IDEMIA Public Security: Industry demand for biometric aviation connectivity

Published: 21 May 2026

Global aviation is returning to sustained growth, with higher network utilisation at airports and rising expectations for seamless, secure, and premium passenger experiences. As volumes grow, real time biometric identification supported by HD video streams is increasingly mission critical, not only for border and security processing, but also for passenger facilitation and trusted services such as lounge access and premium handling.

Airports cannot afford latency, jitter, or degraded video quality during peak travel periods or operational disruption. To deliver the required speed, reliability, and security, IDEMIA Public Security requests access to the QoD/QoS API across MNO networks globally, enabling biometric systems to perform with fibre-like quality over 5G public networks.

Why – Purpose

Passenger volumes are increasing year on year, but airport real estate is finite and expensive to expand. The practical way to scale is to use technology to move more people through the same footprint, faster, more securely, and with less manual intervention, across every step of the journey.

- **Rising volumes, finite real estate**
  Air traffic continues to grow, and airports are operating closer to practical limits during peaks. ICAO's 2026–2050 Strategic Plan references air traffic projected to reach 12.4 billion passengers by 2050, reinforcing the scale of growth that must be absorbed by finite airport infrastructure.
- **Technology is the capacity unlock**
  Major terminal and border hall expansions take years, so near to mid-term capacity is created by digitising and automating processing, increasing throughput per square metre without adding physical lanes, desks, or queuing space.
- **This touches the entire airport, not just border control**
  The same need for faster, more predictable flow applies end to end; check-in and bag drop, pre-security and security, border, lounge entry, boarding, and increasingly retail and other services that depend on trusted identity and entitlement in real time.
- **Biometrics becomes the common trust layer**
  Biometrics reduces repetitive manual checks and enables consistent identity verification across multiple touchpoints. As adoption grows, the model shifts from isolated biometric gates to a coordinated set of biometrically enabled processes that work together to keep passengers moving.

- **The industry is moving to real time video processing**
  Today's 'queue, stop, present, wait, proceed' checkpoints are progressively evolving into free flow corridors where passengers keep walking while HD video is captured continuously. Advanced video analytics and face biometrics verify identity in motion, at speed, and at scale. IDEMIA Public Security's PaXpress™ SmartLane solution provides this capability.
- **Sensitive biometric data often must be shared beyond the airport**
  Because biometric data is regulated and high sensitivity, architectures frequently require the HD video streams, verification events, watchlist checks, or audit evidence to be transmitted securely to off-site government systems or central authorities, often in real time, depending on local policy and operating model.
- **Why QoD/QoS over 5G is required**
  Real time HD video processing, combined with off-site validation and governance requirements, mandates predictable uplink, stable latency, and low jitter. During peaks and disruption, best effort connectivity is unreliable, exactly when performance matters most. IDEMIA Public Security therefore requests access to QoD/QoS APIs across MNO networks, enabling biometric and video-based workflows to request prioritised connectivity on demand and deliver fibre like performance over public 5G where it is operationally required.

Location & Timeline

IDEMIA Public Security is preparing to launch pilots and live deployments at major international airports from Q1 2026, with an immediate requirement for Quality on Demand capability in Saudi Arabia, Australia, New Zealand and the United States. More broadly, IDEMIA is targeting high throughput hubs investing in biometric passenger processing and resilient digital infrastructure, with momentum accelerating across the Middle East, Asia Pacific and Oceania.

Current Market State of Play

Biometric adoption is accelerating across airports and airlines. Industry reporting indicates that many airports and carriers plan to expand biometrics across check in, bag drop, security, and boarding within the next few years. For example, SITA has reported that over half of airports plan to roll out biometrics for check in and bag drop by 2026, and 70% of airlines expect to adopt biometric ID management systems in the same timeframe. IDEMIA Public Security's biometric and passenger facilitation platforms are already operational in major global hubs.

However, public network performance can be variable in high load environments, especially during passenger surges, weather disruption, infrastructure outages, or major events that concentrate demand in short windows.

The QoD/QoS API, as defined under GSMA Open Gateway and CAMARA, enables on demand prioritisation of network traffic for critical biometric processes. This can provide predictable bandwidth, low latency, and low jitter performance characteristics that are closer to dedicated connectivity, while preserving the flexibility and coverage of public 5G networks.

IDEMIA Public Security and GSMA position the public 5G network as a viable resilience layer in airport infrastructure, complementing fixed networks rather than replacing them. QoS/QoD 5G enabled networking becomes a critical piece of the connectivity solution.

Standards & Technology Origin

The requested QoD/QoS API is aligned with GSMA Open Gateway and CAMARA standards. By integrating this API with biometric HD video identification services, MNOs can:

- Dynamically allocate priority resources during passenger surges, boarding / arrival peaks, or operational crises.
- Assure predictable uplink and stable latency profiles for time critical HD video biometric capture and verification workflows, including next-generation free flow corridors alongside more traditional document validation streams where relevant.
- Provide robust bi-directional communication between major hubs and smaller regional airports to central governmental platforms located away from the terminal, reducing the need for traditional fixed networks.
- Maintain consistent service performance during network congestion, reducing reliance on manual fallbacks and lowering operational risk.

Roles

IDEMIA Public Security: Deploy biometric free flow HD video identification services such as PaXpress™ SmartLane in airports globally, integrated with MNO exposed QoD/QoS APIs to assure performance at peak and during disruption.

GSMA (Open Gateway and GSMA Fusion): Support pilots and the commercial deployment of standardised APIs, facilitating collaboration between market participants, including airports, airlines, solution providers, and MNOs, to evidence demand, define requirements, and accelerate interoperable delivery.

MNOs: Expose QoD/QoS APIs with standardised service level agreements (SLAs), ensuring consistent and predictable quality of service for time critical aviation processing.

Opportunities for MNOs

- **New revenue streams**: Monetise QoD/QoS API consumption for aviation security and passenger experience providers, converting programmable network capability into enterprise products.
- **Reputational advantage**: Position as a key innovator enabling the world's most advanced airports, including resilient operations during disruption.
- **Provide capability where others cannot**: Enable PaXpress™ SmartLane capability with video streaming to off-site government systems in hub airports without strong fixed network capability.

- **Future expansion**: Repurpose the same QoD/QoS capabilities for other verticals requiring assured performance, for example healthcare, emergency response, logistics, and live broadcasting.

Network Requirement Details

- Guaranteed bandwidth allocation during QoD sessions for critical biometric flows.
- Target latency below 50 ms end to end for HD video processing and interactive verification at key touchpoints.
- Packet loss below 0.1% during active QoD sessions.
- API accessibility via secure, standardised interfaces aligned with GSMA Open Gateway specifications.
- Support for deployment models that include primary connectivity in constrained locations and resilient failover in major hubs.

Call to Action for MNOs

We invite MNOs globally to collaborate with IDEMIA Public Security and GSMA on deploying QoD/QoS APIs for biometric HD video airport use cases, enabling improved passenger experience, security, and operational efficiency at scale.

Other Details

- API implementation to comply with GSMA Open Gateway and CAMARA specifications.
- Integration support and operational testing provided by IDEMIA Public Security's engineering team.
- Data protection and privacy compliance with applicable local and international regulations, including GDPR where applicable.