Research and Library Services

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Systems Thinking and Public Sector Efficiencies

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This paper introduces a business improvement approach known as 'systems thinking'. Following a theoretical explanation of the principles, some case studies of the implementation of the approach are presented. Finally some considerations for the Northern Ireland efficiency agenda are raised.

KEY ISSUES

- **The systems-thinking approach has been proven to work – first in industry and later in the public sector in both England and Scotland.**

- **There is little available evidence of systems thinking having been applied in Northern Ireland.**

- **It is apparent that with the careful selection of departmental functions and appropriate business areas the methodology could deliver benefits to the Northern Ireland public sector - in terms of specifying output measures, driving the effectiveness of some programmes and delivering efficiencies as a consequence.**

- **It is also clear that the systems-thinking approach is not suitable for all programme areas: it is not likely to be effective for application in highly complex interventions and spending programmes.**

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1. INTRODUCTION

The Northern Ireland Assembly's Committee for Finance and Personnel has recently been considering and taking evidence on the issue of efficiency savings. It also has an interest in the workings of the Department of Finance Personnel's (DFP) Performance and Efficiency Delivery Unit (PEDU).

The purpose of this paper is to draw the Committee's attention to an approach to improving performance and efficiency called 'systems thinking'. Essentially, this is a business-improvement methodology, and, as such, is one of a range of approaches that have been developed in management theory and practice. In the last few years, the methodology has been applied with some success in the public sector in England and Scotland.

This paper is intended to inform the Committee's consideration of departmental efficiency in the light of the shortcomings in the NI Departments' Efficiency Delivery Plans that have been highlighted by experts in evidence.[1]

The paper begins with a theoretical discussion which is necessary to understand how the approach works in practice.

2. WHAT IS 'SYSTEMS THINKING'?

In 2005, the Office of the Deputy Prime Minister published a report on three pilot projects applying systems thinking in local authority housing services. It explains systems thinking as follows:

> *Systems thinking takes many forms, but in all of those forms it examines issues from a 'whole system' approach. That is to say, it considers the system as a whole and not as a collection of separate parts. Failure to recognise the relationship between the parts of a system leads to a silo mentality. This focus on parts of a system, rather than the whole, can be the cause of numerous organisational problems such as resistance to change.[2]*

So, there are a number of ways of taking a 'whole system' approach. One way that has been tried and tested (in these pilot projects and elsewhere) is to consider **organisational purpose**. Importantly, the pilots sought to understand purpose in **customer terms rather than in terms of the organisation itself**.

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[1] See the following links to recent evidence sessions on the efficiency agenda:
http://www.niassembly.gov.uk/record/committees2009/FinancePersonnel/091202DepartmentalEfficiencyDeliveryPlan.htm
http://www.niassembly.gov.uk/record/committees2009/FinancePersonnel/091118EfficiencySavings.htm
http://www.niassembly.gov.uk/record/committees2009/FinancePersonnel/091111EfficiencySavings.htm
See also this link toe the evidence session on PEDU's review of Land and Property Services:
http://www.niassembly.gov.uk/record/committees2009/FinancePersonnel/090923PEDUReviewLPS.htm
[2] The report is available online at: http://www.communities.gov.uk/documents/housing/pdf/138058.pdf
(accessed 03 February 2010)

The table below illustrates the difference between systems thinking and the traditional management approach of 'command and control':[3]

Command and Control Thinking		Vanguard's Systems Thinking
Top-down	**Perspective**	Outside-in
Functional specialisation	**Design**	Demand, value and flow
Separated from work	**Decision-making**	Integrated with work
Budget, targets, standards, activity and productivity	**Measurement**	Designed against purpose, demonstrate variation
Extrinsic	**Motivation**	Intrinsic
Manage budgets and the people	**Management Ethic**	Act on the system
Contractual	**Attitude to customers**	What matters…?
Contractual	**Attitude to suppliers**	Partnering and co-operation
Change by project/initiative	**Approach to change**	Adaptive, integral

The principles of the methodology have been summarised in the following terms:

Principles of systems thinking[4]

- **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.

- **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.

- **Understanding the flow of the work through the whole system is critical.** This means developing a complete understanding of the work

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[3] Source: the Systems Thinking Review http://www.thesystemsthinkingreview.co.uk/index.php?pg=3
[4] Jackson 'A Systematic Approach to Service Improvement' (2005), ODPM, Available online at: http://www.communities.gov.uk/documents/housing/pdf/138058.pdf (accessed 03 February 2010)

> from end-to-end. Work done in Toyota found that economies come from understanding the flow of the work, not from scale of production.
>
> - **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.
>
> - **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.

Systems thinking theory is based originally on an industrial process developed by Toyota. In recent years attention has again been focused on an adaptation of the model by John Seddon.[5] He argued that:

> *Instead of treating all demand as 'units of production', demand [should be] understood in customer terms and action against value and failure demand improves productive capacity. Instead of management acting on the workers (inappropriately) both parties learn to act on the work, using measures that illustrate the organisation's capability to respond. The consequence is liberation of method – people learn through developing the method, they learn how to work against customer demands.[6]*

In other words, to develop an understanding of purpose in customer terms, organisations must first understand the **nature of demand** for their services. This will enable them to design their systems against the demands of their customers, rather than against the internal demand of their systems and processes themselves.

3. UNDERSTANDING DEMAND

One way of understanding demand is to divide it into two parts: 'value demand' and 'failure demand'.

Value demand – people wanting what your organisation(s) exists to provide.

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[5] Seddon, J 'Freedom from Command and Control' (2003) Vanguard, Buckingham
[6] Seddon, J 'Freedom from Command and Control' (2003) Vanguard, Buckingham (see page 49)

Failure demand – demand cause by your organisation(s) failing to do something for the customer or failing to do something right first time for the customer.[7]

A value demand becomes a failure demand when something goes wrong with the provision of the service.

For example, a value demand on the Northern Ireland Housing Executive would be: "I need a home. Can I rent one from you?"

A failure demand could be: "you have rented me a home but the boiler doesn't work."

Work can also be understood in these terms. Value work is activity that solves customers' problems and fulfils their demands. Everything else is waste.

The primary purpose of understanding demand is **not to increase efficiency**. The purpose is **to increase effectiveness**. The focus, in other words, is: satisfy customers' needs more effectively, rather than more efficiently. These must be understood as fundamentally different. It is argued that increased efficiency will come as a by-product of more effectiveness.

The Housing Executive, for example, could increase the efficiency of processing requests for new homes by implementing measures that reduce waiting times. If the end result is that houses are being let more quickly but the heating doesn't work, it cannot be considered an effective service – the customer's demand for a habitable home has not been satisfied.

4. UNDERSTANDING AN ORGANISATION'S SYSTEMS

There are a range of techniques that can be applied to understand how the systems and processes within an organisation interact. These include workflow mapping and more mathematically-based tools like systems capability charts and process behaviour charts.

Mapping the flow of work

To understand how well demand is being dealt with, it is possible to map the flow of work from first point of contact with a customer to the point where the demand has been met - even where this crosses organisational boundaries.

This was performed in Hull City Council, working with social workers, to map the flow of work from their customers' demands. In terms of adult social care there were 12 different services that a social worker could ask to be provided for a customer (ranging from home help to full domestic care). The process map

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[7] Presentation arranged by CIPFA on Efficiency and Measurement by Gavin Betts, Hull University Business School on 19 January 2010.

showed that there could be more than 120 different work steps in each process from start to finish. When these individual steps were evaluated it was found that between 25-33% of these steps added value.[8]

It follows, therefore that 67-75% of the work was 'waste'. Some 'waste' steps were necessary because of legal requirements (irrespective of the customers' perspective) and therefore could not be eliminated. But the process of identifying the 'waste' work, allowed the improvement of effectiveness to be focussed – the work should be designed to satisfy value demand. Any work that does not directly do that should ideally be eliminated.

Process behaviour or capability charts apply mathematical techniques not simply to identify trends or averages but also the predictability around those averages. This shows what the system is achieving and how predictable performance is.

The key to the success of these techniques is that they reduce confusion of the **data required for reporting purposes** with that which will **provide insight for understanding and improving the way work is organised**. In the words of Wheeler, "the process behaviour chart filters out the probable noise in order to detect the potential signals in any data set."[9] Therefore, they help analysts focus on what the source of a problem is: they shift emphasis from the results and toward the behaviour of the system that produced the results.

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[8] Presentation arranged by CIPFA on Efficiency and Measurement by Gavin Betts, Hull University Business School on 19 January 2010.
[9] Wheeler DJ 'Understanding variation: the key to managing chaos' (2000) SPC Press Knoxville, 2nd edition. (see page 54)

Data for reporting and data for understanding

In the work performed at Hull City Council mentioned above a process behaviour chart was produced that looked at the number of days that elapsed from the first point of contact by a customer requesting some form of social care provision to the eventual satisfaction of the demand.

Below is a process behaviour chart for these cases:
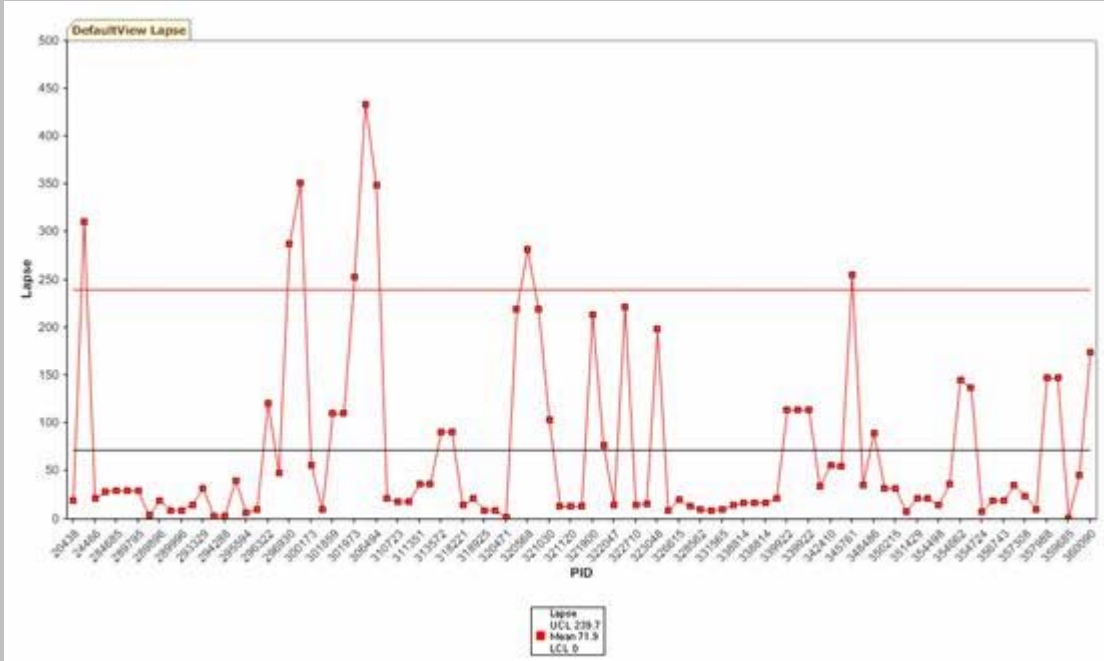
Each dot indicates a case. The vertical axis indicates number of days in the system before a demand is satisfied.[10]

It can be seen plainly that there were huge variations in the number of days that elapsed from significant numbers of cases taking fewer than 50 days, to one case being in the system for 450 days before the demand was satisfied.

The performance data required from the Council masked this variation. The average (represented by the black horizontal line) was 71.9 days. But there were a large number of cases that took considerably longer than that, at least hinting at systemic problems.

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[10] Source: presentation arranged by CIPFA on Efficiency and Measurement by Gavin Betts, Hull University Business School on 19 January 2010.

5. DESIGNING AGAINST DEMAND

Once the nature of demand and the behaviour of the system are understood the next stage is to redesign processes to eliminate waste.

Some waste cannot be eliminated:

> *Many activities, though not important from the customer perspective, are essential for the continued existence of the organisation. For example, adherence to sound audit principles is a cornerstone of good governance and if it is not done, the organisation is put at risk.[11]*

Under the systems thinking methodology, audit is not of direct benefit to the customer so is, strictly speaking, considered waste. But it is not suggested that audit be abandoned – there are indirect benefits to the customer that might not be clearly stated. For example, proper audit reduces the risk of fraud and improper use of resources.

But though *some* waste cannot be eliminated, there will probably be some that can. According to CIPFA:

> *This stage is about moving the picture of the process from the 'as is' to the 'should be' by identifying courses open that could be used to speed the flow by eliminating, simplifying, re-designing and/or combining steps to reduce waste and chances of error or other blockages. The effect is to minimise the number of hand-off's in the system and maximising the clarity and availability of information available to the staff operating the system. From these ideas, the most promising courses open are identified that may be feasibly pursued in the organisation.[12]*

Essentially, one uses the insight provided by the analysis and moves back to the workflow map identifying areas where flow is disrupted and where the work is not designed to satisfy value demand. Ideas for improving the process are considered and introduced – not just in one work area but throughout the whole system.

Ideally this should be performed by process by a project team working in the system rather than external to it – though external expertise can usefully be brought in.

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[11] Jackson 'A Systematic Approach to Service Improvement' (2005), ODPM, Available online at: http://www.communities.gov.uk/documents/housing/pdf/138058.pdf (accessed 03 February 2010) (see page 31)
[12] 'Introduction to Lean Thinking' CIPFA (2006)

6. CHECKING

After new processes have been introduced or road tested in pilot form, it is then important to check that they are effective. This can again be achieved through a range of approaches, such as redoing the process behaviour chart. Also external validation through customer satisfaction surveys can complement this evidence. If effective, the new procedures can be rolled out across the organisation. If not, the process of redesign begins again.

7. CULTURE

For systems thinking to be truly effective it needs to be embedded in the organisation's culture. It has been argued that this requires a shift to a culture that allows for failure. Rather than blaming someone for a process-improvement idea that hasn't worked, the emphasis should be on praising that individual for having come up with the idea in the first place.[13] This, in turn, can help to develop the skills and motivation in the workplace that are needed to identify possible improvements that should lead to increased effectiveness and, therefore, greater efficiency.

8. SYSTEMS THINKING IN PRACTICE

Published documentation relating to the implementation of systems-thinking methods in Northern Ireland – in departments or elsewhere in the public sector – is hard to find. There is however some evidence of its effective application in England and Scotland. A couple of case studies are presented in this section.

Case study: homelessness in Hull

This case is particularly helpful to illustrate the difference between performance data and targets for the purposes of reporting and for understanding/improvement of a system.

Hull City Council's homelessness service had a target to have no-one on B&B accommodation for longer than six weeks whilst they were awaiting re-housing and/or having their circumstances investigated.[14] The effect of this target was to put pressure on the system to focus on length of stay in isolation and not the proper satisfaction of the demand.

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[13] Source: presentation arranged by CIPFA on Embedding Efficiency by Penny Blundell, CIPFA Training and Development Services, 19 January 2010.

[14] Buxton, P 'The Illusion of Control: How Government Targets and Standards Damage Local Government Services' available online at http://www.thesystemsthinkingreview.co.uk/images/ARTICLE/139_The%20Illusion%20of%20Control%20v3%200.pdf (see page 7) (accessed 08 February 2010)

Individuals and families were 'churned' by the system in an attempt to meet the target: people were moved out of B&B accommodation and into a homeless hostel when their stay was approaching six weeks. They were then either re-housed or returned to a B&B some time later; there was an evident commitment to meeting a target rather than satisfying a need.

Systems thinking was applied and focused on the underlying causes of delays in the end-to-end process for assessing the claims of homeless clients. It was found that "the six-week target inadvertently absorbed valuable staff time in fire-fighting one symptom, rather than tackling the underlying causes of problems in the homeless assessment process."[15]

The systems-thinking approach was subsequently taken to understanding the homeless service at Hull. The process for dealing with B&B stays was refocused away from direct satisfaction of the external reporting target and the council was able to save £90,000 from its spending on B&Bs in less than one year (from over £250k in 2005/06 to £160k in 2006/07 – a reduction in operating costs of around 35%).[16]

A further case study from Hull illustrates the benefit of involving those who actually do the work in the redesign of processes. It also illustrates how an understanding of value and failure demand can contribute to service improvement:

Case study: housing benefits applications in Hull

Applications for housing benefit – amongst other customer requests for services in Hull - are processed through a customer contact call centre. A systems-thinking analysis of demand found that 60% of calls to the call centre were housing related – in a contract worth £2m per year this equated to £1.2m of activity. Further, 60% of those calls (i.e. 36% of the total calls to the centre – worth around £720,000 per year in terms of the contract) related to failure demand. Initial contacts led to a request for information from the customer in order for the housing assessors to process a claim.

It was found that 82% of new work arriving with the housing assessors was wrong in some way – either proof of identity was absent, or some other aspect of the required paperwork was incomplete. This gave staff a clear picture of where the problems lay, yet those who needed the information did not directly interface with the customers. Neither did staff in the call centre understand the process

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[15] Buxton, P 'The Illusion of Control: How Government Targets and Standards Damage Local Government Services' available online at http://www.thesystemsthinkingreview.co.uk/images/ARTICLE/139_The%20Illusion%20of%20Control%20v3%200.pdf (see page 7) (accessed 08 February 2010)

[16] Source: presentation arranged by CIPFA on Efficiency and Measurement by Gavin Betts, Hull University Business School on 19 January 2010.

> well enough to ensure all the necessary information was provided by the customer.
>
> After redesign involving both housing assessors and call centre staff, processing times for housing benefit claims were reduced by more than 80% (on average from 25 days to just three). Not only did this increase the effectiveness of the service in terms of meeting the customers' demands but it also released efficiencies. Call centre staff were freed up from handling large volumes of calls helping customers provide the correct proofs and information and were therefore able to concentrate on dealing with other enquiries. Housing assessors were able to assess claims (i.e. value work) first time rather than bounce them back to the call centre (i.e. waste).[17]

Further evidence of the success of systems thinking as an approach is provided by three pilot projects run (also in relation to housing) under the sponsorship of what was the Office of the Deputy Prime Minister – now Communities and Local Government. The three projects sought to address service provision in different aspects of housing and in different local authorities: voids and allocations (Leeds South East Homes); debt recovery and rent collection (Preston City Council), and; responsive repairs (Tees Valley Housing Group).

In summary, each systems thinking pilot found that service was improved: repairs were carried out more quickly from a tenant's perspective, voids were let more quickly and payments of rent were made more quickly. In each case tenants were found to be supportive of the changes.

However, the study cautioned that "service improvements were affected when the work moved from initial testing to the whole organisation."[18]

The initial study was followed up one year later to reassess whether the service improvements had been maintained and whether or not efficiency had improved as a result. This follow-up study found that:

> *Efficiency gains arising out of the amount of waste have been maintained in two of the three pilots. Each system had significant amounts of waste and, though there have been isolated examples of processes being re-introduced, the majority of waste removed initially has remained out of the system.*
>
> *Many of the efficiency gains made are quality gains, where time and resources are better employed to improve the service to the customer. Cash*

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[17] Source: presentation arranged by CIPFA on Efficiency and Measurement by Gavin Betts, Hull University Business School on 19 January 2010.

[18] Jackson 'A Systematic Approach to Service Improvement' (2005), ODPM, Available online at: http://www.communities.gov.uk/documents/housing/pdf/138058.pdf (accessed 03 February 2010) (see page 57)

savings have also built up over time (e.g. reduced number of voids leads to lower rent lost, more repairs work in-house reduces contractor charges).

Staff morale increased in the successful pilots. Employees have increased team working and the process also allowed external partners to become an integral part of the system.[19]

Overall, then, the findings can viewed as encouraging. As the case studies from Hull illustrate, systems thinking has subsequently been shown to be a valid methodology for improving customer service, organisational effectiveness and organisational efficiency in the housing arena.

9. CAN SYSTEMS THINKING BE APPLIED TO NON-HOUSING SECTORS?

All of the case studies listed above are in housing. Nevertheless there is evidence that whole-system approaches can be applied in other sectors. For example, there are a number of case studies relating to an approach called 'lean' (which is another label for systems thinking) in NHS Pathology services.[20]

There is also evidence from Scotland that a range of public-sector bodies can benefit from working to the principles of systems thinking. A study in 2006 found that across a range of sectors (including national health agencies, local government and also the military) there was:

strong evidence that Lean can work within the Scottish public sector, conditional upon an effective approach to implementation. Scottish public sector organisations can use Lean to focus on developing more seamless processes, reducing waste, improving flow and developing an understanding of customer value.[21]

Professor Jackson, author of the ODPM housing pilots study concluded that systems thinking could be:

Recommended as a powerful methodology for bringing improvements in the housing sector. [It is] best equipped to function well in situations of medium

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[19] 'A Systematic Approach to Service Improvement – an update' Northern Housing Consortium (2006) available online at: http://www.northern-consortium.org.uk/assets/northern%20futures/performanance/systems%20thinking%20sustainability.pdf (see page 16) (accessed 08 February 2010)

[20] An index of case studies in NHS pathology can be found at: http://www.pathologyimprovement.nhs.uk/View.aspx?page=/lean%20case%20studies.html (accessed 08 February 2010)

[21] Dr Radnor, Z et al 'Evaluation of the Lean Approach to Business Management and its Use in the Public Sector' Scottish Executive (2006) available online at: http://www.scotland.gov.uk/Resource/Doc/129627/0030899.pdf (see page 71) (accessed 08 February 2010)

complexity where it is possible to provide clarity around specific circumstances.[22]

It would seem from the evidence in Scotland and the NHS that it is **not the sector that is important but the approach to implementation**. Nevertheless – echoing Professor Jackson's comments - there is a recognition that systems thinking will not work with highly complex programmes such as health promotion, for example, because of the range of influences that can come into play and because of the wide range of 'customers' – many of whom may not actually *know* they are customers. They would not, it follows, be able to clearly articulate their demands of the organisations involved.[23]

It does seem convincing that for less complex functions, there are considerable gains to be realised through systems thinking. Some possible implications for the Northern Ireland public sector are considered in the next section.

10. WHAT DOES THIS MEAN FOR THE NORTHERN IRELAND EFFICIENCY AGENDA?

It was noted in the introduction to this paper that Northern Ireland Departments' Efficiency Delivery Plans and the responses of Ministers to questions related to efficiency have been criticised – in particular by Professor Arthur Midwinter (see appendix A).

The criticisms are particularly in relation to the focus on inputs. It is immediately clear that the systems thinking approach is not overly concerned with inputs. Its focus is on demands on an organisation from the customer's viewpoint. This fits with the need to specify output measures that has been highlighted – the satisfaction of customer demand could certainly be described as an output measure.

It does not require a huge leap of logic, therefore, to see that a systems thinking approach could help departments and their agencies determine their efficiency plans with a clearer focus. But there are important caveats.

Firstly, it has been stated above that it is effectiveness rather than efficiency which is the primary focus of systems thinking. That said, the methodology can inform an understanding of an organisation's purpose in customer terms, and this in itself could be used to help to develop and refine output measures.

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[22] Jackson 'A Systematic Approach to Service Improvement' (2005), ODPM, Available online at: http://www.communities.gov.uk/documents/housing/pdf/138058.pdf (accessed 03 February 2010) (see page 72)
[23] Source: presentation arranged by CIPFA on Efficiency and Measurement by Gavin Betts, Hull University Business School on 19 January 2010.

Secondly, it has been noted that systems thinking is not an appropriate methodology for highly complex functions. It is likely that there will be a number of government programmes which are operating in fields that are too muddled by external factors for the approach to be of much benefit.

Having said that, it is possible to think of a number of service-delivery functions where it would seem that systems thinking could be applied. Examples might be in Planning, MOT testing, benefits processing, HR services and social housing, to name but a few. It may be useful to recognise at this point that 'customer demand' does not exclusively have to mean *citizens*, but could also be applied to client organisations or internal customers for advice services (such as the Departmental Solicitor's Office or Account NI, for example.)

11. THE PERFORMANCE AND EFFICIENCY DELIVERY UNIT (PEDU)

PEDU was established on a model rather similar to the Prime Minister's Delivery Unit (PMDU). Information on PEDU is rather difficult to come by – it does not have its own webpages on the DFP site, for example. This may be, in part, due to a desire for PEDU to be a low-profile unit.

In the Finance Minister's statement to the Assembly on PEDU of 15 April 2008[24] he set out that the focus of PEDU's work would be on the Programme for Government, Executive priorities, and those areas where funding is not translating into desired outcomes (note the overlap with the principles of performance-based budgeting).

PEDU methodology

I have looked at the PEDU report on Land and Property Services (LPS) and a presentation PEDU made to Ministers on Planning Service[25] – the two agencies which it has so far been asked to review. The LPS report is available online at: http://www.lpsni.gov.uk/index/publications/lps_pedu_review.htm

LPS review

The PEDU review of LPS comprised:
1. desk research
2. a staff survey
3. staff workshops (involving approx 25% of staff)
4. interviews with Board and senior staff members
5. action-planning workshops

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[24] See http://www.dfpni.gov.uk/inv_135_statement_as_at_15_apr_9.22am.pdf for the full text of the statement. (accessed 09 February 2010)
[25] Presentation supplied to Assembly Research by DoE

The staff survey looked at various aspects: organisational strategy, delivery of core functions; development of clear roles and responsibilities and so on. The focus was on staff attitudes to these elements.

Planning Service review

This looked at agency performance against targets for processing applications and trends in performance. It then itemised a number of issues that had been identified by staff as causing difficulties:

1. agent performance
2. consultee performance
3. staff and management
4. divisional performance
5. performance management.

The striking aspect of the methodology is its **internal focus** in both cases: there does not seem to have been an attempt to engage customers (whether individuals or client organisations) in the reviews. This may not actually have been the case, but it is certainly the impression that is given from the reports available.

12. CONCLUDING REMARKS

Evidence has been received by the Committee for Finance and Personnel from Professor Midwinter, amongst others, in relation to departments' efficiency targets that:

> *Cash-releasing efficiency savings should provide the same service at a lower cost. That requires both financial (input) baselines and **service (output) baselines for each saving proposal** so that efficiency gains can be validated. The N.I. approach, in the main, reports economies, not efficiencies.[26] (emphasis added)*

The criticism is that departments' Efficiency Delivery Plans do not really report efficiencies because they are not necessarily tied to output baselines.

Professor Talbot, giving evidence on 18 November 2009, stated that:

> *The biggest problem is the measurement of outputs. The public sector has not traditionally measured output, either at economic or more detailed organisational levels […] The measuring of outputs is quite tricky, particularly because a qualitative issue is involved.[27]*

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[26] See paragraph 3 of Professor Midwinter's paper at Appendix A
[27] See
http://www.niassembly.gov.uk/record/committees2009/FinancePersonnel/091118EfficiencySavings.pdf

It seems that systems thinking could be a useful technique in developing public sector outputs given the focus on understanding systems and processes from the customer's perspective. However, a drawback is that it does not appear suited to highly complex programmes. Nevertheless it may provide a useful approach in programmes of lesser complexity.

This process in itself could help in making departments' plans and targets more meaningful. A consequence of that would be that PEDU's focus could be more specifically directed at service areas where there are concrete output baselines rather than the more generalised, higher-level targets in the Programme for Government.

Beyond that, it is hard to make concrete assessments of the PEDU methodology and whether it embraces any of the Systems Thinking principles on the basis of the information available. On the face of the evidence uncovered in this research, it would seem that – correctly applied – the systems thinking approach could be a useful tool for Northern Ireland departments seeking to improve the effectiveness and efficiency of their activities.

Appendix A

Efficiency Savings in N.I. Departments: Memorandum

From: Professor Arthur Midwinter
        Institute of Public Sector Accounting Research
        University of Edinburgh Business School

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Context

1.   The Research Paper refers to the reduction of £129 million in planned
        expenditure through Barnett consequentials for 2010-11. It should be made clear
        to members that this is a reduction in the rate of growth, not the current budget
        baseline. It does not therefore require savings from existing programmes.

Terminology

2.   The Guidance Paper on Efficiency Delivery Plans (EDPs) is mostly concerned
        with inputs – how financial savings will be delivered and monitored. Whilst there
        is reference to impact on services and the need "to provide evidence there has
        not been a detrimental impact on services to the public" (para.iv), this is not a
        systematic approach.

3.   Cash-releasing efficiency savings should provide the same service at a lower
        cost. That requires both financial (input) baselines and service (output) baselines
        for each saving proposal so that efficiency gains can be validated. The N.I.
        approach, in the main, reports economies, not efficiencies.

The DFPs Efficiency Programme

4.   The EDP states that efficiencies will not compromise service delivery, but deliver
        more and better outputs. However, no output measures for any of the five
        categories of savings are provided.

Increase Charging

5.   Increased income from charging is not included in the Efficient Government
        Programmes in Whitehall or Edinburgh, as these constitute a reduction in
        service. Increased charges are an economy measure, commonly used to deliver
        budget savings, but they do not result in efficiency gains.

Accommodation Savings

6.   This saving arises from staff reductions which reduce the need for
        accommodation. This is not a pure efficiency saving as it arises from a loss of
        output from the staff reductions. It too is an economy, not an efficiency.

Land and Property Services

7. This narrative provides no clear basis for the savings assumption made. Does rationalisation involve job loss? There is no output baseline provided to validate efficiency gains.

Targetted GAE and Staffing Review

8. This is obviously not an efficiency proposal, but a reprioritisation of policy areas. Outputs are not provided, but if staff are lost, the quality and timelines of staff outputs cannot be assumed to be unaffected by these savings.

Rate Collection

9. This is a cost reduction. It lacks the robust information needed to assess the realism of the savings assumptions.

Conclusions

10. This is not an efficiency delivery plan, but a budget savings plan. The proposals are unclear on how savings will be delivered, and offer no baseline data on which to validate efficiency gains.

11. It is therefore a matter of concern that the savings are being assumed and monies reallocated prior to savings being delivered.

12. I would advise the Committee to draw its concerns over the poor quality of information to the other departmental committees, and seek the following information for each programme:

    (a) Identification of the budget lines in which savings will be made, the current allocation and the scale of savings sought so the realism of the proposal can be assessed;

    (b) Identification of an output baseline for each proposal – a quantified statement of what is provided for the funding – so efficiency gains can be validated; and

    (c) Identification of budget lines to which the savings have been reallocated with a statement of the expected outputs/outcomes from this spend.

13. The N.I. Efficiency Programme shows the same weaknesses of information as the Scottish Programme that makes it difficult to subject to rigorous scrutiny. Lack of transparency is a major problem that needs to be tackled. Describing these budget savings as efficiencies is misleading the Assembly and the public.

Professor Midwinter retired as Dean of the Faculty of Arts at Strathclyde University in 1999. Since then, he has concentrated on research and consultancy in public finance. He wrote a review of the Impact of the Barnett Formula for the ARLS in 2002. Midwinter was Budget Adviser to the Finance Committee of the Scottish Parliament from 2002-2007, and then to the Shadow Cabinet of the Parliament since September 2007.

Supplementary Note

1. These responses from departments confirm my view expressed in my evidence. The "efficiencies" are mainly conventional budget savings options. Most provide little or no evidence that efficiencies have not reduced services, whilst some provide evidence that services have been cut. Others do not spell out any savings at all. The responses are not fit for purpose, and do not facilitate robust scrutiny of current practice.

2. **Enterprise, Trade and Investment**

    Dropping a buy-out initiative is not an efficiency. An efficiency saving requires current input/output baselines against which to demonstrate the efficiency improvement. This option looks like a hypothetical saving on a new development. Did the 5% saving in administration result in staffing reductions? If so, the department cannot guarantee that the quality and volume of its output has not been reduced.

3. **Regional Development**

    This response simply <u>asserts</u> that efficiencies have been made, it does not provide evidence to validate the claim. How were savings made in water subsidies? Additional income is an economy, not an efficiency. Cutting capital budgets is not an efficiency, but asset sales do count in the Gershon framework. Cutting the Budgets is not an efficiency, it is a saving.

4. **Environment**

    Cutting running costs, freezing vacancies, and cutting consultancy spend are conventional savings, not efficiencies. Neither is cutting out a Grant Scheme. There is no data provided to show these had "only minimal effect" on the frontline, and that does infer they had some adverse effect.

5. **Employment and Learning**

    This response fails to provide any costings or details of how savings were made. It is completely useless for addressing Jennifer McCann's concerns.

6. **Education**

    This response spells out a number of budget lines in which savings have been made. It does not provide information on the service impact, nor even costings.

7. **Health, Social Services and Public Safety**

    The Minister appears content to have "obtained assurances" from health trusts that frontline services are being protected. In Scotland, several health boards reported service reductions as efficiencies. I would advise the Committee to seek the relevant information <u>direct</u> from trusts, given the Minister's warning in para.7.

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8.   **Finance and Personnel**

This response <u>avoids</u> answering the question. Is the minister trying to be unhelpful?

9.   **Culture, Arts and Leisure**

Ditto! The response is unhelpful, and bland assurances are no basis for rigorous scrutiny.

10.   **Social Development**

This list is mainly cuts in frontline services, often to the most disadvantaged households. There is not a single efficiency saving in the list.

11.   **Agriculture and Rural Development**

I am not familiar with these functions, but they appear to be cuts in services to DARD and agroforestry research. The statement on rural development does not say whether or how savings were made.

12.   **FM/DFM**

This response provides no information on the scale of savings made through "improving and refocusing", "controlling discretionary spend", "restructuring" and "streamlining". Did these result in staffing reductions?

Arthur Midwinter
14th November 2009