



SHARPENS YOUR THINKING

## **Lean: Changing the organizational discourse for facilities management?**

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### **Published version**

TYLDSLEY, S. and WYTON, P. (2011). Lean: Changing the organizational discourse for facilities management? In: 10th EuroFM Research Symposium: Cracking the productivity nut, Vienna, 24-25 May 2011. (Submitted)

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## **EuroFM Research Symposium**

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### **PAPER TITLE**

**Lean: Changing the organizational discourse for facilities management?**

### **ABSTRACT**

#### **Purpose**

NHS Trusts have begun to use Lean Management thinking to engage staff in redesigning organisational processes to reduce waste, improve quality and increase efficiency ensuring patients receive effective treatment. Lean is starting to be utilised within FM but despite evidence of process redesign and waste reduction there is no research on the impact on the people involved, or the support required for successful implementation.

#### **Theory**

The study sought to understand the engagement with, and views of, lean approaches by facilities staff utilising these techniques in reorganisation projects. The understanding was applied to a case study of process redesign of the laundry service.

#### **Findings**

The study found that FM staff saw lean providing an opportunity to develop a better understanding between FM staff and their customers. This contributed to FM staff and customers engaging in joint process redesign, where the co-creative approach enabled the development of efficient and effective patient focused FM services.

It was observed that for many FM staff the lean journey can be frustrating, traumatic and in some cases life changing. Staff of all levels need the support of effective leaders as they experience changing approaches to decision making and process design.

#### **Originality/Value**

The study provides further evidence to support the proposition that translational leadership and awareness of both 'horizontal' and 'vertical' discourses is a key enabler of effective facilities

## **Keywords**

Facilities Management, Lean Thinking, Change, Co-Creation.

## **1 INTRODUCTION**

The National Health Service (NHS) is subjected to major government reforms of service delivery, financial governance and patient choice (BBC, 2010).

Following introduction of the NHS Plan (2000), NHS Trusts (NHST's) are faced with the dilemma of improving the quality of patient centred services, whilst increased pressures on public funding (Department of Health, 2008) will commit NHST's to achieve more with less funding.

Since 2005 several NHST's have begun to use lean (Bolton Hospitals NHS Trust, 2006) to reduce waste and engage workforces to meet increased expectations of patients and improve quality (Jones and Mitchell, 2006).

In 2005 Royal Bolton Hospital NHS Foundation Trust (RBHNFT) was chosen to pilot lean within healthcare. There have been a range of activities involving teams from different departments including Facilities Management (FM). A particular version of lean has emerged entitled the Bolton Improving Care System (BICS). BICS is based on the fundamental criteria of lean management applied to healthcare that can be used at different levels – departmental, patient journey, or hospital wide (Fillingham, 2008). Instrumental to BICS has been the focus on and development of rapid improvement events (RIE's).

Healthcare services for the trust are centrally located at the Royal Bolton Hospital, a 767 bedded general acute hospital. The laundry service is an in-house provision, and is an FM function within the trust. In April 2009 a customer survey was undertaken by the FM Division which indicated a general perception amongst clinical staff that the Laundry Service was poor and did not meet their needs. As a response in February 2010 the Laundry Services Team embarked on what was its third lean journey, undertaking a RIE, at this time major investment was needed to support the laundry service, the trust needed reassurance that the service and required investment offered value for money.

The Laundry Department employed around 50 full and part time staff by a mixture of direct employment and agency staff, processed 55000 items of linen per week for RBHNFT and around 10000 items for external customers and is located in the centre of the site occupying the same building for over sixty years. The last major investment in equipment was in the 1980's and is seen as coming to the end of useful economic life

The Trust laundry service had participated in two lean events, initially the events had been seen as a success (Fillingham, 2008). New processes had been developed and introduced however, staff returned to the traditional laundry processes. It is difficult to understand the reasons why staff became disengaged however lean initiatives can be incredibly unsettling (Jones and Mitchell, 2006) and at times stressful and frustrating (Vidal, 2007).

This paper provides a case study of the latest lean intervention with aim of answering if lean can help NHS FM staff participate in organisational conversations that assist FM professionals design patient focused services that support the organisation's aspirations?

Early indications are that this intervention has been successful in achieving sustained adoption of new working practices in physical processing, staff behaviours and interaction with clinical colleagues.

## 2 STUDY AIMS AND OBJECTIVES

Previous lean interventions within the laundry had been only partially successful, and there was a need to understand this better and enable a greater chance of success, the main objectives of the study were:

- Gain an understanding of the engagement with lean,
- Understand views held by FM staff of lean,
- Identify any change in organisational discourse.

The research study investigated what NHS FM Staff believed enabled and obstructed the implementation of and what will a future NHS FM service would look and feel like if lean initiatives were successfully implemented.

## 3 WHAT IS LEAN MANAGEMENT

Lean developed as a codification of the Toyota Production System (TPS) in the 1980's (Womack et al, 2003), RBHNFT introduced BICS to break away from lean's association with the car manufacturing industry with a definition (BICS, 2006: 9):

*A management philosophy that utilises a set of tools which can be applied across all activities of an organisation. Lean is guided by a set of principles that:*

- *Defines the way we do things.*
- *Defines the way we think about improvements.*
- *Shapes the belief about what is possible.*

*The aim of a Lean approach is to improve quality from the patient's perspective. The emphasis is on frontline staff improving the process about which they have an in-depth knowledge. This means getting rid of what does not add value (waste) so that they can spend their time on the work that actually does add value to the patient*

Lean has allowed staff to engage in organisational culture were staff at all levels and disciplines are continuously learning about organisational processes from different perspectives ultimately providing patients with improved services and moving the organisation away from its traditional role culture (Handy, 1993). BICs has provided opportunity for staff at the bottom of the organisational structure to have input in the redesign of services within which they work.

## 4 METHODOLOGY

An initial research study investigating the engagement with lean involving around 50 staff from across all areas of RBHNFT FM Division was completed. The study involved staff participating in focus groups and the findings were applied to the Laundry Department Case Study that is the subject of this paper.

Findings included the need for activity that:

- Enabled breaking free from the past

- Understanding of the need for the change

- Full staff engagement and contribution

- Clear understanding of the process, the benefits and solutions within and outside the RIE

This paper focuses on the lean management intervention within the RBHNFT Laundry Department between February and June 2010. This involved studying the behaviour of five Laundry staff during a RIE and subsequent implementation; focus groups were undertaken with a number of the event members - these being two supervisory staff and three laundry assistant staff, these staff work within the FM division and are considered FM staff.

Data was also gathered through observation and discussion with participants, collection of outcome statistics and personal reflection of the author who took the role of team coordinator on the intervention. In taking a participant observer position (Saunders, Lewis and Thornhill, 2009) the researcher was able to fully participate within the lean event case study and observe the behaviour, actions and responses of event participants. All members were aware of the intentions to use the department's latest lean intervention as a research case study.

The case study approach was chosen to investigate within a real life setting (Saunders, Lewis and Thornhill, 2009) providing opportunity to gain in-depth data collection (Creswell, 2007) taking a phenomenological view-point identifying how the phenomena affect human behaviour aiming at gaining a deeper understanding of the nature or meaning of our everyday experiences (Van Manen, 1997). To support the phenomenological view-point a narrative coding approach was adopted (Bazeley, 2007). The number and nature of emergent nodes are presented in tables 1, 2 and 3 below and discussed as indicative of the changing understanding, and engagement through the intervention. Laundry staff participated in the RIE and the focus groups each participant begins to tell a story of their life experiences as they encounter lean.

## 5 FINDINGS AND EVALUATION

### 5.1 A Reflection of a Lean Journey.

Following completion of the intervention the team co-ordinator reflects upon that intervention:

At the commencement of the RIE members of staff from the Laundry were joined by clinical colleagues from several hospital wards.

In a room where there was an eerie silence with staff grouped together based upon their professions, the RIE began with the team being informed of reasons and scope for the week long project.

Participants had differing perceptions of what needed to be achieved. Laundry staff were keen to improve working conditions and achieve long term job security, members from clinical departments demanded they receive a better service.

Initially the event involved mapping the laundry process from collection of dirty laundry, the laundering process, to delivery of clean laundry to ward. Previous lean interventions within the laundry had focused on individual processes i.e. the dirty linen sorting and not the whole laundry system.

During the event staff engaged in obtaining process data utilising several lean tools including value stream mapping, fishbone diagrams, and five whys analysis. When data was analysed to assess process times, shift patterns and staffing levels, lean terminology and buzzwords were frequently used. This resulted in some staff becoming frustrated, confused, disengaged and ultimately disinterested (Vidal, 2007) in what was an important part of the redesign process.

A senior clinical participant constantly questioning the laundry team caused frustration as staff felt the approach was critical of their service. Yet the process contributed to laundry and ward staff developing an improved understanding of each other's service. Some clinical staff had only intended to participate on the first day of the event, they acknowledged their understanding of the laundry service was limited and appreciated the laundry service was more complex than envisaged. There was positive reaction of laundry staff as a senior member clinical staff (Ward Sister) arranged to continue participating in the event for the full week.

On day four new practices were trialed, the speed of change became too much for a laundry supervisor. The member of staff became upset, feeling that the authority of the role was being eroded by assistant grade staff becoming empowered. Coming to terms with change can be incredibly unsettling for staff (Jones and Mitchell, 2006). The supervisor's experience resulted in a temporarily withdrawal from the event, the member of staff returned to play a key role in the RIE implementation.

On day five a solution had been identified, there was realisation that shift patterns would change to allow the service to operate over seven days and processes would be broken down and redesigned ensuring the laundry matched the needs of wards and patients, whilst services to private clients were to be discontinued. In this the process could be seen to generate thinking and solutions that were innovative and counter intuitive (Seddon, 2010).

The reaction of laundry staff was surprising in that there was not more anger and frustration (Kubler-Ross, 1969). There seemed a realisation that the service could not continue in its current format, but there was concern regarding job security.

During implementation, laundry staff were observed becoming advocates for change, promoting the positive aspects of process change becoming more involved with customers, reacting to concerns as an opportunity to view processes from a different perspective.

It was encouraging to observe the change in relationship with wards with representation on the RIE. There appeared to be a better understanding of the laundry service and a deeper appreciation of the work and commitment undertaken by laundry staff in ensuring effective service.

Clinical staff involved had become advocates of the service, explaining to clinical colleagues the role and complexities of the service. This included re designing ward procedure and practices resulting in reduced consumption of linen.

Since February 2010, the laundry service has undergone immense change. The laundry has withdrawn from most of its commercial contracts. Staff levels have been reduced; this has been achieved without the loss of employed Trust staff. Laundry now provides services over a seven day period, this has been achieved through acceptance of new working patterns.

The working environment has improved with less clutter and chaos to a process that provides some order. When the service does not go to plan and bottlenecks appear, staff look for solutions, problems are now identified and broke down into smaller problems (Goldratt and Cox, 2004, Balle and Balle, 2005).

The Laundry team have reduced operating cost resulting in a projected annual expenditure reduction of around £100,000.00 as sourced from internal management reports. The process of value mapping has a side benefit of improving the collection, analysis and understanding of management information generated. This has enabled recognition of the impact of the changes made, the laundry team have continued to process 50,000 items of laundry per week but are now able to turnaround a ward's daily laundry from collection to delivery in under six hours compared to five days before the latest intervention.

## 5.2 Summary of observed impact

<b>Initiatives Implemented Since February 2010</b>	
<b>Reductions in Pay Cost.</b>	
<ul style="list-style-type: none"> <li>Reduction in Laundry whole time equivalent Staff from 50 to 35.</li> </ul>	
<b>Improvements in Quality of Service.</b>	
<ul style="list-style-type: none"> <li>Laundry provides 7 day service (Previously 5 day service)</li> <li>Wards and Department have own identifiable linen which places responsibility on Clinical Staff to manage stock.</li> <li>Laundry Staff now deliver and collect linen from Wards and Departments (Service previously undertaken by outsourced service provider)</li> <li>Turn round time from dirty linen collection to clean linen delivery to 6 hours for High Turnover wards and 24 hours other areas,</li> <li>Reduction of Linen Stock held to 4 days previously 7.</li> </ul>	
Reduction in annual pay cost at 1 <sup>st</sup> April 2011 compared to 1st April 2009.	£222,175.00
Reduction in annual non pay cost at 1 <sup>st</sup> April 2011 compared to 1st April 2009.	£157,478.00
Cost saving to trust for Laundry carrying out delivery and collection service.	£40,000.00
Savings sub total	£419,653.00
Annual loss of income - 1 <sup>st</sup> April 2011 compared to 1st April 2009.	£317,501.00
Total annual operating cost saving - 1 <sup>st</sup> April 2011 compared to 1st April 2009.	£102,152.00

**Table 1 Illustration of Measured Impact on the Laundry Service (sourced from internal management reports)**

## 5.3 Focus Group Evaluation

Focus Group participants were asked 'what do laundry staff believe would assist the successful implementation of a lean designed laundry and what are current barriers that may limit successful implementation?'

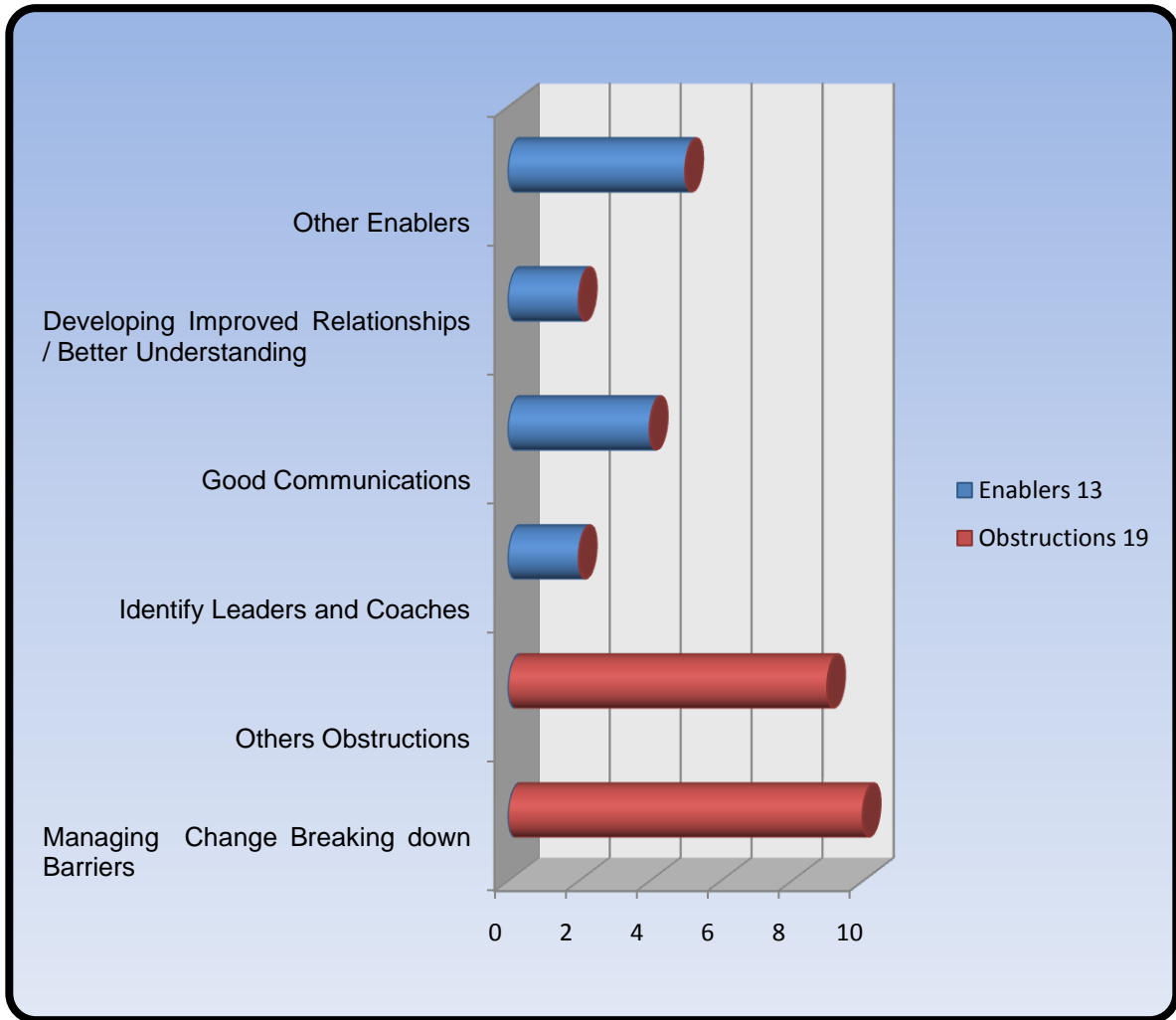
The main enablers and obstructions that were identified during pre lean event focus group discussions are illustrated in Figure 1 below.



Initial discussions were dominated by themes that obstructed lean implementation. Participants discussed how after previous lean events staff had initially engaged in new processes, but after a short period had returned to using traditional approaches, staff became disengaged and demoralised.

Participants believed there was a reluctance to sustain changes when there seemed a lack of investment by the Trust to support changes.

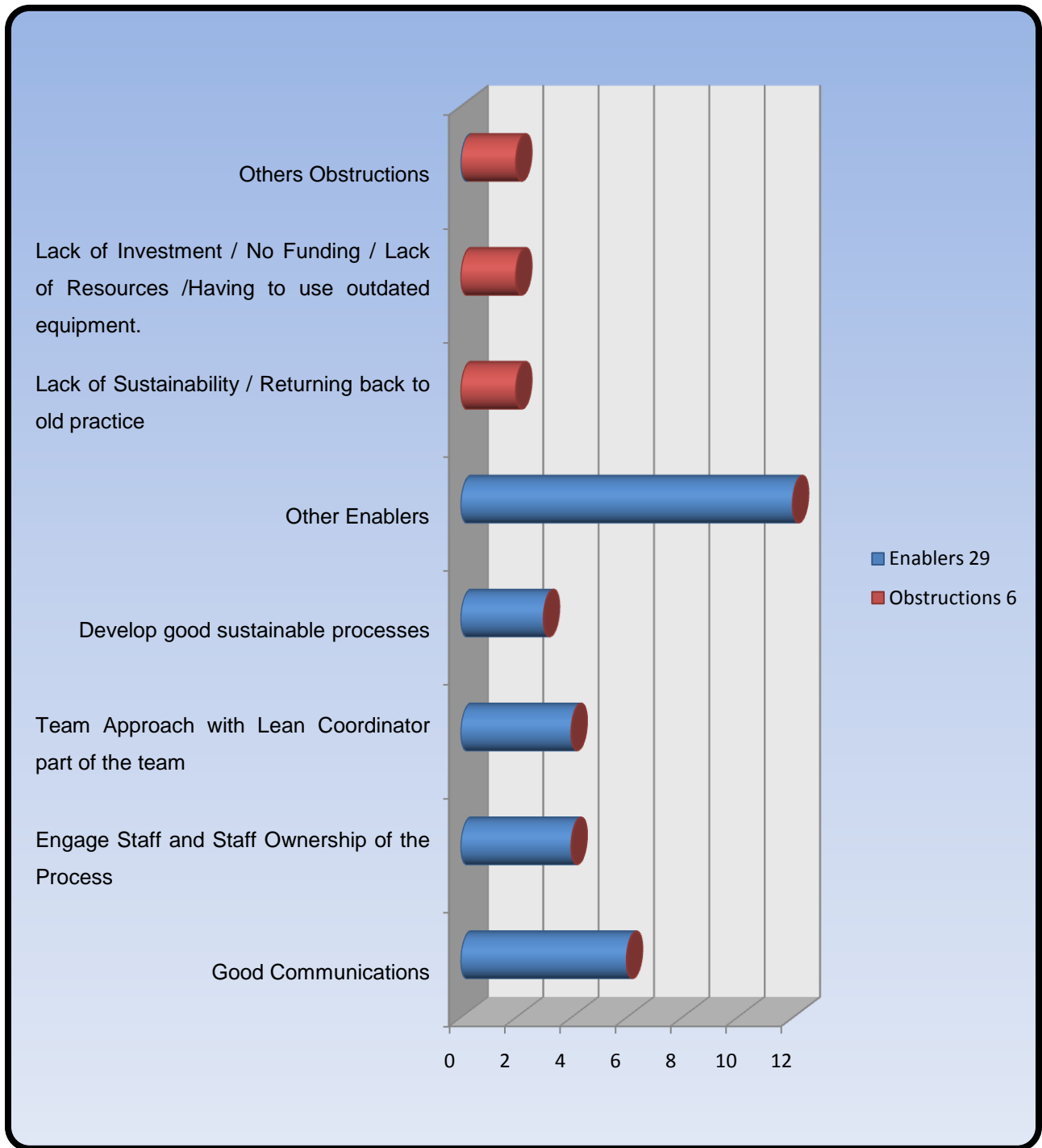
During the Pre event focus group, discussions centred on the importance of good communication and laundry staff being supported and coached through change by leaders within the department.



**Figure 1: Emergent Nodes from Pre Event Focus Groups - What did laundry staff feel would obstruct or enable the implementation of a new lean designed laundry service.**

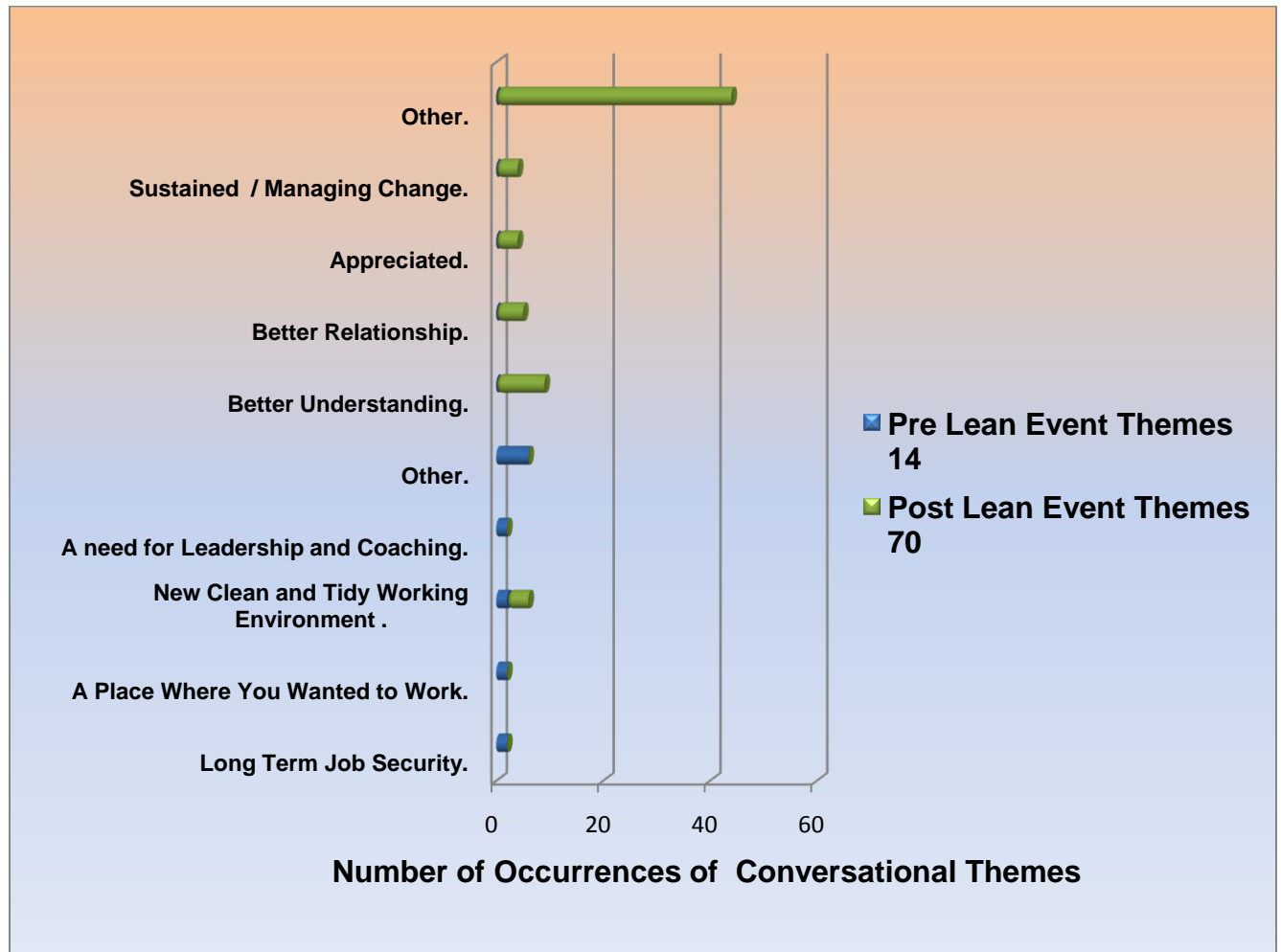
When asked the same question following the event participants were positive, the success of new processes dominated discussions as illustrated in Figure two below.

Participants identified the themes of good communications, engaging staff, a team approach and developing sustainable processes contributed to successful implementation.



**Figure 2: Emergent Nodes from Post Event Focus Groups - What did laundry staff feel would obstruct or enable the implementation of a new lean designed laundry service.**

Figure 3 illustrates the themes identified by the focus group prior to and following the event. Many more themes appeared during the post compared to the pre event focus group, emphasising the developing understanding and appreciation of the wider situation.



**Figure 3: Emergent Nodes from Pre and Post Event Focus Groups - If lean initiatives can be successfully implemented, what will a future lean designed Laundry service look and feel like.**

## 6 FOCUS GROUP AND LEAN CASE STUDY EVALUATION

Through the Focus Groups and Lean Event Case Study closely linked themes emerged and can be broken down into three key areas:

- Managing Change and Breaking Free from the Past.
- Staff Engagement.
- Better Understanding

At the commencement of this study the author believed that staff commitment to FM lean events has been mixed. In some cases staff have fully embraced new designed processes, whilst other staff, after initially committing returned to using traditional systems. Kegan and Lahey (2001) discuss the concept of the immunity to change where people have competing priorities people can relate to a proposed transformation, however often return to a troubling reality.

With the latest laundry lean intervention, after an initial stage of concern, the old processes were seen to be ineffective; enthusiasm grew as a new future vision was developed. Team members became locked into a reinforcing process (Senge, 2006) as team participants talked and pursued a shared vision.

The new laundry process was not shared by all, a proselytizing action commenced as staff and customers from outside the event questioned the vision and how it would affect their working lives, this caused staff to question becoming involved in the new 'religion of lean'. Time was needed to adjust and engage in the new process, the change affects the department's customers; they also need time to buy in.

The author observed laundry participants using language free of lean jargon and buzzwords to engage their colleagues and translated a message of the importance of breaking free from an outdated service to one that is designed to effectively support the patient.

Supervisors and Managers have began to change their approaches from a direct management style to introduce a coaching style that supports and guides staff through the process of change.

Figure 4 illustrates the Model of the lean honeycomb applied to the RBHNFT Laundry developed using Johnson, Scholes and Whittingham (2005) Cultural Web Concept and Darwin, Johnson McAuley (2002) Realist Concept of Culture.

The model illustrates three staff groupings of Managerial and Supervisory, Core Services Staff (Customer) and Supporting Services (Operational Staff) each group influenced to differing degrees by the strategic aims of the organisation. As each group embarks on their lean journey each will have subtly different aspirations regarding the outcome. The honeycomb represents the complex interconnections of diagnostics, tools and techniques to identify waste and value whilst connecting staff with organisational aims and the three main outcomes of managing change, better understanding and engaging staff to achieve sustained implementation

The use of lean tools provides a forum in which operational staff, their supervisors, managers and customers can come together to gain a better understanding of how organisational systems work (Seddon, 2010) and co-creating the adopted solution (Pralhad and Ramaswamy, 2004).

The lean honeycomb illustrates that all staff need a better understanding, both from a supporting and core services perspective, how services are to be provided. All parties learn about the procedure and process of these services whilst developing understanding why change needs to occur, whilst being supported by the leadership and vision of Trust supervisory and managerial staff, breaking free from the old patterns of outdated rituals and breaking down the barriers of the immunity to change (Kegan and Lahey, 2001).

Central to these changes the study has found that there is a need for a number of factors to be present for increased likelihood of successful intervention:

A recognised need for change

Support and commitment from senior management to the solutions identified

Internal coaching support for all involved in what is a difficult and challenging process

Adoption of jargon free language

Recognition that the RIE, those involved and the solutions identified may be viewed as isolated from normal business

Addressing the whole system and incorporating input from various sectors of that system to gain a more complete understanding



Figure 4 Model of the Lean Honeycomb –

## 7 CONCLUSION

Currently the NHS is subjected to major government reforms of service delivery, NHS Trust will need to meet the increased expectations of patients whilst improving service quality and achieving cost reductions by reducing bureaucracy and waste.

Since 2005 RBHNFT has introduced a version of lean management entitled the Bolton Improving Care System (BICS) which as involved the use and development of RIEs.

The case study provided an opportunity to observe a lean journey in which laundry staff and clinical colleagues embarked with a joint aspiration of improving understanding and redesigning a service that that was cost effective and supported patient needs.

At the start of the RIE laundry staff were sceptical of the motives of their clinical colleagues, it was observed after a short time that the BICS approach provided an environment in which FM staff and clinical colleagues can work together in a multi disciplinary team to co-create organisational systems that contribute to efficient and effective patient focused FM services and change the laundry / clinical discourse.

It was observed that lean can be frustrating, traumatic and stressful for participants, time is needed for some staff to come to terms with change which can involve breaking with traditional systems or organisational culture.

During Focus Groups which were undertaken prior and post the RIE event, participants identified themes such as committed leadership, good communication, ensuring that any new processes were sustainable, engagement of staff and developing better understanding were important factors for ensuring successful implementation.

Three closely linked themes emerged:

- Managing Change and Breaking Free from the Past.
- Staff Engagement.
- Better Understanding.

The Lean Honeycomb model illustrates the complex interconnections of supporting, core and supervisory staff each with different aspirations to achieve improved service delivery and organisational performance.

The actions taken to support the process of change demonstrated that lean can achieve a wide level of engagement with co-created solutions that can be innovative and counter intuitive. That the process can provide better, wider organisational awareness, but that understanding of the process in a non jargon way is crucial. The process provides opportunity for different functional units to understand each other, and develop the intra organisational discourse.

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