

Protecting American Children

A Workshop to Explore Age Verification Technologies

January 28, 2026





Iain Corby

Age Verification Providers Association

The Age Verification Providers Association

- Founded in 2018
- Non-profit
- Politically neutral
- Standards-based
- 34 Members globally

Our Mission:

To make the Internet Age Aware



Age Assurance Methods (Verification, Estimation and Inference)

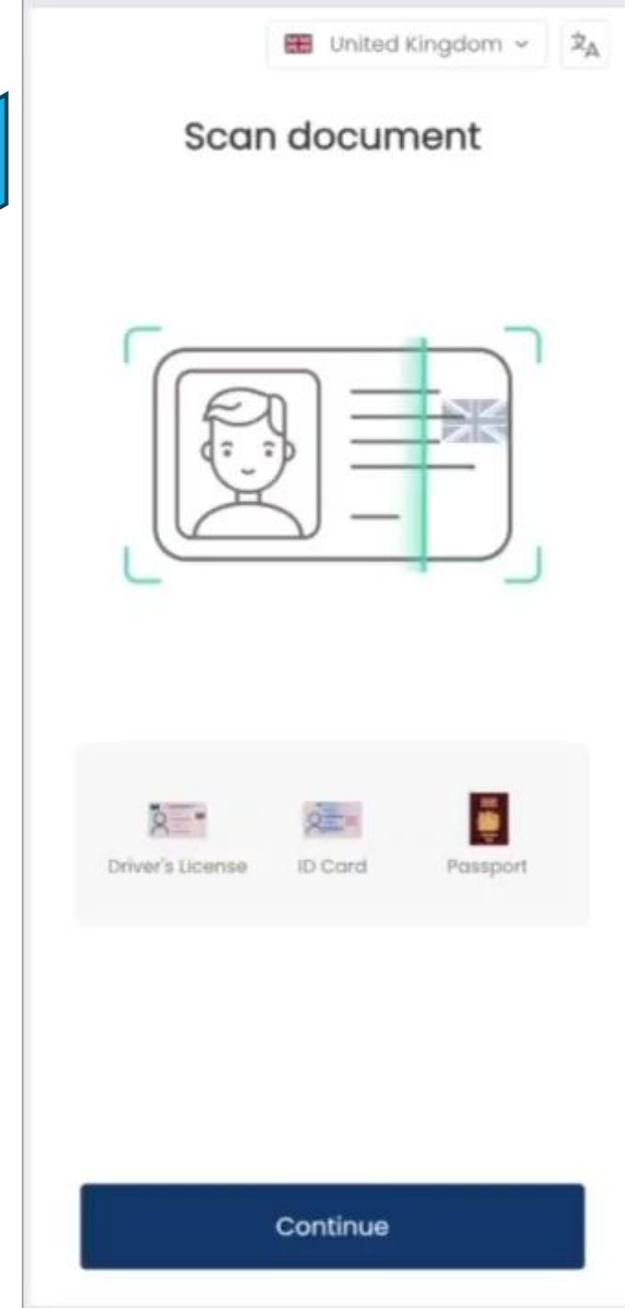
- The essence of 'age verification' is proving your age *without* disclosing your identity
 - Can utilize a third-party provider to make this principle easier to guarantee
 - Data minimization, invariably now required by state laws
 - Double Blind options included
 1. Website cannot identify user
 2. Age Verification Provider cannot identify website
 - Independently audited and certified for data security, privacy, anti-circumvention measures, configuration & accuracy
 - IEEE 2089.1
 - ISO/IEC 27566-1
 - Proximity principle – controls are more effective closer to the harm
 - **LIABILITY** is critical



Age Verification Physical Documents

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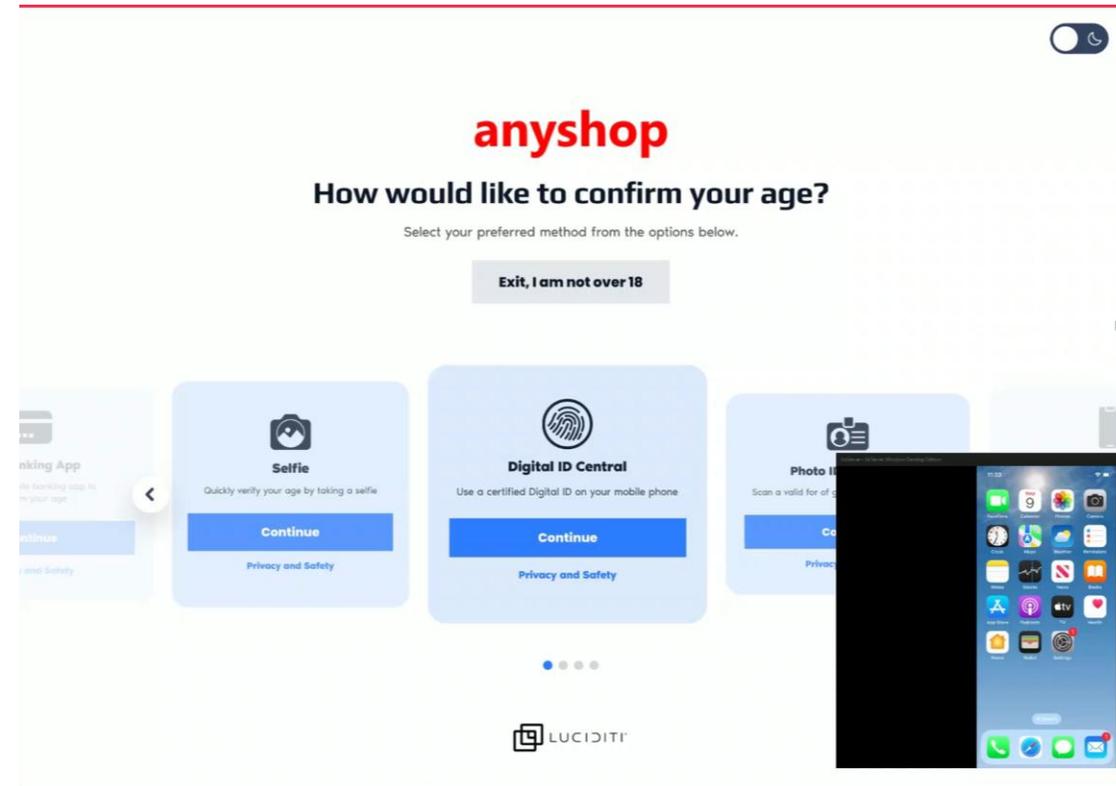
- Various physical documents
 - Drivers' License
 - Passport
 - Military ID
- Data capture via
 - Image with Optical Character Recognition (OCR)
 - Chip read
- Authentication
 - Selfie
 - Liveness check
 - Anti-spoofing (including AI detection)
- Can be completed locally on-device



Age Verification Re-usable digital ID

- Both Government and Private
 - Mobile Driving Licenses (mDL)
 - Reusable Digital ID App
 - Verifiable Credential in a digital wallet
- Authentication mechanisms vary
 - PIN
 - Biometric
 - Device based e.g. FaceID
 - App specific
- All personal data held locally on device

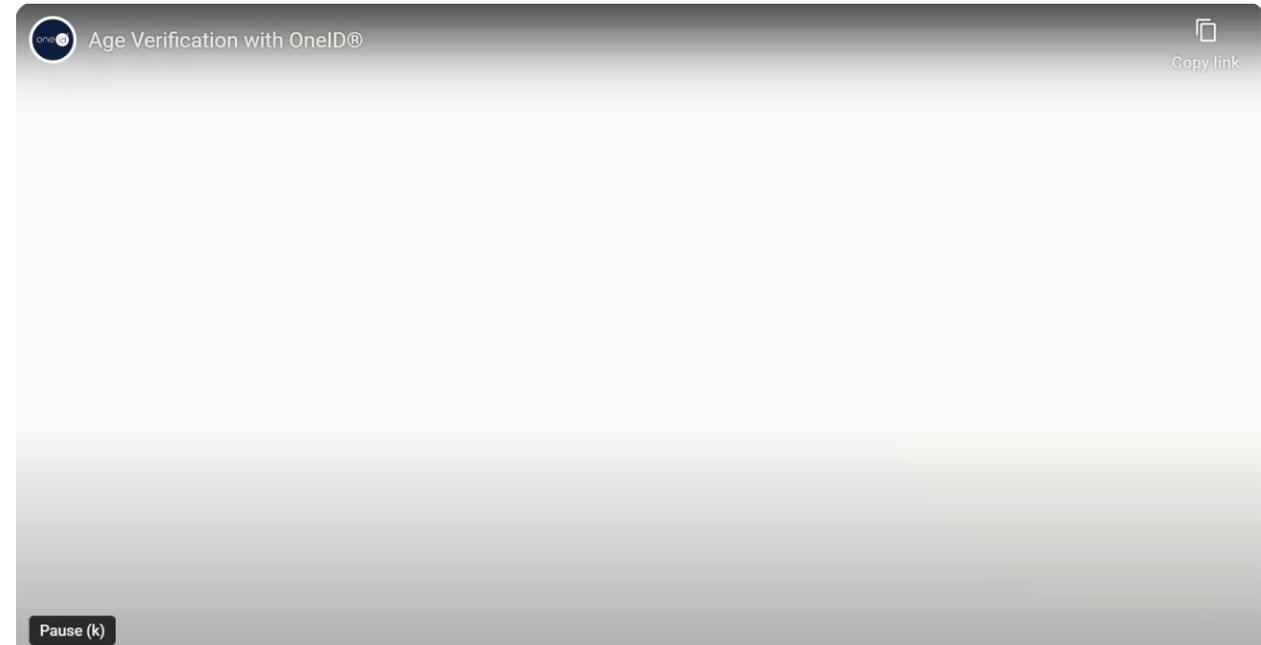
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Age Verification Authoritative Data

- Data from authoritative sources
 - Credit Reports
 - **Banks**
 - Credit Card
- User authentication
 - Knowledge of a payment
 - Login to online banking
 - Micropayment

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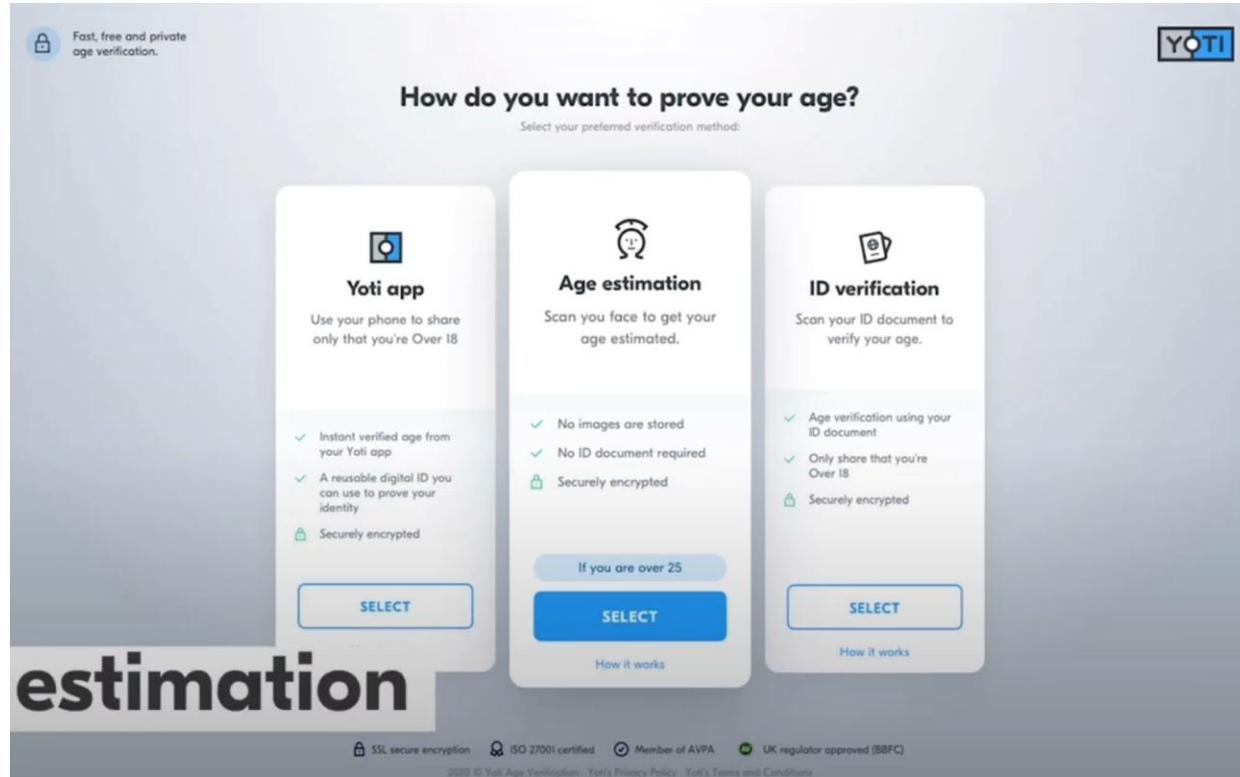


Age Estimation

Facial Age Estimation

- Uses a mathematical map of a face
 - Not enough data to uniquely identify the user
- Image never stored
- Can be completed locally on device

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Facial Age Estimation - Accuracy

 Yoti facial age estimation accuracy										Mean estimation error in years split by gender, skin tone and age band
Gender	Female				Male				All	
Skintone	Tone 1	Tone 2	Tone 3	All	Tone 1	Tone 2	Tone 3	All		
6-12	1.1	1.3	1.5	1.3	1.1	1.2	1.3	1.2	1.3	
13-17	1.0	1.2	1.5	1.2	0.8	1.0	1.3	1.0	1.1	
18-24	2.3	2.2	2.5	2.3	2.0	1.8	1.8	1.9	2.1	
25-70	2.4	2.7	3.2	2.8	2.3	2.6	3.1	2.7	2.7	
6-70	2.2	2.4	2.8	2.5	2.0	2.3	2.6	2.3	2.4	

- True Positive Rate (TPR) for 6-12 year olds correctly estimated as under 13 is 99.0%.
- True Positive Rate (TPR) for 13-17 year olds correctly estimated as under 21 is 99.3%
- True Positive Rate (TPR) 99.6%, 99.0% and 98.9% for skin tones 1, 2 and 3 respectively

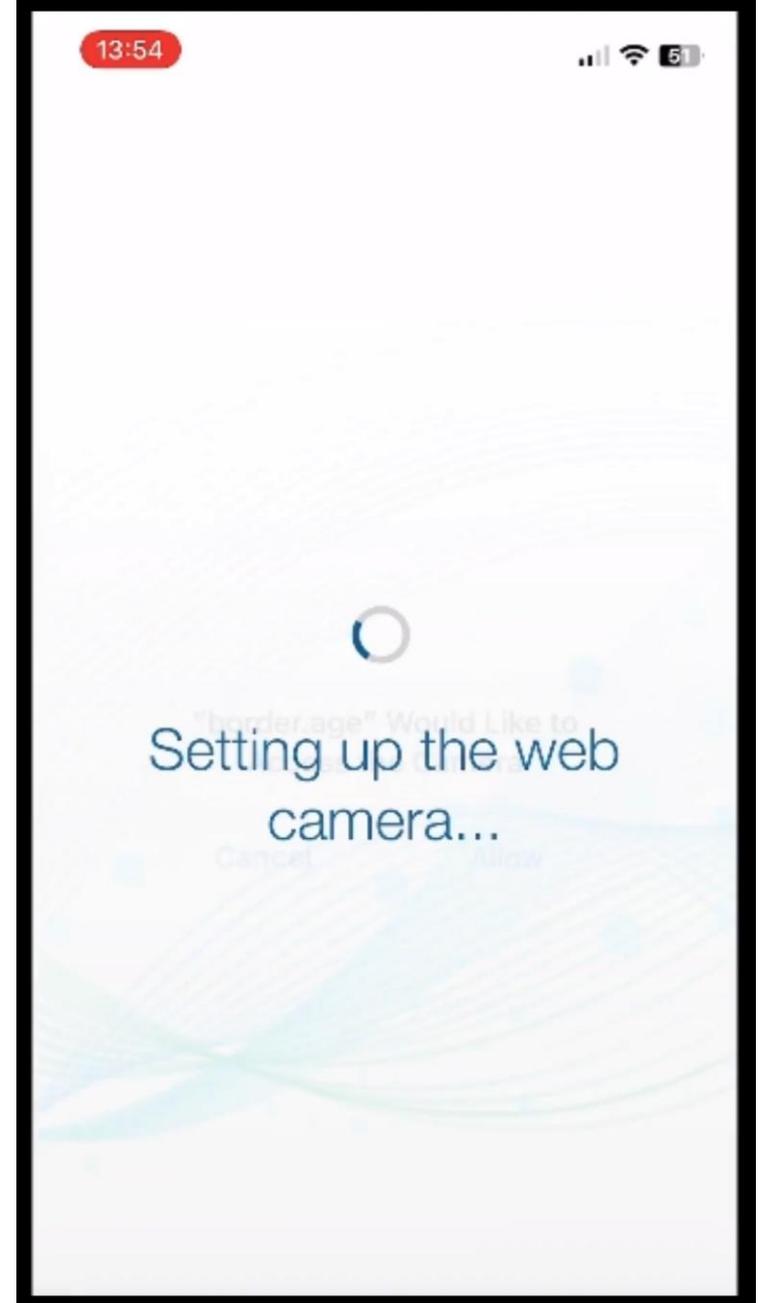


Age Estimation Hand Movement

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- Age estimate based on hand movement
- Anonymous
 - Low resolution to avoid fingerprints
 - Face in frame ceases processing and alerts user
- False Positive Rate 2.1%

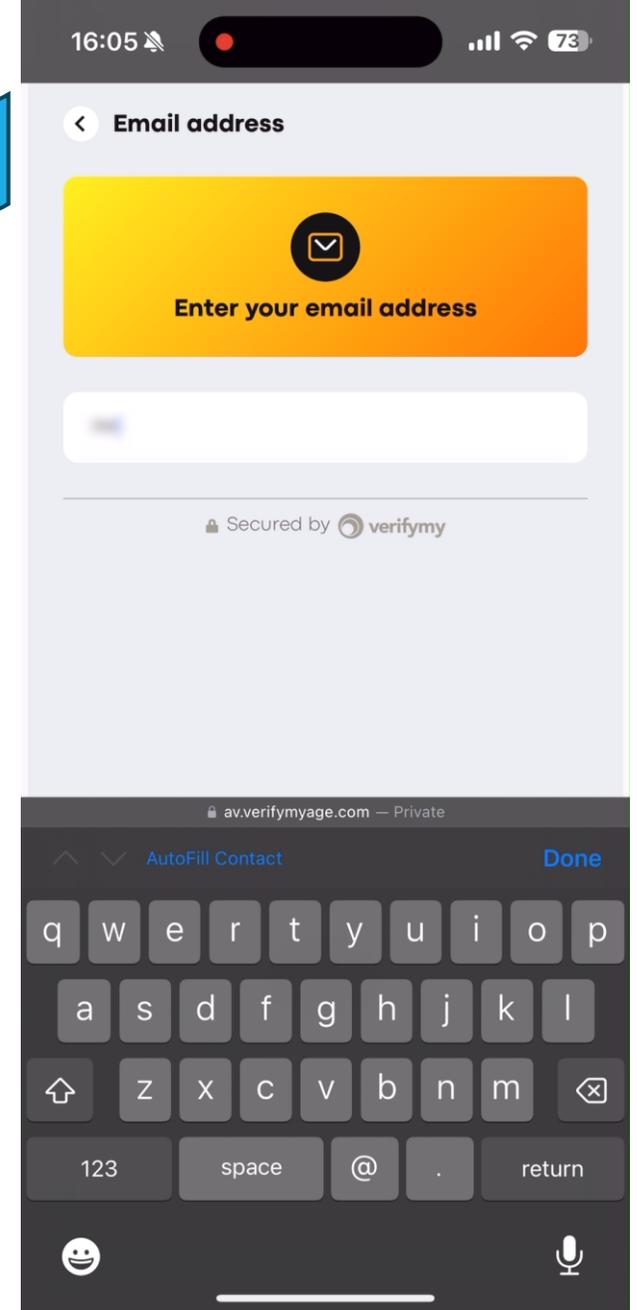
Note: Estimation based EKG records in health apps also under development



Age Inference Email or Cellphone metadata

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- User supplies email address or cellphone number used to
 - lease a car
 - buy a house
 - take out an insurance policy
 - obtain credit
 - place a bet
- Algorithm infers age based on multiple such metadata points
 - Messages are not accessed!
- User authenticates with code from their inbox / SMS



Age Inference Work Email

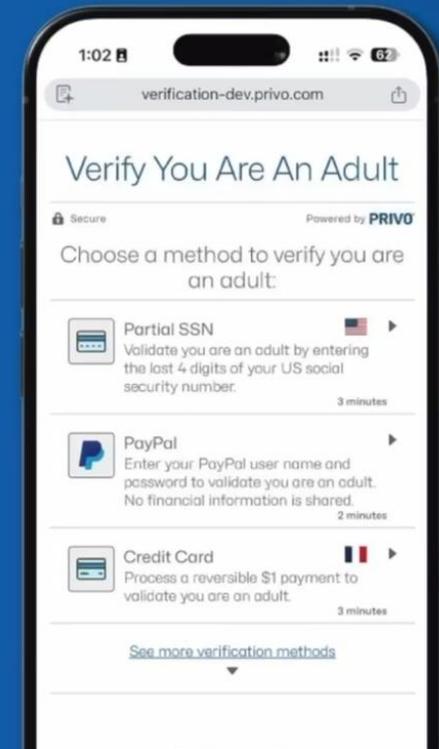
- User supplies email address
- Domain only issues email addresses to adults
- User authenticates with code from their inbox

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PRIVO®

Age Verification Widget

Using the Work Email
Trusted Domain
Method



Age Inference

User Generated Content

- Increasingly used by social media platforms
 - Birthday posts
 - Age of friends
 - School affiliation
 - Natural Language Processing
 - Topics
 - Usage Patterns
 - App interaction
- The “VPN Fallacy” – VPNs do not defeat AV
 - Behavioral and Technical indicators can also flag VPN users within regulated jurisdictions
 - Browser currency and time-zone settings
- Note – Phased implementation in Australia delaying impact while outcomes assessed



Tokenized Interoperability

EU AV Blueprint

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- Member States offer an App or functionality will be added to their EU Digital Identity Wallet
- EU maintain a trusted list of issuers e.g. National eID database
 - On Device passport-based alternative
- Batch of age verification tokens created to anonymize the process
- Shared using OpenID4VP protocol
 - Image of QR code hosted by age restricted site triggers request to share age-range



Tokenized Interoperability “AgeKeys”

- Uses PassKey technology
 - Built on the **FIDO2** and **WebAuthn** standards
- Platforms determine which AgeKeys to accept
 - Method
 - Supplier
- Biometric authentication
- Operated by the OpenAge Initiative, from k-ID

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We need to verify your age

Please choose a verification method below. You only need to do one method.

 Your details are used for **verification purposes only** and are **not stored**.



Take a selfie

Confirm your age with a quick selfie that is used for verification and then deleted. >



Use your ID

Confirm your age by sharing a picture of a valid, government-issued ID that is used for verification and then deleted. >



Tokenized Interoperability “AgeAware”

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- User selects
 - Method
 - Supplier
- Completes age check
- Option to create account
 - Token stored in progressive web app on device
- Authentication periodically or triggered
- Participating age assurance providers must be audited and certified
- System selects valid tokens for use-case

AgeAware[®]

Mobile Phone Method



Tokenized Interoperability “AgeAware”

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AgeAware[®]

Existing User, Already
Authenticated



Concluding thoughts...

- Wide range of methods to prove age gives consumers choice
- Cryptography can guarantee privacy
- Both government and private sector options to prove age
- A proportionate response may mean different solutions for different use-cases
 - Parental Controls in App Stores for terms and conditions
 - Operating System signals for age-appropriate design of websites
 - Platform level age assurance to manage legal liabilities for underage use
 - With improved convenience from interoperable and re-usable age checks
- Certification against standards for privacy, security and accuracy

