Platforms and digital services procurement

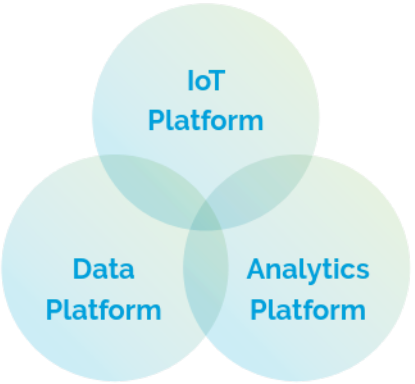
There are several platforms and digital services for air quality monitoring. A technology platform provides the technology environment and services that enable other applications and services.

The three air quality monitoring platforms

A range of technology platforms are available for local government to choose from for the provision of their air quality monitoring solutions.

There are three main types of platforms relevant to air quality monitoring: IoT (Internet of Things) platforms, data platforms, and analytics platforms.

When evaluating available technology platforms, organisations must consider organisational capacity, fit with the existing technology environment and how well they meet the needs of planned air quality monitoring project.



Platforms

IoT platforms manage the IoT devices and air quality data that is captured from the air quality sensing devices deployed in the field. IoT platforms provide immediate access to the air quality data streams. Air quality data can be further stored in a separate **data platform** for future use and further processing such as for reporting, data quality assurance, integration, governance and sharing. **Analytics platforms** can access the stored data and be used to produce air quality reports, dashboards, visualisations and analytical insights.

Commercially available products often have aspects of each of these platforms. For example, a platform provided by a sensor manufacturer will predominately be an IoT platform but may also provide some analytical tools.

Each of the platforms are described below:

IoT platform

An on-premises software suite or a cloud service (IoT "platform as a service") used to manage the collection of data from IoT devices including air quality sensing devices.

Data platform

A data platform provides an integrated set of technology services for ingesting, integrating, storing, processing, analysing, and presenting air quality data.

Analytics platform

An analytics platform provides an integrated set of technology services for analysing air quality data to generate useful insights and visualisations.

Platform selection criteria

Selection criteria generally fall into three categories: platform quality, business fit, and technology fit. The categories and criteria within them should be considered as a starting point and adapted according to the specific needs and circumstances of each organisation.

Organisations should consider which criteria are relevant and determine appropriate weighting of each before including in a procurement process. The categories described in **Table 1** provide a common scaffolding for the selection of platforms and services. Additional selection criteria can be added as appropriate to specific local context.

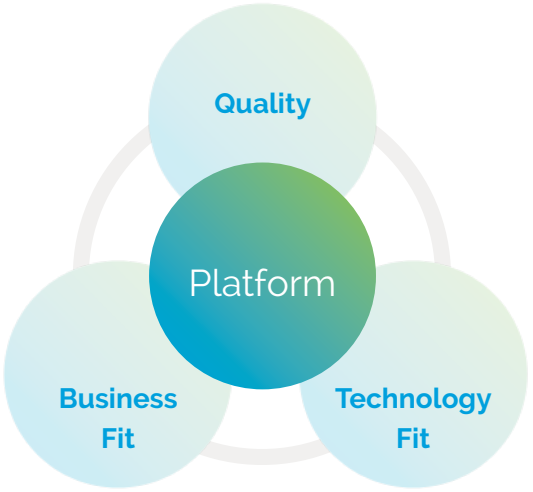


Table 1: Platform Selection Criteria Categories

Category	Typical Criteria	Description
Platform quality	Availability, reliability, auditability, documentation, training, performance, portability, security, supportability, and scalability.	Quality attributes relate to how well a platform delivers the functionality required of it.
Business fit	Platform features, sensing device support, data sharing, analytics, reporting, cost, and usability.	Business fit criteria are about whether a solution will actually provide the air quality data needed in ways are needed by your organisation.
Technology fit	Standards, platform management, documentation, support, and integration.	Technology fit refers to how well a platform will fit with your organisations existing information technology infrastructure and systems.

Organisations should consider which criteria are relevant and determine appropriate weighting of each before including in a procurement process.

Associated OPENAIR resources

For more detailed information on this topic see the OPENAIR Best Practice Guide chapter *Platforms and digital services criteria*. The Best Practice Guide chapter *IoT reference architecture for smart air quality monitoring* provides more information on the reference architecture for smart air quality monitoring.

Further reading

The *Internet of Things Platform Selection Guideline* published by the IoT Alliance Australia provides concise and relevant guidance for private and government organisations to assist in the adoption of IoT technologies. It aims to create a guide that will provide a "running start" for buyers to select between platforms.

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**

OPENAIR

NSSN NSW Smart Sensing Network

UTS Institute for Sustainable Futures

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