GovTech
Bhutan

Bhutan - Current Status





Agenda

1. Country Introduction
2. PKI usage
3. The National Digital Identity (NDI)
4. Digital Signature
5. Digital Trust Ecosystem


Kyrgyzstan
Turkmenistan
Tajikistan
Tehran
تهران
Afghanistan
Iran
Pakistan
LA
JK
HP
PB
UK
HR
UP
RJ
Jaipur
जयपुर
Nepal
Bhutan
AR
AS
ML
NL
BR
Udaipur
उदयपुर
Khajuraho
खजुराहो
Bangladesh
JH
WB
MZ
India
GJ
CG
OD
Mumbai
मुंबई
Hyderabad
హైదరాబాద్
GA
KA
AP
Bengaluru
ಬೆಂಗಳೂರು
TN
KL
Sri Lanka
Laccadive Sea
Arabian Sea
Bay of Bengal
Andaman Sea
Gulf of Thailand
Myanmar (Burma)
Laos
Thailand
Bangkok
กรุงเทพมหานคร
Phuket
เทศบาลนครภูเก็ต
Malaysia
Hanoi
Vietnam
Cambodia
Ho Chi Minh City
South China Sea
China
Beijing
北京
North Korea
SEOUL
South Korea
Yellow Sea
Jeju Island
Shanghai
上海
East China Sea
Chongqing
重庆
OKINAWA
TAIPEI CITY
Taiwan
Hong Kong
Luzon
Manila
Philippines
Panay
Negros
Palawan
Mindanao
Basilan Island
United Arab Emirates
Oman
n Gulf
n Gulf)

2. PKI Usage in Bhutan

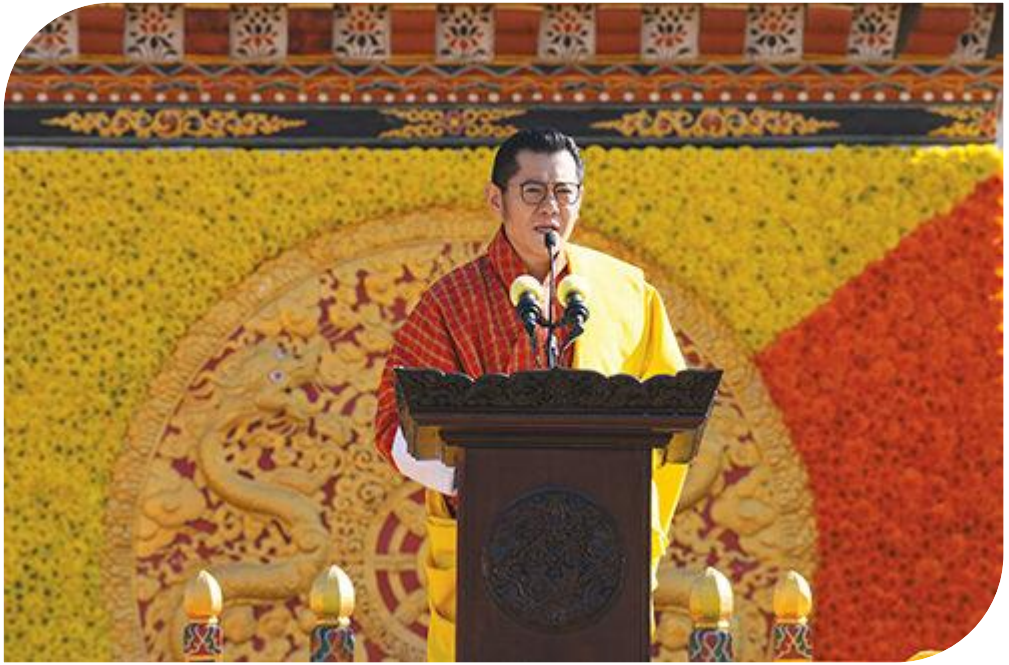


1. **Secure Web Communications**
    a. HTTPS/SSL/TLS used in websites, system sand portals
2. **Email Security**
    a. Google’s default TLS encryption is used (S/MIME is not used)
3. **Digital Signatures & Document Signing**
    a. Heavily used in Financial Institutions
4. **Code Signing** - Not used
5. N**etwork Access Control & Authentication**
    a. VPN & Wi-Fi Access (Not widely used)
    b. Hardware tokens (FIs and high security requirements)
6. **IoT & Device Identity**
    a. Assign unique ID to connected devices
7. **VPN & Infrastructure Security**
    a. SSH Key Management & DevOps (TLS certs for K8s clusters)



3. NATIONAL DIGITAL IDENTITY (NDI)

The Bhutan NDI Philosophy

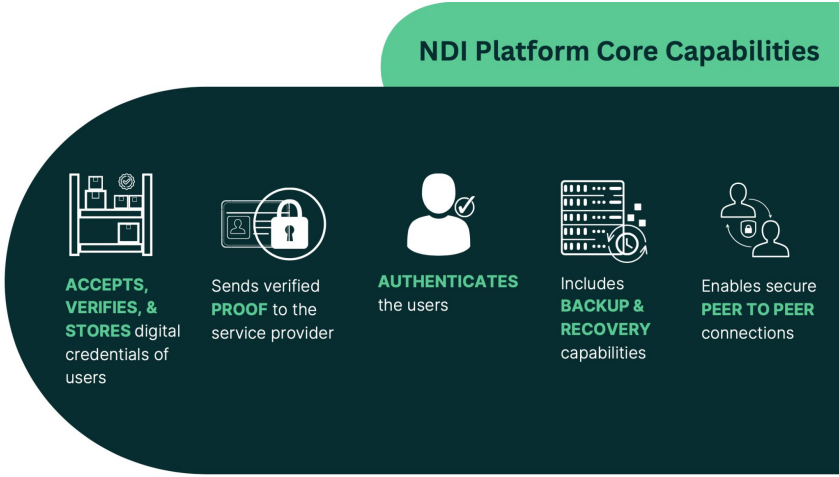


Driven by the personal vision of His Majesty The King to provide every citizen with ***the right to privacy***, Bhutan NDI has been launched with the philosophy of ***Self-Sovereign Identity***.

Bhutan National Digital Identity Wallet

Bhutan National Digital Identity (NDI) is a biometrics-enabled edge mega-wallet that has been developed as the foundation for digital transformation, connectivity, and inclusion in Bhutan.

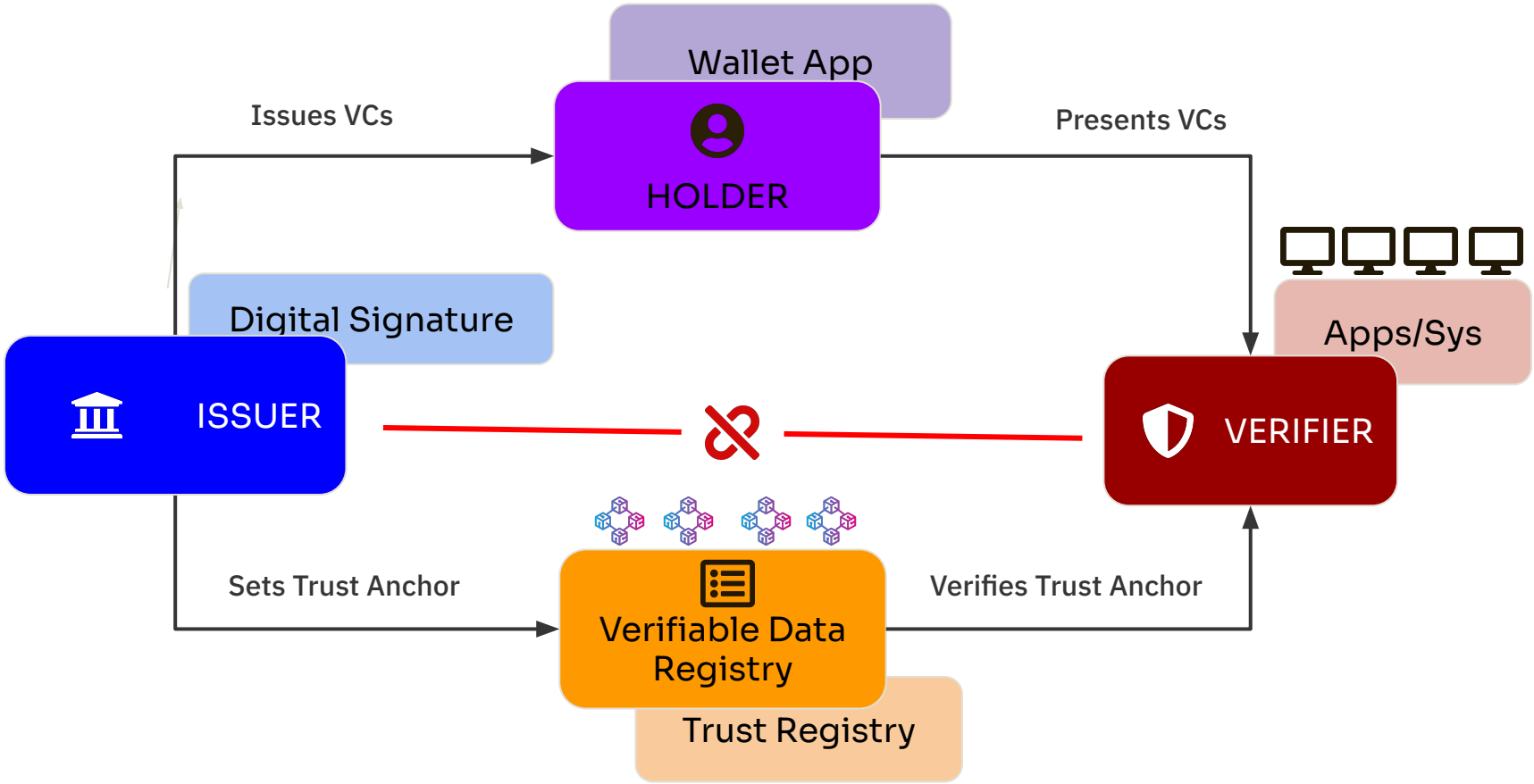
BHUTAN NDI provides trust services by enabling users to authenticate themselves, receive, store, and share **verifiable credentials** while accessing various government and business services online



Adoption of Self-Sovereign Identity

Self-Sovereign Identity (SSI) is an approach to digital identity that **gives individuals control over the information** they use to prove who they are to websites, services, and applications across the web.

The Bhutan NDI Trust Ecosystem



The Bhutan NDI Overview

Bhutan NDI
www.bhutanndi.bt

For Users



ANDROID APP ON Google play

Download on the App Store

For Partners

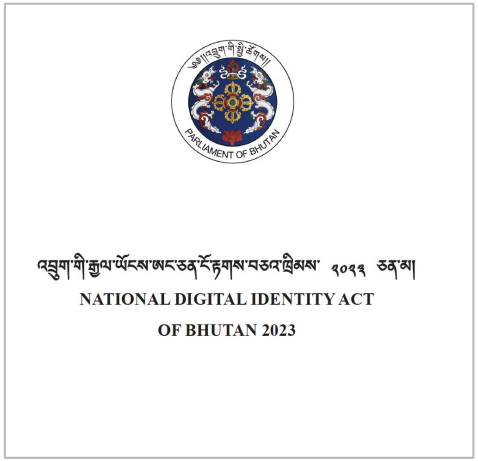


Issuer



Verifier

For Regulators



The Preamble and 13 Chapters

The Bhutan NDI Overview



Digitizing Services



Passwordless Login



Verified e-KYC



Data Privacy

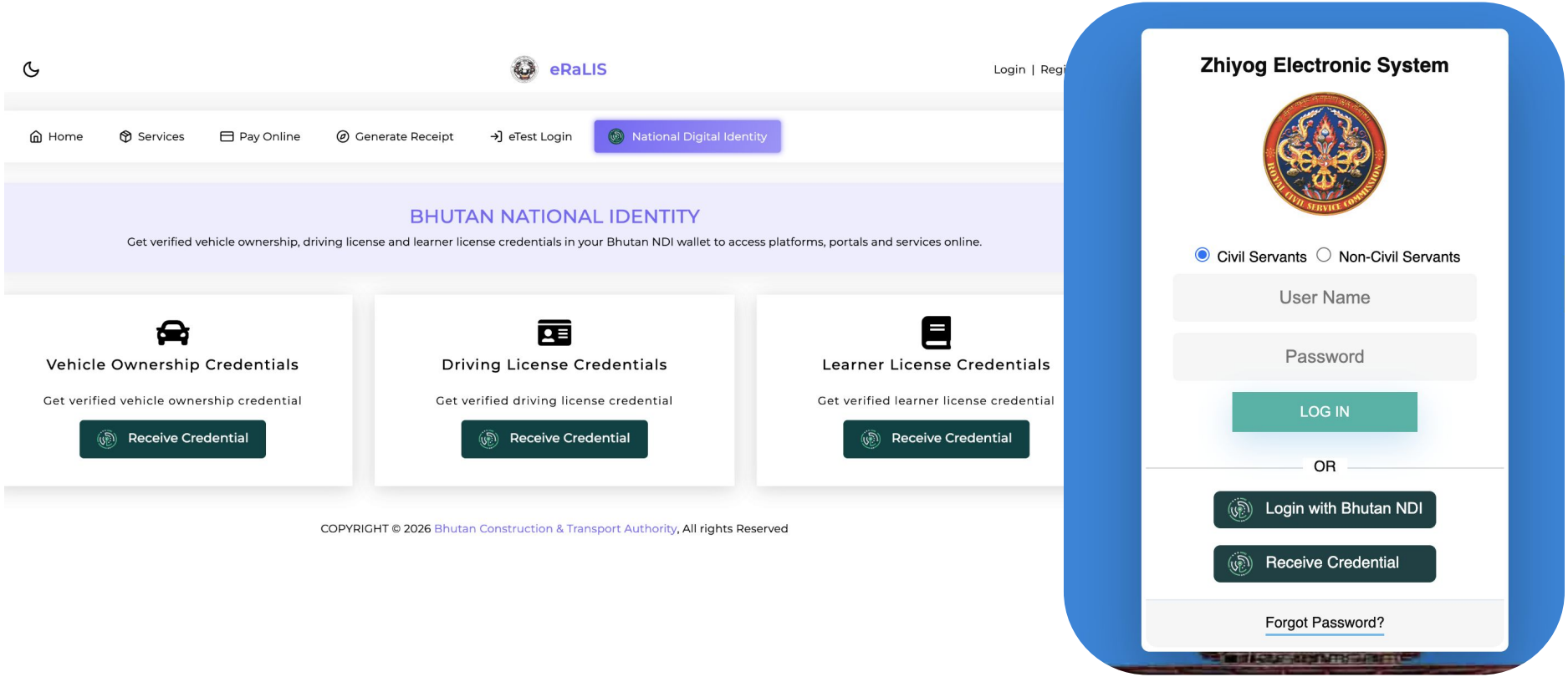


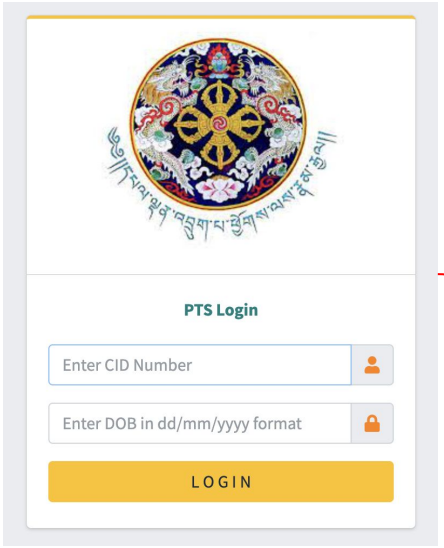
Transparency

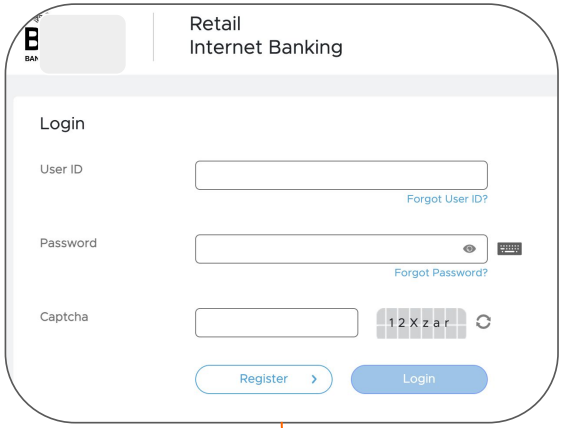


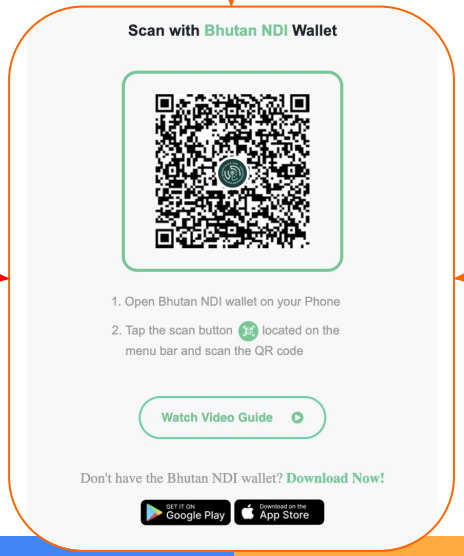
Digital Empowerment

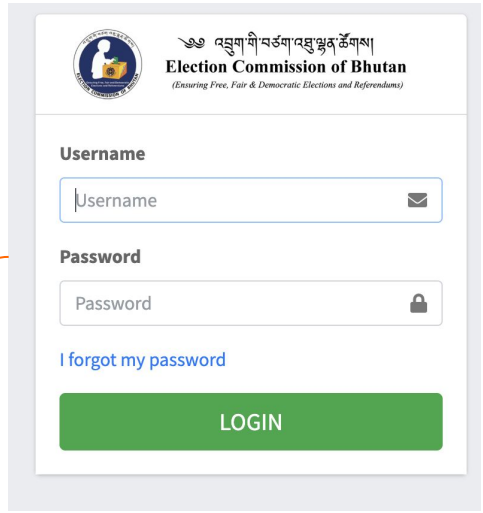
How VCs are issued?




PTS Login
Enter CID Number
Enter DOB in dd/mm/yyyy format
LOGIN


Retail
Internet Banking
Login
User ID
Forgot User ID?
Password
Forgot Password?
Captcha
12Xzar
Register
Login


Scan with Bhutan NDI Wallet
1. Open Bhutan NDI wallet on your Phone
2. Tap the scan button located on the menu bar and scan the QR code
Watch Video Guide
Don't have the Bhutan NDI wallet? Download Now!
Google Play
App Store


Election Commission of Bhutan
(Ensuring Free, Fair & Democratic Elections and Referendums)
Username
Username
Password
Password
I forgot my password
LOGIN

New Telephone Connection

Title *

Mr.

Name of the Customer *

First | Middle | Last

Email *

Current Dzongkhag/Location *

Punakha

Select your Dzongkhag

Address *

SERVICE CONNECTIONS APPLIED BY

Select One *

Bhutanese

Permanent Address

Citizenship ID No *

Village *

Gewog *

Dzongkhag/Location *

Punakha

Select your Dzongkhag

Please attach a copy of your ID card *

Click or drag files to this are

You can upload up to

For Private Business

Yes

No

Business Name

Trade license No

Business Type (for listing in yellow pages)

List other phone Nos. connected in your name / business Name

e information provided above is correct to the best of

e to abide by Bhutan Telecom's Terms and

on of Telecom Services.

reCAPTCHA

Privacy - Terms

Scan with Bhutan NDI Wallet

1. Open Bhutan NDI wallet on your Phone
2. Tap the scan button located on the menu bar and scan the QR code

Watch Video Guide

Don't have the Bhutan NDI wallet? Download Now!

Google Play | App Store







































SERVICE PROVIDERS ADOPTING BHUTAN NDI WALLET

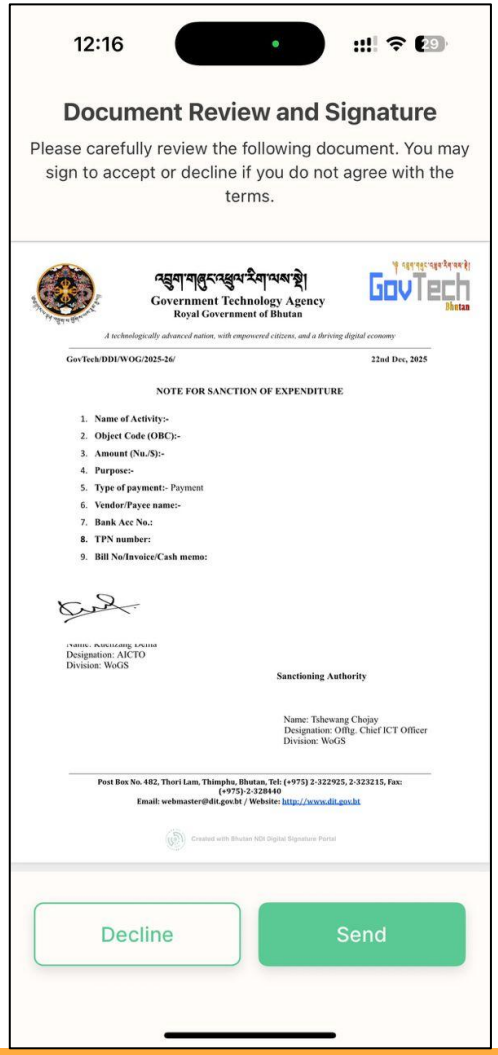


4. DIGITAL SIGNATURE

Signing via NDI Wallet

- Documents displayed in NDI Wallet
- e-Signature auto-retrieved
- Streamlined and secure signing process







Bhutan NDI Document Tracking Portal

Enter your tracking ID to view the signature progress

In Progress
0 of 1 signatures completed

Signature Progress 0%

Document Details

DOCUMENT NAME
work order.pdf

CREATED BY
Kuenzang Dema
kuenzangd@tech.gov.bt

CREATED AT
Dec 22, 2025, 10:02 AM

5. Other NDI based digital trust ecosystems



InApp OTP



4th Gen CID Cards



Liveliness Checks



Digital Signature



Guardianship



Verifier App



Cross-border Interoperability



Entity Wallet

Thank you! Q&A

tchojay@tech.gov.bt

