

Opportunity For All in a World of Change

A White Paper on Enterprise, Skills and Innovation

ENVIRONMENTAL APPRAISAL

Policy Aim

The White Paper *Opportunity for All in a World of Change*, produced jointly by the Department of Trade and Industry and the Department for Education and Employment, sets out the Government's strategy for business competitiveness, innovation and skills. The executive summary is at Annex A.

The overall aim of the White Paper strategy is to equip individuals, businesses and communities to meet the challenges of change by securing improvements in the national skills base, building strong regions and communities, encouraging investment in innovation and other measures to improve competitiveness and living standards.

The White Paper refers to a range of actions which are being continued or intensified and announces further ones.

The chapters and main sections of the White Paper are laid out as follows:

Chapter 1

The foundations of economic success

Chapter 2

A people first economy

Chapter 3

All regions to prosper

Chapter 4

Investing in new sources of business success

Chapter 5

A climate for enterprise and growth

Chapter 6

Global ambition

The table below contains specified policy initiatives in the second, third, fourth, fifth and sixth chapters of the White Paper which are expected to impact on the environment. The White Paper contains a number of other proposals where the environmental impact is likely to be negligible. These have not been included in the table.

CHAPTER	POLICY ANNOUNCEMENT	ENVIRONMENTAL IMPACT
Chapter 2	<p>Initiatives in Chapter 2 include the following:</p> <ul style="list-style-type: none"> • A National Basic Skills Strategy; • Vocational education reform • ICT skills promotion • The Cybrarian – Virtual Librarian’. This is £17.5m initiative to make the internet more accessible, particularly for people with poor reading or computer handling skills. • Employer investment in workforce skills and training 	<p><u>Benefits</u> In the long term, improving basic skills, upgrading ICT skills, modernising vocational and technical education and causing employers to invest more in learning and skills should lead to the better use of physical and human resources. Increased use of ICT may lead to a better use of existing infrastructure.</p> <p><u>Burdens</u> In the short term there will be little environmental impact other than in some modest new build and refurbishment..</p>
Chapter 3	<p>Establish up to 2 New Technology Institutes in each region to boost ICT and other high-tec skills by training up to 10,000 more people each year and promote knowledge transfer.</p>	<p><u>Note:</u> The likely diverse nature of the Institutes means that the benefits and burdens will be similarly varied but cannot yet be predicted. However, it is realistic to suggest that the benefits will exceed the burdens.</p> <p><u>Benefit</u> The benefits will include: The development of improved industrial processes which are less polluting, use less energy and make more efficient use of materials, thus reducing waste and associated disposal requirements. Greater use of integrated communications and e-commerce business processes, thus reducing the need for business-related travel and the unnecessary (non-value adding) movement and storage of goods.</p> <p><u>Burden</u> Primarily short-term through the creation of additional infrastructure (buildings and equipment) to accommodate and equip the physical aspects of the Institutes.</p>

CHAPTER	POLICY ANNOUNCEMENT	ENVIRONMENTAL IMPACT
Chapter 3	Support for five university innovation centres. These will be long-term research partnerships between major business interests and the university sector.	<p><u>Note:</u> The diverse nature of the five centres identified for support means that the benefits and burdens will be similarly diverse.</p> <p><u>Benefit</u> There is no specific environmental orientation, however some projects could lead to the development of improved manufacturing processes which are less polluting, use less energy and make more efficient use of materials.</p> <p><u>Burden</u> None is particularly apparent, though there may be some additional building work at specific centres.</p>
Chapter 3	A new £75m Business Incubator Fund.	<p><u>Benefits</u> Refurbishment of workspace units into facilities and buildings which conform to modern standards.</p> <p>Greater use of integrated communications and e-commerce business processes, thus reducing the need for business-related travel and the unnecessary (non-value adding) movement and storage of goods.</p> <p><u>Burdens</u> In the short term, indirect environmental impacts of construction work.</p>
Chapter 3	Manufacturing Advisory Service will consist of regional centres of excellence possibly co-located with Business Links, and a national online advice service.	<p><u>Benefits</u> Partly aimed at the more efficient use of manufacturing resources and best practice with commensurate energy savings.</p> <p><u>Burdens</u> Negligible.</p>
Chapter 3	Regional Strategies for success	<p><u>Benefits</u> In the long term, strategies for success should lead to a better use of existing infrastructure</p> <p><u>Burdens</u> Little environmental impact in the short term.</p>

CHAPTER	POLICY ANNOUNCEMENT	ENVIRONMENTAL IMPACT
Chapter 4	Next Wave Technologies and Markets programme. A £20 million four-year programme with a focus on promoting the technologies which enable consumer devices to interface with each other.	<p><u>Benefits</u> If successful the NWTM programme should have positive effects such as extending the useful life of consumer electronic devices. Intelligent utility metering (part of the move towards an intelligent, autonomous domestic environment) holds the prospect of increased energy efficiency and economy.</p> <p><u>Burdens</u> There are issues surrounding the provision of portable power (inc. batteries and fuel cells) and a possible trend towards disposable electronics.</p>
Chapter 4	A major initiative with industry and others to achieve a UK solar photovoltaic demonstration programme in line with those of our main competitors.	<p><u>Benefits</u> PV generates electricity without creating any CO2 or other Greenhouse Gas emissions, and therefore has a part to play in climate change mitigation.</p> <p><u>Burdens</u> Possible unverified risk of toxic substances used in one type of panel.</p>
Chapter 4	DTI's further £10 million contribution to the Waste and Resources Action Programme (WRAP) to develop markets for recycled materials.	<p><u>Benefits</u> If WRAP achieves increased recycling in the UK, there will a reduction in the environmental impacts associated with waste landfilling and incineration, including methane emissions. Primary raw materials will be conserved, and energy saved (when compared with the energy consumed in extraction and manufacture from virgin raw materials).</p> <p><u>Burdens</u> Increased energy consumption from separate collection and recycling of waste, compared with collection and transportation to landfill or incineration.</p>

CHAPTER	POLICY ANNOUNCEMENT	ENVIRONMENTAL IMPACT
Chapter 4	<p>Basic Technologies</p> <p>Investing £25m in a series of new activities and projects to ensure that businesses can commercialise key basic technologies. The programme will focus on exploiting technologies which have widespread applications in manufacturing.</p>	<p><u>Benefits</u></p> <p>The programme will help develop new industries with new more knowledge intensive products which are inherently more environmentally friendly.</p> <p><u>Burdens</u></p> <p>New industries can mean more development. This would be a long-term outcome subject to the usual planning controls.</p>
Chapter 4	<p>Broadband networks:</p> <p>New £30 million fund for regional feasibility studies.</p>	<p><u>Benefits</u></p> <p>Direct expenditure on consultancies and small demonstrator projects aimed at developing strategies for broadband. Can take into account environment impact of adopting different strategies/ technologies.</p> <p>Broadband networks will enable greater telecommuting reducing strain on transport infrastructure. Potential for sustaining market towns and supporting life in rural economies.</p> <p><u>Burdens</u></p> <p>Broadband roll out will involve usual telecoms environmental issues: digging up streets to lay cable or fibre, erecting masts for wireless applications</p>
Chapter 4	<p>Digital TV pilot projects.</p>	<p><u>Benefits</u></p> <p>Potential for encouraging Internet access through TV so allowing rural and urban communities alike to benefit.</p> <p><u>Burdens</u></p> <p>Possible small amount of local disruption as transmission levels adjusted to suit those in pilot</p>

CHAPTER	POLICY ANNOUNCEMENT	ENVIRONMENTAL IMPACT
Chapter 4:	UK to have most dynamic and competitive market for digital TV in the G7 as measured by take-up, choice and cost	<u>Benefits</u> Derive from ease of access to e-Government services, e-commerce <u>Burdens</u> Energy consumption needs to be addressed to minimise any additional requirements. Disposal of analogue TV sets and VCRs accelerated
Chapter 4	UK online for business, the Government programme which helps firms get online, will spend an additional £30 million over three years to help businesses move beyond having a web site or trading online to transform themselves through the effective use of information and communication technology.	<u>Benefits</u> Spread of new emerging best practice across UK businesses potentially could help: <ul style="list-style-type: none"> - Significantly minimise waste throughout production processes and supply chains; - promote a culture of efficiency and paperless communications within organisations; - enable extensive remote access and other flexible patterns of working and thereby potentially help reduce travel. <u>Burdens</u> Possible increase in production of hardware and associated electronics components, though the emphasis of the programme is on more effective use of existing ICTs and installed equipment.
Chapter 5	The provision of DTI services electronically	<u>Benefits</u> Contribute to reduction in resources (e.g. paper, travel) <u>Burdens</u> Negligible.

CHAPTER	POLICY ANNOUNCEMENT	ENVIRONMENTAL IMPACT
Chapter 6	Push forward development of WTO through a new round of comprehensive negotiations.	<p>Further multilateral trade liberalisation and clarification of rules linking trade measures to environment could impact on international resource use and levels/dispersion of pollutants. There are possible effects on other aspects of sustainable development which can only be assessed on a case by case, country by country basis.</p> <p><u>Benefits</u> There are potential benefits for all countries, including developing countries. For example, greater economic welfare gains may be used to improve environmental standards and speeding up innovation of environmentally sound technologies, goods and services (e.g. waste water treatment, water recycling) might alleviate the potential damage caused by other factors such as tourism.</p> <p><u>Burdens</u> There is the potential for increased transport use and greater energy costs as trade volume rises.</p> <p>Greater trade activity could potentially boost demand for unsustainable production. However, these burdens can be greatly reduced if liberalisation is implemented carefully.</p>

Conclusion on the Environmental Impact of *Opportunity for All in a World of Change*

The policy framework set out in the White Paper is in line with the objective of reinforcing understanding, within and outside Government, of the importance of environmental issues for business.

The impact of the measures outlined in the White Paper can be expected to be broadly positive. Some actions, particularly those aimed at stimulating the market for photovoltaics, are expected to have significant implications in terms of reducing greenhouse gas emissions. The additional funding for WRAP will also help to develop the markets for recycled products and materials, thus enabling consumers to have greatly improved access to 'green' goods.

The initiatives aimed at increasing best practice in e-commerce and making more DTI services available electronically should also help cut the use of resources such as paper and reduce the need for travel. In addition, a more balanced regional policy designed to stimulate the potential for growth in all regions should reduce pressure on areas like the South East.

The full environmental effects of specific actions will need to be assessed in the normal way – including, where appropriate, via formal Environmental Impact Assessment - by those charged with implementing the policies. In the long term, any consequent construction or development activity which takes place as a result of the initiatives contained in the White Paper will, of course, be subject to environmental scrutiny as part of the existing framework of planning controls.

**OPPORTUNITY FOR ALL IN A WORLD OF CHANGE
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Executive Summary

The Goal

This White Paper is about the vital next steps that Government, businesses and individuals must take to secure economic success in the decade ahead. We can and must reach for this goal now. The stable economic environment that the Government has created provides a unique opportunity to reinforce strengths and remedy weaknesses that are exposed more sharply by the pressures of change.

To achieve improved living standards and opportunity for all we must create the conditions for everyone and every part of the nation to make the most of their talents and capabilities.

The Foundations of Economic Success

The Government has taken major steps to lay the foundations for businesses to grow and prosper and for individuals to succeed. We have set the framework for economic stability and sustainable growth, taking the politics out of monetary policy. That is why we now have the lowest inflation and long-term interest rates for over 30 years. We have over a million more people in work than in 1997 and the lowest ever corporation tax rate. We have reduced Government borrowing by £44 billion. For every pound of public expenditure, only 17 pence now goes to fund debt interest, unemployment benefit and social security – down from 42 pence in every pound in 1997.

We have acted to boost education and improve the infrastructure in telecommunications, e-commerce and transport. We have created a strong competition regime and encouraged increasing investment and research and development (R&D) through tax and other measures so that enterprise and innovation are strengthened. With these firm foundations, we now have a once in a generation opportunity to build the path towards a prosperous future.

The Government's analysis of the competitive challenge, set out initially in our 1998 White Paper (Our Competitive Future: Building the Knowledge Driven Economy, Cm 4176) has been borne out by developments over the past two years. In addition, according to the Government's November 2000 paper, Productivity in the UK (published by HM Treasury), UK productivity, however measured, lags behind that of other major industrialised countries. The challenge for the

Government is to achieve its long-term economic ambition to have a faster rise in productivity than its main competitors and so close that gap. British businesses can no longer compete on the basis of low cost, low value added activity. To be successful, it is even more important for businesses and individuals to learn new skills, be more creative and innovative and use their knowledge to produce higher value added goods and services. Manufacturing continues to play an essential role but it too must transform itself to succeed in an increasingly global market.

This is a challenge that each of us can recognise in our daily lives. Whether we work for a small or large company, in manufacturing or in services, in an office or on the shop floor, all of us can see that the way we work is being transformed by new technology and new competitive pressures.

The coming together of these forces means that our competitiveness as a nation, our livelihoods and our quality of life increasingly depend on our ability to manage and respond to change. Our competitive advantage will only be secured through innovation and improved quality and the better use of our creativity and skills.

Government has a responsibility to serve as an enabling force, providing the right support for businesses and individuals to achieve success and prosperity – and in so doing widening the circle of winners in all regions and communities. Its role is to identify and anticipate the forces that are transforming the world we live in and to help people to respond to them.

We need an active industrial policy which recognises that change itself needs to be managed and that people need to be equipped to make the most of the new opportunities that will be created. It is not the Government's role to try to resist the profound structural changes affecting businesses and individuals, or to intervene by trying to pick winners. But equally, Government cannot stand aside and retreat from any active role in promoting security and prosperity.

This White Paper sets out how Government can help businesses and individuals anticipate and respond to change: working to equip individuals with the skills, abilities and know-how they need; building capacity in all communities and regions to grasp the opportunities; ensuring that investment occurs in the modern infrastructure needed to allow businesses and individuals to innovate and compete; increasing the possibilities for people to transform their ideas into successful businesses and ensuring markets operate effectively and fairly in the best interests of consumers; strengthening the European and global frameworks to maximise opportunity and wealth creation.

A People First Economy

The Government inherited a situation of poor standards in schools, millions of adults lacking in the basic skills of literacy and numeracy and an undervalued system of vocational and technical education. We have already made substantial progress in tackling these problems. Primary schools are delivering the best ever results in literacy and numeracy. The basis has been laid for the high quality expansion of university places. More than 600,000 adults have opened Individual Learning Accounts. We must now press ahead to ensure that our people learn to be creative and enterprising and that they have the world beating technical skills they need, through training and education at all levels. We will:

- foster creativity and enterprise across our education and training system through radical new approaches to teaching and learning and through much more extensive links between education and business;
- ensure we have a numerate and literate population, reducing the number of adults with literacy and numeracy problems by 750,000 by 2004 and spending
- an extra £150 million on literacy and numeracy training;
- build a world class vocational and technical education system through a major rationalisation of vocational qualifications up to technician level by Autumn 2001, investing £100 million to develop vocational specialisms in colleges and more resources in reformed Modern Apprenticeships;
- develop a workforce with world beating information and communication technology (ICT) skills by training up to 10,000 more people a year through new advanced learning programmes and widening the pool of recruitment into ICT including moving 5,000 unemployed people into ICT jobs over the next three years; and
- ensure that employers invest in the skills and talents of all by setting clear and auditable targets for training, investing £45 million in a smaller, stronger network of National Training Organisations and helping small firms to collaborate on training.

All Regions to Prosper

Our aim is to increase the trend rate of growth in all regions by addressing under-performance, building on success and promoting enterprise for all. We need a new approach to regional policy to enable people and businesses to respond to change. We must strengthen the building blocks for economic success which are the key

to innovation in a knowledge economy.

The Government will:

- establish top class university innovation centres and new technology institutes in the regions to boost research and development, innovation and technology transfer and to provide the regions with skills in ICT and high technology;
- boost the capacity for enterprise in all regions by launching a new £75 million incubator fund, managed by the Small Business Service, to support new business formation; ensuring support is available at the right time for growth businesses; and developing new funding to fill gaps in the availability of small amounts of risk capital for new and growing businesses, including those which rely on intangible assets;
- give special support to manufacturing industry by establishing a new Manufacturing Advisory Service;
- promote the growth of successful clusters, building on existing strengths and with the assistance of the clusters map published by DTI. Regional Development Agencies are already taking steps to identify and encourage emerging clusters, for example chemicals, electronics and automotive in the North East;
- remove constraints to growth by inviting the Regional Development Agencies to develop strategies for success in their regions;
- implement the new Job Transition Service, managed by the Employment Service, to enable individuals affected by large-scale redundancy to find the right jobs more quickly and help growing companies tackle skill shortages; and
- make the planning system quicker and more efficient, boosting the regional skills base and improving regional and local transport infrastructure.

Investing in New Sources of Business Success

The Government has invested heavily in the UK's university research, infrastructure and skills base. But we need to do more to keep ahead and spread the benefits of new research to business. By taking up and adapting new technologies we can develop new world beating industries and transform established sectors.

The Government will:

- provide £90 million, to complement recent investment under the science budget, to promote the commercial exploitation of research focusing on genomics, basic

technologies and e-science;

- encourage development and take-up of more resource efficient and environmentally friendly products and energy systems, by promoting markets for new technologies which reduce waste and by embarking on a major initiative with industry and others to achieve a UK solar photovoltaic demonstration programme in line with those of our main competitors;
- accelerate the take-up of broadband technology by businesses and households. Our aim is for the UK to have the most extensive and competitive broadband market in the group of seven leading industrialised nations by 2005 and as a first step we are providing £30 million for innovative schemes to meet local requirements;
- boost digital TV which will transform the communications services available in the home and open up new markets and service opportunities. Our aim is for the UK to have the most dynamic and competitive market for digital TV in the group of seven leading industrialised nations, as measured by take-up, choice and cost;
- stimulate the development of content for the digital technologies; and
- provide a further £30 million to increase awareness and understanding among all businesses of the challenges and opportunities of e-business and new ways of working in transformed organisations.

A Climate for Enterprise and Growth

To succeed in the global economy of the twenty-first century, the UK must have a regulatory and financial environment which is second to none in fostering enterprise and growth. The Government will:

- significantly relax insolvency rules so that honest businesses and individuals who go bankrupt have a better chance of starting again quicker, while cracking down on the fraudulent or irresponsible;
- adopt a more commercial approach to company rescue proposals put to them by companies in short-term financial difficulty;
- give the Office of Fair Trading a new pro-competitive role to spot existing and proposed regulations which hold back dynamic and competitive markets;
- drive forward the Small Business Service strategy "Think Small First" which requires Government

Departments to consider the implications for small businesses when developing policy or proposing regulations; and

- the Small Business Service will launch, by the Summer, a set of initiatives to help small businesses better understand external investment and become better prepared to take it on.

Global Ambition

We must strengthen the UK's engagement with Europe and the wider world. We must build partnerships between businesses and harness the potential of all our regions to compete in global markets. We must continue to promote the best international environment to enable us to realise this vision. We have to win the global battle for world class talent. The Government will:

- launch two new schemes to attract business talent and ideas to the UK: an Enterprise Scholarship scheme for the brightest and best young graduates, particularly in high tech subjects, who want to come to the UK to develop their careers and start new businesses. We will also encourage experienced British entrepreneurs abroad to establish companies in the UK to pursue innovative business ideas;
- strengthen our support for British business on the global stage by launching a global partnership programme to help our firms into international collaboration at home and overseas, with the world's best as their partners;
- work to improve the framework for closer global economic integration and ensure that it contributes to sustainable development for all, including by preparing for a new round of comprehensive World Trade Organisation negotiations; and
- promote a better business environment in Europe by setting in hand, in consultation with our EU partners, a major study to quantify the benefits to our people and businesses of achieving European economic reform and
- make clear the rewards for continuing reform and the costs of failing to push forward. Just as the Cecchini report in the 1980s was a powerful reminder of the need to reap the economic benefits of the single market, so we will use this study to maintain pressure for progress towards the objectives set by the March 2000 Lisbon Council to make Europe the most dynamic knowledge economy in the world by 2010.