# Position description

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|---|---|
| **Position title** | Test Engineer |
| **Group / Branch** | Digital and Transformation / Operational Technology |
| **Reports to (Title)** | OT Product Development Manager |
| **Competency level** | *Individual Contributor* |

## Job Purpose

The role reports directly to the OT Product Development Manager and forms a key part of the product development cycle for emerging technologies developed by SEW. In particular, these activities will relate to Internet-of-Things (IoT) type devices and their related software systems.

The position will operate in a fast paced environment and needs to be flexible and agile as competing demands surface. The position will have support from a range of technology professionals in the OT team, including subject matter experts on electronics, firmware and telecommunications.

Ultimately this role will be key in SEW progressing its strategic plans to become a Digital Utility by collecting masses of new data from IoT related devices and systems. This role will provide the data that will allow the OT team to sign-off on the overall readiness for production releases of devices.

The Test Engineer will be responsible for developing test plans, test cases and executing these across a range of different technologies. They will have a deep understanding of embedded firmware, communication protocols and knowledge of electronics fundamentals. They will help design and implement standardized testing regimes for future emerging SEW OT products and technologies as defined in the strategy laid out by the Product Development Team Leader and the IoT Manager.

The role ensures that devices designed and developed in-house by SEW (or via partners) are to standards that allow them to integrate seamlessly within the SEW's Digital and IoT platform, and are field-ready before they are rolled out into production. They will provide a valuable feed-back loop to the OT development team, and often influence the design of the products themselves, for ongoing improvements to product design and engineering.

The role will be responsible for reporting the results to a range of stakeholders across the business. They will work daily with OT engineers for problem solving and evaluation tasks.

## Key Accountabilities

Under the broad direction of the OT Product Development Manager, this position is expected to show independence and accountability across a range of areas.

- Ensure customer service is maintained with IT, Sewer/Water Operations, Maintenance and planning.
- Regular reporting to internal staff about testing/QA progress
- Reporting and updates of key activities
- Planning of tests with 'real-world' application in mind, via liaison with operators and technicians
- Ensure a safe, secure and well run laboratory is set up to meet all SEW testing requirements
- Perform a range of detailed testing procedures in order to determine the readiness for complex electronic devices to be deployed into the field

The Test Engineer will manage the following;

- Testing / QA software and supporting systems
- Reporting and detailed analysis of all products as and when required

The Test Engineer will work closely with;
- Sewer/Water operations engineers
- The Research & Development team
- Digital Utility Staff
- Iota Product Managers
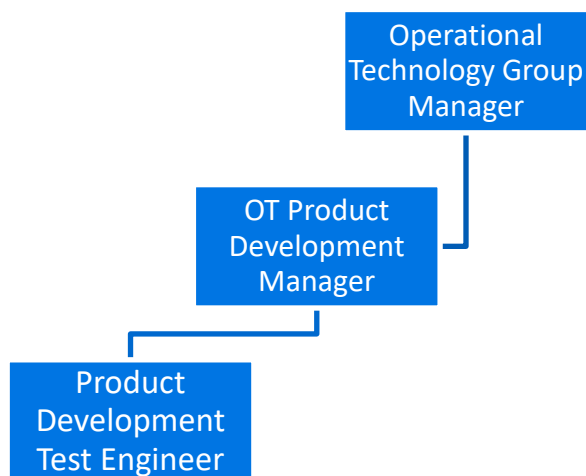- Technology Vendor Partners

## Knowledge, Skills & Experience

- Tertiary degree in electrical/electronic/system engineering or related
- Significant experience in embedded systems, cellular communication devices and related protocols (IP based protocols as well as 3G, 4G, NB-IoT and other LPWAN technologies)
- Good knowledge of IT, communications, Testing solutions and software

- A high level of aptitude to develop new testing procedures for a range of technologies
- A passion for technology and innovation to improve the way South East Water operates its networks and treatment facilities
- Product development experience would be beneficial
- Scripting knowledge would be beneficial
- Highly developed interpersonal and communication skills ( oral and written )
- High analytical and problem solving ability
- Proven ability to work under broad direction only
- Highly proficient in presenting technical information and concepts to a wide range of external and internal audiences.

# Dimensions

## Organisational Chart

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              ┌─────────────────────┐
              │     Operational      │
              │ Technology Group     │
              │     Manager          │
              └─────────────────────┘
                        │
       ┌─────────────────┘
       │
┌──────────────┐
│  OT Product  │
│ Development  │
│   Manager    │
└──────────────┘
       │
┌──────┘
│
┌──────────────┐
│   Product    │
│ Development  │
│ Test Engineer│
└──────────────┘
```

## Number of people managed:

None

## Size of budget managed:

None

## Value of Assets managed:

N/A

## Ensuring a sustainable, resilient organisation:

Authorities outlined in [Instrument of Delegations](#) none

Compliance management responsibilities outlined in the [compliance and obligations register](#) none

Security for Critical Infrastructure identified role: **No**

For Engineering roles the role requires a Professional Engineer (accredited 4 year degree) and requires professional registration in Victoria

South East Water operates a 24/7 service environment. Whilst this role does not involve after-hours rostered duty, all employees may be required to provide out of hours support from time to time as required.