

The Role of Identity Intelligence in Transportation Digital Transformation



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A COMPELLING EVENT IN TRANSPORTATION

The recent COVID-19 pandemic has proven to be one of the most transformational events of the modern era. Its impacts were felt in every aspect of everyday life worldwide – in their own way, every nation was hit hard. Some argue the pandemic is not over; we are simply in a new phase.

The transportation industry was hit particularly hard for a number of reasons. Most facilities and providers relied on legacy systems and processes with manual, staff-intensive, transactional customer interactions. Contracts supporting services were based on high-volume, pre-pandemic daily averages with no opportunity to scale when demand evaporated. Once limited travel began, businesses needed non-contact, limited-interaction processes, automated communication of health status, and service costs based on actual demand.

The net of these experiences for businesses created obvious new digital transformation priorities: scalability, service-oriented contracts, automation to absorb change in business imperatives, more robust analytics driven by real-time, relevant data, and an omni-channel ability to dynamically interact with customers.

DIGITAL TRANSFORMATION IN TRANSPORTATION

Transportation businesses are hard at work simplifying their legacy tech stacks. Transitioning from on-premises data centers to cloud-native, service-oriented infrastructure is fundamental to progress. A multi-tenant cloud platform allows innovation through open, flexible architectures that expose microservices and application program interfaces (API). Businesses use these tools to deploy a standard set of services and capabilities across their enterprise in a tailored way. Updates, changes, and new versions can be deployed enterprise-wide in a matter of minutes. Advancements are applicable for customer-interfacing services, back-office infrastructure, and employee-focused services. The days of developing single-focus systems have rightfully gone by the wayside.

SETTING THE STAGE FOR MODERN CUSTOMER EXPERIENCE

Businesses that quickly transformed operations during the COVID pandemic to focus on automation, limited physical interactions, and intuitive customer applications as a primary means to transact business are still winning. Grocery stores and restaurants that pivoted to carry out, pick up, and delivery quickly gained market share and learned transformational lessons. Not only did businesses learn, but they influenced consumers to have new expectations for digital competencies. Banking is a mature example of an industry that looks nothing like it did 20 years ago – most consumers almost never go into a bank. The vast majority opt to make all transactions with a smartphone app or PC. The takeaway is businesses must be nimble and quick to digitally transform if they want the business of a tech-savvy consumer with high expectations.

Moreover, the ubiquitous smartphone is now the primary platform by which consumers want to interact with transportation stakeholders. Responsive transportation stakeholders are rapidly pursuing innovative, customer experience-focused solutions that mitigate physical interaction, automate manual processes, and introduce easier ways to increase consumer spending. A key aspect of securing digital transactions is identity confirmation. Both government and the private sector have seen a rapid convergence of mutual benefit with the same discreet common data set. Yet consumers remain vigilant about both the Personally Identifiable Information (PII) being shared and with whom. Consumers demand control over their PII.

CONSUMER CONFIDENCE AND TRANSACTIONAL SECURITY

Consumers around the world use mobile devices for everything, including sensitive transactions with businesses, governments, and one another. This win-win proposition continues to gain momentum across all market verticals. The most important part of those interactions is identity verification with privacy protections that are both effective and acceptable to the consumer.

The concept of business transactions via smartphone app sounds deceptively simple. Meeting consumers' expectations comes with valid, real-world challenges to secure consumers' data, protect privacy, and secure transactions – ensuring both the business and the consumer know with whom they are interacting. That can be a heavy lift when you factor in variations of device hardware and operating systems, internet providers, cellular providers, business infrastructures, and their influence on omnichannel apps. It is important for all businesses to understand how to establish transparency when it comes to handling PII and protecting consumers' privacy. Limited formal policy or governing law places responsibility for data stewardship squarely on these businesses.

Today's tech-savvy consumer is well-versed in privacy. In all cases, good consent-driven data transparency goes a long way and can be instituted during optional, or "opt-in," enrollment. Programs like Star Alliance Biometrics are offering well-thought-out, consumer-oriented capabilities that remove friction and improve upon non-contact automation. Star Alliance also considers interoperability with other stakeholders like airports, airlines, retail, hospitality, and others in the travel ecosystem. Their opt-in process gives the consumer power over identity control: The consumer administers how and with whom their PII is shared.

NEW IDENTITY PLATFORM - MOBILE PHONES

Transportation organizations are embracing the ubiquity of mobile devices for automating services. Airlines offering opt-in digital onboarding allow consumers to enroll through an app and create a Digital ID (DiD) (e.g. biometric, secure document verification, security and device instantiation, and PII enrolled). Consumers then can use their DiD for automated verification services at check-in, bag drop, and aircraft boarding. This pre-vetting not only benefits the airline and its staff, but improves customer experience by creating significant time savings and predictable experiences.

Airport stakeholders are rapidly mobilizing new opportunities for the consumer to use the same DiD for other airport services, including retail, parking, ride share, and hospitality. Complexities develop in the web of services enabled by numerous DiD providers through dozens of individual apps from airlines, airports, and other stakeholders in the consumer ecosystem. In the absence of standardization and interoperability, consumption and brokerage of the DiD's require a platform that can seamlessly coordinate divergent transactions. The complex task requires deep expertise and requires careful consideration during the decision-makers' discovery phase. If a stakeholder rushes to select a technology provider, they may find themselves locked in with a proprietary schema that is not interoperable with others in the ecosystem. They may also find their provider does not protect true PII once consent is given.

In parallel with the private sector, governments are rapidly pursuing secure document innovations with digital driver's licenses, digital passports, digital national ID cards, digital health records (e.g., vaccination status), digital visas, and more. Such mobile documents will give a consumer the opportunity to maintain comprehensive PII on his or her mobile device. A digital wallet can specifically contain the DiD, official documents, boarding passes, and payment methods. With this increased digital wallet relevance, big market influencers like Apple and Google are taking an interest and an active part in operational pilots and working groups to promote it. Again, it is important that decision-makers are looking carefully at various technologies to ensure a thorough understanding of consumer data privacy and data rights, interoperability, and tech provider stability. Due diligence in assessing solutions is critical--especially where official documents and private records are concerned. Decision makers must be certain a technology provider will be capable of delivering secure enterprise-grade solutions at scale.

There is a tremendous variance when it comes to digital government services from country to country. This is a challenge in the way of true progress, which has seen the market respond with solutions in lieu of government capabilities. United States Customs and Border Protection (CBP) offers the Traveler Verification Service (TVS), which all tech providers can use as a secure system of record to manage the adjudication of identity verification. However, TVS is a U.S. immigration solution, which does not exist elsewhere in the world. As a result, opt-in commercial DiD has taken the lead. As mentioned earlier, the Star Alliance Biometrics program, which is offered to all member airlines, will also provide a method for other aviation stakeholders to leverage the DiD to secure consumer business transactions beyond passenger facilitation at airports around the world.

TRANSPORTATION MODE SIMILARITIES

While there are obvious differences between modes of transportation, tech solutions can capitalize on similarities across the travel ecosystem. Transportation stakeholders are consumers, governments, transportation providers (e.g. planes, ships, trains, buses), ports (airports, seaports, stations), rental car or rideshare companies, retail, and hotels. Whether it is land, air, or sea, travelers must participate in secure, timely, and well-documented processes as part of the journey. Digital transformation, in the case of transportation, is really the application of automation across common areas of business processes:

<p>1</p> <p>Touch points are points along the journey in which a traveler, or consumer, interacts with organizations for a transaction</p> <p>(e.g. check-in, bag drop, security, boarding, a store to buy something, a hotel during check-in, a rental car company, etc.).</p>	<p>2</p> <p>Government security controls are always present, whether evident or not. In the case of air travel, security checks are obvious and are typically operated by government authorities. While in the case of cruise ships and rail travel, most of this is managed as part of the processes for which operators are responsible. They must share the resulting data with government authorities.</p>	<p>3</p> <p>Traveler registration systems are varied depending on the modality. Travelers enroll by providing key PII and payment information which is transacted with the service provider, who will issue a reservation and share the information with governmental authorities. In today's world, this decision making by the consumer is almost exclusively done via the internet or through an app.</p>
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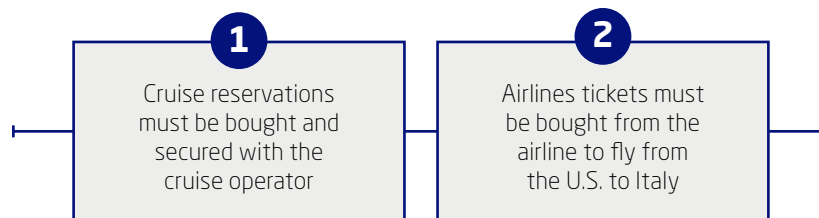
TRANSPORTATION MODE SIMILARITIES (CONT.)

Automating the identity check, ticket verification, and data capture through an opt-in DiD process quickly offers time savings, dynamic resource allocation, improved customer experience, and the creation of data that can then be used for secondary and tertiary services like queue management and consumer-specific content creation. A robust solution can add greater value by layering in Artificial Intelligence (AI) services such as roller board capacity alerts, securing the gate area, associating baggage with the consumer, and more.

WORLDWIDE CONSUMER IDENTITY

Consumer privacy concerns are paramount and drive much of the debate around centralized versus decentralized identity solutions. Maintaining and having responsibility for a large centralized biometric repository is something most commercial entities do not want any part of due to risk exposure for its stewardship. Decentralized identity offers the promise of more privacy and convenience with less risk exposure for all stakeholders. Consumers want to have control of their PII and not have it sold or stolen as part of a cyber intrusion. Consequently, decentralized identity will likely play a key role in the market. It appeals to commercial organizations and consumers alike.

The digital wallet is a key enablement method for digital consumerism. Take the example of a tourist traveling from the U.S. to Italy for a Mediterranean cruise:



How amazing would it be for the consumer to use a digital wallet from *start* to **finish**?

Join the ecosystem.

NEC's Digital Identity Platform is trusted by transportation providers as well as financial, federal, and commercial organizations. It is built on Privacy by Design standards, and its face biometrics algorithm is highly rated by NIST.

Contact [NEC](#) to visualize your Digital ID solution and begin your journey forward.

The tech world is moving at light speed, which is both good and bad. The hard part is keeping up with policy and laws to manage what providers and users of said technology are doing with it. There are a lot of standards bodies, working groups, and industry associations or advocacies that require some level of coordination if there is any chance of effecting change. It is impossible for governments to do address it all on their own.

The transportation space has traditionally been very fragmented, but this should no longer be the case. There are a common set of priorities: 1. Security, 2. Safety, 3. Time Savings, 4. Customer Experience (CX), 5. Increased traveler spend. The digital transformation solutions addressing those business problems should be transferable whether it is land, air, sea, or rail. The traveler expectation is to now be a participant with actionable real-time intelligence along the journey. The opportunity is there to test and evaluate comprehensive transportation system reform, but this will take a coordinated effort to find progress in a timely manner.

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