NEC I:Delight

A SOLID PLATFORM FOR A TOUCHLESS WORLD

In a matter of months, the COVID-19 pandemic has swept the globe, fundamentally altering social paradigms and prompting governments, businesses, and the public to seek new ways of interacting. Even after the current crisis passes, it will take time to recover, and many aspects of daily life may never be the same.

In the "new normal" to follow, we expect the current emphasis on public health and safety to continue unabated, making the ability to travel, shop, and work without the use of tangible identification or credit cards, touchscreens, or digital signature pens higher priorities. To individuals and organizations alike, technologies that support both frictionless access and social distancing measures are now more important than ever. Solutions that satisfy these emerging needs will require two components:

1 Making touchpoints "touchless" to reduce the spread of infectious diseases

2 Providing an advanced, robust, and scalable platform to support hygienic customer experiences

Combined, these components offer a new, revolutionary approach to Digital Transformation (DX), which will enable personal identification via digital technologies to interconnect people—including corporations and local and national agencies—and processes. Participants who opt in to DX technologies can benefit from enhanced digital services that securely, efficiently, and hygienically permeate all facets of life.

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HOW NEC IS MAKING TOUCHPOINTS TOUCHLESS

Through many years of work with governments and enterprise partners, NEC has developed technologies that can eliminate the need for physical interaction when identifying individuals. Although we began our journey toward touchless technology long before the current crisis, the COVID-19 pandemic has provided a new perspective on the importance of our solutions to essential workers who are on the frontlines to ensure our safety and security. Our commitment to support these workers is one of many factors that have driven the implementation of our biometric and AI solutions for multiple purposes, including aviation and immigration.

> **NEC sends its heartfelt thanks to essential workers, such as border patrol officers, law enforcement, first responders, and military personnel, who put their own lives on the line to keep us all safe.**

An example of our touchless technology at work in aviation is NEC's implementation of the first curb-to-gate biometric terminal in the U.S. with Delta Air Lines, in partnership with the U.S. Customs and Border Protection (CBP), the Transportation Security Administration (TSA), and Hartsfield–Jackson Atlanta International Airport (ATL). Our curb-to-gate solution enables rapid identification and real-time screening of passengers. Travelers flying to an international destination can choose to use face recognition technology to check in at the self-service kiosks, drop bags at the check-in counters, go through the TSA checkpoint, and board a flight without requiring a physical ID card or boarding pass. Not only are our solutions more efficient, they are more hygienic with reduced risk of contamination, and they help streamline and secure customer interactions.

While integrating thermal sensors is the first step in addressing the COVID 19 pandemic, implementation of secure, touchless access requires sensor fusion. NEC's award-winning biometrics solutions, including face and iris recognition, coupled with our cutting-edge technologies in behavior detection, body recognition, video analytics, and artificial intelligence, provide the tools to ensure successful implementation of touchless technologies.

Dep Executive Assistant Commissioner John Wagner
@OFODEAC

.@CBP Facial Recognition is a touch-free, hygienic way to validate your identity, as well as protect from exposure to COVID-19 and other germs at the airport. Learn more: cbp.gov/travel/biometr....

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NEC I:DELIGHT PLATFORM

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NEC I:Delight, our highly secure and scalable digital identity management platform, is effortlessly bringing touchless experiences to countless situations. The platform provides a unified experience for a variety of services and situations by using a unique ID based on biometric authentication and AI technology. NEC I:Delight offers a safer, more hygienic solution by minimizing the need to touch surfaces at registration, point of sale, check-in, and check-out. Customers can opt in and self-enroll in the NEC I:Delight platform via their mobile devices. They can also pay using their face, making physical interactions and touch-based transactions touchless, shared experiences safer, and everyday interactions more satisfying and hassle-free.

NEC is committed to protecting the identity of all customers—across touchpoints, modalities, locations, and regulations—in a reliable and trustworthy manner. Our platform uses a privacy-by-design approach and operates as an opt-in service. Users receive a completely transparent view of the services and associated benefits they sign up for. This transparency also extends to the opt-out process, which is as seamless as the opt-in process. Intuitive and hassle-free, the NEC I:Delight platform only engages users with the right message at the right time.

Ready to deploy with plug-and-play integration and tailored to meet the needs of your customers' journeys, NEC can scale our touchless technology for the greatest impact across diverse tasks, settings, and purposes. Our platform streamlines both physical and digital identities into an ecosystem to create a seamless, secure, and straightforward customer experience.

Verticals we serve include:

77%

of consumers under the age of 35 say they would shop in retail stores more frequently if they offered a fast, frictionless, "just walk out" payment experience.

NEC has helped deploy aviation solutions at more than

25

airports around the globe.

Financial services
Secure financial services are available anytime, anywhere, from any device with biometric authentication and face recognition technologies that accurately verify customers, for a personalized experience. Whether it's online banking, account opening, retail payments, or secure bank and ATM use, our platform helps protect customer information.

Retail (grocery, pharmacy, apparel, fast food, and more)
Consumer loyalty is improved with the convenience of customized offers based on their preferences, recollection of their previous orders, and face pay options. In parallel, in-store efficiencies will help reduce the cost and improve margins.

Smart/secure buildings
Using biometric access authentication coupled with thermal sensing, employees can enter secured buildings or restricted areas without requiring identification cards or touchscreens. Touchless technology minimizes physical contact, secures access, and offers employees and agents a safer work environment. In the long term, access control can be seamless and free flowing.

Aviation
Transforming the curb–to-gate experience, travelers can now enjoy a touchless and personalized journey. Travelers can check in at self-service kiosks, drop luggage at bag drops, move through security checkpoints, and board their flight—all without requiring their boarding pass or ID card. Security and check-in wait times are greatly reduced, airport efficiencies are optimized, immigration and customs are seamless, and travelers get to their destination quicker.

Hospitality
39% of travelers prefer personalized hotel experiences. When registered guests stay at a hotel, their face can now be used to check them in and out; unlock the door to their room; and make purchases at participating retail, casino, and restaurant locations. Face recognition enables travelers to specify preferences before their arrival, helping hospitality workers to anticipate and better meet their personal needs. With NEC I:Delight, everyone can feel like a VIP, while optimizing manpower and reducing operating costs.

Healthcare
Providing a safe and secure environment for patients, staff, and visitors is a high priority for healthcare facilities. Using the platform, patients and consumers can check in at registration sites, order or pick up prescriptions, pay for services, and access doors quickly—all while helping reduce the spread of infectious diseases.

Tailored for each use case and partner, the NEC I:Delight platform provides the following digital application services, described further in the following sections:

- Identity Management Services
- Aviation Services
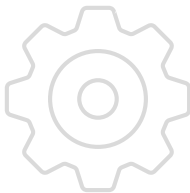- Access Management and Payment Services
- Platform Common Services
- Infrastructure Services

Identity Management Services

The platform Identity Management Services (IDMS) provides a single API to perform identity validation using pre-enrolled identity information. For example, IDMS supports the management of a traveler's identity during their journey. The platform also aggregates all events within the journey and decision-making capabilities based on behavior, anonymized biographics, and biometrics of the individual.

The platform's IDMS supports multiple modes for individuals to enroll:

Centralized Identity Management – IDMS provides the option to enroll and store encrypted data in a centralized repository. Individuals will opt in to use mobile devices, kiosks, the web, or other means to enroll and manage both consent and centralized identity information. IDMS uses this central repository to validate identity information for consented journeys or transactions.

Self-sovereign Identity Management – The platform uses block chain technology to manage enrolled identity information. Patented block chain technology from NEC delivers GDPR-compliant privacy with enhanced transaction performance.

Mobile Identity Management – An individual can use a mobile device to enroll and hold the encrypted data on their personal mobile device. Based on user consent and preference, this data will be exchanged with the target IDMS for identity validation for a transaction or a specific journey segment.

Aviation Services

NEC I:Delight's aviation services are specially tailored for the aviation market. Combined with IDMS, aviation services provide a frictionless, seamless, secure, and cost-effective passenger journey by automating the entire airport experience from curb to gate. Aviation Services include built-in connectors based on industry standards that support and simplify integration with existing airport and airline infrastructure. As a scalable solution, they also allow configuration and policy updates, with proactive and reactive maintenance capabilities to ensure consistent and reliable operations.
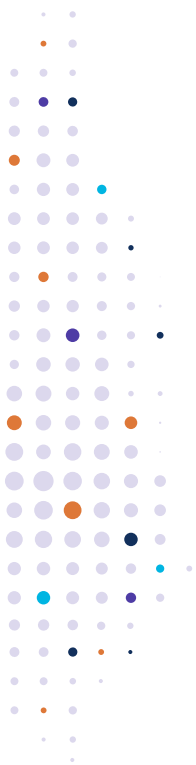
Aviation services include:

Touchpoint and Device Manager – A services component responsible for communication between the various devices in the touchpoint. The Touchpoint and Devices Manager integrates different hardware components to enable easy addition and configuration of different devices within the solution. Working closely with the workflow engine, it can dynamically perform the actions needed to control the touchpoint and report the status of the different components.

Touchpoint Health and Status Monitoring – Real-time performance tool that provides a complete overview of the status of each touchpoint and its devices, allowing both proactive and reactive maintenance, which can also be configured for multiple events.

Workflow Engine – Working closely with the Touchpoint and Devices Manager and Business Rules Management, the Workflow Engine enables easy configuration of the behavior of touchpoint hardware and the rules for touchpoint actions, such as eligibility or a face match threshold. The Workflow Engine is agnostic to the consumer so it can be used regardless of client requirements or devices used.

Business Rules Manager – A common platform for specifying workflow rules and repository parameters to support the Workflow Engine. With the goal of having a configuration approach instead of coding/software development, Business Rules Management can be used by end users to adapt rules and installation parameters and to configure any external outcomes such as user notifications or interactions with third-party systems.

Touchpoint Monitor – Tool that monitors passengers' interactions with each touchpoint in real time, as well as all the authorized information extracted from the multiple devices (biographic, biometrics) and third-party services (background check results, flight info, risk profile). The Touchpoint Monitor can perform exception handling and override decisions based on security alerts.

Access Management and Payment Services

NEC I:Delight access management and payment services provide multi-factor identity authentication services by fusing biometric and other data, including geo-fencing, mobile sensing, historical events, and transaction risk. Fusing data results in a highly accurate, trusted identity authentication tailored to address specific use cases while reducing identity fraud and lowering overall risk of loss. Access management services integrate with popular access solution providers' centralized controllers, which enables frictionless access to select touchpoints without introducing a new access control platform to manage users and access policies.

Common Services

The platform provides a robust complement of common services: :

Monitoring and Control User Interface – The platform's monitoring interface is fully browser-based and can be accessed by authorized users from any PC on the system's LAN or WAN. The service allows system staff to react in real time, providing graphical data, operational status, and performance metrics to support data analysis.

Audits and Logs – The platform includes real-time system monitoring and alert tools that can provide visual performance information through the dashboard or alert-based notifications. The platform has a customizable dashboard for monitoring system status and health. It can provide detailed reports with summary statistics on system usage, including the number of transactions, customers serviced, and processing times.

Administration – The platform uses policy management to implement integrated role-based access control (RBAC) to ensure that only the data needed by a user or system is made available. Sensitive information, such as biometrics, is redacted from transaction logs and reporting data.

Infrastructure Services

The platform supports multiple infrastructures for our solution deployments. In addition to providing support for traditional on-premises solutions, the platform can be deployed on private or public clouds, which translates into savings for our customers. Our cloud solutions can be deployed on a private cloud hosted by NEC or the customer, or they can be deployed on public clouds, such as Amazon Web Services (AWS) and Microsoft Azure. We also offer a combination of infrastructure options, providing flexibility for deployments of all sizes and scopes.

BENEFITS

NEC will continue to invest in technology to build a single, extensible platform that can optimize and deliver the identity management needs of our partners.

## Benefits of the NEC I:Delight platform include:

Single, Extensible Platform – By optimizing across all touchpoints within a journey map, our partners can work with us to address their current and long-term needs. Available for immediate deployment in response to COVID-19—such as at employee entrances with fever detection and face identification—the platform is extensible for long-term use, including improved customer experiences and digital transformation and creating more efficiency across every investment.

Optimizable Platform – Ranked No. 1 five times in a row by the National Institute of Standards and Technology (NIST) for our biometric algorithms, NEC uses AI or face or iris recognition to make touchpoints touchless, enabling a safer, more streamlined customer experience. Our platform offers additional technologies that support our partners to accurately, efficiently, and effectively address their identity management needs, including heat maps, access control, object detection, face pay, and more. These on-demand technologies will optimize each deliverable, helping our partners maximize the reach of their campaigns.

Analytics-Rich Platform – NEC's technology development began with factor analysis related to various phenomena, such as detection of abnormalities, and has progressed into the field of highly accurate and reliable forecasts for complex systems. Development is now evolving into a predictive, robust optimization framework that produces highly efficient and low-risk plans based on predictions. For example, in a passenger journey, analytical and accurate predictive modeling of events and operational data would lead to more personalized offers, reduced delays, increased throughput, and higher overall satisfaction by all stakeholders.

Built-In Privacy Platform – NEC Group AI and Human Rights Principles strengthen NEC's efforts to respect privacy and human rights when applying and using AI and biometric data. Our principles guide NEC employees to prioritize privacy and human rights in each and every stage of NEC Group's business operations and to comply with all relevant laws and regulations. Our NEC I:Delight platform operates purely as an opt-in service in which customers receive a completely transparent view of the services they sign up for, and they can opt out at any time.

Seamlessly Deliverable Platform – From initial discovery to rapid prototyping to full-scale implementation, our seamless delivery is designed to identify and define opportunities, minimize risk, and validate and optimize use cases. The platform is operationally efficient from an employee impact and customer experience perspective and delivers a strategic, prioritized roadmap for ongoing development and deployment.
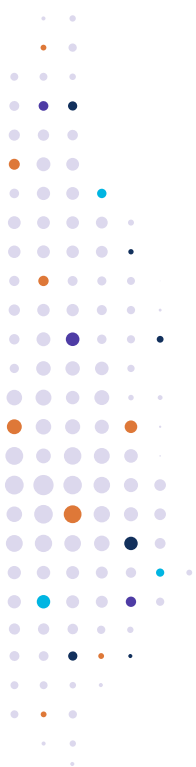
NEC IS PROUD TO PARTNER WITH FRESH CONSULTING.

Using a multi-week collaborative discovery process,
we will work with your organization to determine how to:

1
Design your biometric
customer journey

2
Align key stakeholders
and customer personas

3
Capture technical and
operational constraints

4
Create a prioritized roadmap
and ROI calculations

To work with us on a solution to meet your business needs,
click here to learn more.