National Applied R&D Centre

MIMOS

MyDigital ID

MyDigital ID is a national identity management and transaction signing platform designed to address the vulnerabilities of its contemporary implementation such as insecure communication channels and storage of user credentials.

MIMOS in Government Technology

MIMOS is Malaysia's national applied research and development (R&D) centre focussing on generating technology solutions that enable the Government and industry to deliver better value. In government technology, MIMOS collaborates with Government agencies, industry, academia and citizens to define issues, develop applications and monitor their effectiveness.

Ongoing and successful projects include the Government Online Services Gateway, the Malaysian Health Data Warehouse, JobsMalaysia – a job market portal, modern policing solutions for public safety and security; and high-impact solutions employing big data analytics for smart governance across various sectors.

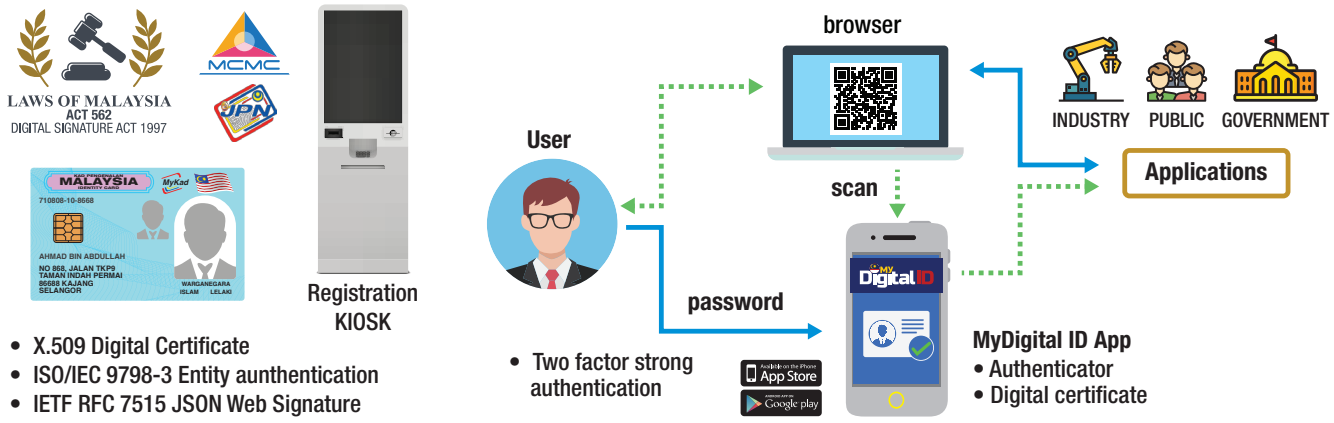
Backed by strong R&D capabilities in data science, artificial intelligence, information security, wireless smart sensors and Internet of Things (IoT) applications, MIMOS is at the forefront of driving digital transformation to improve government performance and deliver better outcomes.

Users of MyDigital ID are assured of:

- Trusted issuance of digital certificates
- Secure protection of digital certificate keys in mobile devices
- Trusted authentication for online services
- Non-repudiation of online transactions.

REGISTRATION AND APPLICATION

MyDigital ID simple registration and application process



MyDigital ID will provide users – in particular Malaysian citizens – with a high-assurance MyKad instrument, with an equivalently high-assurance authenticator applicable towards the widest possible use-case spectrum including routine web and mobile application transactions, as well as Internet of Things (IoT) and blockchain applicability. It is also used for online authentication for secure authentication with online service provider or signing of online transactions.

VALUE

MyDigital ID provides the platform to enable fast and secure execution of identity authentication for users' interaction with entities both in person and online. Most importantly, MyDigital ID allows users to be ubiquitously available.

MyDigital ID is key to inclusive socioeconomic growth, facilitating access to Government services, financial services, social security benefits, education, healthcare and many other critical services. It enables individuals to unlock value and benefits as they interact with Government agencies, businesses, institutions and other individuals.

The implementation of MyDigital ID can bring forth immense economic value through efficiency gains such as cost and time savings. Beyond economic benefits, MyDigital ID enables social and political inclusion, rights protection and transparency.

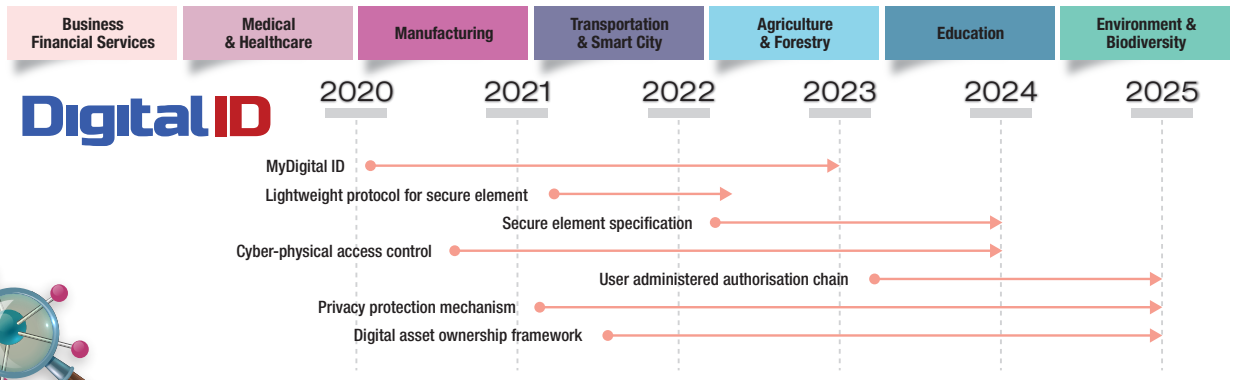
FEATURES

- **One single identification -** Enables accessibility to all Government and private digital services
- **Trusted digital ecosystem** – Common user pool of data and services enables application across different systems, organisations and countries
- **High security** – Trusted identity authentication based on user password and unique device physicality
- **Secure identity management** – User-specific through Certificate Signing Request and receipt by Certificate Authorities
- **Android and iOS compatible** – Leverages on security characteristics of both mobile operating systems.

TECHNOLOGY BENEFITS

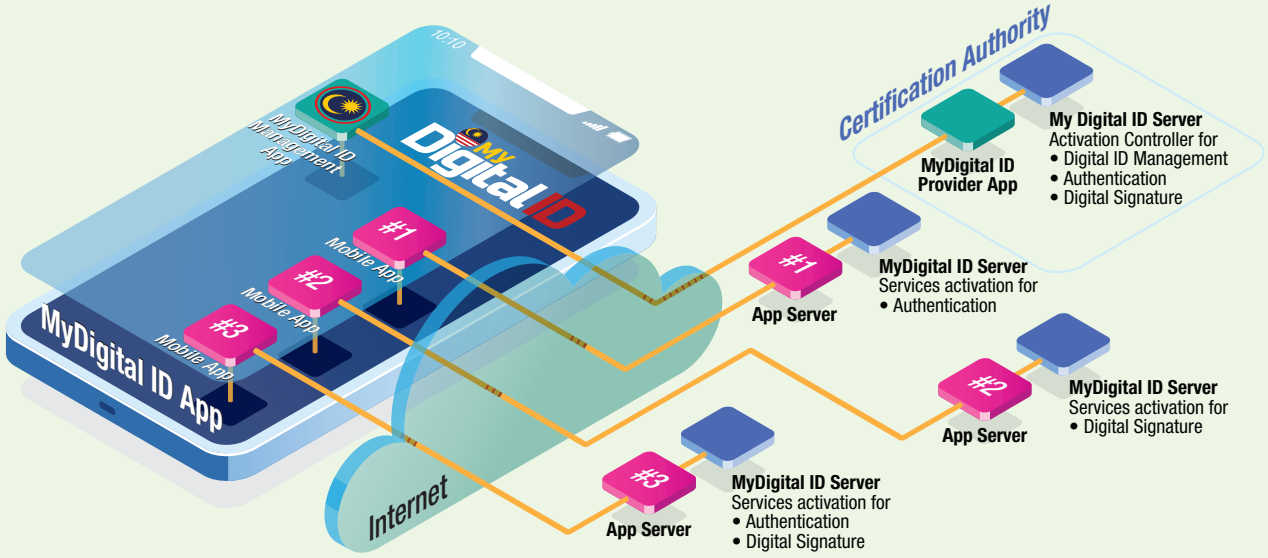
- **Security**
  Protects against phishing attack, with irrefutable authentication outcomes
- **Privacy**
  Digital certificates ensures minimal privacy footprint as it that does not require real-time accessibility to centralised identity management system
- **Acceptability**
  Leverages on the assurance and ubiquity of MyKad to undertake authentication and digital signing of transactions at national level
- **Legality**
  Complies with Signature Act 1997 and Electronic Commerce Act 2006.

FUTURE PLAN



Future plans for MyDigital ID includes:

1. **Cyber-physical access control**
   - Physical access control based on MyDigital ID on mobile phone
   - Parcel drop box or drone delivery can utilise similar technology to unlock a locker by using MyDigital ID on mobile phone
2. **Privacy protection**
   - Explicit consent by data owner by using MyDigital ID to perform digital signature on the consent form before disclosing privacy information to a service provider
   - Anonymous attestation of specific attribute e.g. age requirement; health and marital status
3. **Integration with Blockchain**
   - To serve as authentication method to Blockchain
   - User to have full control over the authorisation chain used in the service provider system where no root administrator is needed in the system.



My Digital ID ecosystem

FRAMEWORK

MyDigital ID framework offers four basic services to Service Provider systems:

1. Client-side key generation and Certificate Signing Request submission to server
2. Server-side certificate issuance and receipt at client
3. Client-side authentication for secure session establishment and server verification
4. Client-side signing of transaction and server verification

ECOSYSTEM

MyDigital ID contains user digital identity which can be utilised by other mobile applications for authentication and digital signature functions. An ecosystem of mobile applications can be created to leverage on common user pool. This ecosystem can be extended to international markets, allowing for access to larger user base using a standardised authentication method.

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MyDigital ID

INTELLECTUAL PROPERTY

No	Patent Number	Title
1	MY/2019007776	Transaction Signing with Ergonomic Addressing and Compact Encapsulation.
2	MY/2019007775	Crypto-Physical Lock Control and Authorisation.
3	PCT/MY/2019050084 & MY/2018001925	Security Framework for Transaction Signing
4	PCT/MY/2018050090 & MY/2017005186	Physical Access Control via Challenge-Response Interaction.
5	PCT/MY/2018050080 & MY/2017005162	Transaction Signing on Multiple Channels.
6	PCT/MY/2018050079 & MY/2017005024	Pseudonymisation and Reversal Thereof of Personally Identifiable Information

PUBLICATION

M Syarif, A Goh, H Cheong, K Lee & K Ng (2017). Transaction Signing on Multiple Channels. IEEE Intl Conf Adv Comp, Comms & Informatics (IACCCI): Udueepi, IN.

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