

West Midlands Futures

Drivers of change affecting the West Midlands

Forum for the Future

November 2006

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Forum for the Future is a sustainable development charity established 10 years ago. We aim to show that a sustainable future is both possible and desirable. We work with forward looking organisations – in business and the public sector – to find practical ways to build a future that is environmentally viable, socially just and economically prosperous.

The views contained within this report do not necessarily represent those of AWM and its partners

1. Introduction

Forum for the Future (Forum) have been commissioned to undertake a futures project as part of their partnership work with Advantage West Midlands (AWM). The project aims to deliver part of AWM's sustainable development (SD) policy on 'Future proofing – using longer-term thinking to prepare for the future and drive innovation'. Forum have also drawn on previous work on practical future proofing in the North West and South East regions.

The objectives of the futures project are:

- to provide recommendations for the revision of the West Midlands Economic Strategy to ensure it is more robust against future trends and uncertainties
- to develop questions and process to be used to continue future proofing within AWM
- to create greater understanding of futures issues among AWM staff.
- to support the AWM board member champion for future generations

This project will build on the work already undertaken for the first part of the West Midlands Economic Strategy (WMES) review, which involved initial evidence gathering including work to examine drivers and issues for the regional economy. It will also seek to address the gaps identified, and apply the findings to 'future proof' the WMES and other AWM activities.

The first stage of this project is to **identify the future drivers of change and uncertainties that will affect the West Midlands economy**. This report is the output from this initial stage, which included a literature review, a series of expert interviews, an external stakeholder workshop and an AWM staff away day.

2. Why is future thinking important?

"All of our experience is with the past, but all of our decisions are about futures."
Institute of Alternative Futures, 2003

Futures thinking is not about prediction, but about how we prepare for the future. A key element of sustainable development (SD) is to consider the impacts not only for this generation but also for the generations that follow, 25 years and more into the future. Previous research undertaken by Forum on long-term thinking¹ highlighted that people generally thought about the future in terms of a three year time horizon and not 10, 25 or even 50 years ahead, which is crucial for example when considering the impacts of climate change.

Futures thinking is a good way of bringing key issues into the mainstream debate, such as sustainable development (e.g. climate and energy) and demographic changes (e.g. ethnic business needs), because these will be even more important in the future, but require us to respond now.

We do not know with certainty what will happen in the future, but by looking to the long-term and thinking about what drives change, it should help us to identify new opportunities and challenges that we may face in the future. This will better prepare us to manage change and risk.

¹ Long-term thinking in the regions (2003), Regional Futures

3. Methodology

Literature review

In September 2006, a literature review was undertaken to identify drivers of change and uncertainties that could influence the West Midlands Economic Strategy (WMES) and economy of the West Midlands in general.

The review built on current WMES future drivers report, climate change reports, and previous futures work undertaken by Forum in the North West and South East, to identify STEEPV (social, technological, economic, environmental, political, values) drivers.

See Annex 1 for full list of resources used.

Workshops

On **4 October** 2006 an external stakeholder workshop was held, hosted by AWM.

The aim of the workshop was to:

- Introduce the West Midlands Futures project
- Build knowledge of futures issues
- Identify key drivers of change and uncertainties that will affect the region's economy
- Develop a range of futures criteria (scenarios) to use to test the WMES.

Participants brainstormed drivers of change that are likely to affect the region in the future. They then prioritised these drivers, choosing the ones that are likely to have the greatest impact on the region if they happen.

A further exercise involved developing plausible sketches/ stories of the future (scenarios), taking account of all of the drivers. These scenarios are alternative contexts within which the Regional Economic Strategy will have to operate effectively.

On **16 October** 2006 AWM held their full staff away day, in which Forum were tasked with running a fun and interactive session on futures. After a presentation on what drives change, participants were asked to develop front-page headlines for the West Midlands Chronicle 2026 in groups.

The aim of this exercise was to raise awareness about futures issues, and in so doing help prepare staff to think more long-term when reviewing the draft policy options for the WMES in the afternoon breakout groups.

This exercise helped to inform the futures work by feeding in what 250 people from the West Midlands believed might drive change in the region in the future. For example, we were able to identify drivers like 'climate change' behind headlines such as 'Birmingham confirmed as new UK capital, as London floods for the final time.'

The results and accompanying pictures can be found in Annex 2.

Expert interviews

A series of expert interviews were also conducted to verify the assumptions of the WMES and to identify drivers and uncertainties from a variety of issues that affect the WMES and the regional economy.

Interviewees were asked to identify the most significant landmark happenings for the West Midlands over the past 20 years. Besides the restructuring of manufacturing and the Rover crisis, unsurprisingly almost all cited the urban renaissance of Birmingham city centre, Brindley Place, Symphony Hall etc. as capturing investment into the city centre, and in so doing raising the profile of the region. This was and continues to be hugely significant for future investment into the region. The G8 summit in 1998 helped showcase the West Midlands and put it on the global map, with media interest in President Clinton's stay.

The development of digital technology that unleashed the potential for global networking, the creation of regional institutions, and the crises that beset the countryside with Foot and mouth and BSE were also mentioned as having profound effects both regionally and nationally. Will it take a crisis again to trigger change in the future?

They were then asked to explore their hopes and fears for the region for the next 20 years.

Future hopes for the West Midlands included: recovering its reputation as a "leading hotbed of innovation of high value manufacturing industry services" (*Regional organisation*) and to create a positive image of the region. Other significant issues included: bringing together people and ideas; access to skilled people; leaders that have strength of vision to take risks; investment; supportive infrastructure networks and cultures; celebrating and nurturing diversity within the region; cohesion within the region between various stakeholders; and consistency in government policy, among others.

These interviews together with the literature review and the outputs from the workshops, helped inform which drivers of change should become regional priorities.

4. Drivers of change

Drivers of change are factors that influence the region's performance economically, socially, and environmentally.

The following section highlights the key future drivers of change identified through research, expert interviews and workshops, as having a significant impact on the West Midlands Economic Strategy (WMES) and economy of the West Midlands in general.

These drivers will help to future proof the review of the WMES which runs to 2020.

1. Ageing population
2. Population growth
3. Migration
4. Changing workforce and working practices
5. Increased gap between rich and poor
6. Skills gap
7. Increasing profile of healthy lifestyles
8. Increasing transport infrastructure stress
9. New technology opportunities
10. An ever more networked world

11. Globalisation of markets
12. Increasing global economic competition
13. Accelerating change
14. Rise of the knowledge economy
15. Pressure for climate change mitigation
16. Pressure for climate change adaptation
17. Increasing pressure on natural resources
18. Emphasis on energy supply and security
19. Lack of regional identity

1. Ageing population

Of all the drivers, this is perhaps the clearest because we know that the population of the world is increasing, and that the proportion of older people in the UK is also rising. Longer life expectancy due to improvements in living standards and health care has given rise to this ageing population, but the actual impact that this will have on society is unclear.

Overview

- Ageing population, with fewer children and young people
- More than half the workforce in the West Midlands will be over 50 by 2010²
- In the UK the 2001 census showed that for the first time there are more people over 60 than there are children³
- Globally, longer life spans will triple the number of people aged 60 or more, from 606 million in 2000 to nearly 1.9 billion in 2050⁴

Impacts	Predictability in the next 20 years
Increase in working age and people working longer	This is very predictable. There are hard facts to support this driver of change.
What will be the impact of an ageing population on the provision of services e.g. on the health sector?	
Will an ageing population bring about greater demands for particular types of accommodation i.e. sheltered, nursing, supported, fragmented houses etc?	
Increased longevity is likely to lead to a lower turnover of housing stock as people retain occupancy of the family home. Will houses be appropriate for their needs?	
What will be the impact of the growth of leisure for retired people?	
As an ageing population, how will the skills and competencies of older people be fully utilised?	
Growing untapped resource - opportunities for employment	
Opportunity to keep valued skills in the workforce	
Potentially more people economically inactive	
Employment attitudes	
Will the migration of young people away from rural areas continue, leading to ageing population in rural areas ⁵ ?	
Will a shorter retirement affect the holiday/leisure industry?	

2. Population growth

The human population growth over the last century has been extraordinary. It took only 40 years from 1950 for the population to double to 5 billion⁶, a change that has taken place in an average person's lifetime.

Population growth over the next 50 years is to be expected, given the strong driving force behind it. More women in the developing world are entering their childbearing years than ever before⁷. Today's young adults will be joined by today's children, who will reach childbearing age in the next two decades⁸.

² WMES (2.5 Challenges for regenerating communities)

³ National Statistics http://www.statistics.gov.uk/census2001/demographic_uk.asp

⁴ Tomorrow Project http://www.tomorrowproject.net/pub/1_glimpses/globalisation/-177.html

⁵ WMES

⁶ Population growth over human history http://www.globalchange.umich.edu/globalchange2/current/lectures/human_pop/human_pop.html

⁷ Tomorrow Project http://www.tomorrowproject.net/pub/1_glimpses/globalisation/-173.html

⁸ Tomorrow Project http://www.tomorrowproject.net/pub/1_glimpses/globalisation/-173.html

Overview

- Global population in 1950 was 3 billion; in 2000 it was 6 billion. It is estimated to be 9 billion by 2050

Impacts	Predictability in the next 20 years
Greater population to employ creates both challenges and opportunities	What is uncertain is the size of the population. Will it stabilise, with people getting older and older?
Increase demand for housing and services	
Impact on natural resources with more people	
More strain on ICT and transport infrastructures	
Less land for agriculture as more land is developed	
Possible cultural challenges in the work place	

3. Migration

We live in a more open and connected world where movement is becoming increasingly easy. Close to 4.4 million immigrants entered the UK in the last 10 years (up to 2004) and just over 3 million people left, giving a net inflow of well over one million⁹. The UK will need to welcome the talents from abroad, as they will strengthen the skills base and bring in new ideas.

Overview

- The number of refugees in the West Midlands (current estimation around 50,000) is set to rise¹⁰
- Counter-urbanisation since the 1960s continues to empty inner cities of the white population¹¹
- The demand for migrant labour will continue to grow

Impacts	Predictability in the next 20 years
Increase in international migration	There is uncertainty around the size and composition of (international) migrant flows.
Will we see a change in the pattern of immigration with less people settling permanently in the UK?	
What will be the impact of increased demand on housing and services with increased international migration?	
Migration (intra and international) – increasing flows of inward migrants and change in workforce by ethnic group.	
Closing the skills gap with increasing number of high-skilled and low-skilled international migrants	
What are the likely effects of the change in population on the employment base for the region?	
Potential cultural challenges within the work place	
What does quality of life mean to different communities?	
Internal migration within the region - will the migration of young people away from rural areas continue, leading to ageing population in rural areas? ¹²	
Move towards greater urban and rural divergence	
Greater diversity	

⁹ The Tomorrow Project http://www.tomorrowproject.net/pub/1_glimpses/employment/-244.html

¹⁰ WMES (2.5 Challenges for regenerating communities)

¹¹ Ludi Simpson, Centre for Census and Survey Research, University of Manchester. West Midlands Regional Observatory, Sept 28 2006 event.

¹² WMES

Inward migration - long-term participation in the regional economy	
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4. Changing workforce and working practices

Britain's workforce has changed drastically over the last 50 years, with more women in employment now than ever before. The number of women entering the workplace is expected to continue. As a result, the demand for more flexible working arrangements and childcare is expected to rise.

Working practices have been revolutionised by the introduction of information and communications technology (ICT). It has enabled more people to work from home, and home working and teleworking are expected to become much more common in the future. If this does happen, it will trigger positive changes including lower congestion and emissions.

As technology advances, it will require much higher levels of co-operation between workers. Consequently, the importance of human interactions in many jobs will grow exponentially.

Overview

- IT changes traditional patterns of living and employment: increased teleworking, home working, limited hours in the office, less travel
- Increased importance of collaboration, team work, joint ventures and interpersonal skills
- More self-employment, part-time employment and home-based work will increase
- Number of women entering the workplace expected to continue
- Increase in demand for flexible working (part-time work, need for childcare)

Impacts	Predictability in the next 20 years
Movement away from a fixed age of retirement	The trends show this to be true. However, there is uncertainty around the extent of the change.
Further developments in ICT enable more home working	
Greater demand for work/ life balance	
Increased home working could lead to reduced travel and therefore less congestion and emissions	
Developments in ICT and home working has allowed people to set up their own businesses	
More micro-scale businesses in the future	
Continuing rise in the proportion of women in the workforce, resulting in a greater need for childcare facilities?	
Will there be a growing need for remote working centres, local collection points, for delivery and to pick up goods ordered on-line?	
What will a longer working life mean for labour supply forecasts?	
More flexibility in working practices helps facilitate greater innovation	
Greater home working presents opportunities for economically inactive e.g. if you are disabled	
Will the workplace become more fulfilling or stressed?	

5. Increased gap between rich and poor

If current trends continue, then the gap between rich and poor could continue to widen but be defined in different ways. Social and economic inequalities could be defined by knowledge of and

access to information, including the Internet and access to broadband. With many industries moving overseas, those without the right skills or ability to continuously learn could find themselves disadvantaged.

With an ageing population, those that have not made adequate pension provision may end up living below the poverty line.

Overview

- Will social disparities increase?
- Will we see a growth in fear and mistrust - gated communities?
- 80% of citizens from the minority ethnic communities live in the deprived parts of the region¹³

Impacts	Predictability in the next 20 years
Will the infrastructure required to provide services such as home monitoring / tele-medicine be available across the region and to all socio-economic groups?	If there is a general income rise, the gap between the rich and poor is likely to continue, unless it is explicitly managed through the direction of policy.
Ensuring that everyone has basic skills	
Ensuring equal access for all to housing and services (including health services)	
Appropriate training and skills can help social exclusion and gaps in wealth distribution	

6. Skills gap

The West Midlands lags behind the national average on a range of skills. There is a real need to upskill or reskill the workforce¹⁴ in a number of areas. This need will become increasingly urgent, as there will be fewer opportunities in the future for people with low level skills. Appropriate skills are especially needed to use new technologies. Investing in skills is key to developing business competitiveness within the region, nationally and internationally.

Overview

- Today, nearly 20% of the region's workforce has no qualifications¹⁵
- The importance of managers and professionals will continue to grow in the West Midlands
- The proportion of jobs requiring degrees or their equivalent rose from just over 16% in 1986 to nearly 23% in 2001¹⁶
- Increased emphasis on life-long learning

Impacts	Predictability in the next 20 years
The nature of skills required is changing	The speed at which the skills gap can be addressed both within the region and between regions. How quickly the workforce can upskill or reskill to take advantage of the opportunities that change
Employers skills requirements (nationally) have increased slowly but considerably ¹⁷	
Will employers in the West Midlands become more demanding about the skills that they need and use ¹⁸ ?	
Can the labour supply meet the challenges posed by economic change?	

¹³ John Edwards, Advantage West Midlands <http://www.bitc.org.uk/resources/viewpoint/wmjohnded.html>

¹⁴ WMES

¹⁵ Future prospects for the West Midlands economy and employment

¹⁶ The Tomorrow Project http://www.tomorrowproject.net/pub/1_GLIMPSES/Employment/-236.html

Will the workforce be equipped with the right skills to access high quality employment?	will inevitably bring.
Ensuring that people have the appropriate skills for their employment (both low and high level skills)	
Need to improve higher level skills e.g. leadership and management	
Creating the right skills levels to address innovation	
Increasing basic skills levels will bring about increased social benefits	
Bringing young people into the prosperous economy so that they have gainful employment, particularly for BME communities, which could enable their communities to become richer and less marginalised over time.	
There is a need to attract and retain high level skilled people to the region	
Increased importance of links between business and education to develop an enterprise and entrepreneurship culture	
Interpersonal skills will become more valued as collaboration across regional and national boundaries increases	
Investment in skills needed to attract and retain investment	
The education system will constantly have to raise its game to produce young adults with the skills and aptitudes required by this demanding world ¹⁹ .	

7. Increasing profile of healthy lifestyles

People's interpretations of a healthy lifestyle could be a better work/life balance, aspirations for more space and a better environment, or a perceived link to greater consumerism (the freedom to buy whatever you want to make you happy).

Overview

- Increasing proactive healthcare
- Increasing number of well informed health conscious people
- Movement away from end-of-pipe healthcare
- The percentage of obese adults has roughly doubled since the mid-1980s²⁰

Impacts	Predictability in the next 20 years
Obesity, stress management, increased rates of depression	How will healthy lifestyles be perceived in the future?
Availability of genetic screening - enabling medicines to be targeted. This may have an impact on insurance	
Will genetic screening be available to all across the region?	
Pollution absorbing materials	
Quality of life valued, not just prosperity ²¹	
Will there be a greater demand for improved quality of environment and accessibility to green open space?	
What will be the implications of the desire to buy fair trade, organic local products?	

¹⁷ The Tomorrow Project http://www.tomorrowproject.net/pub/1_GLIMPSES/Employment/-236.html

¹⁸ Future prospects for the West Midlands economy and development

¹⁹ The Tomorrow Project http://www.tomorrowproject.net/pub/1_GLIMPSES/Media_and_technology/-388.html#A-388:11

²⁰ UK obesity statistics <http://www.annecollins.com/obesity/uk-obesity-statistics.htm>

²¹ LGA Futures Toolkit

Will healthy lifestyles lead to a growing urban – rural divergence in the housing market?	
Personalisation of services and choice	
Access to healthcare	
Satisfying new types of consumer demand	
People's leisure trips	
Link between health, crime and economic inactivity	
Greater demand on rural infrastructure as more people enjoy outdoor activities in rural areas	
Happiness metrics introduced and measures put in place to tackle poverty of happiness where it exists	
Increasing use of alternative medicines and therapies	

8. Increasing transport infrastructure stress

The West Midlands is at the heart of the UK transport network. Over the last several decades the volume of traffic has increased drastically, resulting in higher congestion and lower air quality. The growing demand for cars means congestion will continue to be a major problem.

The arrival of the low cost carrier has slashed the price of overseas travel, so making it much more accessible. Unsurprisingly, this move has triggered an upward surge in the number of airline passengers. As a result, regional airports have expanded considerably. It remains to be seen whether the price and availability of oil, and the need to address climate change will mean that supply side issues will increase prices and thus dampen demand.

Overview

- Congestion is estimated to cost the West Midlands £2.5 billion every year²²
- Desire for personal mobility is increasing
- More reliance on cars and increasing demands for international travel
- International journeys are predicted to more than double between the early 2000s and 2020s from 703 million to 1.6 billion²³

Impacts	Predictability in the next 20 years
Currently full capacity infrastructure. How to deal with supply and demand side issues around that?	Transport stress in the region already exists. This will continue unless it is managed. Forces to stop it happening may include rising oil prices and/or taking climate change seriously.
The potential introduction of congestion charging in the region	
Pressure on the countryside as more people seek to escape crowded cities may lead to more demand for roads in rural areas	
Increasing role of regional airports (Birmingham and Coventry) for business and leisure travel	
Will we see an infrastructure that allows for reduced demand for transport in the future?	
What will be the impact of new technological opportunities e.g. dual-fuel cars, hydrogen vehicles, maglev trains on the economy and climate change?	
Need to ensure effective and efficient infrastructure as a platform for a competitive regional economy	

²² West Midlands Transport Green Paper (2006)

²³ The Tomorrow Project http://www.tomorrowproject.net/pub/1_GLIMPSES/Globalisation/-164.html

Transport (largely private and aviation) contributes the largest proportion of CO ₂ emissions and therefore has a crucial role in its mitigation.	
Existing and new infrastructure both need to be able to withstand a different and unpredictable climate.	
Advent of low carbon infrastructure	
If transport becomes more accessible what will be the impact of increased out-migration from certain areas, as it becomes easier to commute longer distances from home to work?	
Will the escalating costs of travel and congestion cause businesses to change the way they operate?	

9. New technology opportunities

We know that new developments in nanotechnology and biotechnology and continuing development in ICT will continue to have a huge impact on society in the future. Revolutions in science and technology will transform manufacturing and services, and shorten life-cycles.

Overview

- Nanotechnology – new building design and construction materials
- Biotechnology – being able to grow products that are currently manufactured
- Artificial Intelligence – leading to the automation of many areas of work and home life
- Availability of instant global access to health records, medical advice via video/telelink, automated and miniaturised diagnostic testing, home monitoring equipment.

Impacts	Predictability in the next 20 years
New developments in ICT may change traditional patterns of living and employment location	<p>We know with certainty that technological advances will have a large impact on our society. What is uncertain is what it will look like?</p> <p>Technological advancements and their applications are fairly predictable. Their social, commercial and political impacts are not.</p> <p>How long will it take to bring a new technology to market?</p>
Nanotechnology - Production of materials that are substantially stronger, lighter, cheaper and/or faster	
Biotechnology - how will the ability to grow products change the type and location of manufacturing?	
Genomics	
Artificial intelligence – what will be the impact of more automated areas of work?	
What services can be delivered electronically?	
What jobs and services will computers rather than humans undertake?	
Greater e-business take-up	
Technology for the built environment	
New technologies will reduce costs as a result of more automation	
Technology will increase the opportunities for greater interactivity ²⁴	
Personalisation of services	
Personalised advertisements - what will be the impact on individual choice?	
New technologies will change the way businesses operate	

10. An ever more networked world

²⁴ The Tomorrow Project http://www.tomorrowproject.net/pub/1_GLIMPSES/Media_and_technology/-1248.html

In an increasingly networked world many parts of the world have the opportunity to access people and information 24 hours a day. The Internet and mobile phone has enabled us to communicate more often, irrespective of where we might be in the world.

To be connected is a human instinct. Interactions between people have become even more important since the Industrial Revolution and are predicted to continue into the future.

Overview

- Interactions between people will continue to be important
- People in teams operate in relays around the world so projects can be worked on 24 hours a day.

Impacts	Predictability in the next 20 years
Greater connectivity through better access to ICT creates many more opportunities as more is possible especially in terms of productivity and efficiency	Trends show that this is increasing. There is no reason for it to slow down or decrease in the future, with its reliability being facilitated by more technology.
Will this networked world lead to major outsourcing across the world (into and out from the region)?	
Will lack of access to the networked world lead to the isolation of groups from society due to the lack of access to social activities, education, health care and participation in government?	
What effect will the availability of access to the networked world have in rural areas?	
Increasing importance of global networking	

11. Globalisation of markets

The world has become more economically, politically and socially interconnected than ever before. Global interconnection and interactions are set to rise further in the future. This growing, global interdependence is inevitable, thanks to technological advances, deregulation, and trade liberalisation.

Overview

- Relocation of call centres, financial jobs, computer processing etc.
- Collaboration across regional and national boundaries likely to increase
- In China there are 300,000 new engineering and science graduates a year (and rising), compared with 100,000 in Britain²⁵

Impacts	Predictability in the next 20 years
Increasing importance of global networks and alliances	Are local industries and companies likely to grow or decline? Uncertain futures for some sectors as more jobs are out-sourced.
How will the region market itself to capitalise on this changing global context and heighten its international engagement?	
Will businesses increasingly seek to avoid restrictive legislation and locate factories outside Europe?	
How will the region address any potential risk from expanding into untried markets ²⁶ ?	
Will Mandarin and Chinese culture be increasingly taught in schools to keep globally connected?	

²⁵ http://www.tomorrowproject.net/pub/1_GLIMPSES/Globalisation/-169.html

²⁶ WMES (8.5 Engaging with European partners)

Creates opportunities for enterprises (in region)	
Creates opportunities for growth	
Businesses may increasingly choose to invest money in overseas markets than in the region or UK	
Conflict between cheaper labour/greater profits Vs consumer demand for ethical working practices and fair wages	

12. Increasing global economic competition

By 2050, India is projected to become the third largest economy in the world, behind China and the United States. Today, the labour costs in China are 4-8% of those in Britain, with those of India 6-10%.

The emerging economies of China and India could have the skills to out-compete Britain in a growing number of areas. There will be a greater emphasis on social capital as human relationships and emotional intelligence is required more and more.

Overview

- Good links to overseas networks seen as essential for UK competitiveness
- The Chinese and Indian economies have grown by over 700% and 250% respectively since 1980²⁷
- UK imports of refrigerators from China jumped from zero in 1995 to 998,500 units in 2003, just over 38% of all fridge imports²⁸
- Stronger focus on training in the skills of collaboration and partnership
- Greater emphasis on social capital

Impacts	Predictability in the next 20 years
Expansion of out-sourcing	Global trade is steadily increasing, with outsourcing likely to continue.
More flexible, super skilled workforce	
Low value added is less attractive	If incomes in China and India start to increase, it is likely that other countries will take their place in terms of outsourcing etc.
Greater emphasis on knowledge and creative economy	
What will be the impact of China and India (and other newly industrialised countries) on the labour market?	
What will be the impact of EU expansion on employment and labour supply?	
Will the attractiveness (culture, international airports, manufacturing base) of the WM draw in businesses?	
Increased competition in import and export markets	
Will global competition for business investment put pressure on localities to meet requirements of international companies?	
Opportunity for West Midlands to be a global centre of excellence for high skilled 'niche' markets	

13. Accelerating change

In a fast changing world the need to create diverse economies is crucial. With the economic and technological advances that we have witnessed over the past 50 years, how fast will the pace of change be in the next 50 years, and what will it look like?

²⁷ http://www.tomorrowproject.net/pub/1_GLIMPSES/Employment/-228.html

²⁸ Tomorrow Project http://www.tomorrowproject.net/pub/1_GLIMPSES/Employment/-227.html#-227:1

Overview

- Pressure on companies to respond to the accelerating pace of economic and technological change
- In employment terms, tourism & leisure is the region's fastest growing cluster²⁹

Impacts	Predictability in the next 20 years
Organisations will need to be more flexible and better prepared to manage risk in an uncertain future	Changing nature of the economy. How fast will the pace of change be? How can we plan for growing industries that are unforeseen?
Organisations and businesses will need to be willing to take risks	
Must be aware of changing business needs and be capable of responding	
Capacity to generate new ideas and exploit them rapidly, increasingly becomes key route to income generation	
Flexible workforce with a variety of skills and experience, to allow businesses to maintain their market position in the world economy.	
Some may lack the resources to change	
What will be the new drivers of economic growth on the region and where will they be located?	
What will be the pace of agricultural and landscape change?	
Adapting to change to include greater awareness of sustainability and sustainable practices	

14. Rise of the knowledge economy

Developments in ICT and globalisation have accelerated the development of the knowledge economy by enabling the automation of certain functions previously carried out by people. It has also allowed certain industries to locate overseas, such as call centres, placing an increasing emphasis on people, and their knowledge and skills.

However it is not just people's knowledge that will be needed in the future, as more and more of that will be undertaken by faster and more powerful computers. It's their emotional intelligence that will become more valued, because computers will be unlikely to replicate this in the near future.

Overview

- Move towards a more knowledge based economy
- Knowledge-intensive sectors already account for 41% of employment in Britain. This exceeds the EU average of 33%³⁰
- Strong emphasis on creativity, innovation and life-long learning

Impacts	Predictability in the next 20 years
How will the knowledge economy impact on existing enterprises in the region? Which sectors are under represented in the region?	In the UK, outsourcing of basic services continues.

²⁹ West Midlands Visitor Economy Strategy

³⁰ http://www.tomorrowproject.net/pub/1_GLIMPSES/Employment/-228.html#-228:2

Greater focus on innovation, a wider skills base developing an ideas economy	There will be a need for an increase in the knowledge economy in the West Midlands. The extent to which the region takes advantage of this, and how well it performs is uncertain.
Will the knowledge base of the West Midlands make it an attractive location for advanced manufacturing?	
What jobs/ services will be undertaken by computers instead of people?	

15. Pressure for climate change mitigation

Climate change is one of our biggest future threats³¹. The earth is now hotter than at any time in the last 2,000 years. The climate could warm up by about 3°C over the next 100 years bringing with it much more extreme weather – hotter and drier in summer, wetter and windier in winter. These percentage changes are greater than anything we’ve seen in thousands of years, and they have dramatic implications.

Overview

- More extreme and frequent weather events
- Potential for a decrease in pollution to actually increase the impact of climate change
- Cost of mitigation: 20x less than the cost of ‘business as usual’.

Impacts	Predictability in the next 20 years
Introduction of carbon taxes	Scientists are certain that climate change is happening, but uncertain how fast the change in temperatures will happen and what will be the impact as a result.
Environmental legislation – Climate Change Levy, Water Framework Directive, Integrated Pollution Prevention and Control (IPPC)	
Increased regulation from the EU	
Increased insurance premiums in flood risk areas	How precise can we be about climate change impacts at a regional level?
How will the region reduce its contribution to the causes of climate change by reducing emissions of greenhouse gases?	
Impacts on agriculture and property prices	

16. Pressure for climate change adaptation

In the UK we are already seeing changes in our weather with more extreme and frequent flooding, storms, heat waves, and droughts. Even if we were to stabilise carbon concentrations today, climate change impacts would still be felt in the future due to the greenhouse gases that have already been released. To prepare for the changes that are already in the climate system, we need to adapt our way of life, as well as limiting our future greenhouse gas emissions.

Overview

- Over 130,000 people live at risk of flooding in the WM
- The cost of disruption to transport could be between £30 million and £80 million³²
- By the 2020s a flooding event similar to the one experienced in Autumn 2000 could cost the WM agriculture £20 million³³
- By 2050, Warwickshire and the south east of the region are expected to warm up more than Shropshire and the north of the region³⁴

³¹ UK SD strategy, Pentagon scenarios

³² The potential impacts of climate change in the west midlands 2004

³³ The potential impacts of climate change in the West Midlands 2004

³⁴ Environment Agency <http://www.environment-agency.gov.uk/regions/midlands/835324/835577/1136035/1244055/>

Impacts	Predictability in the next 20 years
Will the frequency of rare weather events like the tornado in Birmingham in 2005 become more commonplace?	Unpredictable weather patterns
It will affect the infrastructure that supports us. Buildings will need to be more resilient to extreme weather events	Will adaptation be planned or reactive?
Building Research Establishment (BRE) estimates that the effects of climate change on soils and subsidence could cost as much as £400 million	What will be the speed and effectiveness of such measures?
The effects of stronger winds may also present an increasing problem potentially damaging hundreds of thousands of homes a year	Will we be able to pinpoint the regional impacts of climate change?
Flooding is also predicted to become more frequent and severe with millions of homes at risk. Construction still takes place in high risk areas	How fast will new technologies spread that have the potential to reduce climate change?
The quality and sustainability of the built environment will need to be improved	
Flash floods and high winds could severely disrupt the road and rail network	
What will the cost to businesses of increased flood risk in the region?	
Water stress - drier weather and flash floods will put pressure on the water table and rivers	
Effect on agriculture – flooding will become a regular part of winter weather	
Opportunity to grow new agricultural crops better suited to new climate ³⁵	
Longer growing seasons	
Will businesses adapt and take on the challenges created by changes in recreational and tourist patterns, and domestic lifestyles?	
As the world becomes more prosperous travel will increase significantly – what will be the climate change impact?	
Impact on biodiversity – new species and altered ecosystems	

17. Increasing pressure on natural resources

As the world's economy expands, demand for raw materials, especially fossil fuels, will soar. Oil and gas demand is expected to double between 2002 and 2030³⁶.

The West Midlands has some of the driest areas in the UK yet the region has a limited capacity to store water along with some of the highest population densities in the UK.³⁷ The South East is already experiencing a decrease in water availability and with climate change the West Midlands could expect to experience lower water availability in the future. This could have implications for a range of business sectors.

The amount of waste the UK produces has been steadily increasing. Some regions are already running out of landfill sites and the West Midlands will likely experience the same in the future. The future is likely to demand a higher rate of recycling and re-use of waste.

³⁵ The potential impacts of climate change in the West Midlands 2004

³⁶ International Energy Agency <http://www.iea.org/Textbase/subjectqueries/index.asp>

³⁷ Water resources strategy for the West Midlands

Overview

- Higher summer temperatures could increase the demand for water, reduce water availability and cause soils to dry out
- The UK produces around 330 million tonnes of waste annually³⁸
- The West Midlands had the highest municipal recycling rate of 47% in 2003/4³⁹

Impacts	Predictability in the next 20 years
Availability of land and waste	Trends reveal that increasing pressure on natural resources is likely to rise further in the future. There will be pressure on supply, and pressure on demand, due to the impacts of climate change. The need to manage waste will become even more urgent, as less and less will be land filled in the future. Low carbon alternatives must be found.
Silicon prices become expensive, cheaper to be a nanotech expert	
Businesses will need to engage with huge opportunities offered by low carbon technology	
Expertise in fuel crops and dividing land between fuel crops and mainstream agriculture	
Opportunities in waste market will need to be realised – using waste as a resource, rather than a by-product	
Potential of regional reputation for encouraging environmental awareness and stewardship	
Will water shortages constrain electricity supply?	
Will technology allow power to be generated using less water?	
Engaging the rural community in providing renewables e.g. wind, combined heat and power systems (CHP)	

18. Emphasis on energy supply and security

The principle sources of energy we use - oil, coal and gas are set to peak within the next 20 years. What will be the cost implication of this? There is a growing demand to reduce fossil fuel dependence, and to move to cleaner alternative energy sources that do not adversely affect the environment. This problem is compounded by the relative insecurity of Britain's energy supply and its reliance on imported energy. In 2005, Russia used its gas supplies to put political pressure on the Ukraine. Will energy become a political weapon in the future?

Overview

- 95% of the world's energy infrastructure is located in coastal zones⁴⁰
- The recent rise in energy prices may be followed by a rise in commodity prices generally
- By 2007, Britain will no longer be self-sufficient in oil. Gas supplies are not likely to last much longer.⁴¹
- The UK will become an oil and gas importer
- Currently 0.6% of electricity in the West Midlands is generated from renewable sources⁴²

Impacts	Predictability in the next 20 years
Increase in low energy or decentralised energy generation	Uncertainty around whether the renewable industry will be able to develop enough to be able to meet
Will nations that supply our energy be politically stable?	
Potential for nations to use oil and gas as a political weapon	

³⁸ Environment Agency

³⁹ Defra <http://www.defra.gov.uk/environment/statistics/waste/kf/wrkf07.htm>

⁴⁰ Tomorrow Project http://www.tomorrowproject.net/pub/1_glimpses/globalisation/-359.html

⁴¹ http://www.tomorrowproject.net/pub/1_GLIMPSES/Employment/-228.html#-228:2

⁴² The West Midlands Regional Energy Strategy 2004 <http://www.gos.gov.uk/gowm/docs/177226/394405/WMRES>

What will be the climate change impact on energy infrastructure located in coastal zones?	the UK's energy demands. Will technology develop enough to enable a dependence on renewable energy to take place? Uncertainty around energy prices.
Increase in global collaboration. How effective will it be?	
Growing need to diversify supplies	
Growth in micro generation of energy at household level	
Increase in UK spend on renewables (household and commercial)	
More investment needed in renewables sector	
Need for increased government support for renewables industry e.g. investment in technologies, financial incentives to encourage micro generation and localised renewable energy production	

19. Lack of regional identity

Identity influences the way we behave. In many urban and rural areas in the UK, people have spent their lives within a few miles from where they were born, thus influencing their attitudes. Increasingly however, people are being exposed to alternative lifestyles through university, travel, media and the Internet.

A key strength of the West Midlands is its diversity of urban and rural landscapes and culture. Many areas have a strong identity like Stoke-on-Trent or Birmingham, but what does it mean to be a West Midlander? A weak sense of regional identity can create a poor image of the region. Other regions in the UK have successfully attracted significant investment, some say in part due to their strong regional identity and presence, and thus creating the right image, which is particularly important when attracting international investment and tourism.

Overview

- The West Midlands is second only to London in terms of the diversity of its people
- The region as a whole suffers from a poor image.

Impacts	Predictability in the next 20 years
How will the region promote itself to attract investment?	Will the region gain a stronger sense of identity collectively, or will parts of the West Midlands continue to naturally gravitate towards the south, and northern parts of region towards the north (e.g. to Manchester)?
How will the region market its rich diversity (landscape and culture) to attract tourists?	
Lack of regional identity and presence could hamper the attraction of the region for new enterprises and innovation	
Attracting the right people to the region	
Is there a sense of belonging in the community?	
What impact can media technology have in creating affinity to what's going on in different parts of the region?	

Annex 1

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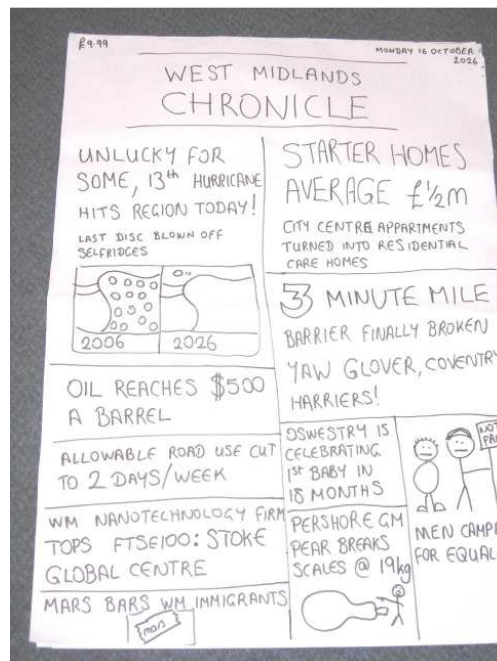
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Annex 2

On 16 October 2006, Advantage West Midlands held a full staff away day in which they invited Forum for the Future to run an awareness raising exercise on futures. Staff were asked in groups to develop front page headlines for the West Midlands Chronicle 2026.

These are a small sample of the results:



Out of 230 headlines produced, 37 were about transport, 22 climate change, 22 energy and natural resources, 18 skills and employment, 18 political/governance issues, 17 demographic change, 16 technology, 16 health issues, 16 values/attitudes, 14 built

environment, 13 economic issues. A smaller number of headlines were concerned with issues around agriculture and land use, quality of life, and sport.