Engaging your organisation with air quality data

Planning an internal engagement strategy around your air quality project ensures that collected data supports evidence-based decision-making and innovation outcomes within an organisation. Internal planning and engagement frameworks are essential to the delivery of strong project outcomes. By engaging your organisation with air quality data, you will also help to build wider institutional capabilities.

Air quality sensor networks provide opportunities for local governments to generate improved air quality outcomes at the local level, while also building new institutional knowledge about the use of Internet of Things (IoT) sensors, and developing innovations based on insights from data.

An air quality monitoring pilot project equips project managers with multiple sources of data through which to engage their organisation and evidence impact. In an air quality project, sources of evidence for decision-making include air quality data and evaluation data established as part of a pilot program, stakeholder engagement outcomes, citizen or community inputs, and other forms of feedback.

Data as evidence can be used to support multiple strategic priorities, which may include health, innovation and community engagement. Importantly, an air quality monitoring pilot will generate important insights and evidence about your own organisation's maturity and capability in working with novel data sets across the organisation.

Designing your air quality monitoring project to ensure you can effectively communicate impacts and outcomes requires careful planning. There are many tools to support this process.

One method for achieving effective use of data across different stages of a decision-making process is by using a 'program logic model.' Program logic models offer schematic representations that describe how a program is intended to work by linking activities with outputs, intermediate impacts, and longer-term outcomes. They are useful tools when planning internal stakeholder engagement because they are designed to link planned program outputs to a set of higher-order strategic outcomes – and to the relevant stakeholders (both internal and external to an organisation).

Refer to the Air Quality Program Logic Map produced by the NSW Government for a useful guide.

PLANNING FOR INTERNAL STAKEHOLDER ENGAGEMENT

Internal engagement of stakeholders within your organisation needs to be informed by strategic priorities, and the measures used to report on those priorities over time. Strategic priorities may be specific to air quality outcomes (especially in areas such as health and planning), or may be linked to innovation capacity building, or developing data-driven capabilities within your organisation.

Decide how data will be used to evaluate the success of your project

Although pilot projects may be too short lived or limited in scope to achieve strategic objectives, it is still important to identify measurable success factors. Pilots are a low-risk way to assess the feasibility of your approach before committing more resources.

Consider what data you need to answer questions relating to technical and organisational feasibility, and to evaluate the overall success of your pilot.

TIPS

Consider SMART goals when mapping pilot outcomes. SMART goals are Specific, Measurable, Achievable, Relevant and Time-bound.

Pilot projects to improve organisational capability in the use of data

Air quality monitoring pilots support capability building in the use of data and technology. Organisational capability in this context can be understood through the lens of a 'maturity model' assessment.

Smart city maturity models are designed to assess the level of 'maturity' (or readiness) for the implementation of smart city solutions (such as environmental sensing and monitoring). There are several smart city maturity assessment frameworks available.

Most smart city maturity models (SCMMs) identify the role of smart technology in supporting key city indicators across domains such as the economy, people, governance, mobility, and environment.

The different stages of maturity are summarised as*:

1	**Level 1**	No smartness infrastructure working
2	**Level 2**	Smartness working but not meeting future needs
3	**Level 3**	Smartness meets current needs
4	**Level 4**	Smartness partially initiated for future needs
5	**Level 5**	Smartness continuously improving to meet future needs.

* Aragão, F. V., Chiroli, D. M., Zola, F. C., Aragão, E. V., Marinho, L. H., Correa, A. L., & Colmenero, J. C. (2023). Smart Cities Maturity Model—A Multicriteria Approach. Sustainability, 15(8), 6695. https://doi.org/10.3390/su15086695

Associated OPENAIR resources

For detailed information on this topic refer to the OPENAIR Best Practice Guide chapter *Engaging your organisation with air quality data*. The Best Practice Guide chapter *The Impact Planning Cycle overview* provides a practical framework designed to assist local governments with impact planning for a smart air quality monitoring project.

Further reading

Visit the NSW Department of Planning and Environment website to download the **Air quality program logic model**.

Download the **Urban Tide Maturity Model and Self-Assessment Tool**. This tool can help local governments to understand where they are on their journey towards 'smart'.

FIND OUT MORE AND ACCESS OPENAIR RESOURCES

This factsheet 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. Check the project website for resources and updates on post project collaborations: **www.openair.org.au**