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#### Biometric Digital Identity Travel and Hospitality Prism Report

## Introduction

Welcome to the **2024 Biometric Digital Identity Travel and Hospitality Prism Report**—the second vertical market-focused publication from The Prism Project. Expanding on the findings in the 2023 Biometric Digital Identity Prism, this report collates the various identity industry forces at work in the travel and hospitality space. The aim is to illuminate the complex and shifting ecosystem that is enabling seamless guest journeys from the time of booking, though the travel process, and during a stay at a destination.

The Biometric Digital Identity Prism launched in 2023. Using original market research and easy-to-understand language, it serves to inform, educate, and motivate influencers and decision makers seeking identity solutions as they tackle the challenges of wide-scale digitization. A product of industry collaboration and ongoing research, The Prism Project uses a unique, proprietary framework to conceptualize biometric digital identity under these global conditions of digital transformation.

The initial deployment of the Prism framework revealed that the most viable vendors operating in the digital identity space had common traits and interacted in specific ways—cooperatively and competitively—with the brightest stars working together to enable highly orchestrated, secure, and convenient user experiences with baked-in privacy and ethics. The Prism Project distilled these characteristics into evaluation criteria based on a strategic philosophy:

- Digital identity belongs to the user it describes.
- True ID empowerment relies on government systems of record.
- Identity must be consistently and continuously orchestrated to remain secure.
- Biometrics must be at the core of any sustainable digital identity ecosystem.

On a fundamental level, travel and hospitality fits perfectly within this Prismatic paradigm.

In this report you will find:

 A holistic analysis of thetravel and hospitality industry framed around common pain points and the biometrics solutions

### Travel and Hospitality Relying Parties:

- Airlines
- Airports
- Cruise Lines
- Sea Ports
- · Train Lines
- Bus Lines
- Hotels and Resorts
- Entertainment and Event Venues
- Casinos
- Theme Parks
- · Private Clubs
- Spotrs Stadiums and Arenas

### Travel and Hospitality Key Use Cases:

- Booking and Ticketing
- Border Control
- Access Control
- Retail Food and Drink (including age check)
- Payments
- Loyalty Programs

that can solve them

- An original market forecast from Acuity Market Intelligence laying out the opportunity for biometric digital identity in travel and hospitality
- A travel and hospitality version of the proprietary Biometric Digital Identity Prism
- Evaluations of vendors operating at the intersection of biometric digital identity and travel and hospitality
- Case studies demonstrating real biometric digital identity vendors solving challenges for travel and hospitality stake holders

The result is a vision of travel and hospitality that puts human beings first. By investing in biometric digital identity solutions like those identified in this document, travel and hospitality stakeholders will find measurable benefits—from improved guest flow, to bulletproof compliance, to secure loyalty programs. But beyond the immediately tangible results, participating in the biometric digital identity ecosystem has a wider, global effect.

My collaborators and I are evangelists of strong identity and believe that the only way to safely move forward in our time of digital transformation is to take human identity seriously. By reading and sharing our vision of a secure, convenient, and privacy-first future of user-empowered identity, you are participating in the positive change required to level-up travel and hospitality and contribute to the seamless guest experience of the future.

Sincerely,

Maxine Most, Founder The Prism Project

## **Executive Summary**

#### The Evolution of the Guest Experience

Air travel and biometrics have been inseparable since the dawn of the millennium, when the aftermath of the 9/11 terrorist attacks created an immediate and intense demand for heightened airport security. Biometrics emerged as the solution, with the promise of heightened security and convenience for high risk identity transactions like border control.

Even before the advent of smartphone-based biometrics that would revolutionize the way we used our identities in an increasingly digitized world, particularly in finance, automated border control eGates and kiosks enabled heightened security without burdening airport infrastructure with bottlenecks and delays. By 2014, Acuity Market Intelligence's research showed more than 150 airports worldwide using some form of biometric ABC eGates or kiosks. And the growth continued.

Over two decades of air travel innovation, partnerships between airlines, airports, and identity vendors defined a biometric digital identity ecosystem that delivered increasingly seamless passenger experiences. Biometrics were deployed by the likes of KLM Royal Dutch Airlines; Changi Airport, Delta Airlines, Frankfurt Airport, Emirates Air, and Aruba Airport (to name only a few). The result of this collaborative effort to improve the airport experience was an industry focused on providing a premium guest journey through high-risk security spaces.

This guest journey is mirrored by the fan experience in large event venues and stadiums, which, while lower risk environments, also face similar facilitation challenges. Naturally, the air travel players began to replicate the frictionless experience in this regulated environment, innovating in new ways to put the guest first using biometric digital identity, with express access and self-serve concessions. Along with parallel innovations in accommodations, loyalty programs, and secondary transport (taxis, ride shares, public transit, etc.), an expanded guest journey is emerging, which has the potential to unite the complex silos of travel and hospitality into one convenient path from a user's couch, where they decide to travel, to their destination, be it a hotel, resort, casino, business event, theme park, or stadium.

The market for biometric digital identity in travel and hospitality is expected to grow at an overall CAGR of 90% from 2024-2028 generating just over \$72 billion globally.

The Prism Project has envisioned this journey as an uninterrupted corridor, threading together four historically distinct ecosystems—departure, arrival, local transport, and destination—via their common element: a guest empowered by biometric digital identity. This is the **Couch-to-Destination Guest Journey:** 



While the minutiae of each touchpoint is complex—with security screening, access, and payments all at play in different phases—the underlying identity principle represented by this model is elegant. Anchoring a guest's identity at the beginning of their journey allows every subsequent transaction to reference their enrollment and carry forward the assurance that they are who they claim to be. The ideal couch-to-destination guest journey is not a complex web that a user must navigate as the cost of doing business, it's a straight line maintained by the trust, security and privacy of biometrics at the core.

#### **The Travel and Hospitality Market**

Acuity Market Intelligence's survey of select high-profile travel and hospitality end users and relying parties showed four leading motivations for adopting new digital technologies: regulatory compliance, improved operational efficiency, increased physical security, and enhanced customer experience. The respondents equally believed that digital identity solutions could address their operational efficiency and customer experience needs—two core elements of the couch-to-destination journey.

Each touchpoint transaction between guest and relying party carries with it a potential for revenue. Over the five year period between 2024 and 2028, Acuity Market Intelligence forecasts 262 billion identity transactions worldwide generating a total of \$72 billion in revenue, with Asia Pacific leading in transaction volumes, followed by North America and Europe. Air travel will be responsible for nearly half of the market share, followed by hotels and resorts, which are expected to generate 33% of that total revenue. Theme parks will contribute 11% to the market, while more targeted destinations like stadiums, arenas, casinos, and conference venues will account for the remainder.

#### **Prismatic Thinking**

Three core concepts are differentiating the leaders in the travel and hospitality space, and they help focus the Prism analysis:

Power to the Passengers: Outside of the security line, technology cannot be forced on people. That's why it's users who will sculpt the biometric digital identity travel and hospitality experience. When a consumer opts-in to a value-added identity experience, they are helping construct the future of travel and entertainment. It is therefore imperative that vendors in this space prioritize known end user pain points if they hope to see traction

during this frontier time for the sector.

Interoperability: Interoperability in the travel and hospitality ecosystem ensures that users don't encounter speed bumps when engaging in a new transaction type. Having to change to a new mobile wallet when buying Duty Free items after using biometrics to pay for a quick meal can be enough to nudge a hurried customer away from a purchase. The stakes for user attention are high. Ensuring interoperability is the best way to keep them moving and transacting.

Intelligent Friction: Years of terminology like "frictionless," "seamless," and "invisible" have resulted in biometric facilitation technologies that are uncomfortable for many users. Adding a small but noticeable amount of friction in the form of positive notifications and alerts can assure users their experience is being facilitated properly and their data is being respected. Regular customer or passenger touchpoints serve as a reminder of their experience, which is brand enforcement for the relying parties providing it. They also offer opportunities to be proactive about privacy and consent. More than anything, Intelligent Friction keeps the experience visible to the passenger, allowing them to feel empowered by the identity technology whose evolution is shaped by their actions and consent

#### **The Travel and Hospitality Prism**

The immensity of the expanding guest journey is blurring the lines between travel, hospitality, and everyday life. As such, a holistic view of the biometric digital identity ecosystem is needed to understand the various moving parts in travel and hospitality, as well as how they interact.

In this Travel and Hospitality version of the Prism, the power of partnership and collaboration is plain to see, with Customer Experience Titans like SITA collaborating with other Prism vendors like Paravision and Indicio in order to masterfully deploy biometric guest experiences around the globe, consistent with the principle of Intelligent Friction. The leaders responsible for developing the couch-to-destination guest journey are co-innovating, not just with other vendors, but with the governments and organizations that provide the underlying infrastructure that allows us to leave home and experience the world safely, securely, and with as few barriers as possible.

In the end, our research shows that, after decades of foundation building, biometric digital identity for travel and hospitality is ready to takeoff. It's game time!

## **How to Read the Prism Report**

The Biometric Digital Identity Travel and Hospitality Prism Report is divided into six sections:

#### **Digitization in Travel and Hospitality**

The first section collects and analyzes the results of a vertical market focused survey examining how travel and hospitality stake holders view biometric digital identity solutions in relation to their digital transformation journeys. This high-level content is the starting point for the Biometric Digital Identity Travel and Hospitality Prism.

#### The Prism Lens (Challenges and Solutions)

The second section draws on aggregate travel and hospitalirty industry research from leading analysts, government organizations, and NGOs such as S&P Global, IACO, and Transparency International, as well as trusted international news sources. It provides a holistic visualization of eight core travel and hospitality industry challenges, then breaks them out individually to demonstrate how biometric digital identity can address them. The graphic visualization is supported by further written analysis. The pain points highlighted in the Prism Lens serve as the basis for the practical applications of biometric digital identity technology profiled later in the report.

#### **Market Forecasts**

The third section presents original proprietary market research from Acuity Market Intelligence, forecasting the global revenue and transactions volumes, broken down by region and by key travel and hospitality sectors (air travel, hotels and resorts, casinos, sports stadiums and arenas, and theme parks) for biometric digital identity in travel and hospitality. The charts depict the immense market potential for the vendors and relying parties in the current four-year period.

#### The Prism

The fourth section is the proprietary biometric digital identity industry ecosystem framework: The Prism. This version of the Prism is focused on the travel and hospitality industry,

depicting the various players that provide the solutions and initiatives required to realize the couch-to-destination guest journey. The Prism is a living research program, subject to updates, showing a strategic view of how the biometric digital identity community is working together with travel and hospitality stakeholders to enable intelligent friction for guest journeys with biometrics at the core.

#### **Evaluations and Case Studies**

The fifth section lists the vendors depicted in the Prism framework next to their evaluations. Each vendor is evaluated in context—based on their capabilities, accomplishements—and market aspirations, and grouped according to its Prism Beam. After each set of evaluations, use cases are presented to demonstrate how the solutions offered by sponsors of this report can address the challenges identified in the Prism Lens section. The evaluations and case studies demonstrate how biometric digital identity vendors currently operate in the travel and hospitality sector.

## The Prismatic Future of Travel and Hospitality

The sixth and final section contains strategic guidance and recommendations based on this report's research. It also contains author information, an overview of The Prism Project, and ways to get involved with future iterations of the Prism. The conclusion lights your way to the next steps on your digital identity roadmap.

Each section can be taken on its own, but together they offer a full picture of the current state of identity in travel and hospitality and the massive potential for its biometrics-enabled future.

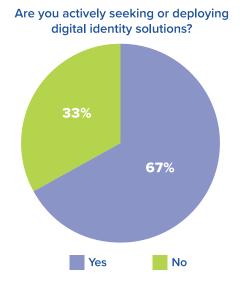
# Digitization and Identity in Travel and Hospitality

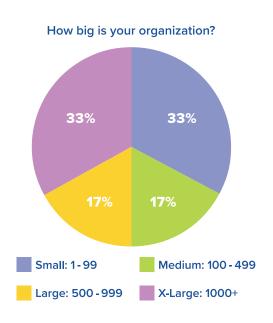
The Prism Project emerged from survey data comparing how biometric digital identity vendors' perception about identity's role in digital transformation lined up with the experience and views of of end users in vertical markets. Enhancing customer service, reducing fraud, and creating operational efficiency were identified as main adoption priorities in both segments, and data showed a prevailing support for converged physical and digital access. Overall we found biometric digital identity was moving from a paradigm of application-based point solutions to a holistic concept based on human users navigating digital spaces with a single ID.

For 2024, we directly surveyed travel and hospitality professionals with digital identity expertise.

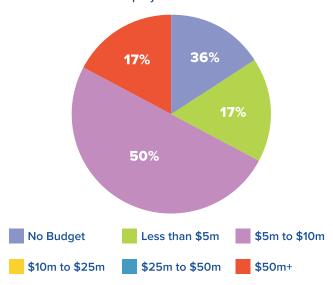
#### **Survey Scope**

The Travel and Hospitality Prism Survey reached organizations of all sizes—from <100 to 1,000+ employees with a strong majority actively seeking digital identity solutions.







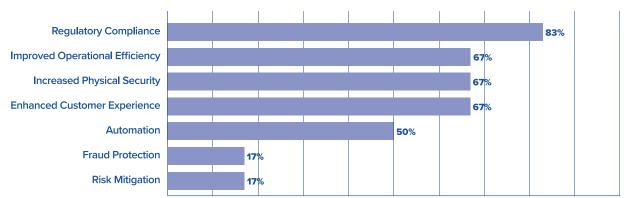


Their size of budget for digital transformation projects varied, but half reported having between \$5-10 million and a third reported having no funds available.

#### **Motivation and Expectation**

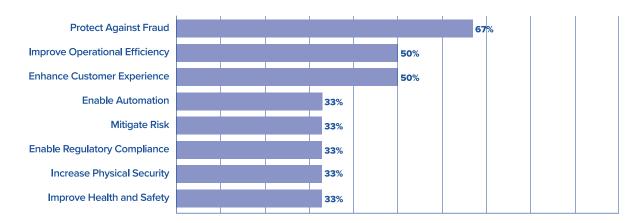
Overall, the respondents are motivated to adopt new digital technologies for reasons of regulatory compliance, improved operational efficiency, increased physical security, and enhanced customer experience.

# Which benefits of digital transformation motivate your organization to adopt new digital technologies?



The motivation to adopt digital technology aligns with respondents' confidence in digital identity solutions, which they believe can enhance customer experience and operations, while reducing fraud.

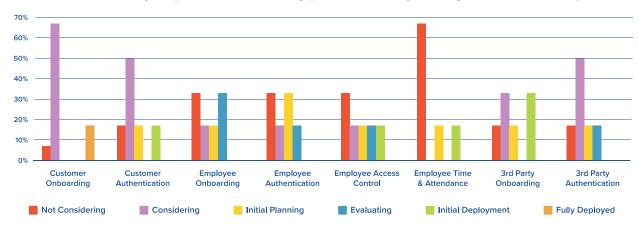
#### Mostly confident that digital identity solutions can:



#### **Priorities and Obstacles**

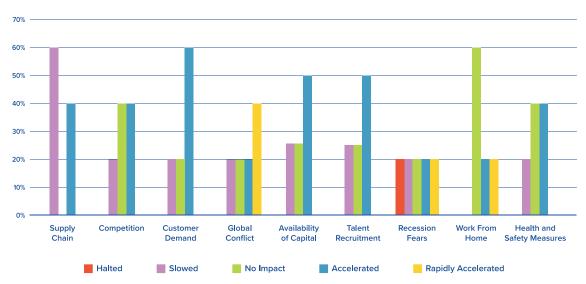
The priorities for identity-based onboarding and authentication are largely under consideration, with early adopters most prominent in 3rd party and customer onboarding. A strong contingent of respondents are not considering employee time and attendance as a priority.

#### Where would you place the following processes on your digitization roadmaps?



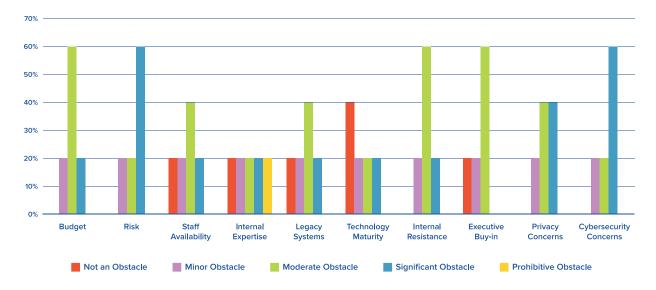
Meanwhile, global factors that impacted the wider industry in 2022 and 2023 seem to have accelerated the pace of digital transformation in travel and hospitality.





But the obstacles and adoption barriers to digital transformation are wide ranging. Risk, privacy, and cybersecurity concerns pose significant obstacles, while internal resistance, budget and executive buy-in are flagged as moderate challenges, implying a need for strong digital identity vendor value propositions.

#### How severe are the following obstacles to your digital transformation roadmap?



# Loyalty Programs

# Viewing Challenges Through the Prism Lens

To understand how the broad benefits of biometric digital identity can be applied to travel and hospitality, we use the **Prism Lens**. Each segment of this octagon represents one significant challenge for the market as it feels the increasing pressure of customer expectation, which is inextricable from all the other issues. By understanding these challenges holistically through the Prism Lens, we can see common obstacles on the path to achieving the couch-to-destination guest journey.

#### **Customer Expectation**

- Significant data transfer is required between guests and stakeholders to meet customer expectations.

 Regulations like GDPR and CCPA have strict requirements and carry harsh penalties.

- Data breaches that compromise guests' personal data
   Workforce cost victim companies challenges millions of dollars prevent relying parties from serving growing guest volumes.
- Longer wait times and more severe outcomes like lost baggage or flight cancellations severely hinder customer experiences.
- Help desks and phone services are ill equiped to deal with the
  - Health and safety is the most important ESG factor facing airports and airlines.
  - Both travel and hospitality providers are vulnerable to the disruption caused by healthcare crises.
  - Governance initiatives in hospitality have seen major investments by global chains in anti-corruption and diversity, equity and inclusion.

- The future of travel and hospitality is being sculpted by customer demand.
  - Customization, convenience, health and wellness, and eco consciousness are factors in guest decisions.
    - Remote work lifestyles are blending business and leisure, expanding the breadth of customer demand
- Guest volume is surpassing pre-pandemic levels, straining operational systems that are still recovering.

Guests are increasingly reporting negative experiences at bottleneck-prone touchpoints.

Delays have a cascading effect leading to operational costs—in airports every minute of delay at a gate costs an airline approximately - Custom-\$20 USD.

ers are disincentivized to commit to repeat business thanks to booking websites that prioritize lower prices and put their brands ahead of actual guest facilitators.

- Loyalty programs are friction-heavy, and enrollment is subject to abandonment.
- Points programs represent billions of dollars in liability

  Mass-produced and are vulnerable to fake IDs can pass account takeover most human inspections.
- Digital transformation creates a service gap between the expectation of seamless experiences and legacy friction.
- Siloed guest experiences create an uneven guest journey from couch-to-destination.
- Relying parties must facilitate the transfer of guests between touchpoints and services to enable a consistent customer experience.
- Inadequate controls to weed out counterfeit identity documents hinder watchlists, enabling smuggling, human trafficking, and terrorism.
  - Ticket scalping and illegal reselling drives up dynamic pricing models for events, shortchanging rightful stakeholders and negatively impacting the fan experience.

#### **Expanding Footprint**

**Operational Challenges** 

#### **Biometric Solutions**

Biometric digital identity solutions can be applied to each segment of the **Prism Lens** to address the digital transformation challenges faced by travel and hospitality stakeholders.

#### **Customer Expectation**

- Biometric digital identity reduces time customers need to spend on administrative and security procedures allowing them to enjoy the experience they purchased.
- Improved customer experience does not come at the expense of security when biometrics are at the core.
- Leaders in biometric digital identity adoption—like Frankfurt Airport—count biometrics as a quantifiable ROI driven investment in customer experience.

#### **Guest Flow**

- Identity verification technologies offload throughput strain by enabling remote check-in for travel and accommodations, and even pre-approval for border control.
- Facial recognition enabled eGates show a 4:1 improvement in guest throughput.
- Biometric payment and retail options carry seamless guest flow to optional touchpoints like concessions and retail, maintaining consistent traffic.

#### **Loyalty Programs**

- Identity verification solutions reduce enrollment friction, improving conversion rates.
- Biometrics enable deduplication of accounts and ensure every user in a loyalty program is real and who they say they are—no synthetic identities or dummy accounts.
- Biometrics remain the strongest defense against account takeover fraud.

#### **Bad Actors**

- Biometric digital identity platforms verify a guest's identity at the first touchpoint and carry that integrity through the entire travel and hospitality experience.
- Linking biometrics to a guest experience can help bring integrity to the ticketing ecosystem.
- Identity verification solutions improve ID checks, helpings weed out counterfeit documents preventing travel of uncleared passengers.

#### Expanding Footprint

- Targeted biometric solutions used to enable guest flow can be used to orchestrate retail payments in the ecosystem.
- Interoperable digital identity technology offers a strong foundation for every relying party to participate in a seamless guest journey.
- Biometrics-enabled seamless experiences give guests more time and agency to participate in the expanding travel and hospitality ecosystem.

#### Sustainability & ESG

- Biometric digital identity solutions enable automation, eliminating unnecessary guest flow congestion and mitigating the spread of pathogens.
- Biometrics enable strong audit trails for every transaction, with various controls for anonymity and pseudonymity, disincentivizing activities related to corruption.
- The best biometric technologies are unbiased, facilitating equal treatment for guests and employees at all levels of participation in travel and hospitality.

#### **Operational Challenges**

- Front of house burden is transferred to intuitive remote booking and check-in thanks to biometrics.
- Increased automation onsite, with self-serve retail and facial recognition enable access, reduces burden on customer-facing staff and security.
- Operational relief is passed onto the guest, who encounters less friction and is given more control over their experience.

#### **Privacy and Regulations**

- Biometric digital identity solutions built with privacy-by-design concepts enable easy regulatory compliance.
- Decentralized biometric digital identity solutions supported by government systems of record prioritize user consent in data sharing.
- Centralized gallery-of-the-day approaches to biometric storage purge guest data at regular intervals, while enabling the high levels of intelligent friction.

## **Looking through the Prism Lens**

The couch-to-destination guest journey is defined by two key concepts: customer experience and operational improvement. Just as biometrics in general have managed to unite the traditionally dichotomous paradigms of security and convenience, digital identity technologies are building a new reality for travel and hospitality in which relying parties see efficiency and revenue gains while enhancing their services and improving customer satisfaction.

The entire travel and hospitality ecosystem—from airports to sports stadiums and theme parks from hotels and resorts to conference centers and casinos—is actively coalescing around the seamless customer experience. Because biometric digital identity technology centers around facilitating the secure and convenient transacting of end users across a variety of touchpoints with various relying parties—and because the guest journey has become so interconnected—the challenges in this sector show significant overlap, as do their solutions. This is a feature of the Prism Lens approach to viewing travel and hospitality: Prism vendors offer elegant solutions to interconnected challenges that multiply in the absence of strong identity controls.

#### **Customer Expectation**

Customer expectation is a major driver in travel and hospitality. Trends in how people prefer to travel shape guest demand, which in turn motivate relying parties to adopt new technologies and reshape the services they provide. At the writing of this report, these trends include a desire for customization, seamless experiences, an increased awareness of health and wellness, concern for eco-friendly practices, and remote work lifestyles that allow travelers to combine business and leisure for extended trips and working vacations.

Biometric Digital Identity, at its heart, is about bringing the human being initiating transactions more fully into our rapidly digitizing world. More control over their identity equates to fewer barriers between users and the travel and hospitality experiences they most desire. Consumers experience biometric digital identity as natural and frictionless, which, thanks to the security of biometrics and modern liveness detection, doesn't come at the expense of safety or security.

"As an airport, the investment (in Smart Path) is not financial, it is the customer experience. The passenger approaches an eGate. The flip gates open and the customer goes through and he's like: 'Wow, it's magic.' And that is the thing you can't measure with money. It is the customer experience."

- Jens Sanner, Program Director, Biometrics at Fraport

#### **Guest Flow**

The travel and hospitality market depends on the flow of people through complex systems consisting of many touchpoints, each carrying with it a risk of slowdown. In hospitality spaces like events venues, casinos, resorts, or hotels, the slowdown created by bottlenecks significantly hinders the guest experience. And the same is true for travel.

In its 2023 Passenger IT Insights report, SITA found that travelers report experiencing negative emotions during key stages of the travel journey—bag drop, security, and border control. The number of passengers dissatisfied with these touchpoints is up 4-6% year over year. And that can cost airlines, which rely heavily on long term customer relationships—in 2021 McKinsey found that the pandemic affected brand loyalty, with customers twice as likely to try new brands and experiences.

In addition to upsetting the customer experience, lag has a cost. Delays at any of the traveler touchpoints have a cascading effect through the entire travel ecosystem. In an airport, for example, a bottleneck at bag drop will clog up the security line further in the passenger journey, while boarding delays lead to traffic control delays and late departures. Late departures can lead to missed connections on passengers' itineraries and operational slowdown for subsequent flights. This cumulative traffic jam effect puts excessive, costly strain on the travel ecosystem. According to research conducted by University of Westminster, every minute of delay at a gate costs an airline about \$20 USD, while delays during the taxiing process cost about \$52 USD per minute.

Biometric Digital Identity Solutions maintain the integrity of the security and identity controls required by travel and hospitality relying parties, while enabling seamless guest experiences that keep traveler flow smooth from couch to destination. Identity verification technologies can offload much of the operational strain in travel by enabling remote check-in and even pre-approval for border controls from a traveler's home. For hospitality, remote issuance of digital keys, express lane ticketing, and biometrically-enabled self-serve concessions don't just smooth out the guest flow, they reconfigure it into a more efficient process—Luminaries in the travel and hospitality space like Wicket have helped sports stadiums reduce the number of entry lanes while improving throughput, showing high levels of guest satisfaction and significant cost savings for the hosting party.

Traveller dissatisfaction with high-friction travel touchpoints has increased 4-6% year over year, according to SITA's 2023 Passenger IT Insights report.

#### **Loyalty Programs**

To say travel and hospitality is a highly competitive environment is an understatement. Booking sites that prioritize cost savings for travelers above all else disincentivize repeat business by putting their brands in front of the actual experience providers, be they airlines, rental agencies, or accommodations providers. Loyalty programs allow airlines, hotels, and other parties to strengthen direct relationships with their customers via preferred service, points programs, and extended benefits throughout a relying party's partner network.

But, in addition to presenting high-friction enrollment barriers to customers, loyalty programs require the management of identity data vulnerable to privacy concerns, exploitation, and fraud. Loyalty programs are particularly vulnerable to account takeover fraud, in which a bad actor gains control of a traveler's account and steals their reward points. And while that might sound low stakes compared to traditional financial fraud because of the language used for rewards programs, consider how much value is placed on them by airlines. In 2022 Delta Airline's SkyMiles program carried USD 7.6 billion in liability.

Biometric Digital Identity solutions solve the downsides of loyalty programs. Identity verification technologies make enrollment as simple as scanning an identity document and taking a selfie, in turn increasing conversion rates. When biometrics are at the core of a loyalty program, they also prevent fraudulent account use, including enrollment of synthetic identities, ensuring the person redeeming loyalty benefits is the rightful account holder. Biometrics even help from a data management standpoint, enabling account deduplication/consolidation, in line with privacy best practices ang supporting a consistent 360-degree view of customers.

#### **Bad Actors**

Travel and hospitality are beset by a variety of serious fraud threats. From a travel standpoint, identity fraud is a core component of criminal activity—from smuggling to international terrorism, to human trafficking. Fake IDs plague both international and domestic travel, with mass produced counterfeits able to pass most human inspections. Without measures to weed out fraudulent identities in the travel system, watchlist programs are left to flounder.

Safety is also a concern in hospitality, but in the entertainment

- "...biometric identification will strengthen security and enhance facilitation with more accurate passenger information. This will, in turn, reduce the number of inadmissible passengers with improper documentation and the chances of human error in letting wrongly documented passengers fly."
- Yvonne Manzi Makolo, Chair of the IATA Board of Governors

space there's a commercial aspect, too: scalping. Illegal resale of concert and sports tickets is a criminal practice—as old as tickets themselves—in which an organized effort is made to hoard tickets to events and sell them at inflated prices outside of the legitimate seller and reseller ecosystem. This practice has led to high profile upsets of already unpopular ticketing practices like dynamic pricing models, in which customers are competing with resellers for tickets to music acts like Beyoncé, Taylor Swift, and Oasis.

By putting biometrics at the core of travel and hospitality, participating guests will always be who they say they are. Identity verification technologies can be used to vet a traveler or guest's identity for authenticity at their initial touchpoint—be it ticket purchase or check-in—and when properly implemented, the integrity of that identity can be carried through their entire journey. At the same time, bringing an element of strong identity into the events ticketing space, the sales history of tickets can benefit from a stronger audit trail that keeps them within the intended commercial ecosystem.

Contemporary digital identity solutions outpace and outscore manual ID checks, helping weed out fake IDs and prevent international crime without adding significant friction to the guest experience. According to Yvonne Manzi Makolo, Chair of the IATA Board of Governors, "biometric identification will strengthen security and enhance facilitation with more accurate passenger information. This will, in turn, reduce the number of inadmissible passengers with improper documentation and the chances of human error in letting wrongly documented passengers fly."

#### **Expanding Footprint**

Digital transformation in travel and hospitality is creating a service gap between seamless experiences and legacy consumer friction. Entry into events venues or airport terminals is being streamlined, but access to amenities like concessions, merchandise, and VIP areas like lounges or private boxes operate in their own silo. Outside of the facility ecosystems, traveler and guest journeys experience uneven levels of friction between modes of travel, types of services, and category of destinations. The traveler and guest journey crosses companies, processes, agencies, and borders, but from the end user standpoint that sequence of events is a unified experience regardless of the number of parties involved. The challenge faced by travel and hospitality relying parties is how to facilitate the seamless transfer between touchpoints to enable a full couch-to-destination journey that's

consistent.

Within travel and hospitality facilities, biometric digital identity solutions that are used for seamless access and security can be expanded to include payments for retail purchases. A common example is sports fans enrolled in a biometric enabled fast access program at their local stadium who connect a payment option to their account so they can participate in automated or self-serve beer and snacks purchases. Outside of a closed system like a stadium, things become trickier as more parties get involved and the experience is much more defined by an end user's choice. The onus then is on the relying parties to match the customer experience offered by the other stakeholders involved in the customer journey. By incorporating biometric digital identity into services like taxis, hotels, retail, and excursions—and partnering with other relying parties involved in travel and hospitality—companies can play their part in uniting the customer-driven travel and hospitality industry with biometrics at the core.

#### **Sustainability & ESG**

According to S&P Global, health and safety is the most important ESG factor facing airports and airlines. This reflects "the impact COVID-19 had on passenger volumes, revenues, and profits." As travel is symbiotically linked to hospitality, similar can be said for all guest services. As proven by the period following 2020, travel and hospitality sector is vulnerable to disruptions related to social risk. What's bad for planes and trains is bad for resorts, hotels, and sports stadiums.

On the governance side of the equation, major hotel groups and hospitality chains are finally taking on anti-corruption measures. Travel and hospitality services can be misused as bribery in very nuanced ways that can be difficult to recognize. With Transparency International's latest Corruption Perception Index revealing two thirds of its 180 assessed countries harboring serious corruption problems, any initiative to clean up operations will stand out in the overall landscape.

Biometric digital identity solutions facilitate health and safety thanks to their ability to automate processes and eliminate unnecessary guest flow congestion. By eliminating bottlenecks within a facility, special restrictions normally directed by security practices can be lifted in favor of ergonomic designs known to limit the spread of disease. The biometrically enabled digital wallets that enable seamless travel can also be used to securely and privately store health information required for travel to regions or facilities with vaccination restrictions. Meanwhile, stronger identity controls provided by biometrics and document verification restrict known criminals and blacklisted individuals from entering the travel and

hospitality ecosystem. Biometrics also offer stronger audit trails when it comes to cracking down on corruption, allowing for cleaner records, cleaner investigations, and inevitably cleaner ethics in a world beset by bribery.

#### **Operational Challenges**

Guest volumes are rising at a time when layoffs, turnover, short staffing, and labor disputes are creating operational challenges. Without the workforce to meet the demands of pre-pandemic service numbers, facilities are incapable of operating safely at full capacity, closing entry lanes, help desks, and in some cases even canceling or rescheduling important parts of a guest's itinerary. The issues are quite punctuated in the air travel experience of recent years, with mass cancellations, historic customer complaint levels, and a high-profile epidemic of lost luggage.

Biometric digital identity solutions improve operations in a number of ways. By enabling enrollment and pre-screening at home, travel and hospitality stakeholders are transferring the front of house burden of ticketing and check-in to the end user, who in turn benefits from the convenience of skipping traditionally onerous in-person processes. In the facilities themselves, biometrics enabled security lanes allow a high level of automation, relieving overworked staff and enabling more efficient workflows. Luminaries in the Targeted Travel and Hospitality Solutions Prism Beam have allowed for a 75% reduction in entry lanes at stadiums that use biometric access for guests, leading to major operational savings.

**Privacy and Regulations** 

Travel is a unique process that demands a significant amount of data transfer between users, governments, and corporate entities. Passengers must submit to relatively invasive security checks in order to travel, especially across international borders. The data provided must be handled with careful adherence to regulations and respect to the passenger's privacy.

In hospitality, the collection and handling of guest data is far less regulated but shifting privacy requirements and an increasingly risky cybersecurity landscape make it a high priority challenge. Hospitality providers are incentivized to collect sensitive data from customers, but mishandling of that data can lead to lawsuits and costly cybersecurity incidents. In 2023 MGM Resorts International suffered a data breach resulting in the compromise of customer information that incurred over \$100 million in costs.

Luminaries in the Targeted Travel and Hospitality Solutions Prism Beam have allowed for a 75% reduction in entry lanes at stadiums that use biometric access for guests, leading to major operational savings.

Biometric Digital Identity Solutions built with privacy-by-design concepts can enable regulatory compliance while giving users more control and visibility into the information they share and how it is used. Decentralized verifiable credentials limit the data that is transferred or stored by relying parties, while centralized platforms that leverage a gallery-of-the-day model, regularly purge guest data at regular intervals. Both methods have strengths, and the solutions implemented will depend on a relying party's application of the principles of Intelligent Friction.

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# The Biometric Digital Identity Travel and Hospitality Market

### **Forecasts**

Bolstered by higher-than-normal identity literacy and the converging industry trends illustrated in the previous section, which lend themselves to biometrics adoption, the Biometric Digital Identity Travel and Hospitality Market is on track for significant growth, globally.

The following data is based on original proprietary market research from Acuity Market Intelligence. These are bottom-up market forecasts based on quantifiable 3rd party data concerning air travel, hotels and resorts, theme parks, casinos, sports stadiums and arenas, and conference venues, along with a series of assumptions about the current level of biometric adoption, average use, and projected growth of the user base and user adoption based on proprietary analysis.

This proprietary analysis is part of an ongoing research project that includes third party data, vendor reported data, and industry expert assessments.

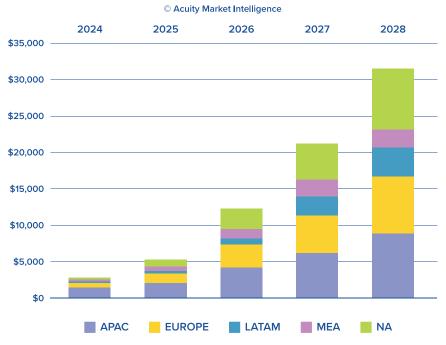
Interactive spreadsheets of these forecasts with further visibility into the market are available for purchase.

Contact cmaxmost@acuity-mi.com for inquiries.

### **Global and Regional Forecasts**

Total biometric digital identity travel and hospitality revenue from 2024-2028 is expected to grow at an overall compound annual growth rate (CAGR) of 92%, generating just over \$72 billion globally.





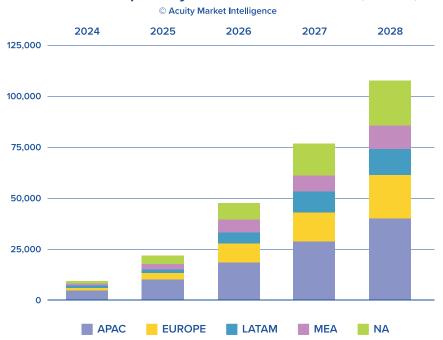
Total Revenue (millions)							
	2024	2025	2026	2027	2028		
APAC	\$1,086	\$1,909	\$3,810	\$6,030	\$8,510		
EUROPE	\$479	\$1,285	\$3,311	\$5,452	\$8,302		
LATAM	\$106	\$342	\$989	\$2,467	\$3,685		
MEA	\$288	\$602	\$1,161	\$1,811	\$2,443		
NA	\$383	\$1,073	\$3,035	\$5,662	\$8,557		
Total	\$2,325	\$5,211	\$12,306	\$21,422	\$31,497		

#### **Global and Regional Transaction Volumes**

That revenue is generated by 263 billion transactions globally within the time period.

This model is broken up into two components, consumer facing and workforce applications, and built on a per transaction basis. While many industry revenue models are built on overall deployment expendatures, or on a volume basis—per person per month or on an annual basis—the transaction-based model was chosen to maximize flexibility. Comparative modeling showed limited variation in forecast values that were not significant at scale so model flexibility was prioritized.

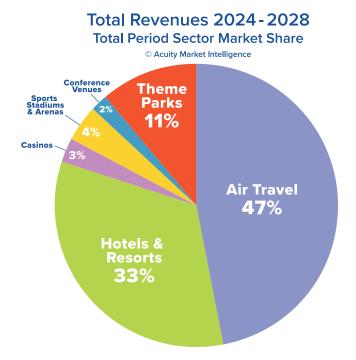
#### **Travel & Hospitality Total Transactions (millions)**



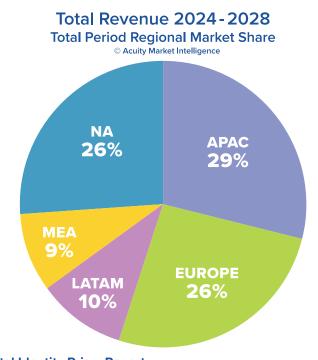
Total Transactions (millions)							
	2024	2025	2026	2027	2028		
APAC	4,058	8,741	18,149	28,470	40,191		
EUROPE	1,205	3,770	9,230	14,544	21,120		
LATAM	631	2,150	5,147	9,262	13,082		
MEA	794	2,288	4,894	7,152	9,716		
NA	1,630	4,369	10,385	17,536	24,836		
Total	8,318	21,318	47,805	76,536	108,945		

#### **Total Market Share By Sector and Region**

Air travel makes up nearly half of the total market over the period, with accomodations like hotels and resorts accounting for a third. The remaining 20% goes to the more targeted sectors.



The regional breakdown is split between North America, Europe and APAC, with the latter slightly ahead in terms of total revenue for the period. Latin America and the MEA region make up the difference with about a tenth of the market each.



#### **The Biometric Digital Identity Prism Report**

# The Travel and Hospitality Prism

Just as a beam of light contains all colors, the biometric digital identity ecosystem is comprised of many vendors contributing to the grand idea of digital identity. The Prism Project conceptualizes this relationship through the Prism: a proprietary market landscape model intended to help reflect the components of the emerging reality of identity in a digitized world.

### **Biometric Digital Identity Prism**

#### Infrastructure

These standards bodies, testing companies, and governmental and non-governmental organizations provide the critical infrastructure required for market maturity and mainstream adoption.

#### Guest

#### **Facilitator**

These organizations drive end user adoption by leveraging identity technology to imporve and automate security, operations, and customer These organizations drive end-user adoption by leveraging identity technology to improve and automate security, operations, and customer experience.

These vendors offer document and/or biometric verification solutions that enable remote onboarding and authentication for access to a range of high-security and customer experience-enhancing travel and hospitality applications.

#### **Identity Verification**

© 2024 Acuity Market Intelligence

#### **Identity Platform**

These platform providers enable end-toend orchestration for identity that may or may not include biometrics, but if included, biometrics are treated as a feature rather than a foundation.

#### Customer

#### **Experience Titans**

These standards bodies, testing companies, and governmental and non-governmental organizations provide the critical infrastructure required for market maturity and mainstream adoption.

These vendors provide biometric and non-biometric security that links a digital identity to an individual for travel and hospitality physical and logical access.

#### Authentication

ACUITY MARKET INTELLIGENCE

#### Biometric Core Technology

These vendors develop biometric core technology deployed across the Prism to capture, process, encrypt, and match biometric data as well as to detect synthetic identities and deepfakes.

#### Biometric Identity Platform

These platform providers enable end-to-end orchestration for identity in travel and hospitality and are built on a foundation of biometrics.

These vendors incorporate proprietary and native biometrics into specialized solutions purpose-built to deliver travel and hospitality identity applications.

Targeted Travel and Hospitality Solutions

Vendors are positioned in one of nine Prism Beams. Each Beam representing a critical component of the biometric digital identity landscape for travel and hospitality. For some vendors, it can be challenging to select one beam that represents their singular position in the marketplace. Many appear to span multiple beams. In these cases, we have selected the beam that most accurately reflects the breadth and depth of their product and service offerings and is most closely aligned with their unique differentiators.

## **How to Read the Prism**

Within each beam, there are three Vendor Categories: Pulsars, Catalysts, and Luminaries.

#### **Pulsar**

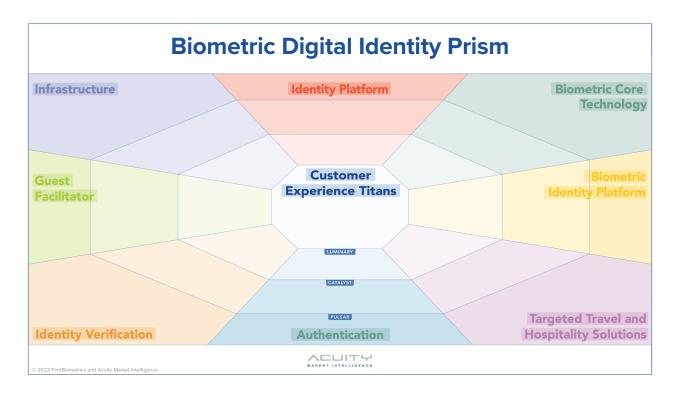
Pulsars are the bright upstarts and pivoting legacy vendors prioritizing the crucial elements of biometric digital identity. Startups with promising technology or established names with a proven aptitude for adapting to the new identity ecosystem, Pulsars have strong potential to influence the Prism landscape.

#### **Catalyst**

Catalysts are established disruptors, innovators, and agents of acceleration. With high proficiency in certain areas of assessment, Catalysts are often one step away from ascending to Luminary status, whether it's through an acquisition, a technological innovation, or an injection of resources.

#### **Luminary**

Luminaries are the guiding lights of their industry segment. They show the highest level of proficiency in their beam and are often responsible for setting trends in their fields.

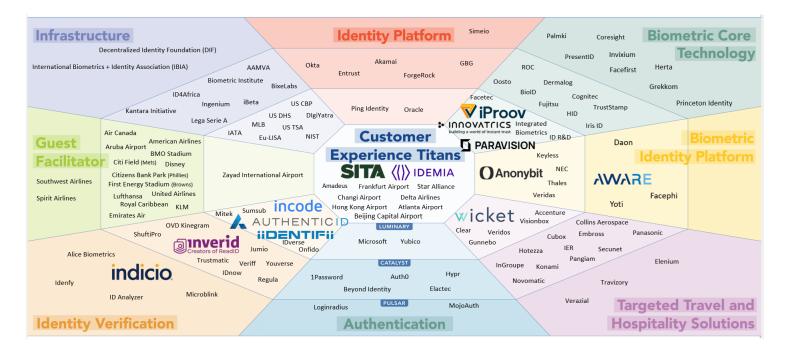


## **Refractors and the Customer Experience Titans**

The center of the Prism is anchored by a special category—the Customer Experience Titans. These companies, due to their size, global footprint, proven expertise, partner networks, and robust portfolios, have a definitive role in the travel and hospitality biometric digital identity landscape. This role is that of a Refractor: it is through their initiatives that the industry is viewed.

As the market evolves through acquisition, development, regulation, and innovation, the Refractor position may grow or diminish. Luminaries in the Identity Orchestration Platform Beams are best positioned to ascend to Refractor status.

# The Travel and Hospitality Biometric Digital Identity Ecosystem



#### **Important Note on Prism Beams:**

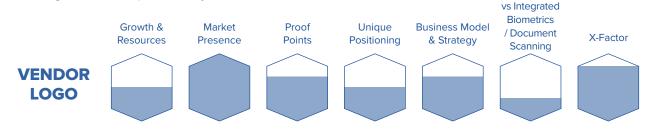
The Prism Beams and the classifications within represent important components of the emerging biometric digital identity landscape, and group vendors by the role they play therein. It is modality agnostic. Because of the broad nature of Prism Beams, many companies in the same areas are not direct competitors but represent the leading providers of their given solutions.

## **Evaluations & Use Cases**

In order to place vendors on the Biometric Digital Identity Prism, we are assessing the leading companies based on six criteria.

- **Growth & Resources** Current revenue, year-on-year growth, financial stability, and resources available to sustain and support ongoing growth.
- Market Presence Overall geographic footprint and market sector penetration, as well as specific geographic regions and markets where a level of dominance has been achieved.
- Proof Points Profile and size of overall and market sector customer base and key customers. Also includes 3rd party testing results and certifications and speed of implementation.
- Unique Positioning Unique Value Proposition (UVP) along with differentiable technology and market innovation generally and within market sector.
- Business Model & Strategy Overall marketing and sales positioning, messaging, and strategy as well as channel scope and quality and range of partnerships, channels, thought leadership, use of digital, social media presence, and engagement generally and within market sector.
- Proprietary Versus Integrated Biometrics and Document Authentication – Depending on the market, solutions(s), specific beam, may be rated higher as proprietary or integrated technology.
- X-Factor This is a unique beam and market sector specific metric.

We visualize this assessment as a Prism Evaluation Chart: an easy-to read graphic representation of a vendor's current activity, resources, and abilities. The more color filling a Prism hexagon, the higher level of proficiency.



**Proprietary** 

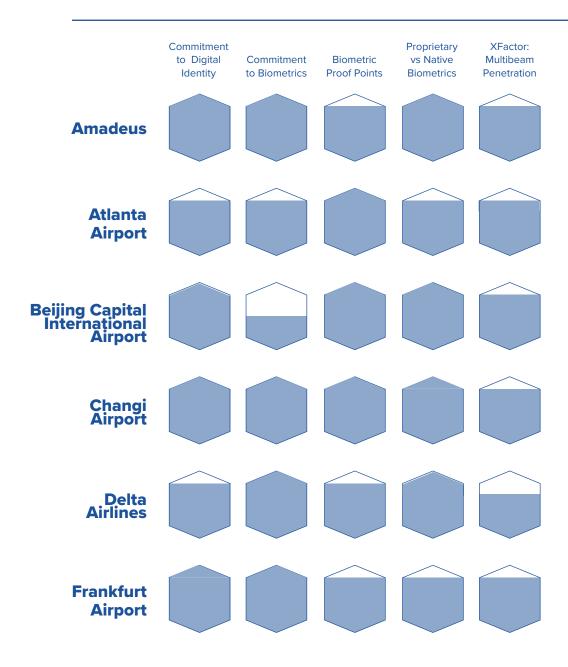
# Important Note of Evaluations and Prism Placement:

The vendor specific metrics in this report are based on publicly available data, survey data, interviews, and confidential briefings. It is presented in good faith as a representation of the travel and hospitality biometric digital identity ecosystem according to the values stated previously in this report. If you see your company here and have questions about your evaluation or placement within the Prism, please contact: info@the-prism-project.com.

## **Customer Experience Titans**

These leading travel and hospitality players are critical to global acceptance and adoption of biometric digital identity. Masters of Intelligent Friction, these market leaders provide end-to-end integrated seamless customer solutions at scale.

#### **Evaluations**





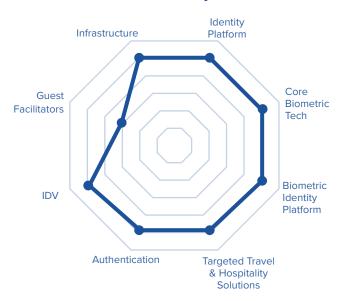
#### **Refractor Beam Penetration**

The Customer Experience Titans are positioned in the center of the Prism because of their demonstrated ability to define the travel and hospitality biometric digital identity landscape through their participation in each other Prism Beam. The following Refractor Charts display each Titan's leadership within every aspect of the biometric digital identity ecosystem.

#### **Amadeus**

#### Identity Infrastructure Platform Core Guest **Biometric Facilitators** Tech **Biometric** IDV Identity Platform Authentication Targeted Travel & Hospitality Solutions

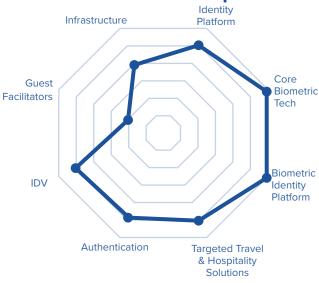
## **Atlanta Airport**

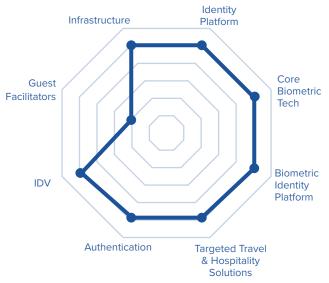


Prism Ver. 1.0 © 2024 The Prism Project

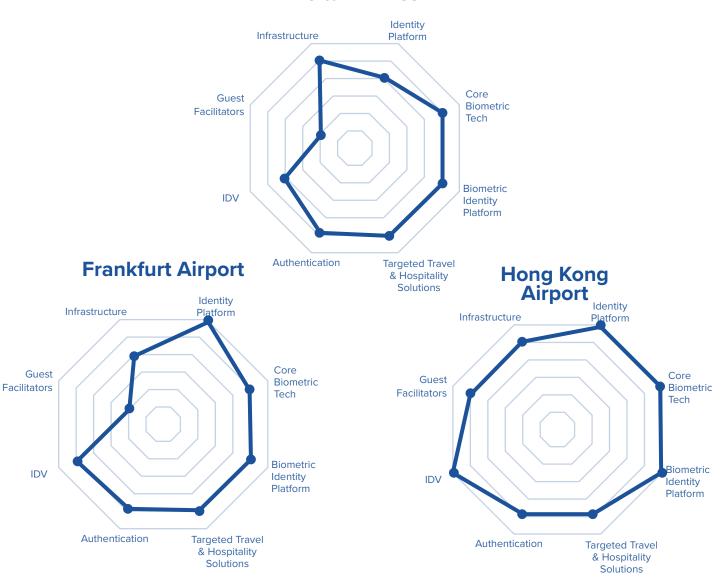
# **Beijing Capital International Airport**

## **Changi Airport**



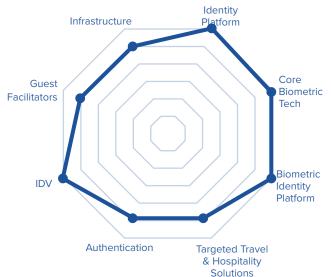


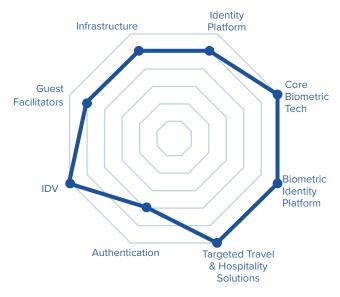
### **Delta Airlines**



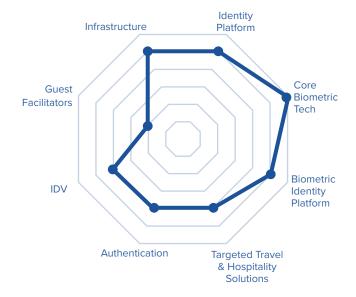






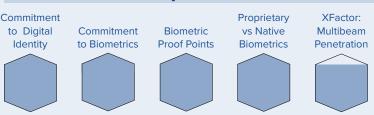


### **Star Alliance**





### BEAM: Customer Experience Titan / CLASSIFICATION: Refractor





In 1949, 11 airlines united around the mission to improve air travel. They created SITA. Initially focused on providing network and communication services between airports and airlines, the company has evolved with the industry to become one of the most foundational players in biometric digital identity for the travel industry. In the 75 years since its conception, SITA has improved the way we travel on a global scale, growing its presence to include 1000 airports, serving over 200 countries and territories and covering 90 percent of international destinations. In addition to its role in the Aviation & Transportation sector, for more than 25 years SITA has also supported governments in improving the security and efficiency of their borders, providing solutions to manage risk & threats while facilitating the movement of legitimate travelers.

#### **An Industry Defining Prism Refractor**

A Customer Experience Titan, SITA holds a uniquely definitive position in the Travel and Hospitality Prism. The company shows particular leadership in core biometric tech, biometric identity platforms, targeted solutions, and identity verification, setting SITA apart as a Prism Refractor. Thanks to its significant contributions to biometrics in travel and hospitality, the company defines the way we see the rest of the market. SITA is behind about 5,000 biometric touchpoints globally. Its widely deployed Smart Path solution provides seamless passenger experiences in 43 airports, while its new innovation, Digital Travel utilizing the Digital Travel Credential (DTC)—is enabling pre-clearance for border control, significantly reducing processing times at international arrivals.

#### The Smart Path Through Frankfurt

When Frankfurt Airport (operated by Fraport) was experiencing rapid increase in passenger volumes, it needed a solution to manage guest flow that fit a very specific profile. The facility had space restrictions, meaning it couldn't simply expand its physical footprint. And because Frankfurt serves over 90 airlines, whatever digital solution it picked would have to be suited for common use. Fraport selected SITA's Smart Path, which met all the selection criteria and enabled the deployment of facial recognition at every passenger touchpoint, from check-in though security to boarding, speeding up passenger processing by 30%. SITA's success at Frankfurt is just scratching the surface—2653 Smart Path devices are already deployed worldwide, with 2216 planned for deployment in the next 12 months.

#### **Better Vacations With Biometrics**

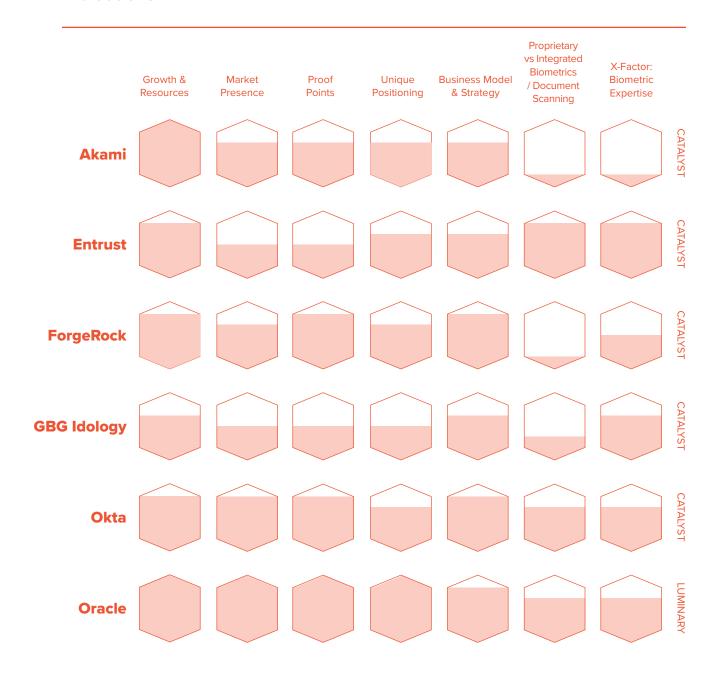
Customer experience is at the heart of Caribbean tourism, so much so that Aruba named its seamless travel program after happiness. Aruba Happy One Pass (AHOP) leverages the Digital Travel Credential developed by SITA and its co-innovator Indicio, allowing travelers to receive pre-approval for border control before they even leave home. Visitors simply scan their passport with their phone to create a DTC, then share it with the Aruban government for approval. They are then issued a Verifiable Credential that lets them enter the country by simply looking at a biometric Facepod once they arrive. The success has been massive, with Aruba committed to expanding AHOP to hospitality and events on the island, while the vast majority of passengers surveyed through SITA's own research are expressing a desire to have DTC-driven experiences on other passenger journeys. An exemplary force in travel, SITA's success in meeting customer demands and pleasing passengers indicates clear skies ahead for the market.

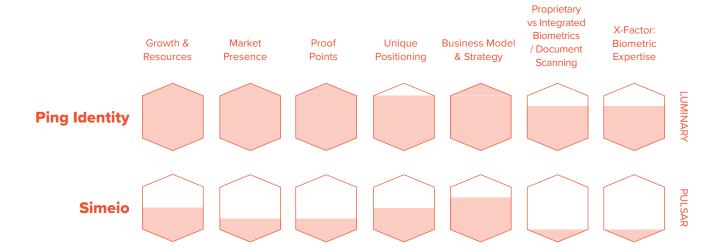
Contact SITA:

# **Identity Platform**

These platform providers enable end-to-end orchestration for identity that may or may not include biometrics, but if included, biometrics are treated as a feature rather than a foundation.

**Prism XFactor:** Biometric Expertise

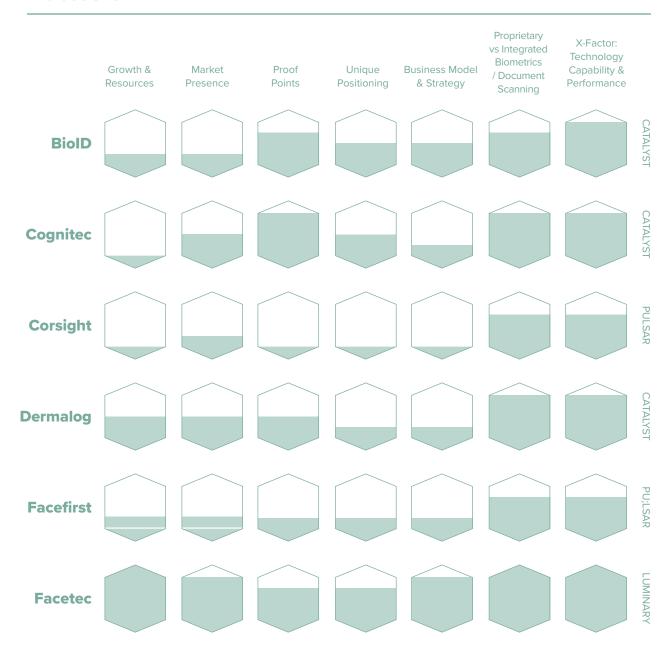


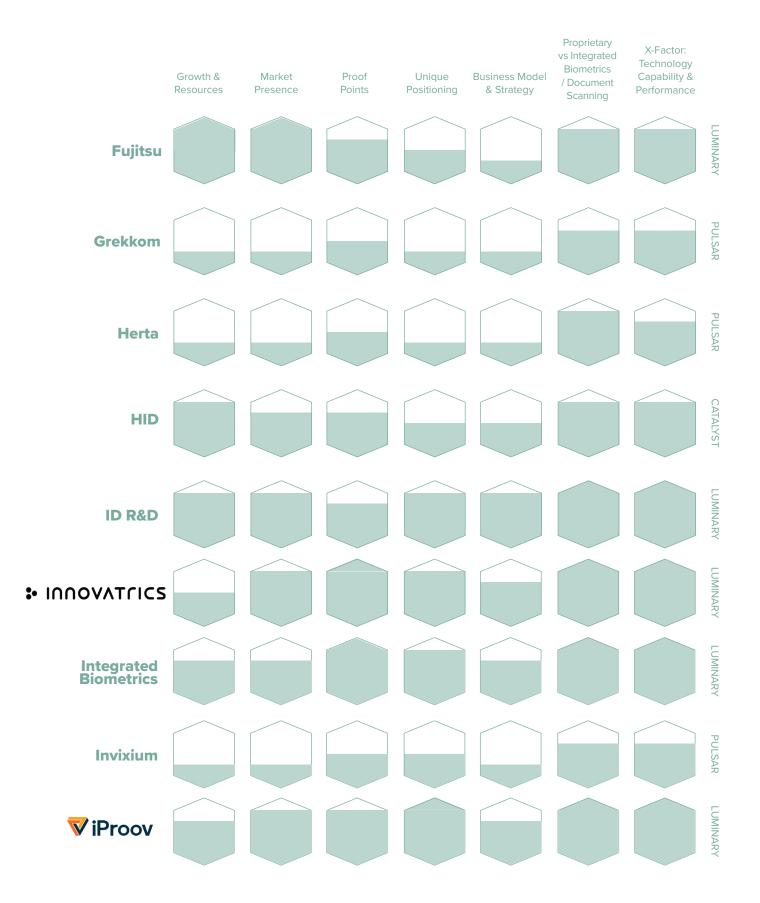


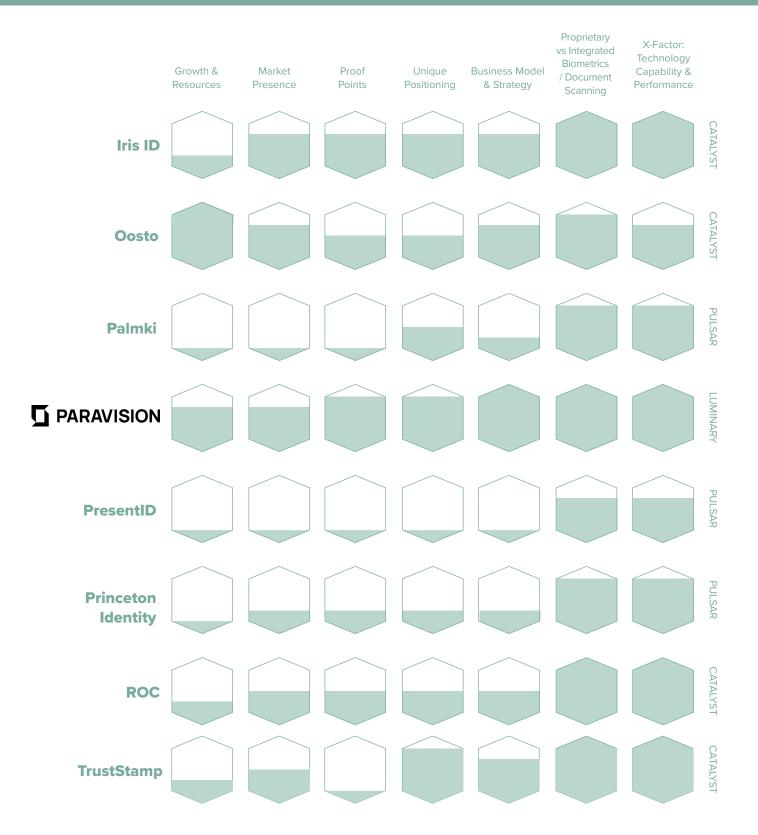
# **Biometric Core Technology**

These vendors develop biometric core technology deployed across the Prism to capture, process, encrypt, and match biometric data as well as to detect synthetic identities and deepfakes.

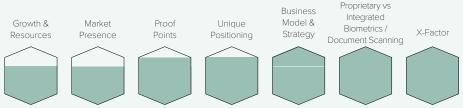
Prism XFactor: Technology Capability & Performance

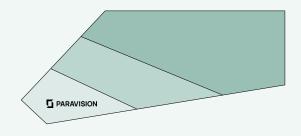






## BEAM: Core Biometric Tech / CLASSIFICATION: Luminary





Based in San Francisco, Paravision is among the leading providers of biometric facial recognition technology. Consistently ranked among the top global performers in independent testing programs like those run by the National Institute of Standards and Technology (NIST), this Biometric Core Tech Luminary is guided by core values of precision, curiosity, and integrity. That, along with its ethical design philosophy based around a set of AI principles, positions Paravision to address the multifaceted challenges of travel and hospitality. Its core tech runs on every major platform, enabling its partners to leverage 1:1 and 1:N facial recognition, as well as search functions, supported by AI tools including liveness, deepfake detection, and age estimation. In a sector that demands a delicate balance between privacy, security, and customer experience, Paravision's approach to biometrics addresses the unique challenges of travel and hospitality.

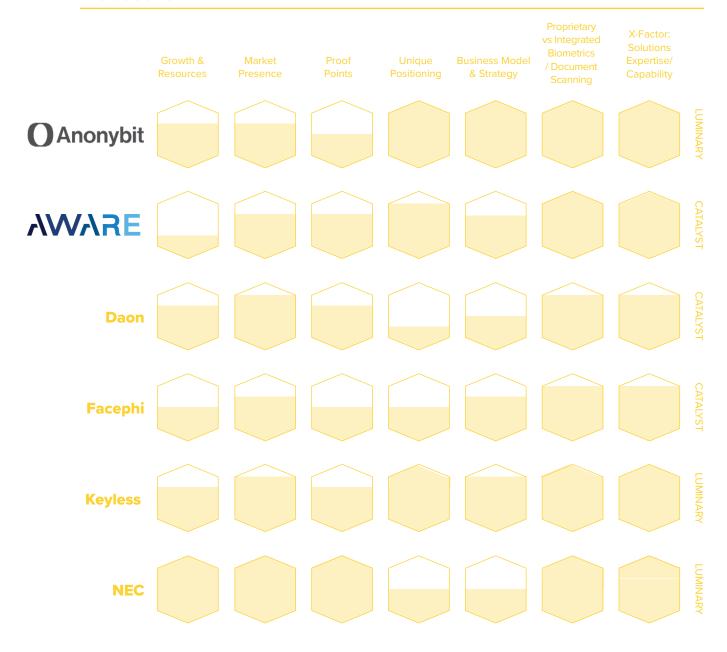
Emphasizing ease of deployment from cloud-based systems to the edge, Paravision's technology is flexible enough to meet the various needs of travel and hospitality providers, no matter which touchpoints they manage on the expanded guest journey. Its technology enables mobile enrollment for booking, check-in, ticket purchases, and loyalty programs. In physical spaces, its facial recognition can speed guests through security checkpoints as easily as it enables convenient and secure retail—perfect for everything from contactless passenger throughput in airports, to gameday sports betting and automated concessions in stadiums. These capabilities are actively being realized through a strong partner network including Prism Catalyst HID Global and Customer Experience Titan SITA. Particularly well-suited to solving travel and hospitality pain points related to guest flow, loyalty, and customer expectation, Paravision's facial recognition technology is facilitating the full spectrum of seamless customer journeys from couch to destination and beyond.

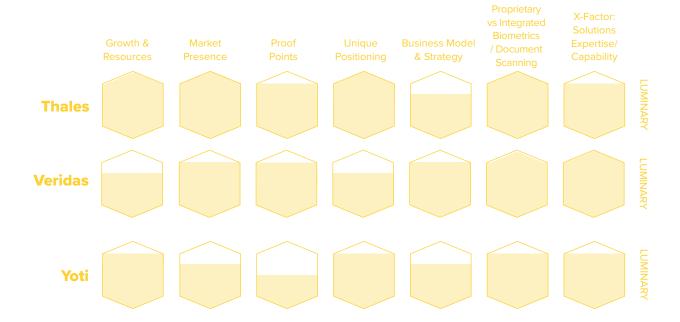
Contact Paravision: info@paravision.ai

# **Biometric Identity Platform**

These platform providers enable end-to-end orchestration for identity in travel and hospitality and are built on a foundation of biometrics.

Prism XFactor: Solutions Expertise/Capability

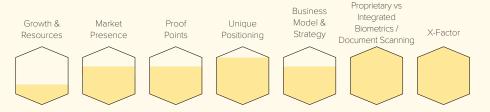


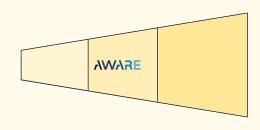






#### BEAM: Biometric ID Platform / CLASSIFICATION: Catalyst





Aware has been a foundational force in the biometric digital identity space ever since it collaborated with the FBI on the first large-scale fingerprint digitization effort in 1993. Operating in over 20 countries, the company has a reputation for its biometrics expertise and prescient research and development, consistently ahead of the curve as trends shift. To learn the history of biometrics, simply trace the history of Aware. With a longstanding commitment to interoperability and a comprehensive portfolio that includes proprietary technologies spanning every core biometric modality (face, finger, voice, and iris), the company offers end-to-end solutions for multiple enterprise and defense use cases, as well as customers across retail, payments, banking, financial services, healthcare, government, and travel and hospitality.

#### **Competetive Advantage**

The travel and hospitality space is beset by competitive challenges, from brand loyalty to operational efficiency, to traveler experience. Aware's broad product portfolio allows it to meet varying demands of travel and hospitality players, with solutions spanning the entire identity lifecycle—Knomi, AwarelD, and Biometric Services Platform (BioSP)—which enables biometric onboarding along with face and voice matching supported by top-rated passive liveness detection. When a leading air transport communications IT company aimed to streamline international arrivals, they deployed Aware's technology to allow visitors to start the border control process from home, reducing the wait time at the border. Aware's customer uses this solution to vet one of every five visitors, and the results are impressive: its costs have been reduced by a factor of ten.

#### **One-Way Tickets**

Not all travel is for business and pleasure. Visa applicants and asylum seekers are also part of the travel equation, and this can be a serious fraud vector. By implementing biometric verification for the screening process of long-term visitors and folks seeking residence, border agencies can have greater confidence that the people being admitted into their country are who they claim to be. Of course, the interoperability and interagency data sharing required to enable this is significant, and not every vendor in the biometrics digital identity space is capable of providing these long-term solutions. True to its legacy, Aware is one of these vendors, and to see the results, one need only look to Canada

#### **The Canadian Welcoming Committee**

In 2012, Citizenship and Immigration Canada (CIC) awarded a joint contract to Aware and Fujitsu. The vendors were tasked with providing the Canadian agency with a biometrically enabled eVisa and eBorder Control process. Over the first 12 months, the companies developed, tested and implemented what would become Canada's "Temporary Resident Biometrics Project" in which fingerprints and photographs are collected from temporary resident applicants. Aware's solution is the connective infrastructure for the biometric system that manages temporary residents for the world's tenth largest economy that depends on temporary residents for its rich culture and social vibrancy. The company managed to meet all of CIC's requirements on delivery, and it continues to provide this solution eleven years after initial deployment.

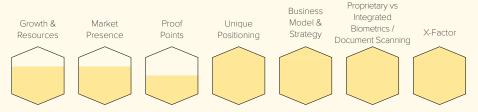
In the biometric digital identity travel and hospitality space, the longevity and expertise required for projects of such importance is a rare commodity. Aware is a glowing example of the long-term vision and commitment required for sustainable biometric border control which is a crucial element of the travel and hospitality ecosystem.

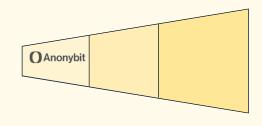
**Contact Aware:** 



# O Anonybit

## BEAM: Biometric ID Platform / CLASSIFICATION: Luminary





Committed to enabling a privacy-by-design framework for the entire identity ecosystem, Anonybit's one-of-a-kind technology breaks up biometric templates into encrypted fragments and distributes them across a network, naturally eliminating honeypot risks and protecting user privacy. This unique approach to decentralized biometric storage underpins the company's flagship product, Anonybit Genie, which unifies the user lifecycle. In an identity landscape characterized by siloed processes and point-solutions, Genie closes the gap between digital onboarding and downstream identity processes like device binding, authentication, and account recovery. Able to perform 1:1 matching in under 200 milliseconds and 10 million 1:N searches in half of a second, Genie makes Anonybit's elegant vision biometric digital identity a reality, closing what CEO Frances Zelazny calls "the Circle of Identity."

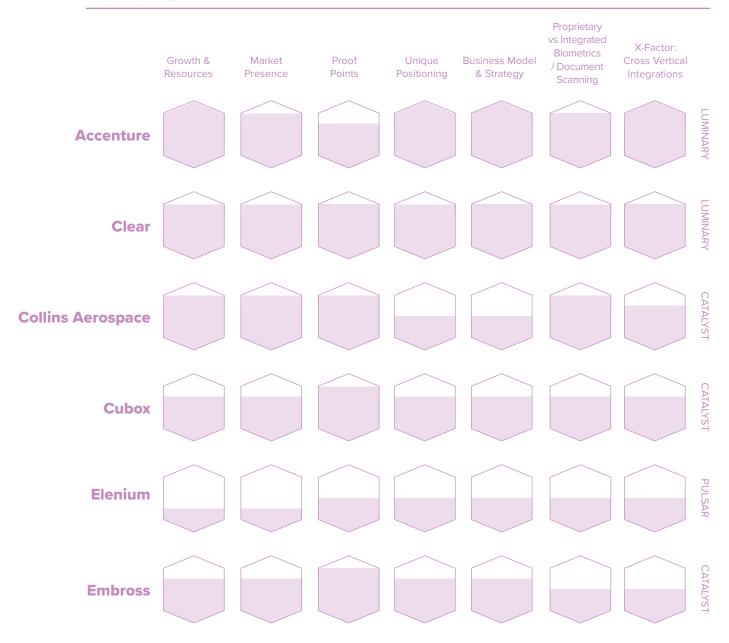
Anonybit shines especially bright in the hospitality space. By adopting Anonybit's open platform—which supports face, palm, and other biometric modalitlies—hospitality chains of all sizes can address the full spectrum of Prism Lens industry challenges. Its omni-channel, streamlined customer experience enhances compliance posture in relation to GDPR, CPRA, and other, emerging regulations, while also bringing a secure and convenient element to guest flow, enabling trusted self check-in and check out. Anonybit also brings the assurance of "who you are" to loyalty programs, which it keeps clean and fraud-free thanks to its authentication and deduplication capabilities. It can enable biometric payments online, offline, and over the phone, too. Anonybit even reaches across the counter, offering operational identity management for employee access and time and attendance. As the travel and hospitality sector evolves and expands based on customer demand, the number of fraud vectors facing hospitality providers multiplies. Anonybit's platform scales to fill in the identity gaps inherent to company growth while offering a simple and consistent selfie biometrics user experience. This Prism Luminary exemplifies the power of a platform approach to biometric digital identity in a dynamic and competitive sector.

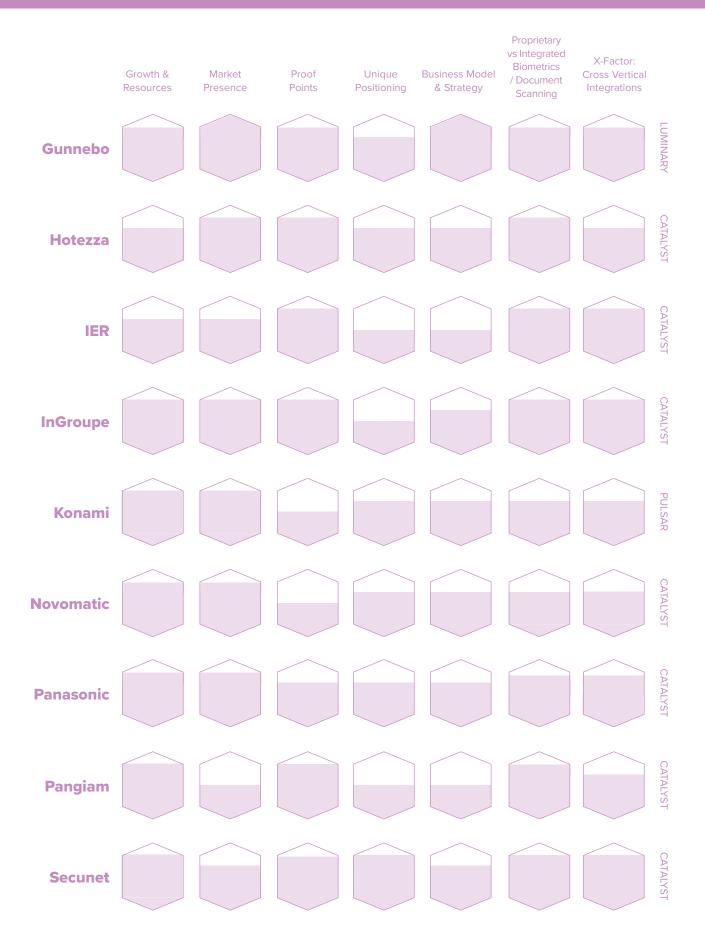
Contact Anonybit: info@anonybit.io

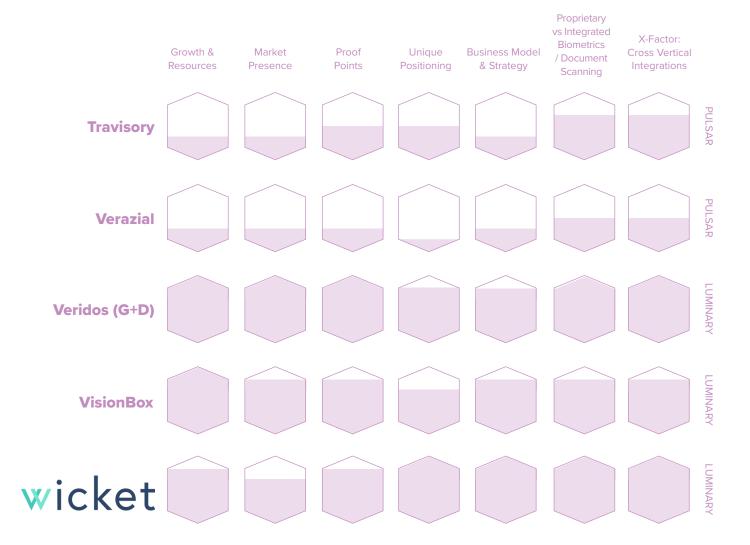
# Targeted Travel & Hospitality Solutions

These vendors incorporate proprietary and native biometrics into specialized solutions purpose-built to deliver travel and hospitality identity applications.

**Prism XFactor:** Integrated Mobile Onboarding, Payments, Cross Vertical Integrations



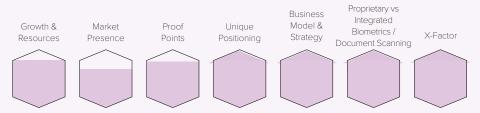


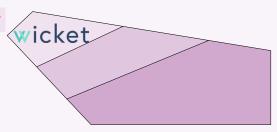






### BEAM: Travel & Hospitality Solutions / CLASSIFICATION: Luminary





In its four years of existence, Cambridge, MA-based startup Wicket has taken the entertainment segment of travel and hospitality by storm. With a robust partner network—including industry-defining companies like Ticketmaster, SeatGeek, and Verizon—the company facilitates guest experiences at over 40 major stadiums and events venues, with customers across all major US sports leagues, the Australian Open, and several major trade conferences. Utilizing a highly flexible deployment model that leverages facial authentication and mobile devices, Wicket puts biometrics at the core of ticketing, seamless access, and payments, enhancing the fan experience, improving security, and demonstrating impressive ROI. With its commitment to collaboration, innovation, and flexibility, Wicket stands out as a Targeted Travel and Hospitality Solutions Luminary.

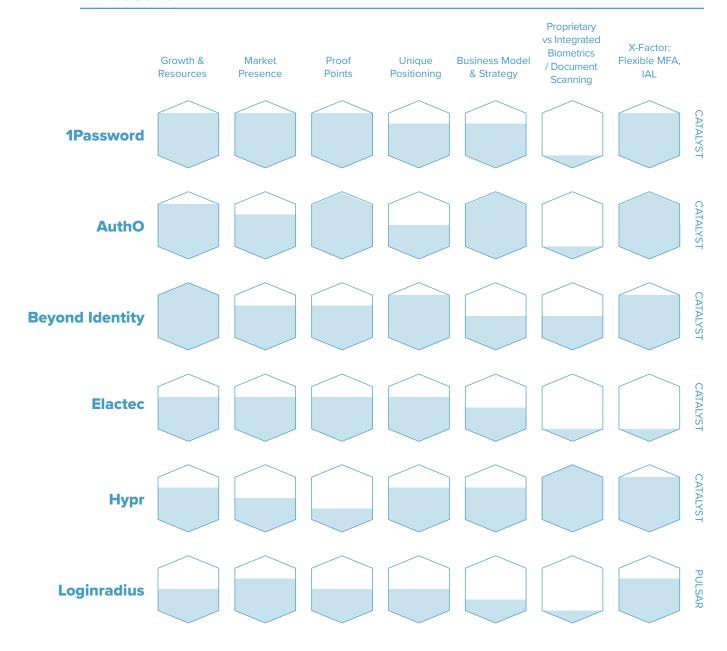
The Cleveland Browns were an early adopter of Wicket's Express Access solution that streamlines facility entry for enrolled fans. In 2023, aiming to further improve the Browns' fan experience, the team expanded its deployment. It increased the number of Express Access lanes, helping drive an average of 992 new enrollments, game by game. That expansion enhanced throughput, allowing the Browns to reduce the total number of lanes needed for guest entry. It also drove significant cost savings, with each Express Lane saving the team \$8,000 per season. And the expansion didn't end at the front gate: the Browns also rolled out Express Beer, allowing fans to purchase drinks and snacks with a simple face scan at a mobile touchpoint. Biometric self-service cut the purchase time for concessions down to 10-12 seconds on average and scored the Browns a 171% return on investment. Add-in the fact that Wicket is also handling facial credentialing and access control behind the scenes, and you'll start to get the full picture. The Cleveland Browns' expansion of Wicket is saving fans thousands of hours and serving as an example of the better biometric future of live entertainment.

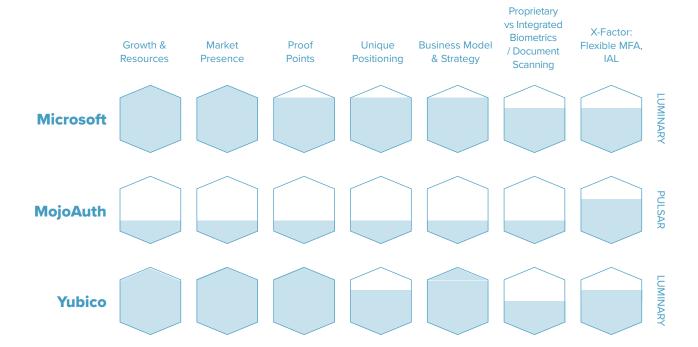
Contact Wicket: hello@wicketsoft.com

# **Authentication**

These vendors provide biometric and non-biometric security that links a digital identity to an individual for travel and hospitalty physical and logical access.

**Prism XFactor:** Flexible MFA (Multifactor Authentication), IAL (Identity Assurance Level)

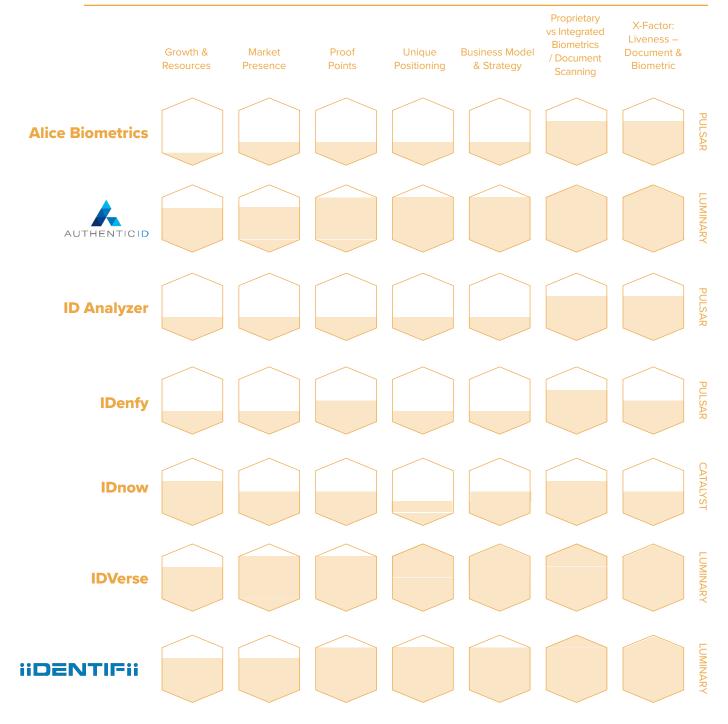


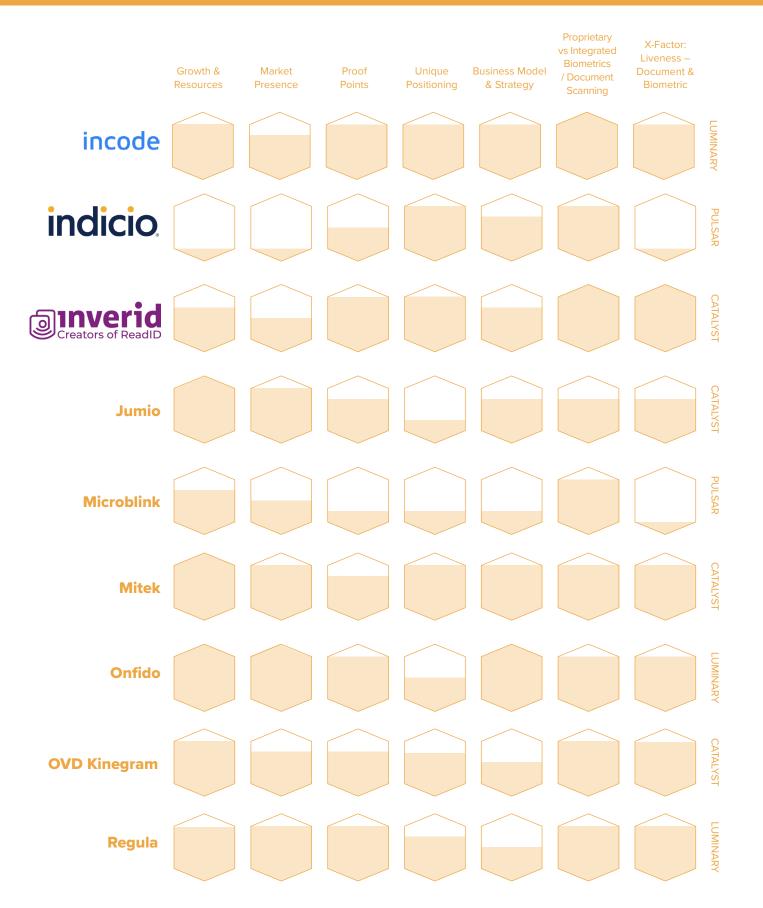


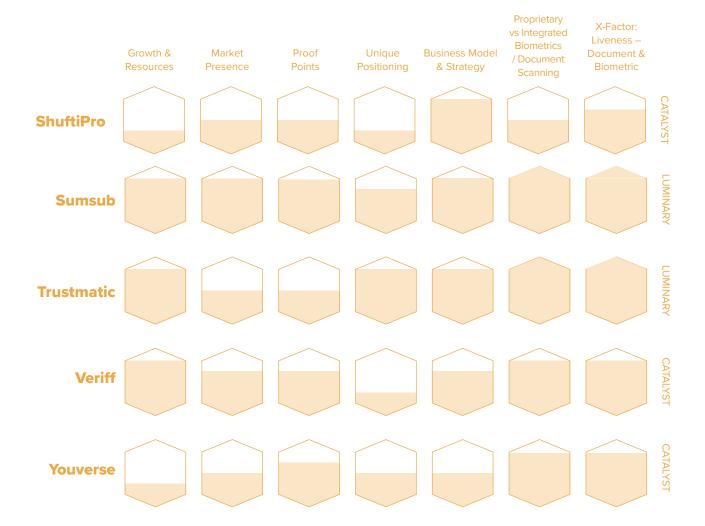
# **Identity Verification**

These vendors offer document and/or biometric verification solutions that enable remote onboarding and authentication for access to a range of high-security and customer experience-enhancing travel and hospitality applications.

Prism XFactor: Document and Biometric Liveness



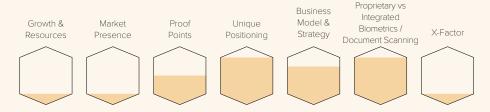








#### **BEAM: Identity Verification / CLASSIFICATION: Pulsar**





Indicio is committed to making digital identity seamless, secure, and usable by anyone, anywhere through decentralized identity technology and Verifiable Credentials. Founded in 2020, this Identity Verification Prism Pulsar works across many sectors to deliver the trust, privacy, and security—especially around biometrics—that consumers need as physical and digital worlds converge. Its focus on empowering users with control over their online identities through a consent-based data sharing model makes it particularly well suited for the demands of the travel and hospitality space.

#### **Introducing The Digital Travel Credential**

Working with Customer Experience Titan SITA, Indicio developed a Digital Travel Credential (DTC) following IACO standards. This provides government-grade digital identity with consent-forward privacy that is the signature of a decentralized solution. Available through Indicio Proven®—a platform for implementing a wide range of decentralized identity solutions, which includes a customizable mobile wallet and an SDK for easily adding verifiable credentials to customer apps—DTC elegantly addresses the major travel and hospitality pain points of fraud, bottlenecks, and data regulations.

#### **Next Stop: Aruba**

In 2023, Aruba welcomed over 1.24 million visitors (an 18% year over year increase). As world tourism expands, Caribbean islands like Aruba need to compete to be a vacation destination. Seamless travel is a key differentiator and Aruba has set itself the goal of getting tourists "from airplane to beach within 30 minutes." The DTC has cut airport wait times for arrivals by 80 percent with a failure rate of zero and Aruba is implementing the technology in its Aruba Happy One Pass (AHOP) program.

#### **Happy Travels on a Global Scale**

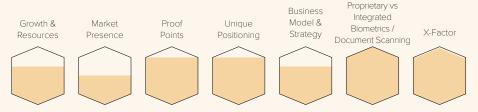
If you're planning to visit Aruba, you can simply download the AHOP app, scan your passport and consent to have your data checked. That creates your DTC, which is reviewed by a government system before you are issued a verified credential—called a Happy Traveler Card—that effectively pre-approves your entry to Aruba. That's it. Upon arrival, you can enter the country with a simple face scan which then matches to your DTC. It's fast, secure, and the success is plainly evident: Aruba has committed to expanding AHOP across the entire island, bringing the same privacy-first seamless experience to hospitality and events. And it doesn't stop there—DTC can be deployed with any airline or airport system, and Indicio and SITA have signed a co-innovation agreement to bring the technology to more countries. A paragon of Prism concepts, Indicio's work is a shining example of how collaboration and purpose-driven development is lighting the way to a better future for travelers.

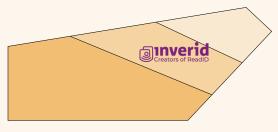
Contact Indicio: indicio.tech/contact





#### **BEAM: Identity Verification / CLASSIFICATION: Catalyst**





Inverid is on a mission to make our lives safe and easier. When it comes to travel and hospitality—an industry beset by data privacy concerns and a complex regulatory environment—it pursues this mission through its NFC-first solution: ReadID. Easy to deploy through a SaaS model, which allows rapid scaling, ReadID enables the remote verification of electronic Machine Readable Documents (eMRTD) like passports. Leveraging smartphone NFC reading capabilities, ReadID accesses the electronic data in eMRTDs to verify the document's authenticity and retrieve the document data including the embedded high-resolution photo of the eMRTD holder. When combined with 1:1 facial verification and liveness detection (via selfie capture), this provides the highest level of remote identity assurance. With Inverid's ReadID solution, even the highest-friction points of a passenger journey can be made seamless.

ReadID is being used in a variety of high-risk deployments, including in-field document verification by border control authorities. But the incoming European Commission Entry Exit System (EES) offers a perfect example of its balance between security and user experience. The EES has faced heavy criticism due to anticipated increased wait times and operational slowdown linked to its passenger data collection process, and that's why the European Border and Coast Guard Agency (Frontex) implemented Inverid's technology for EES within a pilot project (QuickBorder) with the Swedish Border Police and travel stakeholders. Deployed within two weeks, ReadID enabled pre-registration of verified eMRTDs and border control questionnaire data, bolstered by the assurance of liveness-supported face biometric matching against the eMRTD high resolution-image in the NFC chip. By moving traveler data collection to a self-service remote channel, Frontex was able to significantly reduce the burden of EES at the Border Control Point (BCP), enabling the program to proceed without compromise to security while also mitigating operational slowdown and bottlenecks. With ReadID and orchestrated facial verification, Identity Verification Catalyst Inverid proves that border security doesn't have to come at the cost of the passenger experience.

Contact Inverid: sales@inverid.com

## **Guest Faclitator**

These organizations drive end user adoption by leveraging identity technology to imporve and automate security, operations, and customer These organizations drive end-user adoption by leveraging identity technology to improve and automate security, operations, and customer experience. This Beam has a unique rating for Business Model & Strategy Alignment.

Prism XFactor: Biometric Digital Identity Vision

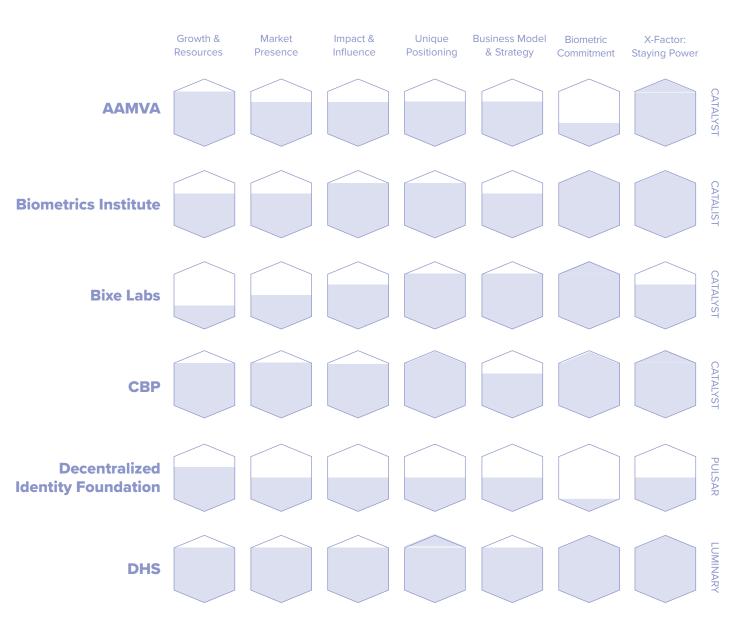


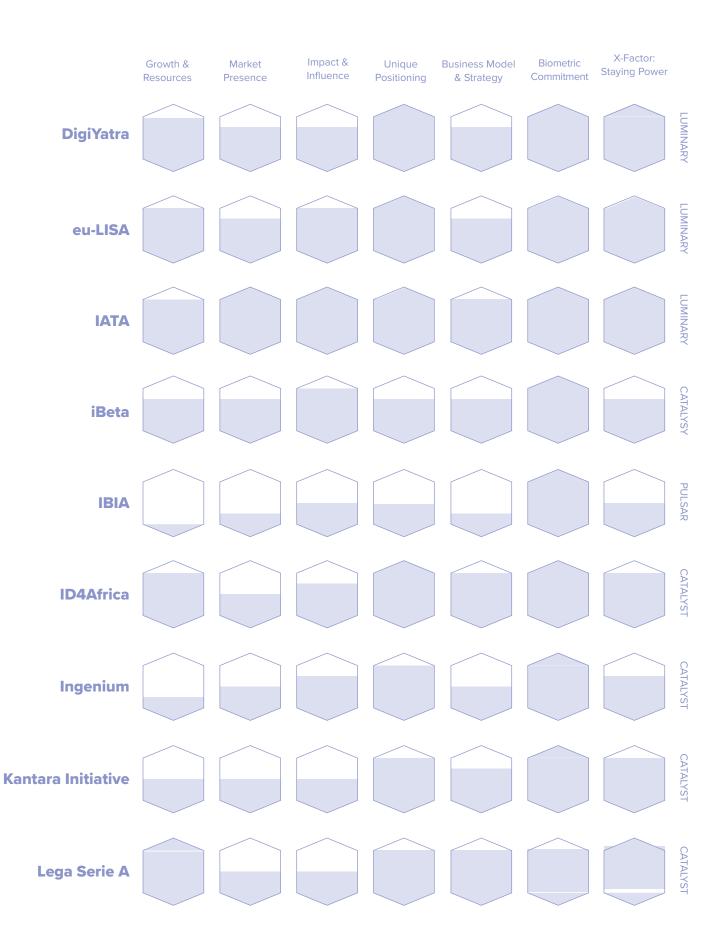


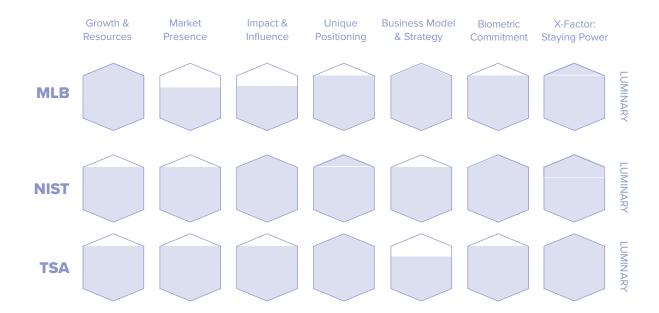
## **Infrastructure**

These standards bodies, testing companies, and governmental and non-governmental organizations provide the critical infrastructure required for market maturity and mainstream adoption. This Beam has unique ratings for Impact & Influence and Biometric Commitment.

**Prism XFactor:** Staying Power







# Couch-to-Destiny: The Prismatic Future of Travel and Hospitality

After nearly two-and-a-half decades of balancing security and convenience with biometrics in various forms, the travel and hospitality is on the verge of achieving an unprecedented level of guest satisfaction. By adopting the technologies and philosophies forwarded in this report, travel and hospitality stakeholders will be in the best position to facilitate the couch-to-destination guest journey that's emerging due to customer demand.

The future of biometric digital identity in travel and hospitality demands:

- Al-powered anti-fraud solutions that can compete in the ongoing cybersecurity arms race.
- Easy and accessible onboarding that can anchor trust at the beginning of the guest journey, rejecting synthetic identities and complying with shifting regulations.
- Strong authentication that carries the trust from that onboarding process forward through every travel and hospitality transaction including account recovery.
- A convenient end user experience meeting the evolving demands of customers that doesn't compromise security.

Travel and hospitality organizations have a multitude of biometric digital identity options to choose from. Those highlighted in this report are ready to deploy and exemplify the principles of interoperability, passenger empowerment, and Intelligent Friction required to compete in the travel and hospitality biometric digital identity landscape. By choosing to put privacy-first biometrics at the core of guest experiences, travel and hospitality leaders are actively participating in building the foundation of a seamless and secure tomorrow.

# **The Prism Project**

## **Showing Identity in a New Light**

The Prism Project arose organically out of a collaborative survey-based research project launched by Acuity Market Intelligence and FindBiometrics in late 2022. The initial proof-of-concept Prism graphic was developed and debuted in the winter of 2023. It instantly became the most shared asset in our history, receiving over 50,000 impressions within weeks. By September 2023, we developed that proof-of-concept into a robust Prism Report, which served as the foundation for The Prism Project. The intent of the Project is to use the Prism as the lens through which we continue to analyze and evaluate the rapidly evolving biometric digital identity industry as we help influencers and decision makers understand, innovate, and implement digital identity technologies.

## **Reports and Collaborations**

The Prism Project will publish, promote, and distribute four reports in 2024:

- The Annual Biometric Digital Identity Prism Report the foundational report defining the Prism Framework initially published in September 2023.
- The Financial Services Biometric Digital Identity Prism Report.
- The Government Services Biometric Digital Identity Prism Report.
- The Travel and Hospitality Biometric Digital Identity Prism Report.

Visit www.the-prism-project.com/prism-reports to download Previews of the reports.

## **Prism Project Brain Trust**

The Prism Project is the brainchild of Maxine Most, Principal, Acuity Market Intelligence and Peter Counter, Author, Technology Writer, and former Editor and Chief, FindBiometrics. This innovative new framework for understanding and evaluating the rapidly evolving biometric digital identity marketplace is the only market model that is truly biometric-centric based on the

foundational conviction that in the age of digital transformation the only true, reliable link between humans and their digital data is biometrics.

# Ongoing Collaboration and Sponsorship Opportunities.

The Prism Project is conducting on-going research and continuing to explore how biometric digital identity is being used today, where the roadblocks to adoption lay, what obstacles must be overcome to successfully deploy these technology solutions, and where they are being used and by whom. We welcome collaborators and are open to discussing how your organization might benefit from and/or leverage the opportunities The Prism Project presents. To reach out, visit www.the-prism-project.com or email us at info@the-prism-project.com.

## **About the Author**

#### **Maxine Most**

Internationally recognized biometrics and digital identity thought leader celebrated for provocative market insights, accurate market predictions and forecasts, and unbiased, pragmatic market intelligence. Tenacious strategic marketer with a prolific career hallmarked by success designing and executing ground-breaking strategies for technology innovators and leaders.

Maxine Most (@cmaxmost) is the founding Principal of Acuity Market Intelligence (www.acuity-mi.com), a strategic consultancy recognized as the definitive authority on global biometrics market development. Throughout her 30-year career, Ms. Most has evangelized emerging technology on five continents. Since 2001, she has focused on biometric and digital identity markets where she has earned a stellar reputation for innovative thought leadership and a proven ability to accurately anticipate biometric and digital identity market trends.

As an executive strategist, Most has provided expertise in emerging markets such as biometrics, authentication, and digital identity, e-commerce, interactive services, and 2D and 3D visualization and image processing. She has worked with startups, established technology market leaders, Global 1000's, and a range of organizations in between. Most leverages her deep understanding of technology evolution, emerging market development, and the process through which industry leaders are created to provide candid strategic analysis, highly targeted implementation plans, and quantifiable, measurable results.

Ms. Most is the author of numerous biometric and digital identity research reports including Face Verification & Liveness for Remote Digital Onboarding," "The Global Automated Border Control Industry Report: Airport eGates & Kiosks," "The Global Biometrics and Mobility Report: The Convergence of Commerce and Privacy," "The Global National eID Industry Report," "The Global ePassport and eVisa Industry Report," and "The Future of Biometrics," as well as a contributor to several books including "Digital Identity Management" edited by digital identity thought leader David G. Birch.

Ms. Most regularly offers insight and analysis in on and off-line publications, is quoted often in industry, business, and consumer



press, and presents regularly at industry events on the evolution and development of biometrics and digital identity markets. She is a graduate of the University of California, San Diego with a multi-disciplinary degree in Mathematics and Computer Science and minors in Visual Arts and Economics.

# Let The Prism Project be your guiding light!

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#### **Maxine Most**

Principal, Acuity Market Intelligence cmaxmost@acuity-mi.com Founder, The Prism Project cmaxmost@the-prism-project

#### **About Acuity Market Intelligence:**

With decade of practical expertise in the unpredictable and volatile world of emerging technology, Acuity Market Intelligence consistently delivers consistently original, thought-provoking, and reliable insight and analysis. Proud, self-proclaimed technology business development and marketing geeks, Acuity is globally renowned for its uniquely customized business and marketing strategies and for creating and deploying innovative programs that integrate digital and traditional channels and platforms.

Visit acuitymi.com and let us help your organization thrive.