

Biomedical Technology Services

Biomedical Technician Cadetship 16 years strong

How we continue to innovate and remain relevant whilst promoting a Learning and Development culture

SMBE NSW Penrith Sydney 2025

Nathan Norman

Biomedical Technology Consultant (HTM) Queensland Health



Queensland
Government

Biomedical Technology Services in 2025

409 Employees

(397 FTE)

232 Technicians

53 Clinical Engineers

33 Medical Physics

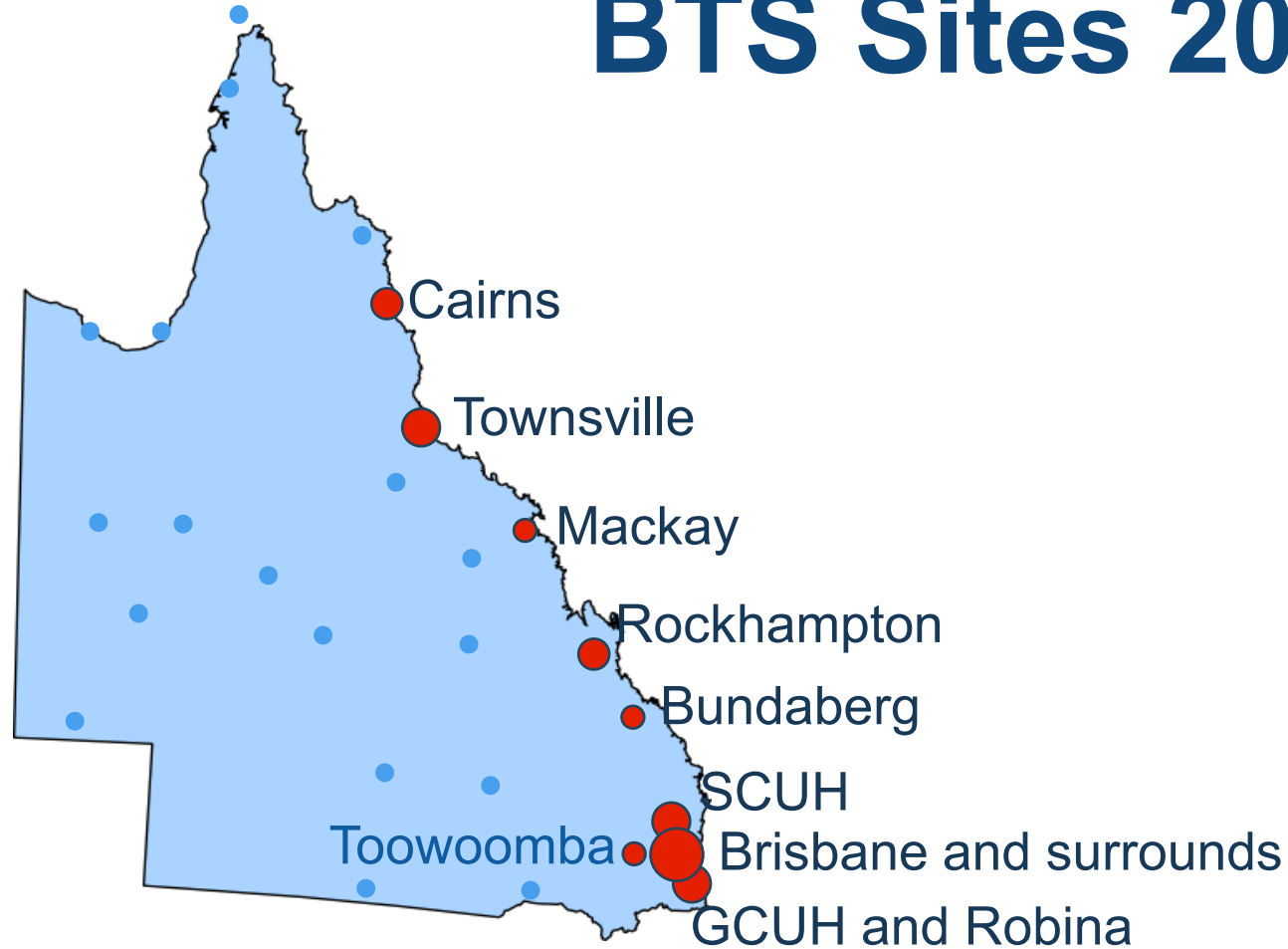
91 Operational and Administrative

70% increase in 10 years



**Queensland
Government**

BTS Sites 2025



Caboolture

Redcliffe

TPCH

RBWH

QCH

PAH

Redland

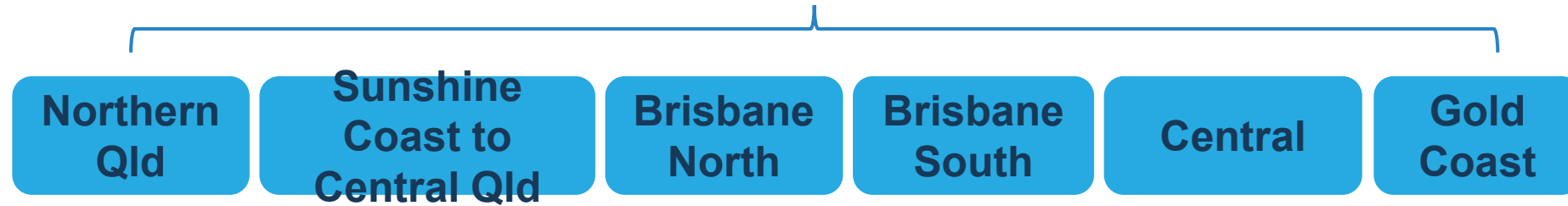
Coopers Plains

Logan

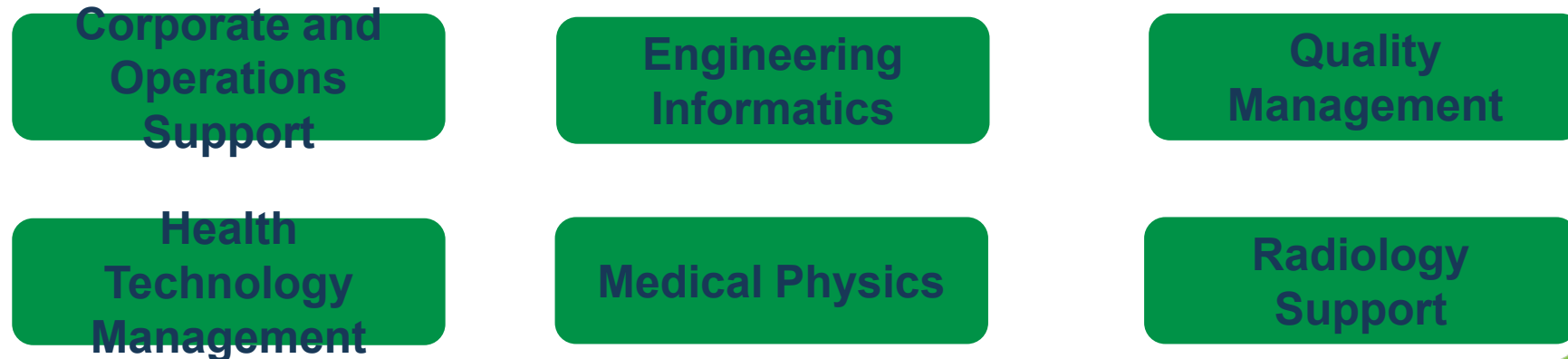
Ipswich

BTS

Service Areas



Head Office



In January 2025 BTS celebrated 16 years of the Biomedical Technician Cadetship Program

Where are we now and how are continuing to innovate whilst promoting a learning and development culture.



Where are we know?

- 59 Cadets Completed program since 2009
- 49 Former Cadets that completed full program still work for Queensland Health
- 16 Current Cadets in various stages of the program
- Many Former Cadets in Senior roles including 2 that have recently become HP5 Service Managers Sunshine Coast, Cairns
- Currently recruiting Sunshine Coast anyone interested?



Biomedical Technician Cadet Training

- ~ 42 Internally developed training modules
- Currently updating to include online training modules. Currently 3 active 35 complete and going through final checks and approvals.
- Rewriting to align with our new Training Framework



The Cadetship model is based on 3 key components

Formal education- It is compulsory for all Cadets to be enrolled and actively completing an Advanced Diploma of Biomedical Engineering or an Associate Degree in Electrical Engineering

BTS developed technical training modules (currently paper based)

Practical Competency Assessments

All 3 components need to be satisfactorily completed to transition from HP1 to HP2 Biomedical Technician role.

How are we Innovating and staying relevant in 2025 ?

- We have now developed multiple Cadet streams with Cadets specialising in General Electronics (Emed), Renal Dialysis, Mechanical (Surgical Instrument repair and manufacturing) and most recently Scientific and Pathology.
- This need for specialist Cadet roles is purely because of demand and the difficulty of filling HP2 Biomedical Technician roles in our specialist areas.
- Development of online training, this has come about out of the need to update the 42 modules we have developed over the last 16 years so they can be presented in an online format
- Our Current platform is iLearn with the modules developed in a software package called Articulate.



List of modules we are working on.

- BTS Electrical Safety Testing in a Biomedical Environment
- BTS Exclusion Zones
- BTS Introduction to gas safety module
- BTS Flowmeter module basic principles
- BTS Information Protocol
- BTS Standards
- BTS PPE
- BTS Intro medical equipment servicing
- BTS Regulators basic principles
- BTS ECG Principles
- BTS NIBP basic principles
- BTS SPO2 basic principles
- BTS Temperature basic principles
- BTS Capnography basic principles
- BTS Pacing basic principles
- BTS Invasive BP basic principles

List of modules we are working on. (continued)

BTS Defibrillator basic principles
BTS BIS basic principles
BTS ESU basic principles
BTS Infusion Pump basic principles
BTS Aspirator basic principles
BTS Blood Warmer basic principles
BTS Respiratory Humidifier basic principles
BTS Hypothermia units basic principles
BTS Alternating mattress pumps basic principles
BTS Sequential compression devices basic principles
BTS Nebuliser basic principles
BTS Spirometer basic principles
BTS Neonatal respiration basic principles
BTS Breast Pumps basic principles
BTS Oxygen Analyzer basic principles
BTS Phototherapy basic principles

BTS Infant Warmer basic principles
BTS Incubators basic principles
BTS Stimulators basic principles
BTS Traction unit basic principles
BTS Ventilation basic principles
BTS Anaesthetic machines basic principles
BTS Ultrasound basic principles
BTS Networking basic principles
BTS Central Stations basic principles

Example of a module in iLearn

MENU

▼ BTS Respiratory Humidifier basic principles.

Introduction ✓

Documentation

Clinical respiratory humidification

Optimal Humidity Video

Clinical Video

Humidifier components

High Flow therapy theory

High Flow Therapy Video

Safety and PPE

MR 850 Video

IPM demonstration MR850

Common faults

MR 950 Video

Multi choice Exam Instructions

Multi choice exam

BTS Contact Details

BTS Respiratory humidifiers basic principles_v3

Queensland Health
Biomedical Technology Services
Version 1.0



BTS Respiratory Humidifiers basic principles

Introduction

Please click on resource tab for further information.
Upon completion of this training module, it is envisioned the Participant will be able to:

- Understand operation and function of a Humidifier and High Flow therapy.
- Identify accessories used with Humidifiers.
- Understand hazards and safety precautions when using a Humidifier.
- Identify different types of Humidifiers.
- Identify the functional testing requirements of a Humidifier.
- Gain an understanding of some of the common faults that can occur with Humidifiers.

Part 2

- Ability to perform an IPM on a Humidifier unit.
- Complete Competency Evaluation Form [QIS 28652](#) including work orders associated with the device.

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II



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NEXT >

What's the way forward

- Full implementation of online technical training modules for all techs not just Cadets
- BTS will continue to grow its own workforce through programs such as the BTS Cadetship
- Increased focus on learning and development and competency-based learning for all Biomedical technical staff. Your learning doesn't stop because you already have your diploma/degree
- Continued investment in our people. A workforce that knows that we are willing to invest in them is more likely to feel valued and stay

Thankyou

- Any Questions?

