

Best Practice Guide

BP208 | Develop

Data policy for local government air quality monitoring



Introduction

Digital information, or 'data' is a local government asset and must be treated as such. Data can be purchased, leased or created and each of these cases require the owner/user to understand their obligations and responsibilities associated with this data. Much like procurement policies or occupational health and safety policies, the local government needs some guiding principals regarding the acquisition, use/administration and disposal of data.

Data is useful only when it is put to use, and this almost always means sharing the data in some form. Air quality data gathering, monitoring and analysis will result in a lot of data. This data will be shared in several forms with several partners and stakeholders. Some of the data will likely be shared with the public, while other more detailed data will be shared with state agencies, other local governments and partners.

Sharing data so that it can be effectively used and reused for local government internal applications and by external organisations such as other local governments, universities, partners, and state government agencies creates a new set of challenges for data custodians. An air quality monitoring project will generate a lot of air quality data, both real time and non-real time, and it is vital that all the data is shared safely, securely and with full knowledge of who it is shared with and for what purpose. To do this, each local government will need a data sharing policy containing guiding principles for custodians to share data safely and effectively.

Who should use this resource?

This document does contain some technical information, but it is very high level in nature and is intended for general use by all parties involved in a smart low-cost air quality monitoring project such as:

- people leading new air quality monitoring projects
- smart city professionals
- people responsible for procurement
- planners and environmental officers
- local government leadership
- information technology (IT) professionals
- data custodians
- analysts, and
- project partners.

How to use this resource

This Best Practice Guide chapter introduces the need for a data sharing policy and the critical concepts and some practical ‘best practice’ approaches for data sharing policy. It contains an example policy that can form the basis of a local government’s policy documentation.

This chapter is paired with the *Sharing air quality data* Best Practice Guide chapter, which builds upon the foundation of best practice data policy to explore how data is shared, including the decision-making process for assessing specific data sets, and the methods (how and where) by which data is made discoverable and shared with end users.

Figure 1 illustrates a series of OPENAIR resources for data policy, data sharing and how they relate. It is recommended you first read and understand this chapter *Data policy for local government air quality monitoring* Best Practice Guide chapter, which establishes the “why”. Second, read the *Sharing air quality data* Best Practice Guide chapter, which focuses on the “what”. The factsheets *Data policy for local government air quality monitoring* and *Sharing air quality data* are high-level overviews of each topic.

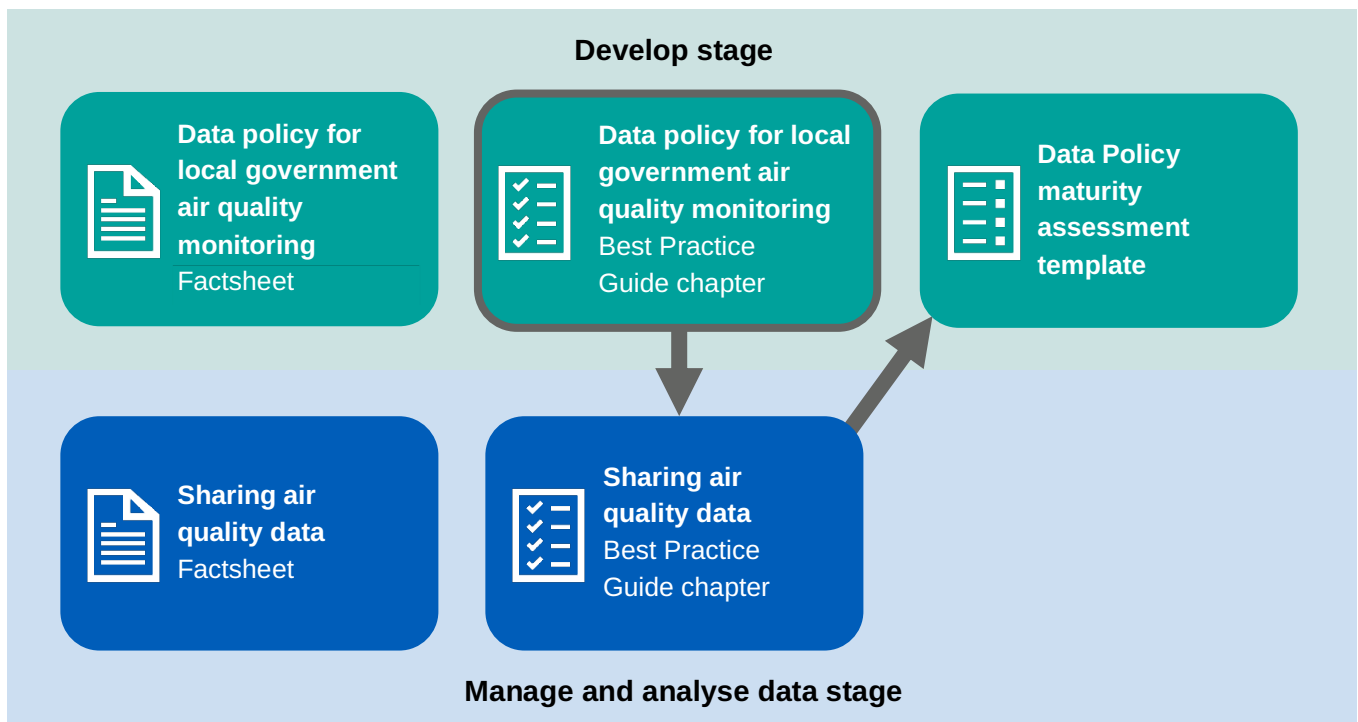


Figure 1. Data sharing document context

Why does the policy matter?

Some data can be quite commercially sensitive and/or it can contain information that may be linked to an individual's behaviour, for example. Sharing data that could contain any form of sensitive information must be done with a very good understanding of what is to be shared, why and with whom while recognising that regardless of the quality of the data sharing policy or the associated procedures, mistakes can happen. Inappropriate data can find its way into the wrong hands. This can lead to embarrassment, as a minimum.

With a good data sharing policy in place and a set of underlying procedures and tools to guide local government staff on their data sharing journey, any mistakes arising can be dealt with quickly and effectively.



TIPS: Imagine having to appear in a TV news interview trying to explain that because of a data error, the local government will now look at putting in place a policy and procedures to prevent this happening again. It would be much better to say policy and practices are in place and data sharing criteria will be tightened to minimise the risk a repeated occurrence. Dealing with data is a constant learning process and the more you use data, the more experience you will gain.

Policy Scope

Some local governments may have an existing data sharing policy in place while others may be new to data sharing and require a new policy document. Below is an example of a data sharing policy that can be used as a template for a new policy.

If a data sharing policy already exists, it is important to check that it contains all the necessary elements to effectively guide objectives throughout the local government.

The scope of a data sharing policy is usually local government-wide policy and is signed off by elected officials as a directive to local government staff. Policy documents by nature are high level and subject to public approval processes. Accordingly, policies do not contain operational details. Following a public exhibition of a draft policy, it is typical that a policy is taken to a meeting of all the councillors and a vote is taken to approve sign-off then making the policy official. From this point the local government CEO has the authority to deploy the policy, usually via budget expenditure.

However, not all local governments wish to deploy a local government-wide policy if the data being collected is for a single project with little or no linkage to other departments or areas. In the longer term, all local governments will find that they gather and use data more and more but for some local governments this will be a slow journey. If a local government struggles to deploy a local government-wide data sharing policy at an early stage of data maturity, then it is possible for the local government CEO to publish a 'directive' regarding data sharing that could be specific to one or several projects without wider-reaching implications. These directives can take a similar form to a policy but without formal "policy" status.

Consistent with other local government policy documents, a good data sharing policy should contain the following sections.

- **Policy objective.** A declaration of intent to share data effectively and to make data available that is safe to share.
- **Policy scope.** A statement of whether the policy covers all the organisation’s data or a specific project or projects’ data.
- **Policy statement.** A simple statement that embodies the overall organisation’s objective to open and share as much data as practical.
- **Shared data goals.** This section describes the goals that reflect what the organisation expects to achieve through the sharing of data (preferably linked to a local government’s overall vision) and a recognition that in the future data and data sharing increasingly becomes part of every-day local government operations.
- **Stakeholder engagement.** This section describes who the stakeholders are and how to engage with them. Data sharing is a two-way thing. It’s vital that a local government includes citizens and stakeholders throughout the data sharing process.
- **Roles and responsibilities.** This section identifies who within local government is responsible for enforcing the policy. It is vital that ownership of the data sharing policy is well understood within the organisation and externally to partners and other stakeholders.
- **Policy implementation.** A description of the operational procedures, process and templates required to deploy and implement the policy.
- **Definitions.** Describe new data related terms. Terminology will inevitably be used within the policy and must be defined so that all policy readers can, understand the basic data terms and how the policy relates to them. See Table 1.

Data sharing policy example

This section provides a simple data sharing policy example that could be used as a starting point for a local government that does not yet have a suitable policy in place.

Policy title: Data Sharing Policy

Directorate: Sponsoring department or functional area

Branch: Branch responsible

Policy objective: This policy aims to position local government to proactively assess all local government data with the intention to share any appropriate, newly created or collected data and to progressively share data over time based on our capacity to deliver.

Policy scope: This policy covers data created, collected, acquired, and maintained by the local government or by contractors or third parties on behalf of local government.

Underpinning this policy is the local government's Corporate Plan and Vision. In an increasingly digitally enabled economy, information in the form of digital data will help to deliver to all these priorities, in support of the overall Corporate Plan and Vision.

Through the lens of the future and the smart city digital economy positioned through this policy, local government strives to leverage the opportunities of data sharing while minimising the risks derived from shared data.

Local government will ensure that every proposed data set that is shared or opened be subjected to a risk assessment to minimise any risks associated with each data set and each use case that leverages the data.

Local government will consider sharing all data unless it is restricted for reasons of privacy, public safety, security, classification, commercial confidentiality, or compliance with law and does not represent operational risk.

Policy statement: Local government strives to make the data it generates and collects open by default to deliver local government's Vision in a manner supported by this policy.

Shared data goals: In sharing data, local government strives to:

- Empower employees and partners to provide more effective, better coordinated information-driven public services with processes to facilitate data sharing good practice.
- Understand the requirements and responsibilities of data sharing and ensure data security and privacy is maintained.
- Improve sharing with all levels of government and non-government organisations (NGOs)
- Make a positive difference in people's lives through making data available to address key community challenges facing the local government.
- Strengthen the relationship between local government's data sharing partners.
- Improve public understanding and trust of local government operations and other information concerning the local government community.
- Enable new ways to improve productivity and efficiency within the local government and with partners.
- Generate economic opportunity for individuals and businesses that benefit from the knowledge created by shared data.
- Encourage the development of innovative solutions that support our community's values.

[Others if needed]

Stakeholder engagement: In sharing data, local government will:

- Create opportunities for local government's partners to work collaboratively on recommendations for how the local government should provide and use data.
- Determine how the local government can use the directives in this policy to develop, deliver, monitor and measure the success of its data resources.
- Create opportunities for the community to input and work collaboratively to use and augment data.
- Solicit public feedback and encourage discussion on policies and public datasets available via a data portal.

- Consider requests received through such mechanisms when prioritising datasets for release and incorporate these recommendations into normal business practice.

Roles and responsibilities: The local government, the Chief Executive Officer, directors, managers and program leaders are responsible for ensuring this policy and associated documents are understood and adhered to by all staff. Further details of roles and responsibilities relating to this policy can be found in the [Data Sharing Guidelines and/or Procedures] as appropriate.

Policy implementation: Implementation of this policy will be principally achieved through the guidance provided within the subordinate [Data Sharing Guidelines and/or Procedures] as appropriate. Updating and implementing the data sharing policy shall be the responsibility of the most appropriate director or equivalent.

Table 1. Data sharing policy definitions

Term	Definition
Local government data	Data created, collected and/or maintained by the local government or by contractors or agencies on the local government's behalf.
Dataset	A data set or dataset is a collection of data. Most commonly a data set corresponds to the contents of a single database table, where every column of the table represents a particular variable, and each row corresponds to a given member of the data set in question. The data set lists values for each of the variables, such as height and weight of an object, for each member of the data set. The term data set may also be used more loosely, to refer to the data in a collection of closely related tables, corresponding to a particular experiment or event. Data sets that are so large that traditional data processing applications are inadequate to deal with them are known as "big data".
Shared data	Specific datasets that are made available by the local government under defined conditions.
Open data	Specific datasets that are made available to the public by the local government. This is a subset of shared data.
Shared data program	A program dedicated to making local government data available to the public and engaging civic technologists, the research community, and other partners to make use of shared and Open Data in support of the Program's goals. This Policy document describes the objectives of the Program.
Data portal	Local government's online catalogue and primary repository for data, created and maintained by the local government for the express purpose of ensuring permanent, lasting access to public information and enabling the development of innovative solutions that exemplify the goals of the Shared Data Program.

Additional resources

Related policies, legislation, and other documents

There are many policies and legislation that are relevant to data sharing. Some examples are shown in Table 2.

Table 2. Related documents

Document type	Document name
Policy	<i>NSW Government Data Policy Framework</i> https://data.nsw.gov.au/data-policy
Legislation	<i>Local Government Act (1993 No 30)</i> https://legislation.nsw.gov.au/view/html/inforce/current/act-1993-030
Legislation	<i>Local Government Regulation (2005 No 487)</i> https://legislation.nsw.gov.au/view/html/inforce/current/sl-2005-0487
Legislation	<i>A Guide to Privacy laws in NSW 2019</i> https://www.ipc.nsw.gov.au/sites/default/files/2020-01/Fact Sheet A guide to privacy laws in NSW September 2019.pdf
Legislation	<i>Freedom of Information Act (1989 No 5)</i> https://legislation.nsw.gov.au/view/whole/html/inforce/2009-01-01/act-1989-005
Industry resource	<i>Australian Computer Society Data Sharing Framework 2017</i> https://www.acs.org.au/insightsandpublications/reports-publications/data-sharing-frameworks.html

Associated OPENAIR resources

Factsheets

Data policy for local government air quality monitoring

This factsheet provides an overview of how local government data policy can support the effective, responsible and strategic management and sharing of data associated with air quality monitoring.

Sharing air quality data

This factsheet provides an overview of how to share air quality data, including how to decide what data to share, and how to ensure that data is shared appropriately and effectively.

Best Practice Guide chapters

Sharing air quality data

This chapter provides guidance for the sharing of air quality data. It explores the process by which a local government might assess data to determine its shareability, and presents a series of practical options for implementing data sharing.

Further information

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This Best Practice Guide section is part of a suite of resources designed to support local government action on air quality through the use of smart low-cost sensing technologies. It is the first Australian project of its kind. Visit www.openair.org.au for more information.

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