

2024-2028

**RPA INSTITUTE OF
ACADEMIC SURGERY
STRATEGIC PLAN**



RPA Institute of Academic Surgery

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Table of Contents



Foreword 4

Executive Summary 5

Strategic Planning Process 6

Our vision, mission, values and key principles 7

Our values 7

Our key principles 8

About the Institute of Academic Surgery 9-10

Background 9-10

IAS Advisory Council 9-10

Staffing 9-10

Core Portfolios 11

- Innovation, Value and Thought 11-12
- Surgical research 13
- Surgical Education 13-14
- Strategic Partnerships 15

Forecasted Surgical Activity for 2028 16

Our Strategy 17

- Our goal 17
- Our objectives 17
- Interventions and activities. 18-23

Key Performance Indicators 24

Conclusion 24

FOREWORD

The Royal Prince Alfred (RPA) Institute of Academic Surgery (IAS) has built a reputation as a leading hub for surgical research and education both nationally and internationally. Working with surgeons, nursing, allied health and other surgically focused staff at RPA, as well as Sydney University and other key partners, the IAS conducts research and provides education and services that are multidisciplinary and pioneering.

The growth of the team has been exponential over the last five years. Our collective dedication and innovative spirit drives the high-quality outputs of the IAS training and research initiatives. These initiatives are operated under comprehensive research frameworks which allows the Institute to efficiently implement processes and track progress. These have been effectively executed with programs such as the Advanced GI Surgical Program (AGISP), the Robotic Assisted Surgery Program and Surgical Innovation.

We continue to support clinicians at all stages of their careers which is immensely fulfilling and mutually beneficial. Other consultants and senior staff affiliated with the IAS also support up-and-coming surgeons and clinicians, assisting them through their academic and clinical careers. Collectively we have published leading research papers addressing innovative surgical ideas, pre and postoperative best care and practice and effective processes to establishing and maintaining surgical programs.



Professor Michael Solomon
IAS Co-Chair

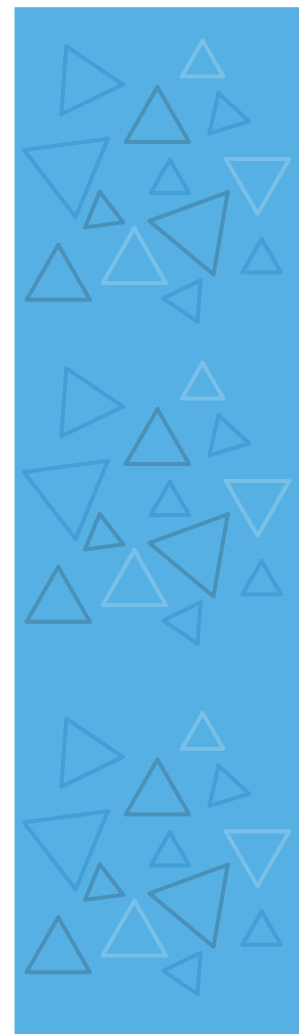


Professor Paul Bannon
IAS Co-Chair

Within Sydney Local Health District, we are proud to be part of a thriving environment of other established and up-and-coming Institutes. We are excited by the opportunity to share the IAS' learnings over the last ten years to strengthen surgical research and education across the state and Australia.

The team is confident that the momentum we have established since the IAS' formation in 2014 will continue to flourish. We are excited by the next five years and are confident that technological advancements in surgery will progress the industry quickly.

Finally, the continued support the IAS receives from the District, the University of Sydney and all RPA departments has been essential to our team's success. The resources and expertise provided allows us to focus on delivering services that ultimately improve patient outcomes.



Executive Summary

Since establishment in 2014, the IAS's goal has been to become the hub for surgical research and education at RPA. As the first hospital-based Institute of its kind in Australia, the IAS has since positioned itself as an instrumental part in supporting RPA clinicians through their surgically focused careers. Together with the University of Sydney and other major partners, the services provided at IAS have always been patient- and clinician-centric with the aim to enhance the quality and depth of surgery in Australia.

Since the previous Strategic Plan (2019-2023), the IAS has had to navigate the significant challenges presented by the COVID-19 pandemic and pivot plans to deliver on the core mission of supporting research and education of clinical teams. With innovation at our core, the staff seamlessly adjusted to the new ways of working and achieved significant results.

Between the years of 2019 – 2023, the IAS has accomplished the following results:

- Maintained a multi-specialty Surgical Robotics Program within a comprehensive research framework
- Hosted two Surgical Robotics and Innovation Summits, including one virtual summit
- Commenced educational webinars, producing a total of 25
- Delivered 754 training courses in IAS facilities to 6,334 internal and external participants
- Delivered 226 courses at the Surgical Robotics Training Institute with 296 attendees
- Performed the 1000th pelvic exenteration surgery and 400th peritoneal malignancy surgery

- Published over 1000 scientific articles across the 16 RPA surgical departments
- Established the Retroperitoneal Sarcoma Program under the Advanced GI Surgical Program (AGISP)
- Supported 11 nurses graduate from the AGISP
- Establish the inaugural Spikning event, celebrating clinicians who have graduated from higher degrees in surgical fields
- Partnered with Vantari to establish a virtual reality training program for RPA clinicians, including the development of two customised modules focused on surgical airways and tracheostomies
- Supervised and mentor over 200 higher degree research students
- Supported 12 0.5 FTE surgical academics in a novel appointment model in partnership with the University of Sydney
- Engaged with our local community, including several interactive education sessions for local primary and secondary school students
- Established the inaugural Director Allied Health Research and Education position to support allied health staff in research and education
- Expanded the Institute's online presence, including establishing a LinkedIn page
- This Strategic Plan (2024-2028) is anchored in the Institute's core business portfolios:
 - Innovation, value and thought
 - Surgical research
 - Surgical education
 - Strategic partnerships

Specific targets for the next five years have been developed in line with the Institute's vision, goals and key objectives of the Institute:

- Advancing academic career pathways through the development of structured programs, the provision of mentorship and guidance and the facilitation of change.
- Encouraging public recognition that academic surgical centres provide the highest quality of patient care
- Strengthening the capacity of surgical departments to undertake research
- Delivery and coordination of quality post-graduate surgical education and training, including post-graduate surgical education research
- Enhancing collaborations and partnerships to further support surgical research and education
- Further develop and promote the IAS as a centre of excellence

The IAS is committed to staying at the forefront of industry changes within surgery, and this Strategic Plan (2024-2028) has been created in line with both cultural and technological advances occurring in the industry. To ensure the IAS is meeting its objectives the IAS Advisory Committee will monitor performance periodically.



Strategic Planning Process

The Strategic Plan (2024-2028) has been developed in consultation with the IAS Executive, Sydney Local Health District Planning Unit and District Executives. The IAS Executive met on multiple occasions to discuss the previous strategic plan and discuss the targets for the next five years.

The team agreed all existing interventions from the previous plan were still critical to the core functions and role of the IAS, however needed to incorporate all surgically related disciplines and staff.

This strategic plan is consistent with the latest RPA Strategic Plan, Sydney Local Health District Strategic Plan and the Strategic Directions of NSW Health, which all seek to provide world class clinical care and the development of truly integrated care.

The outcomes of these consultations have been acknowledged and are integrated into this plan.



OUR VISION, MISSION, VALUES AND PRINCIPLES

Our Vision	Our Mission	Our Goal Over the next five-year period
To be recognised as a world-leading centre for academic surgery dedicated to discovery, scholarship and innovation that drives excellence in patient care and improves the outcomes of surgical patients.	To be the primary hub of academic surgery at RPA by supporting surgical departments and surgically focused clinicians to undertake research, education, and innovation. Our goal over the five-year period:	To increase surgical research, education, and training across all surgically focused disciplines at RPA and lead Australia in surgical innovation.

Our Values

The IAS works in line with the Sydney Local Health District's Core Values including:

CORE VALUES

Collaboration

We work in collaboration with a wide range of departments and staff, other hospitals, universities, societies, and corporate partners with the overall goal to better surgical practice and care through surgical research and education.

Openess

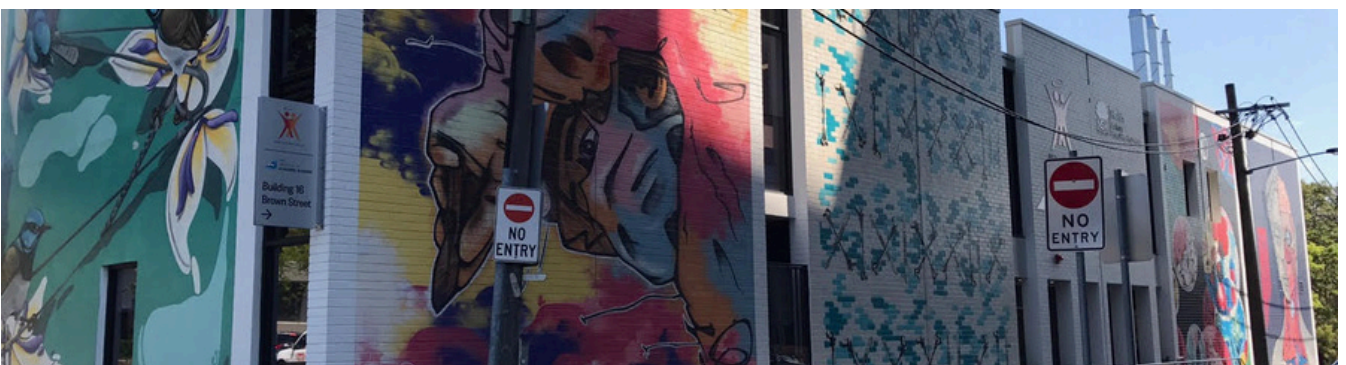
We pride ourselves on taking an inclusive approach with all staff and students encouraged to be involved with the IAS.

Respect

We respect and appreciate the varying contribution staff and students make to the IAS.
We respect the privacy and rights of all patients and participants involved in research and education at the IAS.

Empowerment

We seek to empower our staff, students, community, patients, and partners by valuing their feedback, opinions, and views.



Our Key Principles

This strategic plan is grounded in the eight key principles outlined below that are fundamental in guiding the success and direction of the IAS.

ACADEMIC SURGICAL DEPARTMENTS

Supported through a hub ('the Institute') and spoke ('the surgical departments') model

SUPPORT

Providing an inclusive approach to support and encourage further surgical research and education

PATIENT CARE

Providing equitable care to patients with research embedded as a matter of routine

PERFORMANCE MEASURES

Enhancing the profile of performance measures for research and education

FOCUS

Placing research and education at the centre of each surgical department's mission

TEAM APPROACH

Recognising that surgeons do not act alone, and that all involved in patient care play a vital role

COLLABORATION

Strengthening surgical research and education through collaboration across all disciplines

ENHANCED PROFILE

Improving the profile and academic standing of surgery at RPA



About the Institute of Academic Surgery

Background

RPA has a strong affiliation with the University of Sydney and is renowned for its tertiary and quaternary education and high-quality education and leadership in healthcare. RPA currently delivers surgical care to 45.3% of all adult patient admissions, providing advanced surgical procedures to some of Australia's most complex surgical patients. This surgical excellence has made RPA an important site in various national and international multi-site studies as well as facilitating a range of research developments.

Relocating to its new home in mid-2016, the physical location of the IAS has been imperative to ensuring full utilisation of the research and training facilities with close proximity to clinical services, allowing clinical staff easier access without compromising hospital staffing. The opportunity to build the facility came from generous philanthropic benefactors; the Paradise and Donnelly families as well as support from Sydney Local Health District and NSW Government.

The Surgical and Robotic Training Institute, established in 2017, is also located at RPA and in prime location for staff surgical training.

The IAS operates within a vibrant ecosystem of other District Institutes such as the RPA Institute for Academic Medicine, RPA Green Light Institute for Emergency Care, Sydney Institute for Women, Children and their Families and ANZAC Research Institute at Concord Hospital. The District is committed to driving a culture that identifies research and its implementation as "everybody's business", informed by evidence and the consumer experience, rapid translation of research to practice and collaboration.

The IAS also has a strong affiliation with other surgical organisations, in particular our affiliate institutes; Surgical Outcomes Research Centre (SOuRCe) which reports to IAS as well as the Melanoma Institute Australia and The Baird Institute. The IAS has also worked closely on projects with Agency for Clinical Innovation (Gastrostomy Training Program), iCare, Health Education training Institute (HETI) and Clinical Excellence Commission (CEC).

IAS Advisory Council

Established within Sydney Local Health District and reporting to the Chief Executive, the IAS is supported by an Advisory Council with representation from the IAS, RPA, the District, the University of Sydney, existing RPA research institutes and centres including The Baird Institute, SOuRCe, Melanoma Institute Australia, and Chris O'Brien Lifehouse.

With representation from senior stakeholders across the campus, the Council meets bi-annually and is responsible for ensuring the work of the IAS is aligned with its objective and when required, to provide feedback and make recommendations to strengthen and guide the development of that work.

Council meetings offer the executive members an opportunity to present current IAS programs and activities being coordinated across education, training, and research and to seek their feedback and advice.

Staffing

Since 2019, the IAS has grown and adapted to the changing needs of RPA and the District. The leadership team consists of two Co-Chairs, a Deputy Chair, and a Director. The Director's primary focus is to oversee and manage the operational aspects of the Institute and provide strategic oversight. The Co-Chairs, Deputy Chair and Director report to the RPA General Manager, District Executive Director of Operations and the District Chief Executive.

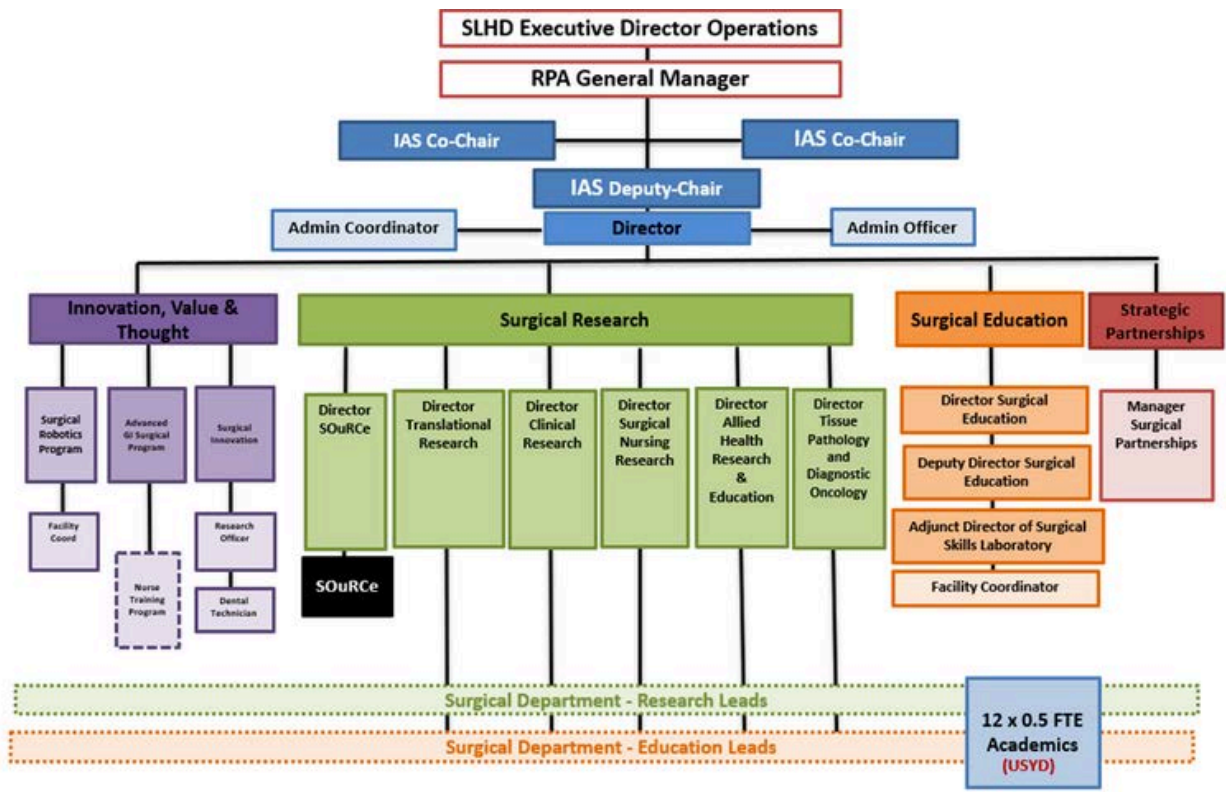
The surgical research and education portfolios are supported by nine directors, including the Director of Translational Research, Director of Clinical Research, Director of Surgical Nursing Research, Director of Allied Health Research and Education, Director of Surgical Education, Deputy Director Surgical Education, Director Tissue Pathology and Diagnostic Oncology, Adjunct Director of Surgical Skills Lab, and the Director of the Surgical Outcomes Research Centre (SOuRCe).

Operational management of the Institute is supported by the Facility Coordinator, the RPA Surgical Program Admin Coordinator, and the IAS Administrative Officer. Marketing and communications are managed by the Marketing and Communications Manager.

All operational nursing surgical services within the Advanced GI Surgical Program (AGISP) are overseen by the RPA AGISP Nurse Manager.

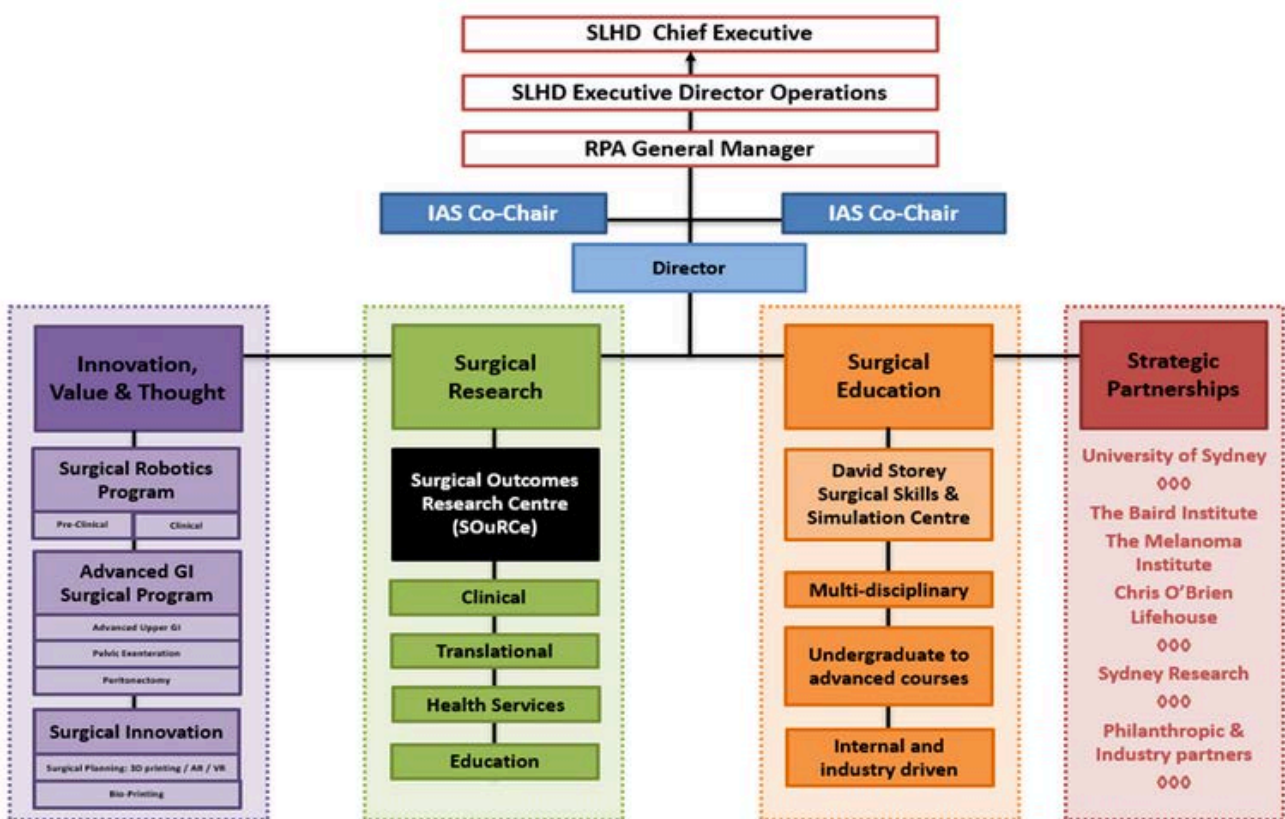
The Surgical Innovation program has a dedicated Research Manager and 0.6 FTE Dental Technician. The Surgical Robotics Program is managed by the IAS. The Surgical Robotics Training Institute (SRTI) houses robotic training. The SRTI has a Facility Coordinator and Technical Assistant, with overall management reporting to the IAS Director. IAS also appoints a Robotics Research Fellow in partnership with the RPA and Concord Repatriation General Hospital urology departments, recruited to every second year.

The IAS has utilised various funding sources to support the appointment of research officers and academics, including 12 surgeons with 0.5 FTE academic appointments at the University of Sydney and research and administrative staff managed at SOuRCe. The IAS also continues to have formal links with research and education leads within each RPA surgical department.



Core Portfolio

Fig. 2 IAS core portfolios which encapsulate all aspects of day-to-day business.



Innovation, Value and Thought

The Innovation, Value and Thought portfolio continues to evolve and adapt to current surgical environments, and encompasses all new technologies, community engagement and unique programs within the IAS.

The portfolio currently includes innovative technologies such as 3D printing and bioprinting, virtual reality, augmented reality, artificial intelligence, robotic-assisted surgery, and the Advanced GI Surgical Program. The IAS has also engaged with local schools to support Women in STEMM excursions and continues to work with Arterie, Sydney Local Health District's Arts in Health Program, on various projects and has supported global health initiatives.



Robotic Assisted Surgery (RAS)

- Continued integration of the da Vinci Xi surgical robot and the Stryker MAKO robot into surgical practice under a research framework that contributes to the growing evidence within this field. There are five surgical specialities, including cardiothoracic, colorectal, benign gynaecology, upper gastrointestinal (UGI) and urology using the da Vinci Xi surgical robot; with orthopaedics using Stryker MAKO robot. There have been 1610 RAS procedures performed and 55 peer-reviewed articles published since the inception of the program.
- The Surgical Robotics and Innovation Summit (SRIS), a biennial conference hosted by the IAS and supported by the District and industry partners, was held in 2022 after a hiatus in 2020 due to the COVID-19 pandemic. SRIS hosted 86 speakers, including 10 international surgeons, and an attendance of approximately 500 delegates.
- The IAS in conjunction with the District, the University of Sydney and industry partners opened the first and only certified wet-lab robotic training facility in the Southern Hemisphere.

Advanced Gastrointestinal Surgical Program (AGISP)

- The Pelvic Exenteration team achieved 1000 case in July 2022 which marked the largest number of cases performed by a single institution worldwide.
- RPA's peritoneal malignancy team performed their 400th case in April 2023 and the program continues to grow and perform on par with other international centres.
- The advanced Upper Gastrointestinal (GI) malignancy program reached a significant milestone of over 1000 resections.
- The retroperitoneal sarcoma program was established in November 2020 in collaboration with Chris O'Brien Lifecare to create a centralised treatment pathway for patients and to facilitate a research partnership. Since inception, the team have performed 100 surgical procedures which is an admirable achievement.
- The Advanced GI Surgical Nursing Program has seen 11 nurses graduate. The 2-year program incorporates clinical rotations, protected teaching time and the completion of a Graduate Certificate within a specialty area of advanced GI.
- Coordinated and delivered multiple AGISP surgical specialty education days, including RPA's Peritoneal Malignancy Education Days in 2019 and 2023.
- Presented at hospital-wide, District-level, national, and international conferences, sharing expertise and advancing clinical knowledge.
- Celebration for 100 Pelvic & Retroperitoneal Sarcoma surgery cases in July 2023
- The AGISP research program, overseen by SOuRCe, has achieved significant results with 128 publications published and 25 graduated HDR students across the four surgical specialities.

Surgical Innovation

- The Surgical Innovation Research Manager has assisted with the planning of over 20 surgical cases and printed over 100 3D printed models for surgical planning and patient education.
- Integration of the Beyond Science program in 2021 to train innovators in interconnectivity, and the development of a statewide innovation network to increase collaboration opportunities between scientists, clinicians and policy makers.
- Secured \$50,000 in funding through The Pitch, the District's Innovation Challenge, for COOL Helmets for Happy Heads, a research project with RPA Orthotics department to design and manufacture new types of helmets for patients who require post-operative head protection for craniectomy, using artificial intelligence and state-of-the-art 3D printing.
- Partnered with Vantari VR, a Sydney based VR startup, in 2022 to implement a hospital-wide rollout of their virtual reality (VR) technology and introduced VR and Augmented Reality as a new and interactive form of surgical education. Clinicians received hands-on training in complex surgical procedures with the implementation of two pilot modules, 'Surgical Airways' and 'Tracheostomy.'
- Collaboration with Chris O'Brien Lifecare in 2022 through biofabrication to 3D print ear cartilage and help patients with middle ear diseases and trialling the technology and surgical technique for implanting 3D printed human ossicles.



Surgical Research

The IAS supports all types of research including translational, clinical, health services and educational research. The IAS has been instrumental in supporting surgeons, medical, nursing, and allied health staff in undertaking higher-degree research in their area of interest.

To date, there have been 12 0.5 FTE surgical academics appointed and funded to undertake research and education within their surgical specialty. The IAS has also been able to support an ongoing Robotics Research Fellowship, encouraging early career surgeons to be involved with research within the robotic surgery program.

Portfolio Highlights

- Published 1581 journal articles between 2019 and 2023, with the number of publications increasing over the three-year period. In 2023 alone a total of \$12.7 million in grants were awarded to RPA surgical departments to support their research.
- As of December 2023, the IAS has supervised over 100 higher-research degree (HRD) students and produced over 500 research publications.
- 59 redcap databases developed across a number of surgical departments to support research.
- The IAS has also been instrumental in raising and utilising specific funds for surgical departments to appoint 4 dedicated research officers to assist with the coordination of studies and trials.



Surgical Education

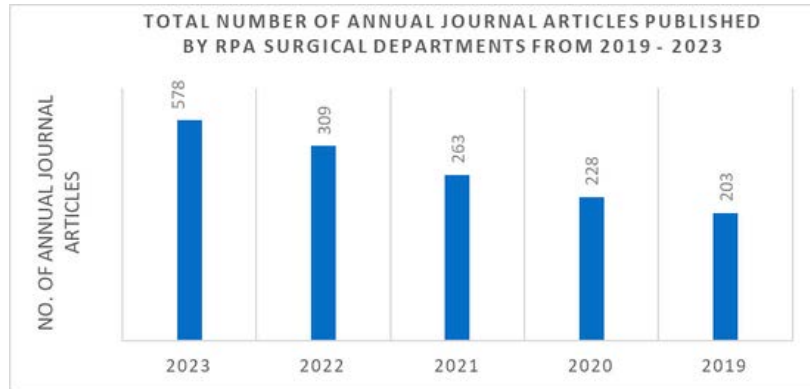
Medical and surgical training is ever evolving and adapting. The surgical training pathway is long, with students sourcing education from multiple providers along the way, all of which deliver different levels and focus areas of surgical education and training. These organisations include universities and associated clinical schools, hospitals, surgical colleges, and societies.

The IAS has worked with these organisations to establish the best way to provide surgical education and training without overlapping on existing programs as well as working with RPA surgical departments to accommodate specific teaching and training programs for their staff.

Since 2016, the IAS standalone facility on the RPA Campus has offered continuing education and training. The David Storey Surgical Training Centre includes a surgical skills laboratory and simulated operating theatre, and the staff meeting rooms provide space for educational sessions and meetings. These facilities are used for basic to advanced training courses for medical staff, nurses, allied health, and medical students.

Over the last five years, the IAS facility has run 754 courses and trained 6334 participants. The majority of courses delivered have trained District staff, and provided at no cost to participants or departments involved.

Figure 3. Number of annual journal articles published



The IAS has developed and implemented various research and education programs at RPA including;

- Ongoing research and education resources across each surgical department and surgically related discipline
- IAS Research and Innovations Group (RIG) targeting nursing and allied health staff
- The Allied Health and Nursing Research Skills and Mentoring Program
- Surgical Department Think Tanks
- Robotic Research Program
- Advanced GI Surgical Program, including a research component in the AGISP Nurse Training Program
- Clinical Nurse Consultant research program for all surgical nursing staff at RPA

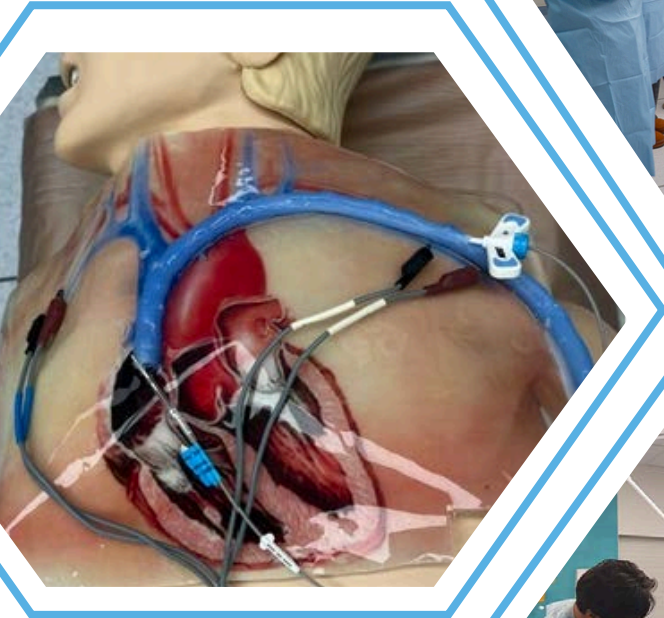
The IAS has also had great support from industry through funding or equipment use, with a number using the facility regularly.

Training and education programs for surgical trainees are complex and involves a variety of partnerships, and there are continuing challenges engaging staff and departments to develop their education and training programs. The RPA Surgical and Robotics Training Institute (RTI) is governed by the IAS and is the only certified da Vinci robotic training facility in the southern hemisphere. Opening in May 2017, it is a collaboration between industry partners Intuitive Surgical and Device Technologies, the University of Sydney, RPA, IAS and the District.

Since 2019, the RTI has provided over 226 courses and trained over 296 participants. The RTI provides wet-lab robotic training for surgeons, advanced robotic surgery training courses and surgical nursing training courses. The facility houses the da Vinci Si and the da Vinci Xi robots.

Portfolio Highlights

- Facilitated 754 surgical training courses within the IAS facilities;
- Trained 6334 participants since the facility opened in May 2016;
- Between 2019 and 2023 the RTI trained 327 surgeons and 103 fellows, including 38 advanced training courses and 226 standard courses;
- Developed suitable models for laparoscopic, suturing and abdominal surgical training;
- Provided a permanent space for the University of Sydney Central Clinical School and facilitated academic and skills teaching sessions for over 200 students in a year;
- Worked with 22 RPA departments to deliver sustainable and profitable training courses for internal and external attendees including ICU, ED, operating theatres, plastics, breast surgery, ENT, general surgery, midwifery and neonatal ICU.



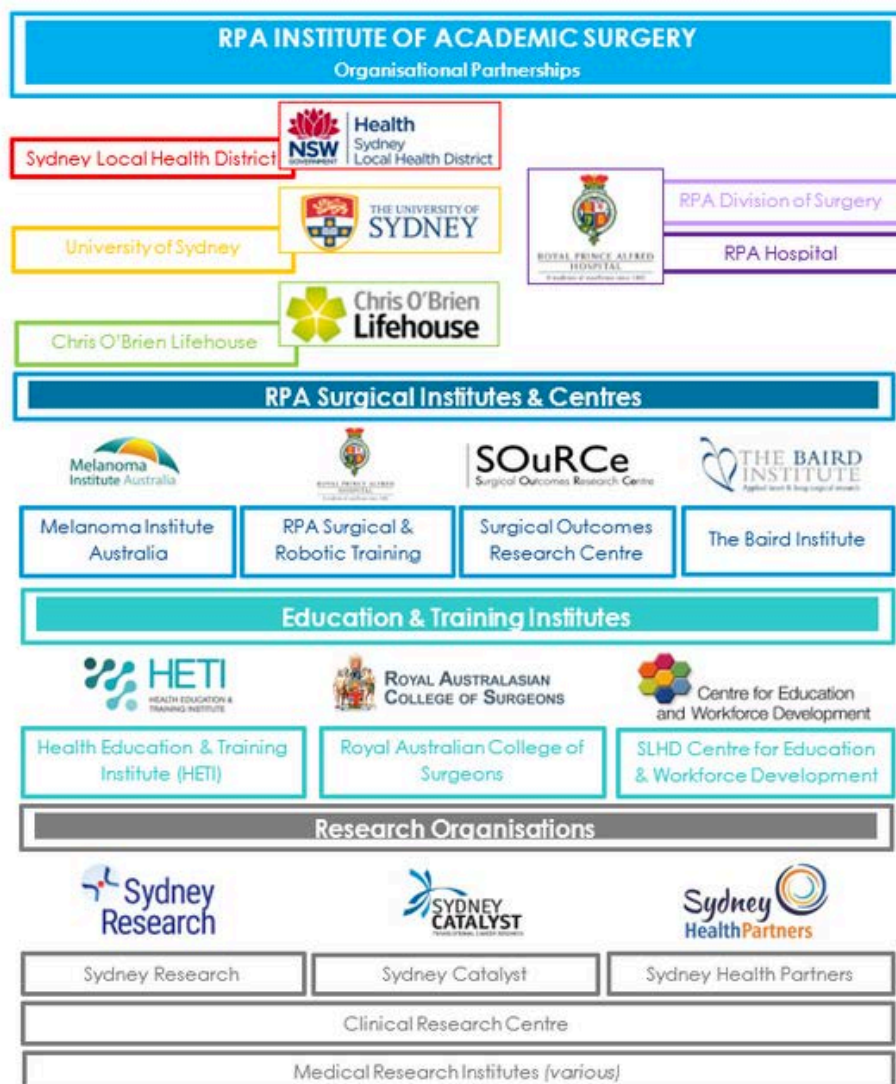
Strategic Partnerships

The IAS works in close partnership with a significant number of organisations including not-for-profit organisations, surgical device companies and government organisations both health and non-health based. The IAS prides itself on being inclusive to anyone interested in surgical education and research.

- Medical Students
- Junior Medical Officers
- Surgical Registrars
- Nursing
- Allied Health
- Hospital Administration
- Industry partners
- Surgical associations and societies
- Arts Community
- Philanthropic donors
- Local schools

Strategic partnerships have been crucial for the ongoing development and running of surgical courses and training. The IAS collaborates with industry to provide training courses for staff as well using the facilities for training on surgical consumables and devices. The IAS has built on existing relationships with industry partners who have funded surgical courses, research projects and conferences. Over \$250,000 has been received from industry partners in the first five years. Further collaboration with industry will be a high priority for the IAS moving forward to ensure we have ongoing financial support for our facility. The IAS will also be looking to increase philanthropic donations to support surgical research and education activities.

The IAS works in close partnership with a significant number of existing organisations and operates within a spirit of teamwork, respect, and innovation.



Forecasted Surgical Activity for 2028

Sydney Local Health District is adapting in the face of new technologies, population changes, and economic challenges. In the next five years, the IAS will play an important role in addressing the increase in demand for surgical services in the District and will be well placed to be a leading research hub and key driver for surgical innovation in the state.

RPA is currently undergoing a \$940 million redevelopment project, supported by the NSW Government. It will be the most significant investment in RPA history and will see enhanced Emergency Department and Intensive Care Units, increased interventional and imaging services, and state-of-the-art operating theatres. These upgraded facilities will be an opportunity for the IAS to expand research capabilities, giving staff more possibilities to engage with the latest technology and surgical equipment.

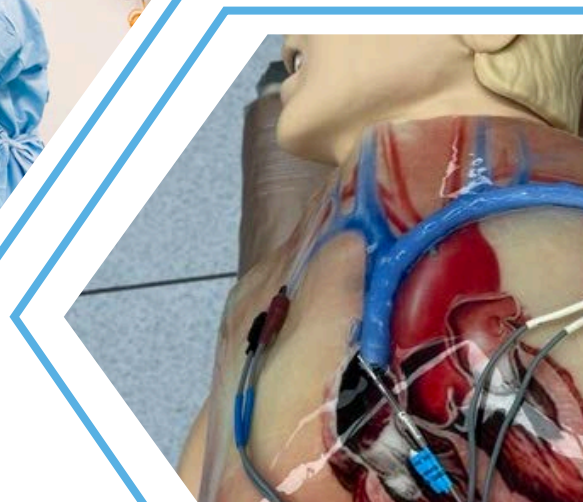
The development of the Sydney Biomedical Accelerator, a partnership between the District and the University of Sydney and the NSW Government, will bring together researchers, academics, and industry to address the world's complex health challenges. With completion set for 2027, the new facility will create partnerships and opportunities for the IAS to collaborate with other researchers, and to facilitate changes to health care delivery in all surgical specialties.

NSW has an ageing population. The NSW Government forecasts that by 2031 there will be 1 in 4 people aged over 60, with guiding principles from the Ageing Well in NSW strategy outlined to help people remain healthy and independent for as long as possible. Access to services and supports will be key, and this increase will correlate heavily with the potential number of surgeries forecasted in the future.

Data from the NSW Bureau of Health Information also shows a rising number of elective surgeries performed in public hospitals, particularly since the health response to the COVID-19 pandemic saw non-urgent elective surgery suspended from April 2020 to March 2022. A partnership with the private hospital sector under the National Partnership Agreement has continued, with elective surgeries contracted to private hospitals, increasing the surgical activity.

The IAS will also be a key support for navigating cost effective surgical services for older patients, as well as ensuring research and education is embedded in all surgical practice. The IAS is well placed to ensure there is strong communication and understanding of the University of Sydney's plans for medical students; including the MD program and other post-graduate programs to ensure a valuable contribution to student's education and training.

The IAS will also be required to adapt surgical training and education to ensure staff are competent in new techniques and equipment, and to ensure further research is undertaken on emerging surgical procedures and addressing new challenges.



Our Strategy

Our Goal

To be the primary hub for surgical research and education at RPA through the development of academic surgical departments and surgically focused clinicians that pioneer best surgical practice and patient care.

Our objectives

Objective 1	Objective 2	Objective 3
Advance academic career pathways through the development of structured programs, the provision of mentorship and guidance and the facilitation of change.	Foster a hospital-wide and community recognition that patients receive the best surgical care in academic centres of surgical excellence.	Strengthen the capacity of surgical departments and surgically focused clinicians to undertake research.
Objective 4	Objective 5	Objective 6
Deliver quality postgraduate surgical education and training.	Enhance collaborations and partnerships to further support surgical research and education.	Further develop and promote the presence of the Institute.



Intervention and activities

Objective 1: Advance academic career pathways through the development of structured programs, the provision of mentorship and guidance and the facilitation of change
<i>Intervention 1.1: Implementation of structured programs</i>
Work with NSW Health, Sydney Local Health District, the University of Sydney and other key partners to create more structured pathways for establishing academic careers including: <ul style="list-style-type: none">• consultant hospital positions complemented with 0.5 FTE academic appointments• incorporate protected time for research and education into clinical appointments• develop structured surgically focused programs across disciplines and departments at RPA
<i>Intervention 1.2: Mentorship and guidance</i>
<ul style="list-style-type: none">• directly provide mentoring to all interested staff e.g. surgical trainees, consultants, nursing and allied health workers to guide and support their efforts to establish academic careers.• provide a platform to enable aspiring surgical staff and researchers to make contact with and seek guidance from experienced surgeons, clinicians and researchers from within particular fields of interest.• encourage the enrolment of staff with a surgical interest into higher research or education degrees.
<i>Intervention 1.3: Advocacy</i>
<ul style="list-style-type: none">• work with the District, Universities, Royal Australian College of Surgeons, the NSW Health Education and Training Institute (HETI) and other key partners to place greater emphasis on participation in research and education within all clinical positions.

Objective 2: Foster a hospital-wide and community recognition that patients receive the best surgical care in academic centres of surgical excellence.

Intervention 2.1: Consumer Involvement

- recognise the importance of engaging with consumers in surgical research, education and innovation by;
 - implementing more consumer-focused discussion in the development of clinical trials, research studies, innovations and education
 - ensuring equality and a focus on minority and vulnerable consumer groups in research studies
 - working with District consumer groups to seek feedback on our research, education and innovation
- enhance patient perceptions about being involved in clinical trials, research studies and patient education.

Intervention 2.2: Staff culture and expectations towards research

- enhance clinician perceptions about being involved in research to develop a hospital culture that incorporates research into surgical patient care as a matter of routine, including:
 - holding educational workshops and presenting at key hospital forums in order to provide an overview of the benefits of research to staff
 - collaborating with key partners to develop tools e.g. information for patients and staff, website content etc. to support the uptake of patients into appropriate studies
 - advocating, encouraging and supporting the uptake of research across all surgically related disciplines.
- Support efforts within Sydney Local Health District to improve staff culture, including;
 - having IAS representatives on the District Surgical Cultural Steering Committee and related sub-committees
 - undertaking research investigating the effectiveness of specific interventions aimed to reducing bullying and harassment within surgical departments
 - implementing measures to ensure gender equality in surgical training and ongoing practice
 - providing support to the MyDistrictOK program from a surgical perspective and to facilitate healthy culture amongst surgical departments and other surgically focused disciplines

Intervention 2.3 – Hospital Redevelopment and the Sydney Biomedical Accelerator

- support the planning and implementation of the RPA and Sydney Biomedical Accelerator (SBA) development by;
 - having representatives at all planning, training and education and implementation committees to provide surgical insight and support to both developments
 - providing feedback and advice to the RPA and District Executive to ensure surgery is represented and included in the planning and growth of the overall RPA and SBA precincts

- **Objective 3: Strengthen the capacity of surgical departments and surgically focused clinicians to undertake research.**

Intervention 3.1 – Ongoing monitoring of surgical departments

- identify and document the current research being undertaken within each surgical department including:
 - key contacts e.g. research leads, higher degree supervisors, research officers
 - the availability of resources e.g. research staff, statisticians, database managers, existence of local and off-site databases, access to laboratories
 - research outputs e.g. publications, presentations, higher degree by research students supervised
 - current funding arrangements including research grants
 - any defined research themes or areas of interest

Intervention 3.2 - Capacity development

- develop opportunities for greater exposure to research through:
 - delivering presentations at key forums
 - facilitating regular think tanks and education days
 - facilitating meetings between key people and partners
- identify people who want to undertake further research within a higher research degree and:
 - facilitate the selection of a suitable supervisor
 - assist in defining the project, location and funding needs
 - provide advice, guidance and mentorship as required
- develop educational materials and other support tools to assist and encourage translational research including assisting with
 - formulating research questions
 - study design and planning
 - statistical advice
 - ethics application assistance
 - working with RPA Human Research ethics Committee to streamline application processes

Intervention 3.3 - Enhance resources

- implement strategies to address the identified resource needs within each surgical department and or area, where possible.
- establish working parties to collaborate on our established surgical programs to apply for further funding in the form of grants including submitting
 - a minimum of two NHMRC grants
 - several smaller seed funding grants

<ul style="list-style-type: none"> • Objective 4: Deliver and coordinate quality postgraduate surgical education and training.
<p><i>Intervention 4.1 –David Storey Surgical Skills & Simulation Centre</i></p>
<ul style="list-style-type: none"> • the training centre will continue to allow <ul style="list-style-type: none"> ○ <i>in vitro</i> training of basic surgical techniques ○ use of simple task trainers ○ multidisciplinary team training in various operating theatre scenarios such as trauma resuscitation and care of the critically ill patient ○ monitoring of course activity and departmental use including ratio of internal to external staff courses • The training centre will collaborate with industry to provide training on innovative surgical products and techniques • The aim is to establish the centre as a leading training facility for surgical training in NSW
<p><i>Intervention 4.2 – Surgical and Robotics Training Institute (RTI)</i></p>
<ul style="list-style-type: none"> • provide support and structure to the RTI to <ul style="list-style-type: none"> ○ be the primary facility for all robotic-assisted training in Australia ○ continue the development of advanced and innovative robotic training ○ undertake research on the effectiveness of the training methodology
<p><i>Intervention 4.3 – Facilitating Educational Structures</i></p>
<ul style="list-style-type: none"> • explore the potential for conducting regular teaching sessions within surgical departments, nursing and allied health to improve surgical education across the board • implement training plans for surgical trainees in both accredited and non-accredited positions including Entrustable Professional Activities (EPA) and competency base training assessments • introduce systems to monitor and improve surgical supervision and delegation including documentation regarding trainee expectations and data collection • use multidisciplinary training sessions to foster genuine collaborative relationships between all members of the operating theatre team, surgical departments and other related disciplines • work with SLHD, Universities, HETI, RACS and other key partners to develop and implement strategies that better facilitate protected time for teaching and training within all disciplines
<p><i>Intervention 4.4 - Course development</i></p>
<ul style="list-style-type: none"> • establish curriculum and courses to facilitate the required learning objectives and skills for all levels of clinical staff • investigate funding models in relation to the delivery of suitable courses
<p><i>Intervention 4.5 - Educational Research</i></p>
<ul style="list-style-type: none"> • facilitate and undertake research into surgical education and training such as: <ul style="list-style-type: none"> ○ skills and simulation training methods ○ development and introduction of new techniques and models and ○ effectiveness of multidisciplinary training

Objective 5: Enhance collaborations and partnerships to further support surgical research and education.

Intervention 5.1 - Internal partnerships

- improve collaboration *within* departments by facilitating communication between team members and utilising dedicated research and education leads to promote strategies
- improve collaboration *between* departments by facilitating communication, establishing key networks and holding forums to promote partnerships
- formalise essential structures within each surgical department to support their academic endeavours including having:
 - access to adequate resources e.g. research staff, statisticians, databases
 - established funding streams and
 - established metrics for measuring their performance

Intervention 5.2 - External partnerships

- strengthen links and relationships with key partners such as government agencies, universities, medical research institutes, specialty associations, indigenous groups, industry and other surgical training centres by:
 - establishing and meeting with key contacts and
 - maintaining an up-to-date profile on areas of interest, facilities and opportunities associated with each partner
- foster collaborations between local, national and international surgical and academic units including supporting existing collaborations
 - ANZ Peritoneal Malignancy Collaboration
 - Sydney Robotics Summit
 - International Exenteration Centre Webinar Series
- facilitate innovative programs to encourage partnerships with groups outside of surgery e.g. Art In Surgery and Arterie, the Arts in Health program
- support other tertiary hospitals to establish and build similar academic units/model
- support other tertiary hospitals in the development of their research programs e.g. robotic research programs

<ul style="list-style-type: none"> • Objective 6: Further develop and promote the presence of the Institute
<p><i>Intervention 6.1 – Internal Promotion</i></p>
<ul style="list-style-type: none"> • be the primary source of surgical information for all surgical departments by collating and disseminating information through social media, e-newsletters, flyers, media releases and the District intranet including: <ul style="list-style-type: none"> ○ promoting academic activity of surgical departments ○ spotlighting the careers and advice of multidisciplinary clinicians to encourage knowledge sharing and networking opportunities and ○ informing the community of ongoing IAS projects and events • engage and support surgical departments to utilise the IAS education and training facilities to meet their needs • promote benefits of research and education
<p><i>Intervention 6.2 – External Promotion</i></p>
<ul style="list-style-type: none"> • explore opportunities to develop commercial partnerships with industry focusing on areas such as medical devices and resource and facility development • develop a national reputation as the leading surgical academic institute in Australia • engage with external surgical leaders about the work of the IAS <p>promote the work of the IAS through established surgical media channels to increase collaboration and exposure</p>
<p><i>Intervention 6.3 – Philanthropic Donations and Funding</i></p>
<ul style="list-style-type: none"> • establish sustainable funding streams from the following identified sources: <ul style="list-style-type: none"> ○ reimbursement for the development and delivery of short-courses and units of study ○ research grants and ○ scholarships for higher degree students • active fundraising campaigns targeting philanthropic and industry donations to then fund <ul style="list-style-type: none"> ○ surgical conferences/forums e.g. Sydney Robotics Summit ○ surgical courses e.g. neurosurgical skills workshops ○ conference travel for research and education ○ new equipment, research/ support staff and consumables • be the primary depository of education grants and funding for surgical research
<p><i>Intervention 6.4 – Commercial partnerships</i></p>
<ul style="list-style-type: none"> • establish sustainable and ethical partnerships with commercial entities to develop and test surgical devices and innovative technology to lead to better patient care. • build collaboration between clinicians and commercial partners to provide feedback on products including using IAS facilities to house and test devices.

Performance Indicators

The IAS will monitor its progress and performance using key performance indicators (KPIs) outlined below. Our KPIs are constructed around our six objectives and will be reported to and reviewed by the IAS Advisory Council throughout the next five years.

1. Academic careers

- Number of 0.5 FTE surgical academics
- Number of higher degree research students with IAS supervisors
- Number of other clinical positions or programs with dedicated time for research and education

3. Research in surgical departments

- Number of research resources available per surgical department
- Number of journal articles published by surgical departments
- Number of REDcap databases created by surgical departments
- Number of research grants (peer reviewed and non-peer reviewed) applied for and awarded by surgical departments
- Number of ethics applications made by surgical departments

5. Collaborations and Partnerships

- Number of partnerships established with industry, media and philanthropists
- Number of collaborative events held annually
- Amount of donations received and sponsorship funding raised annually

2. Patient care

- Number of clinical programs implemented within a comprehensive research framework
- Number of research projects with consumers involved in the development of the project
- Number of research projects focusing on vulnerable / minority groups
- Number of education and training courses delivered on managing or reviewing critical incidents (e.g. from RCAs)

4. Surgical Education and Training

- Number of training courses delivered and participants involved at the IAS
- Number of departments involved in delivering education and training at the IAS
- Number of industry partnerships involved in delivering education and training at the IAS
- Number of basic and advanced surgical robotics training courses delivered at the RTI

6. Marketing and Promotion

- Social media follower growth and engagement rates per month
- Website traffic and e-newsletter subscriptions per year
- Regularity and attendance rates of key events including STEMM school visits, educational seminars, and the Surgical Robotics + Innovation Summit

Conclusion

This strategic plan has been developed to guide the work of the IAS over the next five years and has incorporated the feedback of our staff, surgical departments and partners to ensure the research, education and training initiatives being delivered and coordinated are in keeping with the needs of the RPA campus, Sydney Local Health District, and within the context of academic surgery more broadly.

The IAS will continue to work hard toward successfully implementing the interventions detailed within this plan that are in line within our key objectives and that cut across our core business portfolios. Our planned focus has been established to incorporate the forecasted societal and environmental changes within surgery including the increased use of technology in surgery and an anticipated greater demand on surgical services in the SLHD catchment area. The IAS will monitor its progress and performance using a number of key performance indicators, which will be reported to the IAS Advisory Council.

