Age Verification Test Report: YOTI

Introduction

This report summarizes the results of the independent evaluation of the Age Assurance Software Solution (referred to as the Target of Evaluation, or ToE), performed as part of the Age Assurance Technology Trial. The evaluation focused on the core properties required by ISO 27566-1: functionality, performance, privacy, security and acceptability.

The objective of this test was to assess the readiness and effectiveness of the solution in real-world conditions, to inform regulatory, industry and public stakeholders.

Disclaimer

The inclusion of this test report in the suite of Age Assurance Technology Trial (AATT) documents does not constitute endorsement, certification or approval of any product, service or provider. The findings are based on self-declared information, interviews and test results submitted by participating organisations, and while evaluated under structured criteria, not all claims have been independently verified in full by the Trial team.

This report reflects the status of the technology at the time of testing and within the scope of the Trial. No guarantee is given as to the completeness, accuracy or continued applicability of the findings. The Trial was a technical evaluation only and did not assess legal or regulatory compliance. Inclusion of a test report does not imply market readiness or regulatory acceptance. Any person considering the use of the technology described in this test report should ask the provider for up-to-date evidence of independent conformity assessment of their products or services and should not rely on this test report.

The AATT, Age Check Certification Scheme, nor any of the AATT contractors do not accept any liability for any statements or assessments relied upon in this test report.

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Amendment register

VERSION	VERSION DATE	AMENDMENT DESCRIPTION
0.9	30 June 2025	Initial draft
1.0	4 July 2025	Approved for release
1.1	8 July, 2025	Minor update to references
1.2	21 July 2025	Minor update to test schedule

Approvals:
This document has been approved for release by:
Mark Pedersen

References

Document	Location (URL address or Other)
ALM Octane – Test Cases	Test Case Execution Dashboard

Glossary

Term	Meaning
ToE	Target of Evaluation

Target of Evaluation

Product Name and Provider

- **Product Name**: N/A
- **Provider Name**: YOTI
- **Version Number/Description**: Current at the time of testing.

Provider's Practice Statement

Purpose and Overview

- To confirm a user's age (e.g., 18+) using AI-powered facial estimation, ID document verification, and reusable digital identity credentials.

Methods of Age Verification

- **Facial Age Estimation:**
  - User takes a selfie that is analysed by a neural network trained on millions of images.
  - Provides estimated age and a confidence score.
  - Mean absolute error: ~1.2 years in 13–25-year-olds.
  - No biometric template retained after processing.
- **Document Verification:**
  - User scans a passport, driver's licence, or other ID.
  - OCR extracts date of birth, which is validated against the document's security features.
  - Selfie used for face matching and liveness detection.
- **Reusable Yoti Digital ID:**
  - Pre-verified credentials stored securely in the Yoti app.
  - Users can share only an age confirmation (e.g., "Over 18") without revealing their date of birth.
- **Fallback & Step-Up:**
  - If facial estimation confidence is low, prompts user to upload an ID.

Privacy & Data Protection

- GDPR, UK Data Protection Act, and Australian Privacy Principles compliant.
- ICO Sandbox participant (reviewed by the Information Commissioner's Office).
- Data minimisation: only essential data collected.
- By default, images are retained only as long as necessary to process the check.
- Encryption in transit and at rest.
- User rights: access, correction, deletion, and objection.

Security & Certification

- ISO 27001 certified information security management system.
- iBeta Level 1 and 2 PAD certification for liveness detection.
- Regular penetration testing and third-party security assessments.
- Yoti app independently audited and certified (including BSI Kitemark).

Accessibility & Ease of Use

- Works on mobile and desktop devices.
- Clear step-by-step instructions with visual guidance.
- Multiple language options.
- Designed to be accessible to users with varying literacy levels.

Human Rights & Inclusion

- Facial estimation enables users without IDs or bank accounts to prove age.
- Consent explicitly required before verification begins.
- Digital ID reduces repeat data collection and allows reusable, privacy-preserving credentials.

- Inclusive design principles applied throughout.

Technology Readiness Assessment (TRL)

TRL	Definition
TRL 1	**Basic Research**: Initial scientific research has been conducted. Principles are qualitatively postulated and observed. Focus is on new discovery rather than applications.
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 3	**Critical Function or Proof of Concept Established**: Applied research advances and early-stage development begins. Studies and laboratory measurements validate an
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 5	**Laboratory Testing of Integrated/Semi-Integrated System**: System Component and/or process validation is achieved in a relevant environment.
TRL 6	**Prototype System Verified**: System/process prototype demonstration in an operational environment (beta prototype system level).
TRL 7	**Integrated Pilot System Demonstrated**: System/process prototype demonstration in an operational environment (integrated pilot system level).
TRL 8	**System Incorporated in Commercial Design**: Actual system/process completed and qualified through test and demonstration (pre-commercial demonstration).
TRL 9	**System Proven and Ready for Full Commercial Deployment**: Actual system proven through successful operations in operating environment and ready for full commercial deployment.

The vendor rates the ToE to be at TRL 9.

Testing Scope and Approach

The evaluation process followed principles defined in ISO/IEC 29119-2:2023, utilising two test levels to structure the test activities required:

- System testing
- Acceptance testing

System testing comprised the following activities:

Manual functional testing was used to test:

- the **interoperability** aspects of the ToE by a combination of manual tests, such as to confirm that a given technology works on various device platforms
- **the robustness** of the system with respect to variations in input quality and presentation attack detection features based on ISO/IEC 30107
- **privacy aspects** of the system in terms of revealing unnecessary Personally Identifiable Information in results.

Manual functional testing was conducted in a laboratory setting. The test environment provided direct integration with the ToE, simulating the use of the system in a typical age assurance setting (e.g. a public-facing web application).
All lab testing executed through framework portal on multiple devices and browsers. Testing performed through the purpose built testing framework and connected to the specified vendor endpoint.

Static reviews were used on evaluation of features relating to privacy, data security, compliance with human rights requirements and technology readiness assessment. Dynamic testing of these features for each participating technology was beyond the scope of the current trial; however dynamic testing of these features is recommended for any technology being deployed.

Static reviews comprised a review of the provider's practice statement and interviews with the provider to clarify any additional details.

Acceptance testing comprised the following activities:

Field trials with mystery shoppers:

Mystery shopper testing is a real-world, scenario-based testing approach where testers simulate actual user interactions without revealing their identity as testers. In the context of the Age Assurance Project, it plays a crucial role in evaluating how the system performs in live or semi-live conditions, mimicking genuine user experiences across diverse scenarios.

- As a part of this testing, **Anonymous Testers** (e.g., adults acting as underage users or using altered appearance/accessories) interact with the system as regular users.
- They go through the same flow as any public-facing user:
- Logging in
- Uploading ID documents or using selfie-based age estimation
- Providing or declining consent
- Encountering and reacting to system feedback

Observations are made on:

- Whether the system **correctly accepts or denies access**
- **UI/UX clarity**, especially for edge cases or ambiguous scenarios

Test Schedule

The testing reported in this document occurred during the period 24/03/2025 to 20/06/2025.

Evaluation Results

System Testing: Manual Functional Testing

The Age Verification scenarios are listed in the table below.

Test Scenarios	Results
Valid test for 18+ Age Verification	Pass
User Falls Into 13+ Bracket, Verification Works Correctly	Pass
User Uploads a Document Instead of Capturing via Camera	Pass
User Selects 'I Don't Have These Documents'	Pass
User Tries to Upload an Invalid Document Type	Pass
valid ID submitted for 18+	Pass
User Falls Into 18+ Bracket, Verification Works Correctly	Pass
User Uploads a Blurred or Unreadable Document	Pass
User's Document is Expired	Pass
User's ID Has Missing or Covered Details	Pass
User's ID Does Not Belong to the Selected Country	Pass
User Attempts to Upload a Photoshopped or Fake ID	Pass
Solution does not show excessive and/or PII data in results.	Pass

Table 1: Aggregated Manual Functional Test Results

Response Time

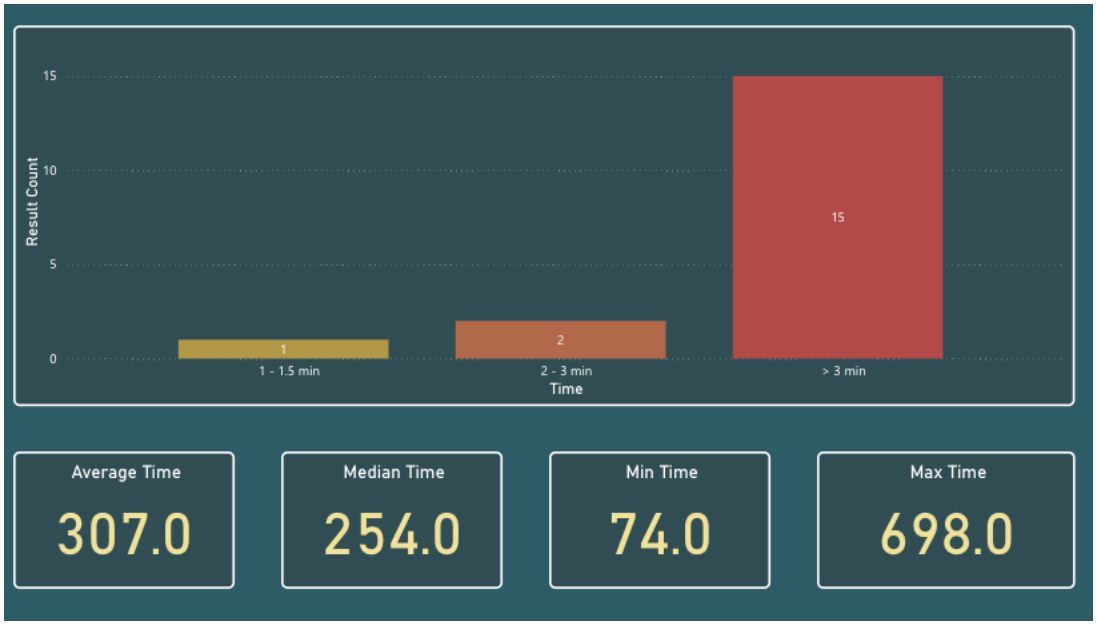

Figure 1: Task Completion Times

The median task completion time was higher than the typical performance for age verification systems (1-2 minutes).

Acceptance Tests: Mystery Shoppers

Results:

Age gate 13

Subject age	Samples	FPR	FNR	TPR	TNR	Accuracy
<10	1	100.00%	N/A	N/A	0.00%	0.00%
10	6	16.67%	N/A	N/A	83.33%	83.33%
11	3	0.00%	N/A	N/A	100.00%	100.00%
12	8	0.00%	N/A	N/A	100.00%	100.00%
13	2	N/A	0.00%	100.00%	N/A	100.00%
>=25	2	N/A	0.00%	100.00%	N/A	100.00%

Age gate 16

Subject age	Samples	FPR	FNR	TPR	TNR	Accuracy
15	1	0.00%	N/A	N/A	100.00%	100.00%
16	1	N/A	0.00%	100.00%	N/A	100.00%
>=25	1	N/A	0.00%	100.00%	N/A	100.00%

Table 2: Aggregated Mystery Shopper Field Trial Results

In assessing accuracy, we observe that performance is perfect for all ages with sample data, except for one subject under 10 years old, however the number of mystery shopper subjects using this ToE was relatively low (under 10 samples in each age year group) so it is not possible to draw any significant conclusions.

Evaluator Observations

- Manual lab testing confirmed full functionality and robustness across scenarios, including spoof attempts, expired and blurred IDs, and cross-border documents. All test cases passed.
- Mystery shopper testing included only small sample sizes but showed 100% accuracy in available data, though results were not statistically significant.
- Task completion time was higher than expected.
- Rated at TRL 9, YOTI is considered ready for commercial deployment, with fallback verification recommended for borderline ages.

Vendor Comments on Evaluation Results

TBC