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**Teamworking under Lean in UK Public Services: Lean Teams and Team Targets in HM Revenue & Customs (HMRC)**

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Manuscripts

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3 **TEAMWORKING UNDER LEAN IN UK PUBLIC SERVICES:**  
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5 **LEAN TEAMS AND TEAM TARGETS IN**  
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7 **HER MAJESTY'S REVENUE & CUSTOMS (HMRC)**  
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11 **Introduction**

12 The authors of *The Machine that Changed the World* were in no doubt about the  
13 importance of team working in lean production: 'in the end,' they say (Womack *et al.*,  
14 1990, p. 99), 'it is the dynamic work team that emerges as the heart of the lean  
15 factory'. It is with this bold statement in mind that we seek to explore and develop  
16 our conceptual and practical understanding of how teamworking operates under Lean.  
17 We examine these issues in the context of a high-profile case of Lean implementation  
18 in the UK public sector, the Pacesetter programme of the UK's tax assessment and  
19 collection service, Her Majesty's Revenue & Customs (HMRC). We find that  
20 although the teams themselves were ostensibly set up on a lean basis, they were  
21 largely unable to operate as such as a result of the pressures they faced to meet their  
22 work targets. This in turn suggests particular ways in which we might better  
23 understand how Lean interacts with the context or environment into which it is  
24 introduced.  
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43 The paper thus addresses four main questions:

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45 1. Given the stated importance of teamworking in lean production, what would we  
46 expect teams to look like as part of the contemporary application of Lean  
47 thinking?  
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50 2. What can we say about lean teams in practice on the basis of an in-depth study of  
51 the large-scale, high-profile implementation of Lean in HMRC? As part of this,  
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3 how do our findings stand in relation to the largely negative portrayal of Lean in  
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5 HMRC put forward by Carter et al. (2011a, 2011b, 2013a, 2013b)?

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3. In light of our prior expectations, how we can explain the form that teamworking takes in practice?
  4. What are the implications of our analysis for our understanding of Lean and the way it is introduced and operated in organizations?

In order to address these questions, the remainder of the paper divides into four main parts. Following this introduction, our review of the secondary literature focuses on the first of our questions. We look at the form we might expect teamworking to take under Lean, setting this in the context of the current widespread application of Lean in the UK. Second, we describe the methods and approach employed in the empirical research upon which the paper draws. In the paper's next section, the findings, we turn to the question of what teams and teamworking look like in practice under Lean. In our discussion and conclusion section, we address the third and fourth of our questions, trying to explain the form that Lean teamworking takes in practice, and using this in an attempt to develop our wider understanding of Lean.

### **Lean, lean teams and teamworking**

#### ***Principles of lean production***

If, as Womack et al. (1990, p. 99) claim, the work team is at the 'heart' of lean production, then we need first of all to understand what that team might look like.

The development of the basic principles of lean production has been widely discussed (see Ohno 1988; Womack et al. 1990; Womack and Jones 2003; Hines et al. 2004; Holweg 2007) and only a brief recap is necessary here. The term 'lean' arose from the US-based International Motor Vehicle Program, a project which resulted in the

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2  
3 publication of *The Machine that Changed the World* (Womack et al., 1990). Lean  
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5 production, it was claimed, 'uses less of everything compared with mass production'  
6  
7 (1990, p. 13). Although the term was new, the principles upon which it was based  
8  
9 originated in the practices of the Toyota Motor Corporation in the 1950s, and if lean  
10  
11 production has any real meaning as a concept, then this resides in the idea of  
12  
13 just-in-time production (JIT). In a manufacturing context this means that rather than  
14  
15 defining an optimum level of stock or work-in-progress, the objective is to reduce that  
16  
17 level to zero (Oliver, 1991). At each stage of the manufacturing process, in other  
18  
19 words, production takes place 'just in time' for it to be used at the next stage of the  
20  
21 process. Production takes place ultimately in response to customer demand from  
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23 outside the factory: it is 'pulled' from outside rather than being 'pushed' from within.  
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28 While these might appear to be rather technical considerations of concern only  
29  
30 to operations managers, the implications for the management of labour are, at least in  
31  
32 principle, quite profound. At the level of the individual worker, the application of  
33  
34 the JIT principle implies that there are times when it best for them to stop working  
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36 and to be what in more conventional terms would be described as 'idle'. As is made  
37  
38 clear by the creator of the JIT system in Toyota, Taiichi Ohno (1988, pp. 59-60), all  
39  
40 that employees achieve by working beyond the immediate requirements of customer  
41  
42 demand is the creation of unnecessary cost. But how would a work *team* operate  
43  
44 under these circumstances? Ohno himself is rather cryptic on this point, relying on a  
45  
46 series of sports metaphors (1988, pp. 23-25). Other authors have sought to be more  
47  
48 concrete in their analysis of lean teams. In the next section we see how such teams  
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50 have been characterised by the nature of the autonomy they are able to exercise.  
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### 55 56 *Autonomy in Lean Teams*

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3 Any consideration of teamworking in a lean context has to take account of the fact  
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5 that there appears to be an inherent inconsistency between the two things. A lean  
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7 plant, claimed Womack et al. (1990, p. 99), 'transfers the maximum number of tasks  
8  
9 and responsibilities to those workers actually adding value to the car on the line'.  
10  
11 From an employee's point of view, this sounds very positive. Moreover, it seems to  
12  
13 fit with the notion that the work team should be able to exercise a degree of  
14  
15 discretion. This is the notion that underpins the idea of the team as an autonomous  
16  
17 work group (AWG) in the tradition of sociotechnical systems theory (see Benders and  
18  
19 Van Hootegem, 1999). The difficulty, however, is reconciling this autonomy with  
20  
21 the operational principles of just-in-time. With the flow of production tightly  
22  
23 controlled in response to customer demand, the degree of discretion that the team is  
24  
25 able to exercise is likely to be severely circumscribed (Klein, 1989). This apparent  
26  
27 inconsistency is what Benders and Van Hootegem (1999) call the 'issue of  
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29 autonomy'.  
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34 The nature of lean teams in practice has been investigated by a number of  
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36 authors. Benders and Van Hootegem (2000), for example, drawing on such classic  
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38 studies as Dore's (1973), see one of the key characteristics of the Japanese model as  
39  
40 being the detailed description and rigorous regulation of work through Standard  
41  
42 Operating Procedures (SOPs). This is a picture backed up by more recent research.  
43  
44 Delbridge et al. (2000) examined managerial perceptions of employee responsibilities  
45  
46 in lean plants in the automotive components manufacturing sector. Their main  
47  
48 findings were that the role of production workers was quite limited in areas such as  
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50 maintenance and production management.  
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54 First of all, we might question the often implicit assumption that autonomy is  
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56 something that is necessarily welcomed by employees. Vidal's (2007) work on the  
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3 introduction of 'post-Fordist' production systems in the US is critical of what he  
4 describes as 'the empowerment theory of job satisfaction'. His own research in a  
5 variety of settings reveals many workers with little desire for empowerment,  
6 preferring instead the predictability of more Fordist work arrangements. Job  
7 satisfaction in these circumstances is related more to a 'fair day's work for a fair day's  
8 pay; while empowerment or autonomy is associated more with higher levels of stress.

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16 In any case, rather than seeing lean teams as a diluted version of the  
17 sociotechnically-inspired AWG, we can look at them as operating a different kind of  
18 autonomy. In the case of Lean we can say that an indirect form of autonomy exists,  
19 one that is effective through the responsibility that employees have for shaping the  
20 SOPs. Thus on a day-to-day basis, the team might have to work in a highly  
21 prescribed way, following the SOPs that have been established. The question,  
22 however, is what should these procedures be and, in some ways more importantly,  
23 who should decide this? In the Toyota Production System, a key part of the worker's  
24 role is to contribute in this way to the continuous improvement of the production  
25 process. It is these ideas that have given rise to what has been described as  
26 'democratic Taylorism' (Adler and Cole, 1993).

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41 At the same time, however, we need to consider just how important these  
42 activities are for the workers involved. Schouteten and Benders (2004), for example,  
43 in their study of the Netherlands-based plant of a Taiwanese bicycle manufacturer,  
44 found that workers' involvement in continuous improvement activities accounted for  
45 only a small proportion of their working time. Their study resonates with the  
46 'contradiction' identified by Conti and Warner (1993) in their examination of the  
47 nature of work in a number of Japanese manufacturing plants. Conti and Warner  
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3 (1993: 39) described how ‘employees [work] four hours a month in a very non-  
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5 Taylorist manner to make their work for the rest of the month even more Taylor-like.’  
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8 Related to this is the question of the degree to which the nature of work is  
9  
10 shaped or constrained by the system of production. Schouteten and Benders (2004)  
11  
12 draw attention to the short-cycle, repetitive nature of the bicycle-manufacturing  
13  
14 process. They acknowledged that workers were not under excessive strain, but  
15  
16 concluded that this was due to the undemanding nature of the job rather than the  
17  
18 degree of latitude or autonomy that the workers were able to exercise. Other work by  
19  
20 Benders (eg Benders 1995) has emphasised the importance of what he calls ‘output  
21  
22 characteristics’—most especially, the variety of products being produced. As is made  
23  
24 clear in Hasle et al.’s (2012) recent review, it can in fact be quite difficult to establish  
25  
26 any direct link between Lean and the working environment. The effects of Lean  
27  
28 *per se* can be difficult to isolate from the effects of the nature of the outputs being  
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30 produced.  
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### 36 ***Second-wave Lean in the UK***

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38 These debates around teams and teamworking were very much connected with the  
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40 emergence of lean concepts in the late-1980s and 1990s. In the last ten years or so we  
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42 have seen what we might describe as ‘second-wave’ Lean, the chief concern of its  
43  
44 many advocates being to establish that lean concepts can be applied in any  
45  
46 organizational setting. The essence of this new version of Lean has been expressed  
47  
48 in the now-familiar ‘five principles’ of ‘lean thinking’ put forward by Womack and  
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50 Jones (2003). For our purposes, what is most significant about these principles is  
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52 that, just as with the original ideas of the ideas of lean production, they contain very  
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3 little in the way of direct implication about how Lean will or should be experienced  
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5 by employees.  
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7 This, however, has done little to deter the upsurge of interest in lean on the  
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9 part of both practitioners and researchers. In recent years we have seen the  
10  
11 widespread adoption of the idea of Lean across a range of public services in the UK  
12  
13 (Radnor and Walley, 2008; Radnor, 2010a). In a recent review focusing on the use  
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15 of business process improvement methodologies in the public sector, 51% of  
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17 publications were found to be focused on Lean (Radnor, 2010b).  
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21 Despite the growing importance of Lean, research into its implementation in  
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23 the UK has given rise to a picture in which its impact has, in a number of ways, been  
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25 quite limited. Within a large organization, for example, the implementation might be  
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27 restricted to a small part of its operations. Lodge and Bamford (2008), for example,  
28  
29 looked at the impact of Lean on waiting times in the radiology department of a  
30  
31 hospital. Lean implementations have been limited in depth as well as in scope. In  
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33 Radnor et al.'s (2012) expression, the research shows evidence of a 'tools-based'  
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35 approach—and very often a very limited range of tools at that.  
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39 But while positive outcomes have been reported (eg Silvester et al., 2004;  
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41 Radnor and Boaden, 2008), they do need to be looked at with great caution. Rather  
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43 than representing the transformation of thinking and systems in an organization, the  
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45 results are quite consistent with the kind of limited, low-level application of Lean that  
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47 we have identified here. Radnor et al. (2012) have argued that the current focus of  
48  
49 Lean has been around immediate and quantifiable outcomes such efficiency and  
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51 cost-cutting, rather than more fundamental objectives such as effectiveness and  
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53 systems development. It is difficult to say that the results we observe actually  
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3 represent an enhancement of ‘value’ in the sense put forward by advocates of Lean  
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5 (Young and McClean, 2008).  
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### 8 9 10 *Teamworking and work restructuring in the UK public sector*

11 Despite the work team supposedly lying at the ‘heart’ of lean production, research  
12 into second-wave Lean has had little to say about the part played by employees. A  
13 full understanding of Lean would seem to require that this omission be addressed.  
14 We do have a number of attempts to place the employees centre-stage, and one of  
15 these, the work of Carter et al. (2011a, 2011b, 2013a, 2013b), we look at it in more  
16 detail below. We should also mention Waring and Bishop’s (2010) ethnographic  
17 study, which emphasises the degree to which employees’ compliance with lean  
18 practices was often only of a symbolic or ritualistic nature.  
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29 But our focus on lean teams also allows us to make use of other research into  
30 the more general restructuring of work in the UK public sector. Whether lean teams  
31 or not, a large part of this restructuring has taken place on the basis of team-based  
32 forms of work organization. Thus in the area of health services, for example, we have  
33 seen the development of teams in areas such as surgical operations (Finn, 2008),  
34 genetic services (Finn et al., 2010) and community mental health services (Onyett,  
35 2011). Other work has pointed to the link between teamworking and various  
36 measures of organizational performance (West et al., 2002) There has been some  
37 questioning of what is understood by ‘team’ or ‘teamworking’ in these circumstances,  
38 and this has been accompanied by calls for much greater clarity in definition (West  
39 and Lyubovnikova, 2013). West (2012: 14-15) has argued that around 50% of staff in  
40 the UK health service are working in ‘pseudo teams’: these are the staff who respond  
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3 in the affirmative when asked if they work in a team, but in the negative when asked  
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5 if their teams possess certain properties by which a team might be defined.  
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8 The same issue also arises if we focus on research undertaken into  
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10 teamworking in our case study organization, HMRC, prior to its introduction of Lean.  
11  
12 Procter and Currie (2004; see also Currie and Procter, 2003) examined the  
13  
14 development of teamworking in the Inland Revenue, HMRC's main predecessor  
15  
16 organization. Like West and others in the health service, Procter and Currie found a  
17  
18 form of teamworking in which autonomy played little part. Rather than dismissing  
19  
20 this as 'pseudo-teamworking', however, they focussed on how teamworking could be  
21  
22 understood through placing greater emphasis on the idea of interdependence between  
23  
24 team members. In the form of what they described as 'target-based teamworking',  
25  
26 they argued that teamworking was effective through the collective responsibility that  
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28 team members felt for meeting the team's work targets.  
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32 In our study of Lean in HMRC, we also need to consider work on the same  
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34 subject undertaken by Carter et al. (2011a, 2011b, 2013a, 2013b). Their findings are  
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36 based on interviews and a questionnaire survey undertaken at six processing sites. In  
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38 contrast to a number of the other studies to which we have already referred, Lean is  
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40 portrayed as having a fundamental effect on the work of the organization. This effect,  
41  
42 moreover, is seen as unequivocally a negative one. Underpinning this conclusion is a  
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44 labour process perspective which sees Lean in HMRC as the application in a clerical  
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46 public-sector setting of an almost unadulterated form of Taylorism (Carter et al.,  
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48 2011b). Lean, argue Carter et al., degrades work; it removes from employees any  
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50 degree of discretion they might previously have been able to exercise (Carter et al.,  
51  
52 2011a, 2011b); it subjects employees to an intensified system of performance  
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54 monitoring (Carter et al. 2011b); and it undermines the public service ethos which had  
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3 allowed employees to see value in their work (Carter et al., 2013a). According to  
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5 Carter et al.'s (2011b: 91 & 92 ) survey, for example, 91% of respondents reported a  
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7 reduction of skills and 91% a decrease in control over work. It is claimed, moreover,  
8  
9 that Lean is not even effective on its own, limited terms. The increased levels of  
10  
11 efficiency claimed by HMRC, argue Carter et al. (2013a), have been attained only  
12  
13 through significant reductions in the *quality* of work performed; and targets have been  
14  
15 met only by ignoring some areas of work altogether. At the same time, the survey  
16  
17 results suggest that occupational ill-health in HMRC has increased significantly as a  
18  
19 result of the introduction of Lean (Carter et al., 2013b).  
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23 As we shall see, our own findings do not tally exactly with those of Carter  
24  
25 et al. Our findings suggest a rather wider range of experience, both across individual  
26  
27 employees and across different parts of the organization. How the differences in  
28  
29 findings might be explained is an issue we return to in the discussion section of the  
30  
31 present paper. As well as differences in coverage and in approach, we shall see that it  
32  
33 can be argued that Carter et al.'s approach does not take adequately into account  
34  
35 either what Lean in principle implies for work, especially for teamwork, or how Lean  
36  
37 in practice in HMRC was shaped by pre-existing work systems--in particular, the role  
38  
39 of performance measures such as target-setting.  
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43 We can note at this point that Carter et al.'s survey results are not entirely  
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45 consistent either with those of the Civil Service People Survey (2011). While the  
46  
47 latter survey is cited by Carter et al. (2013a: 96) to show that HMRC has the 'most  
48  
49 unhappy' workforce of any UK civil service department, a closer look at the results  
50  
51 reveals a more variegated picture. The HMRC's 'employee engagement index' is the  
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53 lowest of any department, but this seems to be related to dissatisfaction with reward  
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55 and organizational leadership, where positive response rates were only 24% and 17%  
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3 respectively. In areas such as ‘resources and workload’, which includes items on  
4 skills and workload, and ‘my team’, which relates to intra-team relations and the  
5 opportunity to improve ways of working, the positive response rates were 62% and  
6 74% respectively (although still below national benchmarks and averages for the civil  
7 service). While these results are not directly comparable with those of Carter et al.’s  
8 survey, they do at least imply that the situation is not so uniformly bleak as Carter et  
9 al. suggest.  
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### 21 **Research Site and Research Methods**

#### 22 *Her Majesty’s Revenue and Customs (HMRC) and Pacesetter*

23 Her Majesty’s Revenue and Customs (HMRC) was established in 2005 as the unified  
24 tax assessment and collection department of the UK government. It was formed by  
25 the merger between the Inland Revenue, the government department previously  
26 responsible for the administration of direct taxation, and HM Customs and Excise,  
27 previously responsible for indirect tax. HMRC is also responsible for the collection  
28 of National Insurance contributions and for the payment and administration of tax  
29 credits, Child Benefit and Child Trust Fund.  
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41 At the time of the research in 2007, there were four types of business units in  
42 HMRC: operational units, product and process groups, customer units and corporate  
43 functions. The operational units employed over 70,000 staff and focused on  
44 delivering services such as processing, local compliance and customer contact. This  
45 research focused on HMRC Processing, which in April 2006 began rolling out the  
46 change programme known as ‘Pacesetter’. Led by the Director of Personal Tax, the  
47 four main elements of Pacesetter were: Leadership Development, Operational  
48 Management, Lean, and Workforce Strategy and Capacity Management. The  
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3 objectives of the programme were to improve efficiency and customer service by  
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5 delivering a 30% improvement in productivity, to reduce backlogs and  
6  
7 inconsistencies, and to ensure that HMRC Processing became the UK Government's  
8  
9 Processor of choice (Radnor, 2010a; Radnor and Bucci, 2007).

10  
11 Within the Pacesetter programme, Lean was based on a three-pronged  
12  
13 approach (for a full description, see Radnor and Bucci, 2007):

- 14  
15 • Redesigning service delivery processes so as to eliminate waste and variability,  
16  
17 maximise flexibility, improve productivity and quality, and reduce lead-time.
- 18  
19 • Changing current management processes to create appropriate management  
20  
21 infrastructure to sustain improvements.
- 22  
23 • Changing mind-sets and behaviours of leaders and front-line staff so as to support  
24  
25 the new systems and deliver continuous improvement.  
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29  
30 Lean was implemented in all HMRC Processing's strategic sites. These were  
31  
32 the larger sites which were scheduled to absorb the work of the smaller sites over a  
33  
34 period of time. In order to implement Lean, there were a number of 'Local Lean  
35  
36 Experts', based in local tax offices, and 'Central Lean Experts', who rotated over  
37  
38 three-month periods between sites. The internal staff had been supported by external  
39  
40 consultants since Lean was originally trialled in 2004. Consultants involved in the  
41  
42 Lean implementation included McKinsey Consultants, PA Consulting and, since  
43  
44 2006, the Unipart Group (see Radnor, 2010a).

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46  
47 The creation of lean teams took place through the implementation of new  
48  
49 processes and structures. The implementation of Lean within each of the case study  
50  
51 sites was carried out through a diagnostic process led by the central and local  
52  
53 Pacesetter team. The diagnostic stage consisted of considering the current state of the  
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55 processes, looking at the set-up of the teams, considering the demand at the site, and  
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3 then designing the future-state process on the basis of the targets to be achieved.

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5 Once the diagnostic stage had been completed, pilot teams were established to trial  
6  
7 the future-state process.  
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### 10 11 *Research methods*

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13 In order to undertake the research, ten HMRC strategic sites were identified by the  
14  
15 Pacesetter Programme Office. The ten sites included five large processing offices  
16  
17 (LPO), two distributed processing offices (DPOs), and three national processing  
18  
19 centres. As Table 1 makes clear, the LPOs and DPOs each covered tax services at a  
20  
21 local level, while the national processing centres each operated on a nationwide basis  
22  
23 in respect of smaller and more specialist areas such as National Insurance.  
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26  
27 Documentation collected from the sites and the Programme Offices included  
28  
29 Pacesetter Programme documents and the Lean Academy handbook. Sites also  
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31 provided organisation charts, current and future-state maps for the processes  
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33 concerned, and information on performance collated over a period of time.  
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42 **Table 1 around here**  
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47 The main vehicle for data collection was a series of site visits undertaken  
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49 between January and May 2007. Each visit, with one exception, extended over a  
50  
51 two-day period. Across the sites visited, semi-structured interviews or focus groups  
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53 were undertaken with a total of 296 personnel. The interview protocol was tailored to  
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55 the different grades of staff. The personnel interviewed at every site included Senior  
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3 Managers (SMs), Senior Officers (SOs), Higher Officers (HOs), Officers (Os), and  
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5 team members consisting of Administrative Officers (AOs) and Administrative  
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7 Assistants (AAs). The actual numbers and profiles of those interviewed varied  
8  
9 according to the size and nature of the sites (see Table 1). In terms of relevance to  
10  
11 this paper, the focus of the data analysis was on the staff who were placed or had the  
12  
13 potential to be placed in lean teams. These were all the ‘front-line staff’ identified in  
14  
15 Table 1 and consisted of Os as team leaders and, AOs and AAs as team members.  
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17 They were interviewed in focus groups, primarily as groups of Os and then as mixed  
18  
19 groups of AOs and AAs.  
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23 In order to understand the implementation of Lean, the interviews and focus  
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25 groups were structured around a number of basic issues. These included what staff  
26  
27 understood both by Pacesetter and by Lean; what staff saw as the qualitative and  
28  
29 quantitative impact of Lean implementation; what problems had arisen and also what  
30  
31 had worked well during implementation; and, most important for our purposes here,  
32  
33 what had changed as a result of the implementation in terms of individual roles, the  
34  
35 processes, the interaction with the customer and the working of individual teams.  
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37 Groups and individuals were asked how they had experienced Lean in terms of their  
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39 own job, their team’s work and their understanding of the customer. They were asked  
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41 also to describe teamworking on their own site; whether there were differences  
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43 between the Lean and non-Lean processes; how the performance of teams was  
44  
45 measured; and whether, and with what effect, this had changed for the Lean  
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47 processes.  
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52 Notes were taken of all interviews, and the majority were recorded on a digital  
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54 recorder and then fully transcribed. At the end of each site visit, a site report was  
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56 prepared by the visiting researcher. The site report summarised the main responses to  
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3 the questions asked during the interviews and focus groups, and highlighted the site-  
4  
5 specific reflective notes of the visiting researcher. These reports were amalgamated at  
6  
7 the end of the evaluation and common issues were drawn together and coded. The  
8  
9 data was used to develop a final evaluation report which was validated by senior  
10  
11 HMRC personnel (Radnor and Bucci, 2007). This paper makes reference to this  
12  
13 report but draws primarily on the data collected through the course of the research.  
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### 16 17 18 **Findings**

19  
20 Our attempt to understand the operation of lean teams in HMRC gave rise to an  
21  
22 analysis of the data structured around three key areas. The first of these is the nature  
23  
24 of the work experienced by employees as individual team members; the second, the  
25  
26 degree to which employees' experience of autonomy corresponded to that suggested  
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28 by the model of lean teams; and third, in partial explanation of the experience of  
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30 autonomy, the role played by the continuing emphasis on team targets. We look at  
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32 each of these areas in turn.  
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#### 38 39 *The nature of work in lean teams*

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41 Turning, then, to the nature of work in HMRC's lean teams, we can say first of all that  
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43 there was evidence of employees feeling that work had become fragmented and  
44  
45 degraded. According to representatives of the main trade union, Lean had led to a  
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47 situation in which there was 'deskilling, little challenge, excess monitoring and where  
48  
49 poor performers could not hide.' One employee referred to feeling like being a 'cog  
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51 in a wheel'. In all the case study sites, employees reported that they were each  
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53 responsible for only part of a whole process, rather than seeing a case through from  
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3 start to finish, as was the situation 'pre lean'. As one front-line employee, an AO,  
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5 expressed it:  
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9 My job has changed. I did have a lot of variety to do, as in post and dealing  
10 with phone calls. Now I ... get a return ... and do only one particular part of  
11 that return. That might be inputting the information or coding the record  
12 correctly and then passing it on to the next person. Because I am now doing  
13 only one part, I've lost a lot of knowledge that I had gained before.  
14

15  
16 A number of front-line staff (both AOs and AAs) pointed to the negative  
17  
18 consequences of this. One said:  
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21  
22 Like everyone else I feel I've been deskilled. We used to do different work, a  
23 good variety of post, but on Lean we do only six different types and follow the  
24 instructions. If you don't follow the instructions you are marked as wrong. It  
25 gets monotonous and [the] more you get bored, the more you make mistakes.  
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29 But the picture was by no means a universally negative one. Even the  
30  
31 employee who referred to being a 'cog in a wheel' was prepared to qualify this  
32  
33 description. There was an acknowledgment on the part of front-line staff that they did  
34  
35 work in an environment in which some degree of interdependence was necessary and  
36  
37 even welcome. Some AOs and AAs felt that the new lean processes gave them a  
38  
39 greater understanding of how what they did fitted into the process as a whole. Across  
40  
41 both the taxation offices and the national processing centres, some AO and AA staff  
42  
43 welcomed the changes to the way in which work was organized, feeling that there was  
44  
45 more structure to their working day. Where there once had been different practices  
46  
47 across and within sites, there was now more of a structure to enable all sites to  
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49 undertake the work in the same way. As one expressed it:  
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54 For me, it's simplified the work. I don't think about what cases I have to do.  
55 My day is mapped out for me and it's structured. I can concentrate on the  
56 process I am assigned to do at a set time.  
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3 Another officer said:  
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6 [Lean has] given me a clearly defined structure and its enables me to go out  
7 and look at things that would otherwise have been hidden away because it's  
8 more visible.  
9

10  
11 In addition, there was some feeling that work organized in this way offered a  
12 better service to the taxpayer. Thus while individual workers might be restricted to a  
13 smaller range of tasks, the expertise each of them could develop could improve the  
14 quality of the work of the team as a whole. Robust performance data proved difficult  
15 to obtain at a team level, but there was a sense that the completion time and the  
16 number of queries related to the taxpayer had both been reduced (Radnor, 2011). In  
17 the words of one HO:  
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28 From a customer point of view, the one thing that I've found from the start  
29 when we were doing self-assessment returns is that Lean has produced better  
30 quality work, which has got to be good for the man outside. It has a benefit to  
31 the customer because it is done, in this particular site more correctly than it  
32 was pre-Lean.  
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36 Thus while we can identify some reduction in the variety of work and in the  
37 discretion that individual employees were able to exercise, Lean can also be seen to  
38 be associated with a more structured approach to work, which provided a clarity and  
39 focus to the work that some employees appreciated. and a heightened sense of  
40 common purpose. As we highlighted in the introduction to the paper, Lean, in  
41 principle at least, could also involve a greater degree of a particular kind of autonomy.  
42 It is to issues of autonomy that we now turn.  
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54 ***Worker autonomy in lean teams***  
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3 Issues of autonomy in lean teams are centred around the organization's standard  
4 operating processes or SOPs. In the case of HMRC, standard processes were  
5 developed and managed by a senior manager and their team at one designated site.  
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7 In rolling these out to other sites, any major deviation from the standard process had  
8 to be considered by this so-called 'process owner'. Involvement in Lean  
9 implementation within each site was confined largely to senior management. Their  
10 role was to agree site performance targets (for such things as quality, productivity and  
11 lead time), be involved in the on-site Pacesetter launch meetings, maintain contact  
12 between the Pacesetter team, trade union representatives and staff, and reassure staff  
13 about the impact of the introduction of new processes and operating procedures. Even  
14 middle-level managers only became involved in implementation when Pacesetter was  
15 being implemented in their own process areas.  
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30 There was thus considerable evidence that many front-line staff felt that they  
31 had had no real input into how the new processes were implemented. Staff  
32 interviewed in the course of the research often stated that the procedures were not 'fit  
33 for purpose', and that when they had tried to change them (even through the  
34 designated 'process owners'), they had met with little success. Staff in one LPO, for  
35 example, came up with innovations around the layout of their performance board, the  
36 introduction of SMART targets, and a productivity calculator. None of these was  
37 implemented, despite the acknowledgement from one manager on the site that  
38 this 'may have softened the blow for staff or made Lean more acceptable to them'.  
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50 The lack of employee involvement in the introduction of the standard  
51 operating procedures might have counted for less if employees had subsequently been  
52 able to play a part in the procedures' ongoing development. Within Pacesetter, the  
53 formal position was that there were opportunities for greater staff involvement  
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3 through structured approaches to improvement and problem-solving. These included  
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5 the '3Cs'--concern, cause, countermeasure—through which staff were encouraged to  
6  
7 highlight and to share with other teams the issues they had faced and the means they  
8  
9 had used to resolved them. There were also intended to be weekly problem-solving  
10  
11 meetings, in which teams of staff and managers got together to look at and resolve  
12  
13 problems using a process called the 'problem-solving O' (based around the plan-do-  
14  
15 check-act framework). The importance of all this was recognised by one AO:

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20 The managers have to actively seek and get staff involved in solving  
21  
22 problems, since they are the ones actually doing the work; I think that is key  
23  
24 with Lean. Staff have a say and can improve process themselves by working  
25  
26 through problems.

27  
28 Such activities were of clear appeal to many of the staff interviewed. Some  
29  
30 front-line staff were sceptical, regarding the new systems as 'overkill', and arguing  
31  
32 that the solutions to many of the problems were in any case well-known. The  
33  
34 balance, however, was very much on the positive side. When asked which elements  
35  
36 of Pacesetter they would most like to retain, many interviewees pointed to the focus  
37  
38 on structured problem-solving.

39  
40 The major problem was that even where effort was put into working out and  
41  
42 proposing improvements, operating procedures remained the prerogative of senior  
43  
44 management or the process owner. Even some of those at Officer and Higher Officer  
45  
46 level--who in general took a positive attitude to the opportunities to address problems-  
47  
48 --expressed frustration at the fact that their proposals were not always put into effect.  
49  
50 There arose the feeling that there was no flexibility to make improvements and that  
51  
52 the new problem-solving procedures were a pointless exercise. This was particularly  
53  
54 apparent in the local or regional tax offices (LPOs and DPOs), where there was a real  
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56 concern that the standard work instructions might even start to be ignored if they did  
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3 not become more user-friendly and if the process for making changes to them was not  
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5 improved:  
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9 The standard work instructions could be lost if they are not sorted out. If  
10 people are told they are empowered to make changes, they will only feel  
11 empowered if the organisation responds to them.  
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13  
14 Although the frustration this represented was typical of the situation in the  
15 local or regional tax offices, a different picture emerged in the national processing  
16 centres. As their name suggests, each of these centres was responsible at a national  
17 level for a particular process or area of work. In contrast to the local or regional  
18 offices, therefore, where basically the same work was being done in each one, each of  
19 the national offices was unique in its responsibilities. This made it much easier for  
20 the senior management in the office to themselves shape and develop the SOPs, rather  
21 than having to conform to an externally-imposed nationwide blueprint.  
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32 These structural factors were thus reflected in some degree of autonomy for  
33 the national offices in the development of their SOPs. During the implementation of  
34 Lean, senior management in these centres had been very firm with the central  
35 Pacesetter programme team with regard to timescales. They had also been very  
36 determined to keep external consultants involved until there was no longer a need for  
37 them. The argument advanced for this was that implementation should be based upon  
38 perceived business needs and not just led by an end-date stipulated in a contract.  
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48 As a consequence of all this, the level of 'buy-in' and understanding amongst  
49 the staff at the national sites was much more apparent and positive than it was at the  
50 local ones. At the central processing sites, staff were able to use the diagnostic  
51 process to develop and implement their own standards and processes. Within these,  
52 more flexibility was built in, with the process teams being able to dedicate time to  
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3 meetings and problem-solving activities. Although it was acknowledged that this  
4  
5 was part of a continuous, long-term process, managers at the site saw a clear  
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7 relationship between problem-solving and engagement in the process:  
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10  
11 Problem-solving is key to staff engagement. If staff are involved  
12 meaningfully in problem-solving and they can actually change what they are  
13 doing, then they feel they have some control over what they do. We need to do  
14 more on this, but we are doing a lot better than we were.  
15

16  
17 Thus while in principle we see an indirect form of autonomy as one of the  
18  
19 main defining characteristics of a lean team, looking at things in these terms in the  
20  
21 context of HMRC reveals a rather messier reality. Front-line staff in the local offices  
22  
23 had little input into either the introduction or the development of their standard  
24  
25 operating procedures. The national processing centres, on the other hand, were able  
26  
27 to use their respective unique positions as a means of retaining some control over how  
28  
29 they did their work, which in turn encouraged a greater degree of involvement on the  
30  
31 part of front-line staff. To gain a fuller understanding of how lean teams operated in  
32  
33 HMRC, we need to look at what else was shaping it. We turn now, therefore, to the  
34  
35 issue of team targets.  
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#### 40 41 42 ***Lean teams and team targets*** 43

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45 In order to fully understand how lean teams operated, we need to consider them in the  
46  
47 context of the target-based system in which they were developed. It must be  
48  
49 conceded that for some in HMRC, the operations of the teams was not seen as an  
50  
51 important issue. In this view, membership of a team was little more than nominal.  
52  
53 One Officer said that in their view 'team' was simply 'a term to define a loosely  
54  
55 related group of people'. The fact that individual taxpayer cases had now to be  
56  
57 worked on by than one employee, however, promoted a greater focus on the team as  
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3 the key work unit. One focus group of AAs and AOs discussed how teamworking  
4 had been enhanced as a result of the changes, as simply more of it was now required.  
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6 At the very least a recognition that the reorganization of work meant that staff now  
7 had a better idea of who their immediate colleagues were, and, as a result, would  
8 discuss work with them much more than before. This feeling was encouraged by the  
9 holding of daily team meetings and by the physical presence of team performance  
10 boards.  
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The meetings and the boards, however, might better be seen as the physical manifestation of the continued importance given to the achievement of performance targets. The diagnostic process in the sites included the timings of the process and the agreement of team work targets. The achievement of the targets was tracked hourly by recording the progress of individual team members. Individual progress was aggregated to the team level and noted on the team performance board. There was a view widespread across many sites that the focus was on target-hitting rather than improving the service offered to the taxpayer.

This emphasis on meeting targets shaped the operation of teamworking in two important ways. The first and most obvious of these is that pressures to meet the targets simply reduced the time available to take part in problem-solving or improvement activity. As we have seen, interviewees were broadly supportive of this kind of activity, and felt frustrated at the imposition of targets. As one interviewee expressed it:

We can't take time out to have an instant meeting about problems. We are encouraged to do this, but the stats targets don't change. There isn't time to do this.



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3 There was thus a perception at some sites that the pressure of work was such  
4 that there was no real opportunity to be involved. 'Problem solving has been good,'  
5 said one front-line employee, 'but there has not been enough of it'. Looking at it the  
6 other way round, then if time was taken to focus on problem-solving, this could have  
7 a negative effect on performance. 'Some processes have more problem-solving  
8 sessions than others,' said one respondent, 'and people are being taken out of the  
9 teams to carry them out. This is impacting upon performance'. Another member of  
10 front-line of staff stated, '[the daily meetings] are a waste of time and resource when I  
11 could be getting on with some real work and meeting the targets'. The tension  
12 between solving problems and meeting targets was well-expressed by a third  
13 employee:

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15  
16 If we solve the problems that are stopping us hitting the targets or stop us  
17 working more efficiently, then this is fine, but if we are constantly having  
18 meetings to solve problems and we are not hitting the targets and the problems  
19 aren't being resolved or aren't affecting the targets, then we are creating a  
20 problem rather than solving a problem.  
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25 The second way in which targets helped shape the nature of teamworking was  
26 through its effects on how members of a team related to each other and worked  
27 together. In some cases, particularly front-line staff, it was felt that the targets were  
28 being used to monitor individual performance. One said:

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31 The pressure to achieve comes from internally as well. We must accept that as  
32 soon as people start collecting statistics, people want to achieve; they may  
33 pretend they don't care, but they do. You therefore put pressure on yourself  
34 because you know that you have been counted.  
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39 Of more interest to us, however, is how individuals placed greater emphasis on how  
40 their own efforts contributed to the team as a whole. Part of this can be put down to  
41 more or less direct pressure from management. Front-line staff could feel under  
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3 pressure from their front line managers, while the front-line managers were  
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5 themselves under pressure from further up the managerial hierarchy.  
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7 The pressure felt by team members can be understood in one of two ways. For  
8  
9 some, it was a negative development; it was seen simply as having to work harder in  
10  
11 order to compensate for those not working hard enough. This could be cause of  
12  
13 significant resentment. One team member said:  
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17 Some people are having to compensate for those that don't work so well. You  
18  
19 are not supposed to pinpoint people who are not working because it's a team  
20  
21 effort, but when people slack off, it can really annoy other people in the team.  
22

23 On the other hand, the same pressures could be seen as contributing a greater  
24  
25 sense of identification with the work of the team as whole. It was accepted that  
26  
27 differences in individual performance might exist—and also that there might be good  
28  
29 reason for this. Differences in performance against a numerical target could arise not  
30  
31 just from differences in effort levels, but also from differences in the degree of  
32  
33 difficulty of the cases being dealt with. A more structured approach to work might  
34  
35 involve some reduction in the degree of discretion that individuals were able to  
36  
37 exercise in deciding what cases to work on—but at the same time it could reduce  
38  
39 tensions arising from the temptation on the part of some individuals to take the more  
40  
41 straightforward cases in order to meet their own individual targets. This 'cherry-  
42  
43 picking' of cases had been a long-standing concern for management at a number of  
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45 sites.  
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49 In what were perceived as the better-functioning teams, therefore, a more  
50  
51 collective, team-based approach could be seen. Focus groups referred to improved  
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53 'team spirit', particularly when the team was achieving its targets. As a Higher  
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55 Officer on one site commented, 'On the two better performing teams, a good team  
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3 spirit exists, they are very engaged, take accountability for things and actually want to  
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5 do a good job.’ In such teams there was now more cooperation between individuals  
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7 within teams and between managers. According to one team member, there was a  
8  
9 heightened sense of common purpose:  
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13 We work better as a team. This is a positive. Before [Lean] everyone had a set  
14 number of claims to process and people would sit at the desk and not speak to  
15 many people on your team.... Now there is more involvement as a team to  
16 solve problems and to work to reach the targets.  
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19  
20 It was difficult to obtain the quantitative data at a team level that would have allowed  
21  
22 this relationship to be tested more formally. Nonetheless, the richer data obtained  
23  
24 from our qualitative interviews allowed us to identify the tensions between targets and  
25  
26 the operation of lean teams—and also the different ways in which these tensions  
27  
28 might play out.  
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### 31 32 33 **Discussion and conclusions**

34  
35 Having presented the findings from a thorough and comprehensive investigation of  
36  
37 one of the most high-profile implementations of Lean in the UK’s public services, we  
38  
39 can return explicitly to the research questions posed in our introduction. In answer to  
40  
41 the first of these, we saw in our review of existing work on Lean an idea of what we  
42  
43 might expect lean teams to look like. While on the basis of some autonomy-focussed  
44  
45 definitions it might be tempting to dismiss these as not being teams at all, we saw in  
46  
47 our review of the secondary literature a distinctive form of teamworking in which  
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49 employees have responsibility for the continuous improvement of standard operating  
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51 procedures or SOPs.  
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55 In looking at Lean in practice in HMRC, the subject of our second research  
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57 question, our findings represent a more nuanced alternative to the almost exclusively  
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3 negative interpretation offered by Carter et al. (2011a, 2011b, 2013a, 2013b). Our  
4  
5 findings can be seen to be more in line with the range of experience suggested by the  
6  
7 results of the Civil Service People Survey (2011). Thus while we can see that there is  
8  
9 some evidence to support Carter et al.'s portrayal of Lean as being associated with the  
10  
11 fragmentation of work and the loss of employee discretion, a closer analysis reveals  
12  
13 that this is only part of the picture. For one thing, some welcomed Lean on the basis  
14  
15 that it gave them greater structure and a better understanding of where their own work  
16  
17 fitted with the work of the organization as a whole. In this respect we can give some  
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19 support to Vidal's (2007) findings that predictability might be as welcome as  
20  
21 empowerment to some employees.  
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24  
25 Moreover—and perhaps more importantly for our purposes—Carter et al.'s  
26  
27 analysis takes little account of how employees work together in teams under Lean.  
28  
29 There are two aspects to this. First, Carter et al. neglect how, in principle at least, lean  
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31 teams are able to exercise an indirect form of autonomy through their input into  
32  
33 improvement and problem-solving activities. As we have seen, it would be greatly  
34  
35 overstating the case to say that a high degree of this form of autonomy was  
36  
37 universally enjoyed in practice. What we see in HMRC is, again, a degree of  
38  
39 variation. In the local and district offices (the LPOs and DPOs), although the  
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41 mechanisms did exist by which employees could play a significant role in both the  
42  
43 creation and the development of operating procedures, little effective use was being  
44  
45 made of them. We can thus take heed of Schouteten and Benders' (2004) caution  
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47 that account should be taken of the extent to which employees are able to exercise a  
48  
49 heightened degree of autonomy. In the more specialist operations undertaken in the  
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51 national-level processing centres, on the other hand, the centres' managers retained a  
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53 greater degree of control over processes and were able to use this to encourage greater  
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3 involvement on the part of employees. The differences between the two types of  
4 office appear to relate to the greater autonomy afforded to the national centres rather  
5 than directly to differences in the nature of work. Thus while consistent with  
6 Benders' (1995) emphasis on output characteristics, they can offer it only indirect  
7 support.  
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14 A demonstration of the second aspect of Carter et al.'s neglect of teams  
15 provides us also with an answer to our third research question: how can we explain  
16 the form that teamworking takes in practice in HMRC? The Civil Service People  
17 Survey (2011) shows working as a member of a team to be the most positive aspect of  
18 work amongst those surveyed in HMRC. As we have seen, the key to understanding  
19 the operation of teams here is the continued emphasis placed on the achievement of  
20 work targets. At one level, there was a simple inconsistency between targets and lean  
21 teams: either improvement activity was squeezed out or, to the extent it was  
22 undertaken, it was regarded as being to the detriment of the achievement of targets.  
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24 More than this, however, we can see how the targets helped shape how members of  
25 the team related to each other. Yet again, this could work in different ways. A  
26 heightened concern for how individual efforts contributed to team performance could  
27 have the effect of encouraging resentment amongst those who felt that they were  
28 making a disproportionately large contribution. On the other hand, the targets could  
29 be seen in a more positive light, as providing the framework and incentive for a more  
30 collective effort. What we see might be regarded as an intensified form of the  
31 'target-based' form of teamworking identified by Procter and Currie (2004).  
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52 This in fact takes into our fourth research question, the implications of this  
53 analysis for our understanding of Lean and the way it is introduced and operated in  
54 organizations. It is clear from what we have presented here that it is not just a matter  
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of adopting the philosophy and principles of Lean. The way in which lean teams worked—and didn't work--was shaped by the environment into which they were introduced. Two aspects of this might be highlighted. The first is the organizational environment. In HMRC, as we have just seen, this was manifest most clearly in the emphasis on targets and the form of teamworking to which this gave rise. The second aspect is what we might describe as the 'market' environment in which an organization operates. Earlier sections of this paper showed that concepts of JIT are premised essentially on demand-constrained environments: workers should produce only in response to demand (Oliver, 1991). In HMRC, the pervasiveness of targets suggests the opposite, a labour-constrained environment: workers should produce as much as they can. The implications of looking at things in this way need to be more fully worked-out. It is to be hoped, however, that it can be used to improve our understanding of Lean and the way it is managed within organizations.

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Site	No. of Staff on site	Staff Interviewed	Lean Processes at time of Research	% Staff Involved in Lean
Chapel Wharf (LPO)	~970	<ul style="list-style-type: none"> <li>5 Managers (2 SOs; 3 HOs)</li> <li>Local Lean Expert</li> <li>20 Front-line Staff (4 Os in a Focus Group; 16 AOs and AAs across 2 Focus Groups)</li> </ul>	Self-Assessment Employee Maintenance Open Cases Post	~75%
NOS Wolverhampton (National Processing)	~250	<ul style="list-style-type: none"> <li>4 Managers (2 SOs; 2 HOs)</li> <li>Local Lean Expert</li> <li>17 Front-line Staff (2 Os, 8 AOs and AAs in a Focus Group; 7 AOs and AAs in a Focus Group)</li> </ul>	Deregistration Registration	~50%
Child Benefit Office (National Processing)	~1,200	<ul style="list-style-type: none"> <li>7 Managers (4 SOs; 3 HOs)</li> <li>3 Local Lean Experts</li> <li>21 Front-line Staff (8 Os in a Focus Group; 13 AOs and AAs across 2 Focus Groups)</li> </ul>	Claims Receipt Post	~10%
Ipswich (DPO)	~120	<ul style="list-style-type: none"> <li>3 Managers (1 SO; 2 HOs)</li> <li>3 Local Lean Experts</li> <li>10 Front-line Staff (3 Os, 7 AOs and AAs in a Focus Group)</li> </ul>	Self-Assessment	~50%
Birmingham (DPO)	~300	<ul style="list-style-type: none"> <li>4 Managers (1 SO; 3 HOs)</li> <li>2 Local Lean Expert</li> <li>23 Front-line Staff (5 Os in a Focus Group; 18 AOs and AA's across 2 Focus Groups)</li> </ul>	Self-Assessment Employee Maintenance Post	~80%
Lothians (LPO)	~800	<ul style="list-style-type: none"> <li>5 Managers (2 SOs; 3 HOs)</li> <li>Local Lean Expert</li> <li>28 Front-line Staff (9 Os in a Focus Group; 19 AOs and AA's across 2 Focus Groups)</li> </ul>	Self-Assessment Post Open Cases Employee Maintenance	~60%
South Wales (LPO)	~900	<ul style="list-style-type: none"> <li>5 Managers (2 SOs; 3 HOs)</li> <li>2 Local Lean Expert</li> <li>24 Front-line Staff (8 Os in a Focus Group; 16 AOs and AAs across 2 Focus Groups)</li> </ul>	Self-Assessment Employee Maintenance Open Cases Post	~80%
East Hampshire and Wight (LPO)	~650	<ul style="list-style-type: none"> <li>4 Managers (1 SO; 3 HOs)</li> <li>Local Lean Expert</li> <li>Trade Union Representative</li> <li>27 Front-line Staff (10 Os in a Focus Group; 17 AOs and AAs across 2 Focus Groups)</li> </ul>	Self-Assessment Employee Maintenance Customer Reviews Customer Correspondence	~85%
West Yorkshire and Craven (LPO)	~400	<ul style="list-style-type: none"> <li>5 Managers (2 SOs; 3 HOs)</li> <li>Local Lean Expert</li> <li>32 Front-line Staff (10 Os in a Focus Group; 22 AOs and AAs across 2 Focus Groups)</li> </ul>	Self-Assessment Employee Maintenance Open Cases Post	~60%
National Insurance Contributions Office (National Processing)	~3,500	<ul style="list-style-type: none"> <li>4 Managers (2 SOs; 2 HOs)</li> <li>4 Lean Experts</li> <li>2 Local Lean Experts</li> <li>28 Front-line Staff (9 Os in a Focus Group; 19 AOs and AAs across 2 Focus Groups)</li> </ul>	Refunds	~20%

Table 1: HMRC Processing Sites and Interviews