



Internet of Things (IoT) Policy Statement

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1. Policy Statement

The Internet of Things (IoT) has the potential to deliver significant benefits to government, industry and citizens by generating intelligent data that can enable better decision making and provide better services. However the value of IoT is not guaranteed by its use alone. Its true value lies in its application – the way agencies use the information generated by IoT to improve service delivery and infrastructure across the State

The information collected through IoT sensors or smart devices can drive sustainability, liveability, workability, productivity improvements, economic efficiencies and innovation. This data can also be used to drive other advanced technologies such as artificial intelligence, augmented reality, digital twins and machine learning.

The NSW Government is regularly ranked as the most digital-ready government in Australia. Effective deployment and use of IoT across NSW Government requires a consistent approach built on a common understanding of the opportunities, risks, obligations and best practice.

The Internet of Things (IoT) Policy comprises this *IoT Policy Statement* and the *IoT Policy Guidance*.

1.1 What is IoT?

IoT refers to physical devices that are connected to the internet, collecting and sharing data. It is the global network of infrastructure, vehicles, wearable devices, home appliances, medical technologies and other objects that are embedded with electronics, software, sensors and actuators, enabling these 'things' to share and exchange data to perform their functions more efficiently and effectively.

Being connected to the internet means that a 'thing' can:

- collect information and send it, or
- receive information and act on it, or
- do both.

Collecting, sending, receiving and acting on information allows us to make more intelligent decisions with less human intervention. This can save time and money while also improving services.

For example, Sydney commuters can access real-time information about their train journey on their smart phones thanks to complex IoT applications. They can access information like the train's location, projected arrival time at individual stations and the commuter capacity of each carriage. Behind the scenes, IoT sensors assist transport staff with tasks like track and train maintenance and performance management.

1.2 Using IoT to improve customer service

The NSW Government is focused on improving customer service. IoT has potential applications for many services delivered by government which can help agencies to:

- collect and analyse data on citizen's needs, priorities and interactions with government, contributing to evidence-based policy and service delivery
- access more accurate real-time data, which can, for example, enable the delivery of on-demand services tailored to individual needs
- model changes to policy and services in a safe environment to better understand the impacts of decisions prior to implementation
- integrate and redesign services in ways that save citizens time, increase productivity and improve the customer experience.

The NSW Government is committed to the safe adoption of IoT, which means protecting privacy, minimising risks and ensuring citizens' security.

1.3 Purpose of the IoT Policy

The IoT Policy has been designed to:

- demystify IoT for NSW Government project managers
- encourage innovation with IoT solutions
- build understanding and capability across government
- provide practical guidance for those responsible for delivering IoT-enabled solutions.

The IoT Policy responds to the NSW Government's growing interest in taking advantage of the efficiency gains and decision-making enhancements presented by IoT. However, it is essential that planning and executing an IoT-enabled project will ensure maximum benefits and minimal risks.

The *IoT Policy Guidance* provides:

- practical guidance to help organisations design, plan and implement IoT solutions
- advice on standards and obligations where available and practical
- tools and templates to help effectively manage an IoT-enabled project
- guidance on where and how to source additional advice if required.

1.4 Application of the IoT Policy

This Policy applies to all NSW Government agencies. It is designed to provide users with the information needed to safely deploy IoT solutions.

1.5 Start date

This Policy is effective from 3 October 2019.

2. Guiding principles

The principles to be applied by NSW Government employees when making decisions about the implementation of Internet of Things projects and systems are:

- Have a clear understanding of the **desired business outcomes** for your project (i.e. what is the project trying to achieve?). IoT should only be used if it can achieve this outcome.
- Consider the **suitability of IoT** early in the project. It can be more challenging and costly to incorporate IoT as the project progresses.
- Adopt **Privacy by Design**. Once information is collected (personal or de-identified) there are obligations under NSW legislation (and Commonwealth legislation in some cases) about how data is held and accessed. Personal information should not be collected unless it is necessary.
- Understand the **cyber security** life cycle requirements during the project scoping and planning phases, including those required by the NSW Cyber Security Policy.
- Treat **data** collected as a public asset. It should be open where possible.
- Avoid vendor lock in by choosing IoT solutions and products that are **interoperable** with each other. Two enablers of interoperability are:
 - **Standards** –use Australian and international **standards** where possible and available.
 - **Open systems** - to allow for interoperability between software and hardware.
- Plan the **network and connectivity needs**, including how much data will be collected and for what purpose.
- Ensure that **data is spatially-enabled**. Data from IoT solutions may plug into the NSW Digital Twin and other platforms.

More information on each guiding principle is available in the *IoT Policy Guidance*.

3. Document Control

3.1 Document Approval

Name & Position	Signature	Date
Secretaries Board	N/A	2 October 2019

3.2 Document Version Control

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1.0	Final	20 Sep 2019	Department of Customer Service	Submitted to Secretaries Board for approval