

Health Tech ProtoComp

Challenge Overview
September - November 2024



Health Tech ProtoComp

INNOVATION CENTRAL BRISBANE



Discover Innovation Central Brisbane (ICB) – Your Gateway to Real-World Innovation!

Innovation Central Brisbane (ICB) is your go-to hub for digital transformation and skill-building. Born through the partnership of global tech leader Cisco and QUT, ICB is all about helping students like you dive into the world of innovation, technology, and problem-solving.

What We Do for Students At ICB, students get hands-on experience working alongside industry experts, government leaders, and cutting-edge researchers. We provide a creative space where you can explore new ideas, design technology solutions, and tackle real-world challenges that make a difference. Whether you're interested in AI, IoT, cybersecurity, or other tech fields, ICB is the place to be.

How We Work ICB is a dynamic environment where innovation happens. We bring together people with different skills and perspectives to work on exciting projects. Our open-door policy means you'll have the chance to collaborate with industry professionals and government agencies, helping to develop prototypes and launch tech initiatives quickly and efficiently.

Why Get Involved? At ICB, you'll not only learn but also contribute to real innovation. By working with us, you'll build your digital skills, network with experts, and be part of projects that have a real impact. Plus, you'll be joining a community that values creativity, continuous learning, and bold ideas.

The ProtoComp The ProtoComp is Innovation Central Brisbane's signature student program, now in its third year. This three-month extracurricular program is open to all QUT students and offers a unique opportunity to tackle real-world challenges. We're excited to welcome our Anchor Partner, Rivernet Communications, to set the provocation for this program.



FOUNDATION PARTNERS





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RIVERNET COMMUNICATIONS



rivernet

Founded in 2008 and based in Brisbane, Rivernet is a leading provider of custom technology solutions designed to address the unique demands of today's digital world. As a Cisco Gold Integrator Partner, Rivernet is recognised for its expertise in networking, security, and advanced IT infrastructure technologies, particularly within the healthcare sector. Rivernet's capabilities are further enhanced by close partnerships with leading technology providers, ensuring the delivery of comprehensive and fit-for-purpose solutions.

Rivernet's extensive track record in the healthcare industry underscores their ability to implement robust IT solutions that enhance patient care, secure sensitive data, and optimise clinical and administrative workflows. Their direct experience with Queensland Health and their respective Hospital and Health Services demonstrates Rivernet's capacity to implement large-scale, integrated systems tailored to the specific needs of healthcare environments.

Health Tech ProtoComp SCENARIO

Australia's healthcare system is currently facing a series of significant challenges that threaten its long-term sustainability and effectiveness. Key among these challenges is the rapidly aging population, with projections indicating that by 2050, nearly 25% of Australians will be aged 65 and over, compared to about 15% today. This demographic shift is expected to increase the demand for healthcare services, exacerbate chronic disease management issues, and intensify workforce shortages as the healthcare sector struggles to recruit and train new professionals.

Population growth is projected to reach around 35 million by 2050, and ongoing urbanisation will continue to put a strain on healthcare infrastructure, particularly in urban areas where overcrowding and longer wait times are becoming common. Simultaneously, rural, and remote regions are grappling with healthcare access disparities, leading to uneven health outcomes across the country.

Today, Hospitals and Health Services across Queensland face challenges in maintaining operational efficiency, managing patient flow, and facilitating effective communication among multidisciplinary clinical teams. Existing ICT systems and infrastructure often falls short in providing the necessary integrated, real-time insights and secure communication channels required for optimal patient care.



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PROVOCATION

**HOW CAN WE HARNESS
TECHNOLOGY TO TRANSFORM
HOSPITAL MANAGEMENT SYSTEMS,
TACKLING INEFFICIENCIES TO
STREAMLINE OPERATIONS AND
ELEVATE PATIENT CARE?**

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PROBLEM SPACES

1 SECURE COMMUNICATION amongst multi-disciplinary teams for PCHC (patient-centred health care), particularly for complex health issues & comorbidities.

THE PROBLEM: Clinical teams often rely on non-authorised, publicly available communication platforms for collaboration. This practice not only poses significant security risks but also leads to fragmented and inconsistent communication, negatively affecting patient care quality and continuity.

SUB-PROVOCATION: How might we leverage technology to enable secure, real-time, role-based collaboration among multidisciplinary clinical teams, enhancing workflows and improving patient care and outcomes?

HOW THESE SYSTEMS CURRENTLY OPERATE: Role-based communications in healthcare involve tailoring information exchange based on the specific roles and responsibilities of healthcare professionals. This approach is essential for multidisciplinary teams, where clear, effective communication ensures that each team member receives the relevant information they need to perform their duties efficiently, fostering better coordination, reducing errors, and enhancing patient care.

WHAT CISCO TECH MIGHT ALIGN WITH POTENTIAL SOLUTIONS:

- **Cisco Webex:** A secure collaboration platform that allows for real-time video conferencing, messaging, and document sharing among clinical teams, ensuring that all team members are on the same page.
- **Cisco Collaboration Endpoints:** These devices enable healthcare professionals to communicate seamlessly across various locations, enhancing team collaboration and improving patient care delivery.



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PROBLEM SPACES

3 OPTIMISE HOSPITAL RESOURCE efficiency and health care experience through enhanced workflow management.

THE PROBLEM: Inefficient clinical workflows significantly hinder the ability to deliver timely and effective patient care. Current systems are often fragmented, leading to delays in treatment, increased workloads for healthcare providers, and suboptimal utilisation of resources. A critical component of this inefficiency is the lack of accurate predictive tools for patient admission and discharge time, which complicates patient flow.

SUB-PROVOCATION: How might we create a smart, connected hospital environment that leverages data-driven insights to improve operational efficiency, enhance patient outcomes, and inform strategic planning by identifying and addressing inefficiencies in clinical workflows and patient management processes?

HOW THESE SYSTEMS CURRENTLY OPERATE: Clinical workflows within hospitals involve a series of coordinated activities among healthcare professionals. These workflows are carefully structured to make sure that each part of a patient's care, from the moment they're admitted to the time they're discharged, is handled efficiently and effectively. Inefficiencies in these workflows can lead to delays, increased costs, and suboptimal patient outcomes. Addressing these inefficiencies is crucial, given the increasing demand for healthcare services and the pressure to optimise hospital operations.

WHAT CISCO TECH MIGHT ALIGN WITH POTENTIAL SOLUTIONS:

- **Cisco Network Solutions:** These solutions provide a secure and resilient infrastructure that enables seamless communication and data sharing across departments, ensuring real-time access to critical patient data
- **Cisco Unified Communications:** Supports efficient collaboration among healthcare teams through secure, high-definition video conferencing, messaging, and voice services.
- **Cisco Meraki Wireless:** Offers robust and secure wireless connectivity across hospital environments, essential for deploying IoT devices that monitor and manage clinical workflows.
- **Cisco Spaces:** Is a powerful platform designed to provide location-based services by leveraging data from Wi-Fi networks and IoT devices. In a healthcare context, it can be leveraged to significantly enhance patient care, operational efficiency, and overall hospital management.
- **Splunk:** Is a powerful platform designed to provide location-based services by leveraging data from Wi-Fi networks and IoT devices. In a healthcare context, it can be leveraged to significantly enhance patient care, operational efficiency, and overall hospital management.

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PROTOCOMP PROCESS

HACK

6-8th September

HACKATHON

Students receive a provocation on Friday afternoon, form teams, and collaborate over the weekend to develop a solution.



PITCH

8th September

PITCH

The student teams present their solutions to an industry panel, aiming to secure a project budget and a spot in ProtoBuild.



BUILD

9th September -
22nd November

PROTOBUILD

Winning teams from the Hackathon receive a project package to develop their digital prototype during the eleven-week ProtoBuild. They will attend weekly group meetings with our design thinking facilitator and connect with tech mentors.



SHOWCASE

TBA

SHOWCASE

Teams present their digital prototypes at an industry showcase.



Health Tech ProtoComp HACKATHON

DAY ONE: FRIDAY 6th SEPTEMBER

- 3:00PM** **HACKATHON OPENS**
Drinks, snacks & networking.
Activity: Are you a hipster, a hacker or a hustler?
- 4:15PM** **OFFICIAL WELCOME**
Meet your ProtoComp Team.
Setting the Scene: Rivernet provides insight and context around your provocation.
- 4:30PM** **ONE MINUTE PITCH**
Sell yourself, and do it in one minute!
- 5:30PM** **PIZZA BREAK & TEAM FORMING**
Assemble your dream team!
- 6:30PM** **FRIDAY'S ACTIVITIES CONCLUDE**
But don't let us stop you. Keep the cogs turning in the ICB, the library or wherever you work best!

Health Tech ProtoComp HACKATHON

DAY TWO: SATURDAY 7th SEPTEMBER

- 10:00AM** **PULSE CHECK BREAKFAST**
Check in with the team and grab a bite to eat.
- 10:30PM** **WORKSHOP: PROBLEM STATEMENT**
So what? Get to the bottom of the problem with Vib.
- 11:15PM** **TEAM WORK**
- 12:30PM** **LUNCH BREAK**
We'll bring the lunch!
- 1:00PM** **TECH SPECS WITH RIVERNET**
Rivernet is here to set the expectations for the program
- 1:30PM** **SPEED Q&A WITH RIVERNET MENTORS**
Think speed dating, but more tech, less awkward conversation.
- 2:00PM** **TEAM WORK**
- 3:30PM** **PITCH PREP**
Everything you need to know for tomorrow's pitches.
- 4:00PM** **SATURDAY'S ACTIVITIES CONCLUDE**

Health Tech ProtoComp HACKATHON

DAY THREE: SUNDAY 8th SEPTEMBER

- 10:00AM** **PULSE CHECK BREAKFAST**
Check in with the team and grab a bite to eat.
- 10:30PM** **TEAM WORK**
Last chance to get your pitches perfect!
- 1:30PM** **SLIDE DECK DEADLINE**
Get your slides to Laura, it's almost time to pitch!
- 1:45PM** **GUESTS & PANEL ARRIVE**
- 2:00PM** **PITCHING**
Each team will present to a panel of industry judges. Up to five teams will win a place into the Build Phase of the ProtoComp with a project budget. You've got three minutes so make it count!!
- 4:00PM** **HACKATHON CLOSSES**
Go home and relax, you've worked hard.