



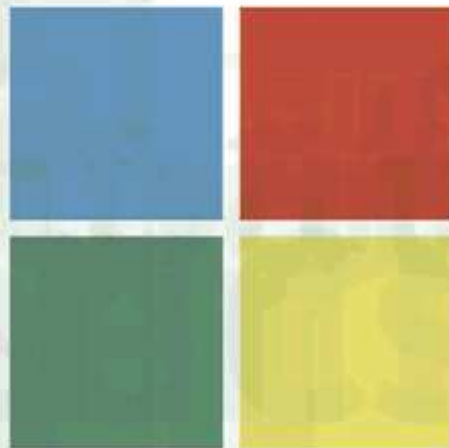
QSIC Review of Queensland Addressing Practices

Business Case for an Implementation Phase

Phase Five Report

August 2006

Queensland Spatial Information Council



smart spatial solutions for Queensland

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1 Executive Summary

1.1 Background

The QSIC Review of Queensland's Addressing Practices has reviewed the existing addressing practices within the state. The review has identified many areas of duplication and redundancy within the current addressing processes leading to a substantial cost to the community in both monetary and safety terms.

1.2 Overview of Project

The project commenced in July 2006 with a review of existing practices in the Discovery Phase through interviews with 18 identified address client organisations. This phase of the project identified four key issues that needed to be addressed:

- Diversity of address data sources.
- Latency between address creation and availability.
- Absence of Private Road data.
- Incomplete coverage of existing data collection.

This was followed by the Envision Phase of the project which recommended solutions to the issues identified in the Discovery Phase. The Envision Phase delivered four key recommendations to be encapsulated in the redesigned addressing processes for the state.

- A single source of address truth.
- Changes to the development application process to generate address earlier.
- Include Private Road data in the development approval process.
- Ensure universal participation in the proposed process.

This final phase of the project has delivered redesigned business processes and a business case designed to solve the identified issues and deliver an integrated solution to those issues.

1.3 Costs

All levels and areas of government spend significant amounts on addressing issues either directly, through the costs of returned mail or losing contact with their clients.

These costs are compounded by the duplication of address management activities across government and the widely varying sophistication of address management within client organisations. The costs to private industry would, in all likelihood dwarf the costs to the public sector who would also benefit from more controlled and timely addressing practices.

In addition to the identified costs to the state are the intangible consequences of poor addressing practices. These include:

- Threat to public safety.
- Loss of contact with clients.
- Planning for delivery of services.
- Identity authentication.

1.4 Benefits

Implementation of the recommendations from the Envision Phase of the project will benefit the state in several ways. These are:

- A reduction in the cost to the state of address management through:
 - Reduction in the duplication of address management activities especially those undertaken by infrastructure providers resulting in a significant reduction in address management costs.
 - Reduction in the resources expended on address management.
 - Reduction in LGA direct addressing costs through a reduction in interaction with multiple client organisations.
 - Implementation of address management best practice.
- Better controlled creation and dissemination of addresses resulting in:
 - Reduced ambiguity in public and Private Road naming and numbering.
 - Visibility of all Private Road enclaves.
 - Reduction in risk to the public from emergency services delivery delay due to ambiguous addressing.
 - Reduction in the time taken for new addresses to become visible to client organisations.

1.5 Implementation

The recommendations from the Envision Phase of the project should be implemented in three concurrent streams. These activities have dependence on one another but can be implemented concurrently as part of a larger project to implement the recommendations of the Envision Phase and the redesigned processes outlined in the document Redesigned Processes.

Data Dissemination	Private Road project	Core Process
Data dissemination technical solution design.	Identify existing candidate Private Roads.	Create the ASQ entity.
Limited Smart Tag Functionality and core delivery mechanism.	Validate candidate Private Roads.	ASQ draft any legislative changes required.
	Include validated data into PLI/DCDB.	ASQ works with client organisations to implement new processes.
	Future Private Road data collected by revised process.	ASQ designs and implements ongoing data quality initiatives with client organisations.
Full data dissemination services delivered.		Ongoing process optimisation and service delivery.

1.6 Recommendations

The QSIC Review of Queensland's Addressing Practices project has analysed the existing addressing practices within the state and found them wanting in several areas. The current state of addressing is inefficient, inaccurate, protracted and represents a threat to public safety.

This project has determined there are three activities that must occur within an adequately funded and resourced project designed to implement these recommendations possibly based on an Information Queensland model. These three sub projects are:

1. Create an adequately funded and resourced entity responsible for the day to day management of addressing activities within the state.
2. Fund a project to identify and record missing private road data as a priority.
3. Fund a project to enable the delivery of address data throughout the public sector.

2 Purpose of the Document – Business Case

This document is designed to consolidate the issues, recommendations and proposed changes documented in the documents produced thus far by the project. It presents the findings and benefits that together make a compelling case for change to the existing processes.

The business case also lists the core activities required to progress the project to the implementation phase.

2.1 Outcomes from BPR Detailed Design Phase

This phase of the project will document redesigned business processes and a service business case.

3 Background

3.1 Scope

This phase of the project takes the recommendations and processes identified during the previous phases and re-engineered process for addressing practices in Queensland and presents the benefits of implementing the changes elaborated by the project.

3.2 Approach

The Discovery and Envision phases of the project identified the issues and recommendations for change to current addressing practices. The Redesigned Processes document detailed the procedural changes required to address the outcomes of these phases. This document accumulates the knowledge gained by previous project activities and presents the case for change based on this understanding and documents the core activities required to implement those changes.

4 Current Costs

This section of the document looks at the identifiable costs associated with the current addressing processes. Because the identification of addressing costs is beyond the sophistication of most client organisations this section of the document lists general areas where avoidable costs have been identified.

4.1 Addressing Administration Costs

The current address processing costs are an accumulation of many activities undertaken by all client organisations to a greater or lesser degree. These processes include:

- **Address Collection**

Address collection occurs through contact with an organisation's clients. It can occur via phone, face to face and forms processing.

- **Address Storage**

Addresses are stored in many different formats within the client organisations from fully structured standards compliant storage to simple text representations of the address. This gives widely varying results from address processing tasks and greatly affects the cost of addressing activities within the client organisations.

- **Address Enquiries**

Many client organisations need to expend a significant amount of effort processing returned mail and re-establishing contact with lost clients.

- **Address Processing**

Many government entities perform cleansing, de-duplicating and data matching activities on their address data. There are varying degrees of sophistication and results achieved by these processes with a large amount of resources expended in what is a duplication of effort.

Many of these activities occur frequently across the client organisations. Resources are constantly looking up addresses manually, dealing with inaccurate addresses and the consequences of these inaccuracies to the delivery of services. The ad-hoc and generally unsophisticated nature of the current processes leads to a large degree of addressing inaccuracy.

4.2 Mailing

The cost of inaccurate addressing becomes apparent when whole of government mailing is considered. There are several processes which create cost to the state, these are:

- **Non-DPID Mail.** If a Delivery Point ID (DPID) cannot be assigned to an address it must be posted at the full mail rate rather than at a discount. This mail is also more likely to be undeliverable. Mail of this type can represent anywhere from 10% to 20% of a typical mailing. Best practice in this area is a rate of less than 2%.
- **Return Mail.** If a mail piece is undeliverable it will be returned and the mailing agency must then correct the address in order to resend. This can be a time consuming and expensive process as the correction of the address may entail significant effort.
- **Resend Mail.** Once a mail piece is returned it must be resent after address correction incurring labour costs, additional mailing cost and delay in the delivery of services.
- **Duplicated Mailing.** Inaccurate addressing causes communication to the same individual to be duplicated because de-duplicating mailings to 100% requires 100% DPID assignment.

4.3 Potential for Cost Reduction

While the entire amount of the identified cost of the current addressing processes is not available for mitigation a large amount is. There are two major areas of saving available to the proposed processes. These are the elimination of duplicated processing of addresses such as validation, parsing, de-duplicating which should lead to a subsequent reduction in the direct mailing costs to the state.

4.4 Outcomes of current practices

Apart from the dollar costs identified by the project are the intangible costs involved in the current addressing practices within the state. These costs are not quantifiable but together make a compelling case to change the current processes.

The proposed changes will correct these problems through the provision of Best Practice advice and support to client organisations and the infrastructure and services to facilitate change and reduce costs.

Public Safety

The project has identified several consequences of the current addressing practices which represent a threat to public safety. These are:

- Delay in the delivery of emergency services.
- Delay in the delivery and maintenance of infrastructure.
- Occupational Health & Safety issues for workers on new developments and the provision of emergency services in these areas.

Inaccurate Provision of Services

Due to the state of addressing within some departments it is felt that the collection of demographic information designed to provide decision support data for the provision of services can create biased views of the data. Anecdotally there are departments that have very low reliability in the capture of client addresses resulting in up to 30% of these addresses being unusable for either contacting their clients or determining where services should be delivered to the community.

Authentication of Identity

A growing number of government agencies have a need to authenticate the identity of their clients for commercial and security reasons. Without a sophisticated level of address processing within these agencies the potential exists for lost revenue and a reduction in the confidence level of authentication practices.

Loss of contact with clients

Losing contact with clients presents obvious problems for agencies delivering services to the general public. This normally occurs through weak authentication and validation of addresses at the time of capture. There is anecdotal evidence of the failure of important health information reaching its intended recipient or being significantly delayed. Apart from the obvious negative outcomes to the intended recipient there is a large potential for negative publicity and significant exposure to litigation and financial loss.

5 Implementation Plan

This project has recommended several activities occur in order to correct the identified deficiencies in the current addressing processes.

- Forming ASQ. (the core change to existing processes)
- Start an Implementation Project
- Implement the redesigned processes
- Private Road data collection.
- Delivering a set of address services.

These activities should occur through an adequately resourced project designed specifically to deliver these outcomes and facilitate the overall changes to addressing within the state.

The result of these activities will be the implementation of the proposed business processes detailed in the Redesigning Processes document produced as part of the Detailed Design phase of the project.

This section of the document will also describe the activities that need to occur in order to implement the proposed process changes and other associated projects. The tables following include the major activities and phases of the projects to give an understanding of implementation interdependencies and the participants in the project.

5.1 Implementation Project

The implementation project will have responsibility for implementing the changes identified by the QSIC Review of Addressing Practices. Specifically it will implement: or facilitate the implementation of:

- The redesigned business process
- Private Road data collection.
- Web based address services.
- Formation of the ASQ.

The accompanying table has been omitted from this version of the document at this particular stage of the project, due to the sensitivities of the suggestions contained therein, including not as yet having had formal discussions with nominated agencies. Should any reader wish to discuss in more detail certain aspects of this section please contact Kevin Landy, Queensland Spatial Information Office, telephone (07) 3224 6975 or email kevin.landy@treasury.qld.gov.au.

5.2 Proposed Addressing Process

The following table contains the core activities, participants and considerations involved in implementing the redesigned business processes outlined in Figure 1 below. Many of these activities are dependent on other components of the overall changes to addressing practices so isolated implementations should not be considered a viable alternative.

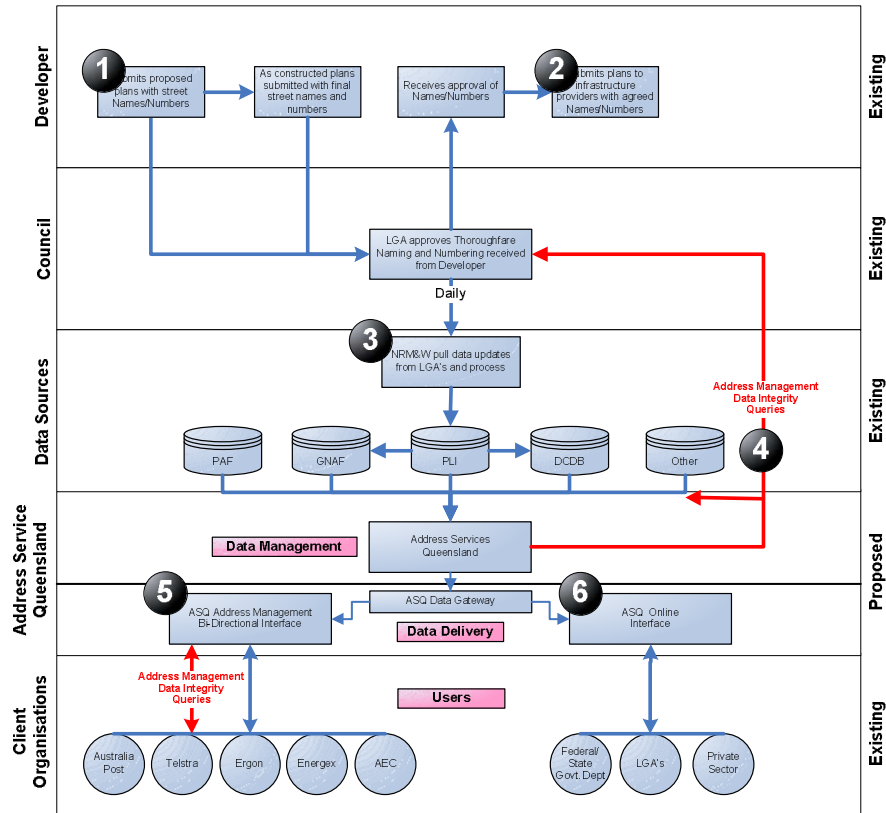


Figure 1. Redesigned Processes

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5.3 Identification of Existing Private Roads

This project will have the responsibility of identifying all Private Road enclaves and recording this data in the PLI. This project has considerable dependence on the PLI/DCDB changes occurring in the redesigned processes in order to record the Private Road data.

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5.4 Establishment of ASQ Entity

The ASQ will be the ongoing entity delivering whole of government addressing services.

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6 Implications and benefits matrix

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Appendix A – BPR Methodology Compliance

Section 1. Develop New Processes

Key Activity	N/A	Included	Notes
Develop Process Model		●	
Validate and complete new process	●		Out of scope
Estimate volumes and costs		●	Business case

Section 2. Identify and Design Boundary Service Processes

Key Activity	N/A	Included	Notes
Identify out of scope activities		●	
Develop handover processes	●		Out of scope
Develop reporting procedures	●		Out of scope
Update new service design		●	

Section 3. Define Information and Technology Requirements

Key Activity	N/A	Included	Notes
Define process data requirements	●		Out of scope
Classify data/information	●		Out of scope
Identify information owner	●		Out of scope
Define technology requirements	●		Out of scope

Section 4. Define Roles and Responsibilities

Key Activity	N/A	Included	Notes
Detail Roles		●	
Validate Roles	●		Out of scope

Section 5. Design Organisation

Key Activity	N/A	Included	Notes
Design Reporting Structure	●		Out of scope
Develop handover processes	●		Out of scope
Develop reporting procedures	●		Out of scope
Update new service design	●		Out of scope

Section 6. Assess Facilities Requirements

Key Activity	N/A	Included	Notes
Determine Facility Requirements	●		Out of scope
Validate facility requirements with appropriate members of the Consultative Group/s	●		Out of scope
Cost proposed facility requirements	●		Out of scope

Section 7. Governance – Legal & Privacy

Key Activity	N/A	Included	Notes
Identify legal and legislative requirements		●	
Develop a legal compliance checklist	●		Out of scope
Resolve specific legal issues relating to channels	●		Out of scope
Assess privacy impacts	●		Out of scope

Section 7. Governance – Corporate

Key Activity	N/A	Included	Notes
Identify reporting requirements	●		Out of scope
Develop process controls	●		Out of scope
Draft new work practices and business rules	●		Out of scope

Section 8. Governance – Security

Key Activity	N/A	Included	Notes
Confirm security objectives to support the options selected	●		Out of scope
Set security control policy parameters	●		Out of scope
Select the appropriate security controls	●		Out of scope
Validate security controls	●		Out of scope
Develop information security framework	●		Out of scope

Section 9. Governance – Audit

Key Activity	N/A	Included	Notes
Review and document control framework	●		Out of scope
Audit to review the mapped new service design processes	●		Out of scope

Section 10. Governance – Risk Assessment for Governance

Key Activity	N/A	Included	Notes
Assess risks in new service design	●		Out of scope
Assess the legal impact of the agreed new service design	●		Out of scope

Section 11. Plan, Run and Evaluate New Service Design Model

Key Activity	N/A	Included	Notes
Plan, arrange and run a desktop new service design model	●		Out of scope
Evaluate new service design model	●		Out of scope

Section 12. Assess Impacts of New Service Design

Key Activity	N/A	Included	Notes
Conduct gap analysis	●		Out of scope
Assess change justification	●		Out of scope

Section 13. Transition Management

Key Activity	N/A	Included	Notes
Define strategic competencies vision	●		Out of scope
Impact - roles	●		Out of scope
Define requirements for people performance management	●		Out of scope

Section 14. Identify Skill Gap

Key Activity	N/A	Included	Notes
Identify skill gap	●		Out of scope
Identify post-implementation support requirements	●		Out of scope

Section 15. Validate & Sign-Off BPR Detailed Design

Key Activity	N/A	Included	Notes
Validate BPR detailed design with Consultative Group/s and team members		●	
Key stakeholders agree BPR detailed design (including roles)		●	
Sign-off by Project Steering Committee		●	

Project Glossary

Address

For the purposes of this project an address is considered a way of referring to a particular and unique point on the land surface of the earth. Within Queensland the Lot on Plan is commonly considered a unique identifier of this location. Therefore, every other form of addressing should be considered a way of referencing the Lot on Plan.

A single Lot on Plan may have many textual addresses associated with it. These can be different ways of representing the official address or, in the case of Private Estates, a way of addressing the internal structure of the estate. This internal structure is opaque to an LGA and addresses within this structure whilst common are technically wrong.

Using this definition we find that several common forms of addressing occur. These are textual references such as a mail delivery address and spatial references such as a latitude and longitude.

Many attributes may also be associated with an address. For example:

- Australian Bureau of Statistics (ABS) Mesh Block/ Collector District
- Australia Post Delivery Point ID
- Latitude and Longitude of its centroid
- Flat/Unit number(s)
- Business or Private use
- Electoral district(s)
- Lot Number

These attributes, and others, are often collected and stored multiple times by many client organisations and represent a significant opportunity for reducing complexity and increasing data availability by storing some in a central repository.

Client

Clients of the Queensland Smart Address Service are organisations that will either:

- contribute new address data as an authorised supplier of addresses, or
- validate address data for their own internal use.

Completeness

Within an address database Completeness is the measure of the coverage within the database of the target addresses that was obtained. Differs from the accuracy or error rate measurement.

DCDB

Digital Cadastre Data Base

Formatting

The process of taking a textual representation of an address and placing it into a structured representation using rules.

Lot On Plan

The basic area of land under uniform property rights.

PAF

Postal Address File.

PLI

Property Location Index.

Matching

The process of taking an address and, through a series of rules and database lookups determining if it has a corresponding entry in the comparison database.

MOWPA

Multi-Occupation Without Postal Address. Areas such as retirement homes, hospitals etc that have a single postal address and an internal mail delivery structure.

OWPA

Objects without Postal Addresses. Buildings and other features that do not have a postal address but may be addressable in other ways such as spatially.

Parsing

The process of splitting an unformatted address text into its component parts such as Thoroughfare Name, Number, Locality and Postcode amongst others.

Private Road

A generic term that refers to any community whose address structure is uncontrolled by an LGA and is allocated by a developer. Examples of these are gated communities, retirement villages, military installations etc.

Additionally and constructed thoroughfare that is unnamed or named but under the control of an State, Federal or Local government that, for whatever reason, is not included in recognised address data sources. Examples of these would be Military bases, sports field access roads etc.

Vanity address

An address given by a member of the general public containing an error that is perceived to enhance the status of the address. For example a person may change their official locality to one that has a higher social status.