SCOPIOUS

Connect Through Collaboration

Do it once, do it right.

The IoT Project Plan - Free Guide

Receiving a return on investment (ROI) from an Internet of Things (IoT) project can depend on various factors, including the project's goals, the industry it's applied in, and the specific implementation. Here are some steps and considerations to help you achieve ROI from your IoT project:

- ✓ **Clearly Define Objectives**
- ✓ **Identify Key Metrics**
- ✓ **Cost-Benefit Analysis**
- ✓ **Choose the Right Technology**
- ✓ **Operational Efficiency**
- ✓ **Predictive Maintenance**
- ✓ **Energy Efficiency**
- ✓ **New Revenue Streams**
- ✓ **Security and Privacy**
- ✓ **ROI Tracking**
- ✓ **Long-Term Perspective**
- ✓ **Flexibility for Adaptation**

+ Bonus Hardware Checklist

The possibilities - Return On Investment (ROI) for your time and money - The Benefits:

Operational Efficiency: Many IoT projects focus on improving operational processes. If your project can streamline workflows, reduce manual intervention, minimise errors, and enhance resource utilisation, it can lead to significant cost savings and efficiency gains.

Predictive Maintenance: In industrial applications, IoT can enable predictive maintenance by continuously monitoring equipment health and performance. By identifying maintenance needs before critical failures occur, you can reduce downtime and extend the lifespan of assets.

Energy Efficiency: IoT-enabled systems can optimise energy consumption based on real-time data. This can result in reduced utility costs and environmental benefits.

New Revenue Streams: Explore opportunities to generate new revenue streams through your IoT project. This might involve offering data-driven services to customers, leveraging customer behaviour insights, or creating subscription models.

Enhanced Customer Experiences: Use IoT to gather customer data and personalise experiences. Tailored offerings and improved customer service can lead to increased loyalty and higher customer lifetime value.

See page 6 for data capture ideas

CLEARLY DEFINE OBJECTIVES: Before starting your IoT project, define clear and measurable objectives. These could be cost reduction, efficiency improvement, new revenue streams, enhanced customer experiences, or better decision-making through data insights.

IDENTIFY KEY METRICS: Determine the key performance indicators (KPIs) that will help you measure the success of your IoT project. These might include metrics like cost savings, increased productivity, reduced downtime, customer satisfaction, etc.

COST-BENEFIT ANALYSIS: Conduct a thorough cost-benefit analysis to understand the financial implications of your IoT project. Consider both upfront costs (hardware, software, implementation) and ongoing operational costs (maintenance, monitoring, updates).

CHOOSE THE RIGHT TECHNOLOGY: Select the appropriate IoT technology and devices for your project. Consider factors like scalability, compatibility, security, and ease of integration with existing systems.
Get in touch **with our team at Scopious IoT for a free consult to get you started.**

The Scopious brand is founded by Director of Go Wireless NZ Ltd, a well respected New Zealand Distributor of trusted wireless hardware and accessories so you are backed by the same experienced, expertise.

DATA COLLECTION AND ANALYSIS: IoT generates vast amounts of data. Implement effective data collection, storage, and analysis mechanisms to derive meaningful insights. These insights can inform decisions that lead to improved operational efficiency or new business opportunities.
Request a demo **of the Scopious platform app from our team at Scopious IoT.**

When you connect your network with the Scopious application, you can start using the intelligence of automation without sharing data offshore.

Notes: (See page 6 for data capture ideas)

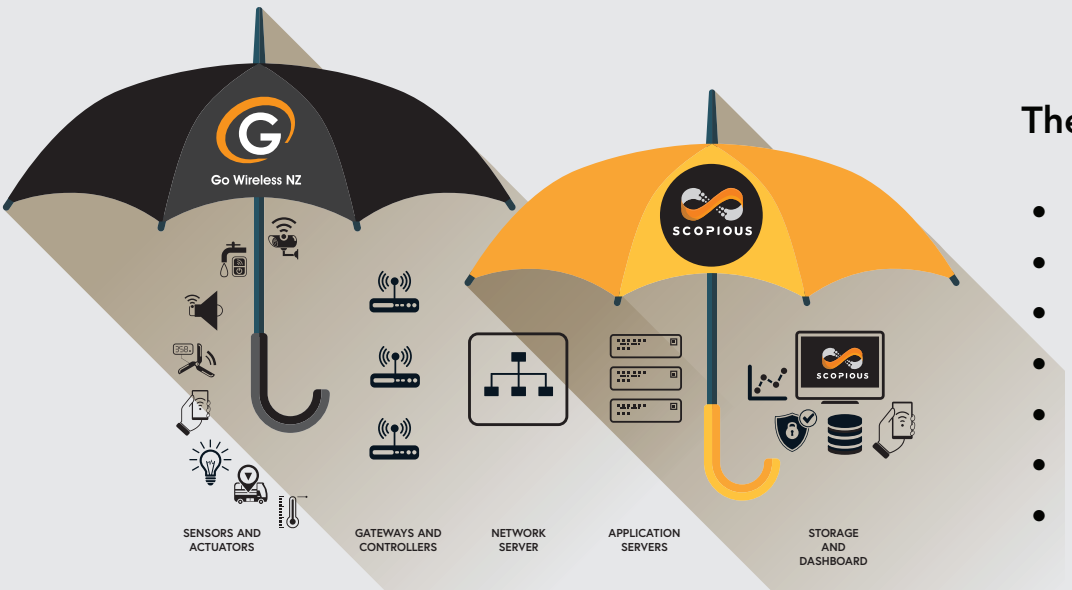
SECURITY AND PRIVACY: If using a third party platform, address security and privacy concerns proactively to avoid potential breaches that could lead to financial losses and reputation damage. *If using the Scopious platform app you can unlock the benefits of a Scopious IoT network while safeguarding your data privacy.*

ROI TRACKING: Continuously monitor and track the impact of your IoT project on the identified KPIs. Regularly assess whether the project is meeting its objectives and adjust strategies if needed.

LONG-TERM PERSPECTIVE: Keep in mind that ROI from IoT projects might not be immediate. Some benefits might take time to materialise as systems are optimised and data-driven insights are acted upon.

FLEXIBILITY FOR ADAPTATION: IoT technologies and market conditions can change rapidly. Design your IoT project with flexibility in mind, so it can adapt to evolving needs and technologies.

Notes:



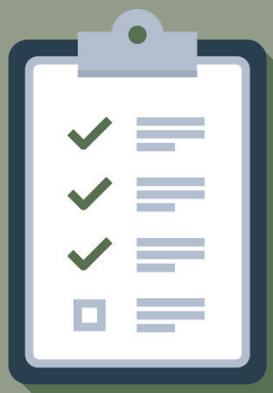
The Scopious Difference

- Expert Consultation
- LoRaWAN Network Services
- Gateway Onboarding
- Device Onboarding
- Device monitoring & Control
- Integration Services
- Bespoke Solutions

End-to-End IoT Solution

Your Hardware Checklist

What to connect, where to connect, how much data to transport at what interval and over what distance.



6 Key aspects to consider

1. BATTERY-POWERED OR POWER-CONNECTED?

This classification is based on whether the object carries its own energy supply or receives continuous power from an external power source.
Batteries limit the lifetime and amount of energy that the object is allowed to consume, thus driving transmission range and frequency

2. MOBILE OR STATIC?

This classification is based on whether the "thing" should move or always stay at the same location.
A sensor may be mobile because it is moved from one location to another or because it is attached to a moving object.
The frequency of the movement may also vary, from occasional to permanent.

3. LOW OR HIGH REPORTING INTERVAL?

This classification is based on how often the object should report monitored parameters.

- A rust sensor may report values once a month.
- A motion sensor may report acceleration several hundred times per second.

Higher reporting intervals drive higher energy consumption

4. SIMPLE OR RICH DATA?

This classification is based on the quantity of data exchanged at each report cycle.

- A humidity sensor in a field may report a simple daily index
- While an engine sensor may report hundreds of parameters, from temperature to pressure, gas velocity etc.
- Richer data typically drives higher power consumption.

5. REPORT RANGE

This classification is based on a combination of; sensor capabilities, the number of smart objects over a given area, transmit power, antenna gain, obstructions and the height and distance between the smart objects and where the gateway is located.

6. SENSOR DENSITY PER CELL

This classification is based on the number of smart objects over a given area connected to the same point of access.

Feeling unsure? Give us a call - we're more than happy to help you out with your IoT project. First hour is free!

+64 3 741 1339
info@scopious.co.nz

More than just a platform

Why Choose us

Personalisation

Tailor a LoRaWAN network to suit your needs, scalable for any industry and size solution.

Accessibility

Quick and easy access to everything you need, including the hardware required. Optional locally stored data for secure peace of mind.

Support

Connect through collaboration with skilled technicians, consultants and loyal hardware vendor relationships backing you every step of the way.

"At Scopious, we believe that we can build a more efficient and sustainable world together through the collaboration of people, ideas, and IoT."

Let's Create the Future

SCOPIOUS
Connect Through Collaboration

Hardware

Options & Benefits

While some devices only sense things, other devices sense things and have the power to do something physical as a response.
What you choose depends on availability and what you want to achieve.

Sensors

Pipe Pressure

In-line pipe pressure sensors can be installed for water or gas distribution to help ensure correct functioning of pumps, valves and pipes/joins.

Air Quality

Sensors a variety of pollutants including dust, fine particulate matter, carbon dioxide, carbon monoxide, ozone, nitrogen oxide, and many others.

Temperature

Used to measure the internal temperature of structures like bridges, dams, buildings, power plants, etc.

Humidity

Detects and measures water vapour or dew - important for incubators, respiratory equipment, sterilizers, and biological products.

Light

Can be used in applications such as light sensing in mobile devices, automatic outdoor lighting, proximity sensors, and renewable energy.

Smoke

Automatically senses the presence of smoke, as a key indicator of fire, and sounds a warning to building occupants.

Distance & Proximity

Used for determining the distance of an object from another object or obstacle without any physical contact.

PIR (movement)

Used to detect motion by receiving infrared radiation. Automatic lighting when someone enters a room or cause a video camera to begin operating.

Water Level

Designed to monitor, maintain, and measure liquid (and sometimes solid) levels. Sends information back to the control panel to trigger an alarm or indicator.

Barometer Pressure

A barometric pressure sensor is a sensor that detects atmospheric or air pressure. The pattern of pressure will predict short-term changes in the weather.

Soil Quality

Monitoring and control can increase soil quality, guide crop production, suppress pests and weeds, sequester carbon from the atmosphere, and clean the water that flows through it into rivers and lakes.

Actuators

Hydrolic

The sole function of an actuator that's used in a hydraulic control system is to convert the hydraulic energy supplied by the pump and processed by the control elements into useful work.

Relay

A relay is an electrically operated switch. It takes a relatively small amount of power to operate a relay coil. That being so, it can still be used to control motors, heaters, lamps, or AC circuits.

Electrical

An electric actuator converts electricity into kinetic energy in either a single, linear, or rotary motion. They're typically used in industrial applications associated with manufacturing valves, pumps, and motors.

Thermal

A thermal actuator is equipped with thermal-sensitive material that when paired with a temperature sensor, can be used to perform tasks such as release latches, operate switches, and open or close valves.

Pneumatic

A pneumatic actuator is a device that converts energy – typically in the form of compressed air – into mechanical motion. Pneumatic actuators are notable in their use for applications where the opening and closing of valves takes place. For this reason, they hold value within applications where there's a fire or ignition risk.

Magnetic

Magnetic actuators operate in either a rotary or linear direction and can have continuous or limited motion. Magnetic actuators are used within the aerospace, automotive industry, healthcare, computers, and many other industries.