Executive summary

Digital proof of age and the use of technology is not currently permitted for sales of alcohol; however, the government is keen to encourage efforts to develop new technology to improve the experience of consumers and retailers when purchasing age restricted products. As such, in 2022, the Home Office worked with the Office for Product Safety and Standards (OPSS) to develop proposals for a Regulatory 'Sandbox'.

The Regulatory Sandbox allowed the trial of technologies that could fulfil the requirement for age verification in the retail sale of alcohol.

Four members from the Retail of Alcohol Standards Group (RASG) participated in the trial. During the trials approximately 99,800 people utilised the age estimation or age verification technology offered by the four RASG members. This accounted for ~46% of all customers that purchased age restricted products (not including tobacco) via the basket and trolley self-scan areas or grocery lockers during the trial period. The remaining 54% opted to use the traditional age verification method. Reasons for this were not ascertained but it would not be unreasonable to assume that customers below the facial age estimation threshold set would choose not to use this option.

Of the 99,800 customers that utilised technology, no underage sales were identified.

Independent test purchases by two retailers, using 18–19-year-olds, demonstrated a 100% rejection rate using Yoti. The retailers used different Yoti age settings. Retailer 1 set the systems minimum age to 28 and carried out 20 test purchases – all were correctly rejected. Retailer 2 set the systems minimum age to 30 and carried out 30 test purchases – all were correctly rejected.

All RASG members deemed the use of Yoti facial age estimation and Yoti digital proof of age technology to be successful, determining that the use of technology in the age verification process:

> ➢ was more accurate and consistent than humans when determining whether a customer needed a Challenge 25 check or not.
> > o N.B The objective of the Sandbox was not age verification and 'actual' age determination but identifying whether a customer was in the target age band (under 28/30) and therefore needing a challenge to verify their age.
> ➢ supports the licensing objective of protecting children from harm.
> ➢ has potential to support the other licensing objectives.
> ➢ has the potential to reduce conflict that could be aimed at staff as the technology did reduce the number of interactions for physical checks between staff and customers.

Introduction

Four members of the Retail of Alcohol Standards Group (RASG) participated in the Home Office Regulatory 'Sandbox' trial in 2022.

The Sandbox, approved by Government and Regulators, enabled live testing of innovations in a real-world environment and under controlled conditions. The trial was part of the Government's effort to establish whether digital age verification methods could deliver an equivalent or enhanced standard of compliance than the current method of age verification, which requires physical ID checks and physical proof of age for alcohol purchases. The primary objective of the Sandbox trial was to trial innovation whilst complying with the Licensing Objectives – particularly the Protection of Children from Harm.

RASG members utilised age verification and/or age estimation technology during the trials, which ran in the first 6 months of 2022. The technology was trialled in the basket and trolley self-scan areas of pre-approved stores by three members and at a locker collection point in the retailer's carpark by one member.

In addition to establishing whether digital age verification methods could deliver an equivalent or enhanced standard of compliance than current age verification methods, RASG members had their own additional objectives for the trials, which included of one or more of the following:

- To assess the impact of age verification software on the age check approvals process and compliance with age verification policies.
- To evidence the pre-trial expectation, that technology would result in a more accurate and consistent outcome when estimating a customer's age, and then deciding whether a Challenge 25/Age verification is needed, than the current in person manual permitted method.
- To assess the impact of age estimation and age verification software on colleagues, in terms of safety and workload. The expectation was that technology would reduce abuse and violence towards colleagues if a sale was refused.
- To assess the impact of age verification software on customers, in terms of take-up of the technology and any issues highlighted with this. The pre-trial expectation was that age verification software would modernise and speed up the checkout process for customers also.
- To assess the impact of age estimation and age verification software on IT systems and processes.
- To assess the impact of age estimation and age verification software on compliance with the Licensing Objectives.

All trial participants utilised Yoti technology which included an inbuilt camera that would take a photo of a customer's face and estimate the customer's age and either progress with the sale - if the estimated age was over the minimum age set by the retailer – or not - if the age

was estimated as under the minimum age set by the retailer. If the estimated age was under that set by the retailer, a retail staff member would intervene and carry out a manual age verification check. Alternatively, for the trials taking place in-stores, the customer could redo the process and verify their age via the Yoti Digital ID App should they be over the legal age. The customer's photo was immediately deleted after the age was estimated.

The youngest age set in the age estimation technology was 25 and the highest was 30 years of age.

The Yoti Digital ID App could be used by customers to allow them to scan a Yoti QR code displayed on-screen at the self-scan checkout to verify their age. As a third 'in-person' fall back option, if this did not work, a retail staff member would attend to the customer to undertake a manual age verification check before the sale is authorised.

Customers could also elect not to use technology completely, and instead opt for the traditional 'in person' Challenge 25 process.

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Virgin Wines – Waitrose - The Wine Society - The Wine & Spirit Trade Association

Findings and discussion

All four RASG trials tested age estimation technology, digital proof of age technology or both.

All RASG trial participants deemed the trials to be successful with no underage sales being approved by the technology.

The age estimation or digital proof of age technology could not identify intoxicated consumers or proxy purchases, however, the use of technology helped to reduce the burden on staff of checking ID documents and allowed them more time to focus on spotting these. Not all retailers experienced these attempts, however, in instances where they were attempted, these were identified by staff and the sales did not take place.

For the retailer testing age estimation technology at collection lockers, there were no attempts to collect goods by intoxicated customers and no attempted proxy sales. It is believed this was due to various factors, including the time lag between placing an order and collection of the goods, the fact that collection was in a car park and customers needed a car to collect as well as the fact that store opening times do not correlate with pub closing times.

In the trials, use of the digital proof of age app was negligible compared to the age estimation usage. This could be due to various factors including the fact customers were unable to use this option if they did not already have a digital proof of age installed on their phone. It was not possible to do this during a store visit as the customers age needed to be confirmed with official documents and checks prior to approval. The question is whether uptake would increase if digital proof of age became legal for alcohol sales. According to Yoti figures, over 4 million individuals have installed the Yoti or EasyID ID wallet apps, and approximately 50% of these were 16-24 years old when first adding their ID documents. Proving age is one of the primary reasons young people have given to Yoti when asking why they choose to create a reusable digital ID wallet so it is likely that many 16–24-year-olds would create digital ID wallets and use them to prove age digitally. However, without changes to legislation to permit alcohol sales to be approved with the use of technology and without clarity from businesses that they will accept certified digital proof of age, uptake will be impeded.

Uptake may also have been affected by the limited time period of the trials and the small catchment areas in which they ran. Agreement was also needed from local regulators. These restrictions would have made it commercially unattractive and prohibitively expensive for Yoti to market the utility to 18–24-year-olds in the specific catchment areas. The outcomes and measures are therefore limited to the demographics of customers at the chosen locations.

Following the success of the trials, should digital proof of age and age estimation technology be permitted for alcohol sales, RASG members are committed to improving education and

advertising around this topic. Further advertising would help dispel customer misconceptions and may result in an increased uptake of the use of the technology than there was during the trials.

Of those RASG members testing both age estimation technology and digital proof of age, age estimation technology had significantly more users than the digital proof of age technology. However, during the trials there was a general reduction in uptake of the digital age verification technology, likely due to the issues highlighted below:

- Both sunlight and instore lighting in the self-checkout area impacted facial analysis equipment and increased the number of failed scans. Configuration refinement and further experience with live customer scenarios will reduce this impact.

- Some customers were confused about the location of the cameras and/or ran out of time to use the technology. Some customers also did not realise that some items required de-tagging before they could leave the store.

- Customers at or below 1.5m in height were excluded from using the age estimation technology due to the angle at which the self-checkout cameras were installed. This included customers in wheelchairs.

- Two members trialling the age estimation technology paused the live trials for 5 weeks due to a previously unidentified configuration issue. During this pause staff reverted to manual age checks while Yoti ran extensive sessions to understand what had happened. A full quality assurance test was carried out before the trials restarted. Once the configuration issue was resolved the system performed as expected during the remainder of the trial.

In terms of RASG members own objectives for the trials, it was generally found that:

- Compliance with the age check approvals process and age verification policies was higher when trialling digital age verification compared to physical age verification.

- Initially there was an increase to staff workload while customers needed support with the new process but over the whole trial period staff workload for self-checkout age checks reduced due to the volume of age checks handled by the software. This freed up colleagues to focus on other areas of the self-checkout such as the prevention of proxy sales and sales to intoxicated customers.

- Minor software issues led to fewer people opting to complete sales via the technology route at the beginning of the trials. This was mainly due to frustration over time, and the age check requirement potentially being set too high, both of which were rectified and then increased take-up throughout the rest of the trial.

- Proxy sales neither increased nor decreased during the trial.

- There was a marginal increase in the prevention of alcohol sales to intoxicated persons.

- There were no operational impacts to self-checkout units because of the sandbox trial.

- The age verification software had no perceivable impact on staff safety and security.

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Conclusions and recommendations

The Retail of Alcohol Standards Group members that participated in the Sandbox trial believe that both digital proof of age and age estimation technology should be permitted for alcohol sales.

➢ **The trials resulted in a more accurate and consistent outcome when estimating and verifying age when compared to conventional age verification undertaken by retail staff.**

Digital age estimation was shown to produce a more accurate measure of judging whether a customer required a Challenge 25 and then verification that they were old enough to buy an age restricted product than staff. The use of this technology during the sandbox trials resulted in a significantly improved compliance rate for RASG participants which, if repeated across all stores, would reduce the chance of selling alcohol to minors and therefore assist retailers in complying with the Licensing Objective of protecting children from harm.

➢ **The use of technology supports the licensing objective to protect children from harm.**

The use of technology by licensed premises means that alcohol is less likely to be sold to minors, therefore retail premises will not be contributing to anti-social behaviour in a community. Licensable activities will not be result in harm to children from alcohol consumption, drunkenness, violence and physical or sexual assault.

The trials found that there was a 100% pass rate in the technology detecting customer's that required an age verification. In all cases, this is higher than the pass rate in conventional age verification checks. Proxy sales neither increased nor decreased as no attempts were reported by store participating in the trials on the run up to the trials.

➢ **The use of technology has the potential to reduced conflicts between customers and retail staff.**

The use of technology significantly reduced the number of age-related interventions by staff during the trial period and freed them up to focus on other customer-facing activities. While there was insufficient data to determine whether the use of technology supports the reduction in abuse and violence towards retail staff, it is logical that a reduction in physical age interventions would lead to a reduction in the opportunity for conflicts between customers and retail staff.

➢ **The use of technology has the potential to support the licensing objectives of preventing crime and disorder, promoting public safety and the prevention of public nuisance.**

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There was insufficient data to draw a conclusion on whether technology supports the licensing objective of preventing crime and disorder. While some retailers experienced a significant reduction in customers that walked out of store without paying for goods after getting frustrated with the technology as the trials went on, the reasons for this cannot be substantiated.

No conclusions can be reached on whether the use of technology supports the licensing objectives of promoting public safety. However, it is not unreasonable to expect a reduction in the number of potential incidents of customer aggression towards colleagues since digital age verification reduced the number of physical age interventions by colleagues. The trigger for abuse is typically the request for age verification and the use of technology reduced age related interventions in the self-scan area.

No conclusions can be reached on whether the use of technology supports the licensing objectives of prevention of public nuisance. However, as the use of technology reduced the workload on store staff, this allowed them to spend more time on customers that needed it and enables staff to focus on other issues such as sales to intoxicated customers and attempted proxy sales, which will help prevent crime and disorder, public safety and the prevention of public nuisance.

> **Software would need regular monitoring, in situ, to ensure that it worked correctly.**

There were frustrations during the trial that technology did not always work correctly. Although this did not result in any sales to minors or intoxicated people, prior to UK expansion, once in situ software configuration refinement and further experience with live customer scenarios will reduce this impact.

> **Software must have an immediate and remote switch off function.**

Software must be able to be switched off remotely with immediate effect and staff reinstated to carry out age verification, if required e.g. if another anti-spoofing loophole was detected.

> **The use of technology must be inclusive and user friendly.**

Cameras must be positioned, potentially with wider camera lenses, to capture individuals at different heights, including those in wheelchairs.

Guidance could be available to direct customers to the correct camera with clear instructions on how to checkout using the technology.

Enhancements could be made to the software to increase the timer for the 'Choose how to verify your age screen' as well as the countdown timer for the photo.

Prompts could be introduced to increase awareness for bottle de-tagging.

In terms of lighting issues identified, solutions would need to be found to mitigate the number of failed scans. Solutions might include repositioning of lighting, changing the angle of cameras, taking the calibration image more often to improve the scan success rate and/or increasing the quality of the image sent from the camera to the software provider for verification, to improve the scan success rate.