

Regional Biomedical
Supply Chain
Development Project
Gold Coast
January 2020

Clinical Trial Unit at Griffith University
(Gold Coast campus)

Presentation Structure

1.0 Introduction

2.0 Stakeholder Engagement

3.0 Economic Analysis

4.0 Supply Chain Development

5.0 Conclusion

6.0 Considerations

A close-up photograph of a person wearing blue nitrile gloves adjusting a microscope. The person's hands are positioned on the eyepiece and the body of the microscope. The background is a blurred laboratory setting with various pieces of equipment. The overall image has a blue tint.

Introduction

Project Objectives

- To define the current activities and capability of the clinical trials sector on the Gold Coast
- To define the potential growth of the sector over the next ten years
- To identify supply chain opportunities that would unlock or catalyse the sector
- To enable the project process to be able to be used in other regions

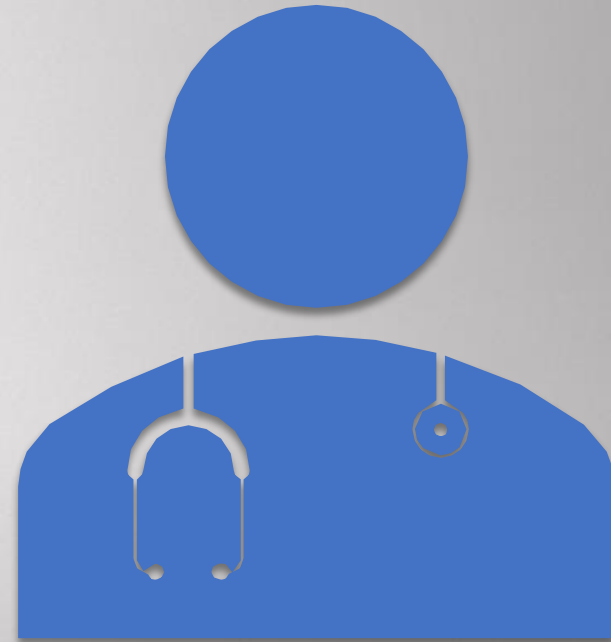
Project Partners

- Regional Development Australia Gold Coast (RDAGC)
- Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP)
- City of Gold Coast (CoGC)
- Gold Coast Health and Knowledge Precinct (GCHKP)

What are clinical trials?

“Research investigations in which people volunteer to test new treatments, interventions or tests as a means to prevent, detect, treat or manage various diseases or medical conditions.”

(National Health and Medical Research Council – a Federal Government Initiative)



Global Drivers

- Companies investing in innovation and research & development
- World population increase
- Ageing populations
- Increasing expectations of greater health outcomes
- Personalised healthcare
- Digital healthcare
- Tighter regulatory regime

Project Methodology

Project Stakeholder Engagement

Economic Analysis

Supply Chain Development



Growth of clinical trials in Australia

Projected to double in expenditure and employment in a ten-year period

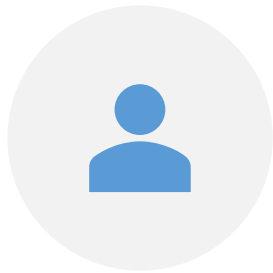
	2015	2025 Scenarios	
		Low Case	High Case
Expenditure (\$Billion)	1.095	2.080	2.530
Employment	6,900	12,900	15,600

Source: MTP Connect. Clinical Trials in Australia: The economic profile and competitive advantages of the sector. 2017

A man with short, curly brown hair and a slight smile is wearing a blue V-neck shirt. He is standing in front of a window with a dark frame and a grid pattern. The background is slightly blurred. The text "Stakeholder Engagement" is overlaid in white, with a vertical line to its left.

Stakeholder Engagement

Project Engagement Process



STAKEHOLDER
IDENTIFICATION



STAKEHOLDER ANALYSIS

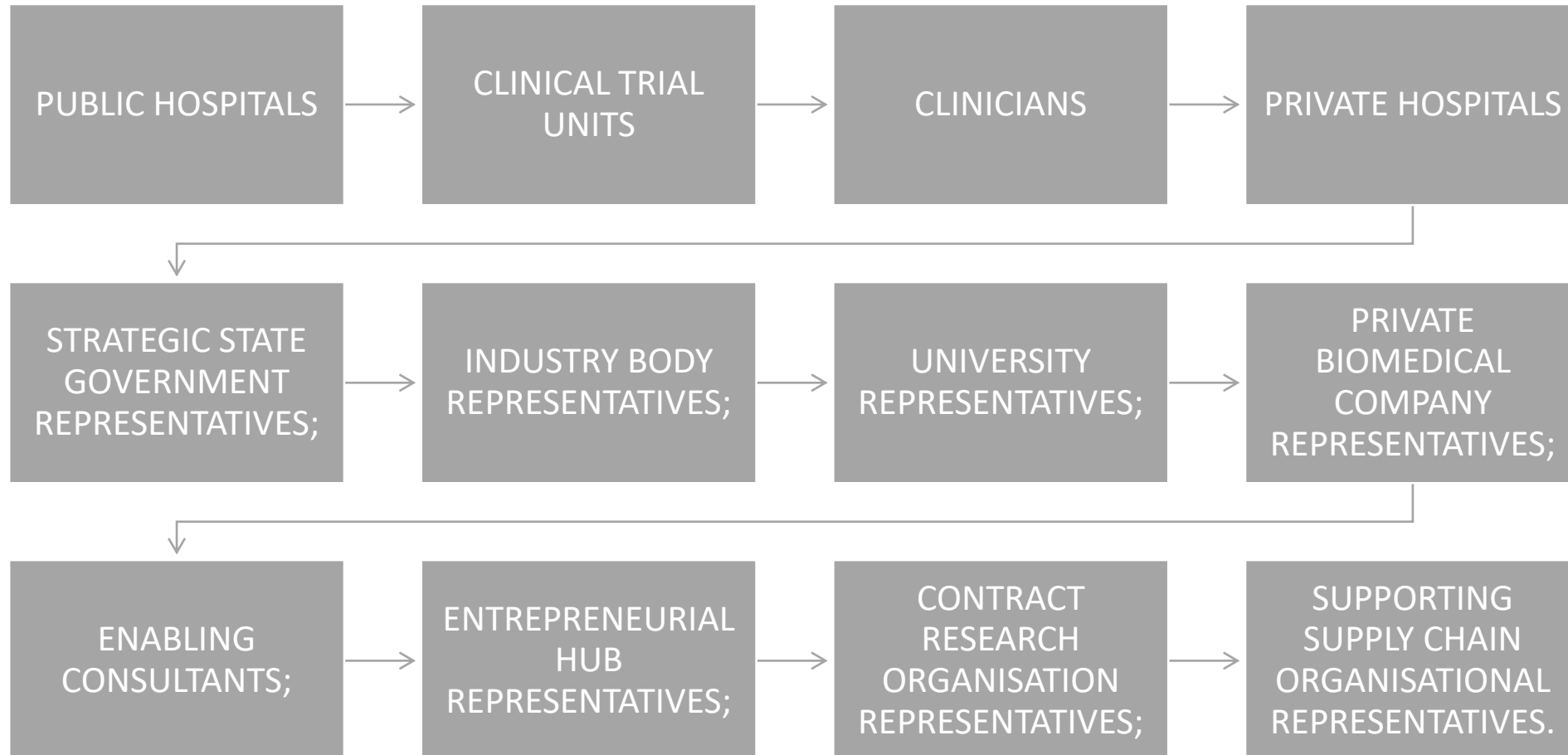


STAKEHOLDER
ENGAGEMENT PLAN

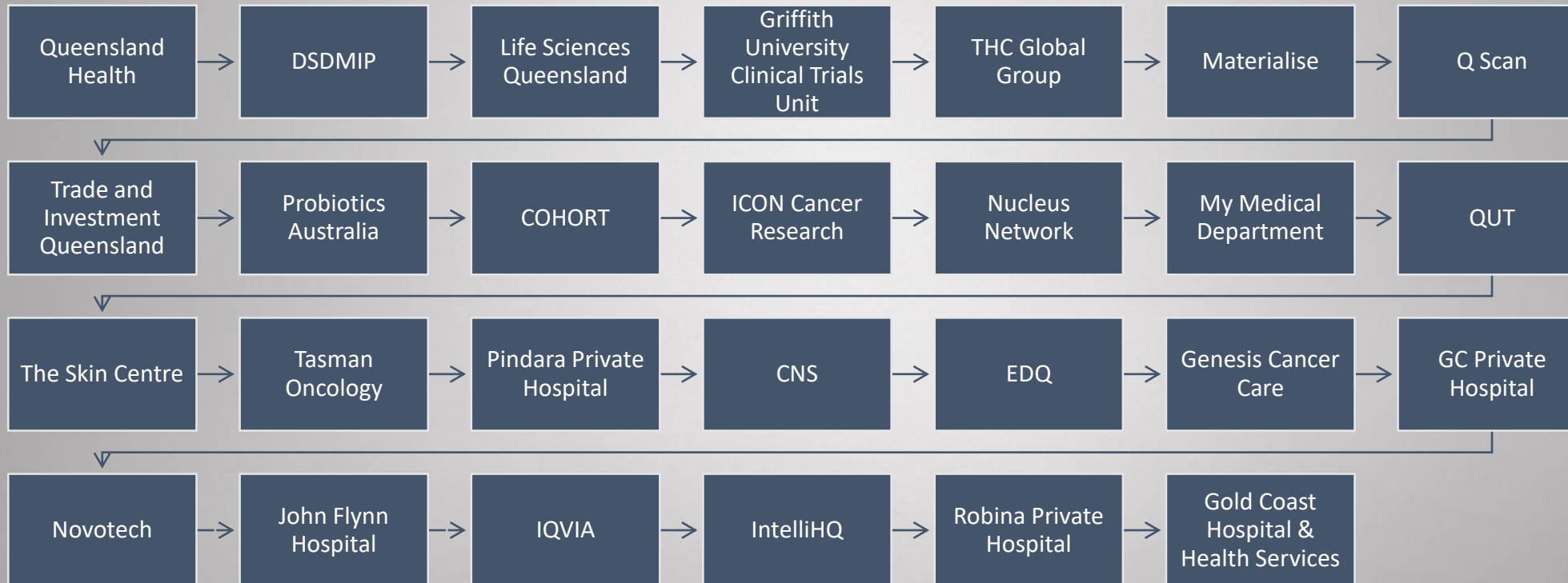


FACE TO FACE MEETINGS
& TELECONFERENCE

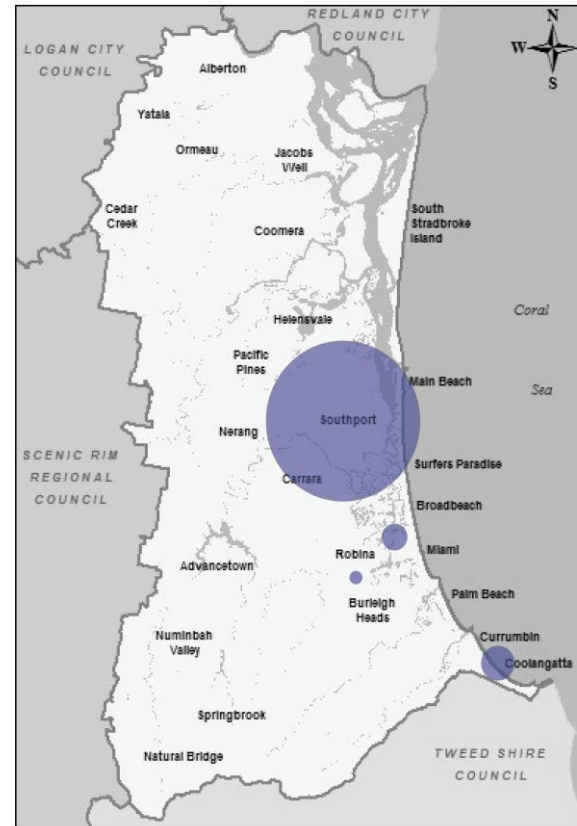
Project Stakeholders



Companies engaged



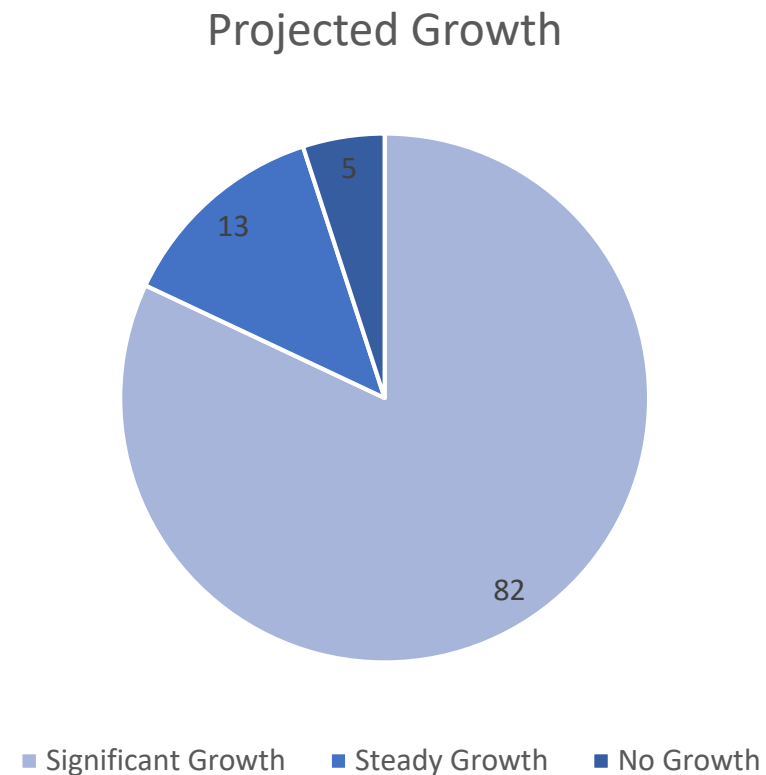
Where are clinical trials occurring on the Gold Coast



Note: 88% of the trials are being delivered in Southport either at the Gold Coast Health and Knowledge Precinct or within a short distance of the old hospital in Nerang Street, Southport.

Market sentiment

Of the stakeholders interviewed who have a direct involvement in clinical trial delivery 82% believed that they would see significant growth, 13% would see steady growth and 5% said they would remain the same.



Strengths

(as noted by stakeholders)

- Gold Coast Health and Knowledge Precinct
- World class research institutes
- Size of patient population
- Ageing patient population
- Ethnically diverse population
- Experienced and motivated clinicians
- Participant recruitment
- Hospital infrastructure (public and private)
- Easy to get around the city
- Oncology research
- Gold Coast lifestyle

Weaknesses

(as noted by stakeholders)

- Emerging reputation for clinical trials
- Collaboration between institutions
- Future need for experienced and skilled clinical trials staff
- Gap in regulatory knowledge support
- Relatively small but growing population
- No accredited material testing laboratory
- Minimal ancillary clinical trials businesses

Opportunities

(as noted by stakeholders)

- Market Gold Coast clinical trials sector capability
- Dedicated Phase I facility
- Gold Coast clinical trials governance structure and strategic planning
- Medical tourism
- Phase I GP Clinic
- More dedicated spaces for trials
- Export of knowledge and services to Asia Pacific region
- Talent attraction
- Telehealth/virtual health
- Wearables and apps
- Artificial intelligence

Constraints

(as noted by stakeholders)

- Lack of specialised laboratories
- High speed internet
- Rail links between Brisbane and airport

Engagement Outcomes Overview

Australia and Gold Coast well placed

Great clinician expertise

Co-location of complementary services

Ongoing infrastructure investment

City growth opportunity

Existing supply chain network

An aerial photograph of a university campus. In the foreground, there are several modern, multi-story buildings with glass facades and flat roofs. A large, green athletic field with a red running track is visible on the right side. The campus is surrounded by lush green trees. In the background, a dense urban area with a prominent city skyline is visible under a clear sky. The text "Economic Analysis" is overlaid in white, sans-serif font, with a vertical white line to its left.

Economic Analysis

Objectives

The objectives for the economic assessment included:

- Map the current Gold Coast clinical trials capabilities and capacity including the present size and structure of the industry and growth potential;
- Identify the economic relationships and linkages;
- Assess and identify the supply chain and associated gaps in the region to support the projected growth of the clinical trials industry;
- Develop the existing suppliers' capabilities, identifying new supply chain opportunities, emerging skills and workforce requirements and gaps, including skills, facilities and investment attraction opportunities, and
- Provide a benchmarking tool for other Queensland regions to utilise.



Economic Analysis Methodology

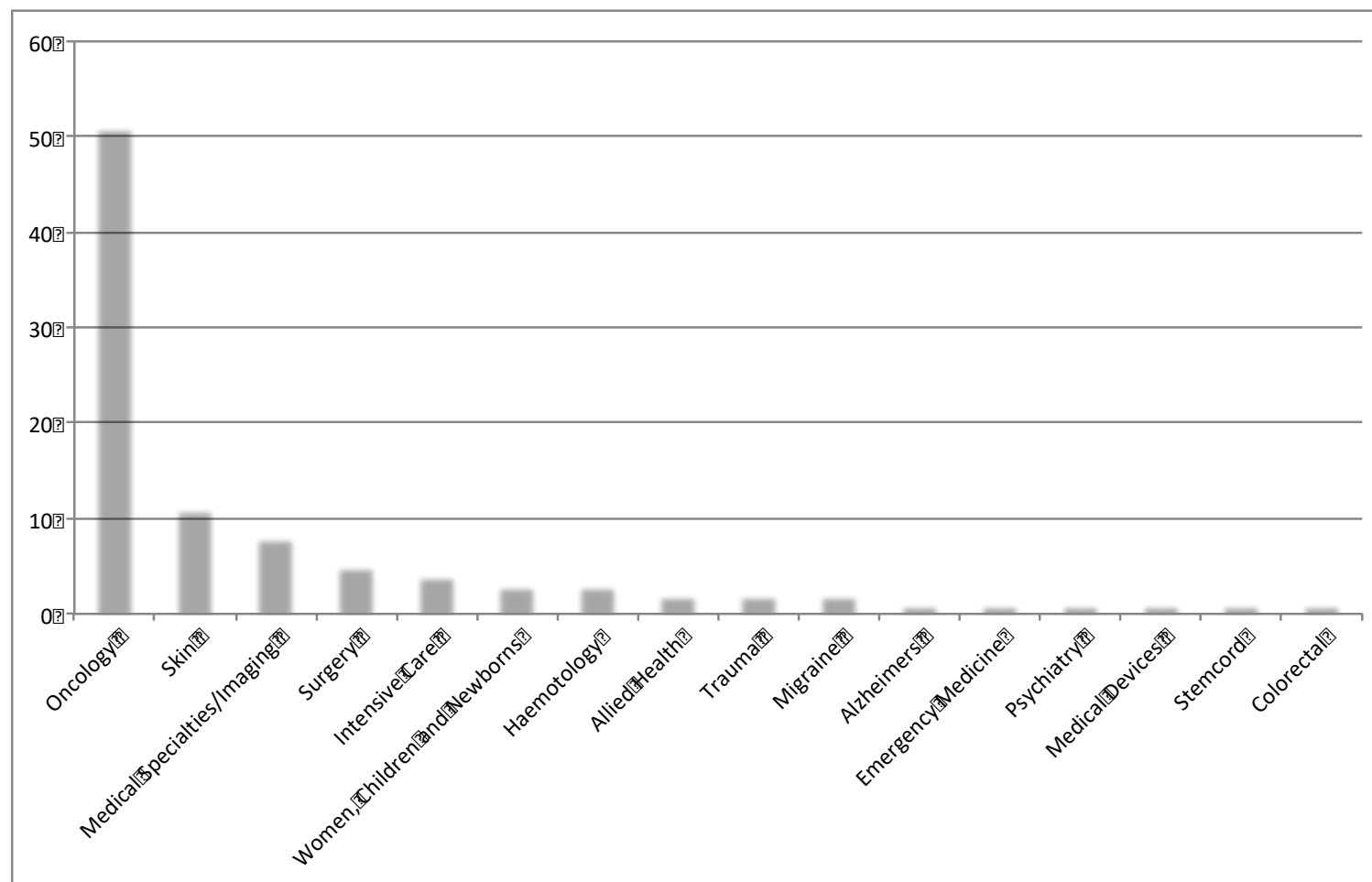
The consideration of the appropriate impact assessment tools were driven by:

- The focus of the project on Gold Coast City, Local Government Area;
- The requirement that the study should be able to be replicated in other Queensland regions, presumably the larger regions which have large hospitals and universities with the appropriate skills, courses and facilities; and
- The model needed to have reasonable specificity in terms of providing industry and employment classifications to the level that could identify where most of those involved in clinical trials were working.

id. economic impact model



Survey Results – Medical Field of Trials



Note: Analysis results from available stakeholder data

Trials
generate
economic
activity

Survey Results: Trials generate economic activity

Measure	2019	2029	Average annual Rate of growth
Number of trials	126	258	7%
<u>Value add Economic Contribution</u>			
Direct Gold Coast (\$M)	8.7	24.7	11%
Total Gold Coast (\$M)	11.7	33.1	11%
Total Queensland (\$M)	14.0	39.6	11%
Total Australia (\$M)	17.7	50.2	11%

Source: Economy i.d model for Gold Coast City for economic activity



Comparative
employment
growth

Comparative employment growth	Period	Average annual Rate of growth
Projected Clinical Trials	10 years 2019-2029	11%
Gold Coast Employment Total	5 years 2014-2019	4%
Gold Coast Education and Training	5 years 2014-2019	5%
Gold Coast Health Care	5 years 2014-2019	8%

Source: Economy i.d Gold Coast City Economic Profile for 2014-2019 employment

Assumed Revenue Impacts

For every \$10M in revenue from grants or contracts attracted for trials, the impacts are:

- An additional value-added contribution of \$8.9M to the Gold Coast economy;
- An output increase of \$15.1M for the Gold Coast economy;
- The flow on jobs created are high value indicating the importance of support activities for this sector, and
- 89 local jobs, of which the Gold Coast retains 84.7% of the jobs created in Queensland.

Economic Contribution Summary (1)

The main features of the medical clinical trials sector in Gold Coast City are that:

- It is an emerging sector that is rapidly growing;
- The demand drivers are well established and include ageing, population growth, increasing populations in sub-tropical and tropical areas, increased regulatory pressures, closer scrutiny of research findings and trials results and the need to diversify the trial population base;
- It does not take place in a vacuum, but is preceded by other stages not measured in this study including initial development, non-clinical refinement, clinical refinement and is for the successes followed by market authorisation, training and market adoption;
- It represents significant scientific investigation operating in a highly regulated environment;

Economic Contribution Summary (2)

- The direct jobs created are typically high value knowledge-based jobs that contribute substantially to the economy;
- As high-level science, trials activities are likely to have strong and positive flow-on effects;
- The industry basis and employment profile fit very well with aspirations of Federal, State and Local Government economic development strategies;
- Gold Coast operations are frequently part of national and international collaborations, with strategic functional linkages with global markets;
- Economic inflows and outputs are likely to be high;
- The state, national and international regulatory environments are driving a specialised supporting sub sector in the legal, business, financial and contracting areas; and
- Physical, intellectual and financial factors of production will drive locational decisions.



Supply Chain Development

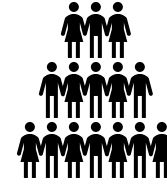
Clinical Trial Supply Chain (City level)

- trial sites
- participants
- sponsors and therapeutic products
- clinicians and clinical trial staff
- support services
- bioanalytical services
- logistics

Trial Sites

Gold Coast	Opportunity
<ul style="list-style-type: none">• Existing capability with public and private hospitals, clinics and clinical trial units.• The colocation of trial sites at the Gold Coast Health and Knowledge Precinct is a key strength.	<ul style="list-style-type: none">• Phase I Facility or Phase I GP Clinic.

Participants



Gold Coast	Opportunity
<ul style="list-style-type: none">• Large and growing population.• Ageing population.• Diverse population.	<ul style="list-style-type: none">• Phase I population.• Database and categorisation.• Increase in overall participation.

Sponsors and therapeutic products



Gold Coast	Opportunity
<ul style="list-style-type: none">• Gold Coast conducts trials for local, national and international sponsors.• Developing new therapeutic products.	<ul style="list-style-type: none">• Regional governance and branding.• Promote competitive advantage of oncology, additive manufacturing, Artificial Intelligence, wearables and robotics.

Clinicians and clinical trials staff



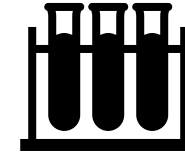
Gold Coast	Opportunity
<ul style="list-style-type: none">• Highly regarded and experienced clinicians.• Movement between sites if trials conclude.• Current clinician and clinical trials staff availability meets existing capacity.	<ul style="list-style-type: none">• Increasing Clinical Practice training.• Develop workforce capabilities:<ul style="list-style-type: none">○ Investigators○ Clinical Trial Coordinators○ Project Managers○ Quality Assurance Manage○ Data Managers○ Clinical Trial Nurses• Greater integration and collaboration between trial sites.

Support Services



Gold Coast	Opportunity
<ul style="list-style-type: none">• Quality of existing allied health and other support services capabilities.	<ul style="list-style-type: none">• Ensure allied health capabilities meet projected growth.• Growth potential in regulatory, legal, accounting, ethics and clinical trial development expertise.

Bioanalytical Services

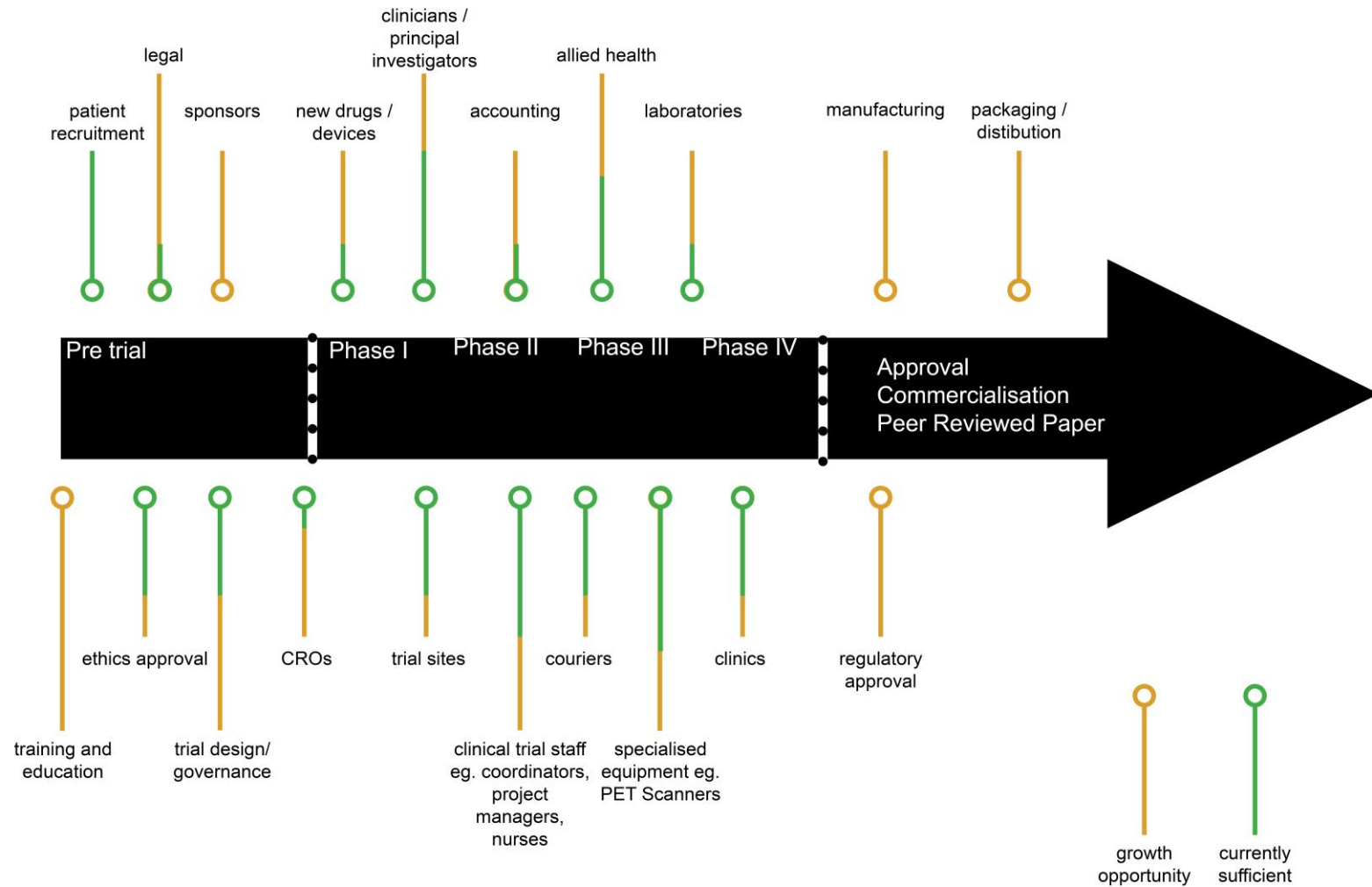


Gold Coast	Opportunity
<ul style="list-style-type: none">• Basic bioanalytical services provided in hospital, clinical trial units and clinics.	<ul style="list-style-type: none">• A long-term strategy to attract bioanalytical service providers to support more complex requirements and emerging industries.• Attract and develop bioanalytical workforce.

Logistics

Gold Coast	Opportunity
<ul style="list-style-type: none">• Strong transport links to clinical trial unit facilities.• High quality transport (e.g. light rail) to a number of facilities.	<ul style="list-style-type: none">• Infrastructure associated with airport, transport and communications.• A strategy to attract clinical trial logistics companies.• A capable freight logistics network.

Gold Coast Supply Chain Growth Opportunity





Conclusion

Conclusion



- **The Gold Coast is the largest regional city in the country for the delivery of clinical trials**
- The sector is expected to grow significantly on the Gold Coast
- This is an emerging sector that is growing quickly and has significant value
- Employment in the sector is expected to more than double over the next ten years and create high value knowledge jobs
- The Gold Coast region has the opportunity to develop the supply chain to meet projected growth



HEALTH AND KNOWLEDGE PRECINCT
GOLDCOAST.

Department of State Development,
Manufacturing, Infrastructure
and Planning

CITY OF
GOLDCOAST.



Giles Consulting

INTERNATIONAL



Business and Economics

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