Delivering a Digital Wales

Evidence Pack to support the Main Document

December 2010

Version 1.1
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2. Understanding our challenges and goals (pp. 3-4)

We have seen a steady rise in the number of people in Wales who regularly use the internet as part of their daily lives. The proportion of households in Wales with Internet access increased from 49% in 2005 to 60% in 2009 (p.3).

**Fig. 1a** Household Internet uptake, UK versus Wales, 2005-2009

![Internet uptake graph for 2005-2009](source)

Source: Ofcom Communications Market Reports, 2006-2009
Sample: All adults aged 15+

**Fig. 1b** Household Internet uptake, UK versus Wales, 1998-2008

![Internet uptake graph for 1998-2008](source)

Sources: Family Expenditure Survey (1998 - 2001), Food and Expenditure Survey (2002-08)
Sample: All adults
Over the same period, the proportion of households with broadband increased from 25% to 58% (p.3).

Source: Beaufort Omnibus Survey, 2006-2009 (Wales)
Oxford Internet Survey, 2003-2009 (UK)

Source: Ofcom Communications Market Reports, 2006-2010
Sample: All adults aged 15+
Data robust enough to directly calculate the percentage of adults in Wales who are digitally excluded was not available in late September 2010. Analytical Services calculated a revised headline figure of 34% using the following method.

According to the Oxford Internet Survey (2009):

- 95% of [current] Internet users access the Internet at home; and
- The same percentage of respondents saying they have access to the Internet at home say that they use the Internet anywhere ("at home, work, school, college or elsewhere").
  e.g., 70 % of British people said they use the Internet at home, work, school, college or elsewhere, and 70 % of British people said they have access to the Internet at home

According to OxIS, 'Internet use and home access remained nearly equivalent: 2009, 70% of British people said they use the Internet [at home, work, school, college or elsewhere] and only 5% of Internet users did not have household access.'


One method of calculating current Internet access for adults in Wales given the data we have is to say that the 62.5 per cent of Welsh adults who currently use the Internet at home represents 95 per cent of current Welsh Internet users. 62.5 / .95 = 66.8 rounds to 66.

This is matched by the Ofcom 2010 Wales figure, which reports that 64 per cent of households in Wales have current broadband Internet access. (Ofcom 2009 reported that 2 per cent of adults in Wales access the Internet at home using non-broadband connections). So the adults in Wales who report having access to the Internet at home can be estimated at 66 per cent, which according to OxIS analysis is historically the same as the adults who use the Internet at home, work, school, college or elsewhere.

Therefore, two analyses using different sources of data and different analytical steps arrive at the same estimate for Wales: 66 per cent. The headline figure is:

The best available estimates place the adults in Wales who currently use the Internet at 66 per cent, and those digitally excluded at 34 per cent (+/- 3 per cent margin of error at 95% confidence interval).

The following text, which refers to the procedure detailed above, is now in circulation:

'Knowledge Analytical Services has provided a revised figure of 34% as the projected proportion of adults in Wales who are digitally excluded. This figure was derived from reliable cross-referenced Wales-level data and calibrated using UK-level trends and analysis'.

Nevertheless, an estimated 34% of the adult population still do not enjoy the benefits that digital technology offers because they are digitally excluded… (p.3)
Nevertheless, [a third] of the adult population still do not enjoy the benefits that digital technology offers because they are digitally excluded, whether through lack of infrastructure, personal choice (such as believing the internet would be of no use) or socio-economic exclusion (e.g. due to low socio-economic status, low levels of education or a disability) (p.3).

**Infrastructure**
The evidence suggests that lack of infrastructure is not a major issue. Bevan Foundation (2009) estimated that around 99% of homes in Wales potentially have access to broadband, and Ofcom (2006) has reported since 2006 that 100% of Welsh households are connected to a 412KB/s DSL-enabled BT exchange. This is based on assumptions that only households that are compromised by certain factors (such as distance from a broadband enabled telephone exchange, network quality, or whether broadband can be received via satellite signal) lack potential access to broadband.

**Personal choice and exclusion**
Personal choice and exclusion would appear to have a far more influential bearing on digital engagement. The characteristics associated with these different forms of disengagement are summarised below (Table 1).

**Table 1 Characteristics of the digitally disengaged**

<table>
<thead>
<tr>
<th>Disengaged through choice</th>
<th>Disengaged through exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured by cultural and social characteristics</td>
<td>Enforced by social, economic and physical health constraints</td>
</tr>
</tbody>
</table>

**Characteristics:**
- Age → use of the internet is lower among older people
- Life stage → students and the employed are far more likely to use the internet than the retired or unemployed
- Low income / socioeconomic status
- Low level of educational attainment
- Disability or health issues

Source: OxIS 2009

In Britain, personal choice is the most reported reason for not having household internet access, with six out of ten non-users reporting they had no need or desire to have household access (Table 2).

**Table 2 Reason for household not having internet**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Characteristic</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t need or want the internet</td>
<td>Personal choice</td>
<td>59</td>
</tr>
<tr>
<td>Equipment or access costs too high</td>
<td>Socio-economic exclusion</td>
<td>33</td>
</tr>
<tr>
<td>Lack of skills</td>
<td>Educational exclusion</td>
<td>21</td>
</tr>
<tr>
<td>Have internet access elsewhere</td>
<td>No exclusion</td>
<td>8</td>
</tr>
<tr>
<td>Privacy or security concerns</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Physical disability</td>
<td>Health exclusion</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: ONS 2010

Total more than 100% as respondents could give more than one answer.
We have many successful businesses in Wales who are exploiting digital technologies and 75% of our Small/Medium Enterprises (SMEs) use the internet in some way. However, internet usage amongst SMEs in Wales lags the rest of the UK (81%)...In 2006, the proportion of Welsh SMEs that reported having a web-site (62%) or selling using the internet (36%) were both below the UK average (69% and 39%, respectively) (p.3).

**Note:** The validity and consistency of these figures and the comparability between sources has not been verified. Due to considerable variation in the data, as evidenced particularly in Figs. 4.2 and 4.3, these figures should be treated with caution.

**Fig. 4.1** % of SMEs with employees using the Internet, UK versus Wales, 2005-07, 2009

![Graph showing broadband and internet usage](image1)

Sources: Small Business Surveys, 2005-06 – 2007-08
Federation of Small Businesses’ Voice of Small Businesses Survey (UK 2009 only)

**Fig. 4.2** % of SMEs with employees which use the Internet to host a business site, UK versus Wales, 2003/4-2007

![Graph showing web-site usage](image2)

Source: Small Business Surveys, 2003-04 – 2007-08
Fig. 4.3 % of SMEs with employees which use the Internet for sales, UK versus Wales, 2003/4-2007

Source: Small Business Surveys, 2005-06 – 2007-08

Fig. 4.4 % businesses (members of the Wales Federation of Small Businesses) which use the Internet for various purposes, 2009

Uses of the internet for business purposes (top answers)

<table>
<thead>
<tr>
<th>Purpose</th>
<th>UK (9761)</th>
<th>Wales (498)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emailing</td>
<td>83%</td>
<td>77%</td>
</tr>
<tr>
<td>Finding advice, guidance and information</td>
<td>77%</td>
<td>73%</td>
</tr>
<tr>
<td>Downloading information/documents</td>
<td>69%</td>
<td>59%</td>
</tr>
<tr>
<td>Maintaining a business website</td>
<td>53%</td>
<td>55%</td>
</tr>
<tr>
<td>Paying bills online</td>
<td>49%</td>
<td>47%</td>
</tr>
<tr>
<td>Visiting government websites to comply with legislation</td>
<td>50%</td>
<td>47%</td>
</tr>
<tr>
<td>Making orders/arranging deliveries</td>
<td>44%</td>
<td>48%</td>
</tr>
<tr>
<td>Searching for information on competitors</td>
<td>36%</td>
<td>46%</td>
</tr>
<tr>
<td>Uploading tax return</td>
<td>33%</td>
<td>48%</td>
</tr>
<tr>
<td>Placing adverts/marketing</td>
<td>30%</td>
<td>23%</td>
</tr>
<tr>
<td>Visiting local authority websites</td>
<td>23%</td>
<td>32%</td>
</tr>
<tr>
<td>Expressing my views/participating in research/consultation</td>
<td>23%</td>
<td>17%</td>
</tr>
<tr>
<td>Do not use the internet</td>
<td>9%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: Federation of Small Businesses’ ‘Voice of Small Business’ Annual Survey (Wales)
While we have seen a steady rise in the availability of public services online, less than 35% of the population make use of public services online (p.3).

**Fig. 5.1** Uptake of Central Government services online, UK v Wales, 2005-2009

![Graph showing uptake of Central Government services online, UK v Wales, 2005-2009]

Error (Wales) +/- 9%, Error (UK) +/- 2%

**Fig. 5.2** Uptake of Local Council services online, UK v Wales, 2005-2009

![Graph showing uptake of Local Council services online, UK v Wales, 2005-2009]

Error (Wales) +/- 9%, Error (UK) +/- 2%
3. An Inclusive, Sustainable and Prosperous Society (pp. 5-8)

Many of the digitally excluded in Wales are older people or those already suffering from some form of social exclusion. In 2007, 76% of those of pensionable age were digitally excluded, compared with 12% of those under 25 years of age (p.5).

Series 6  Internet access at home, selected age bands, UK v Wales

Fig. 6.1 Internet access at home among 16-24 year olds, UK v Wales, 2003/2006-2009

![Figure 6.1](image1)

Sources: Beaufort Omnibus Survey, 2006-2009 (Wales), Error margin +/- 8%
Oxford Internet Survey, 2003-2009 (UK), Error margin +/- 6%

Fig. 6.2 Internet access at home among 25-34 year olds, UK v Wales, 2003/2006-2009

![Figure 6.2](image2)

Sources: Beaufort Omnibus Survey, 2006-2009 (Wales), Error margin +/- 8%
Oxford Internet Survey, 2003-2009 (UK), Error margin +/- 5%
Fig. 6.3 Internet access at home among 35-44 year olds, UK v Wales, 2003/2006-2009

Sources: Beaufort Omnibus Survey, 2006-2009 (Wales), Error margin +/- 8%
Oxford Internet Survey, 2003-2009 (UK), Error margin +/- 5%

Fig. 6.4 Internet access at home among 45-54 year olds, UK v Wales, 2003/2006-2009

Sources: Beaufort Omnibus Survey, 2006-2009 (Wales), Error margin +/- 8%
Oxford Internet Survey, 2003-2009 (UK), Error margin +/- 5%
Fig. 6.5 Internet access at home among 55-64 year olds, UK v Wales, 2003/2006-2009

Sources: Beaufort Omnibus Survey, 2006-2009 (Wales), Error margin +/- 8%
Oxford Internet Survey, 2003-2009 (UK), Error margin +/- 6%

Fig. 6.6 Internet access at home among 65s and over, UK v Wales, 2003/2006-2009

Sources: Beaufort Omnibus Survey, 2006-2009 (Wales), Error margin +/- 6%
Oxford Internet Survey, 2003-2009 (UK), Error margin +/- 5%
**Series 7 Internet access at home, class bands, UK v Wales**

**Fig. 7.1 Internet access at home among AB class, UK v Wales, 2003/2006-2009**

![Graph showing Internet access at home among AB class, UK v Wales, 2003/2006-2009](image)

Sources: Beaufort Omnibus Survey, 2006-2009 (Wales), Error margin +/- 8%
Oxford Internet Survey, 2003-2009 (UK), Error margin +/- 5%

**Fig. 7.2 Internet access at home among C1 class, UK v Wales, 2003/2006-2009**

![Graph showing Internet access at home among C1 class, UK v Wales, 2003/2006-2009](image)

Sources: Beaufort Omnibus Survey, 2006-2009 (Wales), Error margin +/- 6%
Oxford Internet Survey, 2003-2009 (UK), Error margin +/- 5%
Fig. 7.3 Internet access at home among C2 class, UK v Wales, 2003/2006-2009

Fig. 7.4 Internet access at home among DE class, UK v Wales, 2003/2006-2009

Sources: Beaufort Omnibus Survey, 2006-2009 (Wales), Error margin +/- 7%
Oxford Internet Survey, 2003-2009 (UK), Error margin +/- 5%
Figure 8 (overleaf) shows Communities 2.0 eligible areas at Lower Super Output Area (LSOA) level. This can be compared with the map of digital inclusion and exclusion in Wales (Figure 7.2) at LSOA level.

The initial focus of Communities 2.0 support is in the 30% most deprived communities within Convergence Areas (i.e. West Wales and the Valleys). Comparison between the two maps show that there is generally a good match between Communities 2.0 support and areas with high levels of digital exclusion, although certain areas not in receipt of Communities 2.0 support show high levels of digital exclusion. This may be due to the areas being deprived but outside Convergence Areas and therefore ineligible for support (e.g. ‘Ringland 2’ in Newport), or due to the relatively high proportion of older people living in these areas who are less likely to be internet users (e.g. ‘Tywyn 1’ in Gwynedd).

As Table 3 illustrates, in eight of the most digitally excluded areas in Gwynedd, six are not currently eligible for Communities 2.0 support. The data from Experian has only recently become available, and the analytical team are inputting into the evaluation of Communities 2.0.

Table 3 Most digitally excluded LSOAs in Gwynedd

<table>
<thead>
<tr>
<th>LSOAs</th>
<th>Digitally included (%)</th>
<th>Eligible for C2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tywyn 1</td>
<td>56.23</td>
<td>N</td>
</tr>
<tr>
<td>Talysarn</td>
<td>58.20</td>
<td>Y</td>
</tr>
<tr>
<td>Tywyn 2</td>
<td>60.30</td>
<td>N</td>
</tr>
<tr>
<td>Cadnant (Gwynedd)</td>
<td>61.10</td>
<td>Y</td>
</tr>
<tr>
<td>Llangelynin</td>
<td>61.42</td>
<td>N</td>
</tr>
<tr>
<td>Dyffryn Ardudwy</td>
<td>61.58</td>
<td>N</td>
</tr>
<tr>
<td>Diffwys and Maenofferen</td>
<td>63.32</td>
<td>N</td>
</tr>
<tr>
<td>Trawsfynydd</td>
<td>63.59</td>
<td>N</td>
</tr>
</tbody>
</table>

Fig. 8.1 Communities 2.0 eligible areas

Fig. 8.2 Digital inclusion / exclusion by Lower Super Output Area

Source: Experian (2010)
4. Skilled and Competent People: Equipping Citizens for the Digital Nation (pp. 9-12)

**ICT in the National Curriculum** (p.9)

Children and young people often lead the way in using ICT and it is important that we are all able to rise to *their* standards in the creative and collaborative use of emerging technologies whilst ensuring that we provide them with the informed and appropriate guidance they need to stay safe online…While the number of students taking A-level Computing in the years 2005-2009 have seen a decline (32%) similar to that of the UK (35%), the number of students in Wales taking ICT A-levels has increased by 153%, in contrast to a 20% decline over the UK as a whole (p.9).¹

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**Fig. 9.1** A-level uptake for Computing and ICT in Wales, 2005-2009

![Graph showing A-level uptake for Computing and ICT in Wales, 2005-2009](Source: JCQ Provisional GCE A-level results, 2005-2009)

Source: eskills UK (2009).
We will continue to work with the Sector Skills Councils, and in particular e-Skills UK, to ensure that the Welsh workforce has the skills it needs to compete with the best in the world. This work will include discussion of the benefits of establishing a Future e-Skills Group.

A survey of employers in Wales in Q1 2009 revealed that one in ten Welsh companies with IT and Telecoms professionals, and one in six employers in all sectors, consider the IT skills of their employees at below a minimum standard.1 We will be working with the UK Commission for Employment and Skills on a Skills Audit, mirroring the work undertaken by the Commission for England that was published in March 2010. This work will help establish, in more detail, the strategic skills needs and demands in this and other priority sector areas and will constitute an important source of intelligence to inform future provision planning.

Fig. 9.2 Reasons for the existence of IT user skills gaps, UK

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff unable to train due to work commitments</td>
<td>64%</td>
</tr>
<tr>
<td>Company doesn’t train/ train enough</td>
<td>56%</td>
</tr>
<tr>
<td>New projects/products/services being launched</td>
<td>53%</td>
</tr>
<tr>
<td>New systems/processes/equipment introduced</td>
<td>48%</td>
</tr>
<tr>
<td>Staff are new to the job/company</td>
<td>39%</td>
</tr>
<tr>
<td>Other</td>
<td>15%</td>
</tr>
<tr>
<td>Staff cannot reach required skill levels even with training</td>
<td>14%</td>
</tr>
<tr>
<td>Budgets/lack of funds</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: e-skills UK 2009 employer survey

Source: eskills UK (2009).
5. A Thriving and Competitive Digital Economy: Driving Innovation, Productivity and Growth (pp. 13-16)

Exploitation of ICT is key to driving economic performance. Growth in the content and ICT sectors and wider ICT take-up will boost economic recovery and long-term competitiveness. ICT investment drives 30% of EU productivity growth.¹ We have identified the digital economy as a key element in our Economic Renewal Programme and a critical enabler in the rural economy (p.13).

There is a wide evidence base that reports a strong link between ICT and productivity growth. There are two main ways of investigating the impact of ICT on productivity: the macro (impact of ICT on productivity of the economy as a whole and impact on GDP) and the firm level (looking at the impact of productivity within individuals businesses) The macro picture is one of remarkable productivity acceleration in the USA during the 1990s, which would appear to be related (at least in part) to ICT. Europe has not achieved productivity acceleration at the same pace as the US, which is likely due to the greater ‘organizational capital’ in US firms. There is also evidence of a strong firm level association between IT and firm performance (although causality has still to be convincingly demonstrated).

Significant progress has already been made through previous strategies and interventions across Wales. In 2003 only 7% of Welsh SMEs reported using the internet for sales and the same percentage reported using the internet for purchases.¹ In 2006 36% of SMEs reported using the internet for sales and 68% reported using the internet for purchases.¹ Tailored interventions and bespoke advice and support are delivered through the Welsh Assembly Government’s Flexible Support for Business service. Businesses that need to extensively integrate new and often complex ICT systems can draw upon eBusiness Support; a complete package of skills, resources and finance (p.13).

[See Annual Survey of Small Businesses graphs, Figs. 4.1 – 4.4]
Developing Wales' ICT sector (p.14)

**ICT Sector in Wales**
There are currently more than 600 diverse companies in the ICT sector in Wales, of which over 300 are medium and large companies. They employ an estimated 30,000 people – approximately 3.5% of the Welsh workforce - and generate around 5.5% of GVA in Wales.

**Table 4.1a Number of ICT enterprises active in Wales, by sizeband, 2003-2010**

<table>
<thead>
<tr>
<th>ICT Enterprises Active in Wales by Sector and Sizeband</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero (0)</td>
<td>1,120</td>
<td>1,025</td>
<td>975</td>
<td>865</td>
<td>830</td>
<td>840</td>
<td>785</td>
<td>690</td>
</tr>
<tr>
<td>Micro (1-9)</td>
<td>755</td>
<td>740</td>
<td>695</td>
<td>700</td>
<td>700</td>
<td>640</td>
<td>605</td>
<td>585</td>
</tr>
<tr>
<td>Small (10-49)</td>
<td>115</td>
<td>100</td>
<td>110</td>
<td>95</td>
<td>90</td>
<td>90</td>
<td>100</td>
<td>110</td>
</tr>
<tr>
<td>Medium (50-249)</td>
<td>30</td>
<td>35</td>
<td>35</td>
<td>40</td>
<td>35</td>
<td>35</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>Large (250+)</td>
<td>50</td>
<td>45</td>
<td>40</td>
<td>40</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>2,070</td>
<td>1,940</td>
<td>1,855</td>
<td>1,740</td>
<td>1,695</td>
<td>1,635</td>
<td>1,560</td>
<td>1,455</td>
</tr>
</tbody>
</table>

Source: Inter-Departmental Business Register (IDBR), ONS

1. Enterprises active in Wales includes those headquartered outside Wales, but have local units in Wales. Excludes central and local government
2. Provisionally defined. Based on the main activity of the UK enterprise
3. Sizeband is based on the size of the whole enterprise (not just the part in Wales)
4. Local units are individual sites of an enterprise
5. Turnover excludes the financial services sector. For multi site enterprises turnover is apportioned using turnover per head

*Denotes data item is disclosive (i.e. For turnover and employee estimates there are either fewer than 20 enterprises or employees).

**Table 4.1b Employees in ICT enterprises active in Wales, by sizeband, 2003-2010**

<table>
<thead>
<tr>
<th>Number of Employees in ICT Enterprises Active in Wales by Sector and Sizeband</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero (0)</td>
<td>815</td>
<td>750</td>
<td>715</td>
<td>625</td>
<td>615</td>
<td>625</td>
<td>590</td>
<td>530</td>
</tr>
<tr>
<td>Micro (1-9)</td>
<td>2,345</td>
<td>2,300</td>
<td>2,150</td>
<td>2,170</td>
<td>2,135</td>
<td>1,995</td>
<td>1,875</td>
<td>1,810</td>
</tr>
<tr>
<td>Small (10-49)</td>
<td>2,185</td>
<td>2,185</td>
<td>2,185</td>
<td>2,065</td>
<td>2,065</td>
<td>1,790</td>
<td>1,775</td>
<td>1,880</td>
</tr>
<tr>
<td>Medium (50-249)</td>
<td>1,800</td>
<td>2,630</td>
<td>2,735</td>
<td>2,955</td>
<td>2,425</td>
<td>2,425</td>
<td>3,105</td>
<td>2,625</td>
</tr>
<tr>
<td>Large (250+)</td>
<td>19,405</td>
<td>15,140</td>
<td>16,675</td>
<td>13,765</td>
<td>12,575</td>
<td>9,990</td>
<td>10,330</td>
<td>9,940</td>
</tr>
<tr>
<td>Total</td>
<td>26,550</td>
<td>22,705</td>
<td>24,340</td>
<td>21,305</td>
<td>19,525</td>
<td>16,590</td>
<td>17,465</td>
<td>17,090</td>
</tr>
</tbody>
</table>

Source: Inter-Departmental Business Register (IDBR), ONS

1. Enterprises active in Wales includes those headquartered outside Wales, but have local units in Wales. Excludes central and local government
2. Provisionally defined. Based on the main activity of the UK enterprise
3. Sizeband is based on the size of the whole enterprise (not just the part in Wales)
4. Local units are individual sites of an enterprise
5. Turnover excludes the financial services sector. For multi site enterprises turnover is apportioned using turnover per head

*Denotes data item is disclosive (i.e. For turnover and employee estimates there are either fewer than 20 enterprises or employees).
Developing Wales’ Creative Industries (p.14)

### Table 4.2a Number of Creative Industries enterprises active in Wales, by sizeband, 2003-2010

<table>
<thead>
<tr>
<th>Creative Industries Enterprises Active¹ in Wales by Sector² and Sizeband³</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero (0)</td>
<td>1,800</td>
<td>1,740</td>
<td>1,830</td>
<td>1,845</td>
<td>1,950</td>
<td>2,235</td>
<td>2,400</td>
<td>2,330</td>
</tr>
<tr>
<td>Micro (1-9)</td>
<td>1,205</td>
<td>1,240</td>
<td>1,305</td>
<td>1,385</td>
<td>1,400</td>
<td>1,495</td>
<td>1,530</td>
<td>1,510</td>
</tr>
<tr>
<td>Small (10-49)</td>
<td>155</td>
<td>140</td>
<td>140</td>
<td>145</td>
<td>165</td>
<td>170</td>
<td>180</td>
<td>185</td>
</tr>
<tr>
<td>Medium (50-249)</td>
<td>35</td>
<td>45</td>
<td>45</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>Large (250+)</td>
<td>55</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>55</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,250</strong></td>
<td><strong>3,220</strong></td>
<td><strong>3,375</strong></td>
<td><strong>3,470</strong></td>
<td><strong>3,600</strong></td>
<td><strong>3,995</strong></td>
<td><strong>4,205</strong></td>
<td><strong>4,130</strong></td>
</tr>
</tbody>
</table>

*Source: Inter-Departmental Business Register (IDBR), ONS*

¹Enterprises active in Wales includes those headquartered outside Wales, but have local units in Wales. Excludes central and local government

²Defined as the DCMS definition. Based on the main activity of the UK enterprise

³Sizeband is based on the size of the whole enterprise (not just the part in Wales)

### Table 4.2b Employees in Creative Industries enterprises active in Wales, by sizeband, 2003-2010

<table>
<thead>
<tr>
<th>Number of Employees in Creative Industries Enterprises Active¹ in Wales by Sector² and Sizeband³</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero (0)</td>
<td>800</td>
<td>845</td>
<td>945</td>
<td>990</td>
<td>1,075</td>
<td>1,380</td>
<td>1,580</td>
<td>1,565</td>
</tr>
<tr>
<td>Micro (1-9)</td>
<td>3,555</td>
<td>3,665</td>
<td>3,915</td>
<td>4,145</td>
<td>4,185</td>
<td>4,410</td>
<td>4,565</td>
<td>4,470</td>
</tr>
<tr>
<td>Small (10-49)</td>
<td>2,465</td>
<td>2,490</td>
<td>2,395</td>
<td>2,570</td>
<td>2,860</td>
<td>2,905</td>
<td>3,065</td>
<td>2,990</td>
</tr>
<tr>
<td>Medium (50-249)</td>
<td>1,970</td>
<td>2,490</td>
<td>2,180</td>
<td>1,815</td>
<td>2,100</td>
<td>1,830</td>
<td>1,905</td>
<td>2,290</td>
</tr>
<tr>
<td>Large (250+)</td>
<td>7,605</td>
<td>7,725</td>
<td>7,940</td>
<td>6,850</td>
<td>6,825</td>
<td>6,880</td>
<td>8,170</td>
<td>7,580</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16,400</strong></td>
<td><strong>17,205</strong></td>
<td><strong>17,370</strong></td>
<td><strong>16,370</strong></td>
<td><strong>17,040</strong></td>
<td><strong>17,400</strong></td>
<td><strong>19,285</strong></td>
<td><strong>18,895</strong></td>
</tr>
</tbody>
</table>

*Source: Inter-Departmental Business Register (IDBR), ONS*

¹Enterprises active in Wales includes those headquartered outside Wales, but have local units in Wales. Excludes central and local government

²Defined as the DCMS definition. Based on the main activity of the UK enterprise

³Sizeband is based on the size of the whole enterprise (not just the part in Wales)
**Fostering more ICT related Research and Development, innovation and technology and its commercial exploitation.** (p.15)

Sustained investment in research and innovation in ICT will be a fundamental factor in Welsh businesses developing high value-added ICT-based products and services. Experimental research is key to unlocking future creativity, productivity growth and social progress. If we want to know how to help support our ageing population or reduce the impact of climate change we need very ambitious research to support these goals (p.15).

**Figure 10** depicts a more straightforward comparison of productivity growth between sectors when we divide the economy into ICT producing sectors, ICT using sectors (those that use ICT extensively, for example, retail, wholesale, and finance), and the rest of the economy (excluding public administration, health, and education). The bars show the acceleration of productivity. In the US economy, illustrated on the left hand-side of the diagram we can see the acceleration in productivity growth, and that this acceleration was strongest in the ICT using sectors (up from 1.2 per cent per annum in the early 1990s to 4.7 per cent per annum after 1995). There is also a smaller acceleration in the ICT producing sectors (up by 1.9 percentage points). Outside these sectors, there was a deceleration in productivity of about half a percentage point.

**Fig. 10** % change in annual growth in output per hour, US v EU, 1990-95 – 1995-2001

Also of interest is that at the EU level there was strong growth in ICT producing sectors. A study undertaken by the former UK Department for Trade and Industry (2004) reported that productivity growth in ICT producing industry was around 4 times higher than the average for the UK as a whole. The importance of ICT capital increased over time highlighting the continued importance of ICT in driving productivity growth.
6. Transforming Public Services (pp. 17-22)

Local Government Services (p.20)

| Average costs for a local government service transaction face-to-face are estimated at £10.53; the same transaction conducted over the phone costs £3.39 and only £0.08 online. Local Government should accelerate the shift to relevant services being available primarily online, automated or self-service. The services should be convenient, accessible and useable by clients and reduce costs for service deliverers. Authorities should seek to further reduce costs through collaborative regional or national procurement of systems and services and better engagement with suppliers (p.20). |

Research\(^1\) undertaken at the UK level highlight the potential scope of the services and the number of customers they affect. This is summarised in Table 5.

\(^1\) PricewaterhouseCoopers (2009), The Economic Case for Digital Inclusion.
<table>
<thead>
<tr>
<th>Department, Service (Directorate of DWP)</th>
<th>Service</th>
<th>Type of service</th>
<th>Number of customers/ transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department for Work &amp; Pensions (DWP)</td>
<td>Benefits and Pensions</td>
<td>DWP is the biggest public service delivery department in the UK leading on welfare and pension issues</td>
<td>Over 20 million customers</td>
</tr>
<tr>
<td></td>
<td>Working age benefits, including Job Seekers Allowance, Employment and Support Allowance, Carer Allowance, Bereavement Benefit etc.</td>
<td>DWP provides benefits to diverse groups including those out of work, carers and the bereaved</td>
<td>5.6 million working age benefits claimants, including 2.8 million Employment Support Allowance customers and 1.4 million Job Seekers Allowance customers.</td>
</tr>
<tr>
<td>The Pension, Disability &amp; Carers' Service (Directorate of DWP)</td>
<td>Pension Credit</td>
<td>There are two different types of Pension Credit: • Guarantee Credit is for those aged 60 or over • Savings Credit is for those aged 65 or over.</td>
<td>2.7 million (3.3 million including couples) of which 1.2 million receive both the Guarantee and Saving Credits, 0.9 million receive the Guarantee Credit only and 0.5 million the Savings Credit only</td>
</tr>
<tr>
<td></td>
<td>Disability Living Allowance</td>
<td>Introduced on 1st April 1992 this is a benefit for people who have become disabled before the age of 65 and who need assistance with personal care or mobility</td>
<td>3 million recipients of DLA (not including suspended cases)</td>
</tr>
<tr>
<td></td>
<td>State pension</td>
<td>Paid to people who have reached the state pension age and fulfilled the residency and contributions conditions.</td>
<td>12.2 million recipients of which 38% are male and 82% are female</td>
</tr>
<tr>
<td>Child Support Agency (CSA) (CSA)</td>
<td>Child Maintenance</td>
<td>The CSA is responsible for tracing non-resident parents, working out how much maintenance they should pay, and collecting and enforcing payments</td>
<td>There were 1.20 million cases at the end of June 2009.</td>
</tr>
<tr>
<td>HM Revenue &amp;</td>
<td>Tax and tax</td>
<td>HMRC is the UK tax authority collecting taxes</td>
<td>There are an estimated</td>
</tr>
</tbody>
</table>

(continued on next page)
The same study by PricewaterhouseCoopers provided a case study of the efficiency savings that can be generated by moving more elements of public service delivery on line. The following box is the case study from the online vehicle tax payments for the DVLA.

<table>
<thead>
<tr>
<th>Department</th>
<th>Service</th>
<th>Type of service</th>
<th>Number of customers/transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customs (HMRC)</td>
<td>credits</td>
<td>worth £425.7 billion and paying out tax credits of over £35 billion</td>
<td>29.3 million taxpayers in the UK</td>
</tr>
<tr>
<td></td>
<td>Child Benefit</td>
<td>A tax-free payment for children and paid every four weeks and, in some cases, weekly</td>
<td>7.5 million families with 13.3 million children</td>
</tr>
<tr>
<td></td>
<td>Tax credits</td>
<td>Payments to support families with children and workers on low wages</td>
<td>6.1 million families with 10.1 million children</td>
</tr>
<tr>
<td></td>
<td>Working Tax Credit (WTC)</td>
<td>Tops up the earnings of families on low or moderate incomes depending on how many hours worked</td>
<td>0.5 million customer receive WTC only</td>
</tr>
<tr>
<td>Department for Children Schools and Families (DCSF)</td>
<td>Child Tax Credit (CTC)</td>
<td>Provides support to families for children and 'qualifying' young people. It is paid in addition to Child Benefit</td>
<td>5.7 million families receive CTC, of which 1.8 million are claiming both WTC and CTC.</td>
</tr>
<tr>
<td>Driver Vehicle Licensing Agency (DVLA)</td>
<td>Education</td>
<td>Weekly allowance to support learners from low income households to continue in learning</td>
<td>0.54 million learners in England benefit from EMA</td>
</tr>
<tr>
<td></td>
<td>Maintenance Allowance (EMA)</td>
<td>Weekly allowance to support learners from low income households to continue in learning</td>
<td>0.54 million learners in England benefit from EMA</td>
</tr>
<tr>
<td></td>
<td>Driver licensing</td>
<td>Licences drivers</td>
<td>106 million transactions in 2008/09</td>
</tr>
<tr>
<td></td>
<td>Vehicle licensing</td>
<td>Maintains register of vehicles and collects vehicle excise duty (car tax)</td>
<td>43 million vehicle license transactions 28 million manual transactions 15 million are online</td>
</tr>
<tr>
<td>Department of Health (DH)</td>
<td>National Health Service (NHS)</td>
<td>Health services provider</td>
<td>75.9 million outpatient appointments were made. 81.4 million attended by the patient</td>
</tr>
<tr>
<td></td>
<td>Social care</td>
<td>Social care provided to groups such as the elderly and disabled</td>
<td>9.35 million households received home help and home care</td>
</tr>
<tr>
<td>Home Office (HO)</td>
<td>Passports</td>
<td>Passport provision to UK citizens</td>
<td>The demand for passports in 2007/8 stood at just over 4.2 million</td>
</tr>
</tbody>
</table>

Source: PricewaterhouseCoopers (2009)
Box 1 Case Study of potential savings from the online delivery of public services, DVLA

In October 2006 the Government launched an electronic tax renewal system that allowed drivers of the estimated 33 million active vehicles in the UK to purchase their tax discs either online or over the phone. The DVLA Annual Accounts for 2007-08 show that 13m customers relicensed or completed a Statutory Off Road Notification transaction online, roughly 30% of total vehicle licensing transactions. The Annual Accounts also show a reduction in unit costs of dealing with Vehicle Excise Duty (VED) and an increase in transaction volumes, with unit costs falling by approximately 15% (per £100 of Vehicle Excise Duty collected) between 2006, when the electronic system was introduced, and the forecast 2009-10 value. It is difficult to account for the individual contribution of online facilities in these savings, but the DVLA do note that efficiency has been ‘significantly assisted by the introduction of e-services and managed channel shift from the old manual paper based system’.

There are also significant benefits to users of the electronic system. Using the system means that customers are not required to produce paper copies of their MOTs or insurance, reducing the administrative burden of complying. As an electronic system it can be accessed 24 hours a day, 7 days a week, which has clear convenience benefits over face-to-face car tax renewal in particular. Online and telephone transactions can also be made in an average of 4 minutes, and while there is no available data on transaction times using face-to-face channels, is likely to represent a time saving to users over that channel. Given that annual cycle of car tax renewal, and assuming that all adults within the digitally excluded population are drivers and currently renew the car tax face-to-face, we estimate the potential benefit to DVLA in terms of reduced transaction costs to be approximately £107 million. This indicative estimate assumes the equivalent per transaction channel costs as found in local government.

Source: PricewaterhouseCoopers (2009)
References

Note The following documents were considered in drafting the Digital Wales document. Sources marked with a star (*) are cited in the document itself.


*BBC News Online. (5 May 2010). ‘E-crime in Wales more than doubled’. http://news.bbc.co.uk/1/hi/wales/8661197.stm

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