

The Shifting Nature of Work in the UK

Bottom Line Benefits of Telework

April 2011 - Kate Lister, Tom Harnish





Table of Contents

Introduction 3

Telework Savings Calculator 4

Employer Benefits 5

Productivity Impact 5

Real Estate and Electricity Impact 6

Absenteeism Impact 7

Attraction and Retention Impact 8

Employee Benefits 10

Petrol Expense Impact 10

Other Work Expense Impact 10

Time Savings 11

Community Savings 11

Oil Impact 11

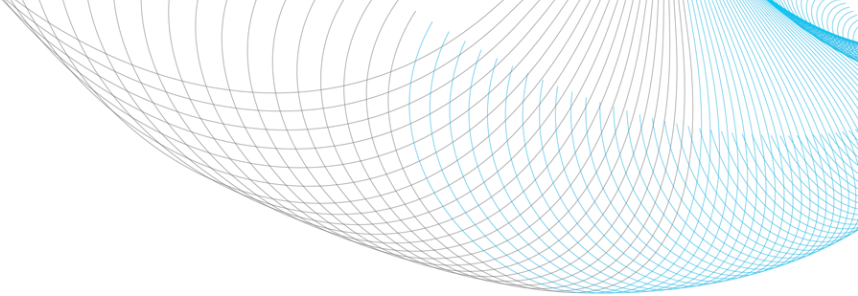
Greenhouse Gas (GHG) Impact 11

Traffic & Accident Impact 11

Other Community Benefits 12

Summary 13

Acknowledgements 14



Introduction

Thanks to advances in technology, work no longer needs to be tethered by time or place. Citrix Online describes this shift from ‘work’ as a noun to ‘work’ as a verb, as ‘workshifting’. The purpose of this paper is to quantify the financial and environmental benefits of this growing trend. It will show how twice weekly home working, by those with compatible jobs and a desire to do so, could save UK companies, employees, and the community over £4,300 per year per participant. At the national level, the savings would total over £32 billion a year.

Workshifting—also known as telework, telecommuting, or e-work—covers a broad range of work arrangements including mobile work, remote work at a client’s location, work at a shared office centre or hub, and home work. In most countries, government numbers on the home-based workforce also includes the self-employed. Whilst all forms of workshifting have their benefits, the focus of this paper is on employee home working. There are two reasons for this. First, it’s been more extensively studied and better documented than other forms of workshifting. Second, by replacing the daily commute, home-based workshifting offers the greatest qualitative and quantitative benefits for all constituents.

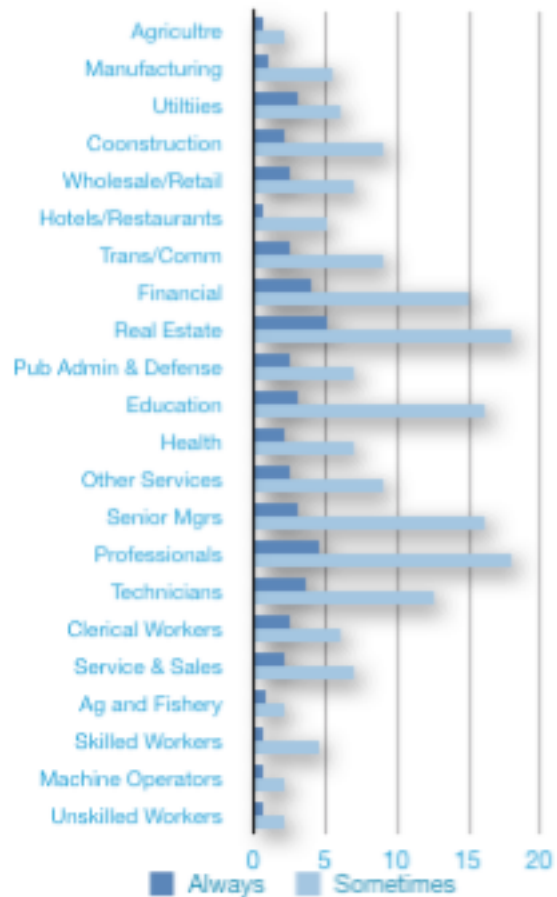
By any name, the concept has been slower to catch on than its advocates have hoped. Whilst worries over weather calamities, the spread of disease, terrorism, rising fuel prices, and road closures often spike temporary interest in workshifting, less transient issues are now driving its widespread adoption.

Much has happened since telework was first proposed as a solution to traffic congestion in the 1970s. Certainly the ‘how’ of remote work has changed. Technologies we didn’t dream about three decades ago are now ubiquitous. But the ‘why’ of it has changed too. Just three years ago saving money was rarely mentioned as an impetus for workshifting initiatives. Labour shortages, better work-life balance, environmental sustainability, and continuity of operations were the principal drivers. As we recover from the recession, those issues will reignite the flame, but workshifting’s potential to dramatically reduce costs and increase productivity will sustain the burn.

Thousands of companies and millions of employees in a wide range of industries across the globe already workshift successfully. They’re proof that the traditional barriers such as management mistrust, security, cost, employee isolation, worries about career advancement, and difficulties collaborating can be overcome with a combination of technology and cultural change. And they’ve proven that the bottom-line benefits are worth the effort.

‘Businesses are embracing technology and utilising home-based teams of employees and entrepreneurs working together to deliver results’, says Emma Jones, author and

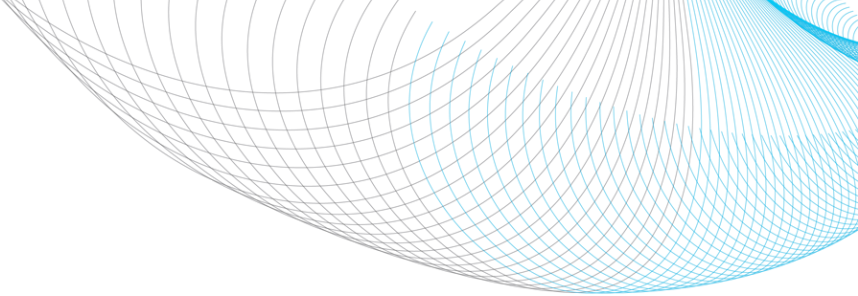
People Who Work at Home with a Computer By Sector and Occupation



EU27 Nations
(Per cent of Workers)

founder of Enterprise Nation. ‘It’s an arrangement where everyone wins; the individual benefits from the freedom and flexibility that comes with working from home and the company receives access to the best people, higher productivity, and better accountability.’

Communities are reaping the benefits of workshifting too. It can significantly reduce traffic congestion (a 2.5% reduction in traffic can cut time lost in traffic by 25%¹) and reduce the need for new road construction. It can provide fuller employment for unemployed and underemployed persons. It can slow the brain drain of



the retiring boomer generation and reduce the offshoring of jobs. It can deter the outbound migration of talent from rural communities. It can reduce energy usage and oil imports. And it can mitigate the impact of small and large disasters on national productivity.

But, the UK has fallen behind other nations in its adoption of this new way to work. Among the EU27 (and Norway), the UK ranked 12th in the percentage of those with employees working at home a quarter or more of the time.

A special analysis of home-working data from the Labour Force Survey conducted for the *Workhubs—Smart Workspace for the Low Carbon Economy* report (2010)² revealed that employees who consider home their primary place of work account for only 4.9 per cent of the labour force—a figure that has grown little over the past decade and is a long way from what’s possible.

Over the past thirty years knowledge intensive industries have driven job creation and productivity gains in the UK. Between 1995 and 2005, for every one job created in ‘other’ services, 12 new jobs were created in knowledge intensive services.³ Recent studies suggest that as many as two-thirds of UK jobs are now workshifting-compatible⁴ and a similar level of employees say they’d work from home at least some of the time if allowed⁵—more than a third would forego a pay raise to do so.⁶

In the face of a record high deficit, billions in planned spending cuts, high unemployment and significant underemployment, low productivity, looming environmental mandates, the threat of rising oil prices, and the changing needs and wants of the population, ‘business as usual’ simply isn’t sustainable for either government or business.

A 2007 Equal Opportunities Commission investigation into the Transformation of Work offers this picture of the future⁷:

‘The potential for many types of work functions to be carried out in location-independent ways has added a new, growing, but still vastly unexploited dimension to the way work is organised. Requiring employees to always make the trip into the office to perform work tasks is fast becoming a sign of dinosaur organisations and a turnoff for new job seekers, particularly a new generation who have grown up with technology and are aware of the freedom it can bring. Evidence suggests that this will hit the jackpot—the ability to work at home is high on the list of work-wants from young and older people alike and case studies show that giving greater control and empowerment to individuals in blue-collar as well as white collar jobs can deliver higher levels of productivity than their office-bound colleagues.’

The remainder of this paper is organised into three sections that summarise the savings and benefits of home workshifting for employers, employees, and communities. The total value of

benefits is provided for 50, 100, and 500 participants, and for the UK as a whole. The quantified benefits include:

- ▶ **Employer Benefits:**
 - Higher productivity
 - Lower real estate and related costs
 - Reduced absenteeism and turnover
- ▶ **Employee Benefits:**
 - Lower petrol and auto expenses
 - Reduced work-related expenses
 - Increased free time
- ▶ **Community Savings:**
 - Lower oil imports
 - Reduced greenhouse gases
 - Fewer traffic accidents
 - Reduced vehicle miles

Whilst there are many other benefits to be derived from workshifting, not all are easily reduced to numbers. Those are listed at the end of each section.

Telework Savings Calculator

The financial benefits presented in this paper were derived from the [Telework Research Network’s](#) proprietary Telework Savings Calculator. The assumptions behind the model are based on an analysis of over 400 UK, U.S., and global case studies, research papers, books, and other sources. Additional information was gathered from dozens of interviews with top virtual employers, advocates and naysayers, researchers, and leaders of successful workshifting programmes in both the public and private sector.

The primary sources of data used to develop the UK Telework Savings Calculator include:

- ▶ British Chambers of Commerce
- ▶ Chartered Institute of Personnel and Development
- ▶ Confederation of Business Industry,
- ▶ Cushman & Wakefield UK Market Beat
- ▶ Equality and Human Rights Commission
- ▶ Eurofound
- ▶ European Union: European Social Fund
- ▶ Forrester Research Inc
- ▶ HM Revenue & Customs
- ▶ McKinsey Global Institute
- ▶ Orange Future Enterprise Coalition
- ▶ Reason Foundation
- ▶ Royal Automobile Club Foundation
- ▶ Trade Union Congress
- ▶ Transport for London
- ▶ UK Department for Transportation
- ▶ UK Office of National Statistics
- ▶ UK Labour Force Survey
- ▶ UK Department of Energy and Climate Change
- ▶ UK Automobile Association

Telework Savings Calculator: General Assumptions

The following assumptions provide the basis for the analysis that follows:

- **Home working average of 2 days per week (based on a 2008 Chartered Institute of Personnel and Development study)**
- **Total Population Model**
 - **Assumes 50 per cent of workforce could work from home at least part of the time (based on three independent assessments)** ⁸
 - **Excludes those who already do so regularly and the self-employed (based on 2008 Labour Force Survey data)**
 - **67 per cent of that population would do so if given the opportunity (based on multiple sources including 2009 Orange/YouGov survey of over 3,000 UK employees)** ⁹
- **Company model:**
 - **Assumes 50, 100, and 500 workshiffters**
- **Notations throughout: b = billion, m = million**

Employer Benefits

Twice weekly home working could save employers over £3,000 per person each year. The primary financial benefits for employers come from increased productivity, reduced real estate costs, and lower absenteeism and turnover.

Productivity Impact

Whilst lack of management buy-in and concerns that people won't work as hard if left on their own is the most commonly cited obstacle to the adoption of workshifting programmes, the fact is that study after study show people who work from home are more productive than their office counterparts.

'One of the biggest holdbacks in home working is that managers worry that the distraction of domestic activities and motivational issues will reduce employee effectiveness,' said Peter Thomson, Research Director for the UK Telework Association. *'However there is no data to prove this prejudice and plenty to counter it.'*

Industry Research on Productivity

British Telecom's home-based call centre agents answer 20 per cent more calls than their office counterparts.¹⁰ BT's Anytime Anywhere working scheme shows a 15 per cent to 31 per cent increase in productivity across various functions.¹¹

Reasons for Increased Productivity

Fewer interruptions: Home workers are not distracted by the many time drains that take place in a traditional office—morning chatter, coffee breaks, long lunches, rumor mills, birthday parties, football pools, afternoon pints, etc.

More effective time management: Email and other asynchronous communications can be time-managed more effectively and are less apt to include non-work digressions.

Feeling like a trusted employee: A sense of empowerment and commitment is consistently shown to be one of the highest contributors to employee job satisfaction.

Flexible hours: For those who are able to flex their hours as well as their location, workshifting allows employees to work when they are most productive.

Longer hours: Many employees work during the time they would have otherwise spent commuting. Overworking is one of the most commonly cited problems among home workers.

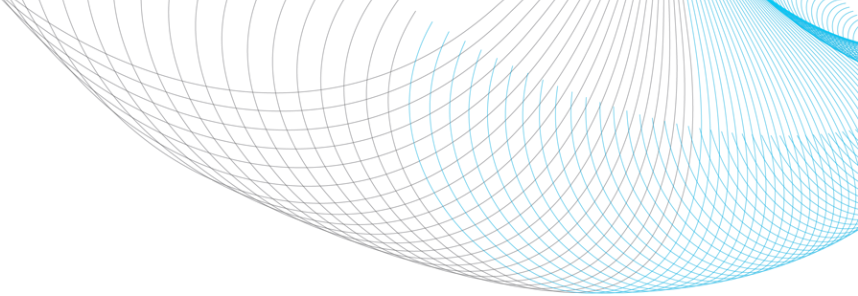
A 2007 report by Orange Future Enterprise (summarising over 1,400 interviews, workshops, and forums) showed that three quarters of those who worked flexibly—either in terms of place or time—report being able to concentrate better.¹²

In a study of more than 24,000 global workers, 80 per cent of IBM managers agreed that productivity increases in a flexible environment.¹³

In 2006, the Industrial Relations Service (IRS) surveyed 66 employers about their policies on and experience with flexible working and telework. When asked about the impact of telework on employee productivity, 38 per cent of respondents felt very positive, 40 per cent positive, and 22 per cent were neutral. None reported a negative impact.¹⁴

U.S. architecture practice, Gensler—the firm behind the new interior of the London Stock Exchange, recently asked 200 senior and middle managers about their work environment. Almost half said they found it hard to be creative or innovative in the office, and 36 per cent said they were more productive when working at home.¹⁵





A study of the return on investment from telework prepared Booz Allen for the U.S. General Services Administration reported an increase in productivity of 1 hour per day among teleworkers.¹⁶

Best Buy measured an average productivity increase of 35 per cent through its flexible work programme.¹⁷

Telework Savings Calculator: Productivity Assumptions

- **20 per cent increase in productivity on home working days (based on a wide range of actual company experiences including those listed above)**
- **Whilst the majority of home workers are more senior level people, the per person income assumption is based on the much lower national average of £25,720 per year¹⁸**

Annual Increase in Productivity				
Twice Weekly Workshifting	50	100	500	UK
Productivity Increase	£102,713	£205,426	£1,027,130	£15.3 b

Real Estate and Electricity Impact

Traditional offices are expensive, inefficient, inflexible, and difficult to scale—particularly down. Home working programmes can reduce the capital drain of owning or leasing a building. Though not quantified in the model, a home working programme can also save on parking lot leases, furniture, supplies, maintenance, security, janitorial, insurance, taxes, common area, and other related costs. It can also dramatically reduce a company's carbon footprint—something that's becoming increasingly important in both the public and private sector.

Based on data from the largest validated database of office property in the UK¹⁹, a 2007 government report found that government office occupancy is about 25 per cent less efficient than in the private sector. Through improved space efficiency, workshifting and office hoteling, it suggests the average per person space could be reduced to 12 m². With more than a sixth of government offices now occupying more than 24 m² per person, the report estimates the savings across government properties could total £1.25 billion a year.²⁰

The 2007 report demonstrates that organisations can achieve significant savings in both real estate and energy use through a combination of more efficient use of space, better use of technology, and new ways of working:

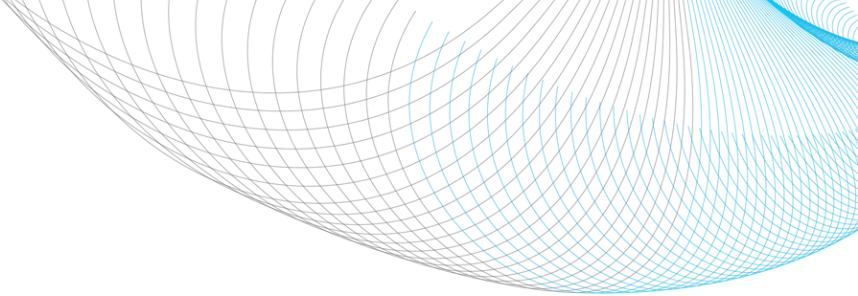
*'It is clear that growing numbers of organisations are dramatically changing the way in which they occupy their office buildings. Part of the drive is economic as organisations respond to cost pressure. But part of the drive is organisational as they transform their work processes to respond to new operational pressures. Static production line-style offices are giving way to more dynamic work environments in which team work, collaboration and meeting space occupy far greater proportions of space. It is well known that traditional office layouts are, typically, half empty for most of the time due to people working out of the office, and many organisations have introduced hot-desking, desk sharing and alternative work styles to improve utilisation. Such initiatives allow a building to support more people in the same amount of space. Their impact on overall densities can be dramatic, often reducing an organisation's appetite for space by around 20 per cent to 30 per cent.'*²¹

'The opportunity to reduce facility costs, by reconfiguring office space or reducing the average space allocated to each worker is an opportunity corporate leaders cannot ignore', said Jim Creighton, co-founder of New Ways of Working, a member organisation focused on alternative workplace solutions. He points to real-world examples where companies have saved millions of square feet of real estate and reduced occupancy costs by optimising their footprint, employing workplace flexibility, and implementing processes and places that support mobile work.²²

Hewlett Packard, for example, has for years acquired people through organic growth and through mergers and acquisitions yet, at the same time, they've shrunk their real estate footprint. *'We're currently about 75 per cent complete in a space reduction exercise called the Global Workplace Initiative to reduce office space by 50 per cent and reduce occupancy costs by approximately 40 per cent',* said Chris Hood, Programme Manager for that initiative. Through a combination of mobile work initiatives and space reconfiguration, HP has been able to drive utilisation from 30 per cent to 40 per cent levels—not atypical in modern offices—towards a target of 80 per cent in just 3 years. He noted that the ratio of employees to desks varies by job, location—both by city and country, and other factors. In some places they have desk sharing ratios of 2:1. In others, they've been successful with ratios as high as 20 to 1.²³

'Good data is absolutely critical', says Mark Wartenberg, Founding Partner at Co3 Group Ltd. *'It shows the difference between what people think their real estate utilisation is and what it actually is.'* At Sun Microsystems, Wartenberg's former employer, they'd been measuring utilisation since 2001. As a result, they could prove that in some areas utilisation was only 20 per cent. By the end of 2008, utilisation was approaching 75 to 80 per cent. The improvement was achieved by supporting people's choices for where they work, supportive management policies, and enabling network technologies.²⁴





Industry Research on Real Estate Savings

Sun Microsystems saves £43 million a year in real estate costs, £1.9 million a year from reduced power consumption, and £16 million a year in IT expenditures with flexible work options for its 17,000 employees (2,000 primarily working at home, 15,000 up to 2 days a week).²⁵

At Oracle BV, redesigned workspaces, hot-desking, and electronic access to documents improved interaction between staff and reduced space from 23 m2 per employee to 13 m2.²⁶

Telework Savings Calculator: Real Estate Assumptions

- **Average office cost = £4,292/year (based on a 2007 government report) though it should be noted that London offices can run 2-3 times higher** ²⁷
- **Reduction with 2 day a week home working = 15 per cent (based on a 2007 government report)** ²⁸
- **Electricity savings = 4,400 kWh per person, per year (based on studies by Global Environment Technology Foundation and Sun Microsystems)** ²⁹
- **Extra home office energy is shown as a cost in the Employee Savings section**

Annual Savings in Real Estate & Electricity				
Twice Weekly Workshifting	50	100	500	UK
Real Estate & Electricity Savings	£27,810	£55,621	£278,106	£4.2 b

Absenteeism Impact

Unscheduled absences cost employers billions. They necessitate staffing redundancies, they inconvenience coworkers and customers, they reduce productivity, they increase insurance costs, they impact service quality, and they demoralise staff. According to the CCH 17th Unscheduled Absence Survey—the definitive survey of absenteeism in the workplace in America—66 per cent of those who call in sick aren't. They do so because of family issues (22 per cent), personal needs (18 per cent), entitlement mentality (13 per cent), and stress (13 per cent). Telework has proven to be the second most effective method of reducing absences (alternative work arrangements is first).³⁰

Home workers often continue to work when they're sick. They're able to return to work more quickly following pregnancy or surgery. And they're able to handle personal appointments

(e.g., appliance delivery, home repair, teacher consult, etc.) without losing a full day of work.

Home-based workers are sick or absent less often because they:³¹

- ▶ Experience less stress;
- ▶ Are less exposed to sick co-workers;
- ▶ Are exposed to fewer occupational and environmental hazards;
- ▶ Avoid driving—the most dangerous part of their day;
- ▶ Have more time for exercise.

Perhaps the most important reason they're absent less is that they are more satisfied with their job and therefore less likely to fabricate an illness.³²

The opposite of absenteeism, *presenteeism* is a chronic problem in organisations too—the mucus troopers who drag themselves to the office only to make everyone else sick aren't doing anyone any favours. In a 2010 Government study of over 2,000 companies, 91 per cent of employees said they'd be quite likely or very likely to go to work with a cold.³³ They do so because the company culture, benefits, or policies—perhaps unwittingly—encourage it. A 2008 study of mental capital and well-being by the Government Office for Science indicated that presenteeism is an even larger problem in terms of lost productivity than absences.³⁴

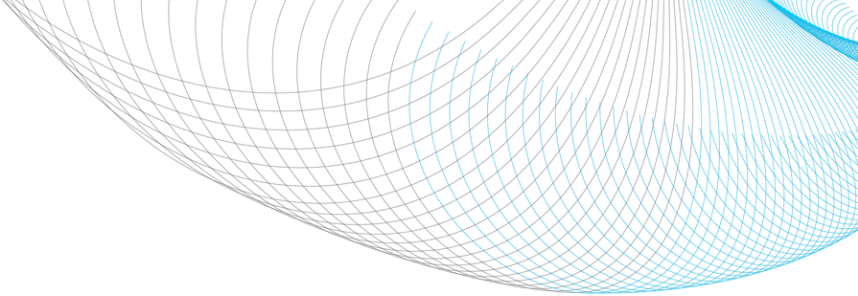
Industry Research on Absenteeism

BT's Anytime Anywhere workers are absent 20 per cent less than the average UK employee.³⁵

Stress at work is associated with a 50 per cent excess risk of coronary heart disease. There is consistent evidence that high job demand, low control and effort-reward imbalance are risk factors for mental and physical health problems. Among the EU-27, the UK ranked 15th in terms of workplace autonomy, sixth highest in employees with monotonous tasks, 16th in feeling they often or almost always have enough time to get the job done, and 15th highest in per cent of employees working more than 48 hours a week.³⁶

Unscheduled absences cost employers and average of £692 per employee per year. Private / public sector absences average 6.4 / 9.6 per person, per year respectively. Absence rates vary by industry and size of employer with the largest employers, those with over 2,000 employees, showing the highest absence rate (10.2 days per year). Absenteeism costs UK employers over £20 billion a year.³⁷





Telework Savings Calculator: Absenteeism Assumptions

- **Average reduction in absenteeism = 4.7 days a year (based on studies by BT, WorldatWork, and Booz Allen)** ³⁸
- **Annual cost per unscheduled absence per person is £93.36 (based on CIPD 2009 data)** ³⁹

Annual Savings Due to Reduced Absenteeism				
Twice Weekly Workshifting	50	100	500	UK
Absenteeism Savings	£21,763	£43,525	£217,626	£3.2 b

Attraction and Retention Impact

A 2010 study of over 7,500 European workers by Aon Consulting showed that nearly half of all UK workers planned to start job hunting by the end of the year. Only the Irish showed a higher intention to do so, with the rest of Europe showing much lower inclination.⁴⁰

A 2009 YouGov survey of over 2,000 UK workers showed that 67 per cent of the workforce would like to work from home at least part of the time.⁴¹ Another YouGov survey of 2,234 people in early 2006, found that 37 per cent of men and 34 per cent of women would give up part of their next pay rise if they could work from home.⁴²

Workshifting enhances attraction and retention because it:

- ▶ Is among the top non-financial benefits desired by employees;
- ▶ Expands the talent pool beyond geographic boundaries;
- ▶ Provides access to disabled workers;
- ▶ Offers alternatives that would have otherwise kept parents and senior caregivers out of the full-time workforce;
- ▶ Appeals to aging workers.

International research based on 8,000 companies in 32 countries shows that despite claims of a flexible labour market, Britain is lagging behind its competitors in flexible work arrangements.⁴³

The UK population is aging. By 2020 nearly a third of the workforce will be over 50. Boomers who haven't already made their exit are anticipating it. At the same time, the number of young people of working age is falling. Meanwhile, the folks in the middle aren't buying the old routine. Gen X watched their workaholic parents, and don't want to make the same mistakes. Gen Y grew

up independent, tech savvy, and were taught to question authority. Now they're questioning their employers. This is not your father's workforce. Businesses will have to fight for top talent in the decade ahead.

A 2010 Chartered Institute of Personnel and Development (CIPD) and Chartered Management Institute (CMI) study involving over a thousand members found that 54 per cent of older workers expect a better balance between their work and personal lives. Yet only 14 per cent of managers considered their organisation very well prepared to cope with the issues of an aging workforce.⁴⁴

Fifty-two per cent of women with children under 16 said they could not find full-time work that gave them the flexibility they needed.⁴⁵ The estimated cost of under-utilising women's skills is estimated to be between £15 and £23 billion a year—that's 1.3 to 2.0 per cent of GDP.⁴⁶

According to a study by City and Guilds, 35 per cent of people not currently working could be encouraged back into work if more flexible working opportunities were available.

Whilst the government's 'Right to Request' regulations may help promote workshifting, the Work Life Law Centre has compared the impact of similar regulations in the Netherlands, UK, and Germany and concluded that flexibility rights for all employees is a better approach. Their findings suggest that limiting the right to a subgroup not only causes resentment, but also makes it more difficult to accommodate requests.⁴⁷

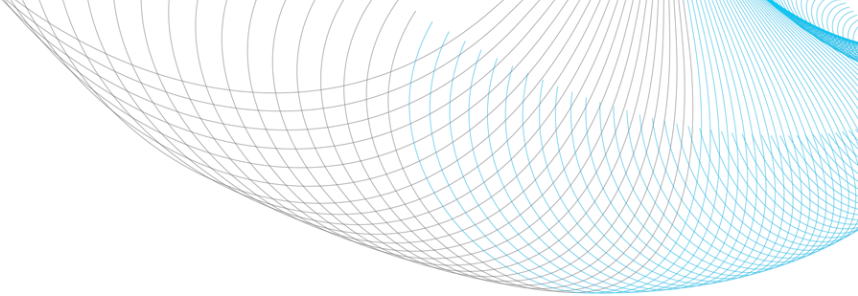
A 2007 study by the Equal Opportunities Commission reiterates that in terms of flexible work, Britain is falling behind.⁴⁸

*'Flexibility is not happening fast enough, is not innovative enough and is sometimes introduced in a way that does not work well for either employees or employers. Meanwhile, the traditional model of work is being stretched to breaking point. Businesses are pushing workers to work long hours, leading to burnout and overall lower productivity per hour than workers on more limited hours in Europe. Regulation supporting flexibility is working well but is reinforcing a "concession culture" way of thinking about flexibility rather than positioning flexibility as available to everyone and able to deliver business benefits.'*⁴⁹

Industry Research on Attraction and Retention

The Need for Work-Life Balance:

In a study of more than 7,500 women in 17 different countries, the UK took 9th place in those who felt favorable about their work-life balance (55 per cent in the UK behind Mexico, Australia, Canada, U.S, Denmark, China, the Netherlands, and India).⁵⁰



A 2007 Department of Trade and Industry survey of 2,000 adults showed that:

- ▶ twelve per cent of women and 7 per cent of men had responsibility for adult care;
- ▶ those aged 45 to 54 had the highest level of caring responsibilities (15 per cent);
- ▶ twenty per cent of adult caregivers spent more than 20 hours a week doing so and another 14 per cent spent 11 to 20 hours a week.⁵¹

According to a 2007 Equal Opportunities Commission report:⁵²

- ▶ being unable to find full-time flexible work was a problem for 43 per cent of adults working part-time, both men and women;
- ▶ nearly a third of parents with a dependent child said they had left a job or been unable to take one because of their parenting responsibilities;
- ▶ fifty-seven per cent of part-time employees and 61 per cent of people with children under five said they would have made different choices if better flexible working options were available to them.

A study covering 11,000 businesses conducted by Regus and reported by Flexibility.co.uk, indicated that 16 per cent of UK workers have considered leaving their job in the last two years because of the commute length. Among those with commutes of an hour or more (12 per cent of the UK workforce and 21 per cent of those who work in London), 39 per cent have considered it.⁵³

In staff surveys by HOP Associates, working at home 1 to 2 days a week ranked highest across all desired flexible benefits—chosen by 65 per cent of respondents. The longer the commute, the more likely workers were to choose home-based work. For all staff surveyed, the 3 most favoured options were working at home 1 to 2 days per week, more flexible hours each day, and compressed work weeks.⁵⁴

Evidence That Flexible Work Works:

In the 2009 CIPD Annual Recruitment, Retention and Turnover study, 65 per cent of companies indicated offering flexible work was their most effective hiring strategy.

As a result of BT's Anytime Anywhere working scheme 1,000 people who would have otherwise left were retained. Ninety-nine per cent of women there return to work after maternity leave compared to a UK average of 40 per cent.⁵⁵

A survey of 1,440 employees conducted by the Orange Future Enterprise Coalition shows the lifestyle benefits of working flexibly are extremely important to employees.⁵⁶

Telework Savings Calculator: Attraction and Retention Assumptions

- **Reduction in attrition = 7 per cent based on 2007 Life Balance International study**⁵⁷
- **Cost of turnover = £6,115 based on 2009 CIPD annual report**⁵⁸
- **Average UK income = £25,720 based on 2010 Office of National Statistics average**⁵⁹

Annual Savings Due to Reduced Turnover				
Twice Weekly Workshifting	50	100	500	UK
Turnover Savings	£1,926	£3,852	£19,262	£287 m

Note: The figures above only include direct costs of turnover. When loss of productivity, training, and other indirect costs are considered, a WorldatWork study estimates the cost of turnover at 75% of salary for lower-level employees and up to 200% for top-level executives. If an average of those figures were used, the above savings would be £60,000, £120,000, £601,000, and £9.0 b.⁶⁰

Other Employer Benefits

Other benefits, not quantified in the employer model include:

- ▶ Avoidance of environmental sanctions by government and value chain partners;
- ▶ Improved continuity of operations: In the event of a major or even minor disruptive incident (strikes, fire, snowstorms, the loss of heating/electricity, terrorism alerts, volcanic ash, or even just a fire in the popcorn maker), organisations that have practiced remote work are better able to continue to function. For this reason, telework is the cornerstone of U.S. government's continuity of operations plan. A one-day loss of productivity across London businesses would cost over £500 million in lost productivity;⁶¹
- ▶ Reduction in company car fleet—a 2009 study by Orange showed that 42 per cent of employees would give up their company car if it meant they could live in their ideal location and work where they chose;⁶²
- ▶ Coupled with performance-based management—a necessity for managing remote workers—it weeds out weak performers and increases employee empowerment, engagement, and satisfaction;
- ▶ More effective and less expensive 24/7 global coverage;
- ▶ Avoidance of local labour burnout in high turnover industries (such as call centres);
- ▶ Ability to expand into new markets without brick and mortar presence.

Employee Benefits

On average, home working just 2 days a week would save employees between £220 and £2,900 per year—the result of reduced driving and fewer work-related expenses (food, clothes, parking, petrol and other vehicle costs for drivers, and rail/coach fare for other commuters).

Workshifter Savings / Year by Mode of Travel (including fuel where appropriate)						
	Car	Moto	Bike	Coach	Rail	Walk
Low	£720	£627	£475	£437	£563	£220
Mid	£1,049	£955	£803	£765	£1,280	£548
High	£2,883	£1,307	£1,154	£1,117	£2,021	£900

Across the UK that would add up to total employee savings of between £4.7 billion to £18 billion a year—money that could go toward savings or be reinvested in the economy.

The employee savings are based on the following:

Petrol Expense Impact

Whilst research shows that not all travel is eliminated on workshifting days (because errands that used to be performed during the commute now require separate trips), the majority is.⁶³

The average UK roundtrip commute takes 54 minutes. However, many suffer much longer commutes. Ten per cent of commuters spend more than 2 hours a day getting to and from work and 3 per cent spend more than 3 hours a day⁶⁴—that's the equivalent of almost 6 workweeks per year.

Telework Savings Calculator: Employee Travel Savings Assumptions:

- Whilst research shows that those with the longest and most expensive commutes are most likely to choose home working, the travel savings numbers in our nationwide model reflects the weighted average of UK-wide use of car, motorcycle, bike, coach, rail, and pedestrian commuters. The 50/100/500 person savings assume all workshifters formerly drove to work.⁶⁵
- Average commuting miles/day = 17.4 based on Labour Force Survey data⁶⁶
- Reduction in driving = 75 per cent based on two independent studies⁶⁷
- Petrol cost = £1.18/litre⁶⁸
- Petrol usage = 26 m.p.g. for cars and 35 m.p.g. for motorcycles⁶⁹

Annual Savings Due to Reduced Petrol Usage				
Twice Weekly Workshifting	50	100	500	UK
Petrol Savings	£12,308	£24,617	£123,084	£1.3 b
Average of £246 per person per year				

Other Work Expense Impact

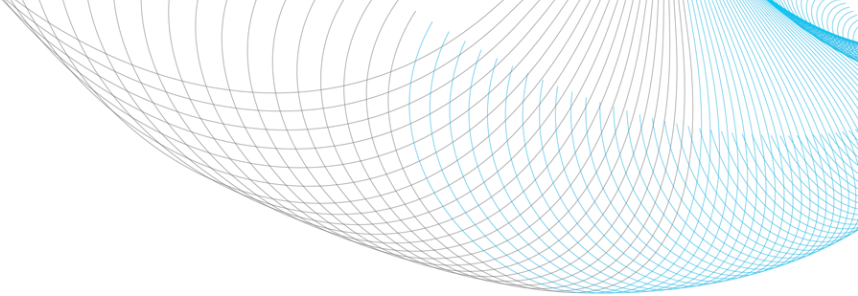
The cost of working in an office doesn't stop at the petrol station. Whilst socioeconomic, geographic, occupational and other factors create a wide range of employee costs, the savings are significant for all home workers.

Savings not reflected in the model include daycare/eldercare—particularly for those who are able to adjust their hours around those needs, serendipity purchases, office gifts, mileage-based vehicle insurance, and other office-related incidents.

Telework Savings Calculator: Employee Other Work Expense Assumptions

- **Parking & Congestion Charge:** Low = £0, Mid = £0, High = £16/day⁷⁰
- **Food (net of food at home):** Low = £2.90, Mid = £4.61, High = £7.32/day⁷¹
- **Clothing:** Low = £.63, Mid = £1.51, High = £7.32 per day⁷²
- **Non-petrol portion of IRS mileage allowance = .40 per mile⁷³**
- **Cost of extra home office electricity = £105/year (shown as a reduction in the cost savings)⁷⁴**
- **Mode of travel = 70 per cent car/van, 1 per cent motorcycle, 3 per cent bicycle, 8 per cent bus/coach, 8 per cent rail, 11 per cent walk⁷⁵**
- **Cost of rail travel/year: Low = £760/year, Mid = £1,734, High = £2,708 (high)⁷⁶**
- **Cost of bus/coach travel/year = £664/year in all scenarios⁷⁷**

Annual Savings in Other Work Expenses				
Twice Weekly Workshifting	50	100	500	UK
Low	£23,740	£47,479	£237,396	£3.4 b
Mid	£40,140	£82,280	£401,399	£6.1 b
High	£131,832	£263,663	£1.3 m	£16.7 b



Time Savings

Twice weekly home working can add up to 4 workweeks of free time a year—time typically spent with family and friends, on hobbies, exercising, sleeping, or, as stated earlier, working. For employers, that means happier and healthier people, and greater loyalty.

Telework Savings Calculator: Employee Time Savings Assumptions

- **Mean round-trip commute (all of Great Britain): 54 minutes round trip; Low mean (Wales): 42 minutes; High mean (Central London): 1 hour 46 minutes**⁷⁸
- **Equivalent days calculation based on 8-hour days**

Time Savings / Year			
Scenario	Low	Avg.	High
Time days / person / year	8.5	11	21.5

Community Savings

At the government and community level, the quantifiable benefits are the result of reduced traffic and vehicle miles travelled (and the associated greenhouse gases and oil imports).

Oil Impact

Twice weekly home working could:

- ▶ Save over £750 million a year in imported oil;⁷⁹
- ▶ Reduce oil imports by the equivalent of two-thirds of the UK's Sub-Saharan African imports.⁸⁰

Telework Savings Calculator: Community Oil Savings Assumptions

- **Petrol savings: refer to assumptions in Employee Benefits section**
- **Import cost = £50/barrel**⁸¹

Annual Oil Savings				
Twice Weekly Workshifting	50	100	500	UK
Barrels of Oil	103	205	1,026	15.3 m
£ Saving	£5,130	£10,260	£51,300	£764.3 m

Greenhouse Gas (GHG) Impact

Twice weekly home working could:

- ▶ Reduce greenhouse gases by the equivalent of taking 2.5 million cars off the road;
- ▶ Reduce transportation sector greenhouse gas equivalents by over 4 per cent.⁸²

Telework Savings Calculator: Greenhouse Gas Savings (GHG) Assumptions

- **GHG reduction stated in tonnes or million metric tonnes (MMT)**
- **CO2 per mile = .34094 kg**⁸³
- **Equivalent cars based on 2.4 average tons of GHG per car/year**⁸⁴

Annual Greenhouse Gas Reduction				
Twice Weekly Workshifting	50	100	500	UK
GHG	41 tonnes	83 tonnes	414 tonnes	6.2 MMT
Equiv. Cars	17	34	170	2.5 m

Traffic & Accident Impact

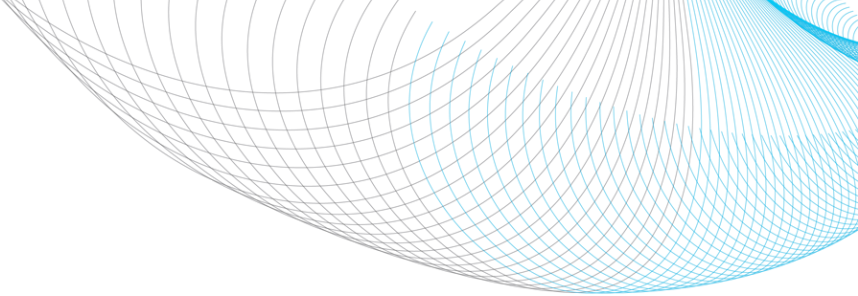
According to The RAC, road congestion is now worse than anywhere else in the EU.⁸⁵ With congestion comes increased frustration, traffic accidents, and highway costs.

The CBI estimates that road congestion costs the UK economy up to £8 billion a year—a number they project could double by 2025 unless there's a radical overhaul of travel patterns and policies.⁸⁶

In its annual transport survey, The CBI reported that:⁸⁷

- ▶ 90 per cent of respondents said poor reliability of road networks had reduced their productivity;
- ▶ 75 per cent of businesses in locations that rely on road networks complained that transport delays had a strong or moderate impact on their staff's ability to arrive at work on time;
- ▶ 75 per cent of all businesses feel their staff arrived at work stressed as a result of traffic.

Difficulties with recruitment and retention were also cited by their members.



When businesses suffer, so do the communities where they reside. At the extreme, traffic and the problems it creates can influence a company's choice of location.

With reduced traffic also comes a reduction in road maintenance and the need for roadway expansion—good news since traffic is already growing much faster than road capacity.

Of the 12 per cent growth in the length of UK roads, the majority has been on minor roads, which, whilst accounting for 87 per cent of Britain's road length, only carry around 36 per cent of all traffic.⁸⁸

According to The RAC's Report on Motoring (2008), since 1988⁸⁹:

- ▶ The total traffic on UK roads grew by 35 per cent, from 234 to 315 billion vehicle-miles;
- ▶ The total length of UK roads grew by 12 per cent, from 220 to 247 thousand miles;
- ▶ The total traffic on UK major roads grew by 40 per cent, from 144 to 202 billion vehicle-miles.

In March of 2010, the Department for Transport gave local authorities an extra £100 million to deal with potholes, but 96 per cent of motorists are still concerned with the condition and maintenance of the roads. Eighty-eight per cent of motorists believe their local roads are getting noticeably worse, and 70 per cent believe the quality of motorways and other major roads is noticeably worse.⁹⁰

Fortunately, lowering traffic volume has a multiplicative impact on congestion. The CBI estimates that in congested areas a fall in traffic volumes by 5 per cent can cut time lost in congestion by as much as 50 per cent.⁹¹

Twice weekly home working could:

- ▶ Prevent over 28,000 traffic injuries and deaths each year;
- ▶ Save over £900 million a year in accident-related costs;
- ▶ Reduce road wear and tear by 6 billion vehicle miles a year.

Telework Savings Calculator: Traffic and Accident Assumptions

- **Number of accidents per billion vehicle mile traveled (VMT) = 4.3 fatalities, 40 serious accidents, and 531 slight accidents** ⁹²
- **Cost/accident = £1.8 million/fatality, £205 thousand/ serious injury, £21 thousand per slight injury** ⁹³

Annual Reduction in Traffic and Accidents				
Twice Weekly Workshifting	50	100	500	UK
Vehicle Miles	42,386	84,773	423,864	6.3 b
Accident Savings	£9,086	£18,171	£90,856	£1.4 b

Other Community Benefits

Beyond the community benefits quantified in this report, widespread home working could:

- ▶ Reduce overcrowding;
- ▶ Revitalise cities by reducing traffic—currently a disincentive to visitors;
- ▶ Improve emergency responsiveness;
- ▶ Reduce road rage;
- ▶ Improve air quality;
- ▶ Increase productivity among non-workshiftingers by reducing travel times;
- ▶ Provide portable work options for military families;
- ▶ Reduce the offshoring of jobs and homeshore some that have already been lost;
- ▶ Raise the standard of living in rural and disadvantaged areas;
- ▶ Reduce terrorism targets of opportunity;
- ▶ Lower national healthcare costs;
- ▶ Pave the way for more remote training;
- ▶ Provide highly educated talent access to jobs that maximise their potential;
- ▶ Promote inbound talent migration without adding to local population;
- ▶ Further reduce travel through widespread use of virtual technologies.

Total Impact				
Twice Weekly Workshifting	50	100	500	UK
Employer	£154,212	£308,425	£1,542,124	£23.0 b
Employee	£52,448	£104,897	£524,483	£7.4 b
Community	£14,216	£28,431	£142,156	£2.1 b
Overall	£220,876	£441,753	£2,208,763	£32.5 b



Summary

The convergence of technological, economic, demographic, environmental, and societal factors are creating a perfect storm. This is no ordinary storm. It's one that will challenge organisations to abandon their outdated concepts about the nature of work.

The role of organisational leaders is to set an unambiguous change of course. On this new heading, managers and employees will need to learn to trust one another. They'll need to embrace the concept of work as what one does—not where, when, or how one does it.

Flexibility laws that perpetuate workshifting as a special accommodation need to be replaced with the message that workshifting and flexibility are good for business, good for employees, good for the environment, and good for the economy.

Ubiquitous high speed broadband is essential to ensuring that workplace flexibility is possible for all and to avoid creating a nation of information 'haves' and 'have nots'.

Government also needs to lead the way by example. Twice weekly telework among civil servants could reduce the nation's deficit by over £2 billion.

Britain's Transport Minister already supports telework. *'Reducing demand for travel will reduce congestion, pollution and stress in our daily lives. Working just 1 day in 10 from home would have a huge impact, and working from home could do wonders for that work life balance we all strive for'*, said Mr. Baker.⁹⁴

*'The results will be tangible—reduced congestion, reduced carbon emissions, improved quality of life and if we're all working from home we might even start talking to our neighbours again, which can't be a bad thing for our communities.'*⁹⁵

Realizing its potential in the U.S., a federal telework bill won bipartisan support and was signed into law in 2010. It gives government agencies a strict mandate to authorise, support, and encourage telework within the federal workforce.

Andy Lake, editor of *Flexibility.co.uk*, writes, *'The current generation coming out of college write their assignments anywhere, email them to their supervisors, and have instant-messaging products, Facebook pages and webcams on the go continuously. Not to mention the superfast broadband in the university networks and all the access that comes with it. Going from that to most corporate working environments is like falling through a trapdoor into the Dark Ages, even with the more up-to-date companies. This will bring about big pressure to change, and eventually the managers will do it.'*

More than a century has gone by since British innovation transformed the world. Along with the industrial age came improved transportation via roads, water, and rail. In the 21st century, it's the information highway that will lead the way to better lives, better standards of living, and a better world. These new digital roads are nearly paved. It's time we made *them* the way to work.

Acknowledgements

We'd like to thank the following experts and organisations that were instrumental in gathering information, providing contacts, and serving as a sounding board for this paper:

Flexibility.co.uk: *The online journal of flexible working.* Founded in 1993 and online since 1997, Flexibility.co.uk carries news, opinions, research, how-to guides and case studies to help organisations implement smart/flexible working. It also aims to stimulate debate about the impacts of new ways of working for public policy. Big thanks to Andy Lake, Editor of Flexibility since 1994 for helping to test our assumptions, obtain credible research, and write proper English.

Wisework Ltd: Over the last ten years Wisework has successfully implemented teleworking programmes for a wide variety of clients, helping them overcome the organisational and management challenges and achieve significant business benefits. Our thanks to Peter Thomson, Director of Wisework Ltd.

UK Telework Association: Founded in 1993, the association promotes flexible and remote working and provides services for individuals and organisations interested in telework. They offer members a weekly newsletter and a quarterly magazine. Thanks to Shirley Borrett for taking the first crack at gathering data for this report.

Enterprise Nation: A small-business support community designed to inform, inspire, and help would-be entrepreneurs from idea to execution. Services include a business to business marketplace where businesses buy and sell their services (Bitsy). Emma Jones, owner of Enterprise Nation is the author of *Go Global: How to Take Your Business to the World* (Brightwood Publishing 2010), *Working 5 to 9: How to Start a Successful Business in Your Spare Time* (Harriman House 2010), and *Spare Room Start Up: How to Start A Business from Home* (Harriman House, 2008). Thanks to Emma for helping us understand the nature of home work in the UK.

Additional thanks goes out to the researchers and supporters at following organisations: [AON](#), [Kenexa Research](#), [British Chambers of Commerce](#), [Confederation of Business Industry, Chartered Institute of Personnel and Development](#), [Equality and Human Rights Commission](#), [Eurofound](#), [European Union: European Social Fund](#), [Forrester Research Inc](#), [McKinsey Global Institute](#), [Orange Future Enterprise Coalition](#), [Royal Automobile Club Foundation](#), and [Trade Union Congress](#); and UK government offices including: Department for Work and Pensions, Department for Transport, Office of National Statistics, Department of Trade and Industry.

We also extend our appreciation to [The Work Foundation](#), [WorldatWork](#), and the many individuals and organisations that through research, advocacy, and practice are helping make the road less traveled the way to work.

Finally, special thanks goes to [Citrix Online](#) for sponsoring this report whilst allowing us to maintain our independent research integrity.

Telework Research Network

The Telework Research Network has synthesised over 500 case studies, scholarly reviews, research papers, books, and other documents on telecommuting and related topics. They've conducted interviews with the largest and smallest virtual employers and their employees, corporate executives, telework advocates and naysayers, top researchers, legislators, leaders of successful telework advocacy programmes, and venture capitalists who have invested in the remote work model. Their research has been quoted in the *Wall Street Journal*, *Harvard Business Review*, and scores of other publications.

Based in San Diego, California (U.S.), the principals of the Telework Research Network are available for research projects, custom telework and flexible work benefit models, and branded web-based telework and flexible work savings calculators, consulting, writing, and speaking.

Their website is <http://TeleworkResearchNetwork.com>. For more information contact info@TeleworkResearchNetwork.com.

Citrix Online

Citrix Online provides secure, easy-to-use online solutions that enable people to work from anywhere with anyone. Whether using GoToMyPC® to access and work on a remote PC, GoToAssist® to support customers or GoToMeeting® to hold online meetings and webinars, our customers – more than 35,000 businesses and hundreds of thousands of individuals – are increasing productivity, decreasing travel costs and improving sales, training and service on a global basis. A division of Citrix Systems, Inc. (NASDAQ: CTXS), the company is based in Santa Barbara, California. For more information, visit www.citrixonline.com.

For a free evaluation of GoToMeeting Corporate, please visit www.GoToMeeting.com/s/WReval

For a free evaluation of GoToMyPC Corporate, please visit www.GoToMyPC.com/compete

ENDNOTES

¹ *Tackling Congestion, Driving Growth—A new approach to roads policy*, CBI, March 2010

² <http://www.flexibility.co.uk/flexwork/offices/workhubs.htm>

³ Challenging the culture of presenteeism, the Work Foundation, 2009

⁴ 1) Knowledge Workers and Knowledge Work, the Work Foundation Ian Brinkley, Rebecca Fauth, Michelle Mahdon and Sotiria Theodoropoulou -- an extensive study of the composition of jobs in the U.K. shows 30 per cent perform many knowledge tasks, 30 per cent perform some, remaining 40 per cent perform few. 2) The Telework Data Report (Population Survey) Ten Countries in Comparison (Bonn, 2000-06-08) surveyed 7,700 individuals including 1,095 from the U.K. Their analysis, more than a decade ago indicated that 67.5 per cent of jobs were telework compatible which was characterised as a) spending at least 6 hours a week doing office work, or b) spending at least 6 hours per week doing work carried out at a desk, or c) spending at least 6 hours a week on a computer. 3) Telework Research Network count of 2010 Labour Force Survey jobs including those employed in non-customer-facing or location-dependent jobs totaled 49% of workforce.

⁵ 2009 Orange/YouGov survey of over 3,000 UK employees

⁶ YouGov 2006 survey of 2,234 workers

⁷ *Enter the Timelords: Transforming Work to Meet the Future*, final report of the Equal Opportunities Commission investigation into the Transformation of Work, EOC 2007

⁸ Op. Cit. Knowledge Workers. To be conservative, a figure of 50% was assumed.

⁹ a) *Connected Britain*, Orange 2009, YouGov survey of more than 3,000 workers across the U.K. b) *The Costs of Transport on the Environment - the role of Teleworking in Reducing Carbon Emissions*, 2007, University of Oxford survey of 1020 UK adults showed only 31.5% say they wouldn't want to work remotely.

¹⁰ *BT, UK: Towards a balanced flexibility*. <http://www.eurofound.europa.eu/areas/qualityofwork/betterjobs/cases/uk05bt.htm>

¹¹ Op. Cit. EOC 2007

¹² *Beyond Boundaries: The emerging work culture of independence and responsibility*, Orange Future Enterprise 2007

¹³ *Finding an Extra Day or Two*, Brigham Young University, June 2010, E. Jeffrey Hill, Jenet J. Erickson, Erin K. Holmes, and Maria Ferris

¹⁴ *Telework in the European Union*, Eurofund, Christain Welz and Felix Wolf, 2010

¹⁵ Op. Cit. EOC 2007 - citing Gensler 2006

¹⁶ *Recommendations to Assist Cost Recovery / ROI Strategies and Budget Planning*, US GS, May 2006

¹⁷ *Why Work Sucks*, Cali Ressler and Jodi Thompson, Portfolio 2008

¹⁸ *September 2010 Average Weekly Earnings for Service Industries*, Office of National Statistics

¹⁹ Ibid.

²⁰ *Efficiency Standards for Office Space*, A report to the Office of Government Commerce, Investment Property Databank, November 2007

²¹ Ibid.

²² *Flexibility: A Smart Way to Cut Real Estate Costs, New Ways of Working*., Press Release October 21, 2010

²³ I Interview with Chris Hood, Programme Manager for the Hewlett Packard Global Workplace Initiative, December 16, 2010

²⁴ Mark Wartenberg speaking at a NewWOW roundtable in September 2010

²⁵ *Flex Your Force: Building the Virtual Office*, Sun Executive Boardroom, Ann Bamesberger, August 2007

²⁶ *The Costs of Transport on the Environment - the role of Teleworking in Reducing Carbon Emissions*, David Banister, Carey Newson, and Matthew Ledbury, Transport Studies Unit, University of Oxford 2007

²⁷ *Office size: Efficiency Standards for Office Space—A report to the Office of Government Commerce*, November 2007; b) *The Use of Business Space in London* RTP, Roger Tym & Partners, Ramidus Consulting & King Sturge 2006

²⁸ Ibid.

²⁹ a) *The Internet and the New Energy Economy*, Joseph Romm, Center for Energy and Climate Solutions, Global Environment and Technology Foundation, 2002. Home offices use 3000 kWh electricity /year versus 4400 for traditional offices; b) *Sun Microsystems' Open Work Energy Measurement Project*, February 2009 found the office equipment energy consumption rate was two times that of home office (including heating, lighting, computers, peripherals, and accessories); c) Cost per kWh per September 2010 UK Department of Energy and Climate Change. d) Extra energy used at home office is shown as a reduction to employee savings and as a reduction to overall energy savings.

³⁰ 2007 *CCH Unscheduled Absence Survey*, conducted by CCH, Wolters Kluwer Law & Business

³¹ *Fourth European Working Conditions Survey (2005)*, European Foundation for the Improvement of Living and Working Conditions 2007

³² CompTia Survey, October 2008

- ³³ *Health, Work and Well-being: Baseline Indicators*, report sponsored by Department for Work and Pensions, Department of Health, Health and Safety Executive, Scottish Government, Welsh Assembly Government, December 2010
- ³⁴ *Absence From Work - United Kingdom*, Eurofound 2010
- ³⁵ Op. Cit. EOC 2007
- ³⁶ *Can 'good work' keep employees healthy?* Evidence from across the EU Knowledge Economy Programme Report Rebecca Fauth and Alana McVerry, June 2008
- ³⁷ a) Charter Institute of Personnel & Development (CIPD) press release 20 July 2009; b) CIPD Press Release 20 July 2009. The average cost of absence is £692 per employee per year. c) 2009 Labour Force Survey: UK workforce = 29 million
- ³⁸ a) *Exploring Telework as a Business Continuity Strategy*, 2005 WorldatWork estimates 63% reduction in absenteeism per teleworker; b) 2006 Booz Allen study conducted for US General Services Administration assumes 63% reduction. c) Op. Cit. *The Costs of Transport on the Environment - the role of Teleworking in Reducing Carbon Emissions*, 2007; d) absence rates per CIPD Press Release 20 July 2009
- ³⁹ Op. Cit. CIPD Press Release 2009
- ⁴⁰ HRMagazine.co.uk (<http://www.hrmagazine.co.uk/news/1027984/Almost-half-UK-workforce-looking-new-job/>), September 13, 2010
- ⁴¹ a) *Connected Britain*, Orange 2009, a survey conducted by YouGov.com of more than 3,000 workers across the UK 67 per cent would choose to work flexibly part of the time, 20 per cent of that group would do so all of the time. b) *The Telework Data Report (Population Survey) Ten Countries in Comparison* (Bonn, 2000-06-08): 74.8 per cent of the UK respondents were interested in some level of telework and 34.6 per cent were interested or very interested in full-time telework.
- ⁴² Enter the timelords: Transforming work to meet the future, Final report of the Equal Opportunities Commission investigation into the Transformation of Work citing YouGov 2006
- ⁴³ Op. Cit. EOC 2007- citing Cranfield School of Management 2005
- ⁴⁴ *Managing an ageing workforce: How employers are adapting to an older labour market*, Chartered Institute of Personnel and Development and Chartered Management Institute, Dr Alison Macleod, Dianah Worman OBE, Petra Wilton, Patrick Woodman and Paul Hutchings, September 2010
- ⁴⁵ Op. Cit. EOC 2007
- ⁴⁶ *Shaping a Fairer Future*, The Women and Work Commission, February 2006
- ⁴⁷ Op. Cit. EOC 2007
- ⁴⁸ Op. Cit. EOC 2007
- ⁴⁹ Op. Cit. EOC 2007
- ⁵⁰ *Aon Consulting European Employee Benefits Benchmark*, 2010
- ⁵¹ *Third Work-Life Balance Survey*, Department of Trade and Industry, 2007, based on 2081 telephone interviews
- ⁵² Op. Cit. EOC 2007 citing Holmes et al., 2007
- ⁵³ Flexibility.co.uk reporting on research commissioned by Regus. The study covered 11,000 businesses in 13 countries. Commute times based on 2008 ONS Labour Force Survey
- ⁵⁴ Flexibility.co.uk reporting on research by HOP Associates
- ⁵⁵ Op. Cit. EOC 2007
- ⁵⁶ *Beyond Boundries: The emerging work culture of independence and responsibility*, Orange Future Coalition 2007
- ⁵⁷ *Work/Life Initiatives: The Way Ahead Report*, 2007 Survey, Life Balance International benchmarking study of 284 Australian companies that showed work/life balance programmes reduce turnover by 7% across all companies, and 15% among "Best Practice" organisations.
- ⁵⁸ *Recruitment Retention & Turnover report*, Charter Institute of Personnel & Development (CIPD) 2009
- ⁵⁹ *Average Weekly Earnings for Service Industries*, Office of National Statistics, September 2010
- ⁶⁰ *Work-life Effectiveness: Bottom Line Strategies for Today's Workplace*, Karol Rose, WorldatWork, 2006
- ⁶¹ Based on 4.4 million London workers, an average wage of £27.1k, and 232 workdays/year
- ⁶² *Connected Britain: the face of working Britain in the digital age*, Orange PCS 2009
- ⁶³ *The Quiet Success: Telecommuting's Impact on Transportation and Beyond*. Reason Foundation 2005
- ⁶⁴ *Extreme Commuting: How far would you go?* Hilary Rose, The Sunday Times, November 14, 2009

⁶⁵ Based on the weighted average of the 2010 October to December “main mode of travel for commuting” per Labour Force Survey: 70% commuted by car, 1% by motorcycle, 3% by bicycle, 8% by coach, 8% by rail, and 11% walked.

⁶⁶ a) Commuting miles per day based on Op. Cit. *The Costs of Transport on the Environment - the role of Teleworking in Reducing Carbon Emissions* 2007; b) Of those using rail services, 16% drive to the station per the *National Rail Travel Survey Final Report* 2008, Department for Transport.

⁶⁷ a) Op. Cit. *The Quiet Success: Telecommuting's Impact on Transportation and Beyond*, 2005. Telecommuters reduce their daily trips by 53 to 77 per cent on telecommuting days. b) *Is teleworking sustainable? An analysis of its economic, environmental and social impact, final report on the SusTel project*, European Commission's Information Society 2004: rebound effect ranged from 16 to 23 per cent c) Op. Cit. *The Costs of Transport on the Environment - the role of Teleworking in Reducing Carbon Emissions*, 2007: In 40 per cent of cases teleworkers make no additional use of the car. In 60 per cent of cases there is a 75 per cent saving in car use. d) The Telework Research Network model uses 75 per cent because part-time teleworkers are more apt to hold and combine errands for work days. A more conservative figure of 55-65 per cent should be used in full time scenarios.

⁶⁸ *Fuel Price Report*, UK Automobile Association, October 2010

⁶⁹ *Vehicle Fact Sheet*, National Travel Survey conducted by the National Centre for Social Research, March 2010

⁷⁰ Flexibility.co.uk web site 2010: High case included 8 pounds congestion charge for cars and 8 pounds for parking

⁷¹ a) Food: 2008 *BLS Consumer Spending Report* using the difference in ‘food dining’ and ‘food home’ between 1 earner and 2 earner households and the difference between average Manager/Technical/Service Workers and Retired persons. The average of the two is shown in the mid-scenario. High scenario is 59 per cent higher, low scenario is 63 per cent lower to reflect occupational differences; b) Europ-Assistance, press release May 2006: A typical train commuter could save £12 a day (£5 on the train journey, £2 on coffee and snack, and £5 on lunch) and a typical road commuter £14 per day (average 17 miles @ 40p per mile, £2 coffee and snack and £5 lunch) or £30 per day in London (including an £8 congestion charge and £8 parking fee. <http://europ-assistance.com/uk/presse>

⁷² a) Clothing: 2008 *BLS Consumer Spending Report* using the difference in clothes for 1 earner and 2 earner households and difference between average Manager/Technical/Service Workers and Retired persons. Used the average of the two as the mid scenario. High scenario is 71 per cent higher, and low scenario is 42 per cent lower to reflect occupational differences. b) 2009 ONS showed £2.30/week as average difference in clothing spend between employed and retired (not mainly dependent on state pension) population

⁷³ HM Revenue & Customs, Travel - mileage (40p) and fuel (15p) allowances

⁷⁴ a) Op. Cit. *The Costs of Transport on the Environment - the role of Teleworking in Reducing Carbon Emissions*, 2007: shows home based work adds 13.6 kWh per telecommuter day. b) September 2010 Energy Statistics press release, UK Department of Energy and Climate Change shows average household usage: 3300 kWh costing £440 pounds/year.

⁷⁵ Labour Force Survey, Main Mode of Transport to Work: Office of National Statistics, October to December 2008

⁷⁶ Transport for London, November 2010: Rail: High = Season pass zones 1-9, Low = lowest Season Pass available, mid = average of high and low.

⁷⁷ Transport for London, November 2010: Bus: Season Pass £664 used in all scenarios

⁷⁸ Op. Cit., ONS 2008

⁷⁹ Assuming £50/barrel, Oil-price.net

⁸⁰ U.K imports 61,857 barrels of crude oil per day from Sub-Saharan Africa, 2009 (http://www.eia.doe.gov/cabs/United_Kingdom/Oil.html)

⁸¹ Oil-Price.net: October 2010

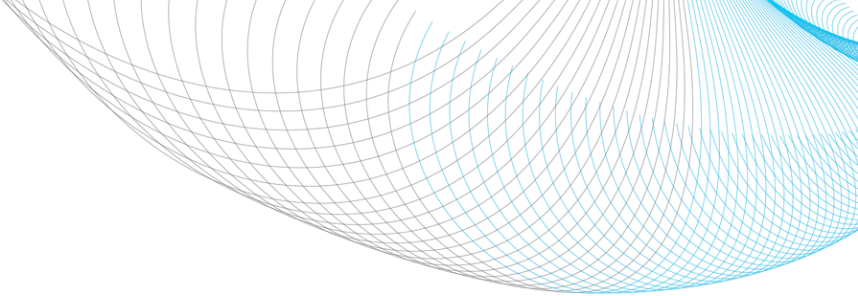
⁸² Department of Energy and Climate Change, 150.1 million tonnes of carbon dioxide equivalent with transportation sector as end user in 2008.

⁸³ *UK Greenhouse Gas Inventory for 2008* (AEA, 2010) Digest of UK Energy Statistics 2009 (DECC)

⁸⁴ Average UK car drives 7,133/miles per year per UK Office for National Statistics 2008

⁸⁵ RAC Report on Motoring 2008

⁸⁶ CBI News Release “Change Work Patterns to Avoid Gridlock on Britain's Roads,” March 15, 2010



⁸⁷ *Tackling congestion, driving growth: A new approach to roads policy*. CBI. March 2010 - citing CBI 2009 Transport Survey.

⁸⁸ Op. Cit., RAC 2008

⁸⁹ Op. Cit., RAC 2008

⁹⁰ Op. Cit., RAC 2008

⁹¹ Op. Cit. CBI. March 2010

⁹² Reported Road Casualties Great Britain: 2009 Annual Report, Department for Transportation

⁹³ Ibid.

⁹⁴ *Don't travel, says Transport Minister*, July 12, 2010 press release at http://www.normanbaker.org.uk/pr/2010/100712_travel.htm

⁹⁵ Ibid.