Age Assurance Technology Trial

PART B
Methodology & Ethics

August 2025

Funded by

Australian Government
Department of Infrastructure, Transport,
Regional Development, Communications, Sport and the Arts

Project by

Age Check
Certification Scheme

Our Core Principles

These principles guided every stage of the Trial. They reflect the ethical standards we applied in assessing technologies and engaging participants.

1 Respect

We honour the inherent worth, autonomy and diverse backgrounds of all participants – particularly children – through culturally sensitive, age-appropriate engagement.

2 Transparency

We commit to open communication about the Trial's purpose, scope, methods and outcomes – empowering trust, understanding and public confidence.

3 Accountability

We uphold clear governance and independent oversight – enabling concerns to be raised, reviewed and acted on with integrity.

4 Fairness

We pursue equity and inclusivity – actively addressing bias to ensure impartial treatment and representation across all demographics.

5 Privacy

We safeguard participant privacy through data minimisation, secure handling and respectful collection aligned with human dignity.

6 Safeguard Children

We prioritise child safety and wellbeing – ensuring informed participation, adherence to rights and protection through every Trial phase.

© Copyright of the Commonwealth of Australia

This document is available for reproduction on royalty-free, perpetual, attributed source, non-commercial rights to reproduce. This permission allows for unlimited reproduction and distribution, provided that proper credit is given to the original author(s) and source. This grant applies to all formats and media worldwide. For queries about commercial use or the licence in general, please contact the publishers. All rights to materials on links are reserved to the author of those materials.

Accessibility Statement:

This report was produced in line with the accessibility guidelines found in the Australian Government Style Manual.

Legal Clearance Statement:

This report includes references to ISO standards through summarisation, referencing and reproduction of definitions only. While the material is not reproduced verbatim, ISO asserts copyright over its publications. For any further use or licensing queries, contact Standards Australia at: copyright@standards.org.au.

Published By:

Age Check Certification Scheme
Unit 321B Broadstone Mill, Broadstone Road
Stockport, United Kingdom, SK5 7DL

www.accscheme.com

ISBN 978-1-0681646-1-3

RESCUE

Table of contents

Introduction and Overview

I

B.1 Introduction to Part B: Methodology and Ethics 6

B.2 Research and Evaluation Design 7

Sources of Data

II

B.3 Sources of Data 16

B.4 Practice Statements 16

B.5 Privacy Policies 20

B.6 Vendor Interviews 24

B.7 Vendor Websites 26

B.8 Testing Approach 28

B.9 School Field Trials 30

B.10 Vendor Test Reports 35

B.11 Analysis of Technology Readiness Assessments 38

B.12 The Scientific and Technical Advisory Cell (STAC) 40

B.13 Statistical Methods 44

Ethics

III

B.14 Ethics Committee 48

B.15 Ethical Considerations 52

B.16 Peer Review 56

Stakeholder Advisory IV

B.17 Stakeholder Advisory Board 60

B.18 Statutory Stakeholders 70

Project and Risk Management V

B.19 Project Management and Risk Management 74

B.20 Future Accreditation and Standards Development 76

B.21 Acknowledgements 80

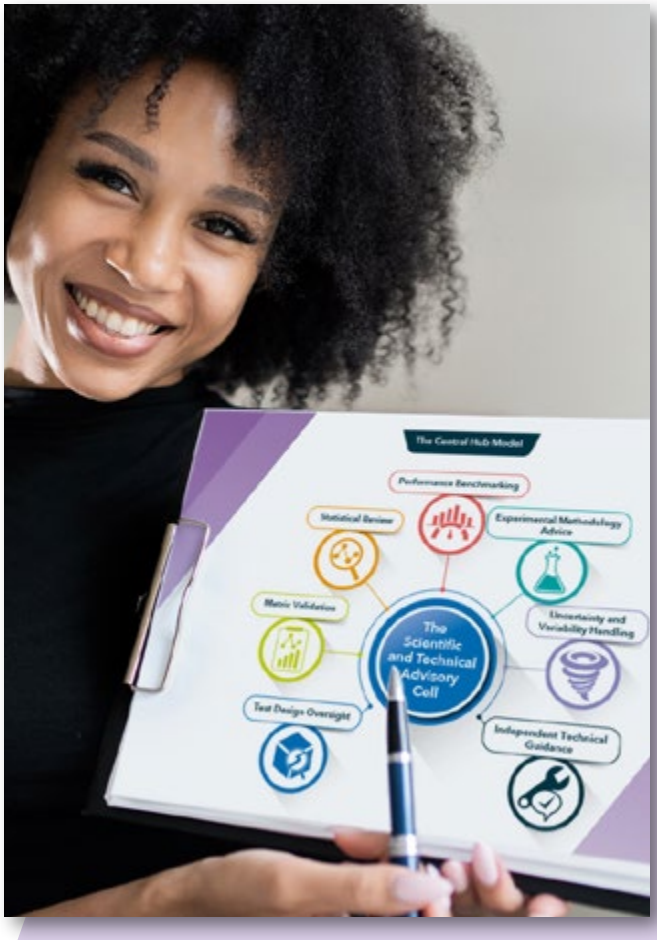
Project Plan VI

B.22 Organisational Management of the Project 90

Age Assurance Technology Trial

1

PART B
Introduction & Overview



B.1 Introduction to Part B: Methodology and Ethics

B.1.1 Recognising the increasing global and domestic demand for effective age assurance solutions, the Trial's research methodology was built on a foundation of strong ethical principles – respect, transparency, accountability, fairness, privacy and safeguarding children.

B.1.2 To ensure robust and replicable results, the research methodology aligned with leading international standards and frameworks, including ISO/IEC 25040[1] (for quality evaluation), ISO/IEC FDIS 27566-1[2] (for age assurance systems) and IEEE 2089.1[3] (for online age checking systems). The methodology also considered unique Australian regulatory, cultural and social considerations, with specific attention to the participation of Aboriginal and Torres Strait Islander Peoples and alignment with Australia's privacy and online safety frameworks.

B.1.3 The Age Assurance Technology Trial was an initiative led by the DITRDCSA to evaluate the effectiveness, reliability and privacy impacts of various age assurance technologies. The Trial was set up in response to growing concerns about protecting children from harmful content such as pornography and other online age-restricted services, as well as harms on social media. By evaluating a range of age assurance systems – including age analysis, AI-based estimation, parental consent/control and identity document verification – the Trial assessed the feasibility of these technologies in real-world applications, ensuring they were accurate, user-friendly and privacy preserving.

1. *All references to ISO/IEC 25040 throughout this report are referring to ISO/IEC 25040: 2024 Systems and software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - Quality evaluation framework*
2. *All references to ISO/IEC FDIS 27566-1 Standard throughout the suite of reports are referring to ISO/IEC FDIS 27566-1 - Information security, cybersecurity and privacy protection - Age assurance systems - Part 1: Framework.*
3. *All references to IEEE 2089.1 throughout the suite of reports are referring to IEEE 2089.1-2024 - IEEE Standard for Online Age Verification.*

B.1.4 The Trial explored how different methods perform in verifying a user's age without compromising their personal data, helping Australia establish best practices and potential regulatory frameworks for age assurance. This effort aligned with global movements towards safer digital environments for young users, as Australia seeks to balance technological advancement with robust data protection and ethical standards.

B.1.5 Ethical considerations were at the forefront of the Trial and this section of the report seeks to explore the Methodology and Ethics behind the Trial and its evaluation.

B.2 Research and Evaluation Design

B.2.1 The Trial was designed to address three key challenges identified in the evidence base: the reliance on theoretical evaluations, the absence of comprehensive technical assessments of age assurance solutions and the underrepresentation of Australian subpopulations in global studies. The Research and Evaluation Design of the Trial directly responded to these challenges and tailored it to Australia's unique regulatory, social and cultural context.

TONY ALLEN
Project Director

B.2.2 The Trial's evaluation framework was structured around **four interdependent pillars**:

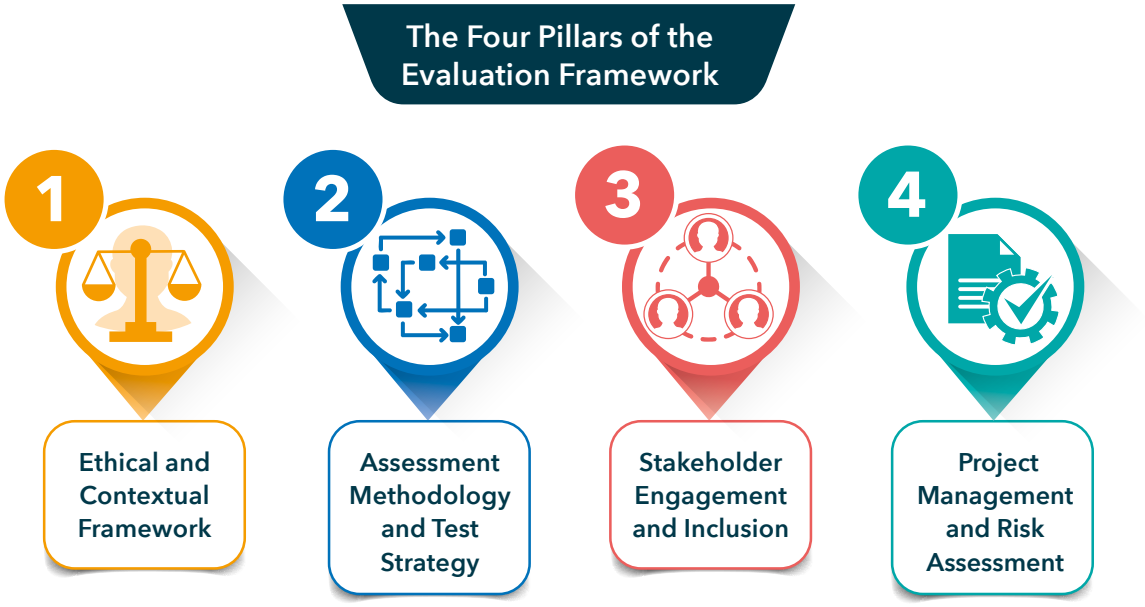


Figure B.2.1 *The Four Pillars of the Evaluation Framework*

1. **Ethical and contextual framework**
   The design of the Trial was grounded in explicit ethical principles – respect, transparency, accountability, fairness, privacy and safeguarding children – operationalised through the Data, Ethics and Impartiality Work Package 1[4]. This ensured that all Trial activities prioritised the protection of vulnerable users, aligned with Australian legal and cultural norms and reflected the diversity of the Australian community, with a focus on Aboriginal and Torres Strait Islander peoples. Oversight by the project's Ethics Committee[5], including monthly meetings, reinforced the impartial and accountable conduct of the research.

4. More information about Work Package 1 can be found:

Section VII *- Management of the project*

5. More on the Ethics Committee can be found:

Section III *- Ethics*

2. **Assessment methodology and test strategy**
   The evaluation methodology was built around globally recognised standards (ISO/IEC 25040, ISO/IEC FDIS 27566-1, IEEE 2089.1) to ensure a rigorous, transparent and replicable approach. Technologies were evaluated against a set of clear and comprehensive criteria.

3. **Stakeholder engagement and inclusion**
   Central to the Trial's design was the inclusion of diverse stakeholders[6] – government, industry, academia, civil society and user groups, including children and parents. This approach sought to ensure the evaluation was not only technically robust but also socially informed and culturally respectful. In particular, the Trial's recruitment of participants and technology providers aimed to reflect the diversity of Australia's population, addressing previous gaps in representation in global studies.

4. **Project management and risk assessment**
   The Trial included rigorous risk management and quality control processes[7] to ensure the integrity of findings and to manage risks specific to the Australian environment, including cybersecurity, privacy and data protection concerns. These processes ensured that the Trial's outputs – these ten detailed reports – were delivered to the highest standards of quality and independence.

6. More information about the Stakeholder Advisory Board can be found:

Section IV - *Peer Review and Stakeholder Engagement*

7. More information about project management and control can be found:

Section VII - *Management of the Project*

Recognised Standards	Key Criteria
Accuracy	How well the technology could detect a user's age.
Interoperability	How well the technology could be used across multiple online platforms.
Reliability	How consistently the technology could produce the same result.
Ease of use	How simple the technology was to operate, including how the system offered functionality appropriate to the capacity and age of a child or adult.
Minimisation of bias	How well the technology avoided racial or other bias, recognising that the complete elimination of bias was unattainable.
Protection of privacy and data security	How well the technology protected users' personal information.
Human rights and accessibility protections	Including people with disabilities, as well as applicable rights under the UN Convention on the Rights of the Child.[8]
Circumvention	Resistance to certain kinds of attacks including Biometric Presentation Attacks and Spoofing attacks.
Technology Readiness Level (TRL)	Ensuring the technology was sufficiently mature for meaningful testing.

8. *The UNCRC is a legally binding agreement which outlines the fundamental rights of every child, regardless of their race, religion or abilities. Australia became a signatory to the UNCRC on 22 August 1990 and ratified it on 17 December 1990.*

| Structured evaluation framework

B.2.3 The Trial utilised a four-layered evaluation model to systematically assess the age assurance technologies:

Figure B.2.2 *The Four Levels of Evaluation*

1. **Accreditation layer**
   Evaluations were conducted by accredited conformity assessment bodies, such as the Age Check Certification Scheme (ACCS), operating under ISO/IEC 17065:2012. This standard ensures impartiality and competence in certifying products, processes and services.

2. **Product quality model layer**
   The Trial applied ISO/IEC 25010:2023, which outlines the systems and software quality requirements and evaluation (SQuaRE) product quality model. This standard assesses attributes like functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability and portability.

3. **Age assurance systems framework layer**
   The Trial applied ISO/IEC FDIS 27566-1, the draft international standard, providing a framework for age assurance systems. This framework addresses core characteristics essential for determining a user's age or age range, guiding the evaluation of age assurance methods.

4. **Implementation requirements and metrics layer**
   IEEE 2089.1, the Standard for Online Age Verification, offers implementation guidelines and metrics for age assurance technologies. This standard aids in assessing the effectiveness of various age assurance measures against established benchmarks.

Age Assurance Technology Trial

II

Sources of Data

B.3 Sources of Data

B.3.1 The Trial drew on a range of carefully managed data sources to comprehensively evaluate age assurance, parental consent and parental control technologies within the Australian context. These data sources provided a robust and contextually relevant evidence base to inform future online safety policy decisions.

B.4 Practice Statements

B.4.1 A central element of the Trial's evaluation methodology was the use of Practice Statements – structured self-declarations provided by participating technology providers. These statements were designed to capture a detailed, standardised account of each provider's system capabilities, operational design, data handling practices and intended use cases. They served as both a foundation for technical evaluation and a transparency mechanism, enabling consistent comparison across diverse age assurance approaches.

What practice statements are

B.4.2 Practice Statements are formal documents submitted by participating providers, outlining how their systems function and how they claim to meet specific expectations under international and domestic standards. They offer providers an opportunity to articulate their system's design in their own words – similar to a 'statement of practice' or 'system disclosure' used in certification and compliance contexts.

B.4.3 In line with ISO/IEC FDIS 27566-1 (Clause 10), which outlines the expectations for provider declarations, Practice Statements in the Trial were intended to:

- Document the key technical and functional characteristics of each system.
- Describe how age assurance is achieved and maintained.
- Set out privacy, security and bias mitigation strategies.
- Explain configuration management, fallback mechanisms and performance claims.
- Detail the provider's governance and accountability measures.

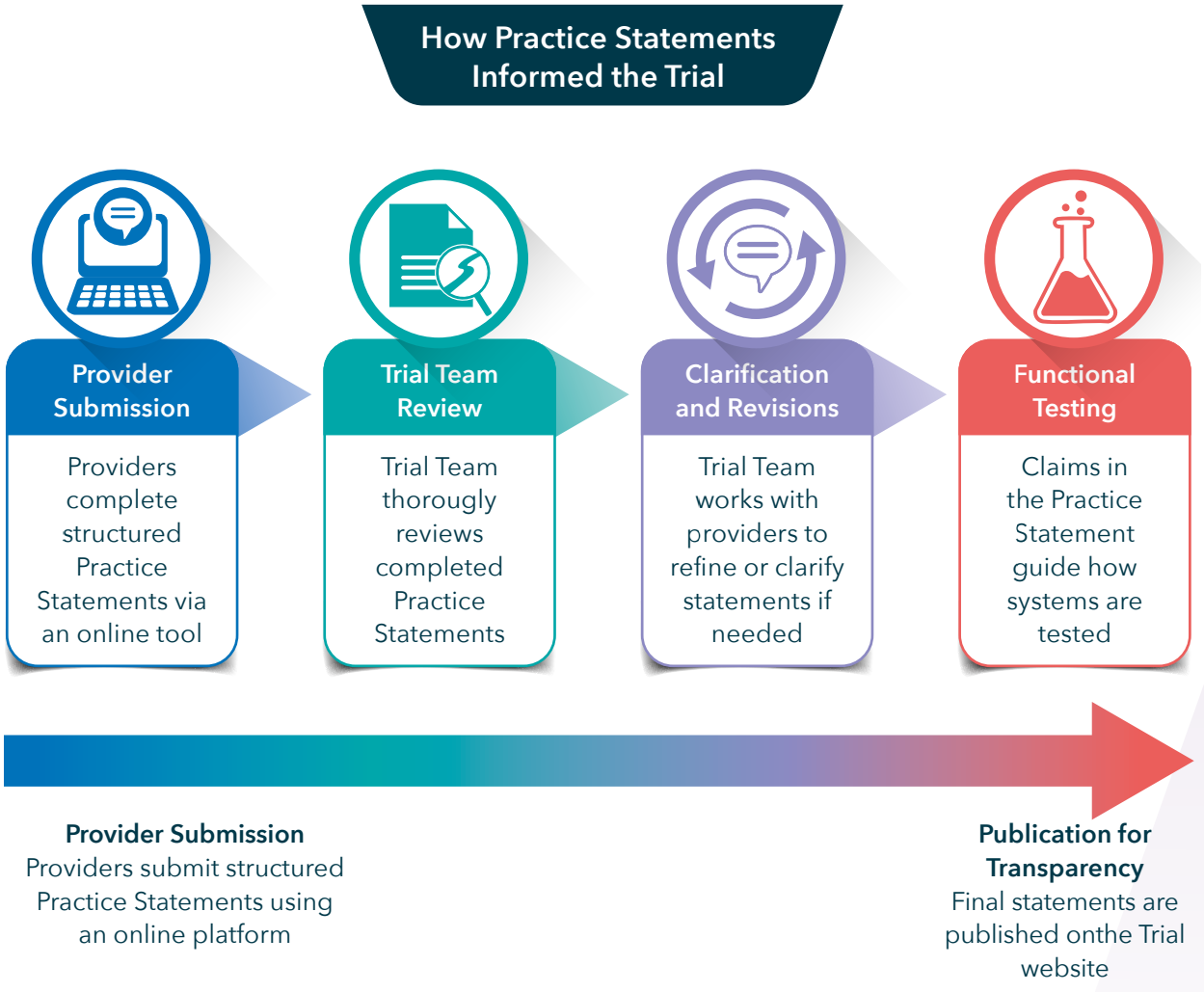


Figure B.4.1 *How Practice Statements Informed the Trial*

Online tool and guidance

B.4.4 To support consistency and usability, the Trial developed a dedicated online Practice Statement Tool, hosted on the ageassurance.com.au website. This tool allowed providers to complete their Practice Statements through a structured interface, ensuring alignment with ISO/IEC FDIS 27566-1 and IEEE 2089.1.

B.4.5 The tool included:

- Drop-down menus, free-text fields and templated sections.
- Guidance notes and examples drawn from best practices.
- Contextual prompts linked to relevant evaluation criteria.
- Validation checks to ensure completeness and consistency.

B.4.6 Detailed online guidance was also published alongside the tool to assist providers in understanding the purpose of each section, how to structure their responses and how their input would be used within the Trial.

Collation and use in the trial

B.4.7 All completed Practice Statements were reviewed by the Trial Team and used to inform both the pre-testing review phase and the onboarding process for each provider. Statements were used to:

- Identify the provider's claimed age assurance method(s) (e.g. age verification, age estimation, age inference).
- Assess alignment with ethical expectations, including transparency and privacy by design.
- Map system features to the Trial's evaluation criteria (e.g. interoperability, demographic fairness).
- Support functional testing, by validating test scenarios against provider-declared capabilities.
- Flag areas requiring further clarification during interviews or follow-up.

B.4.8 Where necessary, Practice Statements were revised in collaboration with providers to ensure accuracy and completeness prior to testing.

Public access and transparency

B.4.9 To promote transparency and accountability, all finalised Practice Statements are published on the Trial website within the Publications Section. Each Statement is linked to the corresponding provider profile and evaluation summary, allowing stakeholders, regulators and the public to review what providers have claimed about their systems in their own words.

B.4.10 Where a provider chose not to publish a full Statement for commercial or confidentiality reasons, a summary version was made available with consent. Each publicly listed Practice Statement is timestamped and reflects the provider's declared position at the point of submission to the Trial.

Purpose and value

B.4.11 Practice Statements served multiple purposes within the Trial and the wider age assurance ecosystem:

- They enabled fair, comparable and transparent evaluation of disparate technologies.
- They support future certification and compliance processes by aligning with international norms.
- They encouraged providers to reflect critically on their system design and readiness.
- They provide a structured disclosure mechanism that can inform policy, procurement and regulatory decisions.

B.4.12 Practice Statements also offer a replicable model for future initiatives, supporting the development of industry norms around transparency, documentation and user accountability in age assurance.

B.4.13 In summary, the Practice Statement framework was integral to the Trial's commitment to standards-aligned evaluation, ethical scrutiny and public transparency. It enabled the Trial to compare systems on a like-for-like basis and helped ensure that each provider's claims could be fairly and rigorously tested.

B.5 Privacy Policies

B.5.1 In addition to the structured Practice Statements, the Trial also reviewed publicly available Privacy Policies for all participating providers. This formed a key part of the Trial's ethical due diligence and helped assess how well declared practices aligned with actual documentation and observed system behaviour.

Collection and collation

B.5.2 The Trial Team systematically located the public privacy policies of each Trial participant, using:

- The provider's official website.
- App store listings and linked documentation.
- Customer onboarding portals or terms of service.
- Where necessary, direct requests to providers to supply the most current version.

B.5.3 All privacy policies were archived and are available for public access via the Trial website within the Publications Section. Each policy is listed alongside the relevant provider's name and the corresponding Practice Statement, where available. This collection offers stakeholders and the public a transparent view of how providers disclose their data handling practices in public-facing materials.

✓	Does the policy clearly explain what personal data is collected and for what purpose?
✓	Is the age assurance functionality explicitly described and are any biometric or sensitive data categories noted?
✓	Are data minimisation, storage limitation and deletion practices addressed?
✓	Is the user (or guardian) informed of their rights and how to exercise them?
✓	Does the privacy policy align with the data handling observed during testing?

Comparative review and evaluation

B.5.4 The Trial conducted a comparative analysis of each provider's privacy policy against two key reference points:

1. Their submitted Practice Statement (what the provider claimed about their privacy approach within the Trial).
2. Observed practices during system evaluation (e.g. data flow, user journey, retention and consent mechanisms).

B.5.5 This analysis enabled the team to assess the consistency and credibility of each provider's privacy posture, using a set of guiding questions.

B.5.6 Where material inconsistencies were identified – such as discrepancies between stated data minimisation claims and observed retention logic – these were flagged in the provider's evaluation summary and, where appropriate, discussed during follow-up interviews.

Purpose and transparency

B.5.7 This approach served several critical functions within the Trial:

- Ethical integrity: Verifying that privacy commitments made to the Trial were consistent with those made to the public.
- Standards alignment: Checking for alignment with principles from ISO/IEC FDIS 27566-1 (Clause 7 – Privacy Characteristics) and the Privacy Act 1988[9].
- User transparency: Highlighting good practice where privacy information was clear, accessible and proportionate.
- Accountability: Encouraging providers to ensure that internal practices and public representations are harmonised.

B.5.8 By making these privacy policies openly available and comparing them to technical claims and functional behaviours, the Trial aimed to strengthen public trust and provide an evidence base for future regulatory or procurement considerations.

B.5.9 This work underscores the Trial's commitment to transparency, ethical evaluation and alignment with international best practices on privacy protection in the deployment of age assurance systems.

9. *The Privacy Act 1988 was introduced to promote and protect the privacy of individuals and to regulate how Australian Government agencies and organisations with an annual turnover of more than $3 million, and some other organisations, handle personal information.*

B.6 Vendor Interviews

Purpose of the vendor interviews

B.6.1 Each Trial Vendor was given the opportunity to participate in an interview which was designed to:

- Clarify the operation of each age assurance technology and system.
- Provide the vendor with an opportunity to explain, contextualise and refine public understanding of their system.
- Allow the Trial to substantiate claims made in written submissions (e.g. vendor practice statements) with verbal clarifications.
- Offer vendors a chance to see and comment on how their technology would be described in official Trial outputs.

Design and structure of the interview

B.6.2 The interview was structured across five thematic sections, each with a set of probing open-ended questions, which were then tailored to the individual technologies provided by each participant:

Section Theme	Detail
Background and Overview	The first questions explored the system's functionality, conceptual origins, use cases and claimed benefits – giving the vendor space to articulate their value proposition and intended purpose.
Privacy and Data Protection	• The next questions explored alignment with Australia's Privacy Principles that were relevant to the scope of the Trial. There was a strong focus on data minimisation, encryption standards and the system's architecture aligned with fairness principles, particularly under privacy law and ethical scrutiny. • Questions ensured transparency on what data was collected, how it was used and by whom – issues central to public trust.
System Security and Fraud Prevention	These questions sought clarity on risk mitigation, preventing misuse and external validation, allowing vendors to explain safeguards and acknowledge any limitations.
Accessibility and Inclusivity	The inclusion of questions about First Nations communities, children in care and disability support reinforced procedural fairness by pushing vendors to demonstrate inclusive design considerations – key in a public interest Trial.
User Support and Adoption Challenges	The final questions gave vendors a chance to reflect critically on implementation challenges, supporting honest disclosure of limitations.

Interview Summaries

B.6.3 As part of the Trial's commitment to transparency and accuracy, the team prepared a written summary of each vendor interview, capturing key points regarding system design, functionality and implementation claims. These summaries were shared with participants for review, allowing them to check, verify and suggest corrections where necessary. Only once participants confirmed their agreement with the content were the verified interview summaries published on the Trial website, ensuring factual accuracy and mutual accountability.

B.7 Vendor Websites

B.7.1 In addition to reviewing Practice Statements and conducting structured interviews, the Trial team systematically examined the **public-facing claims made on vendor websites**. This step was critical in assessing the alignment between what providers promote to the public, what they disclosed to the Trial and what was observed during evaluation.

Purpose and scope

B.7.2 The objective of this review was to determine whether the public representation of each vendor's technology:

- Accurately reflected the core claims made in their Practice Statement.
- Aligned with the functionality described and observed during Trial evaluations.
- Provided clear, honest and accessible information to users, stakeholders and potential clients.

B.7.3 Each provider's website was reviewed for references to their age assurance methods (e.g. age verification, age estimation, age inference), data privacy commitments, system accuracy, regulatory compliance and ethical principles (such as inclusivity or bias minimisation). Screenshots and key excerpts were archived for documentation purposes.

Comparison with practice statements and interviews

B.7.4 The website review findings were cross-referenced with each provider's Practice Statement and interview transcript. The Trial assessed whether claims made on public websites:

- Were consistent with what providers declared during the Trial.
- Overstated the maturity, accuracy or risk mitigation features of the technology.
- Omitted key limitations or caveats acknowledged in other parts of the Trial process.

B.7.5 Where marketing language significantly exceeded what was evidenced in practice – for example, suggesting biometric-free operation when facial estimation was in use – the Trial flagged these inconsistencies in internal analysis. In most cases, these discrepancies were unintentional and addressed constructively during feedback sessions with providers.

B.8 Testing Approach

B.8.1 As demonstrated, The Trial drew on a comprehensive set of carefully managed data sources to evaluate age assurance, parental consent and parental control technologies within the Australian context. In addition to vendor-supplied documentation (including practice statements and privacy policies) and the vendor interviews, the Trial incorporated real world and simulated user testing to generate robust empirical data on system performance, usability, and fairness. This included controlled mystery shopper scenarios and extensive school-based field testing across multiple Australian states and territories.

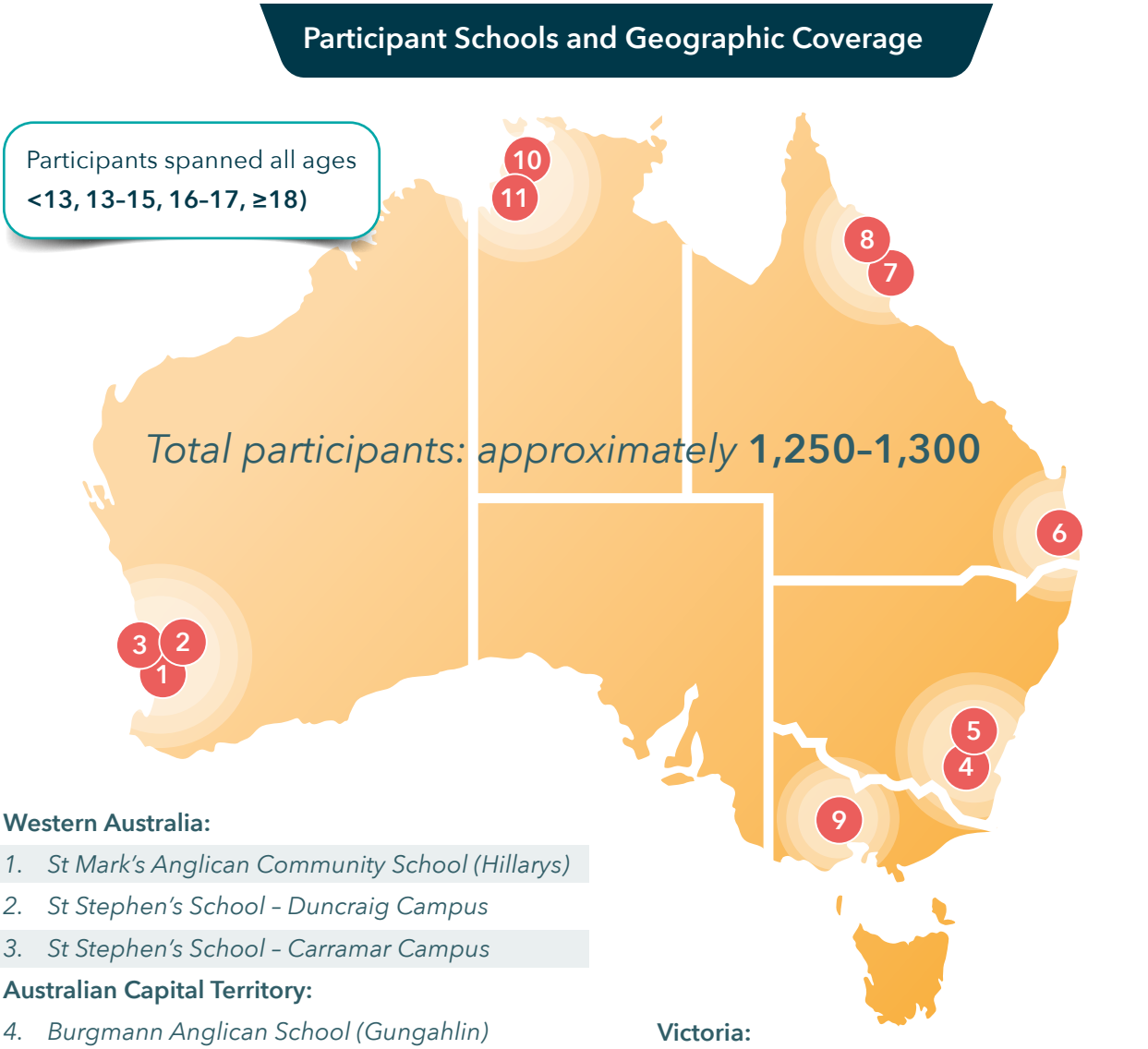
B.8.2 These participant-based methods offered critical insights into how systems performed under realistic conditions — across varied environments, device types, and user demographics. The following sections outline the design, implementation, and key considerations of these testing streams, beginning with a geographic and demographic overview of participating schools, followed by the mystery shopper methodology.

Evaluation Method	Description
Automated Functional Testing	Systems were tested using datasets comprising facial images and metadata (e.g. true age, skin tone, lighting conditions). Tests evaluated classification performance (e.g. TPR, FPR) at policy-relevant age thresholds (13, 16, 18).
Bias and Demographic Fairness	Performance metrics were disaggregated across demographic subgroups to assess bias. Where available, false accept/reject rates and mean absolute error were compared across groups.
Presentation Attack Detection (PAD)	Systems were tested for their ability to detect common circumvention tactics such as deepfakes, masks and pre-recorded video attacks. A risk-based approach was used to prioritise real-world feasible attacks.
Manual Usability Testing	Participants were recruited to test real deployments of estimation systems. User experience, clarity of interaction and ease of use were recorded.
Static Reviews	Systems were reviewed for conformance with privacy, data minimisation and human rights protections as outlined in ISO/IEC FDIS 27566-1 and relevant privacy legislation.
Limitations	No full-spectrum stress testing or cryptographic penetration testing was conducted. The trial did not test all environmental contexts (e.g. extreme lighting). Focus remained on threshold-based estimation (e.g. is the user likely over 18?), not precise age prediction.

B.9 School Field Trials

B.9.1 Geographic diversity: Schools were located across five Australian states and territories – Western Australia, Australian Capital Territory, Queensland, Victoria and the Northern Territory.

B.9.2 School types: Included a mix of government and independent schools, covering co-educational settings in both urban and regional areas.



Western Australia:

1. *St Mark's Anglican Community School (Hillarys)*
2. *St Stephen's School – Duncraig Campus*
3. *St Stephen's School – Carramar Campus*

Australian Capital Territory:

4. *Burgmann Anglican School (Gungahlin)*
5. *John Paul II College (Nicholls)*

Queensland:

6. *Parklands Christian College (Park Ridge)*
7. *Radiant Life College (East Innisfail)*
8. *AFL Academy (Cairns)*

Victoria:

9. *Kyneton High School (Kyneton)*

Northern Territory:

10. *Nightcliff Middle School (Nightcliff)*
11. *Good Shepherd Lutheran College (Howard Springs)*

Figure B.9.1 *Participant Schools and Demographic Coverage*

Mystery Shopper Testing

What was Tested	How it was Done
Spoof resistance, usability, and privacy handling	Total mystery shopper test cases: at least 350–400, aggregated across multiple vendors. These included scenarios involving: • Real adults simulating underage users, • Use of disguises, lighting variations or altered inputs, • Feedback on usability, spoofing resistance and privacy handling.

Output or Metric

Usability and privacy feedback under simulated age falsification attempts.

Notes: Data aggregated across multiple vendors.

Bias and Demographic Fairness Analysis

What was Tested	How it was Done
Skin tone was classified using a machine learning model aligned with the Fitzpatrick scale (Types I–VI). Automated results were disaggregated by skin tone groups and compared for disparity in FPR, FNR, MAE and accuracy.	Bias levels were categorised as Low, Medium or High based on predefined parity thresholds (e.g., >4% difference in FPR was considered High Bias). Some images were excluded from subgroup analysis due to lighting or quality issues preventing accurate classification.

Output or Metric

FPR, FNR, MAE, accuracy, and bias category (Low/Medium/High).

Notes: Some images were excluded due to quality issues preventing classification.

Presentation Attack Detection (PAD)

What was Tested	How it was Done
PAD features were manually tested in scenarios including: • Uploading static images instead of live selfies, • Wearing hats, glasses or face coverings, • Attempting verification with blurred, low-resolution or altered photos.	The ability of systems to reject spoof attempts and detect non-live images was verified where vendors enabled PAD features.

Output or Metric

Detection of non-live or spoofed input attempts (if PAD was enabled).

Notes: Focused on real-world feasible spoofing tactics.

Manual Usability Testing

What was Tested	How it was Done
Real-world usability of estimation systems.	Systems were trialled by participants in both school-based field tests and controlled mystery shopper-style scenarios (where supported). Manual functional testing examined: • Device/browser compatibility, • User experience under variable lighting and device conditions, • Ease of use, especially for edge cases like ambiguous age users, • Tests also included scenarios involving Aboriginal and Torres Strait Islander users, to assess fairness and UX inclusivity.

Output or Metric

Observed user experience, compatibility, and inclusivity indicators.

Notes: UX testing included diverse demographic scenarios.

Static Reviews

What was Tested	How it was Done
Each system's documentation, privacy policy and provider practice statement were reviewed for alignment with: • ISO/IEC FDIS 27566-1: Clauses on privacy, confidence thresholds, demographic fairness, • ISO/IEC 27001: Data security practices, • Applicable regional privacy laws (e.g. GDPR, UK Data Protection Act, Australian Privacy Act).	Interviews with vendors were used to validate claims and fill in contextual or operational gaps.

Output or Metric

Usability and privacy feedback under simulated age falsification attempts.

Notes: Data aggregated across multiple vendors.

Limitations

Output or Metric

- Cryptographic penetration testing and full security validation of vendor systems were out of scope.
- Environmental testing was limited to standard lighting and device types; extreme low-light or bandwidth-stressed environments were not evaluated.
- The Trial focused on threshold-based outputs (e.g., "Over 18: Yes/No") and did not evaluate fine-grained age prediction (e.g., estimating someone as "17.2 years old").
- Where vendors could not support automated integration, testing was limited to manual functional checks only.

Notes: Documents key exclusions to clarify the scope of the evaluation.

Observations and outcomes

B.9.3 While many providers demonstrated good alignment between their public materials and Trial disclosures, some divergence was noted – particularly where commercial websites prioritised simplified messaging over technical detail. In a few instances, website claims were subsequently updated by vendors to better reflect their current system capabilities and data practices following engagement with the Trial Team.

B.9.4 This review not only helped validate the authenticity of provider claims but also supported broader goals of public transparency and responsible communication. It demonstrated the importance of ensuring that promotional material aligns with actual functionality – particularly in a sector dealing with children's rights, data privacy and regulatory scrutiny.

B.9.5 The Trial's findings on website accuracy contributed to the provider's final evaluation summary and offered a reference point for future certification, procurement or public information initiatives.

B.10 Vendor Test Reports

B.10.1 As part of the Trial's commitment to transparency, accountability and methodological rigour, individual Vendor Test Reports were developed for each participating provider. These reports formally document the results of the functional, usability and security evaluations carried out during the Trial and are intended to support public understanding, regulatory scrutiny and future conformity assessment or certification processes.

Standards-based reporting

B.10.2 The test reports were designed and structured in accordance with ISO/IEC 29119-3 (Software Testing – Test Documentation), ensuring that each report:

- Followed a standardised, repeatable and reproducible format.
- Clearly defined the Target of Evaluation (i.e. the specific system, method or capability tested).
- Adhered to test documentation best practices including structured plans, test cases and result recording.
- Aligned with international expectations for software quality, transparency and traceability.

B.10.3 By grounding the documentation in ISO/IEC 29119-3, the Trial ensured consistency in the presentation of evidence and the ability for independent parties to verify, replicate or build upon the findings.

Report content and structure

B.10.4 Each Vendor Test Report included the following components:

Components	Description
Target of Evaluation	A detailed technical description of the age assurance method under test (e.g. age verification, estimation, inference), its intended function, deployment model and boundaries of the evaluation.
Scope and Objectives	Definition of what was tested, why and under what conditions, including relevant thresholds (e.g. 13+, 16+, 18+).
Reference Standards	Documentation of the ISO, IEEE and national standards applied during testing (including ISO/IEC FDIS 27566-1, IEEE 2089.1, ISO/IEC 25040 and ISO/IEC 27001 where applicable).
Test Design and Methodology	Summary of the test plan, including test conditions, sample characteristics and tools used in accordance with ISO/IEC 29119-3.
Results and Data Tables	Presentation of structured quantitative and qualitative findings, including accuracy rates, usability indicators, bias metrics, privacy assessments and circumvention resistance.
Analysis and Observations	Interpretation of results in relation to provider claims, declared practice statements and international good practice.
Limitations and Constraints	Notes on any environmental, procedural or technical constraints affecting test outcomes.
Supporting Documentation	Appendices containing relevant logs, screenshots and evidence files (anonymised where necessary).

Provider review and confirmation

B.10.5 To ensure fairness and factual accuracy, each draft report was shared with the relevant provider prior to publication. Vendors were given the opportunity to:

- Review and verify the content.
- Request clarification or corrections.
- Provide contextual comments or caveats, which were noted where relevant.

B.10.6 Final reports were only published once providers had reviewed and confirmed agreement with the representation of their system and the findings of the evaluation.

Public access and open science

B.10.7 All final Vendor Test Reports are publicly available on the Trial website within the Publications Section. To further support transparency, long-term access and independent scrutiny, reports have also been published through the Open Science Framework (OSF) at Age Assurance Technology Trial – OSF, alongside data tables, anonymised test logs and relevant methodology references.

B.10.8 This approach reflects the Trial's standards-aligned, evidence-based and impartial framework. It provides stakeholders – including policymakers, researchers and civil society – with a trustworthy and comprehensive basis for evaluating the claims and capabilities of age assurance technologies. The methodology also offers a reusable model for future evaluations that require rigour, transparency and accountability.

B.11 Analysis of Technology Readiness Assessments

B.11.1 When submitting an Expression of Interest at the start of the Trial's process, prospective participants were asked to state the Technology Readiness Level (TRL) of their solution. TRLs are based on a scale from 1 to 9 with 9 being the most mature technology.

B.11.2 The New South Wales (NSW) Government's Invest NSW initiative provides a tool to calculate the TRL level for a technology system. The table of TRL levels is set out below.

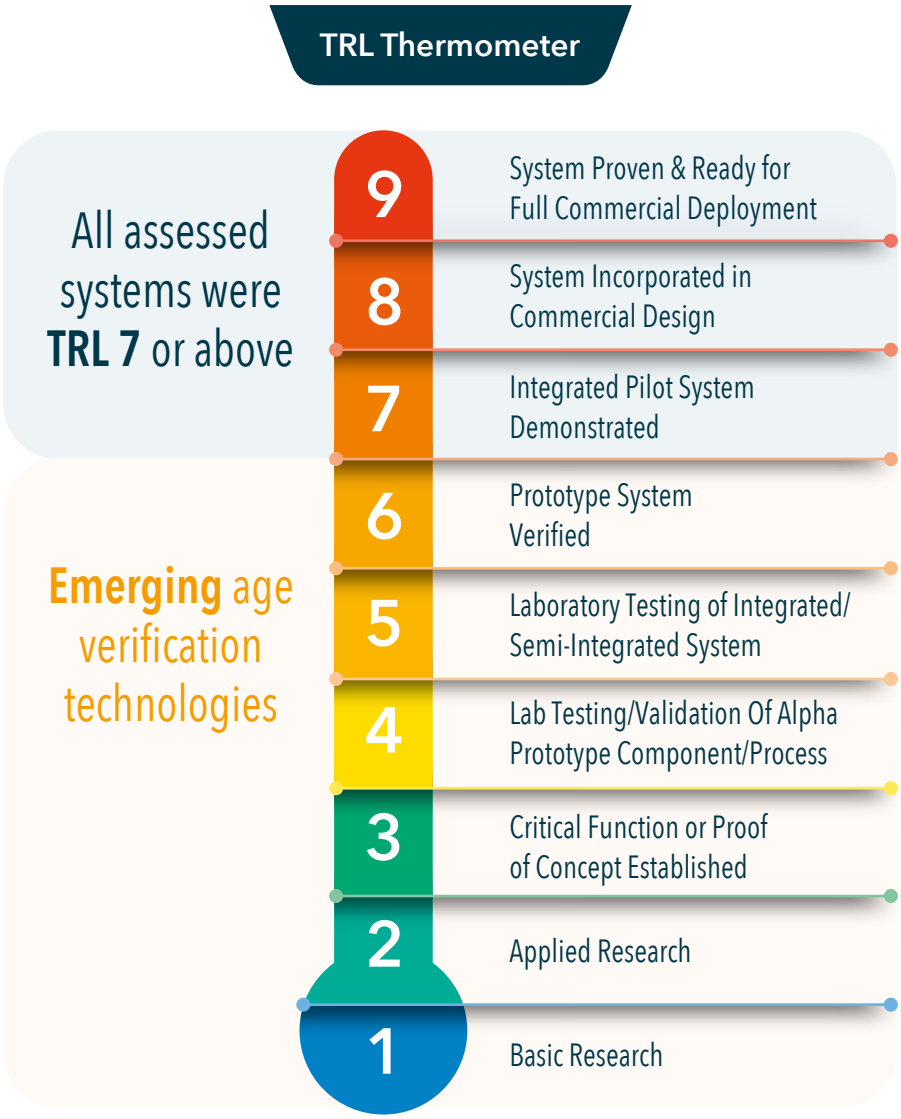


Figure B.11.1 *TRL Thermometer*

TRL 9 **System Proven and Ready for Full Commercial Deployment:** Actual system proven through successful operation in an operating environment, ready for full commercial deployment.

TRL 8 **System Incorporated in Commercial Design**: Actual system/process completed and qualified through test and demonstration (pre-commercial demonstration).

TRL 7 **Integrated Pilot System Demonstrated:** System/process prototype demonstration in an operational environment (integrated pilot system level).

TRL 6 **Prototype System Verified:** System/process prototype demonstration in an operational environment (beta prototype system level).

TRL 5 **Laboratory Testing of Integrated/Semi-Integrated System**: System Component and/or process validation is achieved in a relevant environment.

TRL 4 **Lab Testing/Validation Of Alpha Prototype Component/ Process:** Design, development and lab testing of components/processes. Results provide evidence that performance targets may be attainable based on projected or modelled systems.

TRL 3 **Critical Function or Proof of Concept Established:** Applied research advances and early stage development begins. Studies and laboratory measurements validate the analytical predictions of separate elements of the technology.

TRL 2 **Applied Research:** Initial practical applications are identified. Potential of material or process to solve a problem, satisfy a need or find application is confirmed.

TRL 1 **Basic Research:** Initial scientific research has been conducted. Principles are qualitatively postulated and observed. Focus is on new discovery rather than applications.

B.12 The Scientific and Technical Advisory Cell (STAC)

B.12.1 The development and oversight of the Trial's evaluation methodology was led by the **Scientific and Technical Advisory Cell (STAC)**, a dedicated expert group established to ensure the rigour, reliability and integrity of the Trial and its technical processes. The STAC played a central role in shaping the Trial's scientific framework, with a clear mandate to uphold international best practices in test design, execution and analysis.

Establishment and membership

B.12.2 The STAC was convened at the outset of the Trial and chaired by the Deputy Project Director. Its membership comprised interdisciplinary experts in software engineering, data science, biometric systems, privacy engineering, statistics, human-computer interaction and standards compliance. Members were drawn from both within the Trial delivery team and from external advisory groups, including contributors with experience in certification, behavioural science and the testing of high-assurance digital systems.

B.12.3 The STAC was designed to operate independently from vendor engagement, procurement or communications activities, ensuring its focus remained on methodological integrity and scientific robustness throughout the Trial.

ANDREW HAMMOND
Deputy Project Director

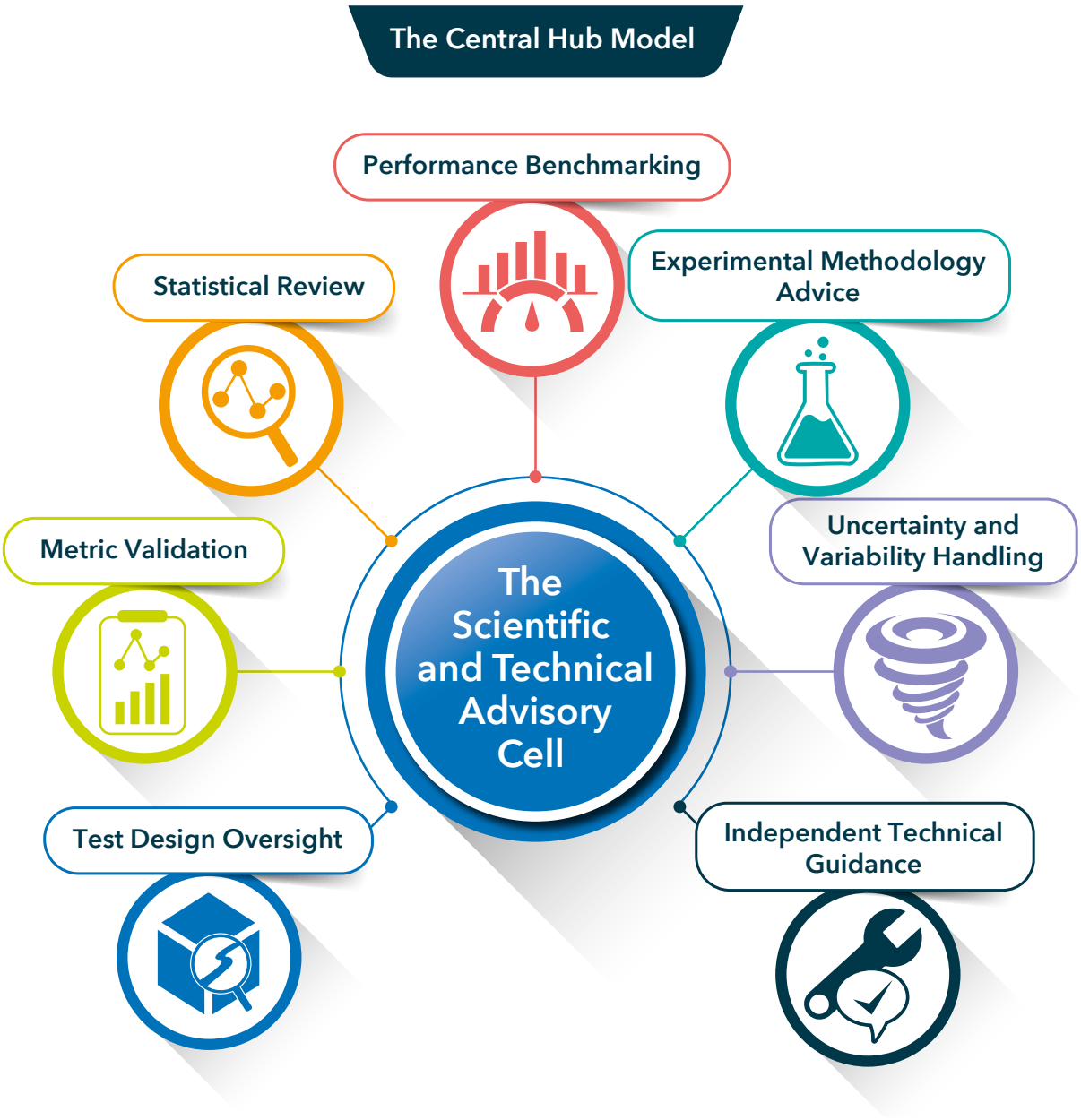


Figure B.12.1 *The Central Hub Model*

Roles and responsibilities

B.12.4 The STAC was responsible for the end-to-end development and oversight of the Trial's evaluation model. Its key functions included:

- Designing test protocols in line with ISO/IEC 29119-3 and other relevant standards, ensuring consistency across different age assurance methods and technology types.
- Defining and validating performance metrics, including accuracy, false acceptance and rejection rates, bias sensitivity, privacy impact and usability benchmarks.
- Overseeing data capture and sample stratification, including the development of inclusive demographic sampling strategies and scenario-based testing models.
- Supporting the development of Practice Statement guidance and vendor self-assessment structures, ensuring alignment with standards such as ISO/IEC FDIS 27566-1 and IEEE 2089.1.
- Reviewing statistical methods for both lab and real-world evaluations, ensuring analytical approaches were appropriate, reproducible and correctly interpreted.
- Establishing protocols for managing uncertainty, including buffer zone thresholds near age boundaries and escalation criteria for successive validation.
- Providing expert input on the testing of emerging or novel approaches, including AI-based inference, device-level controls and non-biometric signals.

B.12.5 Throughout the Trial, the STAC met regularly to review interim findings, approve testing plans and evaluate methodological refinements in response to observed challenges or new insights. These sessions were minuted and recorded to ensure transparency and traceability of methodological decisions.

B.13 Statistical Methods

B.13.1 The Trial employed rigorous statistical methods to evaluate the effectiveness, maturity and readiness of age assurance technologies within the Australian context. A critical aspect of this was ensuring that the evaluation activities yielded statistically significant and reliable results. To achieve this, a framework was established for determining appropriate sample sizes and analytical approaches.

| Determining sample sizes for statistical validity

B.13.2 Statistical validity in the Trial was primarily influenced by the number of Trial participants, which affected the confidence in evaluation outcomes such as classification accuracy measures (false accept rate, false reject rate, failure to acquire rate), binding accuracy (ensuring the age assurance output corresponds to the correct individual) and outcome error parity (freedom from bias).

B.13.3 As a starting point, the Trial considered Australia's population of approximately 26 million people. Applying a commonly accepted confidence interval of 95% (corresponding to a Z-score of 1.96) and a proposed margin of error of 0.03, the required sample size for analysis was calculated to be at least 1,067 participants. For specific population sub-categories, a wider margin of error of 0.05 was applied, resulting in a necessary sample size of at least 384 participants.

| Evaluation methodologies and statistical analyses

B.13.4 The Trial adopted a comprehensive evaluation approach, integrating various testing methodologies to ensure robustness, repeatability and statistical soundness:

- Automated Functional and Non-Functional Tests: These tests assessed the software's functionality and performance under diverse conditions to verify compliance with specified requirements.
- Manual Usability and Acceptance Tests: Conducted by human evaluators, these tests evaluated the user-friendliness and acceptance of the technology among different user groups.
- Manual Functional Tests and Static Reviews: These involved detailed examinations of the software's code and functionality to identify potential issues or areas for improvement.

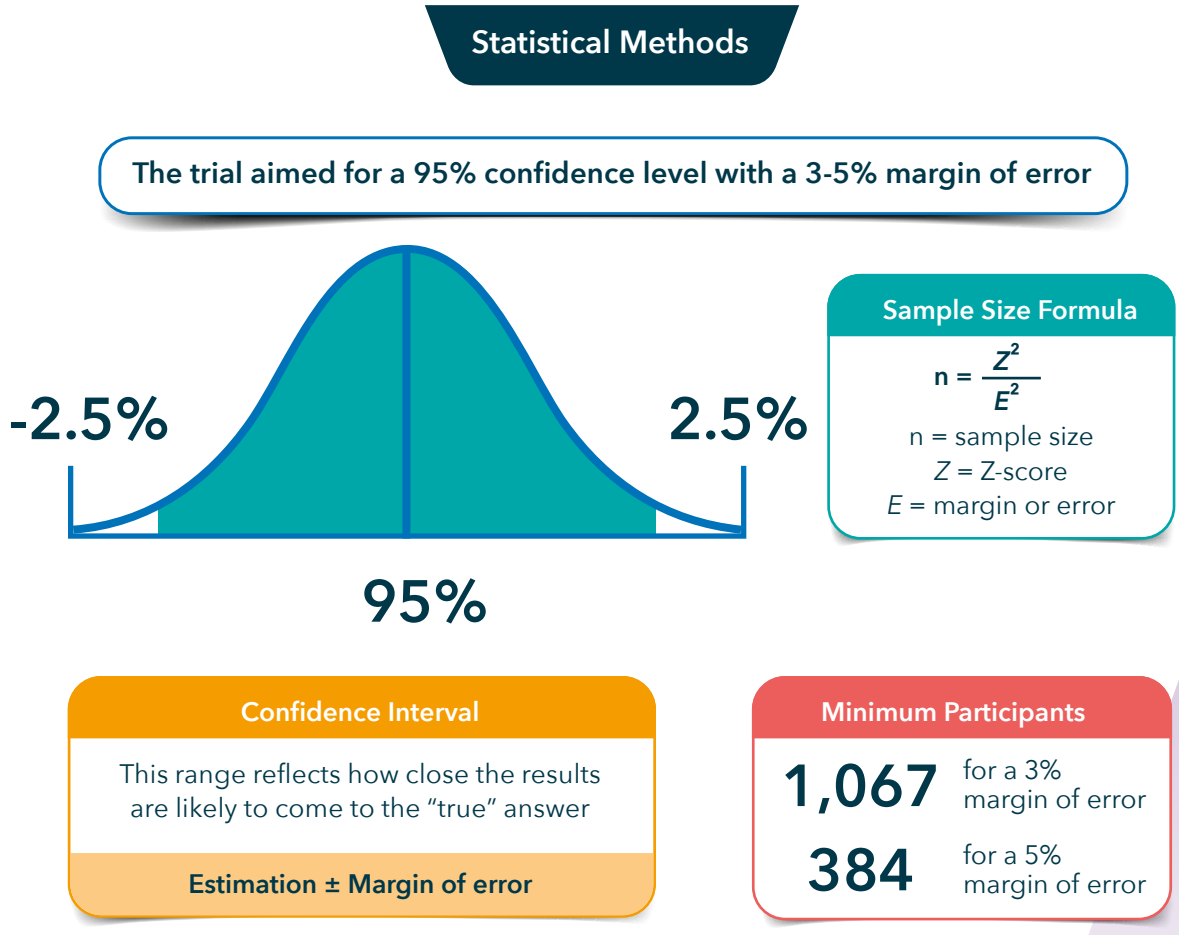


Figure B.13.1 *Statistical Methods*

Age Assurance Technology Trial

III

Ethics

B.14 Ethics Committee

| Purpose and role

B.14.1 The Project Ethics Committee was established to ensure that the Trial upheld the highest standards of ethical practice across its design, delivery and reporting phases. Its core function was to act as the primary governance body for ethical scrutiny and guidance, with a particular focus on safeguarding children, respecting privacy, managing impartiality and ensuring transparency and fairness throughout the Trial.

B.14.2 The Committee's formal Terms of Reference (ToR) were agreed in November 2024 and outlined a clear mandate to review activities that may involve:

- Collection or processing of personal or sensitive data
- Involvement of children or young people
- Participation of marginalised or vulnerable groups, including Aboriginal and Torres Strait Islander Peoples
- Real or perceived conflicts of interest
- Any situation where the Trial's impartiality, credibility or public trust could be called into question

| Composition and expertise

B.14.3 Chaired by George Billinge (Work Package 1 lead), the Committee brought together interdisciplinary experts from law, technology, child safeguarding and policy. Membership was drawn from the core delivery organisations and supplemented by advisors with domain-specific knowledge, including:

George Billinge	*Ethics Chair & WP1 (Data, Ethics and Impartiality) Lead*
Lyn Nicholson	*Legal Counsel (Holding Redlich)*
Tracey Rawlinson	*Safeguarding Lead (KJR)*
Asad Ali, PhD	*Technical Lead (Illuminate Tech)*
Rhianne Kiddle	*Project Oversight (ACCS)*
Johnny Fejo	*Cultural Advisor (with a focus on Indigenous perspectives)*
Abby Solway	*Secretary and Data Ethics Liaison*

B.14.4 Membership was maintained throughout the Trial and reviewed regularly to ensure appropriate representation and expertise across the evolving scope of activities.

GEORGE BILLINGE
Ethics Committee Chair

| Governance and operation

B.14.5 The Committee met monthly, with additional ad hoc sessions scheduled as required. Meetings followed a standing agenda, including approval of previous minutes, review of ethical risks and discussion of live issues raised by the Trial team or stakeholders.

B.14.6 All meetings were minuted and documented in accordance with the Trial's public accountability commitments.

Issues Considered and Resolved

B.14.7 The Ethics Committee played a hands-on role in shaping the ethical design of the Trial. Its contributions included:

Ethical Focus Area	Key Actions Taken by the Ethics Committee
Safeguarding & Consent	Reviewed school protocols, including how explainer materials were shown to children and how opt-in was recorded. Oversaw deletion of affected data after a consent error.[10]
Mystery Shopper Framework	Evaluated risks around involving children; ensured neutral language and voluntary, non-incentivised participation.[11]
Privacy & Legal Alignment	Identified inconsistencies between provider-supplied privacy notices and Australian legal expectations. Recommended clear, lawful, trial-specific policies.[12]
Data Handling & Storage	Advised on anonymisation, retention, and access controls; ensured compliance with national cybersecurity standards.[13]
First Nations Perspectives	Guided application of the AIATSIS Code; promoted culturally appropriate consent and data governance for Aboriginal and Torres Strait Islander participants.[14]
Impartiality & Conflicts	Supported impartiality protocols; reviewed provider cases; ensured transparent conflict of interest management.[15]

10. Ethics Committee Meeting, 14th May 2025.
11. Ethics Committee Meeting, 14th May 2025.
12. Ethics Committee Meeting, 11th March 2025.
13. Ethics Committee Meeting, 29th January 2025.
14. Ethics Committee Meeting, 14th May 2025.
15. Ethics Committee Meeting, 11th March 2025.

B.15 Ethical Considerations

B.15.1 Ethical considerations were at the heart of the Trial and underpinned each phase of its research, evaluation and reporting, acknowledging the sensitive and complex nature of age assurance technologies, particularly their impact on children's rights, privacy and safety. Recognising this, the Trial adopted a set of guiding ethical principles:

1. **Respect**
   The principle of respect was central to the Trial, recognising the inherent dignity and autonomy of every individual. It required that participants were provided with clear and accessible information about the Trial and its purpose, that their decisions to participate were voluntary and free from coercion and that they were treated with sensitivity to their cultural, social and historical backgrounds. This also extended to special care for children, ensuring age-appropriate communication and safeguards to prevent undue pressure or harm.

2. **Transparency**
   Transparency underpinned the Trial's credibility and trustworthiness. The Trial team prioritised clear communication about the goals, processes and outcomes, making information accessible to stakeholders, including participants and the wider public. Transparency also involved clarifying the scope of the Trial – emphasising that it was not intended to develop or endorse any specific technology but to independently evaluate existing approaches to age assurance. Open data handling and clear accountability mechanisms further bolstered this principle.

1. **Accountability**
   Accountability was built into the Trial's governance through an independent Ethics Committee whose purpose was to scrutinise Trial activities and decision-making. Detailed analysis of the Ethics Committee mechanism can be found in B8. All Trial members had a responsibility to uphold ethical standards, address any concerns raised by stakeholders and ensure prompt corrective action if ethical challenges emerged. Mechanisms for participants, including children, to raise concerns or withdraw consent reinforced this principle in practice.

2. **Fairness**
   Fairness guided the Trial's design and delivery to ensure inclusivity and equitable treatment of all participants and technology providers. The Trial actively worked to identify and address any risks of bias – such as demographic, racial or gender bias – in both the technologies under review and the evaluation methods themselves. Fairness also meant ensuring that diverse Australian populations, including Aboriginal and Torres Strait Islander Peoples, could participate meaningfully and share their unique perspectives.

3. **Privacy**
   Privacy was recognised as a fundamental human right and a key pillar of ethical research practice. The Trial followed principles of data minimisation – collecting only what was strictly necessary – and implemented strong data security measures to protect personal information. Privacy considerations were not only about data handling but also about upholding participants' dignity and autonomy, especially in the face of intrusive or sensitive data collection methods such as biometric analysis.

6. **Safeguarding children**
   As children's safety and wellbeing were central to the Trial's mission, child safeguarding was a dedicated ethical principle. The Trial drew on national frameworks, including the Australian Government's National Principles for Child Safe Organisations[16], to ensure children were protected and empowered throughout their involvement. This meant prioritising children's rights, responding swiftly to any concerns and ensuring that those working with children were properly supported and trained.

| Operationalising the principles

B.15.2 The Trial ensured that the chosen principles were not just theoretical – they were actively integrated into each stage of the project. What follows is how these principles were operationalised:

Principle	Operationalisation Summary
Data Protection and Privacy	Data handling followed the Australian Privacy Principles[17], using data minimisation, strong security, and privacy-by-design approaches.
Inclusion of First Nations Peoples	The framework ensured respectful inclusion and engagement of First Nations peoples, aligning with cultural commitments.
Child Safeguarding and Rights	The Trial prioritised children's rights under the UNCRC, ensuring their best interests were central, especially online.

16. *In February 2019, the National Principles for Child Safe Organisations were endorsed by all state and territory governments and the Australian Government. The principles aim to provide a nationally consistent approach to creating organisational cultures that foster child safety and wellbeing.*

17. *The Australian Privacy Principles are a set of 13 Principles that are the cornerstone of the privacy protection framework in the Privacy Act 1988. They are principles-based law.*

Impartiality and Accountability	An independent Ethics Committee and Impartiality Panel oversaw the Trial. Transparency in stakeholder roles reduced bias.
Minimising Bias and Promoting Equity	Technologies were assessed for fairness across race, gender and age, with a focus on equitable treatment of all users.
Transparency and Open Data	The Trial shared methods, conflicts of interest and findings where possible to support public trust and policy use.
User-Centric and Rights-Respecting Design	Technologies were evaluated for usability, accessibility and respect for dignity – especially for children and marginalised groups.
No Endorsement or Policy Mandate	The Trial provided neutral, evidence-based insights without promoting specific technologies or policy outcomes.

B.16 Peer Review

B.16.1 To ensure the integrity, rigour and relevance of its processes and findings, the Trial engaged a robust approach to peer review. The Trial incorporated several layers of review and expert input:

| Peer Review by Professor Toby Walsh

B.16.2 Professor Toby Walsh from the University of New South Wales provided an independent peer review and validation of the Trial's Evaluation Proposal. His role involved offering a critical external perspective, helping to ensure the methodological rigor and impartiality of the project outcomes.

B.16.3 As a part of ensuring confidence and credibility of the Trial, the approach, methodology and testing was subject to independent validation by Prof. Toby Walsh.

Professor Toby Walsh Validation Statement

The proposal does a very good job of scoping out a trial to evaluate the effectiveness of age assurance technologies in Australia. The proposal is especially strong with respect to: (1) the comprehensive evaluation criteria; (2) addressing evidence gaps; (3) explicit ethical principles; (4) a standards-based approach; (5) a commitment to open scientific reporting; (6) and recognition of children's rights.

I identified a few minor issues in the initial draft where I recommended some attention such as addressing combinations of age assurance methods, sample sizes for minority groups, and child friendly project outputs (given this group will be directly impacted by age assurance).

All these issues have been adequately addressed in the final evaluation proposal.

In summary, the trial has been scoped out well and looks set to deliver high quality results on the capabilities of age assurance technologies. I commend the work that the team has put in so far.

Professor Toby Walsh
FAA FAAAI FAAAS FACM FEurAI FRSN

Scientia Professor of Artificial Intelligence
University of New South Wales

NORTH
BONDI

Age Assurance Technology Trial

IV

Stakeholder Advisory

B.17 Stakeholder Advisory Board

B.17.1 A Stakeholder Advisory Board was established, chaired by Professor Jon Rouse APM. Its aim was to create a forum for representatives of key stakeholder groups to provide input.

B.17.2 Due to the independence of the Trial, the SAB was only advisory but provided the opportunity for a wide range of experts and individuals with an interest in age assurance technology and its applications to offer advice and challenge to the Trial team.

B.17.3 While the full Terms of Reference of the Stakeholder Advisory Board can be found on the Trial website, this section of the report aims to examine the methodology behind the SAB. This includes its role and mandate, the key issues raised by the Board and the Trial's response and the Board's merits and broader strategic contributions.

| Stakeholder Events

Where	Date	Time AEST/AEDT
Canberra/Online	28/11/2024	13:00 – 16:00
Online	12/12/2024	09:00 – 10:00
Online	28/01/2025	09:00 – 10:30
Sydney/Online	06/02/2025	12:00 – 16:00
Online	14/03/2025	09:00 – 10:30
Sydney/Online	29/04/2025	11:30 – 14:30
Online	17/06/2025	09:00 – 10:30
Online	29/07/2025	16:00 – 17:30

Role and Mandate

B.17.4 As outlined in its Terms of Reference, the SAB was established to ensure stakeholder interests were meaningfully incorporated into the independent evaluation of age assurance technologies. The SAB was strictly advisory, yet influential in:

- Providing challenge to assumptions and methodologies.
- Raising stakeholder concerns including legal, ethical, demographic and technical factors.
- Ensuring inclusivity, particularly of children and marginalised groups.

| Key issues raised and Trial responses

B.17.5 What follows is a selection of 6 key issues raised by the Stakeholder Advisory Board over the course of its deployment, as well as how the Trial considered and responded to these concerns.

(i) Evaluation Criteria and Methodology

Concerns Raised	Trial Responses
• There was lack of clarity around how diverse user needs, including older adults and people with disabilities, were being addressed. • There was potential misinterpretation of the test scope, with concerns that advanced presentation attacks weren't being sufficiently tested.	• Evaluation Proposal was amended to clarify that usability for all demographics would be evaluated. • More realistic circumvention scenarios were incorporated based on feedback. • Clarifications were made that the scope includes technologies aimed at age gates (13+, 16+, 18+), not specific age recognition.

(ii) Inclusion, Diversity and Sampling

Concerns Raised	Trial Responses
• Need to reflect Australia's ethnic, socio-economic and geographic diversity. • Importance of First Nations and Torres Strait Islander inclusion. • Concerns school-based testing may not reflect real-world use or age spread.	• Sample design based on 2021 Census to ensure demographic coverage. • Targeted 1,100 students from diverse and schools with majority Indigenous students. • Mystery shopper testing used to simulate real-world scenarios.

(iii) Ethics, Safeguarding and Consent

Concerns Raised	Trial Responses
• Lack of formal child safeguarding policy. • Handling of parent-child consent conflict and supporting child agency; transparency with parents and educators.	• Safeguarding protocol drafted using the Lundy model. • Parent Q&As, explainer videos and info packs used. • Sensitive data and consent conflicts not recorded to avoid ethical overreach.

(iv) Legal and Regulatory Alignment

Concerns Raised	Trial Responses
• Whether the age assurance technologies evaluated as part of the Trial would meet Australian cybersecurity and AI standards. • Calls for Trial alignment with the eSafety Safety by Design Framework and potential inclusion of AI assurance guidelines.	• Trial documentation was amended to include consideration (but not full conformity testing) for Australian frameworks, in line with the Trial's scope. • Acknowledgement that final conformance assessments will be the responsibility of future regulators.

(v) Circumvention and Systemic Integration

Concerns Raised	Trial Responses
• How the Trial would assess resistance to circumvention, particularly for more advanced methods. • Whether token reuse, portability and interoperability were within scope of the Trial. • Need to clarify how solutions handled repeated failures or false negatives.	• Circumvention was built into the evaluation, with some negative test scenarios included in the laboratory testing. • The Trial incorporated considerations around successive validation and token reuse mechanisms. • However, aspects like systemic integration and assumed identities (e.g. police use of child personas) were declared out of scope of the Trial but noted for future exploration.

(vi) Vendor Readiness and Transparency

Concerns Raised	Trial Responses
• Some vendors were unprepared or misunderstood the Trial as a procurement process. • There was concern over vendors failing to provide detailed practice statements, which were essential for robust evaluation.	• It was decided that vendors without practice statements would be assessed using interviews and public information, for instance that contained on their websites. • Practice statements were made publicly available to ensure transparency. • Technology Readiness Levels (TRLs) were a key determinant for inclusion in different testing streams. The SAB encouraged the evaluation of lower TRL and conceptual technologies, not just those ready for market.

| Membership of the Stakeholder Advisory Board

Professor Jon Rouse APM is a Professor at AiLECS Labs, Monash University and Chair of the Trial's Stakeholder Advisory Board.
Jon Rouse LinkedIn

B.17.6 Jon is a globally recognised expert in child protection and digital safety. With a career spanning almost four decades in the Queensland Police Service, he pioneered Australia's first proactive operation against online child sex offenders. He has led international operations, trained law enforcement worldwide, and held senior roles at ACCCE and INTERPOL. A recipient of multiple national honours, Jon also serves as an ambassador and director for leading child protection organisations across Australia and internationally.

B.17.7 Here is a look at the Trial's Stakeholder Advisory Board Members:

Stakeholder Advisory Board Members

Ajoy Ghosh
Cyber Alchemist
Cyber security expert

ageassurance.com.au/people/ajoy-ghosh/

Amber Hawkes
Blue Lantern Consulting
Principal Consultant

ageassurance.com.au/people/amber-hawkes/

Stakeholder Advisory Board Members

Amanda Third
Western Sydney University
Professorial Research Fellow

ageassurance.com.au/people/amanda-third/

Ben Au
Snap Inc.
Manager of Public Policy for Australia and New Zealand

ageassurance.com.au/people/ben-au/

Carol Ronken
Bravehearts
Program Lead

ageassurance.com.au/people/carol-ronken/

Cheryl Seeto
Meta
Head of Policy Programs, Australia

ageassurance.com.au/people/cheryl-seeto/

Colm Gannon
ICMEC
CEO

ageassurance.com.au/people/colm-gannon/

Conrad Townson
IFYS
Principal Advisor

ageassurance.com.au/people/conrad-townson/

Stakeholder Advisory Board Members

Campbell Wilson
Monash University
Associate Professor

ageassurance.com.au/people/campbell-wilson/

Deborah Young
RegTech
Founding CEO

ageassurance.com.au/people/deborah-young/

Jenny Duxbury
Digital Industry Group Inc.
Director of Regulatory Affairs, Policy, and Research

ageassurance.com.au/people/jenny-duxbury/

John Pane
Electronic Frontiers Australia Inc.
Chair

ageassurance.com.au/people/john-pane/

Kirra Pendergast
Safe on Social
Founder

ageassurance.com.au/people/kirra-pendergast/

Maree Crabbe
It's time we talked
Project Director

ageassurance.com.au/people/maree-crabbe/

Stakeholder Advisory Board Members

Melinda Tankard Reist
Collective Shout
Movement Director

ageassurance.com.au/people/melinda-tankard-reist/

Peter Violaris
UX Law
Partner

ageassurance.com.au/people/peter-violaris/

Ron Curry
Interactive Games & Entertainment Association
CEO

ageassurance.com.au/people/ron-curry/

Simon Callaghan
RegTech
CEO

ageassurance.com.au/people/simon-callaghan/

Susan McLean
Cybersafety Solutions
Cybersafety Expert

ageassurance.com.au/people/susan-mclean/

Yvette D'Ath
Former Attorney-General
Consultant

ageassurance.com.au/people/yvette-dath/

B.18 Statutory Stakeholders

B.18.1 The Trial engaged with key regulatory stakeholders from the outset, particularly the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCSA), the eSafety Commissioner and the Office of the Australian Information Commissioner (OAIC).

| Consultation with the eSafety Commissioner

B.18.2 Formal agreement; ongoing liaison

The Trial has maintained close engagement with the eSafety Commissioner since the beginning of the project. To ensure impartiality and address any perceived conflict of interest, a Memorandum of Understanding to establish clear boundaries was signed.

B.18.3 Alignment with Online Safety Act frameworks

The Trial's methodologies and practice statements explicitly reference age thresholds within the Online Safety Act 2021, reflecting age gate thresholds set by regulators, including eSafety's input.

B.18.4 The eSafety Commissioner also provided feedback on the Trial's Draft Preliminary Report, referencing the MoU to flag that the feedback was consistent with their commitment to collaborating on frameworks for assessing the effectiveness, privacy safeguards and compliance of age assurance systems. They provided several areas for the Trial team to address and consider when drafting the Final Report.

| Engagement with the OAIC

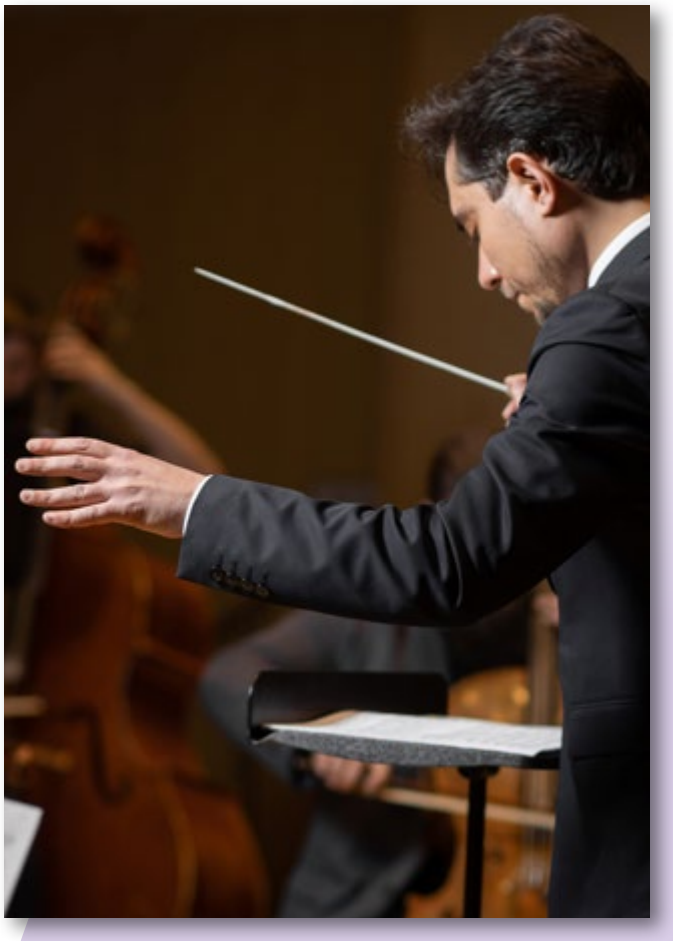
B.18.5 Participant privacy safeguards

The School information pack, the informative guide created to assist schools with understanding what participation in the Trial would look like, clearly informed participants and families that they could contact the OAIC with any concerns about privacy or data use, embedding regulatory oversight at the participant-facing level.

Age Assurance Technology Trial

V

Project and Risk Management



B.19 Project Management and Risk Management

| Quality control mechanisms

B.19.1 The Trial deployed a rigorous approach to Project Management, encompassing the tools, guidelines and templates for planning, managing and most importantly delivering the project. The structured Quality Management approach used a PM² Project Management Methodology, making use of the PM² template set for projects, including the approach to Risk Management, Project Change and Deliverable Acceptance.

B.19.2 The approach to Quality Control was part of the overall management of quality in accordance with ISO/IEC 17065 Accreditation and deployment of laboratory testing in accordance with ISO/IEC 17025 Accreditation.

| Risk Management plan

B.19.3 The Trial's Risk Management Plan defined and documented the Risk Management Process for the Trial. It described how risks would be identified and assessed, what tools and techniques would be used, what the evaluation scales and tolerances were, the relevant roles and responsibilities, how often risks needed to be revisited, etc. The Risk Management Plan also defined the risk monitoring and escalation process as well as the structure of the Risk Register which was used to document and communicate the risks and their response actions.

ageassurance.com.au/wp-content/uploads/2025/07/Age-Assurance-Technology-Trial-Risk-Register.pdf

B.19.4 The Trial approach also included adherence to standards, including existing ISO/IEC 17065 accreditation and the Protective Security Policy Framework, Privacy Act 1988, any Legislative Requirements, Chief Executives Instructions, Archives Act 1983, Public Governance, Performance, Accountability Act 2013 and any requirements of the Australian National Audit Office. Trial Compliance was not complete without full adherence to these relevant regulations and laws.

B.20 Future Accreditation and Standards Development

B.20.1 The Trial marks a pivotal step in advancing the maturity, trustworthiness and regulatory readiness of age assurance technologies. By embedding internationally recognised standards such as ISO/IEC FDIS 27566-1, IEEE 2089.1 and the ISO/IEC 25000 SQuaRE series into its methodology, the Trial has laid the groundwork for future accreditation, conformity assessment and certification within Australia's standards and conformance infrastructure. This standards-based approach not only validates the technical and ethical robustness of participating systems but also establishes a clear pathway for operationalising age assurance in regulated environments. As age assurance becomes increasingly critical to online safety and compliance, the Trial's findings position Australia to lead in the development of globally trusted certification frameworks that balance innovation, privacy and child protection.

| Standards alignment and future certification of age assurance systems

B.20.2 The standards-based approach adopted by the Trial, including through the ISO/IEC FDIS 27566 Series, the IEEE 2089.1 and the Systems and Software Engineering – Product Quality Model all provide a strong basis for the development of accreditation of conformity assessment and subsequent certification of individual age assurance providers in accordance with Australia's standards and conformance infrastructure.

B.20.3 The Trial broadly found that the systems under test had been built to be aligned with ISO/IEC FDIS 27566-1 even though this is still pending final publication. This would indicate a fairly smooth transition into an ISO-compliant range of solutions.

B.20.4 A key objective of the Trial was to ensure that the evaluation of age assurance technologies was not only rigorous and repeatable but also aligned with international standards. This approach enables a pathway toward future conformity assessment, accreditation and certification of age assurance systems and technologies under Australia's National Quality Infrastructure.

B.20.5 Across the systems assessed, the Trial found strong alignment with emerging standards, particularly:

International Standards	
ISO/IEC FDIS 27566-1	**Age Assurance Systems (Final Draft International Standard)** Defines the functional, privacy, security and performance characteristics required for trustworthy age assurance systems, including age estimation.
IEEE 2089.1	**Standard for Age-Appropriate Digital Services** Provides risk-based criteria for the evaluation of online services requiring age checks and includes demographic fairness metrics and usability thresholds.
ISO/IEC 25000 series	**Systems and Software Engineering: Quality Requirements and Evaluation (SQuaRE)** Offers a structured model (including ISO/IEC 25010 and 25040) to assess non-functional quality attributes like accuracy, reliability, usability and security – all of which were applied in the Trial evaluation.

B.20.6 These standards collectively provide the foundational framework for certifying system quality and operational maturity, particularly in safety-critical or privacy-sensitive applications involving children and regulated content.

| Readiness for Certification Under Australia's Standards and Conformance Infrastructure

B.20.7 Australia's standards and conformance infrastructure coordinated by JAS-ANZ (Joint Accreditation System of Australia and New Zealand), supports the development of conformity assessment schemes in line with international norms. The Trial's standards-based methodology and the demonstrated ISO-alignment of most systems tested would allow for a relatively smooth transition into a formal certification model, particularly where:

- Systems demonstrate consistency with ISO/IEC FDIS 27566-1 requirements, even though the standard is pending finalisation.
- Providers apply documented processes to ensure performance, fairness, security and explainability.
- Results can be evaluated by accredited third-party assessors under ISO/IEC 17065 (for product certification) or ISO/IEC 17025 (for laboratory testing).

B.20.8 Providers who participated in the Trial and implemented systems at Technology Readiness Level (TRL) 7 or above were generally able to show alignment with these expectations. They also displayed a readiness to undergo external validation or certification processes when appropriate frameworks become available.

B.20.9 While the Trial applied structured evaluation methods aligned with international standards, it did not undertake conformity assessments in the formal sense required under ISO/IEC 17065 (which governs accredited certification of products, processes and services). As such, the results of the Trial should not be interpreted as conferring certification, endorsement or accredited conformity status on individual participants. Instead, the findings reflect independent, standards-informed testing conducted for the purpose of evaluation and insight—not formal certification. Any future claims of compliance or certification would require assessment by a recognised conformity assessment body operating under appropriate accreditation frameworks.

Figure B.20.1 *Establishing a Certification Pathway for Age Assurance*

B.20.10 This approach would provide greater transparency, regulatory trust and industry credibility, while protect user rights and supporting innovation.

B.20.11 The Trial confirmed that most age assurance systems assessed had been developed in accordance with internationally recognised standards. While the standards are still evolving, the maturity of vendor practices and technical readiness indicate a strong foundation for future accreditation and certification.

B.20.12 Australia now has a significant opportunity to lead in the establishment of quality frameworks for age assurance, providing robust consumer protections while enabling secure, privacy-preserving and efficient access to age-appropriate services.

B.21 Acknowledgements

Age Check Certification Scheme

accscheme.com

Tony Allen
Chief Executive

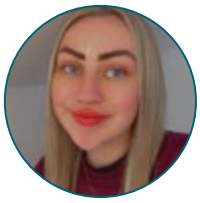
Tina Henderson
Head of Operations & Events

Nicola Elkin
Project Manager

Rhianne Kiddle
Global Policy & Projects Officer

Danielle Bradbury
Finance Coordinator

Surya Ramessh
Applied Data Scientist



Abbie Witkowski
Executive Assistant

Madeleine Winterbottom
Operations Coordinator

John Cassin
Senior Certification Officer

Keith Robinson
Portfolio Finance Director

Ebenezer Hagos
Data Scientist

Victoria Gale
Professional Standards Officer

Jon Ingle
Certification Officer

KJR est. 1997

kjr.com.au

Andrew Hammond
General Manager

Dr Kelvin Ross
Founder

Dr Mark Pedersen
Chief Technology Officer

Adrian Ugray
Senior Software Engineer

Jason Smart
Principal Consultant

Ji Yu Jan
Consultant

Seung Roh
Consultant

Stan Potums
Senior Machine Learning Engineer

Johnny Fejo
Aboriginal First Nations Cultural Consultant Senior Coordinator

Tracey Rawlinson
Senior Consultant

Jonathon Cleaver
Technical Consultant

Abby Solway
Apprentice

Edmund Byard
Senior Consultant

Tom Lyle
Analyst

Taylor Tang
Machine Learning Consultant

Archana Menon
Senior Consultant – Test Manager

Jissa Joy
Consultant

Dhanraj Jayendra
Consultant

Stephain Hsu
Software Quality Assurance Consultant

Luan Nguyen
IT Consultant

Tom Phillips
Junior Consultant

Patrick Vicky
Junior Consultant

SafetyTech Limited

safetytechlimited.com

Iain Corby
Executive Director

Becky Burgess
Project Consultant

illuminatetech.co.uk

George Billinge
Co-founder

Asad Ali
Co-founder

Georgia Mavromihalis
Policy Analyst

Emily Chebanu
Founder's Associate

koliya.com.au

Dr Kolyia Wedenage
AI Solutions Architect / Visiting Lecturer / PhD in Data Science

SojoCreative

sojocreative.com

Jo Carter
Brand Designer / Design Lead

Katy Hui
Graphic Designer

Sarah K Jones
Freelance Graphic Designer

HOLDING REDLICH

holdingredlich.com

Lyn Nicholson
General Counsel

Samuel Lane
Senior Associate

Nastassya Naude
Solicitor

Olivia Vitlich
Law Graduate

Heartburst

heartburst.com.au

Rob Van Der End
Chief Executive Officer

Nick Dube
Head of Digital

Kathryn Donaldson
Senior Digital Designer

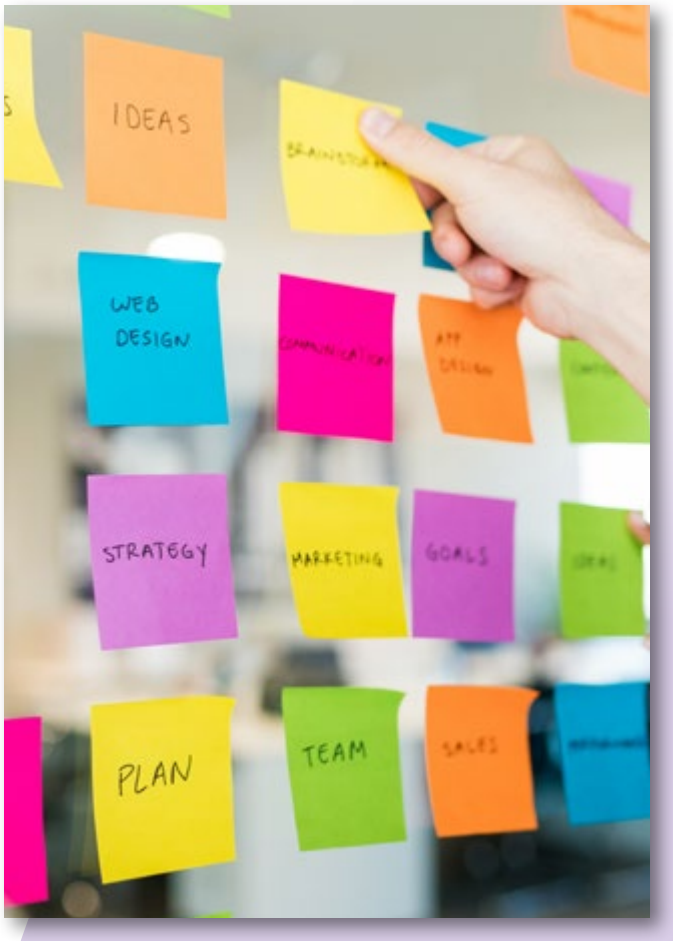
Josh Deidun
Lead Web Designer

Jared Ortlipp
Product and Project Manager

Age Assurance Technology Trial

VI

Project Plan



B.22 Organisational Management of the Project

B.22.1 The Project will be managed through the PM² toolkit. The project is broken down into six work packages:

Work Package 1
Data, Ethics and Impartiality

Work Package 2	Work Package 3	Work Package 4	Work Package 5
Context of Use, Evaluation Design and Validation	Call for Participation, Engagement and Communications	Evaluation Activity	Evaluation Reporting

Work Package 6
Programme Management, Risks and Quality Control

1 Work Package 1: Data, Ethics and Impartiality

Work Stream Leader	Time Period	Budget
George Billinge	M1-M8	5%

Objective

B.22.2 This work package covers the critical risks associated with data, ethics and impartiality of the technology trial. It particularly covers the data collection, analysis and controls associated with children's data, including biometric data. It covers ethical considerations relevant to the trial, including potential bias, discrimination and outcome error parity for indigenous populations in Australia. It secures impartiality (the presence of objectivity) through ACCS' existing ISO 17065 accreditation.

| Project Data Protection, Ethics Handbook and Monitoring

B.22.3 This task involves the creation of an ethics sub-committee in the programme, together with a data collection plan and addressing critical ethical risks, such as the collection of biometric data and data about under 18s and working with human test subjects. This task includes liaison with the Office of the Australian Information Commissioner (OAIC).

Key activities & deliverables (in purple)

Creation of an Ethics Handbook	M1
Creation of a Data Protection Impact Assessment	M1
Creation of a Data Collection Ethical Protocol	M1
Data & Ethics Review on Collection	M4
Data & Ethics Assurance Report	**M7**

| Safeguarding children

B.22.4 This task involves the application of safeguarding children policies in the Australian context. These are existing policies that need to be applied and adapted to the specifics of the technology trial.

Key Activities & deliverables (in purple)

Creation of an Ethics Handbook	M2
Safeguarding Children Assurance Report	**M7**

| Working with human test subjects

B.22.5 This task involves the application of data collection protocols from human test subjects. These are existing policies that need to be applied and adapted to the specifics of the technology trial. This task will include analysis and extent of Aboriginal and Torres Strait Islander peoples and multi-ethnic diverse communities in the demographic spread of human test subjects including through the application of the AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research. The project will include initial and ongoing Equality, Diversity and Inclusion Monitoring to identify where any aspects of the project have EDI consequences and put in place appropriate measures and controls to address them.

Key activities

Human Test Subjects Protocol	M2
Application of the AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research for Data Collection Phase	M3
Develop an ED&I Plan	M3
Undertake an ED&I Review [M8] to feed into the Performance Review & Project Evaluation	M8

| Impartiality mechanism

B.22.6 This task involves the submission of project proposal, project plan and final report to the ACCS Impartiality Panel (as its established impartiality mechanism under ISO 17065). This will include the creation of a conflict of interest declaration and register which will be applicable throughout the project.

Key activities & deliverables (in purple)

Initial Impartiality Report	M1
Conflict of Interest Register	M1
Mid-Project Impartiality Report	M4
Final Project Impartiality Report	M7

2 Work Package 2: Context of Use, Evaluation Design & Validation

Work Stream Leader	Time Period	Budget
Dr Dinindu Koliya Wedanage & Dr Asad Ali, PhD	M1-M2	22%

Objective

B.22.7 This work package covers understanding the specific context in use of age assurance technology in the Australian context, including online safety, privacy and digital ID legislation, ASP security management and the specific programme requirements. It includes a literature review, research relevant to the evaluation of age assurance technologies from domestic and international sources. This work package covers the design and development of a standardised and replicable evaluation process using ISO/IEC 25040 – Systems and software quality requirements and evaluation; applying the five core characteristics identified in ISO/IEC FDIS 27566-1 – Age assurance systems – Part 1: Framework and the specific indicators of confidence and measurement characteristics identified in IEEE 2089.1 – Online age checking systems and the Software Engineering test design methods in ISO/IEC 29119. All of this within existing ISO 17065 accreditation. This work package covers the validation and approval of the approach to evaluation.

| Understanding the national context

B.22.8 Analysis of the existing understanding of age assurance technology in Australia, including consumer attitudes and literature review. Analysis of the input from responses to information requests under s.20 of the Online Safety (Basic Online Safety Expectations) Determination 2022. Review of the inputs to the Roadmap for Age Verification and the background from the eSafety Commissioner through the Online Safety Act 2021.

Key Activities & Deliverables (in purple)

Identification of Relevant Materials, Open Source Research and Specific Reports	M1
Analysis of the Australian Context Report	**M2**

| Understanding the deployment context in australia

B.22.9 Developing understanding of the context in use for Australia, to include the Privacy Act 1988, Digital ID Act 2024 (including accreditation rules and data standards), human rights and anti-discrimination legislation (particularly Aboriginal and Torres Strait Islander peoples and multi-ethnic diverse communities) and the ASD Information Security Manual. This task needs to include engagement with the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCSA) on any additional factors or considerations for inclusion in the evaluation criteria. The research embraces the fact that Aboriginal and Torres Strait Islander peoples and multi-ethnic diverse communities have existed continuously as distinct societies, with diverse and unique laws, cultures, knowledge and worldviews that can inform research across a wide range of disciplines including physical sciences, social sciences and humanities.

Key activities

Analysis of the relevant deployment contexts in Australia	M2
Application of the ASD Information Security Manual to the project, including analysis of the accreditation and data standards from the AU Digital ID Framework	M2
Application of the research to the Aboriginal and Torres Strait Islander peoples and multi-ethnic diverse communities	M2
Engagement with DITRDCSA on potential additional factors or considerations	M1

| Evaluation design (systems & software engineering quality requirements and evaluation)

B.22.10 Development of an evaluation structure in accordance with ISO/IEC 25040. The product quality model categorizes product quality properties into nine characteristics: functional suitability, performance efficiency, compatibility, interaction capability, reliability, security, maintainability, flexibility and safety. Each characteristic is composed of a set of related sub-characteristics. This methodology will incorporate accuracy, interoperability, reliability, ease of use, freedom from bias, protection of privacy, data security and human rights protections as contexts in use.

Key activities

Analysis of relevant aspects and mapping of ISO/IEC 25010	M1
Building of an Evaluation Matrix in accordance with ISO/IEC 25040	M2

| Evaluation design (integration of ISO/IEC FDIS 27566-1 core characteristics and IEEE 2089.1 evaluation metrics)

B.22.11 Current development of ISO/IEC FDIS 27566-1 Core Characteristics need to be mapped to an evaluation matrix. These characteristics (covering functionality, performance, privacy, security and acceptability) for age assurance systems. The consideration of performance metrics needs to be aligned with IEE 2089.1 Annex B, but it may be the case that some progress is made with ISO/IEC WD 27566-3 covering evaluation (it is suspected that this will not be sufficiently mature for this project). Having completed that analysis, it needs to be drawn together into the evaluation matrix.

Key activities

Analysis of ISO/IEC FDIS 27566-1 Core Characteristics to align to the ISO/IEC 25010 Product Quality Model	M1
Analysis of IEEE 2089.1 Analysis Metrics (in Annex B) and alignment to the ISO/IEC FDIS 27566-1 Performance Characteristics and then feeding in to the ISO/IEC 25040 Evaluation Matrix	M2

| Evaluation design (biometric and test subject data capture)

B.22.12 The capture of biometric images (face, voice, hand modality), tokenised attribute exchange models (such as Age Aware by euConsent), and age inference through non-governmental hard identifiers (like credits cards, open banking connect, etc.) together with the gathering of ground-truth data for test subjects, built to a standardised metadata taxonomy for analytics is a critical part of the evaluation preparation. The test subject needs to consider biometric age estimation, account confirmation processes, email verification processes, parental consent, age-appropriate tokenised attribute exchange models and device or operating level interventions.

Key activities & deliverables (in purple)

Analysis of age assurance methods including age verification, age estimation and age inference to develop a biometric and test subject data requirement for evaluation	M2
Analysis of tokenised attribute exchange models available for evaluation	M2
Creation of metadata taxonomy for test data subjects	M2
Creation of age assurance modality protocols and guides for all age assurance methods in scope	**M2**

| Evaluation design (biometric and test subject data capture)

B.22.13 The capture of biometric images (face, voice, hand modality), tokenised attribute exchange models (such as Age Aware by euConsent), and age inference through non-governmental hard identifiers (like credits cards, open banking connect, etc.) together with the gathering of ground-truth data for test subjects, built to a standardised metadata taxonomy for analytics is a critical part of the evaluation preparation. The test subject needs to consider biometric age estimation, account confirmation processes, email verification processes, parental consent, age-appropriate tokenised attribute exchange models and device or operating level interventions.

Key activities & deliverables (in purple)

Analysis of age assurance methods including age verification, age estimation and age inference to develop a biometric and test subject data requirement for evaluation	M2
Analysis of tokenised attribute exchange models available for evaluation	M2
Creation of metadata taxonomy for test data subjects	M2
Creation of age assurance modality protocols and guides for all age assurance methods in scope	**M2**

| Evaluation design (technology stack)

B.22.14 Evaluation of deployments and technology readiness assessment at the device, operating system, digital platform, application level and at the point of delivery/access. Technology deployment samples need to address different platforms, at device and IS level and at platform level (such as plugins to standard HTML platforms) and readiness in the Australian context.

Key activities

Development of technology stack mapping with age assurance deployments	M3
Identification of source deployments in relying parties and test protocols for context in use	M2

| Evaluation design (sampling and statistical assumptions/limitations)

B.22.15 This task explores ensuring statistical significance of the evaluation activity.

B.22.16 This is principally based around classification accuracy measures (false accept rate, false reject rate, failure to acquire rate), binding accuracy (age assurance output relates to the correct individual), outcome error parity (freedom from bias). Taking the 26m population of Australia and applying a generally accepted in research methodology confidence interval of 95% (giving a Z score of 1.96), and a proposed margin of error of 0.03; this leads to a sample size of 1067+. This would apply to population wide analysis, but apply a wider margin of error of 0.05 to specific population sub categories (making the sample size 384+). NOTE: The confidence interval and margin of error is not the same thing as the classification accuracy of the system under test, it is about the reliability of the statistical sampling of that system under test.

B.22.17 Specificity measures a test's ability to correctly identify true negatives, while sensitivity assesses its ability to correctly detect true positives, reflecting accuracy in identifying conditions or events. The evaluation design needs to take account of successive validation methods (waterfall approach) including permutations and combinations of multiple age assurance methods.

Key activities

Preparation of statistical theorem protocols, based on the requirements in IEEE 2089.1 Annex B and statistical best practice (in accordance with Australian Bureau of Statistics guidance)	M2
Identification of all statistical measures to be deployed	M2
Identification of measurement uncertainty parameters and the requirements for sample sizes, confidence intervals, specificity and sensitivity	M2
Development of approach to securing outcome error parity analysis	M2

| Evaluation validation

B.22.18 This task is external to the core evaluation design team consisting initially of validation by internal subject matter experts, input from the Advisory Board and then independent validation of the proposed approach by Chief Scientist, Prof. Toby Walsh, Laureate Fellow & Scientia Professor of AI the University of New South Wales AI Institute.

Key activities & deliverables (in purple)

Prepare a report for External Evaluation Validation	**M2**
Undertake external evaluation validation	M2

| Evaluation approval

B.22.19 This task completes the evaluation design phase with approval from the DITRDCSA. This approval will then authorise the commencement of the evaluation phase of the project.

Key activities & deliverables (in purple)

Evaluation Proposal Report	**M1**
Evaluation Approval from DITRDCSA	M2

Milestone 1

Completion of Trial Development (including approvals) [M2]

3 Work Package 3: Call for Participation, Engagement & Communications

Work Stream Leader	Time Period	Budget
Iain Corby	M1-M3 & M8	18%

Objective

B.22.20 This work package is to attract participants in the technology trial. Participants are needed from (a) test subjects; (b) age assurance service providers (& potentially intermediaries depending on the deployment/technology stack); and (c) relying parties (particularly social media companies, providers of adult content and providers of age appropriate design implementations). The programme needs to be completed with transparency and ensuring the credibility and confidence of participants, the commissioning department and the Australian public.

| Stakeholder engagement

B.22.21 This task maintains stakeholder engagement, support and confidence in the project. The DITRDCSA may nominate specific stakeholders, but the project will include governmental, regulatory, third sector, representatives of Aboriginal and Torres Strait Islander peoples and multi-ethnic diverse communities., campaign organisations, age assurance service providers and relying parties. Particular attention will be paid to eSafety Commissioner and 5Rights Foundation as stakeholders. This includes the establishment of a Project Stakeholder Advisory Board.

B.22.22 There will be at least four engagement events for stakeholders during the project.

#1 Project Launch, Project Plan, Initial Engagement, Website, Openness & Transparency, Public Confidence and Trust. [M1]

#2 Stakeholder Engagement, particularly trial participants, understanding the approaches to evaluation, setting expectations for effort for trial participants, timetable, explaining how to participate. [M3]

#3 Preliminary Report, key initial outcomes from the trial outcomes, identification of opportunities for remedial evaluation. [M6]

#4 Trial conclusion, final stakeholder event, report publication, project review and evaluation, stakeholder feedback. [M8]

Key activities & deliverables (in purple)

Creation of a Stakeholder Matrix	**M1**
Establish a Project Advisory Board [M1] and hold four Advisory Board Meetings	M1
Holding an initial project stakeholder engagement event to set out the project plan, approach and overall management of the project to launch the calls for participation	M1
Holding a pre-participation stakeholder event before the evaluation activity takes place and to report back on the evaluation plans	M3
Holding a post preliminary report stakeholder event	M6
Final Report Stakeholder Event	M8

| Communications including project website

B.22.23 This task secures transparency and maintains public trust and confidence in the project. This includes the creation of a project team portal (within existing MS 365 Teams Tenancy), and an external website, including participant data gathering capability (using WordPress templates and MS Forms). Reports on all deliverables (subject to any security concerns or restrictions from DITRDCSA) would be available through the website to ensure openness and transparency in the project.

This task also provides the data gathering capability, particularly for the collection of practice statements (ISO/IEC FDIS 27566-1, clause 11) and efficacy claims from age assurance providers (IEEE 2089.1 Annex B). This task also covers bug identification and reporting for online communications. Each task leader and the project team will be providing regular blog entries and materials for inclusion on the public website.

Key activities

Creation of a project website, blog, contact and repository for documentation	M1
Maintaining publication of appropriate documentation through the website	M1–M8
Creation of online facility for the calls for participation	M2
Creation of online forms and questionnaires for data and evidence gathering from participants	M3
Creation of an online bug reporting mechanism	M4

| Call for participation (age assurance providers and intermediaries)

B.22.24 This task identifies, communicates with and gains the proactive engagement in the project from Age Assurance Providers and relevant Intermediaries (such as mobile network operators like Optus, Telstra and Vodafone), financial institutions (such as ANZ Bank, Commonwealth Bank, National Australia Bank, Westpac, etc.), credit agencies (such as Equifax, Experian and Illion) and other possible data intermediaries. It would also cover component service providers to age assurance (such as liveness detection, document authenticity detection, deepfake and video injection attack detection as examples). This would take into account advance expressions of interest to DITRDCSA, but also existing ACCS clients (including those in Australia and Globally) and members of the Age Verification Providers Association (AVPA).

Key activities

Establishing contact with AVPA, age assurance providers in direct contact with DITRDCSA and existing ACCS clients about the trial	M2
Establishing the parameters and guidelines for age assurance provider participants	M3
Issuing the call for participants to Age assurance providers and intermediaries	M4

| Call for participation (relying parties)

B.22.25 This task identifies, communicates with and gains the proactive engagement in the project from relying parties. These are organisations (such as social media companies, gaming, adult content, restricted goods, content, services, venues or spaces) that use (or ought to use) age assurance results for making age-related eligibility decisions. This task would include engagement with an liaison with organisations like the Australian Information Industry Association (AIIA), Australian Computer Society (ACS), Tech Council of Australia (TCA) and international organisations like the Digital Trust and Safety Partnership (DTSP).

Key activities

Establishing contact with AIIA, ACS, TCA, DTSP, etc.; relying parties in direct contact with DITRDCSA and existing strategic contacts with relying parties already held by ACCS	M2
Establishing the parameters and guidelines for relying party participants	M3
Issuing the call for participants to relying parties – particularly social media and online platforms for adult content	M4

| Call for participation (parental consent and control services)

B.22.26 This task identifies, communicates with and gains proactive engagement in the project from providers of parental consent and parental control services in Australia. This could include organisations like the Alannah & Madeline Foundation, Bark, Qustodio, Parent Power Box; but would also include global services like the Family Centre services provided by platforms (Google, Apple, etc) and social media (Meta, TikTok, Snap, etc).

Key activities

Establishing contact with parental consent and control services available in AU and globally, including services in direct contact with DITRDCSA	M2
Establishing the parameters and guidelines for parental consent and control services	M4
Issuing the call for participants for parental consent and control services	M5

| Gathering practice statements

B.22.27 This task gathers existing and developed practice statements (ISO/IEC FDIS 27566-1, Clause 11) for age assurance providers, intermediaries and relying parties. Although existing ACCS certified age assurance providers will already have a practice statement, other participants may need to develop one, so the project includes an interactive online questionnaire/tool for establishing practice statements. The practice statements cover functionality, performance, privacy, security and acceptability parameters and configuration settings for the deployment of age assurance systems.

Key activities & deliverables (in purple)

Creating an online portal for the collection of practice statements	M2

Briefing for participants on practice statements, including a training course on how to prepare them in accordance with ISO/IEC FDIS 27566-1 Clause 11	M3
Open call for practice statements to be submitted	M4
Collation of Practice Statements for evaluation	**M5**

| Call for participation (test subjects, including children)

B.22.28 This task identifies, engages with and gains the proactive participation of a sufficient number of test participants to meet the statistical requirements of the project. The recruitment process would include establishing the consent mechanisms safeguarding children and the ethical considerations. It would also include ensuring statistically significant representation of Aboriginal and Torres Strait Islander peoples and multi-ethnic diverse communities. in testing and analysis.

B.22.29 This task will include working with members of the Mystery Shopping Providers Association (MSPA) in Australia. The procurement of these services would be locally in Australia through existing contacts, but based on competitive quotations.

B.22.30 The task will include engagement and participation with schools and educational establishments geographically spread.

Key activities

Establishing the parameters and guidelines for human test subjects, including children	M3
Establishing the consent mechanisms, including where necessary, parental consent mechanisms for human test subjects	M3
Establish a contract with an AU-based mystery shopping provider	M3
Establish a contract with a UX AT provider	M3
Establishing the data collection requirements to match to ground truth metadata taxonomy	M4
Issuing the call for participants for human test subjects	M4
Outreach to schools and educational establishments to secure human test subject participation – suggest six schools geographically spread across Australia for selection for participation	M4
Establish links to representatives of Aboriginal and Torres Strait Islander peoples and multi-ethnic diverse communities to ensure that human test subjects are demographically representative for Australia	M4

4 Work Package 4: Evaluation Activity

Work Stream Leader	Time Period	Budget
Dr Mark Pedersen Dr Kelvin Ross	M3-M5	36%

Objective

B.22.31 This work package covers the actual evaluation activity. It includes the practical deployment of the evaluation plans established under work package 2. It covers the deployment of mixed-method (i.e. both quantitative and qualitative research methodologies to examine the research problem). Throughout, research team oversight will include continuous ethical compliance, safeguarding compliance, impartiality compliance and deployment in accordance with the approved evaluation approach.

B.22.32 The evaluation activity is structured around the practical deployments of age assurance technologies in the real world with an option to create simulated test harnesses, where the level of technology readiness (TRL) does not support real world deployment. It will be delivered through weekly STAC Meetings forming the core of the project's scientific approach. Finally, this work package includes any remedial evaluation following initial analysis of results or feedback from the preliminary report.

| Evaluation of age verification technologies

B.22.33 This task covers the deployment of age verification technologies that validate data, information, documents or materials to establish a date or year of birth and compute that with a subsequent date to provide an age assurance result indicating that a person is over/under an age threshold. This task will include the efficacy, accuracy, privacy, security and acceptability characteristics associated with those

(see ISO/IEC FDIS 27566-1 and IEEE 2089.1). The evaluation will include binding effectiveness and susceptibility to presentation attack vectors of age verification technologies. These will take into account biometric presentation attacks for selfie matching (see ISO 19795). Evaluations will be conducted in line with the product quality model set out in ISO 25010 and the approach to evaluation in ISO 25040. A comparative analysis will be provided, which in turn can be linked to the technology readiness analysis. This task will include an analysis of implementation factors for age verification technologies, including identity challenged demographics.

Key activities

Analysis of practice statements of age verification technologies	M4
Deployment of approved evaluation methodologies for age verification technologies	M3
Comparative quantitative statistical analysis of the efficacy age verification technologies	M3
Comparative quantitative statistical analysis of the efficacy age verification technologies	M4
Comparative quantitative statistical analysis of binding effectiveness and susceptibility to presentation attack vectors of age verification technologies	M4
Comparative technology readiness assessment of age verification technologies for inclusion	M5
Qualitative analysis of implementation factors associated with age verification technologies	M5

| Call for participation (Parental Consent and Control services)

B.22.34 This task identifies, communicates with and gains proactive engagement in the project from providers of parental consent and parental control services in Australia. This could include organisations like the Alannah & Madeline Foundation, Bark, Qustodio, Parent Power Box; but would also include global services like the Family Centre services provided by platforms (Google, Apple, etc.) and social media (Meta, TikTok, Snap, etc.).

Key activities

Establishing contact with parental consent and control services available in AU and globally, including services in direct contact with DITRDCSA	M2
Establishing the parameters and guidelines for parental consent and control services	M4
Issuing the call for participants for parental consent and control services	M5

| Evaluation of age estimation technologies

B.22.35 This task covers the deployment of age estimation technologies that undertake analysis of biological or behavioural features of humans that vary with age to provide an age assurance result indicating that a person is over/under an age threshold. These systems sometimes employ machine learning and artificial intelligence and may be subject to configuration settings or age buffers to avoid false positives based on inherent performance errors. This task will include the efficacy, accuracy, privacy, security and acceptability characteristics (see ISO/IEC FDIS 27566-1 and IEEE 2089.1). This also includes a more statistical analytical approach, such as establishing the mean absolute errors, standard deviation and outcome error parity of age estimation approaches. The evaluation will include UX workflow binding effectiveness (i.e. can you simply switch the user within the workflow), binding effectiveness, susceptibility to presentation attack and examination of the impact of ambient lighting on the efficacy of the system (something that is a known factor in face skin tone bias as an example). Evaluations will be conducted in line with the product quality model set out in ISO 25010 (applying the statistical measurement methodologies set out in ISO 10576). A comparative analysis will be provided, which in turn can be linked to the technology readiness analysis. This task will include an analysis of implementation factors for age verification technologies including outcome error parity for humans with protected characteristics in equality legislation.

Key activities

Analysis of practice statements of age estimation technologies	M4
Deployment of approved evaluation methodologies for age estimation technologies	M3
Comparative quantitative statistical analysis of the efficacy age estimation technologies	M4
Comparative quantitative statistical analysis of binding effectiveness and susceptibility to presentation attack vectors and ambient lighting of age estimation technologies	M4
Comparative technology readiness assessment of age estimation technologies for inclusion	M5
Comparative analysis of outcome error parity of age estimation technologies for humans with protected characteristics	M5
Qualitative analysis of implementation factors associated with age verification technologies	M5

| Evaluation of age inference technologies

B.22.36 This task covers the deployment of age inference technologies that validate the existence of facts or data about an individual that can result in their age or age range being inferred. These systems rely on the status of facts (such as the holder of a credit card) being in law required to be a certain age. This task will include the assessment of the reliability of inference facts from the technologies deployed – they can include for instance presence of registers of electors, holders of certain licences or permissions, military or public service, marital records and many other possibilities. This task will include the efficacy, accuracy, privacy, security and acceptability characteristics (see ISO/IEC FDIS 27566-1). The evaluation will include binding effectiveness and susceptibility of false record injection attack. Evaluations will be conducted in line with the product quality model set out in ISO 25010. A comparative analysis will be provided, which in turn can be linked to the technology readiness analysis. This task will include an analysis of implementation factors for age inference technologies including the validity of inference based on

differing cultural, regulatory or accuracy status of data in different states or territories and communities.

Key activities

Analysis of practice statements of age inference technologies	M4
Deployment of approved evaluation methodologies for age inference technologies	M3
Comparative qualitative analysis of the validity of inference methods based on differing cultural, regulatory or accuracy characteristics	M4
Comparative quantitative statistical analysis of binding effectiveness and susceptibility to false record injection attack vectors	M4
Comparative technology readiness assessment of age inference technologies for inclusion	M5
Qualitative analysis of implementation factors associated with age inference technologies	M5

| Evaluation of successive validation (waterfall method) approaches

B.22.37 This task covers age assurance providers and relying parties that provide multiple and successive approaches to age assurance, usually starting with an age assertion method and then supplemented by successive age assurance methods until the requisite level of confidence in the age of the individual is established. These systems can rely on cumulative assurance, but usually rely on gradually more privacy invasive approaches to gain assurance. This task will include the efficacy, accuracy, privacy, security and acceptability characteristics (see ISO/IEC FDIS 27566-1). The evaluation will include analysis and understanding of the practice statements of relying parties deploying successive validation, particularly where they are utilising multiple age assurance provider inputs and/or orchestration service providers. Evaluations will be conducted in line with the product quality model set out in ISO 25010. A comparative analysis will be provided, which in turn

can be linked to the technology readiness analysis. This task will include an analysis of implementation factors for successive validation.

Key activities

Analysis of practice statements of relying parties and age assurance providers that are deploying successive validation techniques	M4
Deployment of approved evaluation methodologies for successive validation techniques	M3
Comparative qualitative analysis of the validity of successive validation, particular where relying parties are utilizing multiple age assurance providers and/or orchestration service providers	M5
Comparative technology readiness assessment of successive validation techniques for inclusion	M5
Qualitative analysis of implementation factors associated with successive validation techniques	M5

| Evaluation of parental consent and control mechanisms

B.22.38 This task involves the deployment of parental consent (i.e. processes whereby a child prompts a parent, guardian or legally responsible adult to grant consent and approval usually on app or service in the onboarding user experience when accessing age restricted goods, services, content, venues or spaces) or parental control (i.e. processes whereby a parent, guardian, etc establishes advance approval and control over access, which are often deployed through on device or on connectivity router family control systems). The task includes the efficacy of consent mechanisms, binding of children to the correct parent/guardian (verification), evolving capability of children to consent and age appropriate design. The task also includes effectiveness of third-party control mechanisms to filter age in-appropriate content without over filtering news, health, educational and support resources (such as substance abuse, suicide prevention, pregnancy advisory, body dysmorphia support services or sexuality/gender advisory services) – this task is not about testing individual site age gates. This will also include

addressing the evolving capacity of children, issues of coercive control or abuse and age appropriate design in accordance with the 5Rights principles and the four C's content, contact, conduct and commerce developed by the Children Online: Research and Evidence (CO:RE) project, which was funded by the European Commission. Evaluations will be conducted in line with the product quality model set out in ISO 25010. A comparative analysis will be provided, which in turn can be linked to the technology readiness analysis. This task will include an analysis of implementation factors for parental consent and control mechanisms.

Key activities

Analysis of practice statements of relying parties that are deploying parental consent or control techniques	M4
Deployment of approved evaluation methodologies for parental consent techniques including efficacy, binding, evolving capacity and age appropriate design to 5Rights principles	M3
Deployment of approved evaluation methodologies for parental control techniques including efficacy, filter effectiveness, evolving capacity, susceptibility to coercive control and abuse and age appropriate design to 5Rights principles	M3
Comparative qualitative analysis of the validity of parental consent or control methodologies	M5
Comparative analysis of the validity of parental control techniques at different levels of the technology stack	
Comparative technology readiness assessment of successive validation techniques for inclusion	M5
Qualitative analysis of implementation factors associated with successive validation techniques	M5

| Evaluation of technology stack deployments

B.22.39 This task explores the deployment of age assurance techniques at different levels of the technology stack including front-end and back-end deployments. This could include on device, on platform, on server, on router, in app store, in app, in user experience or in onboarding/checkout experiences for different age restricted goods, content, services, venues or spaces. This task will also explore interoperability of tokenised memorisation of age assurance results, such as through the euCONSENT Age Aware solution. Evaluations will be conducted in line with the product quality model set out in ISO 25010. A comparative analysis will be provided, which in turn can be linked to the technology readiness analysis. This task will include an analysis of implementation factors for technology stack deployments.

B.22.40 This task involves identification and analysis of practice statements of relying parties that are either reliant upon the deployments in tech stacks outside of their control (such as on device, on router or in app store) and those that are inside their control (such as in app, in user experience, in onboarding/checkout or on platform. The qualitative analysis will be dependent upon the effectiveness of different age assurance methods at different levels of the tech stack, including the binding effectiveness to the individual user. The analysis of tech stack deployments also needs to take account of the use of devices in multiple locations (through different local connectivity) and through multiple networks, including the potential use of virtual private networks to evade tech stack controls. Evaluations will be conducted in line with the product quality model set out in ISO 25010. A comparative analysis will be provided, which in turn can be linked to the technology readiness analysis. This task will include an analysis of implementation factors for parental consent and control mechanisms.

Key Activities

Analysis of practice statements of relying parties that are advocating for are relying upon technology stack deployments outside of their own control (i.e. on device, on router, in app store, etc.)	M4
Analysis of practice statements of relying parties that are developing their own technology stack deployments (i.e. in app, in user experience, in onboarding/checkout, on platform, etc.)	M4
Analysis of reusable tokenised age assurance across multiple relying parties and tech stack deployments	M5
Deployment of approved evaluation methodologies for analysis of technology stack deployments of age assurance techniques	M4
Comparative qualitative analysis of the validity of various technology stack deployments	M5
Comparative technology readiness assessment of technology stack deployments for inclusion	M5
Qualitative analysis of implementation factors associated with technology stack deployments	M5

| Evaluation of technology readiness

B.22.41 This task involves a structured approach to technology readiness of age assurance technologies. This will be undertaken at two levels.

B.22.42 Firstly the market-wide technology readiness assessment similar to the State-of-the-Art analysis undertaken for Ofcom and ICO as a part of the measurement of age assurance technologies undertaken by ACCS. This involves understanding technical maturity, scalability, market choice, availability and collective understanding of performance characteristics across all providers.

B.22.43 Secondly the technology readiness assessment of individual trial participants for their deployments of age assurance methods. This needs to be conducted on each individual method that they make available for implementation by relying parties; on the use of successive validation if they use that; on the deployment within different layers of the technology stack; and through the creation and/or acceptance of tokenised age assurance results in an interoperable market.

B.22.44 Technology readiness assessments will be conducted in accordance with the DoD recognised TRL 1-9 basis using objective evidence of readiness.

Key activities

Collation of technology readiness assessments from other evaluations	M5
Production of a market wide technology readiness analysis covering market choice, availability and performance characteristics of different age assurance deployment at different levels of the technology stack	M5
Production of individual technology readiness assessments for each participant age assurance, parental consent, parental control or technology stack provider participant in the trial based on a pro-forma to DoD TRL analysis	M6

| Evaluation of implementation factors

B.22.45 This task involves examination of potential implementation factors for age assurance technologies in the Australian context. This will include analysis from the consumer and user research conducted by DITRDCSA. The task covers consideration of societal, technical and ethical aspects, including Australian Legislation, the Trusted Digital Identity Framework and user acceptability. The results of analysis of usability, inclusiveness and absence of unintended consequences (such as over-filtering or failing to address the evolving capacities of children to make their own choices).

B.22.46 The task will also explore cultural sensitivity and understanding how age assurance technologies affect cultural norms and practices in Australia, particularly with Aboriginal and Torres Strait Islander peoples and multi-ethnic diverse communities or other culturally diverse communities and social impacts including the societal implications of widespread age assurance, including the impact on user anonymity, freedom of speech, and access to information.

B.22.47 The task will also explore economic and cost implications providing an overview of the competitive cost profiles of providers (whilst also protecting market sensitive data and fostering effective competition).

Key activities

Collation of implementation factors identified from other evaluations	M5
Production of an analysis of implementation factors in the Australian Context	M6
Production of a market economic analysis of the cost profiles of providers (whilst protecting market sensitive data and fostering effective competition)	M6

| Remedial evaluation

B.22.48 This task recognises that despite clear evaluation planning (see Workstream 2), Stakeholder Engagement (see Workstream 3) and a structured approach to evaluation deployment (see Workstream 4), it is likely that some matters will arise during analysis and after production of preliminary results. Therefore, within reasonable expectations, this task covers the remedial evaluation or additional evaluations required to address any shortcomings identified.

B.22.49 The task will also explore economic and cost implications providing an overview of the competitive cost profiles of providers (whilst also protecting market sensitive data and fostering effective competition).

Key activities

Complete remedial evaluations	M5 & M7

5 Work Package 5: Evaluation Reporting

Work Stream Leader	Time Period	Budget
Rhianne Kiddle	M5-M8	14%

Objective

B.22.50 This work package covers the evaluation reporting process. It includes gathering research methodology and validation, literature review and explaining the evaluation context. This involves creation of an Editorial Board, who will meet regularly as the project moves towards publication of the report. There are two phases of reporting: a preliminary report [M6] and a final report [M8]. The task involves considerable effort to make the report:

(a) Scientifically robust and resistant to external scrutiny (by academics, statisticians, parliamentarians, stakeholders and trial participants), and

(b) Understandable to different audiences (by providing executive summaries, simple explainers, detailed analysis and statistical tables, charts, diagrams and graphics).

B.22.51 It is intended that the report will be published in accordance with guidelines issued by the Australian Bureau of Statistics and fit for public Senate Scrutiny.

| Data gathering

B.22.52 This task involves gathering of all of the data, reports, analysis and evaluations of the individual tasks and deliverables within the workstreams. It also involves working with graphic designers, copywriters, editorial, photography and data scientists to provide for engaging and understandable content. The task includes peer review by Chief Scientist, Prof. Toby Walsh, Laureate Fellow & Scientia Professor of AI the University of New South Wales AI Institute.

Key activities & deliverables (in purple)

Creation of a report structure, skeleton and graphic design style, colour scheme, palette and design themes – aligned to the website design	M4
Collation of outputs from all workstreams and evaluations	M5
Creation of graphic assets, data tables and report contents.	M5
Peer review by the University of New South Wales AI Institute	**M6**

| Alignment of data to indicators of confience

B.22.53 This task involves analysis of the results against the indicators of confidence in ISO/IEC FDIS 27566-1 and IEEE 2089.1. This is part of the scoring process and potentially being able to categorise age assurance technologies as meeting basic, standard, enhanced or strict indicators of confidence. The graphic representation of this in final reports will be crucial to aid understanding of the relative merits of the technologies and approaches examined during the trial.

Key activities

Reporting on analysis of evaluation results against the indicators of confidence in ISO/IEC FDIS 27566-1 and IEEE 2089.1	M5

| Preliminary report

B.20.54 This task involves the production of a preliminary report, including identifying any remedial evaluations required, gathering stakeholder feedback on the preliminary report and appropriate pre-publication quality control on the report (including proof reading, sense checking and accuracy validation).

B.20.55 This task also involves ensuring that the DITRDCSA and statutory agencies in Australia have effective pre-publication input to the report without compromising impartiality. This also involves scrutiny by the Ethics Panel and Impartiality Panel for ACCS. Finally, the task involves publication activities, stakeholder engagement and making the report publicly available through the Project website.

Key activities & deliverables (in purple)

Implementing content into the preliminary report skeleton	M5
Pre-publication stakeholder reviews of the preliminary report starting with DITRDCSA, then engaging with statutory stakeholders (such as eSafety, OAIC, etc), then with the Stakeholder Advisory Board before final preliminary report publication clearance from DITRDCSA.	M5
Identification of any pre-publication remedial evaluations required	M5
Pre-publication quality control on the report	M6
Consideration of the preliminary report by the Impartiality Panel and Ethics Panel	M6
Publication of the preliminary report; feeding into stakeholder events and making the report publicly available through the project website	**M6**

Milestone 3

Completion of Trial and Delivery of a Preliminary Report [M6]

| Final report and summary

B.22.56 This task involves the production of the final report following any remedial evaluation or actions needed as a result of the preliminary report. The task includes the necessary pre-publication quality control checks and clearances that are required to include:

(a) DITRDCSA

(b) eSafety Commissioner

(c) Ethics Review in accordance with AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research

(d) Peer Review by the External Validators UNSW

(e) Consideration (but not editorial changes) by our Stakeholder Advisory Board

(f) Ethics Panel

(g) Impartiality Panel

B.22.57 Finally, on publication, this task includes the dissemination activities for the report including legal deposit in the National Library of Australia and feeding into stakeholder events and making it publicly available through the project website.

B.22.58 It is also anticipated that there will be other dissemination activities by DITRDCSA, including if applicable scrutiny activities post-publication by the Senate.

Key activities & deliverables (in purple)

Analysis of feedback from stakeholder events, public reaction, stakeholder reaction, participant reaction and other feedback from the publication of the preliminary report	M7
Identification and tasking of any remedial evaluations required and integration of their results into the final report	M7
Redrafting of a final report, including pre-publication quality control on the report	M7
Engagement with DITRDCSA and statutory stakeholders on the final report, including any requirements for review by the Australian Bureau of Statistics of pre-publication requirements for Australian research subject to public scrutiny	M8
Consideration of the preliminary report by the Impartiality Panel and Ethics Panel	M8
Peer review of the final report by the University of New South Wales AI Institute.	**M8**
Publication of the final report, including allocation of ISBN data and legal deposit with the National Library of Australia; feeding into stakeholder events and making the report publicly available through the project website	**M8**

Milestone 4

Completion of Final Report and Summary Document [M8]

6 Work Package 6: Programme Management, Risks & Quality Control

Work Stream Leader	Time Period	Budget
Tina Henderson Keith Robinson	M1-M8	5%

Objective

B.22.59 This work package covers programme management. This includes ensuring a structured quality management approach to the project (using PM²), and ensuring that public money is spent appropriately, subject to best value review including for any project procurements, managing risk and timescales and maintaining regular contact with the project commissioners at DITRDCSA. Finally this work package covers project compliance and final review and evaluation of the project as a whole. The Project Board will meeting fortnightly and includes: Tony Allen, Project Director, Andrew Hammond, Deputy Project Director & Chair of the STAC, George Billinge, Data, Ethics and Impartiality, Iain Corby, Stakeholder Relations, and Rhianne Kiddle, Senior Project Coordinator.

| Production of a project plan

B.22.60 This task includes the formal adoption of this project plan, timescales, GANTT chart, deliverables and milestones following contract discussions and negotiations with the Department for Infrastructure. This also includes the identification and agreement of KPIs and performance metrics for the discharge of the contract. This activity is pre-project start and should be completed by the beginning of M1.

Key activities & deliverables (in purple)

Establish the project plan including the timescales, GANTT chart, deliverables and milestones	M0
Obtain approval for the project plan	M0
Production of a Project Plan	**M0**

Milestone 5

Completion of Project Plan [M0]

| Project quality control/process control/records management and PM²

B.22.61 This task will ensure rigorous project management, including maintaining quality controlled and adequate records of activity under the project. This includes a PM² project management methodology to deploy the tools, guidelines and templates for planning, managing and delivering the project. The Project Charter provides a set of guiding principles for the deployment of the project so that stakeholders can be informed through the project website and aligned with the Ethics Handbook. This quality control process is part of the overall management of quality in accordance with the ISO 17065 accreditation and the deployment of laboratory testing in accordance with ISO 17025 accreditation. The Project Handbook helps team members to ensure consistency and compliance with project requirements, documentation and records.

Key activities

Establish the Project Charter: Defines project scope, objectives, stakeholders and key deliverables from the project plan. This includes defining the ethical principles of the project (linked to the Ethics Handbook).	M1
Establish a Project Handbook providing detailed project management procedures	M1
Establish and maintain an Issue Log: Records and tracks project issues	M1-M8
Establish and maintain a Change Log to document changes and their impact on the project	M1-M8
Undertake a Mid-Project Quality Review	M4
Undertake a Final Project Quality Review to feed into the Performance Review and Project Evaluation	M8

Project quality control/process control/records management and PM²

B.22.62 This task will ensure rigorous project management, including maintaining quality controlled and adequate records of activity under the project. This includes a PM² project management methodology to deploy the tools, guidelines and templates for planning, managing and delivering the project. The Project Charter provides a set of guiding principles for the deployment of the project so that stakeholders can be informed through the project website and aligned with the Ethics Handbook. This quality control process is part of the overall management of quality in accordance with the ISO 17065 accreditation and the deployment of laboratory testing in accordance with ISO 17025 accreditation. The Project Handbook helps team members to ensure consistency and compliance with project requirements, documentation and records.

Key activities

Establish the Project Charter: Defines project scope, objectives, stakeholders and key deliverables from the project plan. This includes defining the ethical principles of the project (linked to the Ethics Handbook).	M1
Establish a Project Handbook providing detailed project management procedures	M1
Establish and maintain an Issue Log: Records and tracks project issues	M1-M8
Establish and maintain a Change Log to document changes and their impact on the project	M1-M8
Undertake a Mid-Project Quality Review	M4
Undertake a Final Project Quality Review to feed into the Performance Review and Project Evaluation	M8

| Project risk management plan

B.22.63 This task involves establishing a risk management plan and maintaining an effective, reviewed and monitored risk register. This is also considered as a part of Monthly Contract Management Meetings.

Key activities & deliverables (in purple)

Creation of a Risk Log and continuous monitoring of the Risk Log in Fortnightly Project Team meetings and the Monthly Contract Management Meetings with DITRDCSA	M1-M8
D-6.3 Creating a Risk Management Plan	**M1**

| Monthly contract management meetings

B.22.64 This task involves a fortnightly project team meeting and a monthly contract management meeting with the DITRDCSA(#RFT 4.4.1). The meeting will be supported by an agreed format for progress reporting. In parallel with the monthly contract management meetings, the project team will also hold internal fortnightly project coordination meetings.

Key activities

Develop an agreed format for project status reports for sharing progress with DITRDCSA	M1
Implement a fortnightly project management meeting	M1-M8
Participate in monthly contract management meetings with DITRDCSA	M1-M8

| Project compliance

B.22.65 This task includes assurance for contract compliance, accounting for spending of public money, accounting and audit. It also includes adherence to standards including existing ISO/IEC 17065 accreditation and the Protective Security Policy Framework, Privacy Act 1988, any Legislative requirements, Chief Executives Instructions, Archives Act 1983, Public Governance, Performance, Accountability Act 2013 and any requirements of the Australian National Audit Office.

Key activities & deliverables (in purple)

Identification of contract compliance issues relevant to this project	M0
Completion of sub-contracting arrangements, contracts and banking payments (including ethics, AML and sanctions compliance)	M2
Half-Way Accounting for Expenditure	M2
Final Accounting for Expenditure	**M8**

| Performacne review and project evaluation

B.22.66 This task involves internal and external review of contract performance. It will include assurance from the project legal advisors on compliance, any external audit of expenditure required for project compliance and an analysis of the timeliness and acceptability of project deliverables. The review will also examine lessons learned

(from the project itself rather than from the age assurance systems under evaluation – see T5.4). The aim of project evaluation is to help the project partners and DITRDCSA to deliver improved project management and delivery in the future.

Key activities & deliverables (in purple)

Prepare a final contract performance review and evaluation, to include declarations of legal compliance and analysis of project deliverables, timeliness and acceptability	M8
Prepare a Lessons Learned Report to capture insights from project execution for future improvements	**M8**

| Final report production

B.22.67 This plan includes the production of the final report following any remedial evaluation or actions needed as a result of the preliminary report. The task includes the necessary pre-publication quality control checks and clearances that are required to include:

(i) The Department

(ii) eSafety Commissioner

(iii) Ethics Review in accordance with the Ethics Framework AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research

(iv) Peer Review by Prof. Toby Walsh at the University of New South Wales

(v) Consideration (but not editorial changes) by the Stakeholder Advisory Board

(vi) ACCS Impartiality Panel

B.22.68 The plan involves the production of a final report by the end of June 2025.

B.22.69 Finally, on publication, this task includes the dissemination activities for the report including legal deposit in the National Library of Australia and feeding into stakeholder events and making it publicly available through the project website.

B.22.70 The Project Team also anticipate and will support other dissemination activities by the Department, including if applicable scrutiny activities post-publication by the Senate.

| Conclusion

B.22.71 The Age Assurance Technology Trial represents a significant step forward in understanding and implementing effective, reliable and privacy-conscious age assurance technologies. As online safety concerns grow, particularly around protecting minors from age-inappropriate content, this trial will provide essential data on the practical, ethical and technological considerations of various age assurance methods.

B.22.72 Through rigorous testing, stakeholder engagement and compliance with privacy standards, the trial aims to identify solutions that not only meet regulatory needs but are also feasible for widespread adoption. The insights gained will support the development of robust guidelines and policies, informing future legislation and setting a benchmark for age assurance standards in Australia.

B.22.73 The successful completion of this trial will enable policymakers, digital platforms and technology providers to make informed decisions on implementing age assurance, creating a safer online environment for young Australians. This project underscores Australia's commitment to pioneering solutions that balance safety, privacy and innovation in the digital age.

The **Age Assurance Technology Trial** is a landmark national initiative evaluating the real-world performance, privacy, usability and security of age assurance technologies. Commissioned by the **Australian Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts,** the Trial assessed 48 vendors and over 60 distinct technologies across various sectors, including social media, gaming, adult content and online retail. Through lab-based testing, interviews, analysis, school-based trials and mystery shopper evaluations, the Trial investigated how well different solutions could confirm, estimate or imply a user's age in ways that are secure, privacy-preserving and inclusive.

At the heart of the trial was one fundamental question: **Can age assurance be done?** The answer – based on thousands of data points, stakeholder interviews and international standards – is **yes, it can.** While no single solution fits all contexts, the Trial found that a wide variety of technologies already meet meaningful thresholds for accuracy, security and privacy when carefully selected and implemented. The report offers a comprehensive evidence base to support regulators, industry leaders and the broader public in shaping a safer, age-appropriate digital environment for all Australians.

Visit us on social media...

@AgeCheckCert

Age Check Certification Scheme

www.ageassurance.com.au

AVID Certification Services Ltd t/a Age Check Certification Scheme, registered in England 14865982 • Unit 321 Broadstone Mill, Broadstone Road, Stockport, SK5 7DL, United Kingdom • ABN 76 211 462 157

ISBN 978-1-0681646-1-3