

A Systems Approach to Change

Better Faster Cheaper

Background

With an echo ringing in our ears from community outcomes discussions about the importance of making Council's services easier to use, Central Otago District Council (CODC) embarked on a programme to improve performance in the Planning Consent and Building Control work areas.

A systems approach to change was introduced using the Lean Service principles developed by John Seddon of Vanguard UK and based on the Toyota Production System.

This approach requires most effort at the front end, understanding the workflow as a system using a **Check → Plan → Do** flow. Actions are then planned and taken only when full knowledge exists of how the work works, rather than responding with ad hoc reactions.

Over the past two years Council staff in the building and planning area of Council have implemented the principles to profoundly change the manner of operation and results.

Business Needs and Expected Benefits

During Central Otago community outcomes discussions, known as *Central Prospects*, the community said it wanted:

- User friendly services
- Consent processes streamlined
- Easy access to information

The general belief was that Council acted in silos, leaving clients to find their own way through the development processes.

Council was accused of making processes hard to understand, with overly technical documents and was defensive of its position rather than helpful to the customer.

The District vision of "a vast land of uncompromising beauty that attracts new thinking from innovative people" challenged us to lead the way in the area that managed development of this land.

In addition, a 300% growth in business in the Planning and Building work areas over three years from 2002 had placed stress on the existing systems. Recruitment to cover additional demand was difficult and existing staff daily faced upset clients over processing delays.

"Ease of Doing Business with Council" became one of eight priorities that council was directly responsible for from *Central Prospects*. A new approach was needed to deal with the increased scale of operation.

Lean Service was selected for its track record of success in the UK with real improvements in quality, timeliness, and cost reduction. These were the expected benefits. Our aim was "Better, Faster, Cheaper". Specific targets were not set as these tend to underestimate possible gains when Lean Thinking is applied. Our results bore that out.

Project Management

The change generally followed the Objective Directed Project Management process: concept/feasibility, definition, planning, implementation and sign off.

- The need was determined from *Central Prospects* and worsening data results
- Alternative approaches were looked at to select best fit to need, including Customer First, ISO 9000 and Lean Service
- Feasibility of Lean Service was reported to Council and approval received

- Planning occurred using Vanguard UK methodology and involved those from CODC in the work at start-up meetings as well as analysis, design and implementation phases.
- Implementation followed the **Check→Plan→ Do** flow that involved analysis of demand, simplifying flow and eliminating waste
- Measurements and verifying any proposed action against purpose were the project control tools used to ensure progress was being made
- Sign off occurred when staff were delegated to operate the new methods

The **Check → Plan → Do** steps are critical. While they mirror the analysis, design and implementation steps of project management it is the systems approach that brings the value.

Check

Check required an understanding of the 'what' and 'why' of current performance as a system, as in:

- The purpose of the system
- The nature of demand
- What the system predictably achieves
- How the work flows
- Why the system behaves this way

Reviews of more than 50 recent consents and one week of incoming phone calls were undertaken in both work streams.

It became apparent that at least 50% of calls to staff were what is termed 'failure demand' i.e. requests for action as a result of a breakdown in the system. The common causes were identified.

Analysis of past consents helped identify types of clients that caused most rework and causes of regular further information requests. Detail from both sources helped the Planning and Building teams to understand customer requirements of the system.

Discussions with clients helped to understand their experience of using the processes.

This analysis was undertaken by the staff involved in the work so that the data was verified by them and accepted. Understanding grew of how we added to problems – system problems.

A clear purpose was devised for each process written in the words of the customer.

These were:

Planning to help people develop their land appropriately, through a fast, cost effective process.

Building to help people build properly, made easy through a fast, cost effective process.

Plan

Plan involved looking for levers for change:

- What will improve performance against purpose?
- What are the predicted consequences?
- Against what measures should action be taken?

Any change was assessed against Lean Service Principles:

1. Do what matters to customers
2. Design against demand/purpose
3. Single piece flow - get one do one
4. Do it once right, at first point of contact
5. Measure against purpose
6. People responsible for their own work

These changes included:

- Bringing more of the flow in-house and to the first point of customer contact so one person dealt with all of a consent if possible, reducing hand-offs i.e. double handling.
- Training staff against demand i.e. informing them of what was important to clients, learned from analysis of those most likely to provide incomplete consents. This enabled these people to be captured early during pre-lodgement discussions and provided with helpful information for their application.

- Developing brochures for specific consent applications. These replaced a large generic brochure explaining information for most consent application types. These specific brochures also enabled us to communicate detail to clients on common errors in simple language rather than the more legal approach used in the generic brochure.

Measures of Customer Days for Consent Times and Number of Clean Consents (consents free of further information requests) were used.

The choice of measure was important. Customer Days and Clean Consents focus on the customer experience and the end-to-end flow of the process rather than process days, which do not acknowledge further information requests and extension of time legitimated in the statutory process. This focused attention on understanding how we could work with clients to make the flow of work better for all, rather than building in, and getting good at, wasteful steps required when further information requests are normal.

Clean consents are important not because these will take less time but because these will have less likelihood of on-going risk. Clean applications occur when requirements are understood by clients and Council Officers. This reduces the risk of features that may cause problems in the future.

Do

Action taken directly on the system. After thorough Check and Plan, the Do was well understood, simple to action and few in number.

Changes were implemented only when data showed these likely to improve performance towards purpose i.e. system improvement rather than reacting to symptoms. Results were monitored using a computer programme (*Winchart*) to show variation, upper and lower control limits and mean results. Focusing on reducing variation through eliminating waste, getting clean consents and simplifying flow initiated continuous improvement.

Focusing on simplifying flow lead to one process flow only for the Building Control function in comparison to the 40-50 in most Building Control Authority (BCA) accreditation applications. CODC's application for BCA accreditation is only 25 pages in total compared to an average around four times that.

Communication and Stakeholder Buy-In

Customers

The change relied on direct communication with clients to fully understand their current experience and needs. This occurred initially through phone logs, analysis of applications and direct discussion. Once changes were made clients still finding difficulty (those with regular further information requests) were assisted one-on-one, until able to provide clean consents. This further highlighted system elements that contributed to misunderstandings and prompted continuous improvement.

Council

Council was introduced to the approach, approved the interventions and is now provided with six weekly updates on measurements.

Those in the work

In each process those doing the work provided the person power to analyse customer experience, design the process and any associated tools or documents, implement the method and review measurement data. This was based around a series of meetings following the **Check → Plan → Do** steps. This ensured understanding of the workflow as a system was in the heads of those in the work and not left as a management responsibility. New design ideas therefore were sourced from everyone.

Vanguard UK

Richard Davis from Vanguard UK assisted Council in New Zealand for 4 weeks, then via telephone and email contact from the UK.

Ministry for the Environment (MfE) and Department of Building and Housing (DBH).

Both government agencies were engaged early to ensure understanding of our approach. MfE visited once and maintain on-going contact. DBH along with its accreditation body visited twice before accreditation was applied for. This has resulted in few additional requirements for BCA accreditation and MfE promoting this model to other councils.

Innovation and Originality

A range of innovative results occurred.

Integration of Council services

- All CODC services related to land development, water, roads etc were integrated into the planning and building process (now known as the “I want to develop” process). Building Control Officers were provided with the tools to alert and provide necessary details to clients of Council’s infrastructure requirements. Maps were developed showing areas for each service where connection or access could be granted, and when referral to engineers was required. This increased certainty for clients, integrated decision making within CODC, reduced complaints, increased job satisfaction for staff and created a true one-stop shop.

Documents were made to fit demand

- All documents were given the “techno speak” test and generic explanations of “all you need to know about” planning or building were replaced with pamphlets targeted to the most common application types. Experience from analysis work identified the predictable misunderstandings causing further information requests. These issues were clarified in the pamphlets and led to decreased frequency.

Batching and sorting

- Habits of batching tasks were discouraged as these were found to slow down the workflow and increase bottlenecks as the batches were passed on in indigestible sizes.

Do it once right up front

- Processes were simplified. We moved the knowledge to the front of the process. Customer types most likely to make errors were identified, these tended to be first or only time applicants, or regular “quick and dirty” operators. They were encouraged to seek detailed support from staff before applications were made. Once familiar with the project, that Officer would then process the consent.

It was also identified that multiple requests for extra information resulted in different Officers reviewing the same consent and asking for different information. These were often a result of different style rather than substance. This lead to many complaints and frustration for applicants and it encouraged them to put in incomplete consents in order to find out application requirements. The process was changed to ensure the same Officer followed the consent through to completion and those differences in interpretation assessed at team meetings to determine the best method.

Continuous improvement

- Other changes were made and continue to be made as data analysis shows where further improvements are appropriate. Ongoing weekly analysis of variation of timeframes and incomplete or difficult applications highlight predictable problems and allows staff to design preventative actions. Performance measures have become useful and used weekly – a novel idea for most workplaces.

Check → Plan → Do Systems Approach

- The systems approach to management of change as described relied on understanding the work systems in their totality. Once known waste was highlighted, flow simplified and a decision-making approach used to avoid wasteful management interventions. Those in the work now only act when data makes it clear it is worth trying rather than adding complexity by responding to symptoms.

Successful Results

- Average customer days for in house planning consents fell from 27.6 to 12.5. The range of time taken (control limits) changed from up to 88.7 to 32.8 days (refer **attached** graph 1).
- For Building the changes were similar. Average customer days dropped from 22.3 to 9.3 and upper control limits from 68 to 26.7 days (refer **attached** graph 2).
- Clean planning consents increased from 33% to 65% of applications.

No additional resource was added to the teams to generate this outcome. Additional work has been brought back in-house in the Planning area because of increased capacity and Council has developed its Building Accreditation application using its in-house resources without unduly compromising the building control function. This accreditation work plus Project Hayes resource consent application have affected timeframes recently, although not back to the original levels. These were predictable results and with the two distractions almost completed, work is resuming to return the flow to its former level. In the past distractions such as those would have been highly disruptive.

Our risks are declining. Less errors from clients means less chance of us missing any mistakes. Less resource is required for each consent; the job of communicating, recording and receiving additional information and reacquainting with the consent a second or third time has been cut in half. Better understanding of projects by a single officer minimises risk and improves the value of Council's input for the customer.

Reduction in customer complaint and frustration, a standard by-product of working in a regulatory environment, has occurred. A week's sample of calls when we began this work showed that between 40% and 70% of calls handled by the resource consent staff were as a result of system failures. This has reduced to less than 15% across the team. We now get more compliments than complaints!

Real empowerment, regular innovation, waste reduction, improved teamwork across the organisation, a clear vision of why we do this work, increase in job satisfaction and less stressful days have resulted.

Good, Sensible and Right

Council is well on the way to providing:

- User friendly services
- Streamlined consent processes
- Easy access to information

In a time of staff shortages it is essential to offer interesting and rewarding work.

Upward cost drivers can be reversed by creating capacity through waste reduction.

The change process has delivered better results, faster and cheaper as was the aim.

The **Check → Plan → Do** systems approach to change management provides a clear and effective means to make change that simplifies work, eliminates waste and improves service. It is applicable to any service as we are discovering with good initial signs in our work with the Contractor – Consultant – Client relationship in road maintenance work.

Yes, the project was a good, sensible and right thing to do.