NEW PLYMOUTH DISTRICT COUNCIL
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Entry to the 2004 New Zealand Post Management Excellence Awards

Category – The New Zealand Post Technology Innovation Award

# Real Service, Real Time

New Plymouth District Council's real time service request system is a shining example of harnessing advanced technologies to provide sensational service.

The groundbreaking system has revolutionised the council's handling of service requests from customers, enabling super-efficient online management of water, sewerage and stormwater jobs.

"It's real service in real time," says Anthony Wilson, NPDC's general manager community assets. "It's helping us take giant steps in service management, contractor management and asset management."

***How it works – eight easy steps***

The initial customer call, for instance reporting a leaking water toby, sets off a chain of seamless responses:

1. Details are recorded in the Customer Management System (CMS) at NPDC's call centre – note: the service request system highlights to the customer service representative if the problem has already been reported and is under action. New service request details are automatically transferred to the Asset Management System (AMS), which contains data on assets in place and their maintenance history

2. An email is sent from the AMS to the contractor's depot notifying them of a new job

3. The contractor assigns the job to the closest field crew using GPS tracking

4. The AMS sends an automatic text message to the selected crew's PDA to notify them of their new job

5. The crew use the PDA to receive full details from the AMS and 'acknowledge' receipt and acceptance of the job via confirmation text message back to the AMS

6. The crew arrive at the job and confirm 'On-Site' via the PDA back to the AMS and also advise details such as whether the road will need to be closed and any

other general comments about the job. The AMS sends an advisory email to the council's roading department regarding street opening notifications

7. The crew confirm when "Service Restored" via the PDA back to the AMS, completing the required 'Restored' form details, including outcomes and confirmation of asset information such as type, size and location.

8. The crew confirm when "Ground Cover Reinstated" via the PDA back to the AMS, completing the required 'Reinstatement' form details, including type and size of ground cover plus other general comments.

***Keeping track and measuring performance***

At all stages of the job, NPDC and the contractor can monitor progress via the council's intranet. Stages of each job – 'On-Site', 'Service Restored' etc – are colour-coded for ease of understanding.

In addition:

i) Each job stage is timed and assessed, enabling NPDC to measure the contractor's work against agreed Key Performance Indicators.

ii) Invoicing by the contractor and attribution of maintenance costs for specific assets occurs automatically and supports improved life-cycle asset management.

***The technical details***

'Real Service Real Time' uses Active Server Pages (ASPs)* stored on the NPDC network and accessible by crews via PDAs.

Hardware
- PDAs (Audiovox/Falcon mobile phones running Pocket PC2003)

Software
- CMS (InfraActive)
- AMS (Hansen) on SQL Server 2000 platform using various triggers and stored procedures.
- Inter-operability broker (BizTalk), which integrates CMS and AMS
- GIS (ArcMap) - spatial mapping system.
- ASPs with drop-down boxes to complete job details, and 'holding' tables to store information sent from crews via PDAs.

Connectivity
- Telecom 027 mobile jetstream fast data service

Appendix A provides a process flow overview of the mobile technology interfaces

* Active Server Pages, or ASPs, are HTML pages with embedded Visual Basic, C# or other languages, which are interpreted by the server.

# How ‘Real Service Real Time’ fits the awards criteria

**a) The need for and expected benefits of the project and how it furthers the council’s vision and strategic direction.**

*Need:*

i) In February 2004, New Plymouth District Council (NPDC) commenced a new five-year maintenance contract for water supply, wastewater reticulation and stormwater systems.

Under the previous contract, performance management had suffered from a lack of good and timely information. As a result of this, there was an identified need to shape the contract around desired outcomes and to ensure that performance could be effectively and efficiently monitored and managed.

A fundamental part of this was aligning the contract incentives and Key Performance Indicators (KPIs) to match the council’s desired customer service standards. These incentives include financial remuneration, requiring accurate real time measurement of activities. A defined and robust process was established to ensure performance information was appropriate and captured accurately and seamlessly.

ii) To help towards NPDC’s strategic goal of providing ‘sensational service’, the council needed a seamless system to improve efficiency when dealing with service requests for water, sewerage and stormwater.

*Benefits:*

i) Improved service to customers. NPDC is able to react more quickly to customer requests and is much better placed to manage customer expectations by informing them more fully and accurately of timing and progress to job completion.

ii) Accurate and freely available data allows council to closely monitor the performance of its contractors, as well as outcomes from the customer perspective.

iii) Improved communication. Both council and contractor using the same software means we ‘speak the same language’ and use the same data, greatly reducing the likelihood of misunderstandings.

iv) Greater cost effectiveness with less administration and overheads.

*Furthers the council’s vision and strategic direction:*

i) ‘Real Service Real Time’ is fundamental to the council’s strategic goal of providing ‘sensational service’ to customers.

ii) The system contributes toward the NPDC community outcome ‘Connected’, which aims to deliver integrated communication systems meeting the needs of residents and businesses.

**b) Effective project management techniques**

A highly defined project management lifecycle was developed to transform this vision into reality. The contractor and NPDC worked in close partnership to ensure outcomes met the requirements of both parties.

Project success (planning, execution and control) was based upon measurable results defined at the outset. While the overall project came under the accountability of an individual owner, aspects were broken down into sub-projects with managers given specific activities/tasks containing quality and process controls and accountabilities.

Effective project management was enabled through clarity among all parties of how the project was to be managed, and through regular and focused interaction between project/team leaders and team members within and between each working group – capabilities and competencies of participants were matched to the requirements of the task in hand. Project/team leaders ensured open and transparent communication with a focus on finding solutions to the issues encountered.

**c) A participatory approach to communicating with and getting 'buy-in' from stakeholders associated with project.**

Many parties were involved, including:

Internal – customer service group;
water and wastewater group;
asset strategy group;
corporate IT group.

External – CityCare;
Telecom;
Hansen International;
Delta Software;
Eagle Technology;
Gen-i Ltd.

All affected parties were heavily involved in the development with continuing communication and feedback. The focus on desired outcomes ensured good communications between NPDC and all parties. Planning, execution and control of the project were undertaken as an integral part of project management.

**d) Innovation and originality in the specific award category area**

NPDC believes 'Real Service Real Time' is the first fully integrated online system of its kind to be developed and implemented by a local authority in New Zealand.

The system ties together and integrates various technologies, systems, data and communication tools (emails, text messages, webpages, physical asset data, spatial data, customer service systems, spatial information systems, asset inventories and management systems) to create a single seamless information-efficient environment. The use of standard off-the-shelf hardware has been tailored to meet NPDC's specific requirements using active server page software.

'Real Service Real Time' enables the complete end-to-end process to be monitored and managed online, from report of a problem to despatch of specialist crews, to progress of work and completion of job, to post-completion billing and attribution of costs to specific assets. The performance management system is updated every minute of the day and enables all parties (customers, council and contractors) to be more fully informed, respond more quickly and professionally, minimise service interruptions and use the maintenance costs associated with specific assets to assess and manage asset life-cycles more effectively. In essence, service levels are significantly improved and life-cycle costs are significantly reduced, thereby creating significant added value.

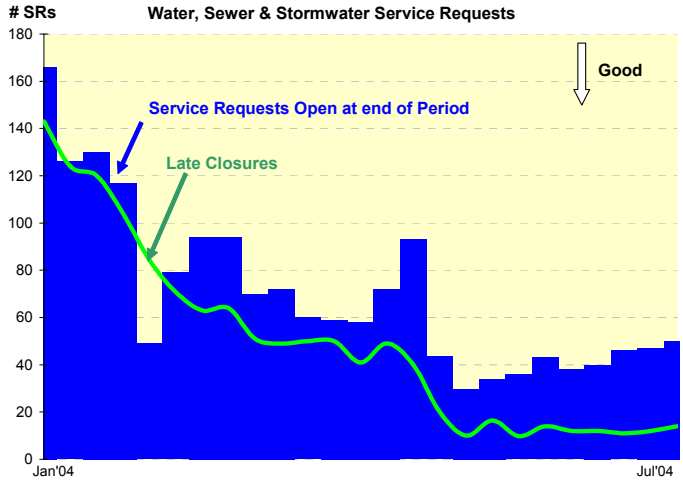
**e) Successful results, in both financial and non-financial terms.**

'Real Service Real Time' has minimised council costs by reducing administration and overheads. Additionally, costs have been reduced by 'getting it right first time' (because critical information is now available in the field) and through more robust information to better manage asset life-cycles to mininise 'whole-of-life' costs (operation, maintenance and renewal).

In non-financial terms, everyday asset data is being enhanced. It is more complete and valid, less prone to data input error as there are no manual and multiple entries of the same data across different systems, and inputs are now controlled through menu systems and validated before they're accepted.

NPDC has received much interest in the integrated online system, as well as positive feedback, from internal and external parties.

Customer service request response times are improving and customer feedback is more positive than ever before.




**f) That the project was a 'good, sensible and right thing to do'**

In a complex business with a data-rich environment, cost-effective use and application of technology has been explored to enable a shift toward 'real time' business management and to ensure that outcomes can be more effectively performance-managed to success. Working through the project from a process perspective has also oriented the parties towards 'knowledge' as opposed to data.

The system provides the ability to view real time information of job progress that can be used by NPDC to measure the contactor's productivity against predetermined targets. In addition, it enables council to feedback to customers on the work being carried out, it is easily adapted to changes in work procedures and it helps to improve the quality of asset data in the Asset Management System.

Real Service Real Time was inexpensive to set up, using off the shelf hardware and software to tie together different technologies.

Looking ahead, there is great potential for future development of this groundbreaking system as well as its introduction to further NPDC departments and other local authorities.

# Real Service, Real Time – Process Overview of Mobile Technology Interfaces

## Appendix A