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| Good morning/afternoon, everyone. Today, I'm excited to present our innovative approach to streamlining the airline check-in process through the digitalization of admissibility, focusing on the use of verifiable credentials within a passenger's digital identity wallet.  **Background** As we navigate the complexities of modern air travel, one persistent challenge has been ensuring that passengers carry the correct travel documents for transit and entry. Traditionally, this involves manual checks by airline staff, leading to longer queues and operational inefficiencies.  **The Solution: Digital Identity Wallet** Our solution leverages a digital identity wallet, a secure platform where passengers can store verifiable credentials, such as digital versions of their passports and visas. This wallet is the cornerstone of our digitalization effort, ensuring a seamless and automated check-in process.  **Actors and Interactions**   * The **Passenger** initiates the process, utilizing their digital identity wallet to store and share necessary travel documents. * The **Airline Check-in System** plays a crucial role, interfacing with passengers and verifying the credentials against travel requirements. * **Government Authorities** issue and validate these digital documents, ensuring their legitimacy and compliance with international standards. * **Border Control** and **Security Systems** are integral, performing security checks and validating admissibility. * **Travel Agencies** and **Payment Systems** are also key players, facilitating bookings and financial transactions within this ecosystem.   **Detailed Processes**   * The journey begins with the **Government Authority**, issuing digital travel documents stored in the passenger's **Digital Identity Wallet**. This wallet enables the passenger to share their documents proactively with the airline. * During check-in, the **Airline Check-in System** verifies these credentials, integrating processes like seat allocation, baggage handling, and flight status checks to streamline the passenger experience. * Concurrently, **Security and Border Operations** ensure the passenger's identity and admissibility are verified, maintaining the integrity of the travel process. * **Travel Agencies** and **Payment Systems** intertwine with these operations, managing bookings and handling financial transactions, thus adding layers of functionality and convenience to the passenger's journey.   **Benefits** This integrated approach not only reduces waiting times and operational bottlenecks but also enhances security and compliance, ensuring a smooth and enjoyable travel experience for passengers.  **Conclusion** In conclusion, by embracing digitalization and the use of verifiable credentials, we are setting a new standard for efficiency and security in air travel. Our use case diagram represents a comprehensive view of this ecosystem, illustrating the intricate web of interactions and processes that define the future of airline check-in systems.  Thank you for your attention, and I look forward to discussing how we can collectively transform the future of air travel. |

To document a use case diagram for the digitalization of admissibility through verifiable credentials (VCs) in a passenger digital identity wallet, we need to identify the actors, processes, and data points involved. Here's an outline of the key components and their interactions:

**Actors**

1. **Passenger**: Initiates the check-in process using their digital identity wallet.
2. **Airline Check-in System**: Verifies the passenger's travel documents and issues boarding passes.
3. **Government Database/System**: Issues and validates digital documents like passports and visas.

**Processes**

1. **Document Issuance**:
   * The government issues digital travel documents (passport, visa) to the passenger’s digital identity wallet.
2. **Check-in Initiation**:
   * The passenger initiates the check-in process using an app, selecting to share specific verifiable credentials.
3. **Document Sharing**:
   * The passenger shares the required VCs from their digital identity wallet with the airline.
4. **Document Verification**:
   * The airline's check-in system verifies the VCs against its criteria and government databases to ensure authenticity and compliance.
5. **Boarding Pass Issuance**:
   * Once verified, the system completes the check-in process and issues the boarding pass to the passenger.

**Data Points**

1. **Verifiable Credentials**: Digital versions of the passenger's travel documents.
2. **Passenger Details**: Information like name, passport number, visa details.
3. **Check-in Status**: Data showing whether the passenger is cleared to fly.

**Use Case Diagram Flow**

1. **Document Issuance**:
   * Government Database/System → Digital Identity Wallet
2. **Check-in Initiation**:
   * Passenger → Airline Check-in System
3. **Document Sharing**:
   * Passenger/Digital Identity Wallet → Airline Check-in System
4. **Document Verification**:
   * Airline Check-in System → Government Database/System (validation)
   * Government Database/System → Airline Check-in System (confirmation)
5. **Boarding Pass Issuance**:
   * Airline Check-in System → Passenger

In the use case diagram, these processes would be represented with arrows indicating the direction of interaction and data flow between the actors. The diagram would visually depict the sequential steps from the initiation of the check-in process by the passenger to the issuance of the boarding pass upon successful verification of credentials.

1- Case Studies -Digitalization of Admissibility

Driver

Airlines are required to ensure that passengers hold the right travel documents for transit and entry into a

country. Often, travel documents, such as visas, are paper-based and require manual checks by check-in

agents at the airport, which then prevents airlines from automating their check-in process and results in

queues and congestion at the airport.

Overview of Context and Scope

One ID - Digitalization of Admissibility (interim state)

Passenger uses an app to derive proof from government e.g. issued documents passport, visa) that are issued to the passenger's digital identity wallet as verifiable credentials (VCs)

Passenger shares required information as VCs from digital identity wallet directly to airline as part of checkin process (eg. online in advance or at a kiosk in airport)

Airline verifies the data as trusted and confirms that the passenger meets the requirements for travel through digital document checking.

Passenger is checked in and is issued their boarding pass, they are Ready to Fly!

On the assumption that all other check- in conditions are met

Use Case 1 – Verifiable Credentials already available in passenger digital identity wallet.

Candidate to document a use Case diagram to provide an understanding of processes and data points, i.e. what

data is involved and shared by whom, with whom, and when.

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| To provide a more detailed use case diagram for the digitalization of admissibility process using verifiable credentials in a passenger's digital identity wallet, we need to delve deeper into each step, identifying specific interactions and data exchanges. Here's a detailed breakdown: Actors  1. **Passenger**: Owns the digital identity wallet and initiates the check-in process. 2. **Airline Check-in System**: Responsible for verifying the passenger’s credentials and issuing boarding passes. 3. **Government Issuing Authority**: Issues and authenticates digital travel documents like passports and visas.  Detailed Processes and Data Points**1. Document Issuance and Storage**  * **Government Issuing Authority** issues digital travel documents (e.g., e-passport, e-visa). * **Passenger** receives these documents in their digital identity wallet. * **Data Points**: Digital travel documents (e.g., e-passport, e-visa) including personal identification information, document validity, etc.  **2. Check-in Initiation**  * **Passenger** starts the check-in process via the airline’s app or website, choosing to use their digital identity wallet. * **Data Points**: Passenger selection for digital check-in, digital identity wallet ID.  **3. Document Sharing**  * **Passenger** selects and shares specific verifiable credentials (VCs) from their digital identity wallet with the airline’s check-in system. * **Data Points**: Verifiable credentials including passport number, visa details, etc.  **4. Document Verification**  * **Airline Check-in System** receives the VCs and verifies them against its own requirements and with external verification services (possibly government databases) to ensure they are valid and meet travel criteria. * **Data Points**: Verification status, authentication logs, compliance checks with travel regulations.  **5. Boarding Pass Issuance**  * Upon successful verification, the **Airline Check-in System** completes the check-in process and issues a digital boarding pass to the **Passenger**. * **Data Points**: Boarding pass details (flight number, departure time, gate, seat number).  Interactions in the Use Case Diagram  * Arrows between **Government Issuing Authority** and **Passenger** to represent the issuance and receipt of digital travel documents. * Arrows from **Passenger** to **Airline Check-in System** for initiating check-in and sharing digital documents. * Bi-directional arrows between **Airline Check-in System** and **Government Issuing Authority** (or a trusted validation service) for the verification process. * Arrows from **Airline Check-in System** to **Passenger** for the final issuance of the boarding pass.  Additional Considerations  * The diagram should show the sequential flow of actions and the conditional logic (e.g., if the documents are verified, then issue boarding pass). * Include error handling or alternative flows (e.g., what happens if verification fails).   This detailed use case diagram will visually represent the step-by-step process of how a passenger’s verifiable credentials are used to facilitate the check-in process, highlighting the interactions between the passenger, the airline's check-in system, and the government issuing authority. |

n the digitalization of admissibility with verifiable credentials, several key pieces of data are involved, shared among different actors at various stages of the travel process. Here’s how this data flows:

**Data Involved**

1. **Verifiable Credentials (VCs)**: Digital proofs of identity and travel authorization, such as e-passports and visas.
2. **Personal Information**: Details like name, date of birth, nationality, and travel history.
3. **Travel Documents**: Electronic versions of traditional travel documents, including tickets and boarding passes.
4. **Flight Information**: Details about flight times, gate numbers, and seat assignments.
5. **Security and Health Data**: Information required for security checks and health clearances, if applicable.

**Shared By Whom, With Whom, and When**

1. **Government Authorities to Passenger**
   * **What**: Issue digital documents like e-passports and e-visas as verifiable credentials.
   * **When**: Before the travel process begins, at the time of document application and issuance.
2. **Passenger to Airline Check-in System**
   * **What**: Share verifiable credentials and necessary travel documents.
   * **When**: During the online check-in process or at the airport kiosk prior to the flight.
3. **Airline Check-in System to Government Authorities**
   * **What**: Verify the authenticity and validity of the verifiable credentials.
   * **When**: Immediately after the passenger shares their VCs, before issuing the boarding pass.
4. **Airline Check-in System to Passenger**
   * **What**: Issue boarding passes and flight information.
   * **When**: After successful verification of the passenger’s credentials, usually completed during the check-in process.
5. **Passenger to Border Control and Security System**
   * **What**: Present verifiable credentials and boarding passes for identity verification and admissibility checks.
   * **When**: At the airport, during security screening and border control checks before boarding the plane.
6. **Travel Agency to Payment System**
   * **What**: Share booking details and payment information.
   * **When**: At the time of booking or purchasing tickets.
7. **Payment System to Airline Operations**
   * **What**: Confirm payment and ticketing details.
   * **When**: After the ticket purchase, before the travel date.

This data exchange ensures that each party involved in the travel process has the necessary information to perform their roles efficiently and securely, facilitating a smooth travel experience for the passenger.