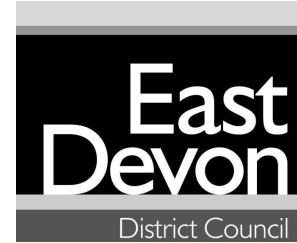


# Agenda Item 9

**Housing Review Board**

**12 June 2008**

**JG**



## Systems Thinking update

### Summary

This report gives an update on the application of Systems Thinking in housing by providing a more detailed explanation of the background and use of the technique and how we are intending to apply this to our housing services. At the heart of the Systems Thinking methodology is the customer and a Check, Plan, Do process for assessing the work needed to meet customer demand.

The report also seeks a budget for the Systems Thinking work which is applicable to the Housing Revenue Account activities being scrutinised.

### Recommendations

- (1) To approve the use of Systems Thinking in housing, and
- (2) To approve a budget within the Housing Revenue Account of £10,000 for the project.

#### a) Reasons for Recommendation

To evaluate specific housing services using a Systems Thinking approach with the aim of improving the services by taking a customer perspective and reducing waste.

#### b) Alternative Options

Not to apply the Systems Thinking approach or apply it to different housing services from those identified.

#### c) Risk Considerations

Applying the technique inappropriately.

#### d) Policy and Budgetary Considerations

#### Positive Impact Overall

Affordable Homes.  
Excellent Customer Service.  
Inspirational Council.

#### e) Date for Review of Decision

Further update reports will be presented as the project progresses.

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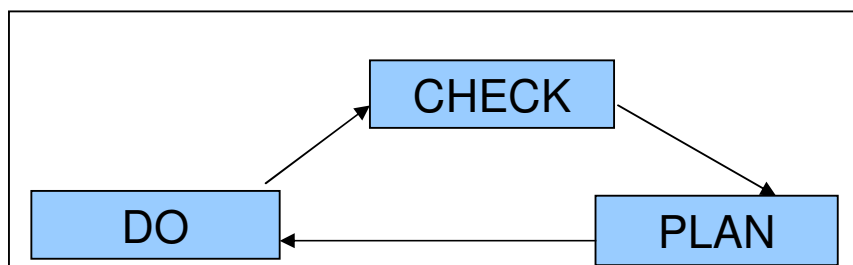
## **1 Background**

- 1.1 I reported to your last meeting on the concept of Systems Thinking and how this would be applied to specific housing services. The technique is having a major impact in the areas of planning applications and benefits by scrutinising service demand, considering what is valued by the customer and redesigning services to focus on what is important to the customer.
- 1.2 The drive for efficiency and continuous improvement means that social housing providers are constantly looking at new ways to deliver services more effectively and provide better value for money. Systems Thinking helps identify and reduce waste and is therefore a valuable tool in achieving efficiency savings, value for money and best value.
- 1.3 When I last reported we anticipated applying Systems Thinking to rent management, homelessness and housing advice in May, but due to some issues in the first two reviews we have delayed the start in housing until September.
- 1.4 In preparation for starting the project we have held a two day scoping session with the managers at the end of May. The purpose of these two days is set out in **Annex 1**.

## **2. Systems Thinking**

- 2.1 Systems Thinking is not a new approach, it has been successfully employed in the manufacturing sector for many years. However, more organisations in the service sector, including the public sector, are now exploring whether it can assist them to deliver their services more efficiently and effectively.
- 2.2 Traditional analysis of systems typically concentrates on separating individual parts of the system and improving them, often without reference to one another. Systems Thinking, by contrast, analyses a system in a fundamentally different way. It focuses on the relationship between the various parts of the system, so that instead of isolating smaller and smaller parts, the analysis is widened as all other parts are taken into account.
- 2.3 Systems thinkers say that it is this relationship between the parts, not the parts themselves that is essential. Systems are more than the sum of their parts. Even if the parts can be identified and separated out, this does not help with the problem if the relationships and their effect on the system are ignored.
- 2.4 The Systems Thinking methodology is adapted for the service sector from the Toyota Production System.
- 2.5 At around the same time as Systems Thinking began to develop, Taiichi Ohno, who developed the Toyota Production System, wanted to turn Toyota into a leading car manufacturer. Ohno studied the American Ford plant before manufacturing in Japan and incorporated some techniques into the Toyota Production System. However, he also saw various contradictions and shortcomings in the Ford system.
- 2.6 Traditional motor manufacturing started with the product, i.e. the car, which was then sold to the customer. However, today, in Toyota it is the customer's order that starts the process. Cars are manufactured in response to customer orders and therefore the orders pull the process through the operations. This concept is known as 'demand pull'.
- 2.7 This creates a natural saving in inventory, avoiding the stockpiling of finished cars awaiting an order. The Toyota Production System was originally named as 'Just In Time', the principle being that items only move through the production system as and when they are needed. (The contrast between the different manufacturing methods has been described as 'just in time' opposed to 'just in case'.)
- 2.8 'Lean systems' was developed by Vanguard from the Toyota model so that service organisations could use this type of Systems Thinking to improve performance.

- 2.9 In adapting the Toyota Production System for the service sector, Vanguard Consulting noted that a crucial difference between manufacturing and service is that services must respond to a range of variable factors. In housing, these factors include geography, priority and customer involvement as well as external factors such as regulation.
- 2.10 The traditional approach to the manufacture of a car would be to mass produce batches of cars in specific colours (citing economies of scale) and market them to the customer, in the meantime holding large inventories of cars in anticipation of sales.
- 2.11 The systems approach is to produce the car in the colour required when ordered and achieve economies in the flow of work by enabling the people who do the work to do what is needed (in this case, set the paint colour) as each car is produced. This creates a quick turnaround in production time and reduced inventory costs as cars are produced to order rather than ahead of it.
- 2.12 In a service industry such as housing, each demand is unique. The customer sets the requirement, which means that the system must be able to cope with a wide variety of demand and be designed to meet each customer's need. In addition, the customer is an active participant in the process rather than the passive recipient of the product.
- 2.13 Systems Thinking principles require that - **The work must be understood from the outside in.** The system established to do the work must be based on customer demand and therefore must consider the work from the customer's perspective.
- 2.14 **The system is designed against predictable demand.** The demands of the service need to be analysed to understand what the customer wants from the system.
- 2.15 **Understanding the flow of the work through the whole system is critical.** This means developing a complete understanding of the work from end-to-end. As shown in 2.2 above, Toyota found that economies come from understanding the flow of the work, not from scale of production.
- 2.16 **Pull.** This means that work is done against demand. Only do something when it is needed but when it is needed the right resources are pulled at the right time. At Toyota, the concept of Just in Time describes how material should be processed and moved in order to arrive 'Just In Time' for the next operation.
- 2.17 **The people on the spot have the responsibility and capability to do what is needed.** This is not empowerment for its own sake. The proper design of jobs ensures that people doing the job have the responsibility to act. With this responsibility comes an ownership of the work and a pride in it. The organisation should make intelligent use of its intelligent people.
- 2.18 The Systems Thinking methodology assesses a system from the customer perspective through a cycle of 'check' (an analysis of the 'what' and 'why' of the current system), 'plan' (is the time spent redesigning the system to eliminate or reduce waste where possible) and 'do' (the effort made to roll in the rest of the service to the new way of working).



2.19 As the diagram in 2.18 shows, the method provides for continuous improvement as the 'Check', 'Plan', 'Do' cycle continually assesses the service.

2.20 A brief description of the steps in the process is described in the table below.

Description of Check Plan Do		
Stage in process	What is it	What does it do
<b>Check</b>	An analysis of the what and why of the current system	Provides a sound understanding of the system as it is and identifies potential causes of waste.  'Check' asks.  What is the purpose of the system? What is the nature of customer demand? What is the system achieving? How does the work flow? Why does the system behave like this and what is the thinking and focus that drive it?
<b>Plan</b>	Exploration of potential solutions to eliminate waste.	Provides a framework to establish what the purpose of the system should be and how the flow of work can be improved to meet it.  What needs to change to improve performance against purpose? What action could be taken and what would be the predicted consequences? How should success be measured and against what measures should action be taken?
<b>Do</b>	Implementation of solutions incrementally and by experiment.	Allows for the testing and gradual introduction of changes whilst still considering further improvement. Takes the planned action and monitors the consequences against purpose.

2.21 We shall be following the review process described above and applying the technique to customer demands from "I'm moving out" through to "I need somewhere to live" through to "I'd like you to help me pay the rent" (from an operations perspective this will involve the voids process, housing register administration and homeless applications, allocations (Choice Based Lettings) and rent management). Early on in the project we have to identify the purpose of the system for example rent management for new tenants the purpose could be – *right amount, right time so the customer knows what to pay, when to pay and how to pay it.*

- 2.22 For repairs the purpose could be – *to do the repair right, first time and achieve what matters to the customer*. For allocations the purpose might be – *right tenant, right home as expediently as possible*.
- 2.23 It is likely that the Check Team will need to spend three days a week for at least six weeks on the first phase of the project. It is essential that those participating commit fully to the process and are converted to Systems Thinkers, rather than retaining the traditional Command and Control approach to work. The redesign phase of the project will inevitably raise implications for job descriptions, management roles etc.
- 2.24 The Service managers will be undertaking some demand analysis prior to the Check Team being activated in September. We will also undertake some predictability work around for example the number, type and location of properties coming available for letting. As indicated above we are likely to consider three broad phases of a tenants' experience when considering the housing system as a whole end to end experience – Moving Out – Moving In – Living In – Council homes.

### **3. The costs of Vanguard**

- 3.1 To successfully implement Systems Thinking we need to be guided and facilitated by an expert in the technique. We are using the Vanguard Consultancy on reviews in Planning and Benefits. Whilst we will be mainly guided by Denise Lyon as lead officer for this work, I am proposing, with her support, that we also use Vanguard's expertise at key points in our review. For this, we would need to set aside a sum of £10,000 within the Housing Revenue Account to finance the elements of the project which relate to landlord activities such as rent management and allocations initially. There is a healthy surplus on the Housing Revenue Account going into 2008/09 to finance this work.
- 3.2 There may be the need to backfill some posts whilst staff are seconded into the Check Team. There is a real danger that performance deteriorates while considerable resources are devoted to the Systems Thinking work.
- 3.3 The cost of the work should be recovered through efficiencies and cutting out waste in our systems once we redesign systems.
- 3.4 Applying Systems Thinking in housing usefully builds upon the work we have been doing to improve housing services and the customer experience. The ideas are also complementary to the 'back to basics' work we did prior to the Audit Commission inspection. The process will inevitably uncover considerable wasteful elements of work and make us question why we do work in particular ways. We will identify processes which are not customer friendly and need to dismantle systems which have built up over many years.
- 3.5 It is an exciting opportunity to fundamentally review some of our systems and redesign them to make them more efficient and customer focused.

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### **Legal Implications**

There are no legal implications highlighted within the report.

### **Financial Implications**

The financial implications are included in the report.

### **Consultation on Reports to the Executive**

The Executive Board have approved the use of Systems Thinking for Council services.

## **Background Papers**

- Systems Thinking in the Public Sector the failure of the reform regime ... and a manifesto for a better way. John Seddon Triarchy Press 2008.
- A Systematic Approach to Service Improvement, Evaluating Systems Thinking in Housing, September 2005, Office of the Deputy Prime Minister.

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John Golding  
Head of Housing and Social Inclusion.

Housing Review Board  
12 June 2008