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## Research and Information Service Briefing Paper

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# Flexible working: further evidence

This Briefing Paper is to support the Committee for Finance and Personnel's inquiry into flexible working in the Northern Ireland public sector. It updates RaISe paper 95/12<sup>1</sup> by providing a review of recent evidence. An in-depth case study of the United States' federal agencies' telework programme is also presented.

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<sup>1</sup> RaISe (2012) 'Flexible Working' available online at:  
[http://www.niassembly.gov.uk/Documents/RaISe/Publications/2012/finance\\_personnel/9512.pdf](http://www.niassembly.gov.uk/Documents/RaISe/Publications/2012/finance_personnel/9512.pdf)

## Key points

- The Flexible Work Commission recently recommended that governments should shift the focus of the flexible working debate away from “family-friendly” work practices; and that the public sector has scope to “dramatically expand” the use of flexible working (section 2.1.);
- The Flexible Work Commission also argued for a role for public procurement in securing flexible working (section 2.1.);
- The United Kingdom Government has recently stated an aim for the Home Civil Service to be an “exemplar” in flexible working practices (section 2.2.);
- Organisation for Economic Cooperation and Development data shows that in the United Kingdom and the Republic of Ireland flexibility is “often limited to variance in working hours.” (section 2.4.1.) This finding is borne out by the Department of Finance and Personnel’s initial evidence to the Committee for Finance and Personnel’s inquiry which lists the flexible working options available as: flexible hours or flexitime; compressed hours; part-time working which includes job sharing and term-time working options; partial retirement; and personalised hours;<sup>2</sup>
- Organisation for Economic Cooperation and Development data also shows that the United Kingdom is above average in the number of males working from home. But there is a significant gender imbalance: a much lower proportion of females work from home (section 2.4.1.);
- A recent International Labour Office literature review points to a number of areas where the Committee for Finance and Personnel could usefully seek to expand the evidence base through its inquiry – in relation to the baseline data available to Department of Finance and Personnel, for example (section 2.4.2.); and,
- Case study evidence from United States federal government agencies provides an interesting example of a country-wide, strategic attempt to capture benefits from flexible working practices. It also provides a number of lessons learnt from which the Committee for Finance and Personnel can draw in shaping the course of its inquiry (section 3.2.4.).

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<sup>2</sup> DFP presentation to CFP, 1 February 2013

## Introduction

For the purposes of this paper, flexible working is defined as:

*...the ability of workers to make choices influencing when, where, and for how long they engage in work-related tasks.<sup>3</sup>*

The Committee for Finance and Personnel's (CFP) inquiry<sup>4</sup> into flexible working in the Northern Ireland public sector aims:

*...to investigate how flexible working practices – including arrangements for how, when and where public servants undertake their work – could be implemented successfully and used strategically for maximum benefit and efficiency in the public sector in Northern Ireland.*

The inquiry Terms of Reference (ToR) state that, amongst other things, CFP will:

*...identify lessons from international case studies on how flexible working arrangements have been implemented effectively elsewhere to achieve benefits for employers, employees and potentially for the wider economy and society, including: increased productivity; improved staff morale and commitment; reduced staff turnover and absenteeism; wider recruitment talent pools; reduced levels of economic inactivity; reduced premises costs; promotion of gender equality in employment; and environmental benefits;*

The purpose of this paper is to support the objectives of the inquiry by providing a review of recent case study and academic evidence. It is intended that this paper will assist CFP to identify further witnesses and data to help progress its investigation.

In addition, it was noted in RaISe paper 95/12 that the Northern Ireland Civil Service (NICS) does not have a formal policy on flexible working. Having said that, there are a significant amount of flexible working arrangements available within the NICS, with regard to flexibility of hours and attendance.<sup>5</sup> Whilst this demonstrates there has been some consideration of flexible working at a policy level, it also suggests that the NICS is not proactively seizing the opportunities that flexible working can offer.

RaISe paper 95/12 also identified lessons for Northern Ireland from a review of the evidence.<sup>6</sup> These were:

- The importance of senior executives showing willingness to work flexibly;
- The importance of proactivity in implementing flexible working policies at the design and development stages of jobs; and,

<sup>3</sup> Hill, E.J.; Grzywacz, J.G.; Allen, S.; Blanchard, V.L.; Matz-Costa, C.; Shulkin, S.; Pitt-Catsoupes, M. 2008. 'Defining and conceptualizing workplace flexibility', in *Community, Work, and Family*, Vol. 11, Issue 2, pp. 149-163.

<sup>4</sup> Information on the inquiry is available online at: <http://www.niassembly.gov.uk/Assembly-Business/Committees/Finance-and-Personnel/Inquiries/Inquiry-into-Flexible-Working-Hours/>

<sup>5</sup> <http://www.dfpni.gov.uk/3.11-hours-and-attendance.pdf> [Accessed 23 April 2012].

<sup>6</sup> RaISe (2012) 'Flexible Working' available online at: [http://www.niassembly.gov.uk/Documents/RaISe/Publications/2012/finance\\_personnel/9512.pdf](http://www.niassembly.gov.uk/Documents/RaISe/Publications/2012/finance_personnel/9512.pdf) (see section 6)

- The lack of higher-level jobs that incorporate flexibility.

This paper offers examples of ways that those issues might be tackled.

The paper is structured as follows:

- A thematic framework for considering the benefits of flexible working is presented (section 1);
- Recent academic and survey evidence is highlighted in the light of the thematic framework (section 2); and,
- A detailed case study is evaluated – at federal level in the United States (section 3).

Throughout the paper a number of issues for consideration and are drawn to CFP's attention.

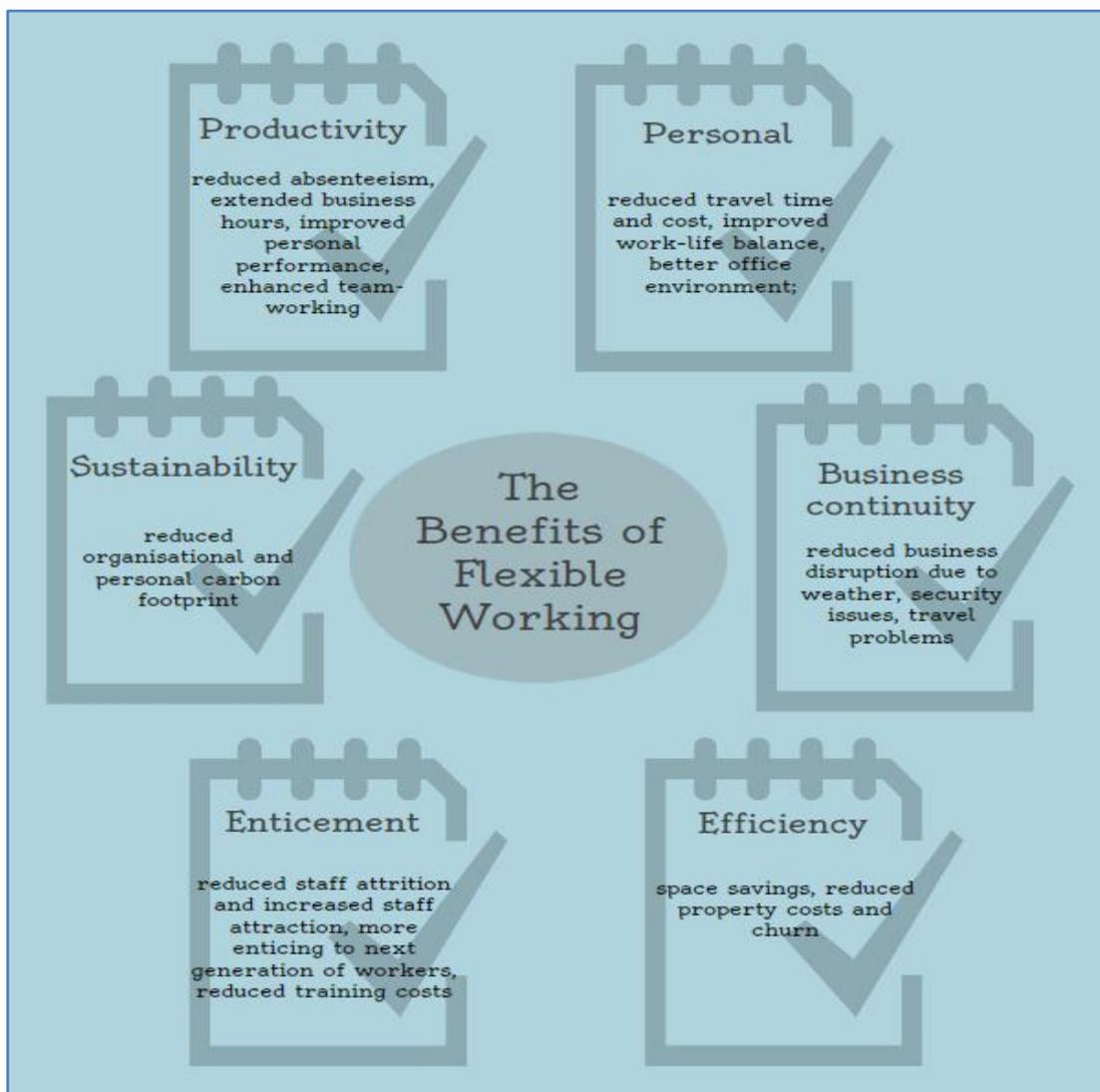
## 1. The benefits of flexible working: a thematic framework

In evidence to CFP, Sir George Bain stated that the benefits of flexible working were – in his view – well established:

*It is hard for me to see the disadvantages of flexible working ...[so]... it is more a question of how one should do this rather than whether one should do it.<sup>7</sup>*

On that basis, the ToR for CFP's inquiry focus more on the successful implementation of flexible working than the justification for such a policy. Figure 1 shows the grouping of the benefits of flexible working identified in a recent study. This grouping is used as a thematic framework for the evidence in this paper.

**Figure 1: six benefits from flexible working<sup>8</sup>**



<sup>7</sup> <http://www.niassembly.gov.uk/Assembly-Business/Official-Report/Committee-Minutes-of-Evidence/Session-2011-2012/February-2012/Flexible-Working/>

<sup>8</sup> After Oseland, N and Webber, C (2012) 'Flexible Working Benefits' available online at: <http://www.workplaceunlimited.com/2012%20WPU-OP-01%20Flexible%20Working%20Benefits.pdf>

## 2. A review of recent evidence

This section of the paper looks at some recently published evidence, with a view to updating the evidence provided in RaSe paper 95/12. Where appropriate, linkages to the thematic framework set out in Figure 1 are highlighted.

### 2.1. The Flexible Work Commission

The Recruitment and Employment Confederation (REC) is the professional body for the recruitment industry.<sup>9</sup> At the beginning of 2012, the REC formed the Flexible Work Commission (FWC):

*...with a view to bringing employers, recruiters, policy makers and labour market experts together to explore in detail the business case behind flexibility.<sup>10</sup>*

The FWC made a number of recommendations. These were addressed:

- to government;
- to business;
- to trade and professional associations; and,
- to recruiters.

Some of the recommendations are to the UK Government in relation to tax and welfare systems or collection of data by the Office of National Statistics. The prime recommendation likely to be of interest to CFP in relation to the inquiry is:

*A wider understanding of flexible work should be adopted by government to help move the debate beyond the current focus on family-friendly working practices. The government should lead the way by demanding increased work flexibility through public procurement and the public sector supply chain.<sup>11</sup>*

This is likely to be particularly of interest to CFP because of the Department of Finance and Personnel's (DFP) remit in relation to procurement policy. This means that DFP's influence in relation to flexible working may not be restricted only to working practices in the Northern Ireland Civil Service (NICS).

In particular, the FWC argued that:

*Much of the existing research and debate around flexible working centres on family-friendly working practices within permanent employment rather than the wider definition encompassing all forms of work flexibility. One*

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<sup>9</sup> For more information see the REC website: <http://www.rec.uk.com/aboutrec>

<sup>10</sup> REC (2012) 'Flexible Work Commission Report' available online at: <http://www.rec.uk.com/uploads/documents/rec-flexible-work-commission-report.pdf> (accessed 5 March 2013) (see page 3)

<sup>11</sup> REC (2012) 'Flexible Work Commission Report' available online at: <http://www.rec.uk.com/uploads/documents/rec-flexible-work-commission-report.pdf> (accessed 5 March 2013) (see page 32)

*aim of this report is to raise awareness of the sheer diversity of flexible options on offer to organisations in both the public and private sectors. In the public sector certainly, there is scope to dramatically expand the use of work flexibility, like the increasing trend of work 'projectisation' being seen in certain sectors of private industry. Far from cutting the use of temporary workers and implementing additional barriers to the use of freelancers and interim managers in the public sector, the government should be embracing these forms of work flexibility and the huge efficiency savings and increased access to in-demand skills they can bring to central and local government-funded projects.<sup>12</sup>*

It might be argued that CFP will be playing a part in such a process by focusing on how to implement flexibility in work practices in Northern Ireland. This FWC argument is that – in its view – there needs to be more emphasis from government on the five other benefits of flexible working beyond the 'personal' element shown in Figure 1.

**It should also be noted that the FWC was formed by the REC, which appears likely to have a direct interest in influencing the public sector to increase the use of freelancers, for example, whom members of the REC may recruit.**

## 2.2. UK Government

In November 2012 the United Kingdom (UK) Government published its response to a consultation which included questions on Flexible Parental Leave; Flexible Working; and, Working Time and Equal Pay. In particular, it looked at extending the rights of employees to request flexible working, and creating a code of practice for employers on how to deal with requests reasonably, and within a reasonable time.<sup>13</sup>

Of particular interest to CFP was the UK Government's commitment that:

*...we also recognise that Government, as a large employer itself, needs to lead by example on flexible working. We are working towards achieving the Government's aspirations for the civil service to be an exemplar in flexible working practices.<sup>14</sup>*

<sup>12</sup> REC (2012) 'Flexible Work Commission Report' available online at: <http://www.rec.uk.com/uploads/documents/rec-flexible-work-commission-report.pdf> (accessed 5 March 2013) (see page 32)

<sup>13</sup> <http://webarchive.nationalarchives.gov.uk/http://www.bis.gov.uk/Consultations/modern-workplaces> (accessed 6 March 2013)

<sup>14</sup>HM Government (2011) 'Modern Workplaces Consultation' <http://webarchive.nationalarchives.gov.uk/http://www.bis.gov.uk/Consultations/modern-workplaces> (accessed 6 March 2013) (see page 44)

The November 2012 publication focused specifically on the flexible working elements of the consultation. It stated that the UK Government would “*proceed with developing guidance on flexible working to further support line managers.*”<sup>15</sup>

Arguably, this might be read as indicating that work flexibility is only the responsibility of local line management; such an approach would seem to suggest the absence of a strategic civil service-wide policy. Later in the document, however, there is an indication that recruitment policy *does* support flexibility:

*The recruitment process also supports the aspiration for the Civil Service to be an exemplar in flexible working. The current e-recruitment system (CS Jobs) for advertising Civil Service vacancies has a default setting that states: ‘This job/these jobs are available for full-time, part-time or flexible working arrangements’. **Departments that wish to deviate from this have to complete a robust business case.***<sup>16</sup>[emphasis added]

This shows that flexibility – at least in terms of working hours – is to be regarded as the norm, not the exception. This aligns with the ‘enticement’ element of the thematic framework.

**Issue for consideration: CFP may wish to examine whether NICS recruitment practices support flexibility in this way.**

Finally, the UK Government also provided a case study from the Department for International Development (DFID). DFID is identified as a source of best practice guidance. The case study is presented in Box 1.

#### **Box 1: Flexible working in DFID**

‘As someone who is trying to juggle home and work life myself, I know how hard it can be. I also know that with the right motivation from staff and the right kind of management it can be very productive for all concerned. In the team we try to be:

- o Predictable and transparent in our working patterns. Everyone knows who is in the office when, and tries to plan work accordingly.
- o Giving people a real job. Reduced hours workers have full areas of responsibility, this is far more efficient than giving them ‘bits and pieces’ because they cannot be at every meeting.
- o Flexibility: there is an expectation that if something very important is going on then the relevant person will do their best to be there, even if it is not on a day that they usually work – this includes linking in by telephone and making this work.

<sup>15</sup> HM Government (2012) ‘Modern Workplaces Consultation – Government Response on Flexible Working’ [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/34691/12-1269-modern-workplaces-response-flexible-working.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/34691/12-1269-modern-workplaces-response-flexible-working.pdf) (accessed 6 March 2013) (see page 23)

<sup>16</sup> HM Government (2012) ‘Modern Workplaces Consultation – Government Response on Flexible Working’ [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/34691/12-1269-modern-workplaces-response-flexible-working.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/34691/12-1269-modern-workplaces-response-flexible-working.pdf) (accessed 6 March 2013) (see page 24)

- o Availability: mobile phones and emails make it easy to stay in touch if something really urgent comes up out of normal working hours but allowing people to say 'I can't talk now' if it is just not possible.
- o Openness: The aim is not that those working reduced hours should do a full time job in fewer days. Rather, we need to be clear from the start what is/is not reasonable to do in the time available, and to review that constantly.
- o The team appreciate that during busy periods colleagues who work flexibly can help with peaks of work, which reduces pressure on everyone. Our clear work plans ensure everyone has a fair workload appropriate to the hours they work.
- o My experience as a manager is that reduced hours colleagues appreciate the flexibility that they have been given, and use it well. Being organised around tasks, rather than about time, enables people to take responsibility for delivering their work in the best way. A win-win all round!

The case study shows that flexibility can be adopted in the public sector in terms of working hours. The example aligns with the 'personal' element of the thematic framework. But it also suggests that the approach is focused on harnessing some - but not all - of the benefits identified in Figure 1.

## 2.3. Workplace unlimited

The request for this research sought a literature review of best practice in relation to flexible working practices. RaISe has identified a very helpful piece of work by *workplace unlimited* which draws together a large number of case studies. The thematic framework in Figure 1 is derived from this paper.<sup>17</sup> However, because CFP received oral evidence from one of the authors of this work on 13 March 2013, it is not repeated here.

## 2.4. International evidence

In the course of the research, RaISe has identified some relatively recent international evidence which is relevant to CFP's Inquiry.

### 2.4.1. OECD Family Database

The Organisation for Economic Cooperation and Development (OECD) maintains a family database, which contains data on family-friendly workplace practices.

A key finding of a survey in 2009 was that:

*Austria, Denmark, Finland and Germany and Sweden, are the countries with the highest proportion of firms providing flexibility in working time arrangements. The percentage of companies providing flexi-time is also relatively large in Ireland or the United Kingdom, but in these countries*

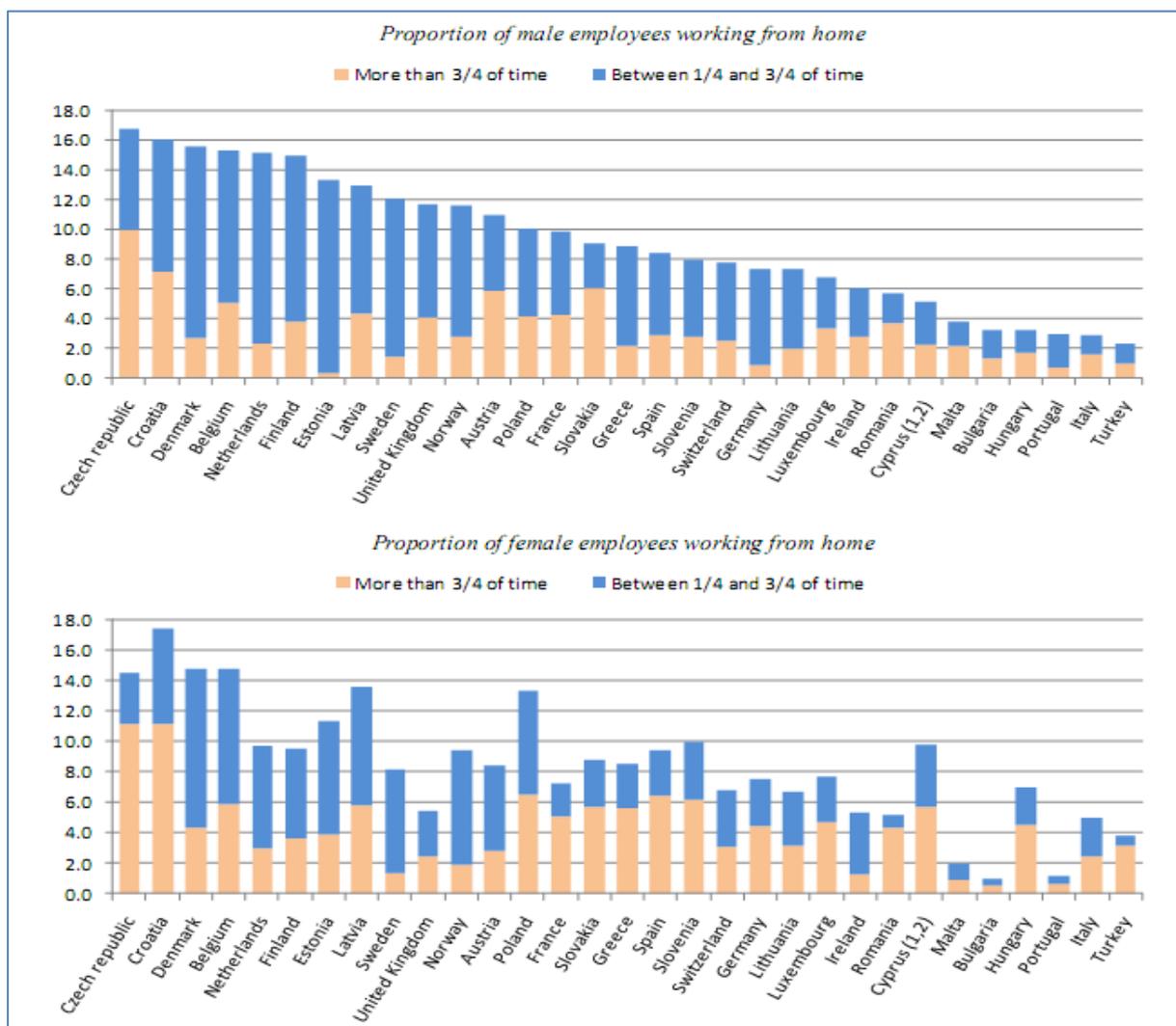
<sup>17</sup> Oseland, N and Webber, C (2012) 'Flexible Working Benefits' available online at: <http://www.workplaceunlimited.com/2012%20WPU-OP-01%20Flexible%20Working%20Benefits.pdf>

*flexibility is often limited to variance in working hours without the possibility to convert accumulated hours in holidays.<sup>18</sup>*

This part of the survey was in relation to hours in the workplace. The survey also collected data on working from home – a key pillar of flexible working practices. The results, broken down by gender, are shown in Figure 2.

The charts show that in the UK, working from home was twice as prevalent amongst males (just under 12%) than females (lower than 6%). The difference by gender in Ireland was much less marked. This is relevant because flexible working might be expected to help tackle gender-based inequalities; RaISe paper 95-12, however, noted that research has suggested that flexible working has not addressed this inequality.

**Figure 2: employees working from home in Europe, by gender<sup>19</sup>**



<sup>18</sup> OECD (2010) 'LMF2.4 Family-Friendly Workplace Practices' available online at: <http://www.oecd.org/els/family/43199600.pdf> (accessed 6 March 2013) (see page 2)

<sup>19</sup> OECD (2010) 'LMF2.4 Family-Friendly Workplace Practices' available online at: <http://www.oecd.org/els/family/43199600.pdf> (accessed 6 March 2013) (see page 5)

## 2.4.2. The International Labour Office

The International Labour Office (ILO) published comprehensive, detailed and extremely helpful research in 2012 called *The Effects of Working Time on Productivity and Firm Performance: a research synthesis paper*.<sup>20</sup> This sub-section of the paper draws out some issues in the literature surveyed by the ILO that are relevant to CFP's inquiry, and to the thematic framework presented in Figure 1.

In particular, the ILO paper seeks to identify the theoretical mechanisms that underlie the productivity-related and other reported benefits associated with workplace flexibility. This is important because the findings suggest that flexitime of itself (one of the key elements of flexibility allowed by the NICS at present) may not be an important driver of improved productivity.

Table 1 groups the findings of the ILO literature review against the benefits identified in the thematic framework. Linkages to issues that may be of interest to CFP's inquiry are identified. In addition, a number of recommendations in relation to baseline data and evidence are made. These may be of particular significance to the inquiry because of the difficulties recorded in the United States in relation to data and the measurement of benefits realisation as detailed in section 3 of this paper.

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<sup>20</sup> Golden, L (2012) 'The Effects of Working Time on Productivity and Firm Performance' available online at: [http://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---protrav/---travail/documents/publication/wcms\\_187307.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_187307.pdf) (accessed 11 March 2013)

**Table 1: Golden, L (2012) findings from literature review for ILO<sup>21</sup>**

Benefit	Research finding	Relevance to CFP inquiry and recommendations
<b>Productivity</b>	It is more often the size of the gap between desired and actual work schedules as opposed to the number of hours per se that affects a worker's job performance (Krausz et al., 2000; Hill et al., 2006). For example, among Australian workers, the number of hours worked mattered less than the mismatch between hours and working time preferences (Drago and Warren, 2009).	DFP's 1 Feb paper significantly focuses on the ability of NICS staff to work flexible, part-time, term-time or compressed hours. <b><u>CFP may wish to establish if NICS policy takes account of the relationship between working-time preferences and workers' performance.</u></b>
<b>Productivity</b>	Time-based conflicts are generally thought to decrease overall work productivity (Netemeyer et al., 2005). Thus, the adverse symptoms generated by longer working hours tend to be exacerbated by a worker's lack of control over the volume and scheduling of working hours (Maume and Bellas, 2001; Spurgeon, 2003; Berg et al., 2004; Golden and Wiens-Tuers, 2006).	<b><u>CFP may wish to establish if DFP has evidence on the level of time-based conflicts within the NICS and what measures might be taken to lessen them.</u></b>
<b>Productivity</b>	When workers report having greater flexibility in the workplace, particularly regarding the timing of their work, this generally tends to be associated with less self-reported stress and strain, and better physical health (Grzywacz et al., 2007; Butler et al., 2009).	<b><u>CFP may wish to establish whether DFP currently has evidence on NICS staff absences that are related time-based conflicts or working-time preferences.</u></b>
<b>Productivity</b>	In perhaps the most precise estimate to date, an empirical analysis of Fortune 500 companies showed that productivity firm-wide was boosted by anywhere from 1 to 3 per cent by an increase in the family-friendliness index (Clifton and Shepard, 2004). This reinforces evidence for European Union organizations of statistically significant correlations between certain work/family practices and organizational performance measures (Stavrou, 2005).	<b><u>CFP may wish to establish whether DFP currently has evidence on NICS staff productivity to inform understanding of the impact of current NICS practices so that any change may be monitored.</u></b>
<b>Productivity</b>	Even slightly higher performance suggests flexible work practices are at least not detrimental to productivity. This supports other research demonstrating that flexible work schedules help employees better coordinate their daily work and life responsibilities and boost their on-the-job performance (White et al., 2003; Berg et al., 2004; MacDermid and Tang, 2009), thus increasing average labour productivity along the "intensive margin". Similarly, flexible schedules may lead to greater efforts being made along the "extensive margin", leading workers to work longer hours, reduce unscheduled absences or breaks, curb tardiness and limit the use of sick time (Drago and Hyatt, 2003; Altman and Golden, 2004; Berg et al., 2004; Holzer, 2005; Drago et al., 2009; Kelliher and Andersen, 2010).	<b><u>CFP may wish to establish whether DFP currently has evidence on NICS staff productivity to inform understanding of the impact of current NICS practices so that any change may be monitored.</u></b>

<sup>21</sup> Golden, L (2012) 'The Effects of Working Time on Productivity and Firm Performance' available online at: [http://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---protrav/---travail/documents/publication/wcms\\_187307.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_187307.pdf) (accessed 11 March 2013)

Benefit	Research finding	Relevance to CFP inquiry and recommendations
<b>Productivity/Personal</b>	Rigid daily work schedules may be a contributing factor that is independent of the length of working hours, in that they have indirect effects on worker productivity via health, injury, and fatigue (Ng and Feldman, 2008). By their nature, flexible working hours may minimize the interference of family obligations with work productivity (Cousins and Tang, 2004).	DFP's 1 Feb paper states that the NICS regards itself as an employer that recognises the importance of having terms and conditions that support staff to balance their work commitments. <b><u>CFP may wish to establish if DFP has evidence on the relationship between NICS staff satisfaction and work-life balance.</u></b>
<b>Personal</b>	Among those who are not permitted to adapt their working hours to their preferred schedules, 45 per cent feel overworked (Galinsky et al., 2001). Lack of control over the scheduling of working hours may reinforce, compound or exacerbate the effects of long hours on workers (Fenwick and Tausig, 2001; Berg et al., 2004). Greater variation in workers' hours tends to reduce their well-being when the variation does not reflect their choice (Heisz and LaRochelle-Côté, 2006). The unpredictability of working hours (Askenazy, 2004), in particular for those with lower incomes (Lambert, 2000), can have a corrosive effect on worker job satisfaction levels. Reduced variability of hours has almost as much influence as higher flexibility on work/life satisfaction (Costa et al., 2006)	DFP's 1 Feb paper highlights the flexibilities available to NICS staff but does not specifically provide information on staff control over variations in their work schedules. <b><u>CFP may wish to establish if DFP has evidence on whether NICS staff have an appropriate degree of control over their working schedules.</u></b>
<b>Personal</b>	In France, "flexibility" that is considered to be wholly employer-centred is associated with increased mental strain on workers, largely because it gives them the feeling they are under time pressure and unable to do their job properly (Askenazy and Caroli, 2010). Interestingly, variable scheduling over days of work provokes more strain than variable scheduling of hours over the course of the day.	<b><u>CFP may wish to consider whether the current NICS flexible working arrangements are employer- or employee-centred.</u></b>
<b>Productivity/Personal</b>	The importance attached by workers to flexible work options is not too surprising, given that time-based conflict has been known to result in many negative job-related outcomes, such as lateness and absenteeism (Hammer et al., 2003). A comprehensive review of over 150 peer-reviewed studies from a number of disciplines supports this (Kelly et al., 2008). In a rare investigation using longitudinal data, the positive effects of human resource practices designed to promote better work/family balance actually produced sustained reductions in absenteeism, more than any sustained improvements in productivity or financial performance (Giardini and Kabst, 2008).	<b><u>CFP may wish to consider the potential impact of changes in practice on sickness absence rates in the NICS.</u></b>
<b>Business continuity</b>	Generally, worker and also managerial capacities to withstand intensive and uncertain working conditions are buttressed by greater flexibility in the nature of the work (MacEachen et al., 2007).	<b><u>CFP may wish to ask witnesses for evidence whether the current NICS arrangements could further enhance public sector resilience in Northern Ireland.</u></b> For example, DFP has conducted an assessment of the recent disruption to public service delivery as a consequence of severe weather events – such as the snow and flooding in 2012. <sup>22</sup>

<sup>22</sup> DFP letter to CFP, 6 March 2013 (ref CFP207/11-15)

Benefit	Research finding	Relevance to CFP inquiry and recommendations
<b>Efficiency/Sustainability</b>	In a sample of city government employees, productivity gains [from compressed workweeks] were sustained and employers reaped other savings, such as lower energy costs (Facer and Wadsworth, 2010)	<b><u>CFP may wish to establish whether DFP can provide baseline data on energy usage across the public estate to allow patterns following policy changes to be tracked.</u></b>
<b>Enticement</b>	The literature suggests that organizations can derive two types of benefits from flexible work schedules. The first is the aforementioned extra effort, motivation, commitment, engagement, job satisfaction and subsequent productivity increase. The second main employer benefit is the savings obtained from an enhanced ability to attract and retain such a motivated work force.	<b><u>CFP, may wish to seek evidence from DFP about the issue of recruitment, retention and training costs in the NICS. Is there a difficulty with 'hard-to-fill vacancies, for example, which might be lessened by adopting greater workplace flexibility.</u></b>
<b>Enticement</b>	A recent, in-depth case study investigated the turnover effects of an organizational innovation (ROWE—Results Only Work Environment) aimed at moving away from standard time practices to focus on results rather than time spent at work (Moen et al., 2011).	<b><u>CFP may wish to explore with witnesses the performance-management/retention implications of moving to output-based rather than hours-based work.</u></b>
<b>Enticement</b>	In US case studies, unmet needs for workplace flexibility were found to be a prominent driver of turnover. The firm Deloitte calculated that it had saved over US\$ 41 million in one year by providing more flexible work arrangements for professionals who otherwise were destined to leave the company (Corporate Voices for Working Families, 2011).	<b><u>CFP, may wish to seek evidence from DFP about the issue of recruitment, retention and training costs in the NICS. Is there a difficulty with 'hard-to-fill vacancies, for example, which might be lessened by adopting greater workplace flexibility.</u></b>

### 3. Case study: the United States Federal Government

On 9 December 2010, President Obama signed the *Telework Enhancement Act of 2010* (the Act).<sup>23</sup> This section of the paper explores the requirements of the Act, and examines the evaluation published in 2012 of its impact.

#### 3.1. The *Telework Enhancement Act of 2010*

The Act was passed to require the head of each executive agency in the US federal government to “*establish and implement a policy under which employees shall be authorized to telework.*”<sup>24</sup> The legislation defined teleworking as:

*...a work flexibility arrangement under which an employee performs the duties and responsibilities of such employee’s position, and other authorized activities, from an approved worksite other than the location from which the employee would otherwise work.*<sup>25</sup>

Subject to some limitations, the Act gave the head of each agency 180 days to:

- establish a policy under which eligible employees of the agency may be authorized to telework;
- determine the eligibility for all employees of the agency to participate in telework; and,
- notify all employees of the agency of their eligibility to telework.<sup>26</sup>

Amongst other provisions, the Act required the head of each agency to provide telework training to workers and managers; ensure that teleworking did not impact on operations; and, treat teleworkers and non-teleworkers equally.

##### 3.1.1. Eligibility for teleworking

The Act set criteria for determining whether an employee is eligible to telework:

An employee is eligible to participate in telework if all of the following parameters are true:

- The employee has not been officially disciplined for being absent without permission for more than five days in any calendar year;
- The employee has not been officially disciplined for violations of subpart G of the Standards of Ethical Conduct for Employees of the Executive Branch for viewing,

<sup>23</sup> Legislation available at: <http://www.gpo.gov/fdsys/pkg/BILLS-111hr1722enr/pdf/BILLS-111hr1722enr.pdf> (accessed 15 February 2013) (cited text from preamble)

<sup>24</sup> <http://www.gpo.gov/fdsys/pkg/BILLS-111hr1722enr/pdf/BILLS-111hr1722enr.pdf> (accessed 15 February 2013) (cited text from preamble)

<sup>25</sup> <http://www.gpo.gov/fdsys/pkg/BILLS-111hr1722enr/pdf/BILLS-111hr1722enr.pdf> (accessed 15 February 2013) (see s.6501)

<sup>26</sup> Legislation available at: <http://www.gpo.gov/fdsys/pkg/BILLS-111hr1722enr/pdf/BILLS-111hr1722enr.pdf> (accessed 15 February 2013) (s.6502)

downloading, or exchanging pornography, including child pornography, on a Federal Government computer or while performing official Federal Government duties;

- Teleworking does not diminish the employee's performance or agency operations;
- For employees participating in the telework program, participation and performance complies with the requirements and expectations of his or her telework agreement;
- The employee's official duties do not require on a FULL daily basis (ALL DAY, every work day): direct handling of secure materials determined to be inappropriate for telework by the agency head; or on-site activity that cannot be handled remotely or at an alternate worksite; and,
- The employee and/or the employee's position are not disqualified based on additional criteria established by the organization.<sup>27</sup>

### 3.1.2. Implementing the Act

The Act additionally required the US Office of Personnel Management (OPM) to provide guidance to agencies and assist with the establishment of qualitative and quantitative measures of outputs. The guidance also specified security considerations for the protection of data and plans for the continuity of operations in unforeseen circumstances or emergencies.

### 3.1.3. Reporting on the implementation of the Act

Finally, the Act required the OPM to report annually on the teleworking programme. The report has to include data on the number of employees teleworking; the number of days they telework; and explanations for any changes in levels of teleworking or goals for increasing participation in future.<sup>28</sup>

Part of the reporting duty placed on the OPM is to assess the impact of flexible working on federal agencies' goals in relation to:

- emergency readiness;
- energy use;
- recruitment and retention;
- productivity; and,
- employee attitudes and opinions regarding telework.<sup>29</sup>

These reporting duties align closely with the thematic framework identified in Figure 1. This suggests the US federal administration introduced the Act with a view to realising the benefits identified in that framework.

<sup>27</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 26)

<sup>28</sup> <http://www.gpo.gov/fdsys/pkg/BILLS-111hr1722enr/pdf/BILLS-111hr1722enr.pdf> (accessed 15 February 2013) (see s.6506)

<sup>29</sup> <http://www.gpo.gov/fdsys/pkg/BILLS-111hr1722enr/pdf/BILLS-111hr1722enr.pdf> (accessed 4 March 2013) (see s.6506 (b)(2)(F))

The findings of the first report by the US OPM under the Act are considered in the following sub-section.

### 3.2. The 2012 report by the US Office of Personnel Management

The OPM published its first report under the Act in July 2012. It is a detailed piece of work that analyses the responses made by US federal agencies to a questionnaire in 2011. The report also analyses the evidence from focus groups and draws on relevant data from Federal Employee Viewpoint Surveys.

This part of the paper presents some of the headline findings in the report and highlights links with other evidence and the thematic framework. The purpose is to indicate where Northern Ireland might be able to draw useful lessons from the US experience.

#### 3.2.1. Reliability of the data

At the outset, it is important to note that the OPM identifies some difficulties with the data-collection process. For example, it is noted in the report that:

*Agency data are quite informative and provide a detailed picture of current Federal telework activities. Program descriptions are particularly valuable and will provide opportunities for interagency sharing of best practices. However, caution should be exercised when participation and frequency findings are reviewed. In the absence of a standardized Government-wide data collection system or trained data collection staff in all agencies, the final combined telework participation estimates are unlikely to be reliable.<sup>30</sup>*

**This means that there is a risk of some over- or under-reporting in the data presented in the following sections. For the purposes of CFP however, RaISe believes the data are sufficiently reliable for drawing some tentative conclusions about the lessons to be learned from the process of strategically mandating telework across a range of agencies. These possible lessons are highlighted in section 3.2.4 of this paper.**

#### 3.2.2. Participation in teleworking in the US federal administration

Table 2 shows the headline numbers of employees in federal agencies reported as teleworking in September and October 2011 – a few months after the deadline for meeting the requirements of the Act.

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<sup>30</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 7)

**Table 2: headline findings of the OPM report<sup>31</sup>**

	Total Number of Employees	Employees Deemed Eligible to Telework	Employees with Telework Agreements	Employees Teleworking in Sept 2011
Number of employees in each category	2,165,390	684,589	144,851	168,558
Number of agency respondents	86	82	82	87

Figure 3 shows the proportion of total employees deemed eligible for teleworking (31.6% of 2,165,390) under the Act.

**Figure 3: percentage of federal employees eligible for teleworking**

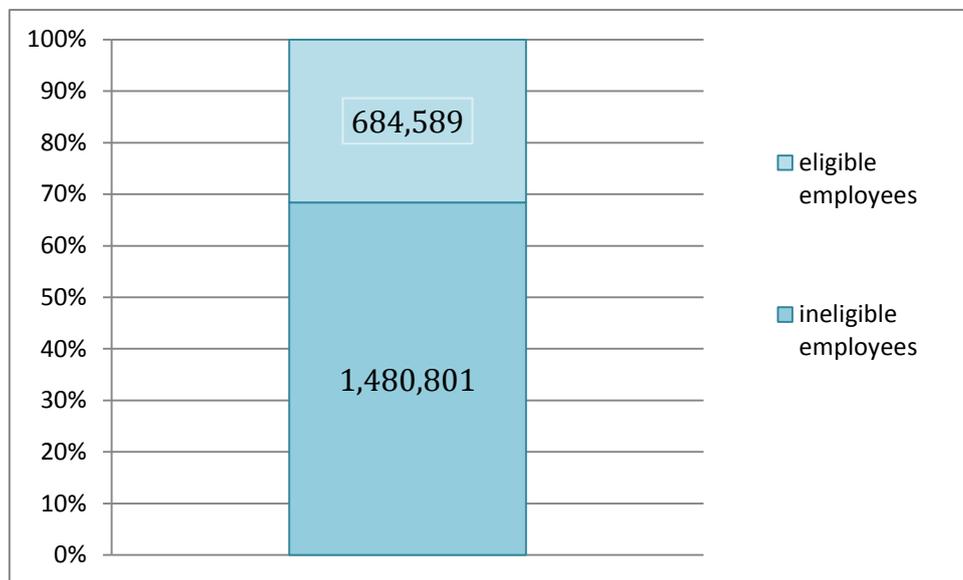
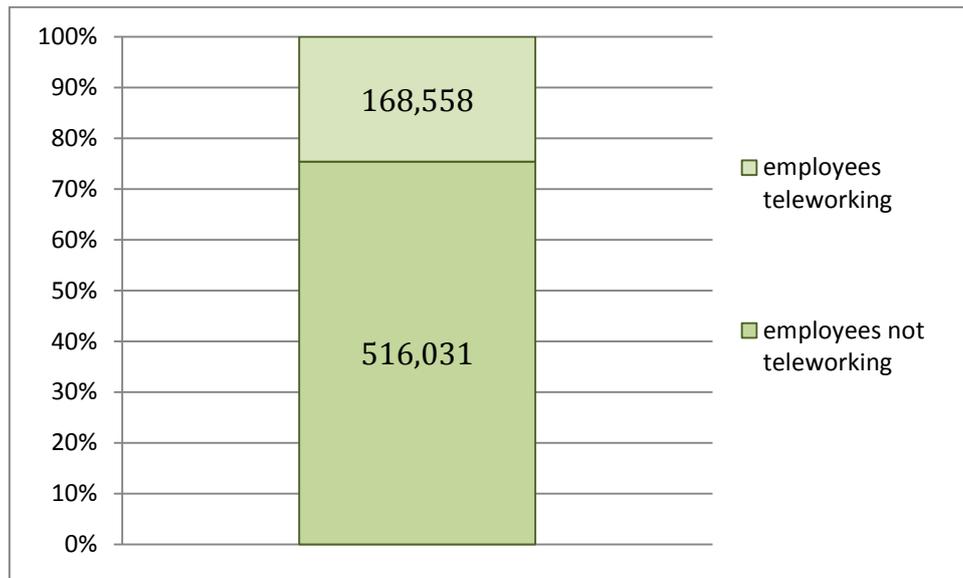


Figure 4 shows the proportion of employees deemed eligible for teleworking who were actually teleworking in September 2011 (24.6% of 684,589).

<sup>31</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 8)

**Figure 4: percentage of eligible employees actually teleworking in September 2011**

In September 2011, **7.8% of the total workforce of US federal agencies was teleworking to some degree.**

### 3.2.3. Frequency of teleworking

Table 3 shows a breakdown of those employees who were teleworking in September 2011, by how often they telework. Note that due to a number of issues with how data was recorded or reported by US federal agencies the total number of workers in Table 3 is lower than reported as teleworking in Table 2 above.

**Table 3: frequency of participation in teleworking**

	<b>3 or more days teleworking per week</b>	<b>2 days teleworking per week</b>	<b>1 day teleworking per week</b>	<b>Once a month per week</b>
Number of employees in each frequency category	46,023	47,675	41,727	5,637
Percentage of all reported teleworking employees by frequency category	27%	28%	25%	3%
Number of agency respondents to item	84	85	81	39

Figure 5 illustrates the frequency data in chart form.

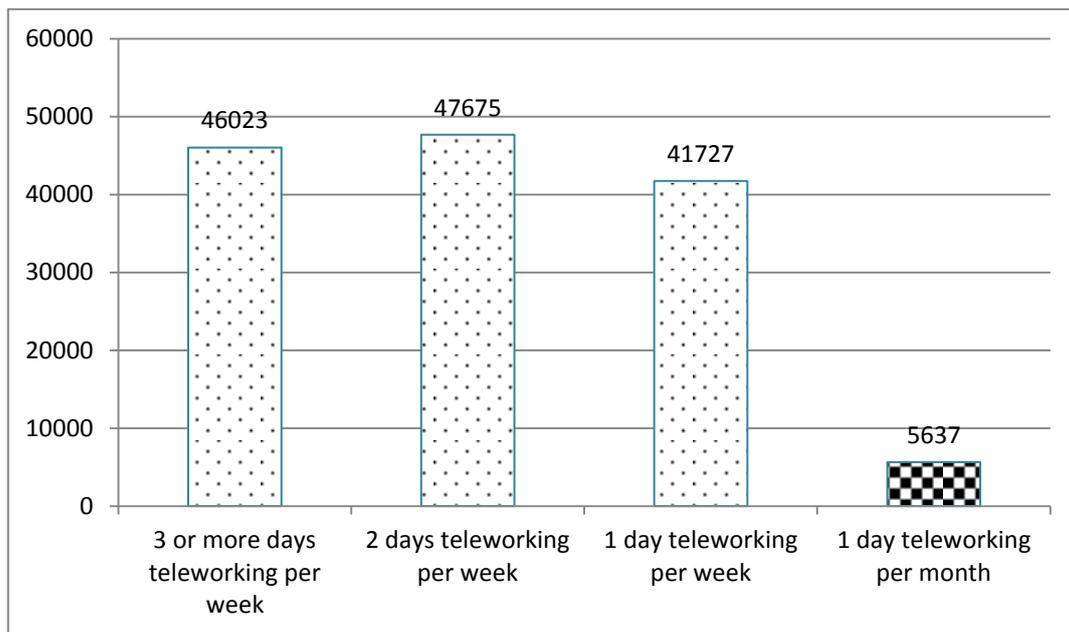
**Figure 5: frequency of participation in teleworking**

Figure 5 clearly illustrates that **the overwhelming majority of those employees who are recorded as teleworking do so for at least one day per week (96% - shown in dotted columns)**. Only 4% (shown in checks) teleworked much less frequently.

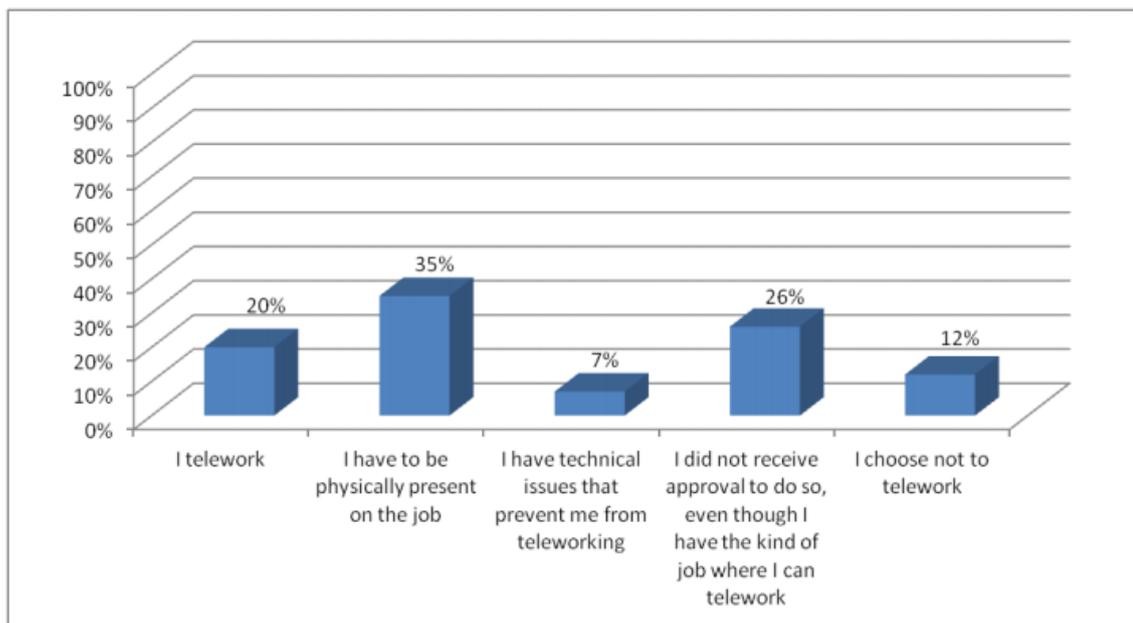
### 3.2.4. What learning might be drawn for Northern Ireland from the OPM report?

This subsection highlights some possible lessons for the public sector in Northern Ireland based on the findings of the OPM report.

#### Suitability of type of work to flexibility

By their nature, not all posts are suitable for a teleworking arrangement. Figure 3 above shows that **68.4% of the US federal workforce was deemed ineligible for telework**.

The OPM report provides data on reasons for non-participation in telework (shown here as Figure 6). **Note: these data are extracted from a survey in 2011 prior to the implementation of the Act.** The data therefore may serve as a baseline, but do not reveal anything about workplace patterns post-implementation of the Act.

**Figure 6: reasons for non-participation in telework<sup>32</sup>**

The following observations may be made about Figure 6:

- just over a third (35%) of federal employees indicated that a physical presence was required for their job;
- approximately a quarter (26%) of federal employees indicated that they had not received telework approval despite the suitability of their role. (Note: this was an employee survey, so there may be some degree of misalignment between jobholders' and managers' beliefs about the types of jobs that are suitable for telework);
- marginally over a tenth (12%) of federal employees indicated that they had chosen not to telework.

These observations point to some considerations for CFP's inquiry. For example, how would the NICS manage the impact on employee relations between staff whose jobs were suitable for flexible arrangements and those whose jobs were not? Further, it seems possible that employee relations might be damaged by the perception that certain roles are suitable for flexible arrangements but management has deemed them unsuitable.

These data may have implications that cut across a number of the benefits outlined in the thematic framework in Figure 1. For example, under 'productivity', there are claims for the benefits of enhanced team-working that might potentially be undermined by these issues of employee relations.

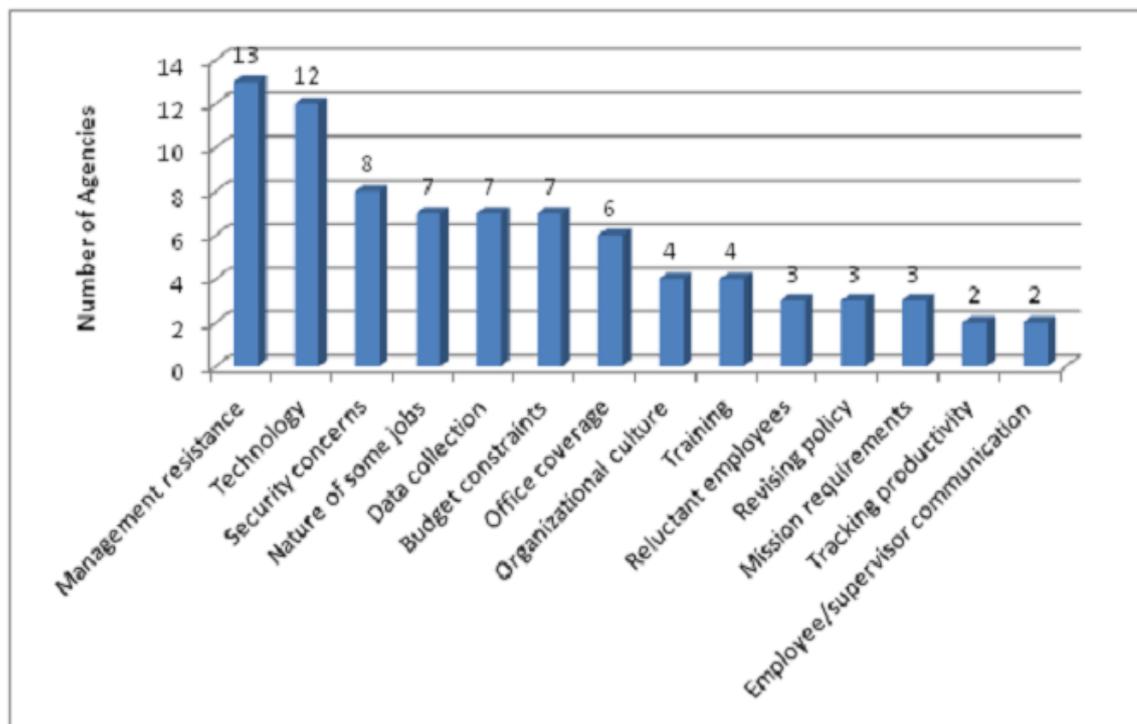
<sup>32</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 40)

**Issue for consideration: CFP may wish to explore with witnesses the extent to which eligibility for flexible working impacts on employee relations, and the scope for managing those impacts.**

### Barriers to telework

The OPM report identifies a number of barriers to the implementation of teleworking that were cited by federal agencies. These are shown in Figure 7.

**Figure 7: Barriers to telework implementation in US federal agencies<sup>33</sup>**



The OPM report acknowledges that the uncovering of barriers is “typical of change interventions.”<sup>34</sup>

The most frequently reported barriers were ‘management resistance’ and ‘technology’. CFP has received evidence from DFP about the scope of *Unified Communications* technology that is available. Examples include: Instant Messaging; Telepresence; Audio Conferencing; Video calling; Online meetings; and, Application integration.<sup>35</sup>

This suggests that – at least in theory – the ‘technology’ barrier is not insurmountable. It is likely that appropriate use of technology is at least part of the means of delivering the ‘efficiency’ benefit identified in the thematic framework in Figure 1.

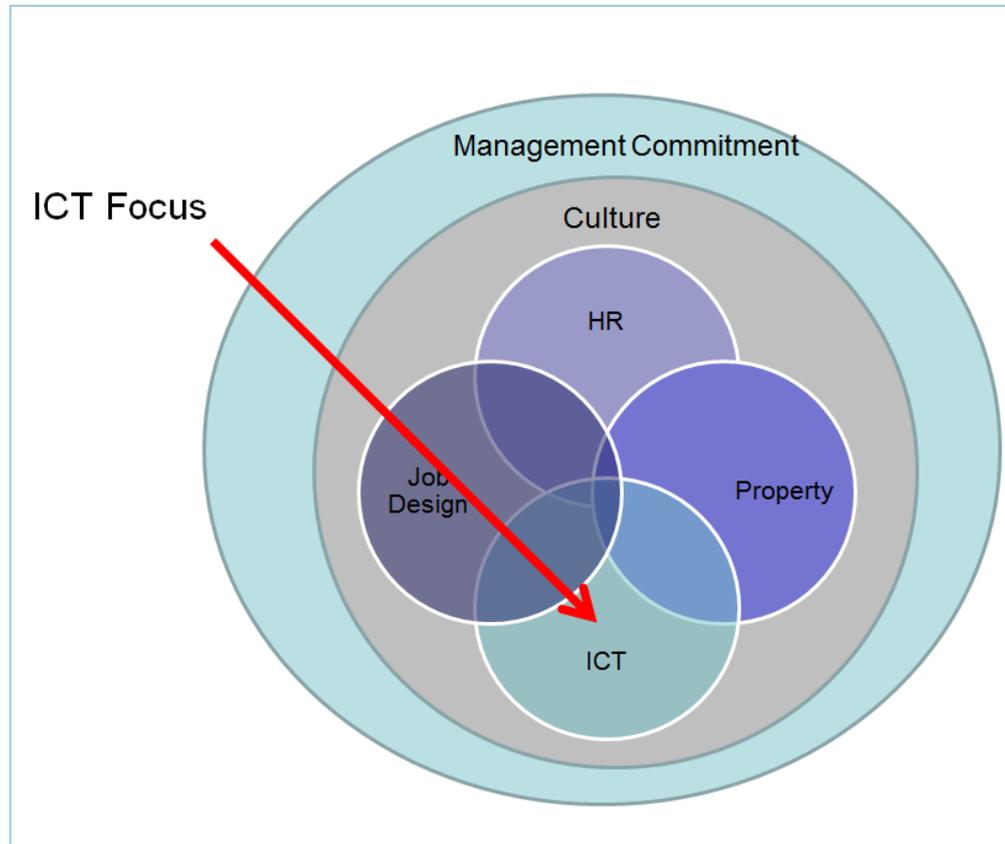
<sup>33</sup> US Office of Personnel Management (2012) ‘2012 Status of Telework in the Federal Government - Report to the Congress’ available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 38)

<sup>34</sup> US Office of Personnel Management (2012) ‘2012 Status of Telework in the Federal Government - Report to the Congress’ available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 38)

<sup>35</sup> DFP presentation to CFP, 13 February 2013

Figure 8 from the DFP briefing also suggests that the Department is conscious of the 'management resistance' barrier, by acknowledging that 'management commitment' overlays (or perhaps underpins) a number of other factors, such as culture or ICT.

**Figure 8: representation of elements of 'agile working'**<sup>36</sup>



**Issue for consideration: CFP may wish to explore with witnesses how the barriers identified in the OPM survey might be overcome.**

### Establishing baselines and measuring impact

The OPM report highlights the importance of agencies collecting and reporting reliable data; data is required for effective programme development as this relies on:

*“continuous evaluation and feedback... agency practices and data collection methods vary too widely to provide reliable data.”<sup>37</sup>*

An example is given by the OPM in a section of the report about 'avoided real estate costs'. The report states:

*Several agencies described eliminating some office space as a result of telework, but few were able to translate this into dollar figures or square-*

<sup>36</sup> DFP presentation to CFP, 13 February 2013

<sup>37</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 62)

*footage of space saved. Several had established working groups to study real estate cost measurement.*<sup>38</sup>

Further examples of inadequate data highlighted by the OPM included data for reduced energy costs and reduced commuter miles. In other aspects, however, more robust data was available – such as in relation to employee retention – but measurement was not systematic. The report states:

*Agencies reported using exit surveys, internal satisfaction surveys, internal focus groups, the Federal Employee Viewpoint Survey, and anecdotal evidence to measure retention.*<sup>39</sup>

That federal agencies were not able to provide figures for costs or space saved suggests that baselines had not been properly established prior to implementation of the requirements of the Act. This is a familiar issue for CFP, because it echoes issues highlighted by the Northern Ireland Audit Office (NIAO) in its report *Review of the Efficiency Delivery Programme* in Northern Ireland.

For example, the NIAO found that:

*It is important that all planned efficiency savings are capable of being measured. Although there is extensive guidance on best practice in measuring efficiency savings this has not been followed in most of the projects the Audit Office examined.*

*14 of the 42 projects reviewed did not have the **basic financial and performance information** necessary for the Audit Office to make an informed judgment on whether efficiency savings had been achieved.*<sup>40</sup> [emphasis added]

None of the benefits outlined in the thematic framework in Figure 1 are capable of being measured unless adequate baseline data are available, and if anticipated benefits are not tracked. In the absence of data, the public sector in Northern Ireland would be unable to judge whether any flexible working policy had been effective or efficient. **In other words, the mistakes of the past might be repeated.**

**Issue for consideration: CFP may wish to explore the issues of baseline information and benefits realisation with witnesses.**

<sup>38</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 59)

<sup>39</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 57)

<sup>40</sup> [http://www.niauditoffice.gov.uk/index/publications/report\\_archive\\_home/2012/review\\_of\\_the\\_efficiency\\_delivery\\_programme.htm](http://www.niauditoffice.gov.uk/index/publications/report_archive_home/2012/review_of_the_efficiency_delivery_programme.htm) (accessed 11 March 2013)

### Effectiveness of flexible working programmes

Building on the issues about data collection to inform understanding about the impact of the Act, the OPM report also makes what appears to be an important observation at the outset:

*Some outcomes can be expected to occur rather quickly with the implementation of a program (e.g., telework participation). Other outcomes, particularly broad community changes (e.g., reduced traffic congestion and pollution), are only recognized once a critical mass in participation and telework frequency has been achieved. Early adopters of innovative interventions like telework usually participate in numbers too small to achieve large-scale community or environmental outcomes.<sup>41</sup>*

This observation has implications for the benefits set out in the thematic framework in Figure 1. Whilst some benefits may be realised fairly quickly, others (such as those relating to sustainability, for example) may take considerably longer.

In turn, this suggests that if there is to be a roll-out of flexible working in the Northern Ireland public sector, a realistic assessment of benefits and their realisation is likely to be essential. The OPM's 'logic model' (which underpins the policy behind the Act) is provided for reference as Appendix 1.

**Issue for consideration: CFP may wish to explore the timeframes for the realisation of potential benefits from flexible working with witnesses.**

### Performance management

The thematic framework in Figure 1 identifies 'improved personal performance' under the heading of 'productivity'. The OPM report notes that:

*Increasingly, the success of telework programs is recognized as being highly dependent upon appropriate performance management practices.<sup>42</sup>*

Performance management was also highlighted as an issue in Table 1 above.

**Issues for consideration: CFP may wish to explore with witnesses the forms of performance management that underpin effective flexible working practices. Secondly, CFP may wish to engage with DFP on the appropriateness of the current NICS performance management system for supporting flexible working.**

The OPM's own identification of lessons learned is presented in the next sub-section.

<sup>41</sup>US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 18)

<sup>42</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 46)

### 3.2.5. Lessons learned by the OPM<sup>43</sup>

The OPM report presents the following observations based upon findings from focus groups in relation to the implementation of the Act – see Box 2.

#### Box 2: OPM's lessons learned

##### Gain Leadership Buy-In

Several participants agreed that gaining buy-in from leadership members at all levels is key to a successful telework program. Comments indicate that gaining leadership support can truly be the catalyst for effective implementation, and buy-in occurs when managers try it for themselves.

##### Involve Critical Functions

The importance of partnering early and often with union representatives and IT experts within agencies was mentioned as particularly instrumental to the success of telework programs. Involvement of all critical parties and functions will limit the number of unexpected surprises and is important for ensuring the effective collaborations necessary for long-term success.

##### Institute Reliable Data Collection

Participants also commented that instituting a reliable data collection or tracking procedure is critical to demonstrating telework success and as a tool for long-range planning and managing for program effectiveness. One participant commented, "As a whole, we need to have a better system for tracking telework. Providing data for the OPM Data Call is difficult for many who have to manually track telework participation. Government-wide, we need to make it easier to collect and report data." Other participants noted that online application systems need to be comprehensive before going live to ensure seamless application. This is another area where partnership with IT and security experts is crucial.

##### Standardize Eligibility and Participation Criteria

Participants described the importance of standardizing eligibility decisions and notification. Some agencies notify their employees via mass email and/or during new employee orientation, while others prefer managers to send individual emails. Participants agreed that part of increasing trust in the telework process is to make sure that communications and notifications are handled fairly and according to established standards across an agency.

<sup>43</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 63-64)

Measure Performance Accurately

Agencies reported facing challenges of performance management in advancing their telework program. Participants stressed the need for performance management systems to measure the outcome of completed tasks and goals. They agreed "managers want to know exactly what teleworkers are working on when out of the office". It is critical for performance management systems to directly link to agency-wide performance plans.

Be Patient

Lastly, several participants emphasized the importance of remaining aware that change takes time and progress with telework requires patience. One participant suggested that one way to address this is to make sure that telework goals and objectives are clear and shared across an agency and that information about progress toward those goals is also shared on an ongoing basis.

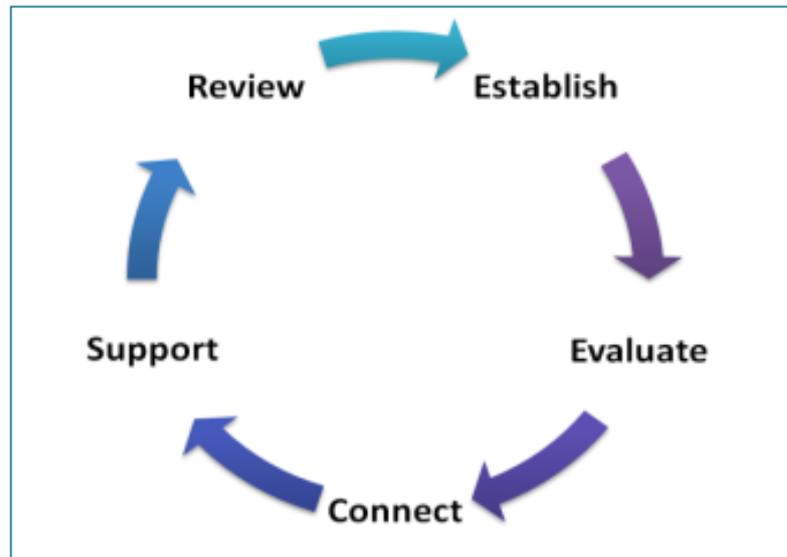
## 4. Concluding remarks

The research presented in this paper demonstrates again the possibilities that flexible working has to offer both employees and employers.

The US case study also raises some cautionary notes about how to go about a state-wide programme. A number of the lessons learned echo the findings of RaISe paper 95/12, such as the need for leadership buy in; others, such as the need for accurate measurement and data collection, echo the findings of reports by the NIAO in Northern Ireland.

This paper has raised a number of issues for CFP's consideration, and has made a number of recommendations for data or evidence that would usefully support the current inquiry.

## Appendix 1: the OPM federal telework logic model<sup>44</sup>



- **Establish:** Goals for advancing telework are outlined in the Act and established by individual agencies. W/L/W supports efforts to establish telework goals through workshops, feedback on research results and individual consultations.
- **Evaluate:** W/L/W conducts ongoing data collection through various research programs to assess agency telework program implementation, processes and outcomes, and assist agencies in similar data collection. Data are collected through custom instruments (e.g., periodic Data Call, focus groups, survey of Federal employees), and other existing sources (e.g., agency surveys, FEVS, payroll and Human Resources data).
- **Connect:** We share results and useful lessons learned through evaluation with the Federal telework community, including agencies and other stakeholders.
- **Support:** W/L/W helps agencies develop and implement programs through training (e.g., in telework, action planning, evaluation) and policy guidance. We provide consultative services as needed for building robust individual agency programs (e.g., program implementation, policy analysis).
- **Review:** We analyze research findings, evaluation findings and lessons learned on a continuing basis to assess Governmentwide progress in advancing telework.

<sup>44</sup> US Office of Personnel Management (2012) '2012 Status of Telework in the Federal Government - Report to the Congress' available online at: [http://www.telework.gov/Reports\\_and\\_Studies/Annual\\_Reports/2012teleworkreport.pdf](http://www.telework.gov/Reports_and_Studies/Annual_Reports/2012teleworkreport.pdf) (accessed 4 March 2013) (see page 18)

