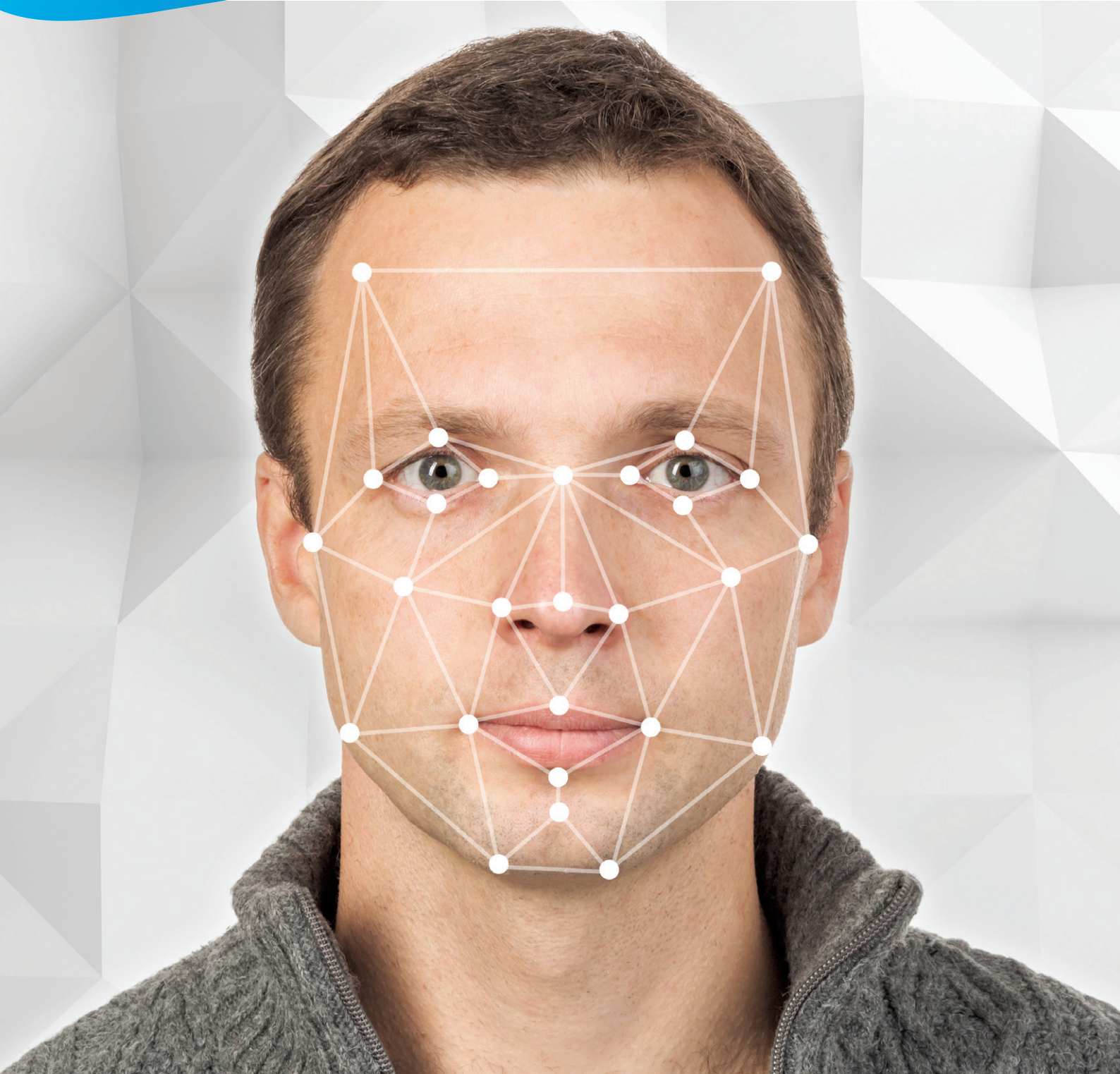# Biometrics by ICM

ICM
an **amadeus** company

ICM's biometric solution
End-to end automation of passenger self-service using high-performance facial biometrics

ICM's offering starts with a smartphone application for off-airport enrolment, meaning passengers can biometrically register prior to embarking on their journey.

Within the airport, ICM's solution employs a distributed hardware / software platform, providing 1-1 and 1-N facial verification of passengers allowing seamless travel through touchpoints and onto the plane.

For airports and airlines, the flexibility and scalability found in ICM's solution presents significant operational advantages in addition to the gains in passenger throughput.

Key benefits to passengers are ease of use and speed, thereby further enhancing their travel experience.

Facial Image Capture

ICM's camera module has Hardware and Software that is specifically tailored / customizable to the touchpoint.

- High-performance 2D/3D Camera module – very accurate facial image acquisition
- Multiple sensor technologies – configurable geospatial zones, independent of lighting
- No moving parts – high reliability
- Real-time face detection, tracking and quality assessment
- Module suitable for all touchpoints – flexibility & adaptability

Touchpoint

There are multiple touchpoints in the passenger's journey through the airport terminal, most typically; Kiosk, Auto Bag Drop, PV Gate, Lounge Entry, and Boarding Gate. ICM's biometric solution may be applied to all using our "Same but Different" philosophy.

Same camera module, same simple passenger experience, but unique performance parameters and functionality based on the requirements of the specific touchpoint.

Matching

ICM has a very robust matching service that uses Artificial Intelligence in the form of Deep Learning Algorithms. Alternatively we can employ a matching service with an identity provider such as; CBP-TVS, Idemia, NEC or others. Due to the very high-quality images obtained by ICM's camera module, matching is both faster and more accurate. ICM's experience using 3rd party biometric providers is well established globally, with multiple airports currently operating facial recognition incorporated in ICM's self-service products.

Platform

The ICM biometrics platform comprises a cloud-based passenger data management platform that dynamically communicates with biometrically-enabled touchpoints.

The touchpoints undertake local image processing to transform facial images into highly efficient signatures which in turn provides a fast experience with high scalability.

Airline Integration

A significant advantage over other biometrics providers is ICM's ability to utilise airline DCS information to enhance the biometric process. Multi-passenger booking transactions and dynamic updating of the touchpoint databases are just two of the features that bring benefits in terms of widening the usability and increasing the match success.

Security

Instead of storing and transmitting sensitive passenger biometric information, the solution is intrinsically designed to maximise privacy. Key principles include utilising non-reversible facial signatures instead of images; only making use of essential passenger data; and limiting the use of biometric information to the flight time-window and touchpoints required. As such, this solution provides a realization of the IATA OneID concept. Watch this space...

www.icm.aero