

Spatial Information Business Information Guidelines

Part of Victoria's Spatial Information Management Framework
Second Edition

The Victorian Spatial Council was established under the Victorian Spatial Information Strategy 2004-2007 to support the advancement of Victoria's social, economic and environmental goals through the provision and application of spatial information. It does this by providing a coordinated approach to spatial information policy, development and management, and facilitating opportunities for greater partnership building, collaboration, cooperation and education.



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VSC CHAIRMAN'S FOREWORD

The Victorian Spatial Information Management Framework consolidates the policies, principles and guidelines for information management that were articulated by both the Victorian Geospatial Information Strategy 2000-03 and the Victorian Spatial Information Strategy 2004-07.

The Framework aims to support the effective use of spatial information to support Victoria's social, environmental and economic goals through the establishment of institutional arrangements for developing spatial information; creating and maintaining spatial information; making spatial information accessible and available; and strategic development of technology and applications.

The custodian of spatial information is at the heart of the Spatial Information Management Framework. Its policies set out the minimum requirements for custodians to manage their datasets, while a set of underlying principles provide the foundation for enabling them to maintain these datasets and ensure all Victorians are aware of and have ready access to them.

These principles address all elements of the Spatial Data Infrastructure of Victoria: *governance, custodianship, framework information, business information, quality, metadata, awareness, access, pricing and licensing, and privacy.*

The Framework is accompanied by ten Guideline documents to assist custodians in the implementation of these policies and principles. These *Business Information Guidelines* provide an introduction to Victoria's approach to business information: how it is defined, how it is managed, what it comprises, and how it may be sourced and used.

The Guideline documents are also intended to be accessible to the general reader by setting out fully the basis on which the Framework will be delivered.

The Victorian Spatial Council is Victoria's principal coordinating body for spatial information, with a mandate to develop policy and promote best practice for spatial information management. These *Business Information Guidelines* are a key contributor to the Spatial Information Management Framework's objective to make spatial information accessible and useable. It is intended that they will be informed by practical experience, and contributions to future editions are welcome from practitioners and readers alike.



Olaf Hedberg

Chair, Victorian Spatial Council

INTRODUCTION

The Spatial Information Management Framework

The Spatial Information Management Framework is Victoria's best practice approach for establishing and retaining consistency in the management of spatial information across all organisations – whether public or private – with a role or interest in doing so.

Its objective is that spatial information be made as accessible as possible.

The Victorian Spatial Council has endorsed the development of the Framework because a coordinated approach to information management will provides the greatest opportunity to:

- reduce duplication of datasets, systems and processes, and increase consolidation, leading to more efficient spending on spatial information
- optimise investment and develop partnerships across the spatial information community (public, private and academic sectors)
- deliver higher quality datasets
- improve access to spatial information

Management of spatial information by participants in the Framework should facilitate its effective use, based on four key principles: that the spatial information will:

- represent the definitive and authoritative source of the data it contains
- be managed by designated custodians
- be accessible and available to all members of the community, except where confidentiality and commercially sensitive conditions apply
- be able to be combined with other spatial information products for the purposes of analysis and decision making

The Spatial Information Management Framework provides a holistic approach to managing spatial information in Victoria, encompassing the

1. **institutional arrangements for developing spatial information;**
2. requirements for **creating and maintaining spatial information;**
3. mechanisms for **making spatial information accessible** and available; and
4. **strategic development of technology and applications.**

Together, these components of the Framework create Victoria's Spatial Data Infrastructure (SDI).

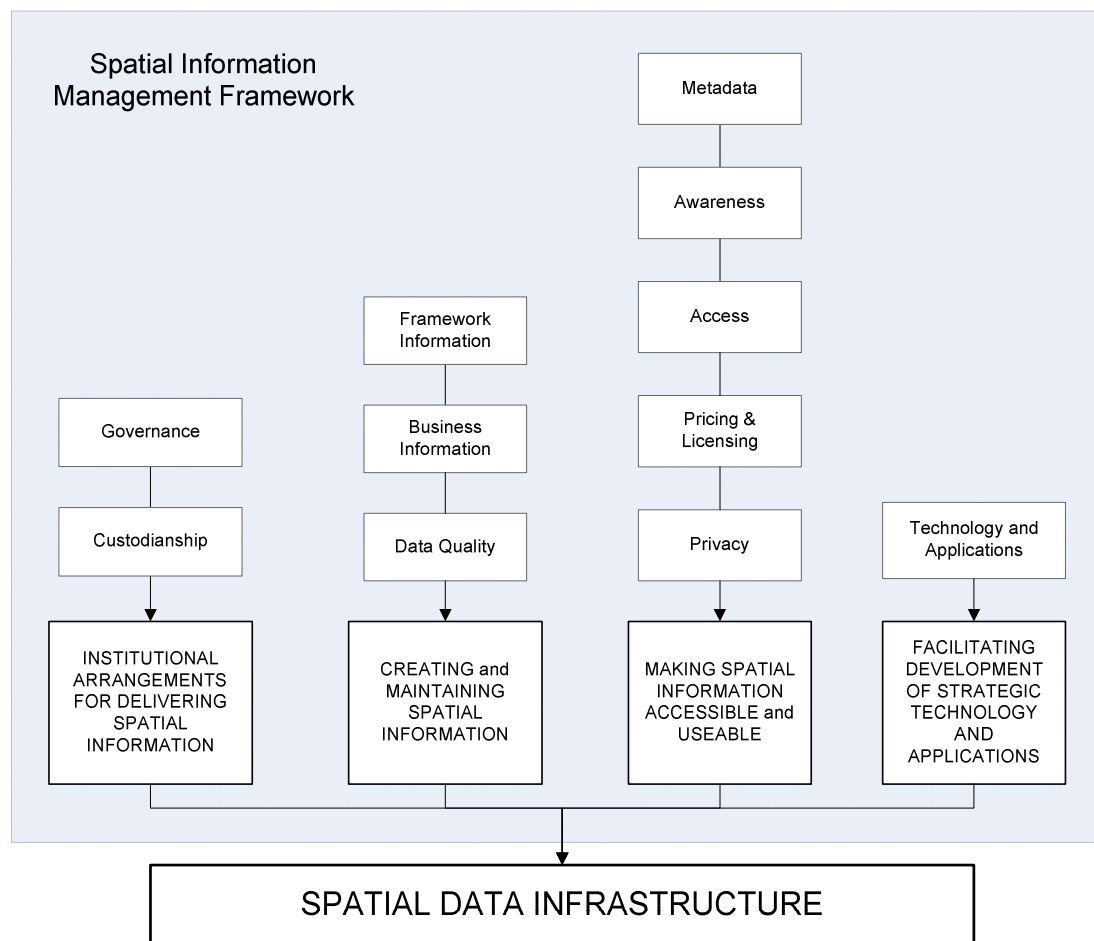
The SDI is an enabler – a mechanism for making data available and for sharing and exchanging it to enhance the achievement of social, environmental and economic goals. Behind it are the myriad of activities that create the conditions in which that sharing and exchange can take place, ie the development of the data, technology, policies, institutional arrangements and capacity building (ie equipping people to use the technology and information).

The Framework allows for the management of these elements in an integrated way to provide an environment for the effective use of spatial information.

This integrated approach is illustrated in Figure 1.

The Framework is supported by policies and guidelines that provide the formal requirements for implementing it, and tools and resources to support those responsible for that task.

Figure 1: The Victorian Spatial Information Management Framework



Separate Guidelines have been prepared for the following components of the Framework:

- Governance
- Custodianship
- Framework Information
- Business Information
- Data Quality
- Metadata
- Awareness
- Access
- Pricing and Licensing
- Privacy

The purpose of the Guidelines is to explain the policies and principles outlined in the relevant component of the Framework, and to describe activities that will support their application in implementing it.

It is envisioned that these Guidelines will vary over the life of the Framework as new information, policies, and procedures are developed, and as new issues arise.

This Document

It is intended that the Guidelines be read in conjunction with the document '*Victoria's Spatial Information Management Framework and Directory of resources*', also produced by the Victorian Spatial Council.

These Business Information Guidelines have two sections.

- Part A provides an overview of the spatial information management principle of business information.
- Part B defines business information and explains how it is managed and made available.

THE GUIDELINES

PART A – INTRODUCTION

Background

The Spatial Information Management Framework groups spatial datasets under two categories:

(1) Framework information, which is information considered fundamental to the development and operation of Victoria's Spatial Data Infrastructure; it is an 'enabler', in that other (business) information cannot be created or maintained without it. Victoria's Framework Information is currently represented by the 'Vicmap' suite of products.

The *Spatial Information Framework Information Guidelines* set out the definition of Framework Information and the principles that apply to its management and availability.

(2) Business Information, which is all other spatial information. Categories of Business Information include, but are not limited to, natural resources (soils, vegetation), socio-demographic (population, economic and social activities) and utilities (water, energy, telecommunications).

Under the Framework, Business Information is to be managed in the same way as Framework Information. As a result, it should be possible to integrate Framework Information and Business Information to create value-added datasets for application in analysis and decision making. It is in the ability to undertake analysis and support the making of decisions that the value of spatial information (whether Framework or Business) lies.

Purpose

The purpose of these Guidelines is to outline the nature of Business Information and set out the fundamental principles under which it is to be managed.

Business Information Policy

The Spatial Information Management Framework is based on the application of consistent information management principles across a distributed network of autonomous data custodians operating throughout the whole spatial information community.

Like Framework Information, the principles under which Business Information will be managed and made available are that the Business datasets represent authoritative sources of the relevant data, and are managed by custodians according to formal custodianship principles.

These goals are expressed in the policy that has been set out in the Spatial Information Management Framework:

Business Information will be:

- Maintained by custodians according to the *Spatial Information Custodianship Guidelines* and information management principles, including data quality, metadata, awareness, access, pricing and licensing, and privacy.
- Subject to periodic auditing to ensure that the datasets continue to meet their published specifications.

On the other hand, unlike Framework Information, the geographic coverage of the datasets and the regularity of maintenance may vary according to the nature of the dataset. However, the fundamental principle that users of these datasets can have confidence in the quality, currency and accuracy of the data still applies.

These Guidelines demonstrate the integrated approach to the management of both Framework and Business Information, and should be read in conjunction with the *Spatial Information Framework Information Guidelines*.

PART B – DEFINING BUSINESS INFORMATION

The Spatial Information Management Framework regards any spatial information that is not defined as Framework Information as Business Information.

Framework Information has a coordinating and defining role; it is information considered fundamental to the development and operation of Victoria's spatial information infrastructure, in that other (business) information relies on it for accurate and efficient use.

The key feature of Business Information is that it can be integrated with Framework Information to create value-added datasets for application in analysis and decision making.

Characteristics of Business Information

As a general rule, Business Information has been created, by Government or private sector organisations, to serve a particular business need. It may also be managed and made available to achieve a commercial gain or revenue stream.

Together with Framework Information, which is used to provide context, Business Information can be used as an important tool for analysis and decision making, by all types of organisations – public, private, educational, academic or community. For example, census data can be used to create maps identifying household income or rates of unemployment in particular localities (such as Local Government Areas), providing a basis for determining where to locate welfare services. Soils, hydrography, geology, vegetation and land management data can be integrated to identify relationships between each to determine levels of salinity on agricultural land or control weeds in national parks.

It has been estimated that more than 80% of information used by government is spatial. Such information includes:

- natural features of the earth's surface - rivers, hills, vegetation
- features beneath the surface - soils, geology, groundwater
- features above the surface - climate, atmospheric pollution, aircraft flight paths
- man-made features - roads, buildings, pipelines
- legal and administrative features - land ownership, planning controls, land valuations
- demographic information - population distribution, economic indicators, incidence of diseases, service utilisation
- public services - location of social, health and community services.

Like Framework Information, the value of Business Information lies in its capacity to be used and exchanged. This requires that it is available, accessible, accurate, complete, current and consistent, and that users know it exists.

Therefore, under the Spatial Information Management Framework, the objective is to increase the number of spatial datasets that are being made available for use. To achieve this objective, all spatial datasets, whether Framework or Business, must be managed according to consistent principles.

Benefits of Business Information

The benefits of Business Information include:

- *Creating value through sharing information:* If Business Information is based on Framework Information, the value of the former can be enhanced through sharing and integration. For example, a business organisation can produce a native fauna overlay and be able to analyse it against an associated building planning permit overlay from another organisation. Through the ability to share Business Information between organisations, more informed decisions can be made.
- *Promoting spatial industry growth:* The development of Business Information consistent with the approach to developing and managing Framework Information ensures compatibility of these Business datasets with the Business datasets of the majority of spatial information users. This provides the potential for development of a larger market for Business Information, and an increase in the number of ‘value adding’ opportunities for the private sector.
- *Encouraging Custodianship of information:* Custodianship affirms that the Business Information will be maintained, documented for history and accuracy, have metadata, be accessible, and have a licence fee determined. Custodianship facilitates discovery, and outlines and ensures quality of the information.

Management Approach for Business Information in Victoria

Under the Spatial Information Management Framework, all spatial information is managed by identifiable custodians.

Custodians are responsible for maintaining and developing the datasets they are responsible for, ie preparing and keeping up to date a data product specification or equivalent descriptive documentation of the dataset, and associated metadata; assessing data quality and developing quality standards in consultation with users of the data; setting user fees and licensing arrangements; and establishing appropriate arrangements for access to the dataset, as set out in the *Spatial Information Custodianship Guidelines*.

- *Product specification:* This defines the product, including identifying its custodian; its geographic extent, content, structure, and reference systems, how it was produced or acquired; how often it is updated; and in what form it is made available. The product specification will also set out the data quality statement, and pricing and licensing conditions (see below).
- *Quality assessment:* There are two components to the quality assessment – actual quality standard (the current quality level) and the minimum quality standard (a required quality standard, developed in conjunction with users); see the *Spatial Information Quality Guidelines*.
- *Develop and maintain metadata:* Metadata is a structured form of the product specification. Custodians are required to ensure that metadata is created and maintained as an integral part of datasets and associated products. As a minimum, they should create and maintain core Page 0 metadata elements defined in the *Geospatial Information Metadata Guidelines for Victoria, 2001*.
- *Determine user fee and licensing arrangements:* The means by which pricing and licensing conditions are set should be published and publicly available, as set out in the document *Spatial Information Pricing and Licensing Guidelines, 2006*.
- *Develop an access mechanism:* The objective of the access requirement is to provide the greatest possible level of public access through simple, effective and low-cost means, simultaneously protecting the interests of the custodian and others.

A comprehensive series of Guidelines and other publications has been produced to assist custodians in meeting these responsibilities (refer to the section ‘Further Reading’ on page 15).

Sourcing and using Victoria's Business Information

The following questions provide a guide to enable users to begin to source and use Business Information.

Who is the custodian of Victoria's Business Information?

The organisation that creates and manages the Business Information is the custodian of that Information.

How do I find out more about Victoria's Business Information?

Further information about Business Information can be obtained using the metadata records that accompany each dataset; these are published in the Victorian Spatial Data Directory and at <http://www.land.vic.gov.au/spatial>. They can also be searched for via DataSearch Victoria, which can be accessed at <http://services.land.vic.gov.au/SpatialDatamart/dataSearch.html>.

Metadata, or 'data about data', is the key management mechanism for Victoria's spatial information environment, providing fundamental information management tools at three levels:

- *Discovery*: enabling users to locate and evaluate information.
- *Management*: enabling custodians to better manage their spatial information.
- *Utilisation*: enabling users to access and manipulate information by means of automated/distributed systems.

The metadata details the characteristics and quality of the dataset. Users are urged to consult the metadata to determine whether it is suitable to their needs.

Further information about the Business datasets may also be available through product descriptions, should they be published by their custodian.

The metadata record is the minimum documentation that must be published to accompany the dataset. The decision to also publish a product description will be made on a case by case basis.

How do I access Business Information?

Access to Business Information is determined by the custodian. Users should consult the metadata record to determine the relevant details.

What Business Information is available?

There are many Business Information datasets available, and they can be accessed in a number of ways. A few examples are provided here.

The Department of Sustainability and Environment and Department of Primary Industries Corporate Spatial Data Library contains over 130 significant datasets that support natural resource planning and management in Victoria.

The catalogue is available on-line via <http://www.land.vic.gov.au/cgdl>

The Department of Sustainability and Environment also maintains a significant range and volume of spatial data relating to natural resource and land use in map, imagery (aerial photography and satellite) or digital data form.

Details of the data and how to acquire it are available on the Department's web site at:

<http://www.dse.vic.gov.au/DSE/nrenptm.nsf/childdocs/-1D73E63770CCC7ECCA2571A3000BAFB4?open>

Interactive maps are available via

<http://www.dse.vic.gov.au/DSE/dsencor.nsf/LinkView/836EE128E54D861FCA256DA200208B945FD09CE028D6AA58CA256DAC0029FA1A>

The Department of Primary Industries maintains *Victorian Resources Online* – a 'gateway to a wide range of natural resources information and associated maps' at <http://new.dpi.vic.gov.au/vro>

Other useful sites include:

- The Victorian Water Resources Data Warehouse – <http://www.vicwaterdata.net/vicwaterdata/home.aspx>
- Planning related data – <http://www.dse.vic.gov.au/DSE/nrenpl.nsf/childdocs/-9F889687EADAE3B2CA2572DA007F071B-637BF964456420E0CA2575E80005F2A4?open>

There will be many others not listed here – *please contact the Victorian Spatial Council at the addresses inside the front page if you would like your resources publicised in these Guidelines.*

What is the quality of the Business Information?

Quality standards for Business Information should be documented in the accompanying metadata and/or product description.

Under the Spatial Information Management Framework, custodians of Business Information are required to set quality standards in conjunction with users, as defined by the *Spatial Information Custodianship Guidelines*, to ensure the data is ‘fit for purpose’. The *Spatial Information Quality Guidelines* provide an overview of the key elements in determining the quality of spatial information.

What is the cost of the Business Information?

The cost of Business Information will be determined by the custodian. For further information on the method for pricing Business Information, refer to the *Spatial Information Pricing and Licensing Guidelines*.

In what formats/projections are the Business Information, and how do the datasets inter-relate?

The formats/projections of Business Information will be published in the metadata and product descriptions.

What is the currency of the Business Information?

The currency of Business Information will be published in the metadata and product descriptions.

How can I combine Business Information with my or others’ Business Information and with Framework Information?

Framework Information may serve as the underlying base for Business Information, enabling the user to add or attach additional attribute information. Framework Information can also enable users to register Business Information, which places it in the correct geographic context for further development and enables incorporation of data from other sources.

Many types of analyses link attribute values to features or relate locations of new phenomena to existing features (eg properties or terrain). Although the Framework Information may not provide all the data needed to perform such applications, its use wherever possible can save much of the considerable cost involved in creating an entire set of data.

APPENDIX - GLOSSARY

Business Information	Information considered valuable to the development and operation of Victoria's spatial information infrastructure, but which is not Framework Information.
Custodian	The entity responsible for a dataset. That is, the organisation formally responsible for ensuring quality, currency, storage, security, and distribution of the data. The custodian need not be directly involved in maintaining or supplying the data, but should be in a position to direct such activities.
Data	The base level of information stored in electronic or other databases. Data can exist in many formats including digital data, imagery such as aerial photographs and satellite images, and hardcopy products such as maps or plans.
Data product	Dataset that conforms to a data product specification or description.
Data product specification/description	Detailed description of a dataset that will enable it to be created, supplied to and used by another party.
Dataset	Identifiable collection of data.
Framework Information	Information considered fundamental to the development and operation of Victoria's spatial information infrastructure.
Information	The result of manipulating, analysing and interpreting data to produce a result which adds value or utility to the original data
Metadata	Data about data.
Spatial Accuracy	A broad concept referring to the level to which data sets may be integrated. In the context of this strategy, Spatial Accuracy refers to real-world features represented as digital data and the ability to accurately reflect their real-world spatial relativities, not only within a data set but also across data sets.
Spatial Data Infrastructure (SDI)	The technologies, policies and institutional arrangements that facilitate the availability of and access to spatial data.
Spatial Information Infrastructure	The spatial information essential to the social, economic, and environmental development of Victoria.
Spatial Information Management Framework	Victoria's best practice approach for establishing and retaining consistency in the management of spatial information. It provides a holistic approach to managing spatial information, encompassing the institutional arrangements for developing spatial information; requirements for creating and maintaining spatial information; mechanisms for making spatial information accessible and available; and strategic development of technology and applications.
Victorian Spatial Data Directory	The directory of metadata that describes data sets that originate or may be of use in Victoria. It is a public resource available on the Internet. It includes both current and archived data.

FURTHER READING

Guidelines:

Spatial Information Access Guidelines

Spatial Information Awareness Guidelines

Spatial Information Custodianship Guidelines

Spatial Information Data Quality Guidelines

Spatial Information Framework Information Guidelines

Spatial Information Governance Guidelines

Spatial Information Metadata Guidelines

Spatial Information Pricing and Licensing Guidelines

Spatial Information Privacy Guidelines

All documents are available at <http://www.victorianspatialcouncil.org/>

DSE 2005, *Victorian Spatial Information Strategy 2004-2007*

Victorian Spatial Council 2008, *Victorian Spatial Information Strategy 2008-2010*

Tomlinson (1993), *GIS Strategy Report 1993*, Tomlinson and Associates