

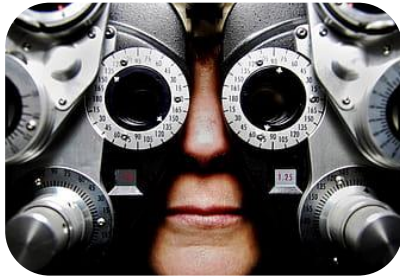
ICAO Facilitation Regional Forum

Ulaanbaatar, Mongolia
7 to 8 July 2025

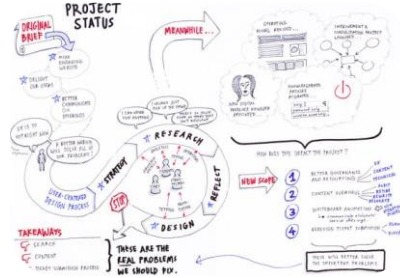
**Future of Facilitation: AI, Automation and
Innovation in Border Processing**

Hosted by:

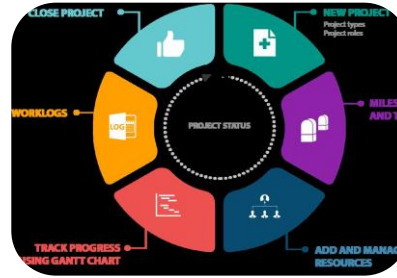




Vision



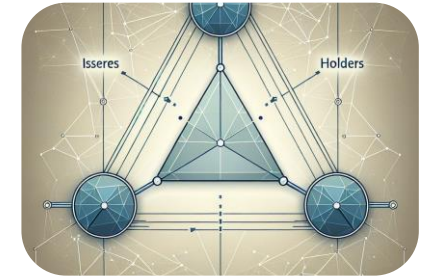
The journey so far



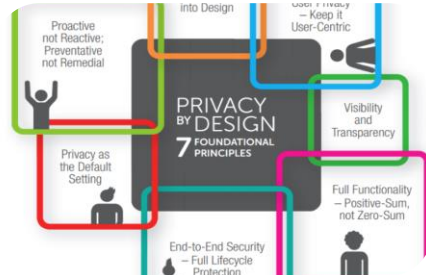
Process flow



How it is Changing travel



Decentralized Technology Concept



**Privacy by Design.
Don't Know Your Customer**



**The future!
No PII data!**



**Other Use-cases
using Verifiable
Credentials**



**SSI & VC
Framework – A
Vision for Globally
Interoperable
Trust**

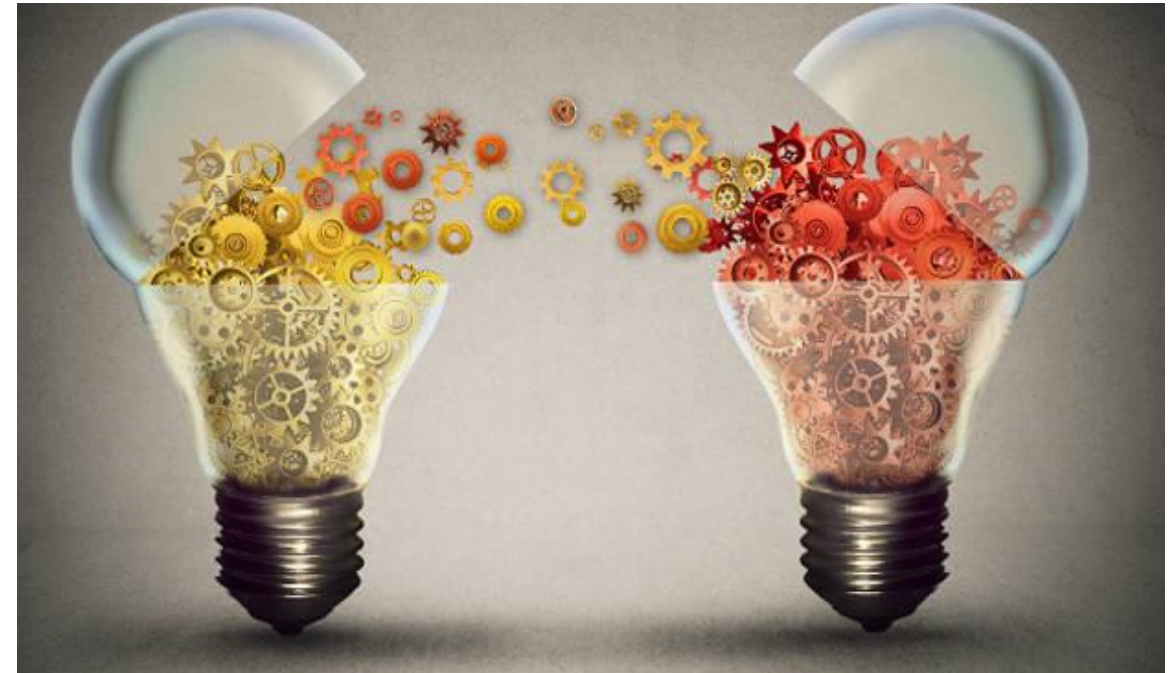


Q&A



- ❑ **Creating Delightful, Memorable, Contact-less, Digital travel experiences.**

- ❑ Enhanced throughputs
- ❑ Lesser Queue waiting times
- ❑ **Walk-in-the-Park experience!**
- ❑ Seamless and Hassle-free
- ❑ Data-driven insights and decisions



The journey so far!

2015– 17

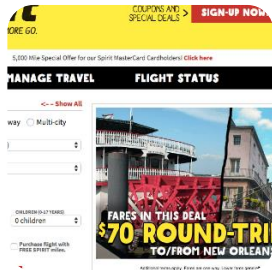
- ❑ Concept: **2015**
- ❑ Successful 'PoC' with Jet Airways: **2017**
- ❑ Showcase to regulatory authorities and collaboration.
- ❑ DY Policy drafted

2018–19

- ❑ Consultations with Industry leaders.
- ❑ Digi Yatra policy published by Dept. Gen. Civil Aviation, Govt. of India
- ❑ **Digi Yatra Foundation** formed to manage DY Central Identity Platform.

2020–24

- ❑ Post Covid-19 changed to **Decentralized Architecture**
- ❑ Selected startup to build DYCE with Niti Aayog & Atal Innovation Mission.
- ❑ **Rollouts**
 - ❑ 1st Dec-22 at Delhi, Bangalore & Varanasi airports
 - ❑ **Total: 24 Airports**
 - ❑ **Potential coverage: 90% of air travellers.**



App Enrolment

- Mobile# / OTP
- AADHAAR# /OTP (**e-Passport**)
- Receive e-KYC with photo
- Selfie & face match
- DY-ID Credential created

Upload boarding Pass

- Upload PDF/ Image or scan boarding pass
- **ID & BP Name validation**
- Click 'OK' to share boarding pass & ID credentials

Airport Entry Gates

- Scan boarding pass (**Optional**)
- Capture & Match face
- Validate Boarding Pass
- E-gate opens

PESC

- Capture & Match Face
- Validate Boarding Pass
- E-Gate Opens

Automated Border Control

- Capture face
- Validate Boarding Pass with airline DCS.
- Scan Passport
- Validate face
- E-gate opens

Boarding Gate

- Capture & Match Face
- Validate Boarding Pass
- E-Gate Opens

Digi Yatra Central Ecosystem and DY App

Under UAT

How it's changing travel!



Convenient

- Enroll from the comfort of your home
- Simple sharing of **'ID + Travel + Health'** credentials
- Arrive **'Ready to Fly'**
- Eliminate multiple manual checks



Secure & Private

- Digital ID and Travel Docs validation.
- No human error
- Privacy Preserving/ PbD
- Aligned with IATA OneID



Faster

- Enhanced processing speed
- Reduced queuing times



Safer


- **'Health-Risk-Free'** process for all
- Safer and Happier passengers




Sustainable

- Lesser Airport footprint
- Lower per passenger costs
- Sustainable innovation
- Future proofing & resiliency


The Decentralized Technology (Standards & Protocols)


 **World Wide Web Consortium (W3C)** standards for interoperability and openness

 **Self-Sovereign Identity (SSI)** empowers users with control over their identity

 **Verifiable Credentials (VCs)** for secure, tamper-proof, and portable information sharing

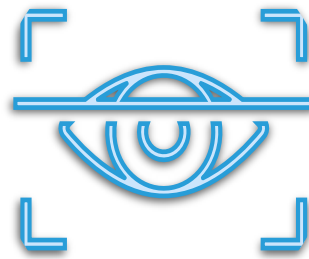
 **Decentralized Identifiers (DIDs)** to ensure unique, verifiable digital identities

 **Trust Layer with Distributed Ledger** using **Hyperledger Aries (Golang/ACA-Py)**

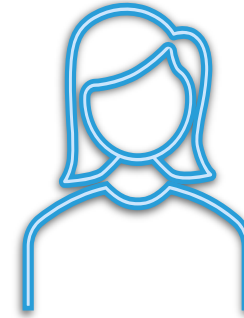
 **Secure Wallets** and **public-private key pairs** to safeguard privacy and personal data



Govt. of
India ID
database/
electronic
Passports/
etc.



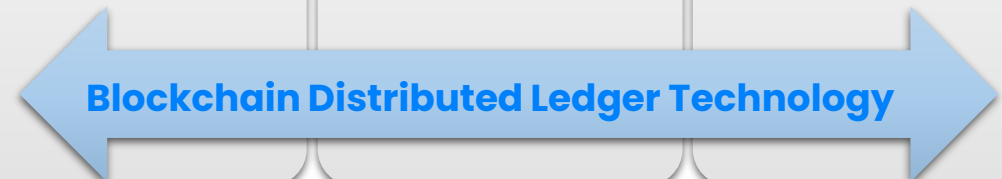
Digi Yatra
Central
Ecosystem
(Issuer)



Passenger
(Owner)



Airports,
Airlines &
Regulatory
Agencies
(Verifiers)



Don't know your
customers.

But.....

Do know their needs!

>30
Months

Privacy by
Design

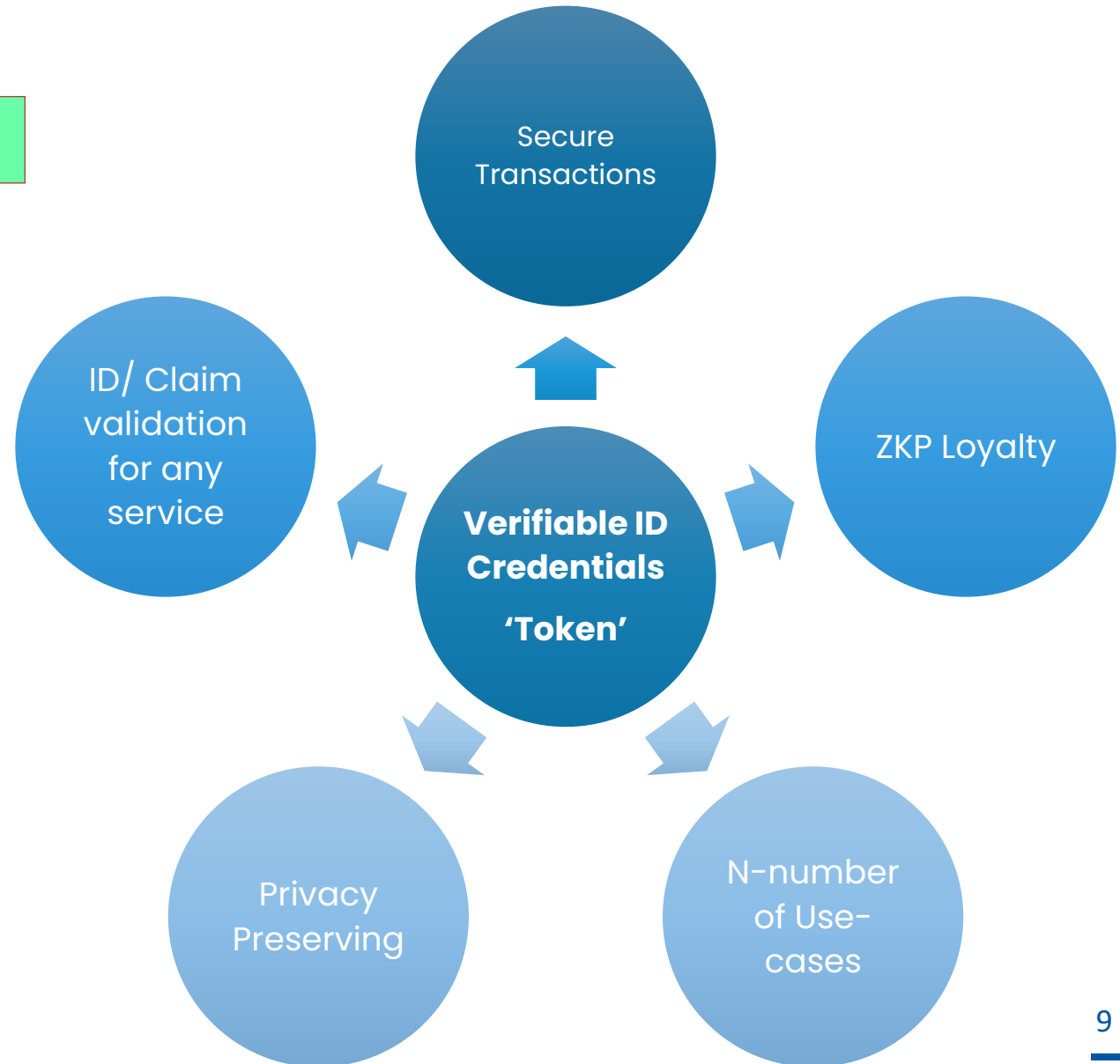
>14 Mn
Userbase



>60 Mn
Seamless
Journeys

2025-26 Future

- **E-Passport based enrolment.**
- **End-to-End, Immigration Automated Border Control.**
- **Collaboration with IATA, ICAO, MEA, MHA and other regulatory bodies.**
- **Hotels, Public places Access and Services using #DigiYatra Verifiable Credentials.**
- **Fully Homomorphic encryption for added privacy.**



- ❑ **Enroll with e-passport** on Digi Yatra or other interoperable Apps like EUDI etc.
- ❑ Create your Passport Verifiable Credentials

Enroll @home



- ❑ Share your Passport, Travel and other credentials:
 - ❑ To **Origin** Airport
 - ❑ Also share to **Destination** Airport

Advance Share Credentials



- ❑ **Auto-verification of travel documents at the Departure airport entry gate**
- ❑ **Seamless Check-in, Baggage Drop and Security Check**
- ❑ **Immigration:** Automated passport & visa validation for a Faster international exit clearance.
- ❑ **Hassle-free Boarding.**

Departure Airport process



- **Auto-verification of travel documents at the Arrival airport border control (ABC) gate**
- Seamless hassle-free international arrivals

Arrival Airport process



Other Use-cases using Verifiable Credentials

✈️ **Travel & Mobility** – Paperless boarding passes, metro/bus passes, vehicle permits

🎓 **Education Credentials** – Degrees, diplomas, skill certifications

💼 **Employment & HR** – Verified job history, EPFO/ESIC records

🏥 **Health Records** – Vaccination, insurance, fitness certs

🏠 **Financial Services** – KYC, credit score, income credentials

🏛️ **Govt Welfare** – Subsidy, ration card, Ayushman Bharat VCs

👤 **Licensing & Compliance** – Trade licenses, FSSAI, pollution clearance

🚇 **Urban Services** – Smart city access, property tax credentials

📦 **Logistics & Supply Chain** – Customs, vendor onboarding, MSME credentials



🔒 Uses Self-Sovereign Identity (SSI) and W3C Verifiable Credentials (VCs) for digital trust

🔄 Decentralized Identity (DID) framework ensures portability, revocability, and privacy

🌐 Global interoperability across credentials: Identity, Education, Health, Employment, Travel

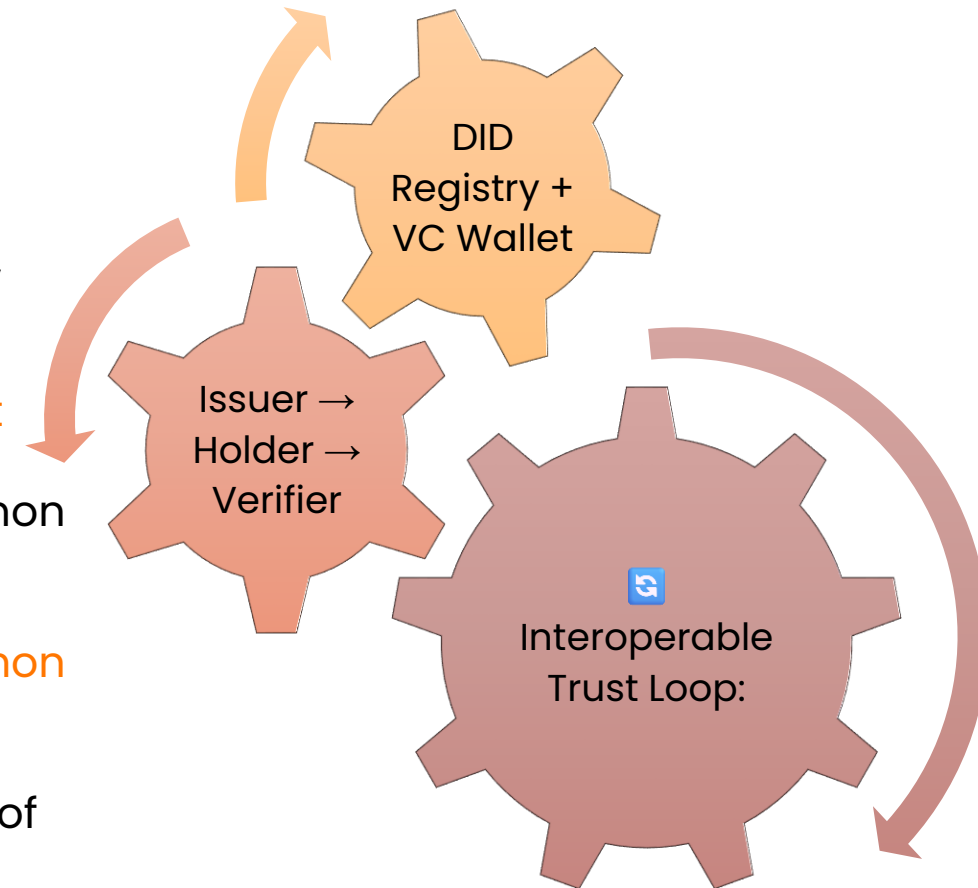
🌐 Aligned with Global Wallets & principles for international trust bridges

🏛️ Enables creation of multiple sectoral credentials using common DID/VC infrastructure

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🔑 Enhances user control and consent with zero-knowledge proof support

🔧 Empowers ecosystem actors: Issuers (Govt), Holders (Citizens), Verifiers (Airports, Banks, etc.)





Thank You

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CEO
Digi Yatra Foundation



ICAO
Headquarters
Montréal

European and
North Atlantic
(EUR/NAT) Office
Paris

Asia and Pacific
(APAC) Sub-office
Beijing

Middle East
(MID) Office
Cairo

Western and
Central African
(WCAFA) Office
Dakar

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Office
Bangkok