

Data Framework

Victoria Unearthed

April 2023 Version 2.0



Energy,
Environment
and Climate Action

OFFICIAL

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Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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Document governance

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Metadata

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1.0	15/03/2018	Project Manager Victoria Unearthed	Initial document
2.0	19/4/2023	Manager Contaminated Land Policy and Planning	Updated to refer to DEECA, to include current references to policy and guidance documentation, and to align with changes to spatial data systems

Coverage

This framework has been developed to enable DEECA to effectively manage the data within the Victoria Unearthed and to comply with all required legal and regulatory obligations for the management of public information.

This framework and its accompanying policies and standards are applicable to and intended for use by all DEECA employees, and external employees responsible and/or accountable for supplying data to Victoria Unearthed and/or managing the data within Victoria Unearthed.

Reliance upon this document by any other person is entirely at their own risk and the department disclaims all responsibility or liability to the extent permissible by law for any such reliance.

Acronyms and terms

Acronym, abbreviation, terms	Definition
API	Application Programming Interface
AS	Australian Standard
EPA	Environment Protection Authority Victoria
EPB	Environment Protection Branch
DEECA	Department of Energy, Environment and Climate Action
DPC	Department of Premier and Cabinet
DTF	Department of Treasury and Finance
FAQ	Frequently Asked Question(s)
GDA2020	Geocentric Datum of Australia 2020
GNAF	Geocoded National Address File
HLUDB	Historical Land Use Database (former name for Victoria Unearthed)
IAR	Information Asset Register
IM	Information Management
ISO	From the Greek word “isos” which means equal. Used by the International Organisation for Standardisation to identify their standards.
MetaShare	DEECA's metadata repository for vector datasets
NGO	Non-governmental organization
OGC	Open Geospatial Consortium
OVIC	Office of the Victorian Information Commissioner
PROV	Public Record Office of Victoria
SIARD	Software Independent Archiving of Relational Databases
VPDSF	Victorian Protective Data Security Framework
VPDSS	Victorian Protective Data Security Standard
WFS	Web Feature Service
WMS	Web Mapping Service
WMTS	Web Map Tile Service
WoVG	Whole of Victorian Government

Part 1 – Introduction and overview

Victoria Unearthed draws on data from the Department of Energy, Environment and Climate Action (DEECA), Environmental Protection Authority Victoria (EPA), and external sources, to provide information about potentially contaminated sites. It includes data such as previous land uses and whether a statutory environmental audit has occurred.

The data framework for Victoria Unearthed (the Framework) seeks to ensure that current and future data sources are managed consistently, effectively and compliantly to inform the community of potential contamination risks and support informed decision making by individuals, government, business and non-governmental organisations (NGO).

The Framework exists within the context of the broader DEECA-wide approach to information management, which commits to basing DEECA's policy development and decision making on sound information that is well managed throughout its whole lifecycle.

It also exists within DEECA's ICT Operating Model where groups/divisions are responsible for:

“owning, making decisions for, funding and supporting data or applications where they are responsible for the business process or policy supported by those data or applications”

Purpose of the framework

The purpose of the framework is to help suppliers of Victoria Unearthed data and those managing Victoria Unearthed technology platforms appropriately and consistently manage that data over time. There are a range of compliance obligations and standards relating to this data including:

- State and federal legislation.
- Whole of Victorian public-sector standards.
- DEECA policies and standards.
- EPA policies and standards.
- Industry standards and best practice.

This framework seeks to highlight the applicable information from these obligations and standards in a single document. It highlights the relevant obligations, responsibilities any supplementary material.

Standards and best practice will change over time, and additional data sources for inclusion in the DEECA will be identified. The framework attempts to strike a balance between being specific enough to assist with practical data management while being generic enough to work with future changes.

The framework should be periodically reviewed to ensure it is still fulfilling its intended purpose. It is recommended it is reviewed once per year following the first year of Victoria Unearthed's operation. This review should include appropriate analysis and updating of any supporting and supplementary material and any associated links, such as those mentioned in dot points above.

Applicability and accountability

This framework is designed to be read and understood by those who are accountable or responsible for the appropriate and compliant management of Victoria Unearthed data. Suppliers of Victoria Unearthed data (both internal and external, private or public sector) and managers of Victoria Unearthed platform are required to comply with this framework.

Framework Structure

The Victoria Unearthed Data Framework covers the following dimensions which are relevant to the management of information:

- Information governance.
- Data management.
- People, capability, and culture.
- Security and privacy.
- Information lifecycle management.
- Use, share and release.

These dimensions are broken down into a total of 13 components, each of which describe the obligations, responsibilities and any supplementary materials to assist with the management of Victoria Unearthed data (see Figure 1 below). A consolidation of all the governance roles and responsibilities is presented in the Appendix.

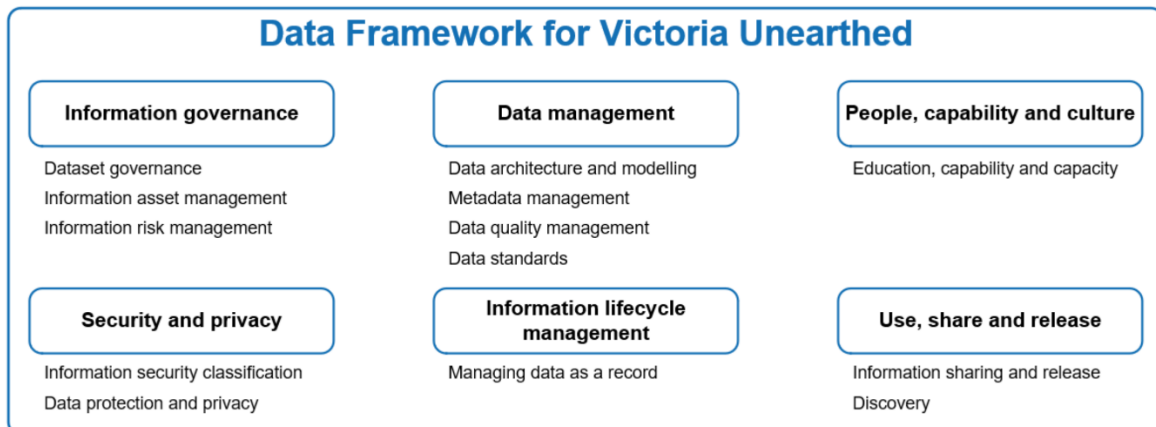
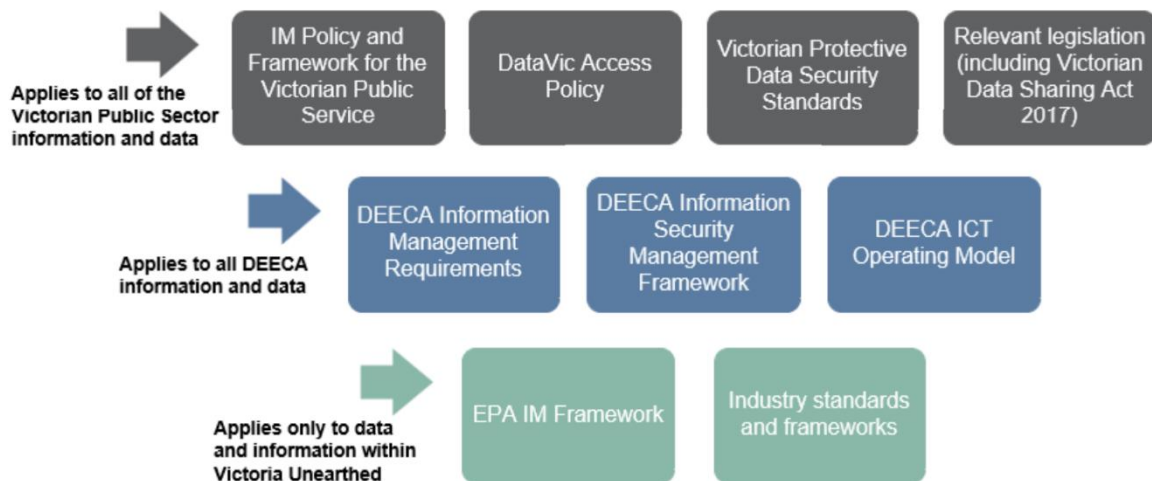


Figure 1: Framework structure

The framework exists within a complex landscape of legislation, policy, standards and best practice and these are described below.

WoVG data management obligations

The IM Policy and Framework for the Victoria Public Service

The Information Management (IM) Framework provides a high-level view of the Whole of Victorian Government's (WoVG) information management landscape and a shared direction for government and agency information management practice. The IM Policy provides direction to the Victorian Public Service in information and information management practice.

These are both developed by the Department of Premier and Cabinet (DPC) and are applicable to all Victorian Departments, Victoria Police, and to broader public services who are interested in adopting it.

DataVic Access Policy

Developed by the Department of Treasury and Finance (DTF), the DataVic Access Policy prescribes that public data be made available to the public as a default position with minimum restrictions, including the proactive removal of cost barriers.

The intent of the policy is to:

- Enable public access to government data to support research and education.
- Promote innovation.
- Support improvements in productivity and stimulate growth in the Victorian economy.
- Enhance sharing of, and access to, information-rich resources to support evidence-based decision making in the public sector.

The policy applies to all Victorian departments and agencies.

Victorian Protective Data Security Standards and Framework

The Victorian Protective Data Security Standards (VPDSS) and associated framework (VPDSF) specify the controls required to protect the security of public sector data. The standard and framework are issued by the Office of the Victorian Information Commissioner (OVIC). DEECA is actively implementing the standards and framework.

Victorian Data Sharing Act 2017

The Victorian Data Sharing Act 2017 aims to enable data sharing across government and address key priorities in the community. The Act provides a clear legal framework for sharing and using data across government to improve policy making, service planning and design, while providing strong safeguards and oversight.

Other relevant legislation

Legislation potentially relevant to the management of data within Victoria Unearthed includes:

Victorian Data Sharing Act 2017 (as above).

Privacy and Data Protection Act 2014 (Vic).

Freedom of Information Act 1982 (Cth).

Public Records Act 1973 (Vic).

Health Records Act 2001 (Vic).

Evidence Act 2008 (Vic).

Copyright Act 1968 (Cth).

Financial Management and Accountability Act 1997 (Cth)

DEECA enterprise-wide data management obligations

DEECA Protective Information Security Management Framework

This document describes the DEECA application of the Victorian Protective Data Security Framework (VPDSF). It specifies enterprise-wide requirements for the protection and security all department information.

The management of Victoria Unearthed data must comply with all relevant aspects of the DEECA Information Security Management Framework. Any industry standards or frameworks that contradict the DEECA Information Security Management Framework may not be applied.

DEECA Group-specific Information Management Frameworks

Each group within DEECA has their own Information Management Framework which addresses specific requirements for the management of relevant information within the department.

The management of Victoria Unearthed data must comply with the relevant aspects of the appropriate department and dataset.

Victoria Unearthed specific data management obligations

ISO 19115-1:2014 Geographic information – Metadata

The ISO standard for Geographic information – Metadata Part 1 describes a schema for describing geographic information and services through metadata. It provides information about the identification, the extent, the quality, the spatial and temporal aspects, the content, the spatial reference, the portrayal, distribution, and other properties of digital geographic data and services.

All datasets for Victoria Unearthed must be accompanied by metadata specified according to the ISO 19115-1:2014 standard. Metadata will be translated from this format to the DEECA metadata repository (MetaShare) format until such time that a new ISO compliant repository is implemented.

Open Geospatial Consortium Standards

The Open Geospatial Consortium (OGC) is an organisation that produces open standards for the geospatial domain. A range of OGC interface standards have been referenced within this framework where data is to be consumed or made available via web services.

The application of these standards supports interoperability between systems and reuse of data. No proprietary specifications or other standards may be used.

WoVG Address Data Standard

The WoVG Address Data Standard specifies the minimum requirements when collecting, managing, sharing, and releasing information that contains address data. The standard specifies that:

- Addresses should be validated against an authoritative source, which for Victoria is Vicmap Address or the geocoded national address file (GNAF).
- The interchange, storage, sharing and release of address data should be as per the Creative Commons License.

Address data captured, stored, and made available from Victoria Unearthed must comply with the WoVG Address Data Standard. Any other industry address standards that contradict the WoVG standard may not be applied.

How to read the framework

The Framework is made up of six dimensions and each component is comprised of a number of components. For each component, the Framework articulates obligations, lead responsibility and any supporting or supplementary material.

Dimension: People, capability and culture

<p>DEECA Information Management Requirements</p> <p>This dimension is about ensuring the improvement of information management practice, responsibility and capability, plus departmental accountability and capacity. It is about creating a culture where information and data are recognised and managed as assets and key drivers of success.</p> <p>Statement of objectives</p> <p>To ensure that the people charged with governing and managing the datasets within the appropriate authority, capability and capacity for their roles.</p>	<p>Dimension summary</p> <p>creating a culture where</p> <p>How the IM Framework dimension relates to the management of Victorian Unearthed data</p>
<p>Education, capability and capacity</p> <p>Often, roles associated with managing datasets are informal and not recognised in position descriptions or performance and development plans. The Data Framework seeks to formalise the roles necessary to govern and manage the datasets in Victoria Unearthed.</p>	<p>A description of one the components of the data management dimension</p>
<p>Obligations</p> <p>Any suppliers of data (internal or external to DEECA) commit to ensuring dataset governance and management roles are filled by staff with appropriate authority level, skills, and capacity</p> <p>Position descriptions for DEECA staff with Victoria Unearthed dataset governance or management roles will reflect these accountabilities and responsibilities</p> <p>Learning and development plans for DEECA staff with Victoria Unearthed dataset governance or management roles will seek to close any capability gaps</p>	<p>Mandatory obligations</p>
<p>Lead responsibility</p> <p>The Director of EPB is accountable for ensuring that the Victoria Unearthed Data Administrator have the appropriate authority level, skills, and capacity and for making sure their role is reflected in their position description and performance and development plans</p> <p>The Data Owner is accountable for ensuring that Dataset Custodians have the appropriate authority level, skills and capacity to fulfil their roles</p>	<p>Responsibility for ensuring mandatory obligations are met</p>
<p>Supporting and supplementary material</p> <p>N/A</p>	<p>Supporting or supplementary materials</p>

Figure 2: How to read the Framework

Part 2 – The Framework

Dimension: Information governance

DEECA Information Management Requirements

This dimension addresses how DEECA's information is managed to support decision making, policy development and service delivery. It focuses on information management practice and the governance of information. It also aims to promote the significance of information to the department and information relevance and commitment.

Statement of objectives

- There is ownership and accountability for all data within Victoria Unearthed.
 - Data within Victoria Unearthed is managed in line with regulatory, statutory and DEECA requirements such as privacy, security, copyright management and freedom of information.
 - There are agreed governance arrangements with data providers external to DEECA.
 - Historic land use data is valued and managed as a strategic asset.
 - Ensure the integrity, confidentiality and availability of information within Victoria Unearthed.
 - Data is protected through identification and management of security risk.
-

Dataset governance

Dataset governance in relation to Victoria Unearthed refers to the ownership and accountability for a dataset within Victoria Unearthed and decision rights relating to that dataset. Having clearly defined roles and responsibilities will ensure that the data is treated like an asset and is managed throughout its lifecycle.

Obligations

The dataset governance model for Victoria Unearthed data must align with the WoVG approach to information governance.

Any suppliers of data (internal or external to DEECA) commit to the minimum Data Governance roles presented in Figure 3 below.

A Data Sharing Agreement between the Victoria Unearthed Owner and Data Custodians will exist for every dataset in Victoria Unearthed.

The governance model is the same whether the dataset is supplied by an external organisation or a business area within DEECA.

The Data Owner retains all rights to any dataset shared through Victoria Unearthed unless agreed otherwise through a Data Sharing Agreement.

Each Data Sharing Agreement will be reviewed annually.

A Data Sharing Agreement will contain as a minimum:

- Adequate description of the dataset(s) covered by the agreement.
- Dataset quality statement according to the WoVG template.
- Information security classification and any access constraints.
- Dataset license requirements.
- Any data retention and disposal requirements.
- Any special arrangements required.
- Contact details for Data Custodian and their delegates.
- Contact details for Data Administrator.
- DEECA/EPB's commitment to the compliant management of the dataset.
- Compliance to DEECA change management process.

Victoria Unearthed data governance model

The data in Victoria Unearthed is to be governed according to the WoVG information custodianship approach (Figure 3).

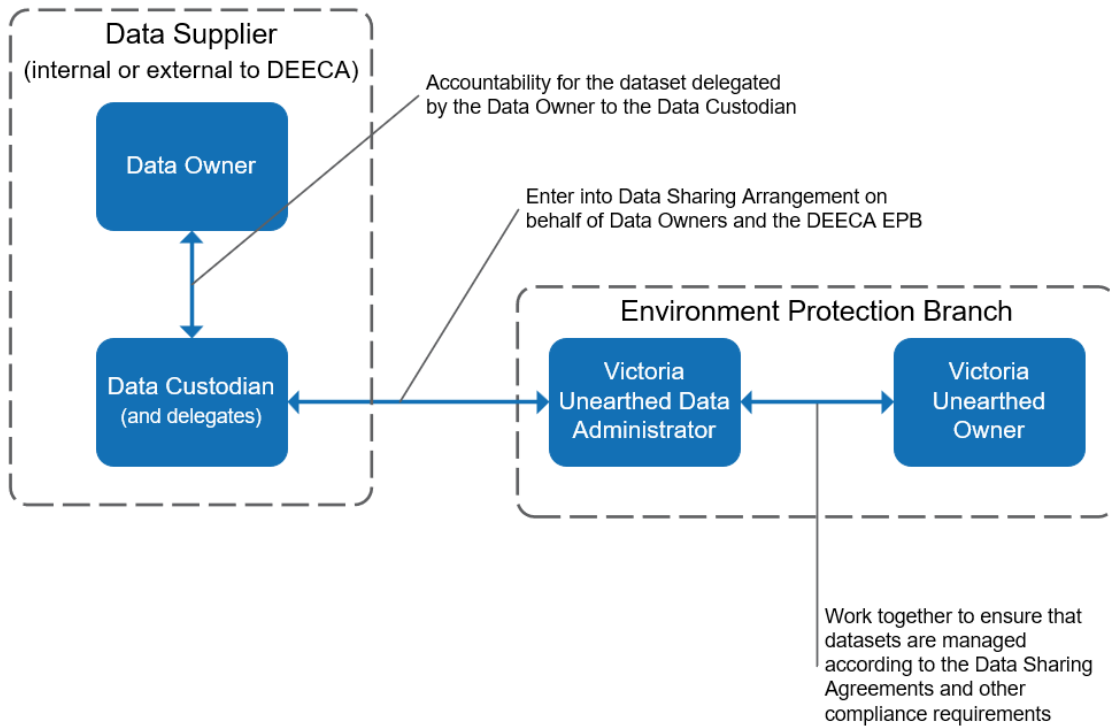


Figure 3: Minimum Data Governance Roles

Lead responsibility

Data Owner	The head of the department, agency or organisation that owns copyright to the dataset or manages the copyright on behalf of the crown or the delegated owner (as per IM-GUIDE-06 <i>Information Management Governance Guideline</i>).
Data Custodian	The individual upon whom the Data Owner has bestowed the accountability, authority, and resources to ensure the appropriate and compliant management of the dataset. Data Custodians are accountable for the quality of the data, resolving conflicts with other datasets and providing it in the required format for inclusion in Victoria Unearthed. Data Custodians may delegate any of the responsibilities for ensuring the appropriate and compliant management of the dataset to another individual. Data Custodians or their delegates must be available to the Victoria Unearthed Data Administrator to resolve any operational issues related to the dataset in Victoria Unearthed or respond to queries about the data.
Victoria Unearthed Owner	The individual with the accountability, authority, and resources to ensure Victoria Unearthed is capable of supporting, and where possible, enforcing the compliant management of all datasets. This includes legislation, regulation, WoVG and DEECA policy and standards and all Data Sharing Agreements with Data Custodians. The Victoria Unearthed owner is responsible for determining whether a dataset is appropriate to be included within Victoria Unearthed. New datasets developed from one or more existing Victoria Unearthed datasets should not be automatically included.
Victoria Unearthed Data Administrator	The individual with accountability for coordinating the development, monitoring and enforcement of Data Sharing Agreements between Data Custodians and Victoria Unearthed Owner. Data Sharing Agreements are to be reviewed and ratified regularly.

Table 1: Governance roles

Supporting and supplementary material

DEECA Information Security Classification Tool.

WoVG - Information Management Governance Standard.

WoVG - Information Management Governance Guideline.

Information asset management

An information asset is a body of information defined and practically managed so it can be understood, shared, protected, and used to its full potential. Information assets support business processes and are stored across a variety of media and formats. Like other assets, throughout its lifecycle, information needs to be managed and maintained as an operational and strategic asset.

All significant and critical information assets must be managed in accordance with the WoVG Information Management Policy and WoVG Information Management Governance Standard. Definitions for significant and critical information assets can be found within the WoVG Information Management Governance Guideline.

All datasets must be assessed as to whether they are significant or critical information assets prior to loading into Victoria Unearthed.

To be considered effectively managed, all Victoria Unearthed datasets must have:

- Assigned ownership and governance (see component dataset governance).
- Appropriate classifications applied (see component information security classification).
- Undergone a security risk assessment (see component Information risk management).
- Be registered on the DEECA information asset register.

Datasets are required to be registered on the DEECA information asset register (IAR) regardless of whether they are owned by DEECA or external entity. Datasets identified as critical information assets will be registered on the WoVG information asset register when it is implemented. Under the Victorian Data Sharing Act, the Chief Data Officer can request any datasets. This includes those registered on the DEECA IAR.

Obligations

All datasets within Victoria Unearthed must exist on the DEECA information asset register.

Where Victoria Unearthed datasets are identified as critical information assets, these must be flagged as such within the DEECA information asset register.

All datasets within Victoria Unearthed must be managed according to all relevant legislation (national, state and department specific), regulatory and administrative requirements.

Lead responsibility

The Data Administrator is responsible for ensuring that each dataset in Victoria Unearthed is registered on the DEWLPI information asset register.

The Data Custodian is responsible for supplying all required metadata for the information asset register.

The DEECA information management function is responsible for specifying the minimum required metadata for the DEECA information asset register.

Supporting and supplementary material

WoVG - Information Management Governance Standard.

WoVG - Information Management Governance Guideline.

Information risk management

Information risk management in relation to Victoria Unearthed is about managing risks that may affect the confidentiality, integrity and availability of data and ensuring that the risks are identified, evaluated, and mitigated. The mitigation strategy for each risk should be proportionate to the likelihood and the severity of the impact.

Information risk management must be conducted in line with the standards specified in the Victorian Protective Data Security Standard (VPDSS) and the DEECA Risk Management Framework.

Obligations

A risk assessment must be conducted for each dataset in line with the DEECA Risk Management Framework before it is loaded into Victoria Unearthed and made publicly available.

Identified threats, vulnerabilities and consequences must be evaluated and appropriate mitigation strategies applied.

Data within Victoria Unearthed must be managed in line with DEECA's Information Security Management Framework.

Security risks for Victoria Unearthed must be identified and recorded on the DEECA Risk Register.

Appropriate security controls will be employed within Victoria Unearthed to reduce risk due to unauthorised access to a dataset.

Lead responsibility

The Data Custodian is responsible for ensuring a risk assessment has been undertaken for their dataset and appropriate mitigation strategies applied.

The Victoria Unearthed owner is responsible for ensuring security risks to Victoria Unearthed data are identified and recorded on the appropriate DEECA risk register.

The Victoria Unearthed owner is responsible for ensuring appropriate security controls are employed within Victoria Unearthed.

Supporting and supplementary material

DEECA Risk Management Framework.

DEECA Information Security Management Framework.

Victorian Government Risk Management Framework.

Victorian Protective Data Security Framework (VPDSF).

Victorian Protective Data Security Standard (VPDSS).

Dimension: Data management

DEECA Information Management Requirements

For DEECA, 'information' means 'information and data' (and data ownership and governance are covered by the information governance enabler). Focusing on the practice of data management specifically highlights the importance of data as a tactical and strategic asset and as an enabler of DEECA's insight and business transformation.

Statement of objectives

Data made available through Victoria Uearthed is of the highest possible value to consumers.

The quality of all datasets within Victoria Uearthed is known and communicated.

Minimised effort for acquiring and loading new and updated datasets.

Data reuse is encouraged, supported, and enabled.

All data within Victoria Uearthed is current.

Data architecture and modelling

Data architecture is a collection of principles, models, diagrams, specifications, and rules that describe and guide how data is acquired, transformed, stored, integrated, and presented. Data models describe information entities and their relationships. A well-defined data architecture will underpin Victoria Uearthed ensuring consistent design and efficient performance while also supporting system extensibility and minimising maintenance overheads.

Obligations

The data architecture of Victoria Uearthed must be defined, documented, and maintained using sound architecture principles, data catalogues, data models, data flow diagrams, data mappings and data dictionaries.

A data architecture must exist for Victoria Uearthed.

A publicly accessible catalogue of all datasets within Victoria Uearthed must exist.

A data model must exist for each dataset within Victoria Uearthed.

A data dictionary must exist for each dataset within Victoria Uearthed. The data dictionary must include at a minimum: field descriptions, data types and references to glossary items.

Lead responsibility

The Data Custodian is responsible for the creation and supply of a data dictionary for their dataset.

The Data Custodian is responsible for the provision of a data quality statement.

The Victoria Uearthed Owner is responsible for the creation and maintenance of a publicly accessible data catalogue.

The Victoria Uearthed Owner is responsible for the creation of a data model and data dictionary for all Victoria Uearthed datasets and resolving any architectural conflicts as they arise.

The Data Custodian is responsible for the creation of a data mapping between the source and Victoria Uearthed data model.

The Data Custodian and Victoria Uearthed Owner are jointly responsible for transforming data between the source and Victoria Uearthed data model. This will need to be agreed on a case-by-case basis.

Supporting and supplementary material

Relevant Vector Data Platform (VDP) documentation (DEECA Information Services Division).

Metadata management

Metadata is data that describes data. Appropriate metadata in Victoria Unearthed will ensure that a consumer is provided the information needed to make informed decisions from the data knowing its meaning and limitations.

This framework specifies that Metadata provided for each dataset within DEECA's current metadata repository 'MetaShare' (which uses the open source GeoNetwork product) should apply and be compliant with the following Metadata standards:

- ISO 19115-1:2014 – Geographic information – Metadata– Part 1: Fundamentals.
- ISO/TS 19139-1:2019: Geographic information — XML schema implementation — Part 1: Encoding rules.
- ISO 19115-3:2018 – Geographic Information – Metadata.
- ISO 19110:2016 – Geographic information — Methodology for feature cataloguing.

Obligations

Data within Victoria Unearthed must be well described by accompanying metadata so that is understood, can be re-used and integrated within other datasets.

Metadata for a dataset must include information about governance, guidance on how it can be used, the provenance and lineage of the data, how it was collected and what has been done to it (such as what derived information has been added and how it was geocoded) and statements about data quality.

Metadata must be captured at both the dataset level and the record (point/polygon) level. Additional metadata may also be captured at the attribute level where appropriate.

Metadata for each dataset must be stored in MetaShare, a DEECA metadata repository.

Metadata for each dataset must be provided according to the ISO 19115-1:2014 Geographic information – Metadata – Part 1: Fundamentals.

A data mapping must be maintained between the ISO 19115-1:2014 Geographic information – Metadata standard and the MetaShare metadata specification.

Metadata must be made available into consumers in an easy to access fashion such as via CKAN.

Lead responsibility

The Data Custodian is responsible for ensuring metadata is created, loaded, maintained, provisioned, verified and audited.

The Victoria Unearthed Owner is responsible for maintaining a mapping between the ISO 19115 Geographic Information-Metadata – Part 1: Fundamentals and the MetaShare metadata specification.

Supporting and supplementary material

MetaShare Metadata Specification.

GeoNetwork Manual 3.10.x.

Victorian Government Data Directory Metadata.

[ISO 19115-1:2014 – Geographic information – Metadata– Part 1: Fundamentals.](#)

[ISO/TS 19139-1:2019: Geographic information — XML schema implementation — Part 1: Encoding rules.](#)

[ISO 19115-3:2018 – Geographic Information – Metadata.](#)

[ISO 19110:2016 – Geographic information — Methodology for feature cataloguing](#)

Data quality management

Data quality is a perception or an assessment of data's ability to be used for its intended purposes. The quality of data can be measured both quantitatively and qualitatively against a range of dimensions such as validity, timeliness, consistency and integrity.

The data quality within Victoria Unearthed must be assessed and communicated. It should be of the highest possible level within accepted limitations such as due to the historic nature of some datasets. All limitations, shortcomings and issues within the data should be clearly stated in the accompanying data quality statement and metadata.

Obligations

The quality of data within Victoria Unearthed must be known and clearly communicated to consumers of the data.

A data quality assessment against defined metrics must be conducted on all datasets before they are added to Victoria Unearthed. Where the dataset is subject to updates, the quality of the dataset should be reassessed periodically.

A data quality statement and other relevant data quality information derived from the data quality assessment must be included with all datasets.

Datasets must be of the highest possible quality within accepted limitations (e.g., there are limitations on what improvement can be done to historic datasets).

Where updates are made to a source dataset, an updated version must be loaded into Victoria Unearthed in a timely manner.

Lead responsibility

The Data Custodian is responsible for the data quality assessment of the dataset and the provision of associated data quality information, including the Data Quality Statement.

The Data Custodian is responsible for the quality of the dataset.

The Data Custodian is responsible for ensuring the dataset within Victoria Unearthed is up to date.

The Data Custodian is responsible for consulting with those providing feedback on the quality of the dataset and for actioning that feedback.

Supporting and supplementary material

[WoVG Data Quality Standards.](#)

[WoVG Data Quality Guidelines.](#)

[WoVG Data Quality Statement Template.](#)

[WoVG Data Quality Management Plan Template.](#)

Data standards

Common data standards provide the foundation for the creation and collection of consistent data and are fundamental to the interoperability of Victoria Unearthed.

With data being provided and then consumed by entities external to DEECA, the application of appropriate data and spatial standards is essential and will ensure that datasets within Victoria Unearthed are discoverable, accessible and useable.

Datasets can be provided to Victoria Unearthed via API or via submission of a file to the Victoria Unearthed Owner. Preference must be given to supply via API and files should only be accepted where the Data Custodian is able to show valid reason.

All data made available from Victoria Unearthed must be in a machine readable, open standard formats to ensure interoperability and encourage the release of datasets. This applies to data released as files and via APIs and web services.

Obligations

Data must be provided to Victoria Unearthed in one of the supported formats as specified in *Table 2: Accepted Victoria Unearthed file and interface specifications* below.

Data must be made available from Victoria Unearthed in a machine readable, preferably open standard format as specified in *Table 2: Accepted Victoria Unearthed file and interface specifications* below.

All datasets must be accompanied by metadata according to the ISO 19115-1:2014 Geographic information – Metadata standard.

Addresses and location descriptors for all datasets within Victoria Unearthed must comply with the WoVG Address Data Standard. The requirements are:

- Addresses are based on or validated against the authoritative source for physical address data in Victoria, Vicmap Address.
- Creative Commons License is used as the basis for the schema for storing and transmitting address data.
- All datasets to be stored in Victoria Unearthed must use the coordinate reference system, Geocentric Datum of Australia 2020 (GDA2020).

Accepted source formats (file)	Accepted source interface format (API)	Data provision formats (file)	Data provision interface format (API)
<ul style="list-style-type: none"> • ESRI Shape file • ESRI File Geodatabase • Mapinfo MID/MIF files • Mapinfo TAB file • Shapefile • CSV 	<ul style="list-style-type: none"> • Web Feature Service (WFS) with encoding: • GML (preferred) • XML • REST with encoding: • GeoJSON • GML (preferred) or XML • CSV (for point data) 	<ul style="list-style-type: none"> • Keyhole Markup Language (KML) • GeoJSON • CSV • Other file formats supported by Spatial DataMart 	<ul style="list-style-type: none"> • Web Mapping Service (WMS) • Web Feature Service (WFS) • Rest interface with encoding: • GeoJSON

Table 2: Accepted Victoria Unearthed file and interface specifications

Lead responsibility

The Data Custodian is responsible for ensuring that datasets adhere to the standards specified above.

The Victoria Unearthed Owner is responsible for making data available from Victoria Unearthed in a machine readable, preferably open standard format.

Supporting and supplementary material

ISO 19115-1:2014 Geographic information – Metadata standard.

Open Geospatial Consortium Standards.

WoVG Address Data Standard.

Creative Commons License.

Vector Data Platform documentation.

Dimension: People, capability and culture

DEECA Information Management Requirements

This dimension is about ensuring the improvement of information management practice by building individual responsibility and capability, plus departmental accountability and capacity. It is about creating a culture where information and data are recognised and managed as assets and key drivers of success.

Statement of objectives

To ensure that the people charged with governing and managing the datasets within Victoria Unearthed have the appropriate authority, capability and capacity for their roles.

Education, capability and capacity

Often, roles associated with managing datasets are informal and not recognised in position descriptions or performance and development plans. The Data Framework seeks to formalise the roles necessary to govern and manage the datasets in Victoria Unearthed.

Obligations

Any suppliers of data (internal or external to DEECA) commit to ensuring dataset governance and management roles are filled by staff with appropriate authority level, skills, and capacity.

Position descriptions for DEECA staff with Victoria Unearthed dataset governance or management roles will reflect these accountabilities and responsibilities.

Learning and development plans for DEECA staff with Victoria Unearthed dataset governance or management roles will seek to close any capability gaps.

Lead responsibility

The Director of EPB is accountable for ensuring that the Victoria Unearthed Owner and Victoria Unearthed Data Administrator have the appropriate authority level, skills, and capacity and for making sure their role is reflected in their position description and performance and development plans.

The Data Owner is accountable for ensuring that Dataset Custodians have the appropriate authority level, skills and capacity to fulfil their roles.

Supporting and supplementary material

Victoria Unearthed Documentation (Victoria Unearthed owner).

Dimension: Security and privacy

DEECA Information Management Framework

This dimension highlights the DEECA's responsibility to protect the security of its information and data. Its emphasis is on protecting the privacy of the individual and minimising risk to government, by ensuring the confidentiality, integrity and availability of government information.

Statement of objectives

Data custodians are aware of and are actively involved in ensuring the security of their data within Victoria Unearthed.

Security of information is balanced with open access relative to its risk profile.

Appropriate access and security controls are designed and built into the system.

An appropriate balance between protecting and enabling the data is maintained.

Victoria Unearthed will make information about historic land use openly available and easily accessible to auditors, researchers and members of the public. DEECA's Information Security Management Framework specifies a risk-based approach to security where level the protection applied is proportionate to the assessed risk.

While the majority of the information contained within Victoria Unearthed is not sensitive and is by default open, it is still important that appropriate assessment and classification activities are undertaken for each dataset to ensure that data is appropriately secured and is not accessible by unauthorised individuals.

Information security classification

All datasets must undergo an information assessment prior to entry into Victoria Unearthed to ensure that the appropriate security controls are able to be applied. An information security value assessment considers the impact if there was a compromise to the confidentiality, integrity and/or availability of the information.

The *VPDSF Practitioner Guide: Assessing the Security Value of Public Sector Information* document defines a high-level process for performing an information security value assessment. The assessment determines:

- The overall security value of the dataset.
- How to conduct an information security value assessment (using Business Impact Levels).

DEECA's Information Security Management Framework provide further detailed information on how a security classification should be assigned. Security classifications assigned out of the assessment must adhere to the DEECA guidelines.

Obligations

All datasets loaded into Victoria Unearthed must undergo an information security value assessment according to the *VPDSF Practitioner Guide: Assessing the Security Value of Public Sector Information* document.

The security classification of data and metadata align with the DataVic Access Policy and Guidelines and the DEECA Information Security Classification Guideline.

Data must be appropriately protected within Victoria Unearthed based on the outcome of the information security value assessment.

Lead responsibility

The Data Custodian will be responsible for conducting an information security value assessment on each dataset and determining the appropriate classification level. For data suppliers with lesser resources, the Victoria Unearthed owner may support the Data Custodian to perform the assessment.

The Victoria Unearthed Owner will be responsible for ensuring the Victoria Unearthed system applies appropriate security controls based on the classification and value of the data.

Supporting and supplementary material

Victorian Protective Data Security Framework (VPDSF) – Practitioner Guide: Assessing the Security Value of Public Sector Information.

DEECA Information Security Policy.

DEECA Information Security Classification Guideline.

DEECA Information Security Classification Tool.

DataVic Access Policy.

Data protection

Victoria Uearthed must be secured with appropriate controls to minimise the risk to DEECA by ensuring the confidentiality, integrity and availability of historic land use datasets.

As the intent is open access, it is anticipated that confidential information within the system will be limited, however it is important that the integrity and availability of the data is maintained, and it is protected from unauthorised modification and loss of access.

Obligations

VPDSS and DEECA security requirements are met for data within Victoria Uearthed.

Appropriate access and security controls are implemented within Victoria Uearthed to ensure data is protected in line with its security classification and value.

Read-only access will be the default access level provided to users.

Creation, modification and deletion of data must only be possible by authenticated users that have appropriate permissions following DEECA's change processes.

All authenticated users must be identified and authenticated in accordance with the Victorian Protective Data Security Standards, to ensure that only authorised users gain access to restricted areas of the system and information.

An appropriate business continuity plan and disaster recovery plan must be in place for Victoria Uearthed in the event there is a loss of confidentiality, integrity or availability.

Lead responsibility

The Victoria Uearthed Owner will be responsible for ensuring the appropriate security and access controls are implemented and applied within Victoria Uearthed.

Supporting and supplementary material

DEECA Information Security Policy, Guideline and Tool.

DEECA Disaster Recovery Policy, Framework and Guidelines.

DEECA ICT Disaster Recovery Planning and Testing Procedure.

Victorian Protective Data Security Framework (VPDSF).

Victorian Protective Data Security Standard (VPDSS).

ICT System Access General User Access Policy.

ICT System Access Privileged User Access Policy.

Dimension: Information lifecycle management

DEECA Information Management Requirements

This enabler considers the lifecycle of information and the people, processes and technologies that help to protect it, manage it and extend its value and usefulness to the department.

Statement of objectives

Ensure Victoria Unearthed can manage the maintenance and security of any public records it contains through their full lifecycle.

Ensuring those records retain their authenticity, reliability, usability and integrity (for as long as required).

Managing data as a record

Public records are defined by the Public Records Act 1973 as:

“Any record made or received by a public officer in the course of his duties”

All Victorian public records are subject to rules about how they must be managed, used, stored and disposed of. Public records are not limited to any particular format (such as paper-based documents) and can include structured or GIS data in databases.

Obligations

The Public Records Office Victoria (PROV) is charged with developing and supporting the regulations for lawfully managing public records. Any public records contained within Victoria Unearthed must be managed in accordance with the following PROV principles, as detailed in the PROV recordkeeping standards:

Creation	<ul style="list-style-type: none"> • Authentic records of all agency activities and decisions are consistently captured by robust and compliant systems. • Public records are correctly and clearly connected to relevant times, people, systems, processes and events to ensure they are reliable evidence of what occurred. • Public records are preserved for future use at the time of their creation and capture through effective strategies, methods and formats. • Systems that capture public records maintain the integrity of the records as evidence, protecting them from undetected and unauthorised alteration.
Control	<ul style="list-style-type: none"> • Metadata elements needed for the structure, context and management of business records to be used and understood over time are captured, maintained and connected with the records. • Business records are classified in accordance with business classification schemes that are aligned and mapped to access controls and disposal programmes. • Business records are accurately tracked using systems that create, capture and maintain information about the movement of and actions on records.
Storage	<ul style="list-style-type: none"> • All public records must be stored in conditions that are authorised by the Keeper of Public Records. • Public records must be stored using systems that enable the records to be retrievable. • Public records must be protected from theft, loss, misuse and inappropriate or unauthorised access or modification, whilst they are being stored.
Access	<ul style="list-style-type: none"> • Any restriction of access to records, or use of records, must meet the agency's documented and endorsed criteria to justify the restriction. • Public records must only be used for authorised purposes, considering all relevant legislation, access, copyright or licensing conditions. • The security of public records must be assured, preventing unauthorised access, alteration, destruction or release of records.
Disposal	<ul style="list-style-type: none"> • Disposal of public records must be conducted in a lawful manner. • Disposal of public records must be authorised by the Keeper of Public Records. • Disposal actions must be based on an informed decision-making process. • Disposal actions and retention periods for public records must be justified. • Disposal of public records must be planned, regular and integrated into the agency's business processes and programs. • Public records must be disposed of in a timely manner. • Disposal of public records must be undertaken using a secure method so that the content is protected and is not inadvertently released or lost.

Table 3: PROV Principles

Lead responsibility

Data Custodians must determine if the data they are providing to Victoria Unearthed is a public record or not (it may be simply a copy of a public record). Any public records provided to Victoria Unearthed must be identified and classified according to the appropriate retention and disposal authority

The Victoria Unearthed Owner must ensure that Victoria Unearthed can support and enforce the compliant management of any public records it contains

DEECA records management function must support Data Custodians and the Victoria Unearthed Owner to apply the PROV records management standards to structured data

Supporting and supplementary material

DEECA Records Management Policy

DEECA Hard Copy Record Destruction Procedure

DEECA Information Disposal Fact Sheet

DEECA Record Keeping Quick Reference Guide

DEECA What is a Corporate Record Fact Sheet

DEECA Records Management General Information FAQ

[PROV Standards Framework](#)

[PROV Retention and Disposal Authorities](#)

[Software Independent Archiving of Relational Databases \(SIARD\)](#)

Dimension: Use, share and release

DEECA Information Management Requirements

This dimension is about allowing DEECA's information to be of greater benefit to government and the community by increasing the opportunity for reuse, repurpose and collaboration where applicable or protecting it where required.

Statement of objectives

The Victoria Uearthed system is discoverable by people who are unaware of its existence.

Datasets within Victoria Uearthed are easy to discovery.

Datasets within Victoria Uearthed are easy to access.

Clear licensing and reuse restrictions exist for all datasets in Victoria Uearthed.

Data Custodians are accountable for determining the degree to which their data can or must be used, shared and released. They are responsible for making this assessment in line with their statutory, regulatory and compliance obligations.

These determinations will be captured in the Data Sharing Agreements for each dataset (see dataset governance). The Data Custodian retains authority over their data with the right to amend use, share and release rights to the data.

Information sharing and release

Sharing information with other government departments, agencies, external entities and members of the public helps to increase the value of Government investment in information by creating an opportunity for reuse and repurpose.

Victoria Uearthed must support the sharing and release of information by providing a mechanism through which users are able to view and interact with historical land use data and provide services that will allow data to be easily extracted in standard, open formats for reuse in other applications.

Obligations

Data must be made available in accordance with the DataVic Access Policy.

Datasets within Victoria Uearthed are open by default. Compelling reasons must be shown where access to data is to be restricted.

Copyright and licensing agreements must be considered before making data available in Victoria Uearthed. DEECA is bound by the Copyright Act 1968 (Vic), the WoVG Intellectual Property Policy and the DEECA Copyright Policy.

Where the dataset is owned by the Victorian Government, the licence recommended for use by agencies under the WoVG Intellectual Property Policy is CC BY 4.0.

Data made available through Victoria Uearthed must be released with relevant licensing information.

Lead responsibility

The Data Custodian is responsible for ensuring a dataset is made available in accordance with the DataVic Access Policy.

The Data Custodian is responsible for justifying where a dataset within Victoria Uearthed should not be open to all users.

The Data Custodian is responsible for determining copyright and licensing associated with a dataset, ensuring this is documented in the associated metadata record.

The Data Custodian is responsible for ensuring relevant licensing information is made available with the release of the dataset.

Supporting and supplementary material

DEECA Copyright Policy.

Victorian Data Sharing Act 2017.

DataVic Access Policy.

Copyright Act 1968 (Vic).

WoVG Intellectual Property Policy.

Creative Commons (CC) 4.0.

Discovery

Information within Victoria Unearthed is only as valuable or useful as the ability to distribute it, find it and use it. The Victoria Unearthed system must be a shared and searchable repository that facilitates discovery and easy access to information by DEECA, other government departments and agencies, external entities and members of the public.

It must make use of catalogues, appropriate schemas, metadata, classification structures and architectures that support discovery both by direct users of the Victoria Unearthed system and by users of third-party search engines.

Obligations

Victoria Unearthed must enable discovery and easy access by all proposed use cases including DEECA, other government departments and agencies, external entities, and members of the public.

All datasets designated significant or critical information assets within Victoria Unearthed must exist on the DEECA information asset register.

Victoria Unearthed must be designed and built with a focus on easy access and discovery.

Victoria Unearthed must make use of appropriate schemas, metatags, classification structures and architectures that support discovery.

Victoria Unearthed must include intuitive search capabilities.

Victoria Unearthed must support being indexed by major internet search engines allowing both the system and individual datasets to be found, with CKAN preferred.

Lead responsibility

The Data Custodian is responsible for providing appropriate metadata that can be used to support search and discovery.

The Victoria Unearthed Owner is responsible for ensuring the Victoria Unearthed system is designed and built to support discovery.

The Data Administrator is responsible for ensuring that each dataset is registered on the DEECA information asset register.

Supporting and supplementary material

HTML <meta> Tag.

WoVG - Information Management Policy.

WoVG - Information Management Governance Standard.

Appendix: Governance roles and responsibilities

The table below specifies the complete list of responsibilities for each governance role for Victoria Unearthed.

Role	Responsibilities	Framework Component
Data Owner	<ul style="list-style-type: none"> Accountable for all aspects of the management of a dataset throughout its lifecycle 	All
	<ul style="list-style-type: none"> Accountable for ensuring that Data Custodians have the appropriate authority level, skills and capacity to fulfil their roles 	Education, capability and capacity
	<ul style="list-style-type: none"> Responsible for specifying the minimum required metadata for the DEECA information asset register 	Information asset management
Data Custodian	<ul style="list-style-type: none"> Responsible for supplying all required metadata for the information asset register 	Information asset management
	<ul style="list-style-type: none"> Responsible for ensuring a risk assessment has been undertaken for their dataset and appropriate mitigation strategies are applied 	Information risk management
	<ul style="list-style-type: none"> Responsible for the creation and supply of a data dictionary for their dataset 	Data architecture and modelling
	<ul style="list-style-type: none"> Responsible for the provision of a data quality statement 	
	<ul style="list-style-type: none"> Responsible for the creation of a data mapping between the source and Victoria Unearthed data model 	
	<ul style="list-style-type: none"> Jointly responsible with the Victoria Unearthed Owner for transforming data between the source and Victoria Unearthed data model. This will need to be agreed on a case-by-case basis 	
	<ul style="list-style-type: none"> Responsible for ensuring metadata is uploaded, maintained, provisioned, verified, and audited in MetaShare 	Metadata management
	<ul style="list-style-type: none"> Responsible for the data quality assessment of the dataset and the provision of associated data quality information 	Data quality management
	<ul style="list-style-type: none"> Responsible for the quality of the dataset 	
	<ul style="list-style-type: none"> Responsible for ensuring the dataset within Victoria Unearthed is up to date 	
	<ul style="list-style-type: none"> Responsible for consulting with those providing feedback on the quality of the dataset and for actioning that feedback 	
<ul style="list-style-type: none"> Responsible for ensuring that datasets adhere to the specified standards 	Data standards	
<ul style="list-style-type: none"> Responsible for conducting an information security value assessment on each dataset and determining the appropriate classification level 	Information security classification	
<ul style="list-style-type: none"> Responsible for determining if the data they are uploading is a public record or not (it may be simply a copy of a public record). Any public records provided to Victoria Unearthed must be identified and classified according to the appropriate retention and disposal authority 	Managing data as a record	
<ul style="list-style-type: none"> Responsible for applying the appropriate PROV records management standards to structured data 		

Role	Responsibilities	Framework Component
	<ul style="list-style-type: none"> Responsible for ensuring a dataset is made available in accordance with the DataVic Access Policy Responsible for justifying where a dataset within Victoria Unearthed should not be open to all users Responsible for determining copyright and licensing associated with a dataset, ensuring this is documented in the associated metadata record Responsible for ensuring relevant licensing information is made available with the release of the dataset 	Information sharing and release
	<ul style="list-style-type: none"> Responsible for providing appropriate metadata that can be used to support search and discovery 	Discovery
Victoria Unearthed Owner	<ul style="list-style-type: none"> Responsible for ensuring security risks to Victoria Unearthed data are identified and recorded on the appropriate DEECA risk register Responsible for ensuring appropriate security controls and employed within Victoria Unearthed 	Information risk management
	<ul style="list-style-type: none"> Responsible for the creation and maintenance of a publicly accessible data catalogue Responsible for the creation and maintenance of a data model and data dictionary for all Victoria Unearthed datasets and resolving any architectural conflicts as they arise Jointly responsible with the Data Custodian for transforming data between the source and Victoria Unearthed data model. This will need to be agreed on a case-by-case basis 	Data architecture and modelling
	<ul style="list-style-type: none"> Responsible for maintaining a mapping between the ISO 19115 Geographic Information-Metadata standard and the MetaShare metadata specification. 	Metadata management
	<ul style="list-style-type: none"> Responsible for making data available from Victoria Unearthed in a machine readable, preferably open standard format 	Data standards
	<ul style="list-style-type: none"> Responsible for ensuring the Victoria Unearthed system applies appropriate security controls based on the classification and value of the data 	Information security classification
	<ul style="list-style-type: none"> Responsible for ensuring the appropriate security and access controls are implemented and applied within Victoria Unearthed 	Data protection
	<ul style="list-style-type: none"> Responsible for ensuring that Victoria Unearthed can support and enforcing the compliant management of any public records it contains according to PROV records management standards 	Managing data as a record
	<ul style="list-style-type: none"> Responsible for ensuring the Victoria Unearthed system is designed and built to support discovery 	Discovery
Victoria Unearthed Data Administrator	<ul style="list-style-type: none"> Responsible for ensuring that each dataset in Victoria Unearthed is registered on the DEECA information asset register 	Information asset management
		Discovery

Role	Responsibilities	Framework Component
EPB Director	<ul style="list-style-type: none"> Accountable for ensuring that the Victoria Unearthed Owner and Victoria Unearthed Data Administrator have the appropriate authority level, skills and capacity and for making sure their role is reflected in their position description and performance and development plans 	Education, capability and capacity

