account developments in the global economy.</p>
<p><b>Preferred option:</b> Support businesses to increase their overseas trade by:</p> <ul style="list-style-type: none"> <li>• providing tailored export services, including specialist support for businesses looking for opportunities in Brazil, Russia, India and China (BRIC);</li> <li>• devising programmes to develop business skills in areas such as international sales and marketing, language and culture;</li> <li>• assisting companies, where appropriate, to internationalise through offshoring, joint ventures and strategic partnerships.</li> </ul>

### Priority 2e-2: Targeting Foreign Direct Investment

<p><b>Evidence:</b> There is a significant body of research that suggests that there are spillover benefits associated with the presence of more productive foreign owned businesses in the UK (<i>Raising UK Productivity- Developing the Evidence Base for Policy</i>, Department of Trade &amp; Industry, 2004).</p>
<p><b>Rationale:</b> Spillover benefits are a positive externality that will contribute to the development of the East Midlands.</p>
<p><b>Options:</b> Generic FDI support offer  To develop a more targeted approach that will maximise spillover benefits.</p>
<p><b>Preferred option:</b> Target FDI attraction on those market sectors that are likely to contain knowledge driven, R&amp;D intensive investments and back this up with:</p> <ul style="list-style-type: none"> <li>• specialist support to the investing companies to their local needs, including aftercare support;</li> <li>• specialist support that meets the needs of those larger companies that fall outside mainstream business support mechanisms.</li> </ul>

## **2f) Building the Visitor Economy**

### **Priority Action 2f: Increasing Visitor Spend**

**Evidence:** The visitor economy makes a significant contribution by bringing resources into the region. The East Midlands Tourism *Corporate Plan 2005-2008* reports that annual visitor spending in the region is over £4bn and supports 150,000 jobs.

**Rationale:** Visitor spending is a significant injection into the regional economy and this action seeks to maximise its value.

**Options:** No viable alternative

**Preferred option:**

- Target regional and sub-regional marketing and promotion with the aim of increasing visitor spend, particularly from staying and inbound visitors
- Develop a coordinated campaign to encourage investment in public realm, conferencing and business tourism facilities.

## **2g) Harnessing Culture in the East Midlands**

### **Priority Action 2e: Targeting Growth of Creative and Cultural Industries**

**Evidence:** The Department for Culture, Media and Sport estimates that cultural and creative industries account for 7.9% of UK GDP. The Cox Review highlighted the wider role of creative industries and the need to enhance business productivity by drawing on creative capabilities (*The Cox Review: Enhancing the Role of Creativity in Driving the Productivity Performance of SMEs in the UK*, HM Treasury, 2005).

**Rationale:** Cultural institutions and creativity have been identified as contributing to a regions adaptive capability and its ability to define new paths of economic development.

**Options:** The emphasis of government policy on this area means that there is no viable alternative.

**Preferred option:**

- Protect, conserve and enhance the key regional cultural and historic assets to maximise their contribution to the regional economy;
- Support the cultural sector to create opportunities for community participation and to develop social capital.

## 2h) Supporting SMEs to Harness Business Opportunities Such as Public Procurement

### Priority Action 2f-1: Maximising the Benefits of Public Procurement

<p><b>Evidence:</b> The potential scale of public sector procurement means that it can have a significant impact on regional development. Total identifiable expenditure in the East Midlands was around £23.2bn in the East Midlands (<i>Public Expenditure Statistical Analyses 2005</i>, HM Treasury, 2005). Although not all of this is available for procurement it does indicate the potential size of this policy lever.</p>
<p><b>Rationale:</b> There are information failures (on both the public and private sides) that prevent businesses from accessing public contracts and this policy aims to address this barrier.</p>
<p><b>Options:</b> Lead the development of a coordinated approach in order to maximize the benefits from procurement.                      Training procurers and those looking to benefit from procurement.</p>
<p><b>Preferred option:</b> Develop a Regional Procurement Opportunities Plan aligned with the National Procurement Portal to open up more market opportunities, in the region and nationally, to regional businesses.</p>

### Priority Action 2f -2: Maximising the Benefits of the London 2012 Olympic and Paralympic Games

<p><b>Evidence:</b> The experience of non-host regions in Australia at the time of the Sydney games in 2000, suggests that the most significant economic opportunities associated with the games will be prior to the games themselves- in particular procurement and pre-games training camps.</p>
<p><b>Rationale:</b> There is an opportunity for the East Midlands to benefit from the Games but information failures around procurement activity could be a barrier to the successful exploitation of these.</p>
<p><b>Options:</b> Not develop a plan to capture benefit from the Olympics                      Develop a plan to capture benefit from the Olympics</p>
<p><b>Preferred option:</b> Develop a 2012 Action Plan which:</p> <ul style="list-style-type: none"> <li>• provides businesses with the information and support they need to win contracts associated with the 2012 Games;</li> <li>• optimises the opportunities from the 2012 Games by providing dedicated support/advice to SMEs bidding for contracts, and the targeted marketing of training facilities;</li> <li>• builds the region's sports infrastructure to attract elite athletes as well as benefit local communities, so a legacy in terms of skills, health, culture and participation remains.</li> </ul>

**Structural Theme 1: Raising Productivity**  
**Strategic Priority 3- Innovation**

**3a) Increasing Investment in Research & Development**

**Priority Action 3a-1: Increasing Research & Development**

<p><b>Evidence:</b> Innovation activity is one way in which developed economies can maintain competitive advantage- 'it offers firms a high wage-high growth strategy' (<i>Innovation Policy</i>, C Oughton and M Frenz, Birkbeck, University of London, August 2005). Research published by the OECD shows that a 1% increase in business R&amp;D leads to a 0.13% increase in multi-factor productivity and that the figure for foreign R&amp;D is higher, at 0.44% (<i>R&amp;D and Productivity Growth: Panel Data Analysis of 16 OECD Countries</i>, D Guellec and B van Pottlesberghe de la Potterie, OECD, 2001).</p>
<p><b>Rationale:</b> The outcomes from research and development are not fully captured by the firm that invests in R&amp;D. These spillover benefits are beneficial for society but it means that firms do not have an incentive to invest in the socially optimal level of R&amp;D.</p>
<p><b>Options:</b> Increasing R&amp;D is government policy so there is no viable alternative.</p>
<p><b>Preferred option:</b> Provide targeted support to foster innovation within businesses and encourage them to undertake more research and development with the aim of:</p> <ul style="list-style-type: none"> <li>• creating new market opportunities;</li> <li>• developing innovative new products, processes and services;</li> <li>• maximising the opportunities offered by existing support mechanisms (such as R&amp;D tax credits) and improving access to finance for R&amp;D.</li> </ul>

**Priority Action 3a-2: Developing Research Excellence**

<p><b>Evidence:</b> Levels of publicly funded R&amp;D in the East Midlands are relatively low. Government funded R&amp;D is equivalent to 0.1% of GVA, which is half the national average. In addition Higher Education funded R&amp;D is equivalent to 0.4% of GVA, which is below the national average of 0.5%.</p>
<p><b>Rationale:</b> Innovative institutions are one element of adaptive capability- which is the ability of regions to develop new paths of economic development and avoid decline. This action will contribute to the development of adaptive capability in the East Midlands.</p>
<p><b>Options:</b> Lobby government for a greater share of publicly funded R&amp;D          Work to develop research excellence in the region</p>
<p><b>Preferred option:</b></p> <ul style="list-style-type: none"> <li>• Develop research excellence so the region can compete for and benefit from a larger share of public and privately funded R&amp;D;</li> <li>• Enhance the growth and investment in the region's research and science base, including the Universities.</li> </ul>

### 3b) Helping Existing Businesses Deploy Technologies and Processes

#### Priority Action 3b: Developing and Applying New Technologies

<b>Evidence:</b> Technology impacts on business performance. An example is ICT investments, to which 40% of EU productivity growth is attributed ( <i>A European Information Society for Growth and Employment</i> , i2010, MEMO/05/184, 2005). Given that technology using sectors are much larger than technology developing sectors in the economy, the application of technologies has significant benefits.
<b>Rationale:</b> The development and deployment of new technologies are one element of adaptive capability- which is the ability of regions to develop new paths of economic development and avoid decline. This action will contribute to the development of adaptive capability in the region.
<b>Options:</b> Policy aimed at the development of new technologies Policy aimed at the development and deployment of new technologies
<b>Preferred option:</b> <ul style="list-style-type: none"><li>• Provide assistance in the development, promotion and implementation of new enabling technologies, products and processes, utilising support services that are aligned with the needs of businesses</li><li>• Establish collaborative networks between researchers, businesses, venture capitalists to ensure emerging technologies are brought to market.</li></ul>

### 3c) Resource Efficiency Through Effective Use of Technology and Management Practices

#### Priority Action 3c: Providing Business Support on Resource Efficiency

<b>Evidence:</b> Businesses in the region produce around 14 million tonnes of waste material each year. Nationally, the Environment Agency show that waste minimization could yield a saving of almost £3bn in manufacturer's operating costs and £1.8bn through energy efficiency ( <i>Contribution of Good Environmental Regulations to Competitiveness</i> , Network of European Environmental Protection Agencies, 2005).
<b>Rationale:</b> Waste is a by-product of economic activity, the costs of which are not fully borne by the producer. This externality leads to levels of production that are above the socially optimum level.
<b>Options:</b> The production of waste at current or increasing levels in the region Aim to reduce the amount of waste in the region
<b>Preferred option:</b> Introduce a range of resource efficiency business support measures that enable regional businesses to adopt leading best practice related to: <ul style="list-style-type: none"><li>• avoidance, reduction and improved management of waste;</li><li>• creation of new markets for innovative products and services derived from waste;</li><li>• more productive and efficient use of energy, water and materials;</li><li>• promotion and implementation of environmental and sustainable benefits to businesses</li></ul>

### 3d) Translating Scientific Excellence Into Business Success

#### Priority Action 3d-1: Maximising the Impact of Science City Nottingham

<p><b>Evidence:</b> Cities are drivers of economic growth and act as pools of knowledge and attract highly skilled workers (<i>City Regions and Polycentricity: The East Midlands Urban Network</i>, M Coombes et al, University of Newcastle, 2005). Nottingham's strengths include two universities, the Queens Medical Centre, (the largest teaching hospital in Europe), and the British Geological Survey, which is located just outside of the city.</p>
<p><b>Rationale:</b> This is an opportunity to develop the adaptive capability of the East Midlands.</p>
<p><b>Options:</b> No sensible alternative.</p>
<p><b>Preferred option:</b> Maximise the impact of Nottingham's Science City designation to the benefit of the wider region particularly in science and technology focused infrastructure development and regeneration by:</p> <ul style="list-style-type: none"> <li>• encouraging greater and more effective collaborative working between the Nottingham Universities, other research establishments and businesses to build the infrastructure, expertise and knowledge needed to attract and retain high value science and technology based businesses;</li> <li>• extend outwards from Nottingham to develop regional research excellence.</li> </ul>

#### Priority Action 3d-2: Commercialising Scientific Excellence through Facilitated Business Collaboration

<p><b>Evidence:</b> Research published by the Institute for Fiscal Studies shows that, based on a sample of UK companies, patents have a significant impact on firm level productivity and market value (<i>Real Options, Patents, Productivity and Market Value: Evidence from a Panel of British Firms</i>, N Bloom and J Van Reenen, Institute for Fiscal Studies, 2000).</p>
<p><b>Rationale:</b> There are costs and information requirements associated with patenting and other forms on formalising intellectual property rights and this action is aimed at addressing these barriers.</p>
<p><b>Options:</b> Relatively low levels of commercialisation of scientific excellence in the region continue</p> <p style="padding-left: 40px;">Work to increase levels of collaboration and commercialisation of scientific excellence</p>
<p><b>Preferred option:</b> Introduce more effective initiatives to facilitate greater collaboration between businesses and the regional research community, including the universities, with the aim of:</p> <ul style="list-style-type: none"> <li>• matching research capability to business needs, leading to increased commercialisation of the region's scientific excellence;</li> <li>• exploiting the benefits associated with wider intellectual property rights in order to develop innovative new products and services and create new market opportunities;</li> <li>• providing specific business support throughout the commercialisation process</li> </ul>

**Priority Action 3d-3: Development of Land and Property**

<b>Evidence:</b> There are a range of requirements for sites and premises in the East Midlands, ranging from incubator and small workshop space to larger development sites.
<b>Rationale:</b> There are a number of reasons that justify public intervention in the supply of sites and premises. The market fails to provide suitable sites for smaller companies because they can not cover the sunk costs involved in development. The Market can also fail to provide a solution when reclamation and remediation needs to take place before a site can be developed.
<b>Options:</b> Continued under-provision through the market Public intervention to ensure an adequate supply
<b>Preferred option:</b> Develop land, property and facilities which maximize opportunities for collaborative innovation activities and inward investment by providing quality sites and buildings which support enterprise development. Proposed developments should: <ul style="list-style-type: none"><li>• be linked to RES priority sectors;</li><li>• maximise clustering benefits;</li><li>• improve links between academic institutions and businesses;</li><li>• be supported by the work of Innovation East Midlands and Blueprint;</li><li>• encourage sustainable building design.</li></ul>

### **3e) Growing the Region's Key Sectors**

#### **Priority Action 3e: Growing the Region's Key Sectors**

**Evidence:** A range of economic data was examined for 30 industrial sectors in the East Midlands in order to assess where the region's comparative advantage lies. Data examined included: scale (in absolute terms and relative to the UK), productivity, quality of jobs and growth prospects.

**Rationale:** To contribute to the development of adaptive capability in the region- the ability to develop new paths of economic development and avoid economic decline.

**Options:** To use alternative criteria and support different sectors

**Preferred option:** Ensure that the priority sectors (transport equipment, construction, food and drink and healthcare) are considered in the implementation of other actions in the RES to support growth, address skills needs and focus efficiency and excellence, for example:

- by ensuring skills and training providers are matching their provision to the needs of these sectors; and
- by encouraging business support organisations to consider these sectors in the setting of their priorities and delivery of their services.

## Structural Theme 2: Ensuring Sustainability

### Strategic Priority 4- Transport and Logistics

#### Priority Action 4-1: Improve Transport Connectivity and Accessibility

**Evidence:** Most congestion occurs in the main urban areas and on key strategic long-distance routes in the vicinity of the main urban areas. Road is still the major transport mode for freight. Access to services and employment remains a challenge outside of the urban areas with the East Midlands. For example, in *The East Midlands 2006: Transport & Infrastructure* it is reported that 34.5% of those living in a sparse hamlet/isolated dwelling live within 4km of a library.

**Rationale:** Congestion is an example of a negative externality that will be addressed by this priority action. This action will also address equality issues that arise as a result of the geographical dispersion of the population within the region.

**Options:** Current conditions could be allowed to continue.  
To improve upon the contribution that the current infrastructure and services make to the development of the region.

**Preferred option:** To maximise the contribution the region's transport infrastructure and services make to the delivery of the RES objectives, the following actions will be promoted by regional partners to be taken through national agencies, RSS and RTS, Local Transport Plans and Development Frameworks, and transport operators :

- Improve inter and intra-regional connectivity by strengthening links between the regions main urban centres, improving reliability on key routes for passengers and freight, and address poor connectivity or capacity to key centres in other regions, including London, Leeds, Birmingham, and Manchester.
- Improve international accessibility by improving surface access to NEMA and other airports serving the region (including Robin Hood Airport Doncaster Sheffield), and strengthening connectivity to mainland Europe by a range of modes, including rail via London.
- Support regional regeneration and growth by improving access from all communities to employment and maximising the impacts of economic drivers and growth areas, unlocking investment sites in disadvantaged communities, and addressing inequality by improving accessibility.
- Contribute to environmental, quality of life, and wellbeing indicators by implementing demand management measures, and access to recreation, sport, and cultural facilities.

**Priority Action 4-2: Maximise Benefits of Nottingham East Midlands Airport and Robin Hood Airport**

<p><b>Evidence:</b> Passenger traffic at NEMA has almost tripled between 1994 and 2004. In addition the amount of freight passing through the airport has increased by 3.5 times since 1994. Recent work for <i>emda</i> suggests that almost 5,000 jobs in the region are supported by express freight activity at NEMA (<i>The Importance of the Express Freight Delivery Industry to the East Midlands Economy and Economic Impact of Express Carriers for UK plc</i>, Oxford Economic Forecasting, January 2006). Airports have also been identified as a key driver of regional economic development (<i>Trading Places: Competitive Cities in the Global Economy</i>, J Simmie, Oxford Brookes University, 2000).</p>
<p><b>Rationale:</b> NEMA and other airports generate negative externalities such as noise and pollution. However they are also a driver of economic development and contribute to the development of adaptive capability in the region.</p>
<p><b>Options:</b> Government policy is for the expansion of airports so the region has to maximize the benefits that arise from this policy.</p>
<p><b>Preferred option:</b> Realise the economic opportunities and benefits of NEMA and Robin Hood Airport. This includes recognising the need to address and monitor key environmental issues to help secure long-term sustainable growth. Key issues for action by local, regional and national partners are:</p> <ul style="list-style-type: none"> <li>• Surface access improvements to reduce the local impact of transport movements, and enable all communities can access employment and training opportunities;</li> <li>• Secure employment land supply in surrounding urban areas is through local development frameworks and strategies;</li> <li>• Ongoing partnership working to ensure skills, labour supply, and training opportunities help meet future Airport needs through groups like the NEMA Employers Forum;</li> <li>• Ongoing mitigation and technological responses to help reduce local noise and environmental impacts of the forecast growth in passenger and freight activity.</li> </ul>

**Priority Action 4-3: Travel Demand Management**

<p><b>Evidence:</b> Between 1994 and 2004 there was an increase of 25.5% in the amount of vehicle kilometres travelled on the East Midlands road network, which is above the average for England (20.4%). In addition car use is above the English average, the average driver in the East Midlands travelling 4,070 miles compared with 3,487 for England (<i>Transport Statistics Bulletin- Regional Transport Statistics</i>, Department for Transport, 2005)</p>
<p><b>Rationale:</b> Congestion and car use imposes costs on others (time, environmental and health) and the aim of this action is to address these externalities.</p>
<p><b>Options:</b> Create additional infrastructure to cope with increased demand          Make the best use of existing infrastructure</p>
<p><b>Preferred option:</b> Support regional competitiveness by improving transport efficiency and reducing road congestion by developing innovative approaches to behavioural change, travel demand management and integration, including exploring measures of congestion charging and other parking measures to realise economic, wellbeing and environmental benefits.</p>

## Strategic Priority 5- Energy and Resources

### 5a) Responding to the Challenge of Climate Change

#### Priority Action 5a-1: Adaptation to Climate Change

<b>Evidence:</b> It has been reported that the average annual temperature in central England has increased by around 1°C over the last 100 years ( <i>DEFRA Science Notes 2: How is DEFRA Tackling Climate Change?</i> , Department for the Environment, Food and Rural Affairs, 2005). More extreme weather conditions that result from climate change have economic costs associated with them (e.g. lost output).
<b>Rationale:</b> Climate change is a negative externality associated with economic activity and this priority action seeks to address this market failure.
<b>Options:</b> Climate change has been identified by the government as 'the most severe problem we are facing today' (David King, UK Government's Chief Scientist, 2003) so there is no viable alternative.
<b>Preferred option:</b> Ensure that public and private sector leaders understand and respond to the impacts of climate change by: <ul style="list-style-type: none"><li>• developing a regional climate change adaptation and mitigation strategy/action plan;</li><li>• providing support to businesses to undertake climate change risk analyses</li></ul>

#### Priority Action 5a-2: Reducing the Demand for Energy and Resources

<b>Evidence:</b> Demand for, and use of, energy contributes to the emissions of greenhouse gases in the region. Despite falling during the 1990s as technological improvements made generating plant more efficient, emissions of greenhouse gases have begun to increase and now stand at around 40 billion kg CO <sub>2</sub> equivalents. In 2002/03 over 20 million tonnes of waste were generated in the East Midlands, costing over £400 million to dispose of.
<b>Rationale:</b> Greenhouse gases and waste are pollutants associated with economic activity and this priority action seeks to address these negative externalities.
<b>Options:</b> Maintain current rates of energy usage and waste generation. Become more resource efficient and minimise energy use and waste generation.
<b>Preferred option:</b> Ensure that our need for energy and resources is minimised by: <ul style="list-style-type: none"><li>• investing in better management and skills</li><li>• driving change through public procurement</li><li>• encouraging the use of low carbon technologies</li><li>• stimulating clean design</li></ul>

## 5b) Exploitation of New and Growing Low Carbon Markets

### Priority Action 5b-1: Utilising Renewable Energy Technologies

<p><b>Evidence:</b> Demand for, and use of, energy contributes to the emissions of greenhouse gases in the region. Despite falling during the 1990s as technological improvements made generating plant more efficient, emissions of greenhouse gases have begun to increase and now stand at around 40 billion kg CO<sub>2</sub> equivalents. Renewables still account for only a small proportion of energy generation in the region.</p>
<p><b>Rationale:</b> Greenhouse gas emissions are a negative externality that this priority action seeks to address.</p>
<p><b>Options:</b> Maintain current levels of non-renewable energy production                  Seek to reduce dependency on non-renewables and increase energy production from renewable sources.</p>
<p><b>Preferred option:</b> Maximise the economic and environmental benefits of renewable energy technologies by promoting their development and deployment through:</p> <ul style="list-style-type: none"> <li>• the creation of a regional renewables investment plan;</li> <li>• promote demand for and showcase renewables technologies;</li> <li>• support supply chain development to ensure regional economic benefit from renewables investments</li> </ul>

### Priority Action 5b-2: Exploiting Low Carbon Technologies

<p><b>Evidence:</b> Demand for and use of energy contributes to the emissions of greenhouse gases in the region. Despite falling during the 1990s as technological improvements made generating plant more efficient, emissions of greenhouse gases have begun to increase and now stand at around 40 billion kg CO<sub>2</sub> equivalents. Consumers are becoming more carbon sensitive and by 2010 the marketplace for low carbon technologies is estimated to be worth over £400 million (The Rt Hon Patricia Hewitt, <i>Profiting from the Low Carbon Economy</i>, IPPR conference, December 2001).</p>
<p><b>Rationale:</b> Greenhouse gas emissions are a negative externality that this priority action seeks to address.</p>
<p><b>Options:</b> Maintain current carbon intensive activities                  Develop low carbon alternatives</p>
<p><b>Preferred option:</b> Ensure that businesses are well placed to exploit the opportunities presented by the growing global marketplace for low carbon products and services through:</p> <ul style="list-style-type: none"> <li>• regional awareness raising and communications campaign;</li> <li>• the provision of dedicated low carbon business support;</li> <li>• creating stronger linkages between the private sector and Higher Education Institutions active in low carbon research and development</li> </ul>

## 5c) Ensuring an Infrastructure for a Low Carbon Economy

### Priority Action 5c: Energy and Waste Capacity

**Evidence:** Large coal fired capacity in the region is approaching the end of its operational lifetime and electricity distribution networks are approaching the end of their design life. In addition the region's existing capacity for waste disposal will be exhausted within ten years even if waste reduction targets are met (*Regional Waste Strategy*, East Midlands Regional Assembly, 2005).

**Rationale:** There are elements of natural monopoly that this action is addressed at but the key rationale is to ensure energy supplies in the region and avoid potential loss of output that might be caused by energy shortages.

**Options:** There is no viable alternative to securing energy supply and waste management routes.

**Preferred option:** Promote the development of a more secure, diverse and sustainable energy and waste infrastructure and innovative approaches to providing energy and waste services within our economy by:

- promoting and investing in renewable and low carbon energy generation;
- promoting and investing in diverse and localised energy supply;
- promoting and investing in diverse and localised waste management;
- influencing private sector utilities and regulators concerning the capacity and longevity of existing supply and distribution and waste management infrastructure.

**Strategic Priority 6: Environmental Protection and Enhancement**

**Priority 6a): Protecting and Enhancing our Environmental Infrastructure to Ensure Sustainable Economic Growth**

**Priority Action 6a-1: Environmental Infrastructure**

<p><b>Evidence:</b> The economy and key industrial sectors are directly dependent upon a well functioning environmental infrastructure (resources, sinks and services) which are inseparable from our economic and physical infrastructure (transport, power, buildings etc). Continuing with patterns of over-consumption will degrade these systems, inhibit growth and affect our well-being. (<i>Securing the Future: UK Sustainable Development Strategy</i>, ODPM, 2005).</p>
<p><b>Rationale:</b> The use of the environmental infrastructure is an example of the 'tragedy of the commons' where individual consumption decisions lead to unsustainable use of a collective good. This priority action seeks to address this market failure.</p>
<p><b>Options:</b> Allocation of property rights to environmental infrastructure          Optimise resource use within collective ownership</p>
<p><b>Preferred option:</b> Develop and promote innovative and sustainable approaches to supply and demand management (relating to travel, energy, water and materials) to reduce pressures on environmental infrastructure by:</p> <ul style="list-style-type: none"> <li>• improving resource efficiency (see priority action 3c)</li> <li>• addressing travel demand management (see priority action 4a(2))</li> <li>• delivering sustainable energy and resource management (see all the actions under the Energy and Resources section)</li> </ul>

**Priority Action 6a-2: Sustainable Construction**

<p><b>Evidence:</b> Of the 20.4 million tonnes of waste produced in the East Midlands in 2002/03, 48% was from Construction &amp; Demolition (<i>Sustainable Development Indicators</i>, DEFRA, 2005). New buildings tend to be more energy efficient and contribute to community well-being.</p>
<p><b>Rationale:</b> Waste and pollutants produced through energy use are examples of negative externalities that this priority seeks to address.</p>
<p><b>Options:</b> Sustainable construction is government policy so there is no viable alternative.</p>
<p><b>Preferred option:</b> Ensure that investments in the built environment integrate climate change considerations through:</p> <ul style="list-style-type: none"> <li>• raising awareness of climate change factors on the built environment (see priority action 5a under the Energy and Resources section)</li> <li>• applying high quality design and environmental standards for all developments (refurbishments and new builds) receiving public sector support;</li> <li>• promoting and replicating models of existing best practice, such as Sherwood Energy Village and Attenborough Nature Reserve.</li> </ul>

**Priority Action 6a-3: Cleaner Production Processes**

**Evidence:** Demand for, and use of, energy contributes to the emissions of greenhouse gases in the region. Despite falling during the 1990s as technological improvements made generating plant more efficient, emissions of greenhouse gases have begun to increase and now stand at around 40 billion kg CO<sub>2</sub> equivalents. In 2002/03 over 20 million tonnes of waste were generated in the East Midlands, costing over £400 million to dispose of.

**Rationale:** Greenhouse gases and waste are pollutants associated with economic activity and this priority action seeks to address these negative externalities.

**Options:** Continue to rely on current production processes  
Support the development of cleaner, more efficient production processes

**Preferred option:** Support the development and adoption of cleaner production processes and shift consumption towards goods and services with lower environmental impacts through:

- the provision of clean production process audits to businesses
- building links between the regions Higher Education Institutions and businesses

## **Priority 6b): Protecting and Enhancing Green Infrastructure Through Environmental Stewardship**

### **Priority Action 6b-1: Improve Damaged Environments**

<b>Evidence:</b> Seventy four sites in the East Midlands were identified by the Environment Agency as contaminated in March 2005. Levels of biodiversity in the region- as indicated by the condition of Sites of Special Scientific Interest and a decline in the number of farmland, woodland and wetland birds- are below average ( <i>The East Midlands in 2006: The East Midlands Environment, emda, 2006</i> ).
<b>Rationale:</b> It is often the case that the public good nature of site provision limits the extent to which the private sector will get involved in the remediation and reclamation of previously used industrial sites. This priority action aims to address this market failure and contribute to adaptive capability through the provision of an improved environment.
<b>Options:</b> To leave remediation and reclamation to the private sector To facilitate private sector remediation and reclamation of damaged environments
<b>Preferred option:</b> <ul style="list-style-type: none"><li>• Improve natural environments, damaged as a legacy of former industrial and development activity, particularly where this is a barrier to investment in the region, especially in the coalfields.</li><li>• Encourage sustainable agriculture which enhances and protects the countryside and protects the regions biodiversity.</li></ul>

### **Priority Action 6b-2: Protect and Enhance Green Infrastructure**

<b>Evidence:</b> Levels of biodiversity in the region- as indicated by the condition of Sites of Special Scientific Interest and a decline in the number of farmland, woodland and wetland birds- are below average.
<b>Rationale:</b> Externalities that arise as a result of economic activity (waste, emissions, etc) all adversely affect levels of biodiversity and this priority action aims to address this.
<b>Options:</b> There is no viable alternative.
<b>Preferred option:</b> Protect and enhance green infrastructure at the local and regional levels to contribute to more sustainable communities and enhance quality of life by: <ul style="list-style-type: none"><li>• encouraging the integration of green infrastructure issues into the planning system where possible;</li><li>• working with developers and land-owners to ensure that opportunities for new or improved green infrastructure are integrated into physical development schemes;</li><li>• realise the environmental, social and economic potential of green infrastructure.</li></ul>

## Strategic Priority 7: Land and Development

### Priority 7b: Development Land

#### Priority Action 7b-1: Secure the Supply of Quality Employment Land

<p><b>Evidence:</b> The changing structure of the economy means that there are changing requirements for employment land. In recent years there has been a shift out of manufacturing activities towards the service sector, with an accompanying change in the use of employment land (see <i>Commercial and Industrial Floorspace and Rateable Value Statistics 2004</i>, ODPM, 2005). In addition a growing population puts pressure on sites to be re-allocated for housing use.</p>
<p><b>Rationale:</b> In many cases the provision of property and the use of land can be determined through market forces. However, there are areas where the market is unable or unwilling to deliver on requirements. Supply constraints exist when land allocated in statutory plans is inadequate to meet market needs (a case of public sector failure) and physical/financial constraints prevent the operation of the market.</p>
<p><b>Options:</b> Oppose the de-allocation of sites  Bring forward new sites</p>
<p><b>Preferred option:</b> Ensuring and safeguarding an appropriate supply of quality employment land by providing supportive local and regional plans and policies. Key actions include:</p> <ul style="list-style-type: none"> <li>• Maintaining an up to date regional picture of employment land supply and quality issues by monitoring, and building on the results of local, sub-regional, and regional studies.</li> <li>• Bringing forward new sites, upgrading existing sites, and where necessary in order to further regeneration objectives, promoting the redevelopment of commercially unattractive sites for other economically beneficial uses;</li> <li>• Undertaking master planning exercises, and where appropriate use Environmental Impact Assessments (EIA), to provide a holistic approach to the supply of employment land;</li> <li>• Preparing relocation strategies for businesses affected by redevelopment proposals;</li> <li>• Encouraging job creation through private sector development and the targeting of public sector resources for priority sites.</li> </ul>

#### Priority Action 7b-2: Infrastructure for Employment Related Schemes

<p><b>Evidence:</b> In 2003/04 over 3,000 hectares of land were committed to employment purposes, and just over two thirds of this commitment was on greenfield sites (<i>Regional Spatial Strategy: Annual Monitoring Report</i>, DTZ Pbeda, 2005).</p>
<p><b>Rationale:</b> The public good characteristics of infrastructure means that the market is likely to fail to provide the optimal amount to service employment sites.</p>
<p><b>Options:</b> Leave provision to the market  Use public sector levers (e.g. planning gain) to leverage private sector investment.</p>
<p><b>Preferred option:</b> Ensure appropriate levels of infrastructure including transport, utilities and ICT for employment-related schemes, through:</p> <ul style="list-style-type: none"> <li>• Assessing regional deficiencies and identifying needs for utility provision and ICT;</li> <li>• Assessing and planning for infrastructure needs on proposed sites for</li> </ul>

<p>development, using development briefs and local planning decisions to ensure appropriate provision;</p> <ul style="list-style-type: none"><li>• Ensuring proactive investment by the public sector where market failures exist;</li><li>• Assess potential environmental impacts using Environmental Impact Assessments and environmental capacity studies.</li></ul>
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### **Priority Action 7b-3: Previously Developed Land and Buildings**

<p><b>Evidence:</b> In 2003/04 over 3,000 hectares of land were committed to employment purposes, and just over two thirds of this commitment was on greenfield sites (<i>Regional Spatial Strategy: Annual Monitoring Report</i>, DTZ Pieda, 2005).</p>
<p><b>Rationale:</b> The preservation of greenfield land will contribute to well-being and the development of adaptive capability in the region.</p>
<p><b>Options:</b> The sequential test for the use of land, which places primacy on the use of brownfield land, is government policy.</p>
<p><b>Preferred option:</b> Increase the re-use of previously developed land through an appropriate mix of actions including site remediation, reclamation and redevelopment, and ensure that effective use is made of the existing stock of buildings. Key actions include:</p> <ul style="list-style-type: none"><li>• Rolling out the Brownfield Land Action Plan for the East Midlands;</li><li>• Identifying appropriate previously used sites through Local Development Frameworks to bring forward economic investment consistent with the RES and RSS.</li><li>• Ensuring that the legacy of severe problems of environmental degradation caused by coal mining continues to be addressed.</li></ul>

## Priority 7c) Housing

### Priority 7c-1: Supporting Infrastructure for Housing Growth

<b>Evidence:</b> There is a projected increase in the number of households in the East Midlands that has to be accommodated ( <i>New Projections of Households for England and the Regions to 2026</i> , ODPM, 2006)
<b>Rationale:</b> The public good characteristics of infrastructure mean that the market is likely to provide a sub-optimal level of infrastructure to support housing growth.
<b>Options:</b> There is no viable alternative.
<b>Preferred option:</b> In areas of housing growth, ensure provision of transport, economic, cultural, and community infrastructure, including green infrastructure, to support the creation of sustainable and integrated communities. This will be achieved by: <ul style="list-style-type: none"> <li>• Using development briefs and planning policies and decisions to ensure provision of adequate land supply for employment and community uses to support housing growth;</li> <li>• Assessing and addressing the deficiencies and needs for utility provision to service the new development.</li> </ul>

### Priority 7c-2: Regeneration in Areas of Low Housing Demand

<b>Evidence:</b> Areas of deprivation in the region, (as identified in RES Evidence Base from the Index of Multiple Deprivation 2004, published by the Office of the Deputy Prime Minister) are generally areas with poor quality environments where there is low demand in the housing market.
<b>Rationale:</b> The public good characteristics of infrastructure mean that the market is likely to provide a sub-optimal level of infrastructure to support housing growth.
<b>Options:</b> There is no viable alternative.
<b>Preferred option:</b> Ensure that regeneration and economic, social and environmental inclusion benefits are integral to future developments in areas of low housing demand through the provision of new and improved housing and community and economic infrastructure. Key actions are: <ul style="list-style-type: none"> <li>• Build on the experience of ongoing best practice, such as Meden Valley Making Places, and support the Housing Market Renewal pilot projects which will test out the Regional Policy Framework for housing market renewal;</li> <li>• Develop a greater understanding of both the causes and the solutions to housing market failure in the region and address them through regional and local investment strategies.</li> </ul>

### Priority 7c-3: Range of Housing Provision

<b>Evidence:</b> Affordability is increasingly a problem in some parts of the region, such as the Peak District, areas in Northamptonshire and Lincolnshire and among the urban areas. Regional economic competitiveness is affected by a range of factors and housing is one of them ( <i>Thinking About Regional Competitiveness: Critical Issues</i> , R Martin, University of Cambridge, 2005).
<b>Rationale:</b> The provision of a range of types of housing will contribute to the regions adaptive capacity.
<b>Options:</b> In order to accommodate an increasing population and build upon regional

competitiveness, there is no viable alternative.

**Preferred option:** Improve the range, mix and quality of housing in the region, including the renewal of existing housing stock, through the Regional Housing Investment Strategy, through regional and local planning policies and development control decisions.

## **Structural Theme 3: Achieving Equality**

### **Strategic Priority 8- Cohesive Communities**

#### **Priority Action 8-1: Promoting Social Capital**

<b>Evidence:</b> Increasing life chances for all is a fundamental feature of building strong, cohesive communities and a dynamic society and economy ( <i>Improving Opportunity: Improving Society</i> , Home Office). Social capital has been identified as a driver of regional competitiveness ( <i>Thinking About Regional Competitiveness: Critical Issues</i> , R Martin, University of Cambridge, 2005).
<b>Rationale:</b> This action aims to address distributional outcomes in the East Midlands economy and will contribute to the development of adaptive capability in the region- the ability to develop new paths of development and avoid becoming locked in to a path of long term decline.
<b>Options:</b> Maintain current policies towards the development of social capital Develop policies towards the development of social capital
<b>Preferred option:</b> Support initiatives which mobilise existing social capital and create bridges and links between different groups including volunteering opportunities.

#### **Priority Action 8-2: Collaboration to Encourage Participation**

<b>Evidence:</b> Increasing life chances for all is a fundamental feature of building strong, cohesive communities and a dynamic society and economy ( <i>Improving Opportunity: Improving Society</i> , Home Office). Social capital has been identified as a driver of regional competitiveness ( <i>Thinking About Regional Competitiveness: Critical Issues</i> , R Martin, University of Cambridge, 2005).
<b>Rationale:</b> This action aims to address distributional outcomes in the East Midlands economy and will contribute to the development of adaptive capability in the region- the ability to develop new paths of development and avoid becoming locked in to a path of long term decline.
<b>Options:</b> Maintain current policies towards encouraging participation Develop policies towards encouraging participation
<b>Preferred option:</b> Encourage collaboration between cultural, leisure and tourist bodies to encourage community participation, build social capital and contribute to community cohesion.

#### **Priority Action 8-3: Develop Cohesive Communities**

<b>Evidence:</b> Increasing life chances for all is a fundamental feature of building strong, cohesive communities and a dynamic society and economy ( <i>Improving Opportunity: Improving Society</i> , Home Office). Social capital has been identified as a driver of regional competitiveness ( <i>Thinking About Regional Competitiveness: Critical Issues</i> , R Martin, University of Cambridge, 2005).
<b>Rationale:</b> This action aims to address distributional outcomes in the East Midlands economy and will contribute to the development of adaptive capability in the region- the ability to develop new paths of development and avoid becoming locked in to a path of long term decline.
<b>Options:</b> Maintain current policies towards developing cohesive communities Develop policies on cohesive communities within the framework of Government policy

**Preferred option:** Support the development of cohesive communities through Local Area Agreements.

**Strategic Priority 9: Economic Renewal**

**Priority 9a) Building Local Capacity, Resources & Support**

**Priority Action 9a-1: Effective Engagement and Involvement of Local Businesses and Residents**

<p><b>Evidence:</b> There are pockets of severe multiple deprivation in the region (as identified in RES Evidence Base from the Index of Multiple Deprivation 2004, published by the Office of the Deputy Prime Minister) where employment, incomes and levels of skills are low. There are examples in the East Midlands of where asset development approaches can work to address these problems (such as Sherwood Energy Village).</p>
<p><b>Rationale:</b> This action aims to address distributional outcomes in the East Midlands economy and will contribute to the development of adaptive capability in the region- the ability to develop new paths of development and avoid becoming locked in to a path of long term decline.</p>
<p><b>Options:</b> Direct provision of economic renewal activities and services                  Build capacity so that economic renewal can be locally developed</p>
<p><b>Preferred option:</b> Ensure that people and businesses in local communities have the skills and capacity to develop local economic renewal solutions through:</p> <ul style="list-style-type: none"> <li>• the provision of economic development skills training;</li> <li>• the provision of economic/enterprise coaches and business brokers;</li> <li>• building social capital between the statutory, business and community sectors</li> </ul>

**Priority Action 9a-2: Inclusive Business Support**

<p><b>Evidence:</b> Whilst levels of entrepreneurial activity in the East Midlands have increased during the last four years, there remain groups in the region that lag behind e.g. TEA among women is less than half the rate among men (<i>East Midlands Regional Entrepreneurship Monitor 2005 Summary</i>, Global Entrepreneurship Monitor, London Business School, February 2006).</p>
<p><b>Rationale:</b> This priority action seeks to address information failures that exist around the provision of business support, which can be exacerbated with disadvantaged groups.</p>
<p><b>Options:</b> Provision of generic business support                  Tailored support within the regional business support framework</p>
<p><b>Preferred option:</b> Ensure that business support is responsive to the needs of all communities and under-represented groups through:</p> <ul style="list-style-type: none"> <li>• the integration of specialist needs into the regional business support model;</li> <li>• support for enterprise coaching models in the most disadvantaged areas (see priority action 2b(1) under the Enterprise and Business Support section).</li> </ul>

## Priority 9b) Reviving Local Infrastructure and Environments

### Priority Action 9b-1: Built and Green Environments

<b>Evidence:</b> Many of the more disadvantaged areas within the East Midlands suffer from a poor quality of environment, resulting from previous heavy industrial activities and blighted by poor quality housing stock.
<b>Rationale:</b> The public good nature of a high quality environment means that market provision is unlikely to be optimal. This priority action aims to address this market failure and contribute to adaptive capability through the provision of an improved environment.
<b>Options:</b> There is no viable alternative
<b>Preferred option:</b> Improve the quality of the built and green environments to enhance local economic prospects through: <ul style="list-style-type: none"><li>• applying best practice standards for design and construction (see priority action 6b (2) in the Environmental Protection section);</li><li>• working with developers to ensure the integration of green infrastructure factors and improving the public realm in development briefs.</li></ul>

### Priority Action 9b-2: Addressing Crime

<b>Evidence:</b> Crime and the fear of crime are regularly cited as key reasons for companies deciding not to invest in disadvantaged areas. In addition among individuals, 33% have been the victims of crime in the two years prior to the British Crime Survey ( <i>Secondary Analysis of Regional Data in National Surveys: Evidence from the British Crime Survey 2002-2003, East Midlands</i> , National Centre for Social Research, 2005).
<b>Rationale:</b> A crime free environment has public good characteristics which mean that market provision is unlikely to be optimal.
<b>Options:</b> Reducing crime is government policy so there is no viable alternative.
<b>Preferred option:</b> Reduce the impacts of crime on communities and businesses through neighbourhood and business crime reduction initiatives and activities to reduce re-offending.

## Priority 9c) Stimulating New Markets and Enterprise Opportunities

### Priority Action 9c-1: New Markets and Enterprise Opportunities

<p><b>Evidence:</b> The potential scale of public sector procurement means that it can have a significant impact on regional development. Total identifiable expenditure in the East Midlands was around £23.2bn in the East Midlands (<i>Public Expenditure Statistical Analyses 2005</i>, HM Treasury, 2005). Although not all of this is available for procurement it does indicate the potential size of this policy lever.</p>
<p><b>Rationale:</b> There are information failures (on both the public and private sides) that prevent enterprises from accessing public contracts and delivering community, social and environmental benefits. This policy aims to address this barrier.</p>
<p><b>Options:</b> There is no viable alternative to this.</p>
<p><b>Preferred option:</b> Stimulate new local markets and enterprise opportunities by unlocking the potential of local procurement by:</p> <ul style="list-style-type: none"> <li>• encouraging local public authorities to adopt procurement approaches which deliver local, social, environmental and community benefits;</li> <li>• supporting the development of social enterprises, and the broader voluntary and community sector, to deliver services whilst improving the economic, social and environmental capacity of a local area;</li> <li>• encouraging large businesses to consider supply chain opportunities in their local areas.</li> </ul>

### Priority Action 9c-2: Improve Access to Finance

<p><b>Evidence:</b> Despite recent progress, SBS research indicates that there are still gaps in funding provision for new or growing firms in the East Midlands (<i>A Mapping Study of Venture Capital Provision in SMEs in England</i>, Small Business Service, 2005). SBS research also points to a lack of 'investment readiness' as a barrier for firms to access growth (<i>A Government Action Plan for Small Business: The Evidence Base</i>, Small Business Service, 2003).</p>
<p><b>Rationale:</b> There is a degree of risk and uncertainty associated with new and growing firms that means that the market fails to provide an adequate level of finance at certain levels. HM Treasury and the Small Business Service suggest that this is for amounts up to £2m (<i>Bridging the Finance Gap</i>, HM Treasury, 2003 and <i>Improving Access to Finance for Small Business</i>, Small Business Service, 2003). These market failures are exacerbated among more deprived groups.</p>
<p><b>Options:</b> Maintain current provisions  Work to improve current provisions</p>
<p><b>Preferred option:</b> Improve access to finance for all entrepreneurs irrespective of location, personal characteristics and type of business by:</p> <ul style="list-style-type: none"> <li>• providing an appropriate range and specification of financial services products tailored to their needs;</li> <li>• influencing mainstream financiers;</li> <li>• investing in community development finance instruments (CDFIs);</li> <li>• promotion and coordination of CDFI investments.</li> </ul>

## Strategic Priority 10: Economic Inclusion

### Priority 10a) Employability

#### Priority Action 10a-1: Enhance Employability of the Most Disadvantaged

<p><b>Evidence:</b> The employment rate for those with no qualifications in the East Midlands in 2003 was more than twenty percentage points lower than those with a level 2 qualification. The average weekly pay for those with no qualifications was only £229 in 2003, which is 15% below the average for those with a level 2 qualification (<i>The East Midlands 2006: The East Midlands Labour Market</i>, emda, 2006).</p>
<p><b>Rationale:</b> This priority action will seek to maximise the spillover benefits that are associated with basic skills provision.</p>
<p><b>Options:</b> Generic support to individuals  Target support at the most disadvantaged</p>
<p><b>Preferred option:</b> Improve the employability of those without skills and qualifications through:</p> <ul style="list-style-type: none"> <li>• the provision of basic skills (including ESOL (English for Speakers of Other Languages), vocational and core employability skills);</li> <li>• encouraging the take up of level 2 qualifications.</li> </ul>

#### Priority Action 10a-2: Address Worklessness

<p><b>Evidence:</b> Despite relatively low levels of unemployment in the East Midlands, there are areas in the region that suffer from severe multiple deprivation that includes high levels of employment deprivation (<i>The East Midlands 2006: Deprivation and Economic Inclusion in the East Midlands</i>, emda, 2006).</p>
<p><b>Rationale:</b> This priority action seeks to address information failures that exist in the labour market that lead to mismatches between demand and supply.</p>
<p><b>Options:</b> Continuation of current support activities  Develop new approaches to tackling worklessness</p>
<p><b>Preferred option:</b> Address persistent and high levels of worklessness in communities by:</p> <ul style="list-style-type: none"> <li>• connecting local people to job opportunities created by public sector investment in key infrastructure projects;</li> <li>• encouraging private sector developers and employers to recruit from underutilised local labour sources;</li> <li>• connecting people in areas of limited opportunity to areas of growth;</li> <li>• supporting innovative solutions to long term unemployment such as work trials, peer mentoring schemes and intermediate labour markets.</li> </ul>

#### Priority Action 10a-3: Improving Diversity of the Workforce

<p><b>Evidence:</b> Evidence suggests that 73% of workplaces in the UK have equality and diversity policies but the application of these policies is not widespread- 23% of large private sector businesses and 10% of SMEs apply them (<i>Workplace Industrial Relations Survey</i>, Department of Trade &amp; Industry, 2004).</p>
<p><b>Rationale:</b> This priority action seeks to increase the pool of labour available in the East Midlands and reduce labour market mismatches caused by information failures.</p>
<p><b>Options:</b> To work for a tighter legislative framework  To work towards greater voluntary activity within existing frameworks</p>

**Preferred option:** Work with employers to increase the diversity of the East Midlands workforce and address the under representation of different groups in work by:

- developing a regional campaign to demonstrate the business case for diversity;
- providing support to businesses to undertake diversity assessments and develop action plans;
- creating and promoting an East Midlands diversity quality mark for employers.

## Priority 10b) Achieving a Healthy Workforce

### Priority Action 10b-1: Working With Employers to Improve the Health of the Region's Workforce

**Evidence:** Each year it is estimated that £222m is lost to the regions economy as a result of people taking sickness absence (*Statistics of Occupational Safety, Ill Health and Enforcement Action- East Midlands 2004/2005*, Health and Safety Commission, 2005).

**Rationale:** Although not necessarily the result of personal choice, sickness is an externality, which this priority action seeks to address.

**Options:** Government policy is to increase the amount of exercise that people take, which will contribute to the loss of fewer days that result from sickness. This means that there is no viable alternative.

**Preferred option:** To ensure that employers are informed on the detrimental effects of poor health on business performance and take steps to improve and protect the health of their employees by:

- promoting the benefits of a healthy workforce through business support services;
- work through the Investment for Health Strategy to promote healthy workforce initiatives.

### Priority Action 10b-2: Address Ill Health as a Barrier to Employability

**Evidence:** There is evidence that suggests a significant number of people in the region who would be willing to work if suitable employment that fit with their personal circumstances was available. An analysis of hidden unemployment suggests that there are over 70,000 IB claimants in the region who might be be in work in a fully employed economy (*Hidden Unemployment and its Relevance to Labour Market Policy in the East Midlands*, C Beatty and S Fothergill, Sheffield Hallam University, 2004).

**Rationale:** This priority action seeks to address inequality by improving the chances that individuals are able to access employment in the East Midlands.

**Options:** There is no viable alternative as work for all who can is government policy.

**Preferred option:** Ensure that those who experience poor health as a barrier to employment are supported in entering the labour market in positions consistent with their personal circumstances. This will be achieved by ensuring that employment support activities in the region take account of the varying health needs of these groups.

## **Priority 10c) Enterprising People**

### **Priority Action 10c: Develop Entrepreneurship Skills**

**Evidence:** Enterprise has been identified by the Government as one of the five drivers of productivity. There is a mixed picture in the East Midlands on indicators of entrepreneurial activity- VAT registration rates are below average whilst Total Entrepreneurial Activity is above average.

**Rationale:** As one of the key drivers of productivity, enterprise is also a key element of the region's adaptive capability. Creating a more entrepreneurial culture will strengthen the region's ability to adapt to change and create new paths of economic development. It will also seek to maximise the spillover benefits that are associated with enterprise education such as increased employability.

**Options:** There is no viable alternative.

**Preferred option:** Ensure the region consistently generates entrepreneurs from all sections of society by:

- promoting entrepreneurship as a viable career choice through targeted awareness raising activities (see priority action 2a(1) under the Enterprise and Business Support section)
- integrating entrepreneurship at all levels of the education curriculum (schools, FE and HE) and creating effective links between education institutions and businesses;
- providing business support appropriate to all sections of society (see the priority action 9a(2) under the Economic Renewal section)