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A Thematic Analysis of Executive Leadership and Perspectives on Continuous Improvement in the Emergency Services.

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Summary: This paper reports initial findings from 15 interviews with executive leaders across the national police, fire and rescue and ambulance services in Scotland, UK. The interview themes are drawn from a systematic literature review of lean and six sigma practices in the public sector and the analysis is around five key themes all within the strategic context of significant organisational change following the respective police and fire services mergers in 2013. The initial results are reported to support organisational learning and identify a knowledge gap around CI Methodologies, an imbalance between CI and Radical change and a further need to embed CI through strategy, performance measurement and roadmaps, the findings also emphasise the importance of staff engagement and empowerment as part of CI Initiatives and identify future research in this area.

Track: **Organisational Transformation, Change and Development**

Introduction

The need for quality in public services is long established. The trust of public money to deliver services to people who are often the most vulnerable in society is a serious charge and given the budget challenges experienced since 2007, public bodies have had to make difficult decisions around the reduction or withdrawal of services, this stated, the necessity for change has also driven a desire to tackle unfairness and equality of access to services (Antony et al. 2016).

The purpose of this research is to explore and compare the approaches to continuous improvement within the three national emergency services in Scotland, through the eyes of the boards and executive leadership of the Police, Fire and Rescue and Ambulance Services as well as from the perspectives of executive office holders within the relevant inspection and audit bodies and staff associations and trade unions.

At a time when the three services are committed to a joint strategy aimed at increased collaboration and co-production (Scottish Fire and Rescue Service, 2018) a shared understanding of perspectives on continuous improvement can be argued to have a greater importance when it comes to mapping needs, services or processes across agencies. The comparison between the more established Scottish Ambulance Service (SAS) and the young national services of Police Scotland and the Scottish Fire and Rescue Service (SFRS) who are

currently undertaking significant radical change programmes allows a further exploration of the understanding of the differences between radical change and continuous improvement and how these sit alongside each other within the emergency services.

This paper presents the findings from the analysis of the first fifteen interviews completed with executive leaders representing the three case study organisations as well as executive postholders in the oversight and inspection bodies and the unions and staff associations. The discussion following the analysis is presented at this time to provide early findings and assist ongoing work developing approaches to CI and intended work around co-production and collaboration.

This paper is structured around an overview of the literature which has informed the design of this research followed by the detailed methodology undertaken and thereafter the analysis of the first fifteen interviews carried out and the associated discussion. The paper concludes with presentation of the considered limitations and an explanation of the next stages of research in this project. The introduction section of this paper concludes with brief overviews of the three case study organisations as shown below.

Police Service of Scotland (Police Scotland)

Police Scotland was created on the 1st April 2013 by the merger of the eight previous geographic police services and the Scottish Crime and Drug Enforcement Agency and the Scottish Police Services Authority (Scottish Government, 2012). The structure of the eight legacy police service had been in place since regionalisation in Scotland in 1974 (Terpstra & Fyfe, 2015). Police Scotland is the second largest police service in the UK, with 23,000 staff of whom 17,000 are police officers (Police Scotland, 2019). The organisation has an operating budget of over £1bn and is overseen by the Scottish Police Authority, which was also created at the same time as the service and by the same legislation (SPA, 2015).

Her Majesty's Inspector of Constabulary (Scotland) (HMICS) provide independent scrutiny of both Police Scotland and the SPA (HMICS, 2019) and Audit Scotland (Audit Scotland, 2019) have a similar responsibility regarding the inspection of financial aspects of the service.

Within the service, police officers to the rank of Chief Inspector are represented by the staff association 'Scottish Police Federation' (SPF) these members make up 98% of police officers in Scotland (SPF, 2019) and police officers of the ranks of Superintendent and Chief Superintendent are represented by the 'Association of Scottish Police Superintendents' (ASPS) (ASPS, 2015). Police staff are represented by a number of unions; however, the largest representation is through the public sector trade union (UNISON) (UNISON, 2019).

Scottish Fire and Rescue Service (SFRS)

Like Police Scotland, SFRS was created on 1st April 2013 through the merger of the eight legacy geographical fire brigades and became the largest service in the UK (Scottish Government, 2012). The merger created the 4th largest fire and rescue service in the world with 7,776 staff and a budget of almost £310m (SFRS, 2019).

Much like the police service, the Police and Fire Reform (Scotland) Act 2012 created an oversight board, The Scottish Fire and Rescue Service Board (Scottish Government, 2012). Similarly, Her Majesty's Inspector of Fire Services (Scotland) (HMFSI) (HMFSI, 2018)

provide independent scrutiny of both SFRS and the Fire Services Board with Audit Scotland having responsibility for inspection of financial areas (Audit Scotland, 2019).

Full time and volunteer firefighters as well as control room staff are represented by the UK wide trade union; the Fire Brigades Union (FBU) (FBU, 2019). While this makes up the largest group of staff, small numbers of staff in other roles are also represented by UNISON (UNISON, 2019).

Scottish Ambulance Service (SAS)

SAS has operated as part of the National Health Service since 1947. Firstly, as a contracted service to St. Andrews Ambulance Service and since 1974 directly as part of the health service (St. Andrews First Aid, 2019). The service currently operates as a special health board and has 4500 employees and an annual budget of around £214m, the service is overseen by a board whose responsibility it to ensure that it meets its obligations to its patients (SAS, 2019). Like most public sector bodies, Audit Scotland is responsible for auditing the ambulance service through their NHS Scotland responsibilities (Audit Scotland, 2019).

The largest trade union representing health services and the Scottish Ambulance Service is UNISON (UNISON, 2019).

Literature Review

This research has been drawn from the analysis of a systematic literature review on Lean and Six Sigma Practices in the public sector (Rodgers & Antony, 2019). The review identified 121 papers published over a 17-year period from 2000. The study identified a prevalence of case studies on applying improvement methodologies in health (Baril et al, 2016; Bamford et al, 2015; Bouras, 2015), Education (LeMahieu et al, 2017; Svensson et al, 2015; Holmes et al, 2015), National Government (Carter et al, 2012; Radnor, 2010; Radnor & Walley, 2008) and in Local Government functions (Antony et al. 2017; Kuvveti & Firuzan, 2019; Suarez Barraza, 2009).

However, gaps in published research around the approach to implementing continuous improvement methodologies in the public sector were also identified. Austerity measures and their impact on budgets were frequently commented on as drivers for implementing continuous improvement methodologies such as Lean and Six Sigma (Barton, 2013; Douglas et al., 2015; Balzer et al., 2015) and this focus on cost reduction has been assessed as leading to an over focus on tools and techniques (Radnor et al., 2012) and short term gains (de Souza & Pidd, 2011) rather than strategic alignment and wider organisational change to embed continuous improvement.

This leads to research questions such as ‘How do public sector organisations select methodologies for continuous improvement?’, ‘Are continuous improvement approaches built into strategies by public sector organisations and through Government oversight?’ (Rodgers & Antony, 2019) and whether the focus is on cost reduction or on efficient and effective services and in turn where the ‘voice of the customer’ comes into public sector continuous improvement strategies ((Hines & Lethbridge, 2008; Heath & Radcliffe, 2010; Radnor & Osborne, 2013). This research is intended to explore these research questions and narrow the identified gaps using the perspectives of executive leaders across the case study organisations. Where there is

a theoretical gap identified through the review of literature is around the wider implementation of continuous improvement is in the development of organisational culture towards improvement rather than application of methodologies and tools and techniques in the work place.

The systematic literature review (Rodgers & Antony, 2019) additionally identified that within public sector deployments of continuous improvement methodologies there was frequently a lack of shared understanding of the organisational approach and meaning of terms such as 'Lean' (Radnor et al., 2012, Radnor & Osborne, 2013; Waring & Bishop, 2010) and a gap in the assessment and understanding of organisational culture and its impact on the initiative (Rodgers & Antony, 2019).

The research reported in this paper is intended to inform understanding of the gaps and emerging themes discussed above through the exploration of the perceptions and understanding of continuous improvement of executive leadership within public sector organisations. The focus is on the three national emergency services within Scotland, UK as there was an additional identified gap in the systematic literature review around research focussed on the police service where only four papers were identified (Adler et al. 2012; Barton, 2013, Fryer & Ogden, 2014; Antony et al., 2017), the ambulance services, where only two papers (Fryer & Ogden, 2014; were identified and the Fire and Rescue Services where only one paper (Heath & Radcliffe, 2010; Fryer & Ogden, 2014) was identified. Through this focus, it is additionally intended, to narrow the research gap on the approaches to continuous improvement undertaken in these three emergency services.

Methodology

This research forms part of a wider programme of research around embedding a culture of continuous improvement within public services. The scale of the public sector is such The initial focus is on the three national emergency services within Scotland, UK and in particular the strategic perspectives around continuous improvement and the nature of current initiatives within the respective services.

Case Studies

This research explores the state of continuous improvement settings within real life situations and as such a case study approach has been adopted (Yin, 2014). In further considering the scale of the public sector more broadly and the complexity of culture change specifically set against the journey to embed continuous improvement within these organisations, a case study has been further considered most suitable research (Collis & Hussey, 2003). In order to ensure a robust depth of research a multiple case study approach (Herriot & Firestone, 2003) has been undertaken across the three related agencies. Aside from a natural affinity between the three organisations and their alignment in the sense of geography and governmental oversight, there is an existing drive towards greater co-production between all three as exemplified by the creation of the 'Scottish Emergency Services National Collaboration Strategy' during 2018 (Scottish Fire & Rescue Service, 2018).

It is therefore considered that an exploration and comparison of the approach to continuous improvement by all three services has the potential to inform the development of collaborative

approaches to continuous improvement through identification of shared understanding or gaps in approaches. An additional opportunity is a recognition that both the Police Scotland and the Scottish Fire and Rescue services have only been in existence since 2013 (Scottish Government, 2012) whereas the national Scottish Ambulance Service was created in 1947 when it was taken over by the National Health Service and was given the status as a Health Board in its own right in 1995 (St. Andrews First Aid, 2019) and as such while the former two organisations remain on a significant radical change journey through their respective mergers, the Scottish Ambulance Service is a more mature organisation.

Sample Identification

Following on from the selection of the three case study organisations and given the research focus on executive leadership perspectives and understanding, a non-probability sampling approach was selected as the potential population for this research is defined in many respects by job role and is a small potential group given the number of executive posts within organisations. Purposive sampling was utilised in order to identify the potential interviewees within each organisation who were best able to assist in answering the research questions (Etikan et al., 2016), within this the approach supports the identification of individual cases within the relatively small potential sample number where rich data on the research subject could be gathered (Shaw, 1999).

Each relevant organisation was approached to invite executive members to participate in the research. Accordingly, the organisations who participated in this research were; Police Scotland, Scottish Fire and Rescue Service, Scottish Ambulance Service, Audit Scotland, HMICS, HMFSI, Scottish Police Authority, Scottish Fire & Rescue Service Board, Scottish Ambulance Service Board, UNISON, Fire Brigades Unions, SPF and ASPSP.

Semi-Structured Interviews

In seeking to understand leadership perspectives associated with this research, a qualitative approach was undertaken and given the research objective of exploring perspectives, understanding, behaviours and policies semi structured interviews were preferred as a data collection method (Rowley, 2012) given their supportive nature of the Case Study approach to the research (Silverman, 2010). The key themes drawn from the literature are shown below in Table 1 and were used as the structure for the interviews although additional conclusions from research included in the literature review were also included in the interview questions.

Emerging Themes	Gaps
Applicability of Lean Six Sigma in the Public Sector	Evidence of Strategic Alignment of continuous improvement initiatives
Dominance of Lean only approaches in the public sector	Evidence of understanding of readiness and organisational culture for continuous improvement
Shared Understanding of Lean and continuous improvement	Role of Government in continuous improvement for public sector services
Disconnect with Human Resource Departments/Functions	Understanding the Voice of the Customer
	The impact of organisational culture on continuous improvement initiatives

Table 1: Key Themes & Gaps from the review of Literature (Rodgers & Antony, 2019)

The full interview structure including potential questions and additional prompts is included at Appendix 'A' in this paper. The interview structure was piloted amongst both individuals from the case study organisations (outwith the interview sample) and Lean Six Sigma practitioners and academics in order to assess clarity and understanding of the questions as well as broad coverage of the subject area linked to the wider interview objectives. Feedback was incorporated into the final version of the structure shown at Appendix 'A'.

Interview Analysis

Each of the fifteen interviewees largely were affiliated to only one of the case study organisations, however there were two whose respective roles encompassed more than one of the organisations. The spread of interviewees affiliation across all three organisations is shown in figure 1 below;

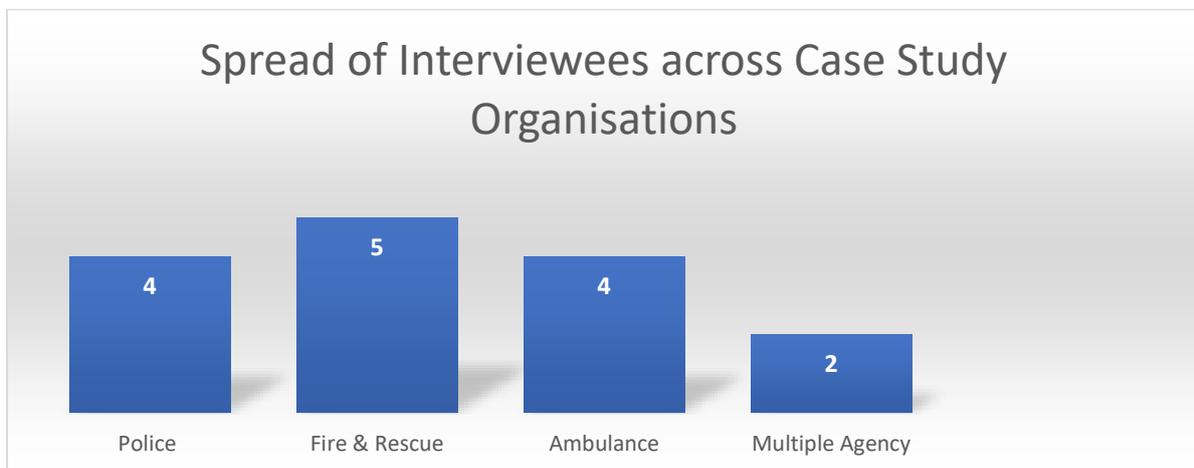


Figure 1: Spread of Interviewees across Case Study Organisations

In order to additionally provide some context on the roles of interviewees, Figure 2 below, shows a breakdown of the 15 Interviewees by role and grouped into three categories, 'Oversight & Inspection' which includes Board Membership and Auditing and Inspection executives, 'Executive Leadership' which includes interviewees at Director level and above, and finally 'Union and Staff Associations' which includes executive post holders in those relevant organisations.



Figure 2: Breakdown of Interviewees by Role

These two categorisations will be applied throughout the analysis of the interview data analysis in order to contrast the perspectives between case study organisations and between different executive functions.

The interviews were transcribed and thereafter analysed using NVivo. Given the basis of the interviews being themes derived from a related literature review, a directed content analysis approach was utilised (Hsien & Shannon, 2005) Some of the themes were therefore pre-figured, however additional themes emerged from analysis of the data (Rowley, 2012). A total of 23 themes were identified and these were thereafter regrouped into 5 overarching themes.

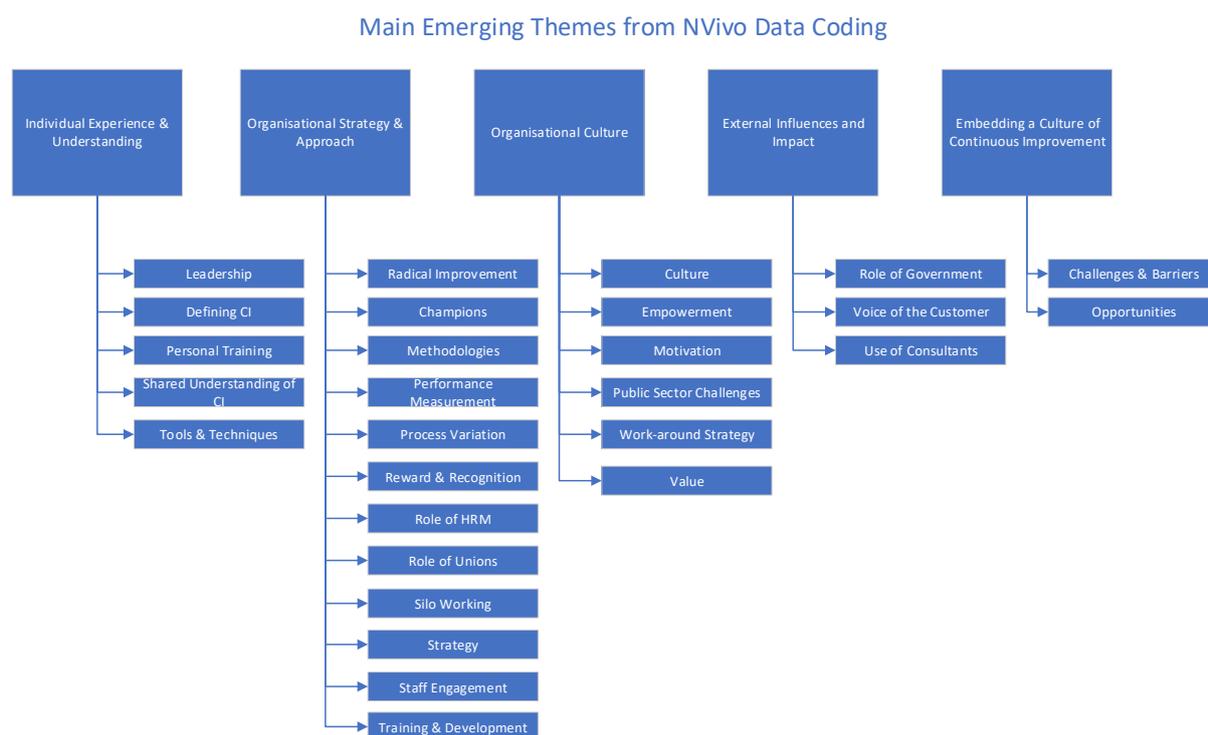


Figure 3: Grouping of emerging themes from NVivo Coding

The analysis of the data is presented under the structure of the grouped themes as shown on the top line of figure 3.

Individual Experience & Understanding

All fifteen interviewees were asked about their own understanding of continuous improvement and their experience of improvement methodologies or associated tools and techniques, or what they thought of as improvement methodologies as an introductory question. The responses are summarised in table 2.

Interviewee	Affiliation	Methodologies	Interviewee	Affiliation	Methodologies
'A'	Police	EFQM, PSIF	'I'	Police	None
'B'	Ambulance	Kaizen, Lean, PDSA	'J'	Police	EFQM, PSIF
'C'	Ambulance	PDSA	'K'	Ambulance	PDSA
'D'	Fire	None	'L'	Fire	EFQM, PSIF
'E'	All	Lean	'M'	Fire	EFQM
'F'	Police	TQM, EFQM	'N'	Fire	Lean
'G'	All	EFQM, PSIF	'O'	Fire	EFQM, PSIF
'H'	Ambulance	Lean, Six Sigma			

Table 2: Interviewees experience of improvement methodologies

Organisational success can be rooted in a quality management approach and the adoption of methodologies for continuous improvement. Historically, Total Quality Management (TQM) and in particular Deming's Plan-Do-Check-Act were dominant but since the 2000's Lean Six Sigma has become more widely accepted (Salah et al. 2010). Further analysis of the systematic review of Lean and Six Sigma from 2000, evidenced a prevalence of Lean applications in the public sector over Six Sigma, particularly in the health area and particularly within the UK (Rodgers et al, 2019). A key area for the success of continuous improvement initiatives is leadership commitment but facets of this include leading by example, understanding of methodologies and resourcing and supporting such deployments (Laureani & Antony. 2015; Goodridge et al. 2015).

The interviewee responses show that only interviewees 'E' and 'H' state they have received any formal training in methodologies and more broadly, only seven of the interviewees state they have an awareness of any combination of TQM, Lean or Six Sigma). It is equally clear that interviewees associate the self-assessment frameworks of the European Foundation for Quality Management (EFQM) and the closely related Public Service Improvement Framework (PSIF) with being improvement methodologies. There is also a gap in research which would evidence any relationship between these self-assessment frameworks and continuous improvement methodologies (Rodgers et al., 2018).

All fifteen interviewees placed an importance on continuous improvement (CI) in regard to their respective organisations, however in defining CI, while all interviewees had a view and belief, there was no organisational commonality in those definitions which is suggestive of none of the case study organisations having formally defined CI. One of the emerging themes from the literature (Rodgers & Antony, 2019) is the importance of such a shared understanding of what is meant by CI or specifically Lean within organisations. There is not evidence from the interview data that any of the three case study organisations have defined CI so as to ensure common agreement on understanding and application.

Only interviewees, 'B', 'C', 'H' and 'K' specifically referenced any tools or techniques for continuous improvement, and this clearly related to the Ambulance Services adoption of Plan-Do-Study-Act (PDSA) as its primary improvement tool. While some awareness of methodologies such as TQM and Lean was commented on by interviewees affiliated to police and fire, no knowledge or experience of individual tools was commented on. This is suggestive of elements of common understanding of approach within the Ambulance service alone amongst the three case study organisations.

“I don’t think we’ve got a lack of tools and methods with which to improve the service. I think it’s all there for us. I just don’t think we pay enough attention to it.” (Interviewee ‘M’)

It is additionally noted that as regards CI within Police and Fire services, interviewees ‘A’, ‘E’, ‘F’, ‘I’, ‘J’, ‘K’, ‘M’, ‘N’ all spoke about the focus on major transformational projects and confusion between CI and Radical Change, where strategic priorities and in particular resources and leadership energies were concentrated on the radical change and where these were often referred to as continuous improvement projects.

Finally, whereas all interviewees commented on the importance of continuous improvement, the perspectives on leadership for continuous improvement were mixed, for example, Interviewee ‘A’ commented that they were ‘unclear on leadership buy-in to continuous improvement tools and techniques’ within the police service. By comparison, Interviewee ‘B’ commented on the employment of a continuous improvement expert at executive level to operate as a champion within the ambulance service. More broadly, interviewees commented on the leadership role in culture change, empowerment and communication to support continuous improvement but did so in terms of future development rather than current delivery (Interviewees, ‘C’, ‘D’, ‘F’, ‘H’, ‘K’, ‘M’).

From the analysis of the themes raised by interviewees, there is a common agreement of the importance of CI, however there is no clear evidence of shared definitions either within or across the three case study organisations. Importantly, there is an apparent gap in either the knowledge of and the training in CI methodologies broadly across the leadership of the three organisations, albeit less so within the ambulance service. Finally, there appears to be agreement in confusion over the roles and application of continuous and radical improvement, as Interviewee ‘O’ stated in the context of the fire service, “I don’t think we’ve ever really worked out what the two mean.” and the links and relationships between self-assessment frameworks and CI methodologies.

Organisational Strategy & Approach

The interviewees had very mixed views on their respective organisational strategies around CI, within the ambulance services some interviewees felt that CI was very explicit, and quality was a key business strategy (Interviewees ‘B’ and ‘C’) whereas interviewee ‘K’ felt that CI was more implicit within the strategy than explicit.

Across the other case study organisations, within fire, Interviewees ‘L’ and ‘N’ felt that CI was explicit within the strategies and was a golden thread through corporate documents, whereas Interviewees ‘M’ and ‘O’ felt it was more implicit and required development. Finally, in policing, all affiliated interviewees commented on explicit references to CI within strategies, but all agreed on an apparent disconnect between strategy and practice.

“The danger is that people will latch on the methodologies and try and drive them through as being the end game, rather than having that strategic bit around driving forward a culture of continuous improvement.” (Interviewee ‘A’)

There were no references during the interviews to any roadmaps for embedding CI or links to performance frameworks and outcomes nor explicit holistic CI plans within the case study organisations.

As introduced earlier in the analysis, there are a significant number of references to self-assessment frameworks but apparent gaps in understanding of CI methodologies and similarly training in those methodologies, this is linked to strategies and implementation plans above in terms of the apparent gaps in plans or roadmaps around CI implementation within the case study organisations.

In terms of listening to staff and engaging them in CI, again there are mixed views amongst interviewees. Interviewees 'A', 'B' and 'C' all describe 'listening activities' and more interviewees ('D', 'E', 'I' and 'J') all comment on recognition of the importance of involving and listening to staff, however there are additional comments around such activities being more 'telling' than 'listening' and still being somewhat 'top-down' within police and fire. Albeit there is a consensus of the existence of a genuine desire to engage the workforce across the three case study organisations.

“So how do we get people to buy into improvement? I find it really easy. You talk to them in language that brings it back to, why are you here? What do you like about your job, and how can we make it better? How can you make it better? And empower people to make it better.” (Interviewee 'C').

From a CI and training and development perspective, interviewees affiliated to the ambulance service ('B', 'C', 'H', 'K') reference the structure of training related to CI and the importance of training across the organisation and the oversight and inspection organisations for consistency of language and approach. IN addition, reference is made to new employee selection and induction and the role of CI training or knowledge within these. There are no similar references within police and fire affiliated interviews.

Organisational Culture

The theme of organisational culture was repeatedly returned to by interviewees at points through the interviews. Within the ambulance service, interviewees commented on an emerging culture of data driven or evidence-based decision making to support continuous improvement (Interviewee's 'C' and 'K') and within that the importance of a shared language around continuous improvement is supportive of a culture change (Interviewee 'B'). These views were consistent across executive leadership and oversight and inspection.

Perhaps unsurprisingly, interviewees affiliated to police and fire expressed more diverse legacy cultural impact and perceived issues over the centralisation of policies, practices and associated decision making (Interviewees 'D', 'L', 'F' and 'I'), beyond this there was elements of shared perceptions that transformation programmes within police and fire focussed too heavily on organisational structures and did not tackle culture change effectively. Interviewees 'F' and 'L' additionally commented on the culture of staff to 'get things done' regardless of policy and practices which in their views lessened engagement with continuous improvement initiatives as they worked round processes rather than changed them.

A significant related factor raised by interviewees and linked to the centralisation of policies, practices and functions within police and fire was the perceived lack of empowerment of staff to make decisions and implement improvements at a local level. Interviewees views range from "empowerment hasn't happened yet" (Interviewees 'D' through "it's probably there, but it doesn't feel like it yet" (Interviewee 'E') to "there is no empowerment" (Interviewee 'F'). Interviewees affiliated to the ambulance service tended to give specific examples of

empowered staff making improvements, this is summarised by Interviewee 'C' who stated "...start really small, test in a different environment, adapt and then get local people to use it locally to make the changes, rather than a top-down...".

"People retreated into their own boundaries. We maybe need to create some kind of catalyst, something that says, it's probably better carrot than stick, to move that public-sector agenda into a new space, a new paradigm, a new way of working." (Interviewee 'F').

In the context of empowerment, interviewees unanimously agree on the importance in relation to continuous improvement, however, broadly feel that within police and fire there has been insufficient attention given to empowering staff.

External Influences & Impact

This theme considers primarily the interviewees consideration of the role of the government in leading, supporting, encouraging or enabling continuous improvement as well as the role of the public and services users, the voice of the customer, and how well or otherwise this is achieved.

Interviewees were split in their views on the role government have had or should have. Interviewees 'A', 'B', 'C', 'E', and 'G' have all expressed positive views about the governments drive towards legislation, outcomes and support of Christie Commission recommendations which create a positive environment continuous improvement. Additionally, the development of shared leadership approaches was commented on. These views are largely expressed by the oversight and inspection interviewees within the sample.

From a contrary perspective, the short term nature of politics and the yearly allocation of individual agency budgets act as inhibitors for improvement (Interviewee's 'G', 'F', 'H', 'I', 'L' and 'O'), in some respects interviewee's expressed resignation to the short term nature of politics but also frustration over lack of guidance when government stated they felt they were interfering with operational decisions compared a perceived willingness of government to become involved in operational decisions due to media reporting or political concerns.

"The actual experience of what really matters and what you're actually held to account for are not how you work in a partnership or the extent to which you're designing preventative services and all those things. It's the extent to which you're hitting the following targets." (Interviewee 'G').

This stated, the key areas of agreement as to a role government should play was around single year and single agency budgeting processes which interviewees felt impeded co-production and breaking down silos.

"I think that's probably the big dilemma at the moment. The more work you do for somebody else, it's costing you but you're not getting reimbursement for it in the biggest terms, not just money." (Interviewee 'D').

Interviewees 'K' and 'N' expressed views that rather than the perceived success or failure of leadership for continuous improvement, the challenge was simply more reflective of the complexity of the public sector and the significant challenges of moving further into the prevention space.

The second element of this theme is around public engagement and consultation and the understanding of voice of the customer. The importance of the voice of the public and the service user was agreed across all 15 of the interviewees, however the challenge of doing this effectively was additionally a focus of agreement. From the perspective of the ambulance service, interviewees ‘B’, ‘C’, ‘H’ and ‘K’ all spoke consistently about their focus on the ‘patient journey’ and the structures and processes which are established. Within both police and fire, respondents spoke about the tension of public understanding of where the service was and how it was transforming with the public being informed about what was within organisational remits and was possible within budgets (Interviewees ‘E’, ‘G’, ‘I’ and ‘J’).

There was additional a view that the sense was the public were becoming weary with consultations (Interviewees, ‘D’ and ‘J’) in large part due to the sheer scale of radical or transformational change across police and fire following on from the mergers within both services. The additional perception of interviewees outwith those affiliated to the ambulance service were that the right mechanisms for gathering the voice of the customer were not yet in place within police and fire (Interviewees, ‘K’, ‘M’ and ‘O’).

Embedding a Culture of Continuous Improvement

The final section of the interviews sought to draw on the experiences of the interviewees as to the long-term potential for developing an embedded culture of continuous improvement within the case study organisations. This was balanced between the perceived challenges and barriers and the opportunities. These are summarised for comparative purposes by keywords and presented in table 3.

Interviewee	Opportunities	Challenges/Barriers	Interviewee	Opportunities	Challenges/Barriers
‘A’	Innovation	Understanding	‘I’		Austerity, Silo’s
‘B’		Culture	‘J’	Leadership	Radical Improvement
‘C’			‘K’		Motivation
‘D’		Empowerment	‘L’	Motivation	Austerity, Engagement
‘E’		Culture	‘M’	Motivation	Empowerment
‘F’	Motivation	Leadership	‘N’	Motivation	Culture
‘G’	Community Empowerment	Empowerment, Leadership	‘O’		
‘H’	Motivation	Understanding Customers			

Table 3: Summary of Opportunities & Challenges/Barriers

In considering the opportunities to embed a culture of continuous improvement, there is a pattern of interviewees who view the public service motivation of staff in the emergency services to be a key opportunity, the perception that staff who work in the public sector are disposed to ‘make a difference’ (Interviewees ‘F’, ‘H’, ‘L’, ‘M’ and ‘N’) these responses cover all three of the emergency services and show perspectives from both executive leadership and representative associations, however a contrary view to motivation was expressed by interviewee ‘K’ in regard to public sector motivation and the negative impact of changes in pension arrangements and public sector pay.

Interviewee 'A' viewed the emerging environment of innovation in the transformational change programmes as an opportunity within policing, while Interviewee 'J' observed that new leaders within the same organisation were more orientated towards embracing improvement. Finally, Interviewee 'G' saw the emerging focus of empowering communities to be a key opportunity to further embrace continuous improvement.

In terms of challenges and barriers, the main consensus was around the need to empower staff to enable them to contribute to continuous improvement (Interviewees, 'D', 'G' and 'M') and this covered all three case study organisations and particularly from an oversight or inspection perspective. Organisational Culture was equally commented on (Interviewees, 'B', 'E', 'M') and in particular overcoming resistance to change and associated weariness of change.

As can be viewed in Table 3, interviewees also commented on the impact of austerity and the challenge of short-term measures to meet budget reductions, in the same context, how this pushed leaders towards more transactional behaviours and reinforced silo working. This viewed point was particularly expressed from interviewees who represented trade unions and staff associations. It is also noted that interviewee 'J' saw an over focus on radical improvement as a barrier to continuous improvement, where projects delivered late and overpromised and underdelivered, this could lead to staff feeling it was not worthwhile getting involved.

Discussion

It is clear from both the context around the three organisations and the interviews with executive leaders and postholders that the three case study organisations are at different stages of organisational maturity with the police and fire services only being 5 years old.

It is therefore noticeable that there is more of a CI focus within the Ambulance Service, whereas the other organisations are still in the middle of significant transformational programmes around structures and services. The question then of how CI can be balanced with Radical Improvement is relevant for the case study organisations and can impact on how employees contribute. Additionally, there is a sense from the interviewees of a focus on radical improvement around structures and systems which could be more balanced with a focus on culture change, developing engagement, empowerment and staff awareness and training around CI.

There is additional broad agreement around strategic references to CI but appears to be gaps in agreeing common definitions, roadmaps to delivering CI and links to performance management and reward and recognition processes as well as understanding and training in continuous improvement methodologies within strategic positions in the case study organisations. There is additionally some suggestion, that approaches to budget allocation and single year processes shifts executive leaders into transactional approaches and silos improvements within individual agencies.

A consensus additionally exists regarding the importance of customer engagement, however the tools and methods to achieve this in a meaningful way are underdeveloped to achieve what interviewees would wish to.

Interviewees tended to agree that the opportunities around embedding a culture of contentious improvement rest within public service motivation and the 'can do' approach of staff within

the organisations but additionally agree that organisational culture and employee motivation remain as significant challenges to achieving this goal.

Research Gaps & Limitations

This paper is based on the analysis of only 15 interviews across the three case study organisations and while there is an element of comparison between the views and experiences of executive leaders and senior office bearers of staff associations and unions for example, it does not currently consider the broader views of the staff and employees across the organisations and where these are aligned. The addressing of these limitations is discussed within the ‘future research’ section of this paper. However as has been stated, the purpose of reporting initial findings is intended to be supportive of organisational learning and the development of CI initiatives within the case study organisations.

Future Research

As referenced in the introduction, the interviews presented in this paper are part of broader and ongoing research but are being presented at this stage to provide early analysis of perspectives due to the case study organisations running both extensive change programmes and moving into an increased collaborative space.

The number of interviews will be expanded in order to include the broadest and most inclusive range of views and assess the shared executive understanding of continuous improvement. Additionally, the next phase of the research is a questionnaire directed at the employees of each of the case study organisations in order to explore the alignment or misalignment of perspectives throughout the organisation and in particular across the executive leadership and the employees.

Conclusion

This research is not intended to be critical of the case study organisations and recognises the budget challenges within the public sector and the significant journey that Police Scotland and the Scottish Fire and Rescue Services are on in terms of their mergers. Any opportunities should also be put in context, perhaps best summarised below;

*“I think sometimes if we all stepped back and looked at public services in Scotland, and indeed the UK more widely, and then compared them with elsewhere in the world, we may be feeling a bit more positive about them than, perhaps, we sometimes do.”
(Interviewee ‘G’).*

While it may be clear, that it is challenging to lead continuous improvement within any organisation without knowledge of the methodologies, tools and techniques which can support the vision and strategy, the data suggests that this is a clear gap to varying degrees within the case study organisations and is not identified as a gap within the organisations. Such knowledge allows leaders to lead by example, be visible and inspire (Laureani & Antony, 2017). In the

same way, such knowledge would assist executive leaders develop a common language and shared definitions around continuous improvement (Rodgers & Antony, 2019).

Beyond this, the case study organisations may be supported in aligning CI strategy through considering tools such as Hoshin Kanri, of which there would appear to be very little awareness but supports policy management and performance frameworks such as the balanced scorecard and an inclusive approach to development and delivery (Witcher & Butterworth, 2002). In addition, there is recognition of the complexity of public services but the desire to engage effectively with customers, albeit the interviews suggest that there has not been consideration of the use of Quality Function Deployment (QFD) and through this, customer needs analysis (Chan & Wu, 2002) to assist in identifying and prioritising the voice of the customer as it relates to public sector services.

The interviewees additionally comment on the importance in harnessing public service motivation of employees in terms of maximising success opportunities for CI initiatives and also of prioritising work to increase staff empowerment and engagement in order to assist removing barriers to success.

This research also identifies challenges, the solutions for which, are out with the immediate gift of the case study organisations but sit with Government on how they enable organisations to embed a culture of continuous improvement in particular through approaches to budget allocation and developing co-production and the resultant decrease in silo working between public sector organisations.

References

- Antony, J., Rodgers, B., Cudney, E.A. (2017). 'Lean Six Sigma for public sector organizations: is it a myth or reality?' *International Journal of Quality & Reliability Management*, 34(9), pp. 1402-1411.
- Antony, J., B. Rodgers and E.A. Cudney. (2017). 'Lean Six Sigma in policing services: case examples, lessons learnt and directions for future research', *Total Quality Management and Business Excellence*, 1-13. doi: 10.1080/14783363.2017.1327319.
- Antony, J., Rodgers, B., and Gijo, E.V. (2016), 'Can Lean Six Sigma make UK public sector organisations more efficient and effective?', *International Journal of Productivity and Performance Management*, 65(7) pp. 995-1002
- Association of Scottish Police Superintendents (2015), 'Remit' (online), Available at: http://scottishpolicesupers.org/?page_id=25, (accessed on 12/02/19).
- Balzer, W.K., Brodke, M.H. and Thomas Kizhakethalackal, E. (2015). 'Lean higher education: successes, challenges, and realizing potential.' *International Journal of Quality & Reliability Management*, 32(9), pp. 924-933.
- Bamford, D., Forrester, P., Dehe, B., and Leese, R.G. (2015), 'Partial and iterative Lean implementation: two case studies', *International Journal of Operations & Production Management*, 35(5), pp. 702-727.

- Baril, C., Gascon, V., Miller, J. and Côté, N. (2016), 'Use of a discrete-event simulation in a Kaizen event: A case study in healthcare', *European Journal of Operational Research*, 249(1), pp. 327-339.
- Barton, H. (2013) 'Lean' policing? New approaches to business process improvement across the UK police service.'. *Public Money & Management*, 33(3), pp. 221-224.
- Bouras, A. (2015), 'Quality tools to improve the communication level in the surgery department at a local hospital', *Computers in Human Behavior*, 51(Part B), pp. 843-851.
- Carter, B., Danford, A., Howcroft, D., Richardson, H., Smith, A., and Taylor, P. (2012), 'Nothing gets done and no one knows why': PCS and workplace control of Lean in HM Revenue and Customs', *Industrial Relations Journal*, 43(5), pp. 416-432.
- Chan, L-K. and Wu, M-L. (2002). 'Quality function deployment: A literature review', *European Journal of Operational Research*, 143, pp. 463-497.
- Collis, J. and Hussey, R. (2003), *Business Research: a practical guide for undergraduate and postgraduate students*, 2nd ed. Basingstoke: Palgrave Macmillan.
- de Souza, L.B. and Pidd, M. (2011). 'Exploring the barriers to lean health care implementation' *Public Money & Management*, 31(1), pp. 59-66.
- Douglas, J., Antony, J. and Douglas, A. (2015) 'Waste identification and elimination in HEIs: the role of Lean thinking' *International Journal of Quality & Reliability Management*, 32(9), pp. 970-981.
- Etikan, I., Musa, S.A. and Alkassim, R.S. (2016). 'Comparison of Convenience Sampling and Purposive Sampling'. *American Journal of Theoretical and Applied Statistics*. 5(1), pp. 1-4.
- Fire Brigades Union (2019), 'About' (online), Accessed at: <https://www.fbu.org.uk/>, (accessed on 12/02/19).
- Fryer, K.J., & Ogden, S.M., (2014). 'Modelling continuous improvement maturity in the public sector: key stages and indicators', *Total Quality Management and Business Excellence*, 25(9), pp. 1039-1053.
- Heath, G. and Radcliffe, J. (2010). 'Exploring the utility of current performance measures for changing roles and practices of ambulance paramedics', *Public Money and Management*, 30(3), pp. 151-158.
- Her Majesty's Fire Services Inspectorate (Scotland) (2018), 'Who we are' (online), Accessed at: <https://www2.gov.scot/fireinspectorate>, (accessed on 12/02/19).
- Her Majesty's Inspector of Constabulary (Scotland), (2018), 'Our Purpose' (Online), Accessed at: <https://www.hmics.scot/>, (accessed on 11/02/19).
- Herriott, R.E. and Firestone, W.A. (1983). 'Multisite qualitative policy research: Optimizing description and generalizability', *Educational Researcher*, 12(2), pp. 14-19.
- Hines, P. and Lethbridge, S. (2008). 'New Development: Creating a Lean University', *Public Money & Management*, 28(1), pp. 53-56.

- Holmes, M.C., Jenicke, L.O., and Hempel, J.L. (2015). 'A framework for Six Sigma project selection in higher educational institutions, using a weighted scorecard approach', *Quality Assurance in Education*, 23(1), pp. 30-46.
- Hsieh, H.F. & Shannon, S.E. (2005). 'Three Approaches to Qualitative Content Analysis', *Qualitative Health Research*, 15(9), pp. 1277-1288.
- Kuvvetli, Ü., and Firuzan, A.R. (2019). 'Applying Six Sigma in urban public transportation to reduce traffic accidents involving municipality buses', *Total Quality Management & Business Excellence*, 320(1-2), pp. 82-107.
- Laureani, A. and Antony, A. (2017). 'Leadership characteristics for Lean Six Sigma', *Total Quality Management & Business Excellence*, 28 (3-4), pp. 405-426.
- LeMahieu, P.G., Nordstrum, L.E. and Greco P., (2017), 'Lean for Education', *Quality Assurance in Education*, 25(1), pp. 74-90.
- Police Scotland (2019), 'About Us' (Online), Accessed at: <http://www.scotland.police.uk/about-us/>, (accessed on 11/02/19).
- Radnor, Z. (2010), 'Transferring Lean into government', *Journal of Manufacturing Technology Management*, 21(3), pp. 411-428.
- Radnor, Z.J., Holweg, M. and Waring, J. (2012). 'Lean in healthcare: The unfilled promise?' *Social Science and Medicine*, 74(3), pp. 364-371.
- Radnor, Z., and Osborne, S.P. (2013). 'Lean: A failed theory for public services', *Public Management Review*, 15(2), pp. 265-287.
- Radnor, Z. and Walley, P. (2008), 'Learning to Walk Before We Try to Run: Adapting Lean for the Public Sector' *Public Money & Management*, 28(1), pp. 13-20.
- Rodgers, B., Antony, J. and Penman, D. (Accepted/In press). 'A Critical Evaluation of the Public Sector Improvement Framework', *International Journal of Lean Six Sigma*.
- Rodgers, B. and Antony, J. (2019). 'Lean and Six Sigma practices in the public sector: a review', *International Journal of Quality & Reliability Management*, 36(3), pp.437-455.
- Rodgers, B., Antony, J., Edgeman, R. and Cudney, E.A. (2019). 'Lean Six Sigma in the public sector: yesterday, today and tomorrow', *Total Quality Management & Business Excellence*, DOI: 10.1080/14783363.2019.1599714
- Rowley, J. (2012), 'Conducting research interviews', *Management Research Review*, 35(3-4), pp.260-271.
- Salah, S., Carretero, J.A. and Rahim, A. (2010). 'The integration of quality management and continuous improvement methodologies with management systems', *International Journal of Productivity and Quality Management*, 6(3), pp. 269-288.
- Scottish Fire and Rescue Service (2018). 'Scottish Emergency Services National Collaboration Strategy'(Online), Available at: https://www.firescotland.gov.uk/media/1277778/20180426bsppc07_18emergencyervicesnationalcollaborationstrategy_complete.pdf, (accessed on 10/02/19).

- Scottish Fire and Rescue Service (2019), 'About Us' (Online), Accessed at: <https://www.firescotland.gov.uk/about-us/whoweare.aspx>, (accessed on 09/02/19).
- Scottish Government (2012), 'Police and Fire Reform (Scotland) Act 2012' (Online), Available at: <http://www.legislation.gov.uk/asp/2012/8/contents>, (accessed on 10/02/19).
- Scottish Police Authority (2015), 'About Us' (Online), Available at: <http://www.spa.police.uk/about-us/>, (accessed on 11/02/19).
- Scottish Police Federation (2019), 'Welcome' (Online), Accessed at: <https://spf.org.uk/>, (accessed on 12/02/19).
- Shaw, E. (1999). 'A guide to the qualitative research process: evidence from a small firm study', *Qualitative Market Research: An International Journal*, 2(2), pp. 59-70.
- Silverman, D. (2010), *Doing Qualitative Research: A Practical Handbook*, 3rd ed., Sage, London.
- St. Andrews First Aid (2019), 'Our History' (Online), Accessed at: <https://www.firstaid.org.uk/charity/about-us/history/>, (accessed on 10/02/19).
- Suarez Barraza, M.F., Smith, T. and Dahlgard-Park, S.M. (2009), 'Lean-kaizen public service: an empirical approach in Spanish local governments', *The TQM Journal*, 21(2), pp. 143-167.
- Svensson, C., Antony, J., Ba-Essa, M., Bakhsh, M., and Albliwi, S., (2015), 'A Lean Six Sigma program in higher education', *International Journal of Quality & Reliability Management*, 32(9), pp. 951-969.
- Waring, J.J., and Bishop, S. (2010). 'Lean healthcare: Rhetoric, ritual and resistance', *Social Science & Medicine*, 71(7), pp. 1332-1340.
- Terpstra, J. and Fyfe, N. (2015), 'Mind the implementation gap? Police reform and local policing in the Netherlands and Scotland', *Criminology & Criminal Justice*, 15(5), pp. 527-544.
- UNISON (2019), 'About' (Online), Accessed at: <http://www.unisonpolicestaffscotland.org/about/>, (accessed 09/02/19).
- Witcher, B.J. and Butterworth, R. (2002). 'Hoshin Kanri: Policy Management in Japanese-Owned UK Subsidiaries', *Journal of Management Studies*, 38(5), pp. 651-674.
- Yin, R.K. (2014), *Case Study Research: design and methods*, 5th ed, California: Sage Publications.

Appendix ‘A’ – Semi-Structured Interview Questions (Executive Leadership Perspectives)

Interview Questions:

Question and Possible Supplementary	Link to Literature Review (Antony & Rodgers, 2019)
<ul style="list-style-type: none"> • What is your own understanding of Continuous Improvement and how familiar are you with methodologies? 	Lack of shared understanding of methodologies?
<ul style="list-style-type: none"> ○ IS CI a priority for your organisation? ○ Is there a CI team or infrastructure in place? ○ What is your investment in CI? ○ Have you used, or do you have any training in any methodologies? ○ Do you feel any methodologies are not appropriate to your organisations? ○ What number or percentage of your employees are actively pursuing CI projects? 	Linked to debate around relevance of LSS to public sector?
<ul style="list-style-type: none"> • How is continuous improvement linked into the strategic priorities of your organisation? 	Lack of reference to strategy?
<ul style="list-style-type: none"> ○ Are any specific methodologies included? ○ What strategic documents reference CI? ○ Why have you included/not included CI in your strategic documents? ○ What outcomes are you seeking from your CI programme/strategy ○ How did you select the methodology? ○ Do you use any specific tool such as Hoshin Kanri? ○ Do you have a roadmap for implementing and sustaining CI? ○ How do you measure success? 	Focus on ‘quick wins’ and cost reduction. Why is Lean most commonly selected?
<ul style="list-style-type: none"> • What support, guidance or direction do you feel should come from government, elected representatives regarding CI in the Public Sector? 	Lack of reference to role of government
<ul style="list-style-type: none"> ○ National Policy/Strategy to guide public sector agencies? ○ Should there be funding for Training and Development? ○ What should the focus of training be? ○ Should there be cross sector Reward and recognition of staff and what form should it take? 	Theme of single agency deployment of CI

<ul style="list-style-type: none"> ○ Should there be clear guidance in breaking down silo's between public sector organisations for CI initiatives? 	
<ul style="list-style-type: none"> ● What do you feel the role of HR functions/departments should be in CI Initiatives? 	Lack of employee engagement
<ul style="list-style-type: none"> ○ Is there conflict between HR change management and organisational development role? ○ Are HR embedded within the CI initiative? ○ How is staff engagement and formal staff consultation balanced? ○ Who provides leadership for the CI programme? ○ What is the role of leadership for sustainability? 	Bypassing HR function in CI programmes Work intensification
<ul style="list-style-type: none"> ● Does Continuous Improvement reflect or align with the ethics or values of your organisation? 	Lack of customer involvement
<ul style="list-style-type: none"> ○ Do your values explicitly include the development and empowerment of staff? ○ How do you capture the voice of the customer, if so how and what challenges do you experience? ○ What analysis do you undertake with VoC data? ○ Do your values reflect cost reduction or quality standards? 	Lack of employee engagement
<ul style="list-style-type: none"> ● How do you develop and empower your staff in delivering CI initiatives? 	Lack of employee engagement
<ul style="list-style-type: none"> ○ How are staff trained? (format, duration, content) ○ Are staff motivated to contribute? ○ Do staff feel empowered to contribute? ○ How are staff rewarded/recognised for contributing? ○ How are improvements raised, actioned and communicated? ○ How is leadership demonstrated? 	Lack of holistic use of CI (focus on tools and techniques)
<ul style="list-style-type: none"> ● Does the organisational culture encourage or hinder participation in CI programmes? 	Public Sector Motivation
<ul style="list-style-type: none"> ○ How are projects selected? ○ Do staff feel included? ○ Do staff feel if they contribute they will be listened to? ○ Are staff change weary or remain keen to make a difference? ○ Are first and second line managers committed to the CI initiative? ○ Are staff concerned about work intensification? 	Public Sector Culture

<ul style="list-style-type: none">• In your view what are the opportunities for sustaining a culture of continuous improvement in the public sector and what are the barriers and challenges?	
<ul style="list-style-type: none">• Do you undertake radical improvement as well as continuous improvement, if so how often?	