UTS Rapido

Social Impact

Engineering for good

Bridging the gap between academia and industry

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An industry focused, R&D innovation hub, delivering engineering and technology solutions for industry and social impact

Welcome to UTS Rapido Social Impact

UTS Rapido Social Impact partners with not-for-profits and socially-driven organisations to co-design engineering and technology solutions that drive community impact.

R&D Innovation Hub

UTS Rapido is an R&D and technology innovation hub that partners with NFPs, industry, government and academia to solve complex, real-world challenges. We turn ideas into market-ready solutions through advanced engineering and digital innovation.

Engineering for good

We believe technology should be accessible to those working to make a difference. Our social impact projects with not-for-profits and socially-driven organisations, enable us to deliver affordable, engineering and technology-driven solutions that contribute a lasting impact in the community.

Affordable innovation

Our discounted, low-bono model makes R&D more accessible to those who may not have the in-house technical expertise or budget to develop technology-based innovations.

Why choose Rapido Social Impact?

Working with our team of experts gives you access to a world-class, multidisciplinary team of engineers, UX specialists, software developers, and project managers. Plus access to the facilities, tools and research expertise of the wider UTS innovation ecosystem.

- Tailored R&D: Every project is shaped to meet your needs and context.
- Purpose-first: We prioritise public good and positive outcomes.
- Practical outcomes: We turn insights into working solutions for your organisation.
- Affordable access: Our discounted, low-bono model, and grant support removes typical barriers to innovation.
- Trusted partner: Backed by UTS, Australia's leading young university.

About UTS

The University of Technology Sydney (UTS) is the #1 young university in Australia, ranked for excellence in teaching, research impact, industry engagement and international outlook.

With over 50,000 students, UTS ranks in the world's top 100 universities, recognised for its academic excellence, strong research performance and industry impact. Our campus is in Sydney's vibrant education and innovation hub, where creative energy and cross-disciplinary collaboration with leading researchers thrive.

Since 2017, we have donated significant time and resource to purposeful organisations to create positive change.

Social impact is a core UTS value, and through UTS Rapido, we turn that commitment into action. Social change doesn't happen in isolation. Meaningful relationships are essential to the transformational change we hope to see.

Hervé Harvard
Founder and Executive Director, UTS Rapido

Raj Calisa, Principal Delivery Manager – presenting at the UTS Social Impact Showcase

Impact focused – solution driven

Founded in 2016 in the Faculty of Engineering and IT, UTS Rapido is committed to creating positive impact and solving real-world challenges.

By collaborating with research teams, government entities, and clients from diverse industry sectors, we leverage our expertise in software, mechatronics, and UX digital solutions.

We innovate new products and services that address specific business or user needs to deliver tangible benefits.

> **Without UTS Rapido, it would have taken us at least a couple of years to arrive at the CHEX digital currency solution they have created with us.**
>
> **Oscar Sanchez, Harris Community Centre Coordinator**

20 **Organisations supported on a low bono basis**

30 **Rapido Social Impact projects delivered**

Core R&D services

Software Engineering

We apply analytical thinking, engineering principles, methods, tools and techniques to the design, development and maintenance of bespoke software solutions.

Mechatronics and Additive Manufacturing

We solve industry problems by designing, analysing, testing, and manufacturing intelligent systems using mechanical and mechatronic engineering and additive manufacturing techniques.

UX and Digital Design

We create value generating digital solutions by identifying the needs of your business, its market, and the end-users, and by designing, developing and deploying innovative software and hardware solutions.

Research Translation

We provide the engineering and digital capability to turn research into practical, scalable solutions and move beyond discovery into development, deployment and impact.

Australian NFP Technology Awards
UTS Rapido Social Impact:
Winner in 2023
Finalist in 2021

We help purposeful partners:

- Access affordable, engineering-led innovation
- Overcome budget or capability constraints
- Co-design solutions that meet real community needs
- Apply emerging technologies such as:
    - Digital UX and interface design
    - Artificial intelligence and machine learning
    - Data science and automation
    - Prototyping, mechatronics and 3D printing

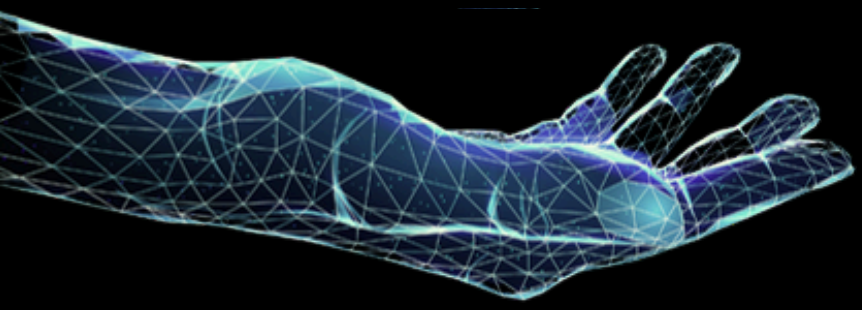
Whether you're an NFP, a social enterprise or a for-purpose business, UTS Rapido can help you shape, build and deliver technology for good.

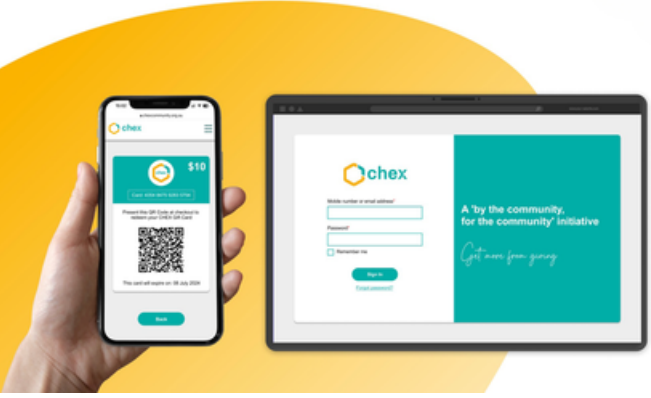
> UTS Rapido has set a benchmark for NFP technological support that now challenges other universities to come to the party.
>
> Natalie Zelinsky
> Founder Director
> StreetKind

Social impact partners

We offer:

- **Affordable, discounted, low-bono R&D for NFPs and purpose-led organisations**
- **Expertise in software, UX, AI, mechatronics, 3D printing and prototyping**
- **Human-centred, collaborative design processes**
- **End-to-end support: from scoping and research to prototyping and delivery**
- **Access to university labs, facilities and grant submission support**





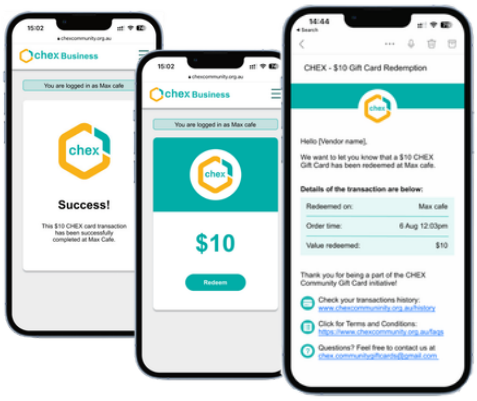
Case study:
Digital innovation for social good - CHEX Digital Community Currency

chex Uniting

Need:
Develop a digital version of a community gift card to allow the local program to operate efficiently, reduce administration resources and allow for cost effective expansion.

> This project has fostered community engagement with an increase in local community members purchasing CHEX cards.
>
> The new digital currency enables rapid growth and scalability, with plans to triple the number of businesses in the program across the first six months.
>
> Oscar Sanchez,
> Harris Community Centre Coordinator

Innovation:
We designed and built a user-friendly web application hosted on AWS, ensuring seamless management and tracking of all issued digital cards, operational efficiency and control. Digital cards can now be dispensed and monitored via the web app.



Outcome:
The CHEX digital card implementation is complete, next steps are deployment and user trials at select small businesses in Ultimo to foster a positive circular economy.

To date, the project has cut two years of implementation time. Staff resources can now be redirected to other community benefiting initiatives.

Other anticipated benefits include; saving over 400 volunteer hours, expansion to 30 businesses in the first six months, saving approx. $7k by eliminating physical gift cards, and $20k savings in annual wages.

Gender Legislative Index

Case study:
Ranking and scoring legislation against global standards for women's rights

Need:
Create a digital tool that empowers users to access and compare legislation on women's rights, ranked and scored for gender responsiveness. Enable the Index to be used to uphold women's rights when drafting legislation, to drive action and reduce disadvantages for women globally.

Innovation:
This collaboration between law and data science developed AI powered heat-map visualisations to show a meaningful aggregation of different parts of each law's evaluation by each evaluator; and an algorithm to calculate the overall rankings.

Outcome:
The Gender Legislative Index (GLI) – an analytic tool used to benchmark, score and rank laws on a scale; from gender regressive to gender responsive.

The Gender Legislative Index was instrumental in establishing a new parliamentary body dedicated to scrutinising draft legislation to advance the needs and interests of Australian women.

We believe this collaboration with UTS Faculty of Law and Connected Intelligence Centre marks just the beginning of a transformative journey towards a more gender-inclusive legislative landscape in Australia.

> The women's rights law behind the GLI tells legislators how to do it better but the data science and machine learning brings the index integrity, while the UX and design thinking brings the GLI accessibility to a wide audience.
>
> Rapido Social Impact's UX proficiency has elevated the Gender Legislative index to an open access tool, enabling the team to influence activists, legislators and inter-governmental organisations globally.

Professor, Dr Ramona Vijeyarasa,
Founder of GLI

Photo credit: Toby Burrows

Case study:
My Blue Sky web platform is dedicated to preventing and responding to forced marriage in Australia

Need:
To create a digital platform empowering individuals at risk of forced marriage in Australia.

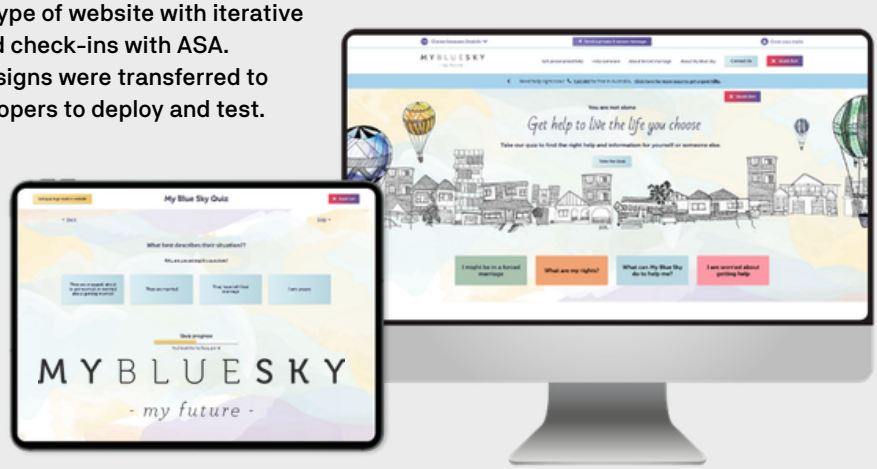
Operated by Anti-Slavery Australia (ASA), a specialist legal and research centre within the Faculty of Law at UTS – My Blue Sky delivers legal advice, immigration support, and guidance for reporting cases to authorities.

> We enjoyed working with the UTS Rapido team. They were quick to respond to any requests in changes to the live website and provided ongoing support to our team.
>
> Yat Hing Elsie Cheung
> Product Owner of My Blue Sky

Innovation:
We defined, designed and built a user-friendly web-based platform, co-designed with ASA to ensure culturally-sensitive content is presented in an non-confronting and intuitive manner for users.

We developed the detailed hi-fidelity Figma prototype of website with iterative feedback and check-ins with ASA. Approved designs were transferred to Rapido developers to deploy and test.

Outcome:
Defined, designed and deployed 'My Blue Sky' website, with $20k reduction in mental health intervention per affected individual, savings in legal and social dependency costs and contributions to GDP per empowered individual entering the workforce.

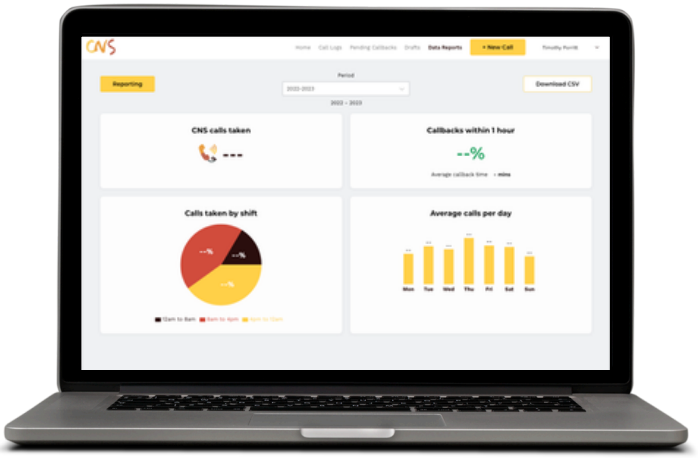


Case study:
Data collection and reporting solution to support culturally appropriate legal assistance to Aboriginal and Torres Strait Islander people across NSW and ACT

Need:
Streamline data collection and reporting for the Custody Notification Service (CNS) run by the Aboriginal Legal Service.

Innovation:
A bespoke CNS app replaced paper-based forms and manual reporting with a digital, cloud-native solution, allowing centralised collection, handovers of calls between solicitors, and immediate data reports.

Outcome:
A digital platform supporting over 29,000 CNS notifications in the 2022/23 financial year. The data collection and reporting dashboard has removed the need for manual data entry and processing from paper forms.



> This project will improve the efficiency of the Custody Notification Service.

The platform generates data to improve responses to the needs of Aboriginal people in the criminal justice system and enable longer-term planning for support and wraparound services.

Professor Thalia Anthony,
UTS Faculty of Law

Case study:
Supporting culturally appropriate, holistic healthcare services to Aboriginal and Torres Strait Islander communities

Need:
To develop software for a sensitive Indigenous medical app with culturally and gender safe spaces.

Innovation:
Custom cross-platform mobile and web applications using Google Cloud hosting.

We utilised Firestore database and rewrote the mobile app in React-Native. Our UX design and software team re-designed the user-interface and added new functionality.

Outcome:
Reduced costs for external parties, improved health service delivery, and safe spaces for transient complex communities, including cultural and gender considerations.

SWAMS staff can post news articles, communicate with mobs and keep the community informed. Aboriginal people can stay safely connected with their mobs and community groups.

The SWAMSapp received Distinguished Recognition for Innovation at the ISSIP 2023 Excellence in Service Innovation Award Program (April 2023).

Developed in collaboration with Professor Christopher Lawrence and the Centre for Indigenous Technology Research and Development.

#thismymob

Case study:
Reconnecting Aboriginal and Torres Strait Islander communities through culturally safe, community-driven technology

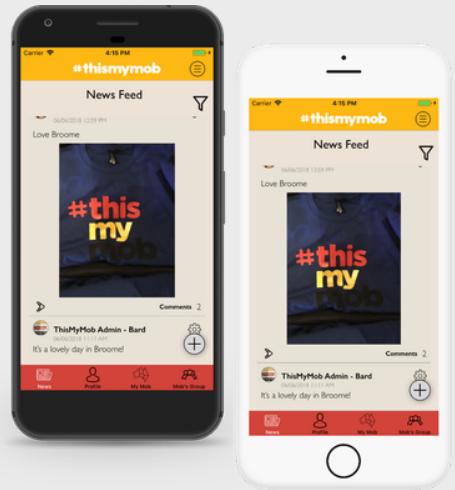
Need:
Aboriginal communities face social fragmentation and need a safe online space for connection. We were asked to develop a culturally sensitive, virtual platform dedicated to connecting Aboriginal people, their families, and their mobs.

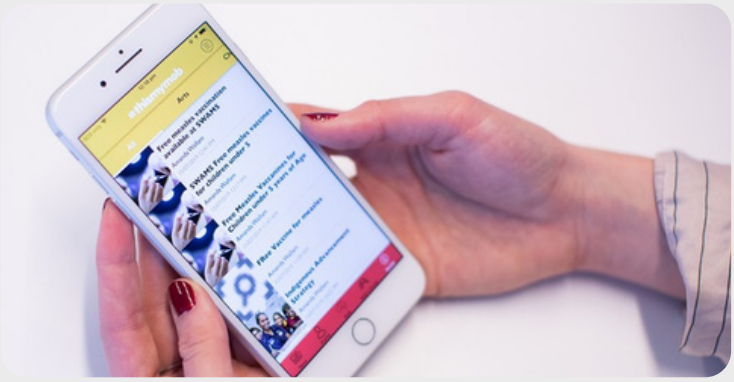
Innovation:
A groundbreaking mobile app connecting Aboriginal people digitally to enhance social and health outcomes.

The app facilitates interactions between users, their mobs, Elders and appropriate government and industry organisations.

Outcome:
A real-time Indigenous community platform enabling social interaction, public notice dissemination, improved access to essential services, and entrepreneurial opportunities.

It fosters cultural discussions, strengthens community engagement, and deepens the bond between Indigenous land and people.





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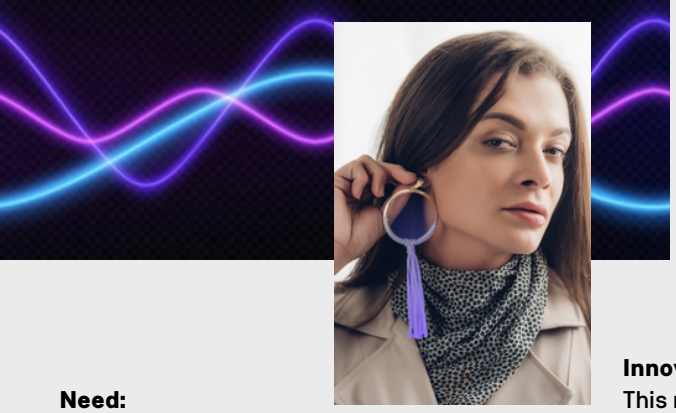


Case study:
UX research to co-design wearable technology for gender affirming voice (GAV) training

Need:
Gender affirming voice (GAV) training is a lifelong practice for the gender diverse population while generalisation of trained voice techniques from the clinic to everyday use is often difficult.

A pilot study was needed to research wearable technology solutions for gender-diverse individuals undergoing gender-affirming voice training.

Innovation:
This research collaboration initiated a user experience investigation to evaluate the suitability of technology for providing real time feedback on voice, minimising misgendering, enhancing training goals and identifying interest levels.

We conducted discovery workshops, user diary studies, and a co-design workshop.

Outcome:
We provided insights of exploring the potential of wearable tech use in GAV training and communication.

We identified key factors influencing the design and use of wearables, offering valuable insights to inform future research and co-design. These findings can also guide discovery projects, help secure grant funding, and identify potential commercial partners.

I am very pleased to have received a grant for this exciting work looking at wearable technology use in gender affirming voice training, and looking forward to building a strong partnership with UTS Rapido.

Dr Cath Gregory, Lecturer
UTS Speech Pathology

Case study:
Streamlining data collection for a harm-prevention charity supporting vulnerable young people in Sydney's nightlife precincts

Need:
Collecting and reporting on real-time, measurable impact data is essential to better inform, and motivate both support teams and stakeholders.

We needed to streamline live incident data collection and reporting – improving operational efficiency and data management to support harm prevention.

Innovation:
A bespoke StreetKind app replaced paper-based reporting and workflows with a digital, cloud-based solution.

This enabled centralised collection via smart devices, easier search-ability, and streamlined reporting of specific harm prevention data sets.

Outcome:
Over 17,000 individuals supported, with event and impact data digitally captured.

Real-time dashboards now track programme effectiveness, usage, and emerging trends, providing transparent reporting to stakeholders.

These insights position StreetKind to expand its support across a broader section of the community.

UTS actively fulfils its commitment in driving social change beyond its campus. We have experienced this commitment firsthand.

The upgraded StreetKind dashboard has been a huge success. We now have a valuable technology solution we could not otherwise access or afford.

Natalie Zelinsky
Founder/Director, StreetKind

Case study:
Revolutionising orthotic care through cutting-edge 3D-printed devices and digital workflows

Need:
AbilityMade is an Australian for-purpose organisation who needed a comfortable ankle-foot orthoses (AFOs) solution, with faster production and a less traumatic process for recently arriving refugees with disabilities.

Innovation:
We designed and created a solution utilising advanced technology, more comfortable plaster-free, 3D printed AFOs made from a bio-compatible material.

Outcome:
We drastically reduced production times – from 4 weeks to 28 hours, enabling a valuable community solution to be rolled out quickly.

This breakthrough approach improved mobility and well-being, empowering refugee children with physical disabilities to walk with ease and confidence.

Case study:
Innovating mobility: Tremor-Responsive Wheelchair Control

Need:
Individuals with movement disorders, such as those caused by traumatic brain injuries, often experience severe tremors that make it difficult and unsafe to operate standard power wheelchairs.

Involuntary movements can trigger unintended joystick inputs, raising safety concerns and reducing user independence.

Existing solutions failed to address these specific needs, so a new approach was needed.

Innovation:
A magnetic joystick toggle that detaches upon detecting excessive tremor-induced force, instantly halting the wheelchair to prevent unintended movement and improve user safety.

Developed through a user-centred process with input from people with lived experience of tremors, the design allows users to quickly reattach the control and restore functionality without compromising safety or independence.

> After decades of working alongside skilled therapists and technicians to try and identify a better, safer way to drive her wheelchair, Kyle was ready for change.
>
> We worked with Kyle and UTS Rapido to bring together the best from engineering and disability to create that positive change.
>
> Samantha Frain, Executive Director, Northcott Innovation

Outcome:
The development of a novel wheelchair control system, enhancing independence for individuals experiencing severe tremors.

The new control system has significantly improved the safety and autonomy of users with severe tremors, enabling them to navigate their environments with greater confidence.

This new design has potential applications for a broader range of movement disorders.

Engineering for good - whatever your organisation type

Social impact is part of who we are

At UTS, social justice and community contribution are core to our mission. The university's strategy commits to driving economic, social and cultural prosperity through research, education and practice.

UTS Rapido Social Impact helps to bring that mission to life through real-world R&D collaborations that deliver positive impact for people, communities and the planet.

Working with purpose-led organisations

UTS Rapido supports not just NFPs, but any organisation working towards socially minded outcomes. That includes social enterprises, start-ups, and for-purpose businesses.

Where these partners sit outside the not-for-profit category, our standard commercial model applies.

We bring affordable, professional R&D and a collaborative, co-design approach that helps partners navigate complex challenges and deliver measurable impact.

Trusted to deliver community outcomes

With a strong portfolio of social impact projects, UTS Rapido has developed deep expertise in designing and delivering technology solutions that make a meaningful difference.

From disability support and accessibility tools to research aimed at addressing modern slavery, our work is grounded in empathy, experimentation and engineering rigour.

We understand the realities of working with small teams, limited budgets and complex social challenges. We are driven to deliver outcomes that matter.

PolySpine®

For purpose case study: Compliance and safety testing to improve access for people with severe disabilities

Need:
PolySpine created a wearable exoskeleton to support people with limited mobility, but needed to meet strict safety and performance standards for TGA approval.

As a start-up, they lacked the specialist facilities and engineering expertise required for compliance testing and validation.

Innovation:
We designed and delivered a full validation testing program using university-grade labs and equipment.

Tests covered strength, durability, flammability, toxicity, and product lifespan.

The results led to design improvements and provided the evidence needed to move onto regulatory approval.

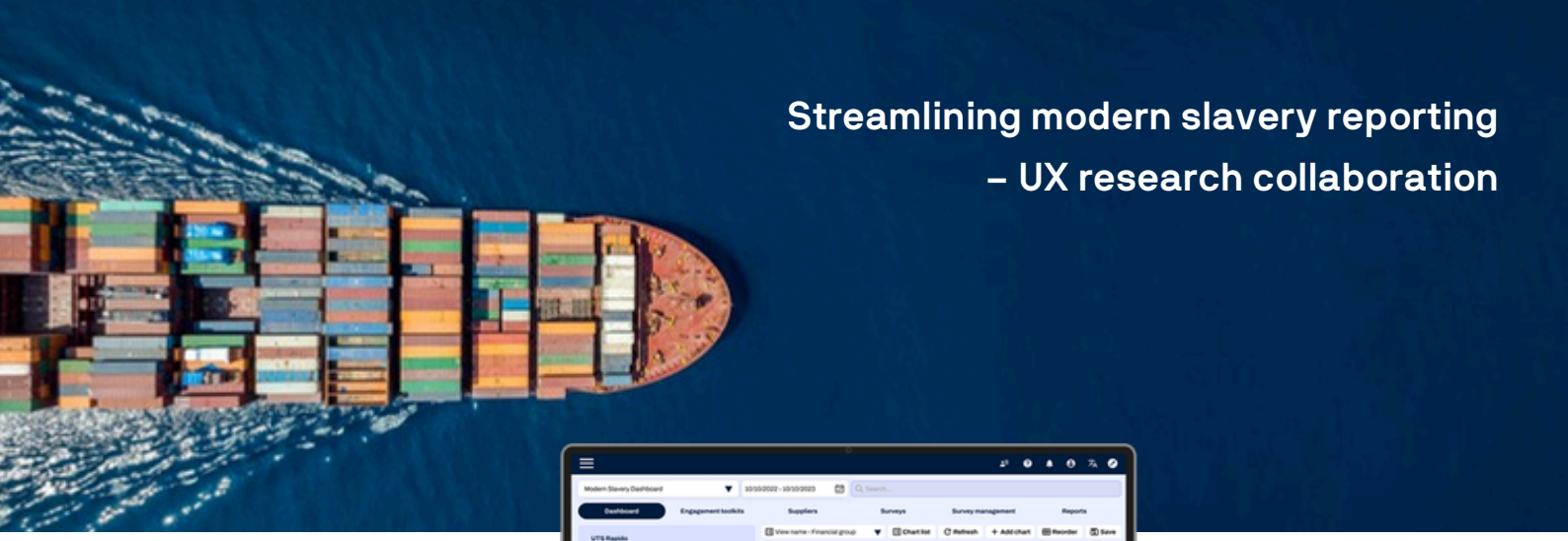
Outcome:
The partnership enabled PolySpine to meet stringent medical device compliance standards and confidently move into commercial production.

The device passed all required safety and performance tests, secured ARTG approval in 2021, and launched the following year.

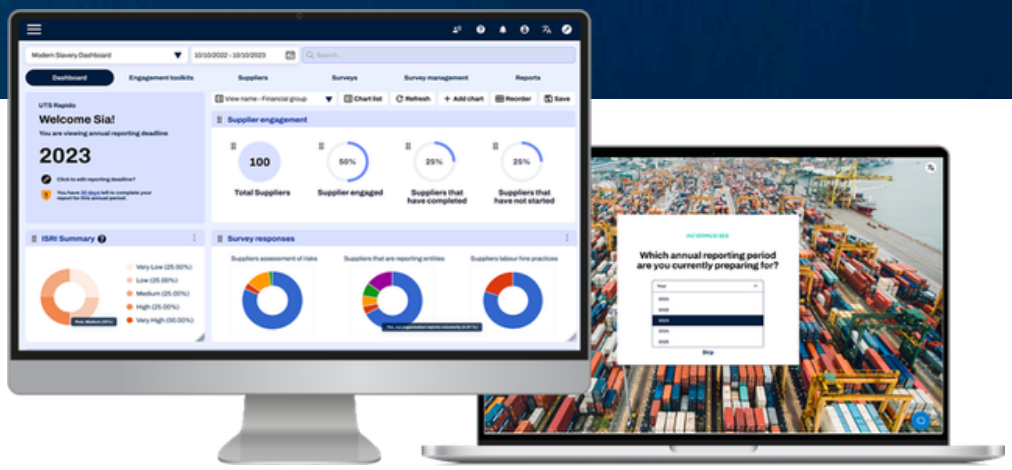
Now listed on the NDIS and under review by the US FDA, PolySpine is enhancing mobility and inclusion for users nationwide.

The process also led to key product improvements and the creation of two new jobs.

> We came in with a list of tests — and Rapido identified all the others we hadn't thought of. They were just so competent; they understood exactly what we needed to achieve.
>
> Jasmine Sayour, Managing Director, PolySpine



Streamlining modern slavery reporting – UX research collaboration



For purpose case study:

INFORMED 365

Enhancing compliance with the Modern Slavery Act, through a comprehensive UX research initiative

Need:
To enhance the usability and efficiency of the Informed 365 supply management tool, to streamline supplier audits, and risk identification processes.

Innovation:
A UX research initiative involving discovery workshops, usability sessions, process and task modelling, and prototype development.

Working closely with customers and CX staff, we identified key areas for improvement and delivered innovative concept development through to detailed design — focused on simplicity, efficiency, and user empowerment.

INFORMED 365
Nicholas Bernhardt
CEO, Informed 365

"As a progressive team, we value our partnerships with leading technology experts, and our collaboration with UTS Rapido was key to the project's success.

Hearing directly from our clients and customer support team in the UX research process was invaluable, and delivered significant, usable insights that will help drive change.

Benefits to Informed 365

Time efficiency: streamlined processes could save support staff up to 60 hours weekly.

Improved user experience: enabled a shift of focus towards performance enhancements and future upgrades.

Customer satisfaction: enhanced platform intuitiveness leading to reduced client-reported problems.

Professional development: improved staff experience and new capacity for alternative utilisation.

Social impact: increased capability to detect and mitigate the incidence of modern slavery.

Outcome:
The project's success was palpable, with design concepts not only aligning perfectly with organisational goals and workflows, but also heralding a notable shift in how clients valued and interacted with the platform.

Substantial time savings, enhanced ability for teams to focus on strategic use of the tool, and the relief of operational burdens on addressing basic usability concerns were among the celebrated outcomes.

This research demonstrates unanimous support for the design concepts, indicating a direct alignment with both adoption rates and efficiency improvements.

Multidisciplinary innovation hub with professional R&D engagement and project management

Mechatronic engineering

We design, prototype and test intelligent systems that integrate mechanical, electronic and software components—from concept to working prototype.

Software engineering

We develop bespoke scalable software, apps, platforms and AI-powered tools—to solve complex challenges and deliver smarter systems to drive business impact.

User experience (UX) & digital solutions

We create intuitive user experiences grounded in research and human-centred design—deploying tailored digital solutions that drive value and engagement.

Research translation

We bridge the gap between academic research and real-world application—transforming research into commercially viable technologies.

Hear from our partners...

"UTS Rapido Social Impact does not end with a one-off technical solution. We are constantly collaborating with the team on app enhancements as well as exploring how we can create even greater social impact."

– Natalie Zelinsky, Founder Director, StreetKind

"UTS Rapido had the knowledge, passion, commitment, and will to try something previously untested in creating the GLI."

– Professor Ramona Vijeyarasa
Chief Investigator, Gender Legislative Index

"Thank you to UTS Rapido for your amazing support, patience, and for helping us understand in a very friendly way the technical side of this digital CHEX project. As a result we have a better understanding of our goals and effectively communicating what we are looking for and strategies for the future."

– Oscar Sanchez, Harris Community Centre

"It's crucial for us to partner with leading tech experts to enhance the adoption and efficiency of tools designed to significantly diminish modern slavery. This collaboration with UTS Rapido is helping us deliver impactful solutions."

– Nicholas Bernhardt, CEO, Informed 365

"The work we're doing with UTS Rapido is a quantum shift in our industry and it will allow us to make smarter and more efficient investment decisions."

– Philip Byrum, Director, Orion Consulting

"Working with Rapido was a seamless process. The Rapido team have great knowledge of validation testing."

– Jasmine Sayour, Managing Director, PolySpine

CONTACT US

Ready to discuss a project, partnership or find out more about our R&D expertise, labs and facilities?
Get in touch: rapido@uts.edu.au / rapido.uts.edu.au

UTS Rapido

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