




HealthTech Industry Prospectus

A Growth Sector for the NSW
Hunter Central Coast Region
2023 – 2024



The region has the proven smarts,
track record, and infrastructure to
deliver new-to-the-world innovations.

Combine this with a dynamic,
collaborative, future-focused attitude
and the Hunter Central Coast
establishes its value as a niche location
for Health & Medtech.

– **Kate O’Mara**



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RDA Hunter Welcome

RDA Hunter plays a vital role in economic growth, innovation and entrepreneurship in the Hunter.

We facilitate investment in our communities, industry and the region by working with stakeholders across various industries.

RDA Hunter has a focus on the region's people: helping ensure our workforce is strong and diverse and that no-one is left behind.

We're supporting the Hunter to build on its industrial, geographic and economic strengths to consolidate its role as an important contributor in Australia's economic success.

We're helping the Australian Government get better outcomes from its programs and services by promoting and contributing regional data and information. This helps ensure that regional development strategies, programs and policies are evidence-based, relevant and well-targeted.

And, we support regional economic growth and sustainability by helping our local industries grow and diversify. Our co-ordination of the Health & Medtech Industry Cluster (HMIC) is one practical example of how we're doing this.

The healthcare & social assistance sector is the region's largest employer and fastest growing sector. The provision of Health services directly impacts our quality of life, and as an economic force it is significant. Given the potential for our existing industry to contribute solutions to Health's clinical and process needs, it's also a sector rich with opportunity.

RDA Hunter initiated the establishment of HMIC as a way of bringing the sector and its supporting industry partners together to identify and leverage the opportunities for improvement, investment and innovation.

RDA Hunter appreciates the guidance provided by an Advisory Panel comprised of local subject matter experts from the local industry, Health, education and research communities.

Trevor John

CEO & Director Regional Development

Regional Development Australia (RDA) Hunter



Hunter Central Coast Health & Medtech Industry Cluster

The Health & Medtech Industry Cluster (HMIC) was established by RDA Hunter in 2020 to work with Hunter Central Coast industry, research, Health and enabling organisations to identify and address Health challenges locally.

Three years on, the Cluster continues to grow and develop. Its stakeholder base is large and varied and reflects the region's wider economy. It includes companies with technical expertise in health & medtech, advanced

manufacturing and engineering companies, our LHDs, clinicians, allied health companies, healthtech-focused professional services companies, researchers, educators, government and industry peak bodies.

We're excited to be facilitating engagement between the John Hunter Health Innovation Precinct and the region's health & medtech focused industry base to explore new-to-the-world solutions to Health's challenges.

The Cluster's activities have successfully connected people and we're seeing new local commercial partnerships flourish. Our sector's small, yes, but it's made up of enthusiastic, driven people with a shared ambition to grow their own companies as well as see the region thrive. We're nurturing a collective spirit and a sense of community, and we're excited about the potential our region has to contribute to new Health discoveries, nationally and globally.

We'd love to tell you more about the Hunter Central Coast, our great region, what it's achieved to date and what its future looks like. This Prospectus will help but please reach out so we can give you the full story.

Kate O'Mara

Director, Health & Medtech Industry Cluster

Regional Development Australia (RDA) Hunter

HealthTech: The Big Picture

The global healthcare industry is huge and growing. According to Forbes, in 2020, global healthcare expenditures reached a new high of \$9 trillion.

The number of people aged 60 and older is expected to grow from 1 billion in 2020 to 1.4 billion in 2030 when 1 in 6 people worldwide will be considered elderly.

Older age is associated with diverse health conditions. Older people regularly need healthcare services and medications, driving the sector's demand. Increasing life expectancy contributes to this growth.

Australia's healthcare system is underpinned by a world-class medical research sector supported by universities, hospitals, medical research institutes and life science companies. These Life Sciences companies number more than 2,600 and contribute more than \$250 billion to the nation's economy.

AusBiotech, the leading Australian body representing and advocating for the life sciences sector, published the following statistics in its 2022 publication **Australian Biotechnology Sector Snapshot**:

- Australia's lifesciences ecosystem comprised 2,654 companies and employed 263,693
- The sector grew by 43% from 2019
- There were 192 life sciences companies on the ASX (Australian Securities Exchange)

So where are the opportunities for our Health systems and Australia's health industry?

Digital Health

According to HMIC member company **Mudbath, an Endava Company** CEO Josh Doolan, Australia is revolutionising digital healthcare with accessible, efficient care through innovation. The company's **Market Scan 2023 Digital Healthcare** states that 55% of Australian Healthcare Leaders are in the process or have already adopted predictive analytics. It goes on to say that after the pandemic peak period, we are seeing Australia's health-care leaders reassess their digital needs, with an increased focus on new technologies that can expand care access, address resourcing shortfalls and deliver improved patient experience. It states that industry key players are focused on:

- Expanding care beyond the hospital setting
- Accelerating innovation and partnerships
- Embracing the power of prediction

Sustainability in Healthcare

The **World Health Organisation** says sustainable health systems "improve, maintain or restore health, while minimising negative impacts on the environment". Both the Australian and NSW governments are working towards sustainability in healthcare.

In its 2022-23 Federal Budget the **Australian Government** committed to fund Australia's first National Health and Climate Strategy and a National Health Sustainability and Climate Unit to better prepare the health system for the challenges of climate change.

NSW Health has one of the highest energy needs in the NSW Government. In 2016 it began sustainability programs to lower the electricity bill and to reduce the amount of energy needed from the electricity grid. This also resulted in relying less on coal-fired power with high carbon emissions.

Medical Devices

MTAA's The Value of MedTech Report quantifies the value of the medtech sector in Australia: in 2021/22 medtech's gross revenue totalled \$11.4 billion and constituted \$5.4 billion of Australia's total GDP. It says, from implantable devices such as pacemakers, personal devices for the management of diabetes, X-ray machines and MRI scanners to uncover cancer, or surgical robots to aid surgery, to personal technologies that enable patients to effectively manage their chronic disease, the devices and equipment used in healthcare ensure Australians can live their life to its fullest.

Sources:

[Forbes](#)

[Global Australia](#)

[World Health Organization](#)

[Australian Government](#)

[MTAA](#)



HealthTech: Hunter Central Coast

Healthcare and the potential it presents our local companies to enter an emerging, opportunity-rich industry sector has recently become a focus for the Hunter Central Coast.

The Hunter has a strong manufacturing history. Shipbuilding was a mainstay of the region's manufacturing base until 1987; steelmaking underpinned its economic strength for more than eight decades until 1999, and now it's billion-dollar resources and defence sectors continue to call on the region's high-performing SMEs to produce vital equipment and technology.

Our traditional, regulated industries have produced a workforce with skills at both technical and trade levels that deliver smart, technically sophisticated solutions. This, coupled with a track record for adaptability in the face of economic shocks, has increased the ease with which our companies apply transferrable skills and knowledge into new, high-tech industry sectors, like HealthTech.

The region is fortunate to have a strong Health sector managed by forward-thinking, collaborative executives who are actively seeking to engage with the local industry base and work together to solve health's wicked problems – locally if they can.

Formal systems and processes are right now being developed by the region's enabling organisations in partnership with industry to ensure that our local companies can work side-by-side with clinicians, researchers and scientists to contribute to solving health challenges.

The Hunter Central Coast health & medtech industry base is burgeoning. Compared with our mining, logistics, wine-making, food manufacturing and equine industries its small and diverse, but its motivated. There's a shared ambition to grow, build capability and capacity, and be part of a local supply chain solution. We have the chance right now to help our local companies uncover and seize opportunities in a whole new sector and we're excited to make it happen.

The region's collective aim is to have its own clinicians, advanced manufacturers, health providers, technology providers, researchers, engineers, project managers, design thinkers, CROs, enablers and government representatives working together to identify, produce and commercialise new-to-the-world solutions.

This Industry Prospectus has been developed by RDA Hunter's Health & Medtech Industry Cluster (HMIC). It outlines the region's current capability, industry base, enabling organisations, growth opportunities, and examples of how we're already making a difference. And, we believe it establishes the case that the Hunter Central Coast has all the elements needed to contribute to advancements in health – locally, nationally and globally.

We invite you to consider Hunter Central Coast as a location to conduct Health and HealthTech activities, and we encourage you to engage with the HMIC to connect with the region's diverse and professional industry base.



Market Drivers

Factors Driving Change, Growth and Advancement in Health



LONGER LIFE EXPECTANCY



PROACTIVE PATIENTS



HEALTH INEQUALITY



INCREASED OCCURRENCE OF COMMUNICABLE DISEASES



INCREASED INCIDENCE OF CHRONIC DISEASES



TRANSITION TO KNOWLEDGE-LED INDUSTRIES

01011
00101

BIG DATA & ANALYTICS



DIGITAL INNOVATION & AI



ALTERNATIVE HEALTHCARE MODELS



ENVIRONMENTAL RISKS



CIRCULAR ECONOMY & SUSTAINABILITY IN HEALTHCARE



SUPPLY CHAIN & LOGISTICS DISRUPTION



WORKFORCE SHORTAGES



HMIC Stakeholders Input

Our Process

The Hunter Central Coast health & medtech industry cluster is small but growing quickly.

It comprises approximately 120 companies that cover seven sub-sectors: medtech/medical devices, eHealth/digital health, biotech/pharma, wellness, service provision, health provision, research/education.

It is important to note that this cluster of companies also includes many whose specialties lie in other sectors like resources, defence and professional services but who are looking to Health and HealthTech for growth and diversification opportunities.

In September 2023, RDA Hunter's Health & Medtech Industry Cluster (HMIC) surveyed its stakeholders to help us better understand the composition of the sector. The 2023 survey is the third undertaken by HMIC; the first was in 2020 soon after the Cluster was established and the second in 2022. Professor Roy Green, a keen contributor to the Cluster since its inception, provided advice that an initial capability mapping exercise would formalise our knowledge of the existing sector – so it did, and continues to.

The 2023 survey was conducted online. Participants were asked to complete approximately 30 questions about their businesses plus another 10 questions about the Cluster and its activities, the results of which will be used for HMIC's strategic development. RDA Hunter engaged Dr Mark Flynn to help analyse the results.

On the following pages you will see some of our findings – mostly quantitative, but some qualitative to reflect sentiment. You'll also read about why the Hunter Central Coast is a smart investment location: outlined are the region's general and strategic advantages plus its HealthTech specific benefits.

We hope you find the content useful in identifying where the region's expertise lies and where there's opportunity for collaboration, new partnerships and investment potential.

Hunter Central Coast Snapshot

Hunter Central Coast is an economically significant region situated on Australia's east coast.

Located north of Sydney, the region is NSW's second most populated area, with a combined population of over 1,000,000 people. It is one of Australia's top performing regional economies with combined GRP estimated at around \$87.1 billion which is approximately 12.5% of NSW's economic output.

Hunter Central Coast has a growing, diverse Health & Medtech industry base. It comprises companies and organisations representing biotech, medtech, digital health, service providers, clinical services, allied health, research, education, insurance, specialised professional services, national peak bodies and government.

There is a spread of large and small, mature and start-up health & medtech companies in the region. 31% were established less than 5 years ago, 22% in the last 10 years, 28% between 10 and 25 years ago and 17% have been operating for more than 25 years.

The region's broader industry base primarily comprises SMEs, which is reflected in the health & medtech cluster: 63% of companies have less than 10 FTE employees, 26% have between 10 and 100, and 11% have more than 100 employees.

Surveyed companies annual turnover: 57% at less than \$2 million, 14% between \$2 and \$10 million, 23% between 10 and \$50 million, and 6% over \$50 million.



Source:

[DataAU: AEC Gross Regional Product 2021-22](#)

The Region's Health & Medtech Companies

Engage in seven sub-segments of the Health & Medtech sector. Due to the connection between industry, researchers and clinicians we see growth in medtech, ehealth and wellness solutions:

57% service providers

34% medtech/medical device

29% eHealth/digital health

20% wellness solution

17% research & education

14% health provider

3% biotech/pharma

Are focused on the provision of healthcare directly to patients, practitioners and hospitals:

63% service patients

54% service practitioners

49% service hospitals

23% service other industries/businesses



The region's industrial capability is broad and diverse. The health & medtech ecosystem mirrors this with companies listing their capabilities among the following high-level categories:

- Advanced manufacturing
- AR/VR
- Biological science
- Clinical trials and ethics
- Digital Health
- Drug synthesis
- Engineering
- Image Processing
- Industrial design
- Market access/business development
- Marketing/product management
- Medical device/component manufacture
- Project management
- Quality management systems
- Regulatory affairs
- Reimbursement
- R&D
- Start-up incubation/acceleration
- Statistics/computation/mathematics
- Sterilisation
- Training/workforce readiness

Collaboration is a differentiator for the Hunter Central Coast. Particularly strong is collaboration between research and the hospital system. Here's what our health & medtech companies reported:

- 76%** collaborate with universities
- 60%** collaborate with hospitals/health systems
- 54%** collaborate with other local industry
- 57%** collaborate with businesses in NSW
- 65%** collaborate with businesses nationally
- 42%** collaborate with international companies
- 94%** would like to build more collaborations with universities in the future

94% of the region's health & medtech companies would like to build more collaborations with hospitals and health systems. The reason they want to engage is:

- 71%** to access real-world problems
- 58%** to access clinicians
- 58%** to trial a product or service



27% of companies are exporting health & medtech products/services internationally. 55% of companies are seeking to broaden their international reach

510 clinical trials are currently active and/or recruiting in the region. Importantly, 43% are sponsored by industry, often global pharmaceuticals companies.

12 health & medtech companies reported they had formal Quality Management Systems in place. Of these 42% have achieved ISO13485 medical device standard. 3 companies have achieved Good Manufacturing Practice (GMP) and some are working towards increasing from ISO 9001 to 13485

Reflecting regional growth and positive outlook, 82% of companies are planning to expand their workforce/teams in the next 12 months

In the next 12 months:

31% of companies are planning to invest in facilities

46% of companies are planning to invest in R&D

57% of companies are planning to invest in new products

In the next 12 months:

46% of companies are seeking to broaden their reach locally

40% of companies are seeking to broaden their reach across NSW

Health & Medtech Industry Cluster (HMIC) membership at October 2023:

127 companies and organisations

213 people

76% of HMIC companies are Hunter Central Coast based

24% of HMIC companies and organisations are from outside the region, primarily Sydney

The Hunter Central Coast



Hunter Central
Coast population
= **1,029,000**



19.1% of the HCC
population is aged
65 years and over



6% of the HCC
total population is
Aboriginal and/or
Torres Strait Islander



**42 PUBLIC
HOSPITALS** across
Hunter Central Coast



John Hunter Hospital
is **AUSTRALIA'S
LARGEST** and
busiest trauma centre
outside a capital city



Health and Social
Services is the
**LARGEST
EMPLOYER** in the
Hunter Central Coast



Health and Social Services
EMPLOYS 88,300
in the Hunter Central Coast



510 ACTIVE
clinical trials underway
in the region



HMRI is the largest regional medical research institute in Australia
with **1,600 RESEARCHERS**



University of Newcastle has **37,000 STUDENTS**
enrolled across Newcastle, Central Coast, Sydney, and Singapore

The Hunter Central Coast

76%

of companies
collaborate with
universities

34%

of health & medtech
companies self-
categorise as medtech/
medical device

27%

of companies are
exporting health &
medtech products/
services internationally

37%

of health & medtech
companies employ more
than 10 people

14%

of companies have
ISO13485 accreditation

55%

of companies are
seeking to broaden their
international reach

23%

of health & medtech
companies turnover
between \$10 million and
\$50 million

54%

of companies are
collaborating with other
local companies

82%

of companies are
planning to expand
their workforce/teams
in the next 12 months

63%

of health & medtech
companies cite
patients/consumers as
their end-users

94%

of companies want
to collaborate with
hospitals

57%

of companies are
planning to invest in
new products in the
next 12 months

71%

of companies want
to collaborate with
hospitals to access real-
world health challenges

Hunter Central Coast Inventions & Discoveries

Did you know? The Hunter Central Coast has developed:

Bactol® 90 Surgical Hand Rub (Whiteley Corporation)

90% fast-acting antiseptic hand rub suitable for surgical-grade disinfection

Catavak™ Oncolytic Virus (Viralytics)

Immunotherapy cancer treatment: one of the largest biotech acquisitions in Australian history

Ezyaid

Waterproof, tube holding device that adheres to the face of tube fed patient, particularly babies, securing the tube in place

Flutracking

One of the largest crowd-sourced public health surveillance systems in the world

Hey Zomi

Australia's first reusable menstrual disc, made from 100% medical grade silicone, designed, owned and made in Australia

Innate Immune Nasal Spray

First-in-class, fast-acting nasal spray designed to boost innate immunity against respiratory viruses

Master of Traumatology

First postgraduate coursework program of its kind in Australia

Myo Munchee

Small chewing device made of soft, medical grade silicone to enhance the strength of jaw and mouth muscles to assist in optimal oral health and function

Saliva glucose biosensor

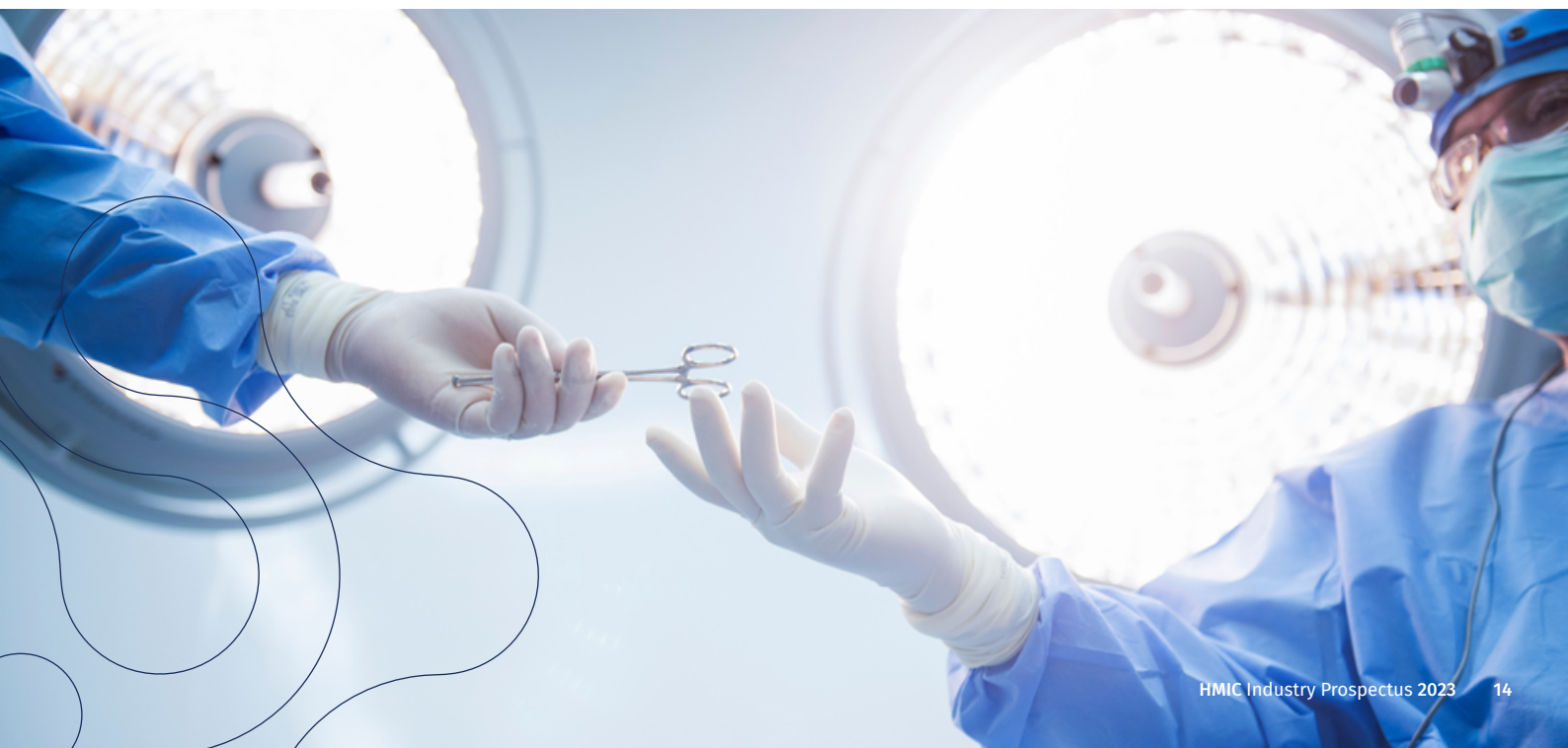
'Lickable' sensor replacing the need for finger-prick blood glucose testing for people with diabetes

Spotto Asset Visibility Platform

Simple and low-cost, multi-technology, real-time and point-in-time tracking of equipment, vehicles, staff and other assets. Used by hospitals, first-responder services, distribution and other industries to improve operations and reduce losses

VR Training for Emergency Stroke Nursing Care

Real-time stroke care training for nurses



Hunter Central Coast Export Markets



General Export-Readiness

The Hunter Central Coast is export ready. The region's industry base is well experienced in global trade with 54% of companies exporting across North America, South America, United Kingdom, Europe, Africa, Asia and the Pacific, and 22% having international logistics capabilities.

Health & Medtech Specific Exports

27% of health & medtech companies are exporting health and medtech products internationally. 20% of companies export to North America, the United Kingdom and Europe while 17% export to Asia and 14% to the Pacific.

The majority of these companies are looking for opportunities to increase international trade.

51% are targeting North America

49% are targeting the Pacific

46% are targeting the United Kingdom

40% are targeting Europe

40% are targeting Asia

8.5% are targeting Africa

8.5% are targeting South America

The Hunter Central Coast Industry Sector Comprises 7 Segments

Medtech/Medical Devices

The medtech/medical device segment makes products—ranging from surgical gloves to artificial joints to imaging equipment—and plays a role in developing new medical technologies that can improve the ability to diagnose and treat illness. Medical devices can also include diagnostics like test kits or lab reagents used for testing.

Biotech/Pharma

The pharmaceutical and biotechnology segment produces drugs, vaccines, and other products that help people and animals live healthier lives, recover from injuries, and treat illnesses. Biotechnology companies are those that employ living organisms or biological substances for the development of products and services. Pharma companies are commercial enterprises that research, develop, produce and sell drugs and other medicines.

E-Health/Digital Health

eHealth/Digital Health refers to IT tools or software designed to boost hospital and administrative productivity, give new insights into medicines and treatments, or improve the overall quality of care provided. This covers data and analytics, AI and personalised medicine, and real-world evidence. Health tech can also refer to telehealth and telemedicine or smart devices and wearables that aid a patient or consumer in their health or healthcare.

Wellness Solutions

The wellness solutions industry segment includes companies that enable consumers to incorporate wellness activities and lifestyles into their daily lives. Wellness is the active pursuit of activities, choices and lifestyles that lead to a state of holistic health which can include healthy-living, self-help, self-care, fitness, nutrition and diet.

Service Providers

Service providers deliver products or services for other companies/parties. This segment includes companies that share expertise, give advice, and guide health care organisations to make business decisions that promote growth and benefit their customers and patients. They span the breadth of the sector, including hospital and health systems, to pharmaceutical companies, or medical device.

Health Providers

Health providers deliver health care service: including doctors, dentists, physical therapists, and nurses, etc. Additionally, this sub-sector encompasses not only the professionals engaged in care, but also the setting in which the care is provided; including hospitals, clinics, long-term care facilities like aged care.

Research/Education

The education sector provides teaching and training at all levels including school, higher education, vocational education and training, adult and community education and private tutoring.

Health research investigates a wide range of areas affecting human health outcomes, including public health, genomics, bionics and biomaterials, cancer, cardiovascular disease, mental health, indigenous health, stem cells and tissue engineering. The purpose of health and medical research is to build knowledge, validate applications of theories of practice, discovery and exploration, and delivery of better health outcomes.

Sources:

[Duke University](#)
[Global Wellness Institute](#)
[Australian Government](#)
[AAMRI](#)

Hunter Central Coast Enabling Organisations

The Hunter Central Coast combines deep sector expertise with strong, supportive collaboration to deliver successful, commercial outcomes.

It offers a unique enabling environment with a combination of high-profile and high performing organisations that nurture and enable success.

Health & Medtech Industry Cluster (HMIC)

Established in 2020 by Regional Development Australia (RDA) Hunter, HMIC is industry-led and working to identify and address industry and Health challenges locally. It represents and coordinates the Hunter Central Coast's diverse and growing health & medtech cluster of companies and organisations, and aims to facilitate partnerships that lead to real, commercial outcomes and economic growth.

It comprises a broad range of the region's allied health companies, health providers, service providers, national industry associations, clinicians, manufacturing and engineering specialists, education & research organisations and government.

At the time of publication, HMIC initiative engages approx. 127 organisations and 210 people. Vision, mission and aims are agreed and consistent, but activities are varied and influenced by current industry trends. The Cluster is informal and not a traditional member-based organisation. Our stakeholders do not contribute fees.

The Cluster is guided by an 11 strong Panel of Advisors. These subject matter experts are volunteers from our stakeholder base who contribute technical expertise and advice towards HMIC decision-making and activities.

HMIC is working towards three main goals:

- 1.** to build awareness of the Hunter Central Coast as a strong contributor to medtech competitive capability in NSW and nationally;
- 2.** to facilitate growth of health & medtech and related companies through collaboration across industry, government, research and education;
- 3.** to improve access to global supply chains and boost participation in national and international markets.

HMIC has helped build the profile of the region and its health & medtech industry base since activity began in 2020. This is evidenced by the growing number of people/ companies/organisations from outside the region who have become members of the HMIC community to connect, engage and partner with our local companies.



University of Newcastle

With campuses in Newcastle, the Central Coast, Sydney and Singapore, the University of Newcastle has been delivering superior education and research for nearly 60 years.

By drawing on the unique attributes of the Hunter and Central Coast regions – and supporting communities with research and innovation excellence – the University is creating the ultimate test bed for innovation. Strong partnerships with industry, community and government organisations are central to the University’s ambition of helping our regions thrive.

Research capabilities

The University of Newcastle is renowned for its health and medical research and for finding new ways to help people live better, healthier lives. Its research capabilities in this area include:

- enhancing cancer care
- addressing chronic illness
- promoting healthy aging
- advancing Indigenous health
- innovating in medical technologies (HealthTech)
- fostering mental health solutions
- advancing pharmaceuticals
- exploring social determinants of health
- studying health economics
- emphasising preventative health measures
- investigating conflict, trauma, and memory.

Industry Engagement Support

The University of Newcastle serves as a broker of connection to address industry and community-led needs. Its industry engagement teams help connect world-class researchers and innovators with industry, community and government to solve problems and deliver impact.

- **Knowledge Exchange and Enterprise (KEE):** With a focus on business development and intellectual property commercialisation, the University’s Knowledge Exchange and Enterprise team facilitates collaborations that solve industry issues and deliver commercial outcomes.
- **The University of Newcastle Research Associates (TUNRA):** A subsidiary of the University of Newcastle, TUNRA connects external partners to University researchers for commercial consulting and contract research projects. It also provides business services for hosted projects and access to geotechnical and bulk materials expertise.
- **Integrated Innovation Network (I2N):** I2N is the University’s entrepreneurship and venture development unit. It fuels the success of innovators, entrepreneurs, startups and small businesses by connecting them to community, customers, coaching and capital – turning curious problem solvers into budding entrepreneurs.

Research Facilities

University of Newcastle researchers, students and industry partners can access a wide range of technologies and purpose-built facilities that help drive new discoveries and innovations.

- The University's **BioResearch Building** has been specifically designed to improve the way disease is diagnosed and treated. It gives biomedical and biological researchers access to a state-of-the-art animal research facility that keeps pace with emerging technologies, methodologies and research fields. The overall space includes:
 - flexible laboratory configurations, which can respond to changing needs and future technologies
 - PC2 holding and procedure facilities for mice and rats involved in research
 - different zones to cater for low, intermediate and high-barrier procedures
 - the ability to expand and contract zones depending on research needs
 - capacity for genomic editing technologies, germ-free facilities and sample freezers.
- The University's **Central Analytical Facilities** gives researchers, students and partners access to a suite of highly specialised, multi-disciplinary scientific equipment. Instruments are supported by expert staff and are centrally maintained, with more than 30 specialised pieces of equipment across seven technology streams:
 - Analytical Mass Spectrometry
 - Biological Mass Spectrometry
 - Flow Cytometry
 - Advanced Confocal Microscopy
 - Scanning Electron Microscopy
 - Transmission Electron Microscopy
 - X-Ray Technology

These specialised instruments support to a range of health and medical research fields, including but not limited to:

- biological sciences
 - biotechnology
 - chemistry
 - forensic sciences
 - food sciences
 - health and medicine
 - life sciences
 - manufacturing
- Housed in the Q Building in the Newcastle CBD, **I2N Hub Honeysuckle** is the base for the Integrated Innovation Network (or I2N) – the University of Newcastle's entrepreneurship and venture capital unit. The facility provides state-of-the-art space for researchers, academics, students and entrepreneurs to work alongside industry and community partners, business advisors and investors.

TAFE NSW

Across its 16 Hunter Central Coast campuses, TAFE NSW delivers qualifications in health-related fields including:

- Diploma of Nursing
- Certificate III in Allied Health Assistance
- Certificate IV in Allied Health Assistance
- Certificate III in Community Pharmacy
- Certificate III in Dental Assisting
- Certificate III in Pathology Assistance
- Certificate III in Pathology Collection
- Certificate III in Sterilisation Services





HMRI (Hunter Medical Research Institute)

Established in collaboration with the University of Newcastle and the Hunter New England Local Health District in 1998, the Hunter Medical Research Institute (HMRI) is Australia's largest regional medical research institute. It leads, creates, and enables medical research that generates new knowledge, drives innovation and delivers real-world impact. Internationally recognised research outcomes are being achieved in asthma and airway diseases, cancer, diabetes, mental health, nutrition, pregnancy and reproduction, stroke and more.

HMRI's clinical, biomedical and public health researchers are working across nine key platforms undertaking 19 research programs and related activities to prevent, cure and treat a diverse range of serious illnesses.

Platforms include:

Clinical Research Facility

HMRI's clinical trials facility allows researchers to conduct clinical trials to achieve accurate study results and track research outcomes. Services include: Clinical contact rooms; Specialised cough challenge clinic; Lung function machine; Expired nitrous oxide clinic; Nutrition lab

Imaging

The HMRI Imaging Centre is one of the first facilities in the world to house a state-of-the-art Siemens MAGNETOM Prisma 3T scanner devoted entirely to medical research imaging purposes. HMRI has the capability to perform high-quality structural, functional, and spectroscopy studies for clinical and biomedical use.

Histology

HMRI offers histology and biospecimen services including: Digital imaging (20x and 40x); Slide preparation; Slide staining; Tissue embedding; Tissue processing; Tissue sectioning (Cryo); Tissue sectioning (FFPE). Direct access to Cryostat, Microtome, Embedding station equipment is also available.

Health Research Economics

The HRE group fosters the integration of economic principles and techniques into health research; builds regional capacity and expertise in health research economics; and conducts original research of relevance to the field of health economics



Biobanking

Hunter Cancer Biobank offers a range of services related to supply of tissue for research including Collecting and distributing solid tissues (FFPE and fresh frozen), liquid biopsies and protocol driven collections. The Biobank also offers clinical trials facilitation, cataloguing and storage of new and established collections, bespoke Tissue Microarray generation and speciality, automated Immunohistochemistry services.

HMRI's goal is to deliver patient-focused translational research. This includes seed funding start-up studies, supporting larger-scale research projects whilst fostering a flow of information and innovation between scientists, clinicians and public health professionals.

Attracting top health and medical specialists and collaborating with other leading institutes and industries helps fast-track new and better health solutions to address the real needs of patients at the point of care.

HMRI has 19 research programs that study a wide range of health issues relevant in our communities:

- Active Living
- Asthma and Breathing
- Brain Neuromodulation
- Cancer Detection and Therapy
- Drug Repurposing and Medicines
- Equity in Health and Wellbeing
- Food and Nutrition
- Healthcare Transformation
- Healthy Minds
- Heart and Stroke
- Infection
- Immune Health
- Infertility and Reproduction
- Injury and Trauma
- Mothers and Babies
- Population Health
- Precision Medicine
- Surgical and Perioperative Care
- Women's Health



John Hunter Health Innovation Precinct

John Hunter is one of the most utilised healthcare campuses in NSW. It has one of the busiest Emergency Departments, trauma centres and public hospital neurosurgery units in the state.

The redevelopment of the John Hunter and John Hunter Children's Hospitals will deliver a significant expansion providing additional capacity and purpose-built infrastructure, to enable the implementation of contemporary models of care. The project includes an interim expansion of the existing Emergency Department to relieve current pressure.

The NSW Government is investing \$835 million to redevelop the John Hunter and John Hunter Children's Hospitals.

The project will:

- Deliver enhanced and expanded facilities with a new seven-storey acute services building
- Deliver a new Emergency Department to meet a projected future demand of over 95,000 presentations per annum
- Double the capacity of the Intensive Care Unit and provide capacity for future expansion
- Provide 22 operating theatres and nine interventional suites to respond to significantly increasing demand
- Deliver five procedure rooms for endoscopy and minor procedures
- Provide purpose-built flexible education space co-located within clinical services.

Health Innovation Living Lab (Hill)

The HILL is a 500sqm catalyst space embedded in the John Hunter Hospital. Opened in 2023, it is a partnership between the Hunter New England Local Health District and the University of Newcastle, designed to support healthcare-relevant innovation activity with a focus on commercialisation and scaling up.

Its role is to co-design solutions to real-world health system problems by facilitating collaboration between clinicians, researchers, industry and the community.

The HILL provides a full complement of enabling assets and services to drive innovation activity including: collaboration spaces, prototyping equipment, technical support, knowledge services, signature programs and networking events.

The HILL's innovation priorities reflect the region's research and clinical strengths.

Priority areas include:

- Digital health
- Sustainability in healthcare
- Medtech development and manufacturing
- Innovation in health operations, logistics and processes of care.



Central Coast Clinical School & Research Institute

In June 2021, the Central Coast Clinical School and Research Institute (CCCSRI) was opened in the heart of the Central Coast's Health and Wellbeing Precinct at Gosford Hospital. This \$72.5 million state-of-the-art research and education facility co-locates the Central Coast Research Institute with the University of Newcastle Clinical School and the District's Library and Research Office.

The CCCSRI's research facilities will help bring together researchers from a range of health and wellbeing disciplines and create a centre of excellence to build research skills and capacity across the health, university and wider workforce.

Engaging closely with the local community, the CCCSRI's wider vision is to contribute to the creation of a Health and Wellbeing campus that stimulates research and innovation in ways that can deliver wider economic benefits to the Central Coast community.

The 9,500sqm facility includes:

- 6 floors of education, research, office and retail space
- 9 lecture and seminar rooms
- 15 learning suites, consultation, training and teaching rooms
- 6 problem-based learning areas
- 3 simulation wards
- 1 simulation laboratory
- 4 research laboratories.

Central Coast Research Institute

Created in 2020, the Central Coast Research Institute is a joint venture of the University of Newcastle and Central Coast Local Health District located in a new, world-class, purpose-built facility at the Health and Wellbeing precinct at Gosford Hospital.

It is supported by advisory groups and communities of practice. Each is made up of health professionals, managers, researchers, community members and other experts to help guide and support CCRI's growing work portfolio.

The CCRI aims to deliver pioneering research relevant to improving the health and wellbeing of the Central Coast community and beyond. Its research focuses on the design, implementation and evaluation of new models of person-centred integrated care.

It's research priorities include:

- Aboriginal & Torres Strait Islander Health
- Active and Healthy Ageing
- Complex & Chronic Illness
- Mental Health & Wellbeing.



Central Coast Health & Wellbeing Living Lab

The Central Coast Health & Wellbeing Living Lab is a partnership between the University of Newcastle and the Central Coast Local Health District.

It brings together researchers, healthcare providers, aged care professionals, industry and, most importantly, older people and their carers. Its role is to develop, test and deliver innovative and effective solutions that help seniors live satisfying, engaged and independent lives in their homes.

The Living Lab focuses on four core challenges related to ageing in place using the Central Coast Health and Education Precinct as the experimentation hub.

These include:

- community connectivity
- tech-enabled home
- care at home; and
- preventative tech.

By developing products and services that meet the needs of older consumers, stakeholders can tap into the 'longevity economy', driving economic activity and supporting an important cohort in our communities.

Ideas Hub At Gosford Hospital

The technology and innovation 'Ideas Hub', located within Gosford Hospital, aims to identify and address healthcare challenges. It works with all CCLHD facilities, local businesses, entrepreneurs and health staff to improve staff and patient experiences. Health staff is heavily involved in generating ideas that will improve day-to-day processes as well as patient experience.

Hunter New England Local Health District (HNELHD)

HNELHD provides services to:

- 942,374 people, including 64,333 Aboriginal and Torres Strait Islander people across 25 local government areas
- 169,846 residents who were born overseas
- Employs 17,661 staff + 1,600 volunteers.

HNELHD services include:

- 1 tertiary referral hospital
- 4 rural referral hospitals
- 12 district hospitals
- 8 community hospitals
- 60+ community health services
- 7 in patient mental health facilities plus community mental health services
- 3 residential aged care services.

HNELHD incorporates the John Hunter health complex which comprises John Hunter (JHH) Teaching Hospital – the busiest trauma centre in NSW and the second busiest nationally, John Hunter Children’s Hospital (JHCH), Newcastle Private Hospital, the Hunter Area Pathology Service which provides tertiary level pathology testing, The Royal Newcastle Centre, Rankin Park Hospital (Rehab), and the Hunter Medical Research Institute (HMRI). Development of the John Hunter Health Innovation Precinct is currently underway.

Sources:

[HNEHealth](#)

[CC Local Health District](#)

Central Coast Local Health District (CCHLD)

CCHLD provides services to:

- 347,158 people, including 12,489 Aboriginal and Torres Strait Islander people. 48,057 residents were born overseas
- By 2031, it is predicted that 20% of the population will be aged 70-84 years (an increase of 58.6%).

CCHLD comprises two acute hospitals – Gosford and Wyong.

Gosford Hospital is the principal referral hospital and regional trauma centre for the Central Coast. Wyong Hospital is a major metropolitan hospital.

Woy Woy Hospital and Long Jetty Healthcare Centre provide sub-acute care. Additionally there are eight community health centres and other community based services.

Primary Health Network

The Primary Health Network (PHN) is a not-for-profit organisation funded by the Commonwealth government to improve the efficiency and effectiveness of the primary health care system.

The PHN is not a direct provider of services, instead it manages a range of service agreements with organisations to deliver primary health care programs in areas of identified need.

The Primary Health Network works with health care providers across the Hunter, New England and Central Coast to deliver a range of primary health care services that meet identified needs and close service gaps for people living in the region.

The PHN analyses and integrates information and data to support health planning and health service delivery in our region.

Its aims are to:

- Identify & address health needs in our communities
- Support and develop improved health care delivery in the primary care sector
- Develop and implement improved care pathways and models of care
- Commission health services to communities to close service gaps – we are not a service provider.

Opportunities for HealthTech Growth in the Hunter Central Coast

Digital health

The Hunter Central Coast is a compelling destination to test, develop and commercialise digital health solutions. The region has adopted digital health to help deliver services, improve processes, and increase efficiencies. With a strong commitment to Health and technology partnerships that lead to Health-led, effective solutions, the region is looking for opportunities to expand its reach in digital and e-health.

Clinical trials

The Hunter Central Coast has a strong clinical trials sub-sector that delivers a range of device and pharmaceutical trials. It has the skilled workforce, dedicated infrastructure and clinical expertise to support a complete clinical trials service. Opportunities exist to expand the region's delivery capacity as well as to develop educational courses to upskill the workforce in the provision of clinical trials.

Additive manufacturing

The creation of lighter, stronger parts and systems is important to medical device production. Additive manufacturing, or 3D printing, is being taught in some Hunter Central Coast schools and at TAFE and University. Opportunities exist to upskill the existing workforce and implement additive manufacturing processes in more of the region's production facilities.

Small batch pharmacology production for clinical trials

There is support from Hunter Central Coast clinicians to increase the region's capability to enable the production of clinical trial size batches of pharmaceuticals for studies occurring in the CCLHD and HNELHD as well as for health researchers and private clinical trials providers.

Rapid prototyping, production and testing

Rapid prototyping production and testing facilities are important for bringing products to market. Opportunities exist to grow and better utilise the Hunter Central Coast's existing R&D capability and rapid prototyping infrastructure to improve the efficiency of the pipeline from unmet need to commercialisation.

Medtech & advanced manufacturing

Hunter Central Coast has the engineering and manufacturing expertise to deliver products and components across many sectors. HCC companies have the appetite, relevant skills, track-record and certifications to deliver into the health & medtech sector and a willingness to collaborate, even with competitors, to deliver end-to-end solutions to large-scale challenges.

Sustainability in healthcare

Initiatives to achieve carbon and waste neutrality in the region's health sector are underway. They focus on resources, infrastructure, procurement and transport. Opportunities exist for collaborative activity to reduce energy, water and resource utilisation, lower emissions and create more environmentally compatible alternatives to consumables, devices and therapeutics.

Why Hunter Central Coast?

Health & MedTech Industry Base

The density of Health industry firms in the HCC creates a defined 'precinct' north of Greater Sydney on Australia's east coast, that has access to world class research facilities, two Local Health Districts and the benefits of simple logistics and supply chains.

These companies work to improve human and animal health, are highly collaborative – 76% collaborate with universities, and have established local, national and global markets. They directly support thousands of jobs while many more thousands of people are employed in the public and private health services, the University of Newcastle and medical research institutes.

Skilled People

People are the key ingredient for industry success: a skilled, motivated workforce underpins quality service and production and meaningful collaboration. The Hunter Central Coast boasts world renowned clinical experts who are delivering medical breakthroughs; doctors, and researchers many of whom trained at the well-respected College of Health, Medicine and Wellbeing at the University of Newcastle; patient-facing nursing and support staff – graduates of the University of Newcastle and TAFENSW; Medical Engineering graduates from the University of Newcastle; researchers engaged in new to the world projects at HMRI and CCCSRI; international industry cluster development experts; industry and manufacturing leaders; and many others. HCC's expert workforce engages at all levels to identify and solve patient-centric problems, unmet clinical needs and industry sector challenges.

Workforce

The Hunter Central Coast workforce is large.

Hunter Central Coast data supplied by the Australian Government's Labour Market Information Portal suggests:

- 542,400 people are employed across the region
- Participation rate is 64%
- 16.8% of the Hunter Central Coast population is employed in Healthcare and Social Assistance
- Employment in Healthcare and Social Assistance will grow by 93,000 jobs by Nov 2025

The Hunter Central Coast's Health and MedTech sector is represented across the region's largest employers by industry:

- Health care and social assistance employs 88,300
- Professional scientific and technical services employs 36,400
- Manufacturing employs 32,900

Advanced Manufacturing And Healthtech Capability

The region's history in traditional industries and regulated fields means it has an increased concentration of people with engineering skills at all levels. These skills, coupled with a track record of adaptability, built in response to economic shocks like the cessation of BHP's steelmaking in 1999, has increased HCC's ability to 'pivot' and apply transferrable skills and knowledge into new, high-tech industry sectors like medical technology. The region's engineering pedigree delivers smart, technically sophisticated solutions.

The regulatory/governance/quality management systems skills essential in the HCC's traditional industries is another set of transferrable skills and a key asset.

Source:

[Australian Government](#)

Regulatory System Compliant, Accredited Companies & People

Companies and organisations in the Hunter Central Coast have the required certifications to conduct business in a compliant method according to international regulations and required certifications. Several have the required clearance from the TGA, FDA and other international bodies for the sale and distribution of their medical products and services.

Medical Device design and manufacture quality management certification, ISO 13485, and the non-medical device specific quality management certification, ISO 9001, has been achieved by a variety of large and small companies in the region while others are examining the business case to undertake it.

Diverse Population

The region is large and diverse with a combined patient population of approximately 1,000,000 people and a large indigenous population – approximately 60,000 Aboriginal and Torres Strait Islander people live in Hunter New England Local Health District and 12,500 in Central Coast Local Health District – 27% of the NSW indigenous population.

Approximately 20% of the HCC population was born overseas and 15% speak a language other than English at home. The region's median age is 40.

Diverse Locations

HCC has a diversity of settings providing opportunity for a range of clinical applications, delivery, trials and testing. Across the region there are cities and metropolitan areas, urban, rural and remote locations each with access to health infrastructure and services.

Collaborative Environment

The Hunter Central Coast is proud of its collaborative business and industry environment – demonstrated by long-established and successful network organisations such as Hunternet whose members work together to exchange knowledge, solve industry problems, and fill skills and intelligence gaps.

In recent times swift and effective collaboration has resulted in solutions to such problems as ventilators, in-hospital tracking systems and point of care testing devices.

Enabling Organisations

The Hunter Central Coast combines deep sector expertise with strong, supportive collaboration to deliver successful, commercial outcomes. Its health & medtech companies offer a unique enabling environment with a combination of high-profile and high performing organisations that nurture and enable success.

They include:

- University of Newcastle
- TAFE NSW
- Two engaged Local Health Districts
- Hunter Medical Research Institute
- Central Coast Clinical School & Research Institute
- R&D labs + Innovation hubs
- Industry specialised service providers (CROs)
- Connecting/co-ordinating organisations.

Source:

[Australian Bureau Statistics](#)





Talent

The availability and quality of labour is an increasingly important consideration for investors. The Health and Medtech sector requires a highly educated and skilled workforce. The University of Newcastle, TAFE NSW and industry in the region is collaborating to produce graduates with industry relevant, current skills. Industry advisers are increasingly contributing to the development and delivery of subjects while professional placement is an essential component of courses at all levels.

Long running, successful education-industry partnerships result in the provision of current, contextualised curriculum that leads to a motivated graduate pool.

Innovation Incubators

The Hunter's innovative business environment supports collaboration between enterprise, tertiary education, research and government. This ensures knowledge sharing, technical development and a positive attitude to new ideas is translated into commercial products. Partnerships are evidenced in the range of innovation and R&D hubs and incubators that provide support and commercialisation advice to the region's strong start-up sector and established firms. The Melt, Eighteen04, I2N, Dashworks and Fastlab provide R&D as a service, physical spaces for collaboration and access to expert advice and support for commercialisation.

Professional Services

A range of large and niche professional services companies have bases in the region and provide specific legal, financial, research and advisory services to address the needs of health & medtech companies.

The region also has a variety of Contract Research Organisations (CROs) that provide services including quality management, business development, regulation consulting and strategy to the local health & medtech industry base as well as national and international clients.

International Markets

Australia is a highly globalised economy, with trade accounting for 46% of nominal GDP. Hunter Central Coast is contributing nationally with the region's health & medtech companies having both local and global reach.

Firms offer products and/or services throughout NSW with most also trading Australia-wide. Importantly, 54% of firms offer products and/or services beyond Australia, primarily to New Zealand, USA, United Kingdom and Europe. 22% of firms are exporting health & medtech products and services.

The importance of this is crucial given the logistics and regulatory hurdles required for the export of highly regulated medical devices and biotechnology products to overseas markets.

Source:

[Macrotrends](#)



Local, National And International Transport Connectivity

Hunter Central Coast transport infrastructure is modern, efficient, accessible and continuously improving. It is interconnected and includes:

Newcastle Airport

- Australia's sixth largest regional airport and NSW's second busiest
- Daily flights to Australian capital cities and regional hubs
- Upgrade to the Airport's runway to Code E status will enable international connections and deliver \$12.7 billion in regional economic benefit through increased freight and stimulation of the visitor economy
- \$54 million terminal expansion to international capacity.

Port of Newcastle (PoN)

- The Port currently handles 4,140 ship movements per annum
- With trade worth about \$71 billion to the national economy each year, Port of Newcastle enables Australian businesses to successfully compete in international markets
- PoN is contributing to Australia's prosperity with responsible, integrated and innovative supply chain solutions
- PoN is transforming to be a major renewable energy precinct
- PoN is the only deep-water port on Australia's east coast with direct wharf-rail connectivity.

Road and Rail

- The Hunter Central Coast has a highly developed network of highways and arterial roads
- Over 100 national and regional transport companies operating in the Region, allows for fast and efficient movement of freight.
- The NorthConnex (M1 to M2 link) reduces travel time to the centre of Sydney and freeway travel between the region and Melbourne
- Most industrial estates in the Region, as well as those planned, are located on or close to national highways or on main arterial roads with fast links to the highways
- A comprehensive network of passenger and general freight rail services link the Hunter with Sydney, Brisbane and North Western NSW including Tamworth and Moree.
- The rail network is also linked to the Port of Newcastle, providing a smooth transition between sea and land for the movement of bulk items such as coal, alumina and containerised cargo.

Business Parks & Green Field Sites

Hunter Central Coast offers a wide range of industrial/employment sites to meet the needs of business and industry. Mature industrial areas provide opportunities to obtain premises for immediate occupation while new industrial estates offer sites ready for development with some developers offering design and construct packages.

Development sites are also available at the new John Hunter Health Innovation Precinct.

All sites are located close to motorways, rail and within easy reach of airports and Port of Newcastle.

Case Studies

Hey Zomi

Female-founded femtech brand Hey Zomi is the first reusable menstrual disc to be designed and made in Australia. Founded by sisters Zoe and Mika, Hey Zomi empowers those who menstruate by helping its customers have periods on their terms, embrace the flow, and live unapologetically.

Spurred on by sub-standard menstrual products and inadequate period management, the sisters felt compelled to create something that would help menstruators get on with their lives, uninterrupted. They worked with the best designers, manufacturers and materials to create Hey Zomi from 100% medical-grade silicone, making it soft, smooth, flexible and safe.

The Hey Zomi disc is a no-brainer when it comes to the environment and the wallet: this innovative reusable has an average expected lifespan of a minimum of five years, diverting a huge amount of period product waste from landfill.

The sisters' ultimate mission is to empower all menstruators to have periods on their terms, including those who cannot access the period care they need.

www.heyzomi.com



Tactics VR – Emergency Stroke Care VR Training

Emergency department nurses across NSW are gaining valuable real-time experience in stroke care thanks to a new virtual reality (VR) training program developed by the Centre for Advanced Training Systems at the University of Newcastle.

Responding to a need for rural, regional and remote areas to have access to regular high-quality training, the [TACTICS VR](#) program provides nurses with immersive, interactive and evidence-based training to improve outcomes for people presenting with stroke.

Program director and University of Newcastle Professor Rohan Walker said stroke was a time-critical medical emergency and ensuring fast response and treatment times was essential to saving lives and improving stroke recovery.

By simulating real-time scenarios, the training program gives emergency nurses essential practise in how to handle those first critical minutes when a patient presents with stroke.

The aim of the training is to increase awareness of nursing processes in hyper-acute management and emphasise the critical importance of effective communication and team coordination in the first 24-hours after stroke.

www.newcastle.edu.au/newsroom/featured/virtual-reality-training-to-improve-emergency-stroke-nursing-care

Case Studies

The Hyphen Health Group

The Hyphen Health group incorporates the online telehealth clinics Stigma Health, PrEP Health, and Roidsafe. The group was effectively established in December 2020, when it launched its second online sexual health, PrEP Health. The first two clinics Stigma Health and PrEP Health are now combined Australia's largest sexual health clinic. In 2022 it launched Roidsafe, the world's first telehealth service for harm minimisation for Australians or Performance and Image Enhancing Drugs (PIEDs).

Hyphen Health is deliberately niche-focused in healthcare spaces known to be stretched, under-resourced and underperforming. Its proven itself as a solution with more than 25% of patients reporting that before using Hyphen's service they'd never before been tested. To date, Hyphen has helped more than 30,000 Australians. It's adding over 1600 new patients a month and helping more than 2,000 Australians a month with their health.

The group's growth has seen it consecutively listed on the Australian Financial Reviews Fast 100 Fast Starters List (2022 and 2023). In the 2022 list it came in at #42. Its compounded annual growth rate (CAGR) to qualify for the 2023 list was over 340%.

The clinics are now trusted brands and the Group is building resources to provide specialist services on behalf of General Practice Clinics and State Health Clinics Australia-wide.

www.hyphen.health



D+I & AdvanCell

Design + Industry (D+I) and AdvanCell collaborated on a world first nuclear isotope generator for the reliable and scalable supply of a rare isotope used in prostate and several other cancer treatments.

This device is capable of producing a daily dose of an isotope known as Lead-212. The short half life of Lead-212 (10.6hrs) led the demand for this technology. The research, established and prototyped at University of Adelaide and University of Newcastle, was bought to D+I in 2019 for design and commercialisation.

D+I's Newcastle and Sydney design teams conceptualised the technology that went on to be one of three devices to receive the 2021 NSW Medical Devices Fund. This round of funding helped boost the projects development phase.

The next 12 months saw numerous milestones achieved:

- The device was successfully manufacturing daily doses of Lead-212
- Presented with the Australian Good Design Award of the Year
- Closed AUD\$18M Series B funding led by Morningside
- Awarded AUD\$9.8M from the Australian Federal Government.

www.design-industry.com.au

Case Studies



Whiteley Corporation's Bactol® 90

Whiteley has a long-standing commitment to research and innovation since it commenced business in 1933. Whiteley has been working hard to provide better Infection Prevention solutions for healthcare. In April 2023, Whiteley expanded its Bactol® range to include Bactol® 90. Bactol® 90% alcohol surgical hand rub which is a new fast-acting antiseptic hand rub suitable for surgical-grade disinfection.

The Bactol® family of products are part of the core drivers for Whiteley's new \$20+ Million-dollar Human Therapeutics Plant (HTP) investment under construction in Tomago. This new Hunter facility will allow Whiteley to expand its manufacturing capabilities and provide critical products, like Bactol® 90, to healthcare facilities globally.

The launch of Bactol® 90 post-pandemic has been critical in driving brand awareness and providing ongoing education and training on the importance of effective hand hygiene in healthcare. Whilst the business saw significant growth during the pandemic, it also uncovered some barriers to business operations. Product demands for key Bactol® products were produced via third-party subcontract manufacturers' which meant extensive lead times and limited flexibility on batch quantity. This heavily impacted the market during the most critical parts of the pandemic. It was a pivotal driving factor for the business' growth plans and its ability to proceed with the HTP build at Tomago.

The new Whiteley HTP facility will operate under Good Manufacturing Practice (GMP) and has multiple advantages for improving the business including:

- Reduces sovereign risk to Australian customers by ensuring that the products manufactured under GMP are produced in Australia with guaranteed quality.
- Helps increase consumer confidence by giving Whiteley more control over when the product is available to customers i.e., flexible batch sizes, reduced lead times.
- Expands operational expertise and workforce skill into GMP Manufacture.
- Increases Research Capabilities into new a range of new opportunities.

www.whiteley.com.au



EzyAid

EzyAid was created by Jess Hay and Adam Geostis when their son Matty was born with MED-13L Syndrome, which meant he had to be tube-fed for the first two years of his life.

Tube feeding was Matthew's only option due to the high risk of an acute aspiration event, but it wasn't easy. While tube feeding saved their son's life, they encountered many challenges along the way. Tube changes were traumatic – whenever the tube dressing got wet, it lost adhesion and irritated his skin, necessitating another change. Like all babies, Matty also tended to play with his dressing and pull out his tube. Over time, he developed a feeding aversion as he associated food with the discomfort and emotional distress of having hands in his face for tube changes.

Frustrated by the lack of options to secure his tube and minimise his distress, Jess and Adam decided to invent a solution. They developed EzyAid – waterproof, adhesive dressing that secures tubes to the face for tube-fed people, particularly babies.

Around 280,000 Australians (including 80,000 children) rely on a NasoGastric (NG) or Orogastric (OG) tube for sustenance. Millions more around the world need to be tube fed due to the impact of eating issues and complex health conditions.

Jess and Adam's EzyAid solution offers:

- Less invasive application reduces the risk of feeding aversion
- Specially designed material requires less tube changes
- Simplified application means only one person is required for tube changes
- Pre-cut dressings cut waste to zero and save precious time
- Waterproof dressing withstands bathing, swimming and runny noses.

www.ezyaid.com

Case Studies

Nupress Group

Nupress Group supplies leading edge products with the latest technology to Mining, Building, Aerospace & Defence and now Medical sectors.

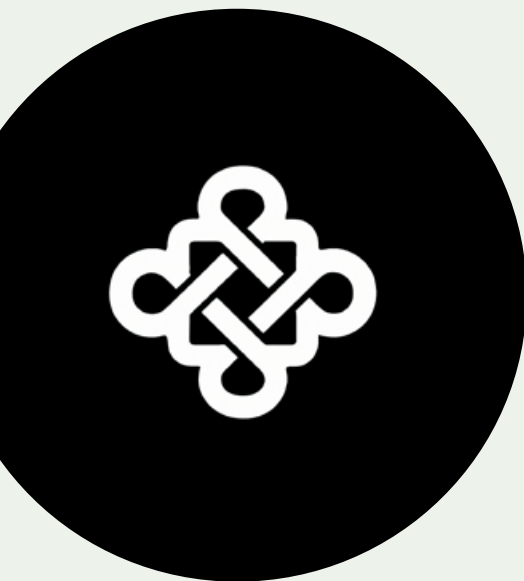
To compete in an increasing competitive international marketplace Nupress' focus is on working smarter not harder. Its innovative manufacturing approach positions it for the manufacture of unique and complex parts while also excelling in high quantity batch manufacturing. Its 5s and LEAN principles including cyber capability, the latest technology and reverse engineering processes, enable successful outcomes.

Medical is a new focus area for Nupress. With a proven track record of partnering with innovative health professionals in the design and development of components and instrumentation, the company has manufactured niche products including bone broaches, specialised tooling, instruments and prosthetic components.

It provides full reverse engineering of parts and assemblies, solid modelling and dynamic simulation. Nupress offers destructive testing as well as non-destructive testing of parts, engineering reports, weld procedures and documentation in accordance with AS/NZS 1554: FEA, Mechanical and Structural Engineering.

With the use of some of the most advanced CNC equipment and state of the art 3D modelling, Nupress is dedicated to meeting the needs of the ever evolving Health industry and is working towards its ISO 13485:2003 certification.

www.nupress.com.au



Newcastle AI

Newcastle AI, known for its proficiency in predictive analytics and forecasting, is pleased to present a compelling use-case tailored for the health sector.

In a collaborative dialogue with a seasoned manager within the field, Newcastle AI explores the viability and potential of refining operating room scheduling – a crucial aspect of hospital management.

Newcastle AI's goal is to illuminate how data-driven strategies can significantly enhance efficiency and patient outcomes in healthcare settings. Its solution harnesses predictive analytics for precise resource allocation, accommodating both planned surgeries and emergent cases.

The AI solution employs predictive machine learning to optimise operating theatre schedules. The model streamlines operating theatre schedules, substantially curtailing patient wait times and bolstering theatre occupancy allowing for more surgeries to be conducted reducing idle time and the likelihood of late-running cases that incur overtime costs and impact staff morale.

The resulting streamlined operations not only minimise the need for surgery cancellations but also create an environment where urgent procedures can be accommodated promptly, thereby enhancing overall patient satisfaction.

The end goal is a robust, data-driven system that enhances hospital efficiency and patient care while providing a flexible, adaptive scheduling tool for healthcare providers.

www.newcastle.ai

Case Studies



Chezleon

Imagine conquering cancer, only to face painful swelling and lumps from fluid build-up, causing infections that put you back in hospital 3 times. Nothing on the market helps but using a new product, DP-Tx, within 2 weeks the lump and swelling are gone. This is the actual experience of one of our patients.

ChezLeon's patented DP-TxTM technology is a unique Australian product designed to relieve the pain and swelling of fluid blockages and lymphoedema, significantly improving quality of life for patients.

Lymphatic dysfunction or Fluid blockages cause painful, persistent swelling causing disfigurement, inability to breast feed, infections such as cellulitis that can lead to hospitalisation, psychosocial consequences & lifelong conditions such as lymphoedema with NO CURE.

Lymphoedema the hidden epidemic being under-recognized and undertreated worldwide with a minimum 250mil Worldwide (WHO), affecting both males and females as well as children of all ages. Cancer treatment is one of the main causes of lymphoedema with an estimated 1.9 mil new cases per year the number of people suffering with lymphoedema will increase.

Our unique patented DP-TxTM technology empowers people to Go with the Flow and Live Life

- Reduce pain and swelling
- Recover from surgery and injuries
- Regain quality of life

Our first product for Breast Cancer, Breast Surgery & Mastitis is set to launch early 2024.

We are excited by the multiple-market potential for DP-TXTM in the treatment of fluid blockages, post-surgery, recovery & sportswear. Our B2B2C model gives easy access for patients to off-the-shelf, effective products which could impact the quality of life for millions of people worldwide.

www.chezleonhealth.com



Maroba Aged Care

Innovation in aged care is critically important, particularly given the recent focus on the sector. The Hunter's Maroba Aged Care, under the stewardship of its CEO Viv Allanson OAM, is keenly focused on staying at the cutting edge of resident care. It's working hard to provide residents with not only a caring, comfortable home, but holistic, effective services that improve their quality of life and support their independence.

While traditional services such as residential aged care and retirement accommodation remain Maroba's focus, it has introduced a range of wellness and support services that are structured to support the older person.

One such service is the student-led speech pathology program which is integrated into Maroba's resident care plan – and has been for the past 12 years.

Embarked upon as a pilot between Maroba and the University of Newcastle in 2012, the program initially aimed to help Speech Pathology undergraduate students complete their third-year requirement for work placement. Six months into the pilot, Viv and University of Newcastle Clinical Educator, Kristen Munro agreed that the cost-neutral program was mutually beneficial: participating students enjoyed it, engaged in genuine care activities and as a result learnt a lot whilst on-the-job at Maroba, while Maroba's residents embraced the student-developed activities and showed (often significant) signs of improvement after participating in them.

Fast forward 12 years and the program is a mainstay of Maroba's clinical service offering. Honed in partnership with the organisation's multi-disciplinary teams and tailored for individual residents' needs, it is delivering clear and trackable improvements in resident health, and it's preventing illness.

www.maroba.com.au

Case Studies



Thermalog

According to World Health Organisation research, up to 50% of vaccinations are lost due to improper temperature monitoring and maintenance.

Temperature fluctuation can cause damage to vaccines which each have different temperature requirements.

Thermalog is an accurate temperature monitoring system that provides detailed information about temperature deviations. The system monitors temperatures 24 hours a day, seven days a week; saves the data on cloud-based storage for easy retrieval, and alerts the user when the temperature falls out of already set standards.

Pharmacy regulations and quality control standards are strict for manufacturing and delivering medicinal products. Thermalog maintains precise control over the temperature monitoring process guarding against diminished product effectiveness, patient impact, unnecessary costs to healthcare providers and harm the manufacturer's reputation.

According to the CDC (Centre of Disease Control and Prevention) guidelines, every vaccine storage unit must have a temperature monitoring device that can provide an accurate, around-the-clock temperature history critical for protecting vaccines.

Thermalog monitoring and safety systems, established, designed and manufactured in the Hunter region by Abid Khan and his team, is the answer.

www.thermalog.com.au



Myo Munchee

Shaped like a mouthguard – but with a handle – Myo Munchee is a soft, durable silicone chewing device that massages the teeth and gums to encourage improved breathing patterns, healthier teeth and gums, and a “good quality face”.

Developed in 1967 by Dr Kevin Bourke, a dentist in Maitland NSW, the TGA and FDA certified device is a result of Dr Bourke's revolutionary research into the function and development of jaws. He discovered that like any part of the body, the jaw and facial muscles need the right kind of exercise/movement to stay healthy. And, that chewing enhances jaw and mouth muscle strength, jaw growth, correct swallow patterns and assists in optimal oral health and function. As a result of his research, he created a fun and easy to use device, The Munchee, that also encourages lip closure, correct resting tongue placement & swallow pattern and promotes nasal breathing.

The company is now headquartered in Newcastle and run by his daughter, chiropractor and CEO Mary Bourke. Mary has established global export markets for Myo Munchee and continues to refine the product through research partnerships. Mary and her team's goal is to provide education to the public and practitioners about the long term impacts of poor oral health, lifestyle and underdeveloped jaws and how they affect future well-being.

www.myomunchee.com

Case Studies

Mudbath, an Endava company

For a decade, Mudbath has been at the convergence of strategy, design, and software engineering, creating impactful digital products. In 2023, the company began a pivotal integration phase with Endava, a NYSE-listed digital and technology consultancy with a two-decade global impact record. This merger and acquisition has empowered Mudbath with greater global insights and enhanced innovation in healthcare, while benchmarking Mudbath's solutions against international standards, solidifying its position in the APAC region.

Through engaging with health leaders, analysing public discourse and leading in-depth client discovery sessions, Mudbath works to address challenges in Australia's digital healthcare system, whether it be overall patient experience, cost efficiencies, or diagnostic and treatment outcome communications.

The agency's full-service product offering has seen SaaS tools introduced for GPs, enhancing financial transparency and operational efficiency in practices.

Additionally, it has delivered a pharmacist-owned CRM platform that delivers seamless digital dispensary and patient management systems, heightens government service integration, and drives community engagement, removing the barrier of access for Australia's aging demographic.

In an ongoing client partnership with one of Australia's leading health insurers, Mudbath delivers efficiencies across its entire digital ecosystem, integrating the company's core engine product into existing systems, automating processes, and enhancing claims procedures to reduce operational expenses.

Mudbath's excellence in product strategy and creation of companion applications for emerging and established MedTech products demonstrates the company's focus on advanced software and technology solutions for the sector. Whether harnessing the power of data or delivering advanced cloud-based systems, each product delivers stakeholders with feedback in real-time to impact decision-making, monitors health data to provide notifications to patients, and aggregates vast datasets to leverage trends and insights for business launches and existing product evolutions.

www.mudbath.com.au



Case Studies



Jaegersoft

Jaegersoft designs and develops innovative software products that drive high-value results and an immediate return on investment.

Catering to businesses in mining and heavy industry, advanced manufacturing and processing, mechanical and electrical engineering, construction, and shipping, Jaegersoft's core services include:

- web application development
- mobile application development
- cloud integration and optimisation
- api development and integration
- system integration and automation.

The company's designers and engineers leverage modern technologies to architect dynamic and effective solutions for complex business challenges and aim to deliver measurable value.

Jaegersoft's product development process is focused on the four Ds: discovery, design, development and delivery. Its software products are continually safeguarded and improved via maintenance support packages that fine-tune, add new features, and resolve issues.

Jaegersoft believes that as its customers' businesses grow and pivot, so must the software products they have invested in.

www.jaegersoft.com.au

Robotic Systems & Braincubator

The Braincubator is a recovery incubation system designed to extend the viability of acute brain slices for research purposes. Developed by Prof Yossi Buskila and Prof Paul Breen of Western Sydney University it prolongs the lifespan of brain slices to more than 36 hours, solving the problem of limited experimentation time. It was developed to reduce the number of animals sacrificed, enhance research efficiency and provide researchers with more viable tissue and standardized incubation conditions.

Proceeds from Braincubator sales go towards further research, the long term goal being to extend the time entire organs can remain viable. Such an outcome would have major impact on transplant medicine.

Richard Burgmann from CEG, a Braincubator partner, brought Newcastle-based team Robotic Systems into the project in 2023, recognising that the company's focus on low volume high complexity manufacturing to an ISO standard could address the entire range of the manufacturing process he required.

The proprietary manufacturing process Robotic Systems has developed with integrated quality control means they can start and stop the assembly line on a product by product basis. Richard said, rather than having to manufacture ten or a hundred or a thousand units, I can commission in ones and twos as the need requires. And of course, as an Australian company, they come with a strong



respect for Intellectual Property rights and are largely immune from the whims of international geo politics!

The fact that they are a regional manufacture near a major university and allied supplier network means that I get the benefits of a much lower costs compared to a Sydney or Melbourne based company as well as the benefits of their deep roots in academia and bringing other inventions to market.

www.roboticsystems.com.au

Case Studies



Professor Jennifer Martin

Mentoring and training is a passion of Professor Jennifer Martin, and who better to impart their wealth of knowledge to the next generation.

Rhodes Scholar, President-Elect (2022-24) of the Royal Australasian College of Physicians (RACP), Director of the Australian Centre for Cannabinoid Clinical and Research Excellence, University of Newcastle Council member, Chair of Clinical Pharmacology at the University of Newcastle, physician and keen sportsperson, Jennifer has a depth of knowledge that the Hunter region is privileged to be able to tap in to.

Now Hunter-based, Jennifer specialises in clinical therapeutics, drug trial design and interpretation, cost-effectiveness of therapeutics and pharmaceutical policy.

She leads two independent multidisciplinary national research programs around optimised use of medicines, and she's a teacher – postgraduate students under Jennifer's supervision are developing a mass spectroscopy library and clinical validation for synthetic drugs of abuse, and developing programs to optimise dose and timing of cancer therapies.

In her University Chair of Clinical Pharmacology role, she focuses on therapeutic drugs and illicit or emerging drugs of interest. The Hunter team looks at everything from the development of drugs, the clinical trials process, through to the post-marketing phase, where data is collected on the effectiveness and any side effects of the drugs.

Jennifer's vast and diverse experience has cemented in her a responsibility to do something helpful for the community. She believes that teaching well involves admitting to past errors to prevent students from repeating them. "I'm motivated, but my motivation is to try and ensure equity of access to opportunities based on merit in a society of entitlement, where some people get preferential treatment."

"I know I can't override thousands of years-worth of inequity, but I'm doing it in my own small way and I hope that it eventually has some benefit in terms of access to medicines."

www.newcastle.edu.au/profile/jen-martin



Lincoln Black

Lincoln Black is an independent Industrial Designer helping small and startup medical device companies turn their big ideas into successful, elegant devices.

With a focus on usability and human factors, he is passionate about improving quality of life through outstanding design. From concept development and prototyping, to product visualisation and design for manufacture. He collaborates across disciplines to develop devices that make a difference to clinicians, caregivers, and patients.

His process is lean and agile with outstanding attention to detail, aiming to deliver exceptional value to medtech founders. This approach allows him to be flexible to the challenges of research and development, pragmatically balancing the needs of quality, regulatory, and commercialisation, with business objectives.

With 20 years of experience and 15 years developing medical and orthopaedic devices, Lincoln has helped bring many devices to market. He works with clients both locally and interstate. Among his current projects, he is building devices to treat otitis with media effusion (OME) in children, improve fixation of femoral neck fractures, and drastically improve the success rate of patient cannulations.

In the future he hopes to empower medical device entrepreneurs to explore problems and build their own solutions through education in design and design thinking.

www.lincolnblack.cc

Case Studies

Honeysuckle Health

Honeysuckle Health is a specialised healthcare data science and services company on a mission to create better pathways to better health outcomes by providing highly targeted, high-quality healthcare solutions.

Harnessing the Power of Data: Our core strength lies in data science. Through our data models, AI and machine learning platforms, we extract valuable insights from healthcare data with the aim of enabling individuals to make informed decisions about their health and empowering our partners with a deeper understanding of their customers' health indicators, trends and risks.

System-Wide Impact: Ultimately, improved health outcomes not only benefit the individual, but have a flow-on effect benefiting insurers, providers, the entire healthcare system, and the wider population. Data has the power to amplify that impact significantly.

Focusing on the Individual: Supported by real-time machine learning models, we identify and prioritise individuals who would benefit most from our programs aimed at health interventions, recovery from or preparation for treatments, and mental health and wellbeing. Our continual improvement approach, fueled by data feedback loops, optimises patient selection and targeting, program delivery, and health outcomes.

In an exciting time for the healthcare industry, we're on a journey to better health outcomes and system-wide improvements – data and innovation are driving us there.

www.honeysucklehealth.com.au



Community Therapy

Community Therapy is the leading community allied health provider across the Hunter New England and Central Coast Health Districts of NSW with a team of almost 130 local Physiotherapists, Occupational Therapists, Dietitians, Speech Pathologists, Exercise Physiologists, Massage Therapists and Therapy Assistants delivering in-home services.

They specialise in the care of older adults and people living with disabilities, have recently launched a paediatrics division, and are certified by SAI Global against the NDIS practice standards and partner with approved aged care providers to ensure compliance with the aged care quality standards.

The Community Therapy team visits more than 1,000 clients each week and recently passed the milestone of receiving more than 10,000 referrals for our services in a 2 year period. In 2021 they launched an online Manual Handling Training Course and they have now had over 20,000 healthcare workers complete the course on their website.

In 2022, Community Therapy co-founded OT Sketch (otsketch.com) with local web developers. This product is now live with approximately 100 early adopters using the software platform to create better, more accessible homes for older adults and people living with disability. They're currently in discussions with Universities across Australia to provide free access to OT students to better their skills around designing home modifications.

The Community Therapy story is just beginning, but in 7 short years since it was founded they have become an integral part of the healthcare community for the Hunter region with plans to expand their presence both nationally and internationally through online training and medtech innovation.

www.communitytherapy.com.au



Case Studies

Creative Pipeline

Pivoting is something we've all heard lots about in the last three years – pivoting for sustainable growth, to enter new markets, and the big one ... to shore-up sovereign capability.

To pivot is smart in the wake of the multi-industry shortages Australia experienced during the pandemic, and one small company in the Hunter region of NSW has done just that.

Creative Pipeline (CP) has cleverly leveraged new introductions, made possible by the region's Health & Medtech Cluster, to pivot into one of the Hunter's most promising growth sectors – Health – and in doing so has created new products and set itself up for the future.

Creative Pipeline commenced as a one-man operation in 2006 specialising in virtual reality, 3D animation and augmented reality, primarily for the resource sector. Tim Black, that one man, went on to develop his video production, 3D animation and industrial design know-how into a unique offering that simplifies technical, complex information into world class visual resources.

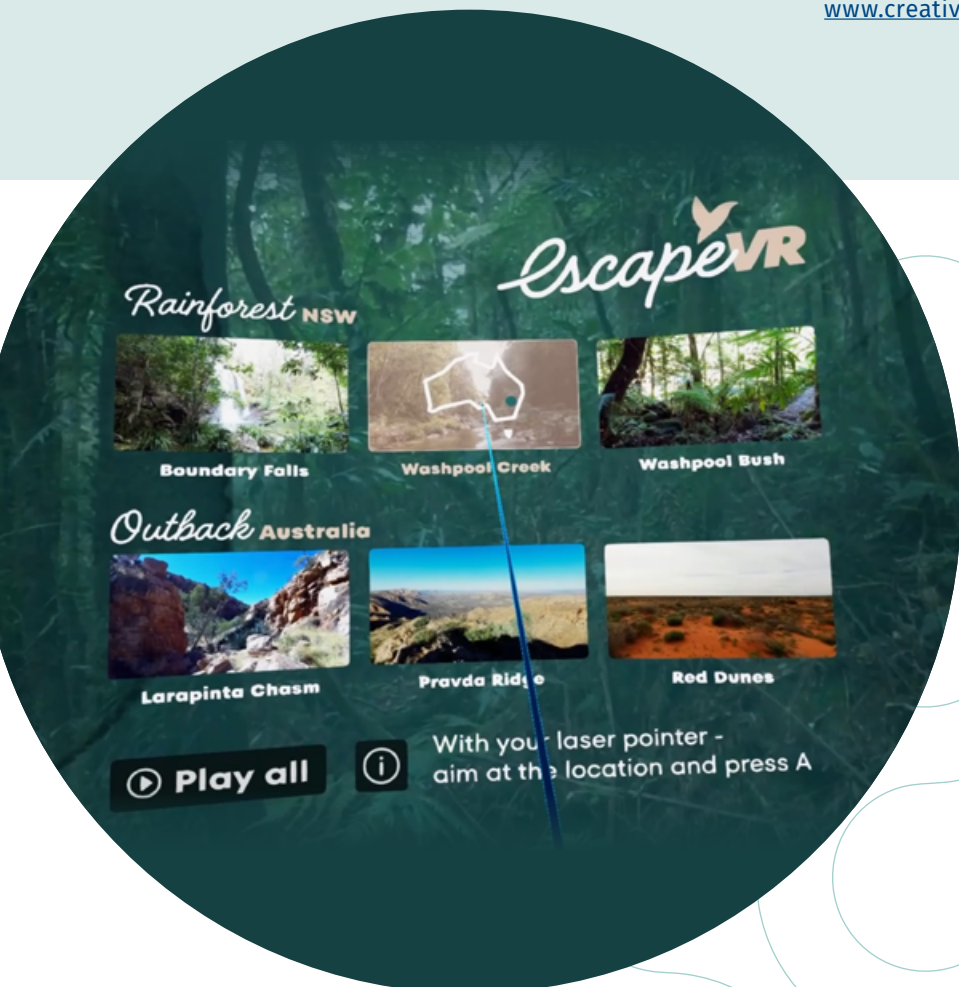
With clients like Orica, Bradken, BHP and AustMine, Tim and his small team solve big problems for companies who need better ways to train their people, or market themselves in a better way. They have a mining mindset and were doing well, but knew they needed to consider diversifying their client base to secure the company's future. Seeking out and accessing opportunities were pressing challenges.

Listen, learning and testing the market at health focused events and site visits helped Creative Pipeline clarify its health offering and develop new marketing collateral. They began to think differently about the application of their technology – to the point where they developed CP's first health-specific VR product.

Escape VR has been designed to allow anyone to feel the calming effects of beautiful natural places via a VR headset: made possible by travelling to National Parks in both NSW and the NT, capturing 360 video footage of hard to get to, calm locations nearby to waterfalls and outback ridges. Recently, this product has been trialled at a Newcastle Aged Care facility to discover two things: whether VR technology can help residents experience the calming effects of nature from their Aged Care home, and if it can help Aged Care staff use the technology as a "Tool for Work".

Creative Pipeline's capabilities have also enabled them to develop other use-cases for VR as "Tools for Work" in the Health sector for training and facility planning.

www.creativepipeline.com.au



Case Studies

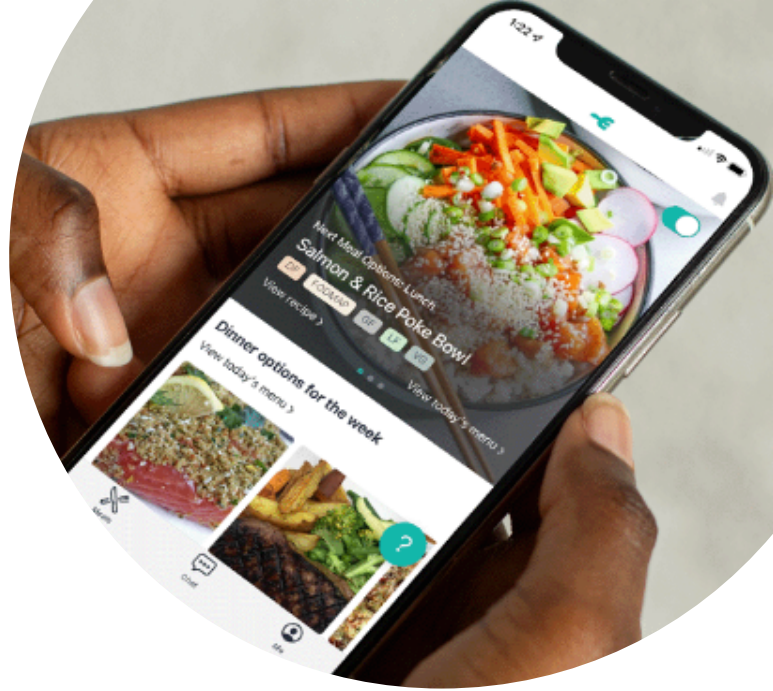
Compeat Performance

According to Rae Dower, Matilda's Pathway Technical Lead & Head Coach Women's U17, "Compeat is changing the game in nutrition and athlete well-being! The direct athlete impact on and off the field is refreshing and one of a kind."

High praise for Newcastle-based Compeat Performance and its groundbreaking digital health solution, designed to elevate athlete development, performance, and availability. Conceived by the husband-and-wife team of Dan and Alicia Edge, the innovation stemmed from a determination to shift the focus of athlete performance away from traditional prescription methods.

Their vision was to move beyond the consult model and explore impactful, human-centered ways to support athletes. Initially redefining nutrition success by emphasizing behavior, environment & relationships, the Compeat model continues to expand to incorporate more psychology and encompass a holistic view of people and well-being. A model that provides unique insight into athlete injury and illness risk, training adaptations, and performance.

This vision has become a reality, with Compeat Performance now partnering with prominent organisations such as The Matildas & Socceroos, Lacrosse Australia, and Professional Footballers Australia, alongside a number of prominent World and Olympic-level athletes.



Delivered through its proprietary technology platform, Compeat focuses on positive motivation alongside scaled support for the athlete, wherever they are in the world and when and where it's needed to realise impactful health & performance outcomes. A flexible and accessible shift that is achieving benefits for both the Athlete and Practitioner.

With its continued success, Compeat is broadening its sports application to afford the same health and well-being benefits seen by the Matildas to the Employee and Population Health markets. An expansion that will provide new predictive and preventative opportunities at population level scale to help grapple a number of society's large health challenges.

www.compeatperformance.com



Instar

Translating ideas into hardware requires specialist engineering capability and experience in commercial execution. Instar founder, Dr Sam Evans, has engineered more than a dozen products, from idea stage to commercial sales. As a former university researcher, Dr Evans has led numerous projects in engineering biomechanics. Instar has expertise in computer aided engineering, injection moulding, structural analysis, prototyping, customer development, and go-to-market strategy. Contact: hello@instarco.com.au

www.instar.com.au

Case Studies

Ethos Health

Established for over 15 years, Ethos Health is a Newcastle-based health and safety business with a purpose to keep people and organisations healthy, happy and safe through an innovative and growing suite of health and safety services. Ethos Health's team of physiotherapists, dietitians, exercise physiologists, nurses and a dedicated IT team delivers clinical allied health services to the Newcastle and Hunter regions; and a range of face-to-face, digital and SaaS health and safety products and services to organisations both locally and across Australia.

Working with clients from all industry sectors, from SME's to ASX200 businesses, Ethos Health's services and technologies support better health and safety outcomes across the domains of fatigue risk management, musculoskeletal injury prevention and management, and workplace health and wellbeing.

In the last two years Ethos Health has added over 15,000 new users for their proprietary technologies with Hunter-based and national clients from multiple industry sectors including mining, utilities, logistics, local government, construction and manufacturing. In the next 12 months the business anticipates significant opportunities to support clients better engage their teams and communities in important WHS initiatives through an innovative communications strategy that maximises recognition, uptake and usage of our platforms, leading to improvements in health and safety outcomes.

www.ethoshealth.com.au



IhydRATE

Management of personal hydration is very important. Relying on thirst as a gauge is ineffective. Typically, by the time someone feels thirsty, they have already lost 1-2% body weight in water and are starting to suffer dehydration related mental and physical impact. Today, however, it is surprising difficult to measure hydration easily.

Local bio-tech start-up IhydRATE has created the 'Salhy' test. The Salhy test uses leading edge biochemistry with machine vision technology to measure personal hydration in real time.

Salhy is a saliva-based test that is convenient, affordable, fast and easy to use. Compared to other current measures such as urine testing or a blood test, the Salhy test is not invasive, it's not painful or messy, it can be used when on-the-go.

For sports athletes and their coaches, occupational health & safety managers monitoring their heat-stressed workforce or the carers of vulnerable groups such as the elderly, the Salhy test offers a fast and simple method to monitor hydration. This can assist in optimising general performance, productivity and improve safety. It can reduce the risk of dehydration related illness.

IhydRATE is an 100% locally owned and developed technology, with relationships with University of Newcastle, Hunter/Central Coast pilot customers and local manufacturing planned.

www.ihydrate.co

Case Studies

Design Anthology

Design Anthology is a locally-based product design and development company. Constantly seeking new ways to creatively solve its clients' problems by innovating and bringing game-changing ideas to life, DA's bunch of driven creatives have the right tools and know-how to design, test, manufacture and launch new products with a bang.

Design Anthology's big point of difference is that it works across multiple industries, giving the company a unique edge and diverse perspective. Its clients have access to the DA Team's decades of experience in design, engineering, production and manufacturing across multiple sectors and disciplines, resulting in end-to-end solutions and products that are better than imagined.

AusDiagnostics' flagship multiplex platform, the HighPlex, has been redesigned through a successful partnership with DA.

The HighPlex is a reliable everyday solution for laboratories globally. Known for its dependability and consistency, with its patented technology, "TandemPlex," the HighPlex automates MT-PCR to detect up to 40 gene targets from a single sample without compromising analytical sensitivity and specificity.



You can find more information about it at www.ausdiagnostics.com

The product is a testament to DA's collaborative approach and expertise in concept design, concept validation, detailed design, engineering, prototyping, and manufacturing expertise and in-house capability.

For more information on Design Anthology and its current projects, visit www.designanthology.com



QiTek Group

QiTek Group, headquartered in the Hunter, specialises in cutting-edge, cloud-connected Smart Air Purifiers and Indoor Air Quality (IAQ) Sensors designed for commercial and industrial settings.

QiTek's IAQ Assessment Service is ideal for businesses and organisations seeking to enhance employee well-being, ensure regulatory compliance, mitigate legal and financial risks, and optimise operational efficiency. It's a valuable solution for those committed to fostering a healthy, productive, and sustainable workplace environment.

Our Smart Air Purifiers harness the power of Hydroxyl radicals, naturally occurring cleansing molecules that efficiently sanitise both air and surfaces within treatment spaces. These Hydroxyls disperse throughout the entire area, ensuring comprehensive sanitisation.

QiTek's technology combats viruses, bacteria, mould, VOCs, and odours, with the Doherty Institute confirming a kill rate of up to 99.93% against SARS-CoV-2 (COVID-19).

All our products are IoT-enabled and seamlessly connect to a robust commercial-grade cloud system capable of managing countless devices.

www.qitekgroup.com

Case Studies



Water Monitor

Heart failure has a significant impact on our health system. 8 Australians die of heart failure every day and 73,000 hospitalisations in 2018-2019 were the result of heart failure costing the Australian health system \$billions.

60% of hospitalisations for heart failure are due to fluid overload.

A Central Coast start-up, Water Monitor™, has developed a simple, practical, recyclable tool to help keep track of fluid intake and reduce the impact of fluid overload on patients and the health system.

Water Monitor™ is an interactive, reusable, time-saving aid that helps nursing staff and patients monitor and manage fluid intake at the bedside.

Designed with clinical staff and the patient in mind, the simple system created by Founder and CEO of Water Monitor™, ex-registered nurse Heather Hocking empowers patients, their carers and staff to record accurate and real-time fluid intake information, saving time for busy clinicians and enabling proactive interventions and personalised treatment plans.

The tool may not only help reduce risk of pulmonary overload for the vulnerable cardiac patients but for others at risk of consequences of dehydration both in hospital and in the community.

Water Monitor™ supports better health outcomes for people with prescribed fluid restrictions and fluid goals and aims to reduce the likelihood of re-hospitalisation.

The venture is currently preparing for a pilot study with Central Coast Local Health District exploring efficacy and potential for the NSW Health system.

It is available for purchase at www.watermonitor.com.au



Building a Resilient Supply Chain – Efficiently!


As we experienced during covid we are vulnerable in times of epidemic. The risks and compliances associated in ensuring a quality and resilient supply chain are onerous if not complex. So much of this crucial part of our business operations is managed primitively if at all, while the majority is in siloed tools within our businesses. It is not efficient and therefore not managed well and costs \$Millions in our region alone.

Jonesci Alliance has teamed up with long-time associate 4links to bring a fully inclusive and advanced “SMARTPlatform” to the region designed for clusters such as the MedTech Industry to collaborate and grow without the laborious administration processes being faced – downstream and upstream in your supply chain.

Focussing on the 8 Key groups of challenges the SMART Platform delivers everything in one highly secure system – in a modular way so the user only pays for what they want. Our aim in bringing these hubs to a regional cluster is to aid in creating a sharper knife – that competitive edge for businesses in our region to build and to attract more to this region for everyone to benefit from.

With HMIC and its members already leading the way the efficiencies to be gained from this platform will further enable and strengthen the region with a resilience and the sovereign capabilities required driven by innovation, removing unnecessary roadblocks so we can focus on our strengths.

www.jonesci.com.au/scm or clive@jonesci.com.au for more details.



That's the Hunter Central Coast's HealthTech story so far. We invite you to join us. Make your future part of our future: a future where innovation in health & medtech in the Hunter Central Coast region contributes to Australia's competitiveness and a healthier world.

– Trevor John

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Acknowledgements

RDA Hunter acknowledges the financial and other support received from the Australian Government. We acknowledge the traditional custodians of this land on which we work, meet and live. We recognise and respect their continuing connection to the land, waters, sky and communities. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islanders.

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