

Credentials and Access Technology

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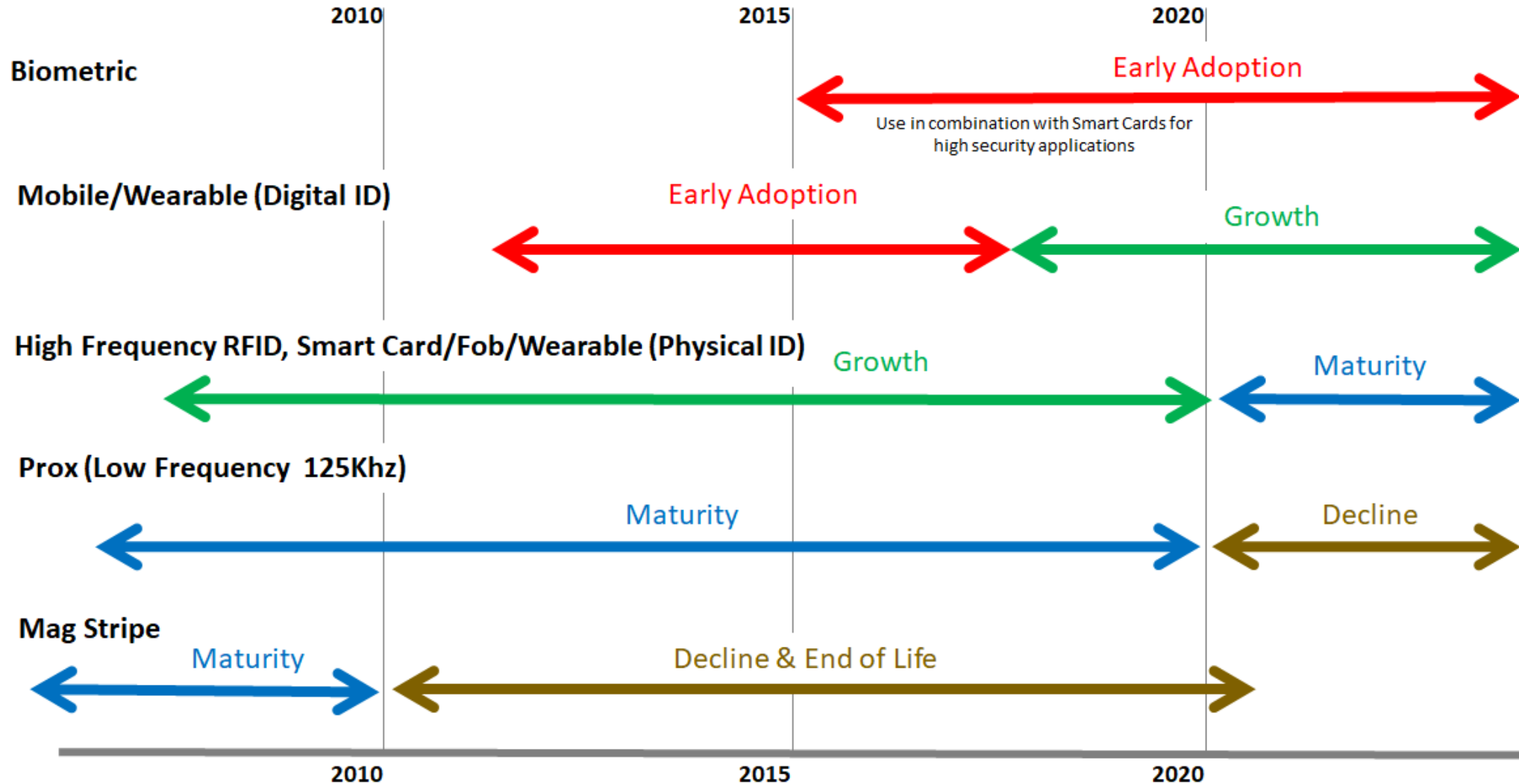


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HID Global

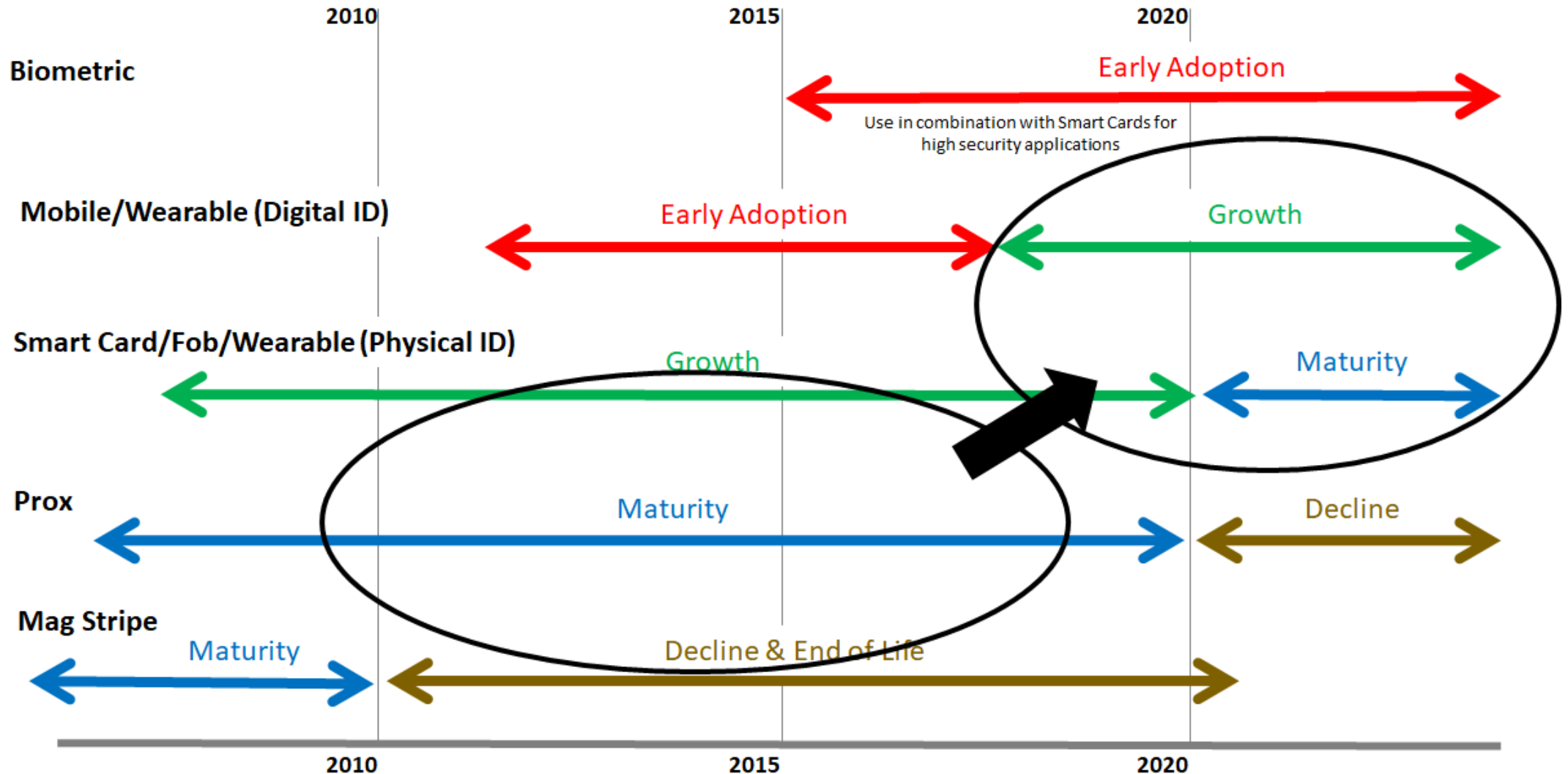


Powering
Trusted Identities

Credentials – Life Cycle View



Credentials – Life Cycle View



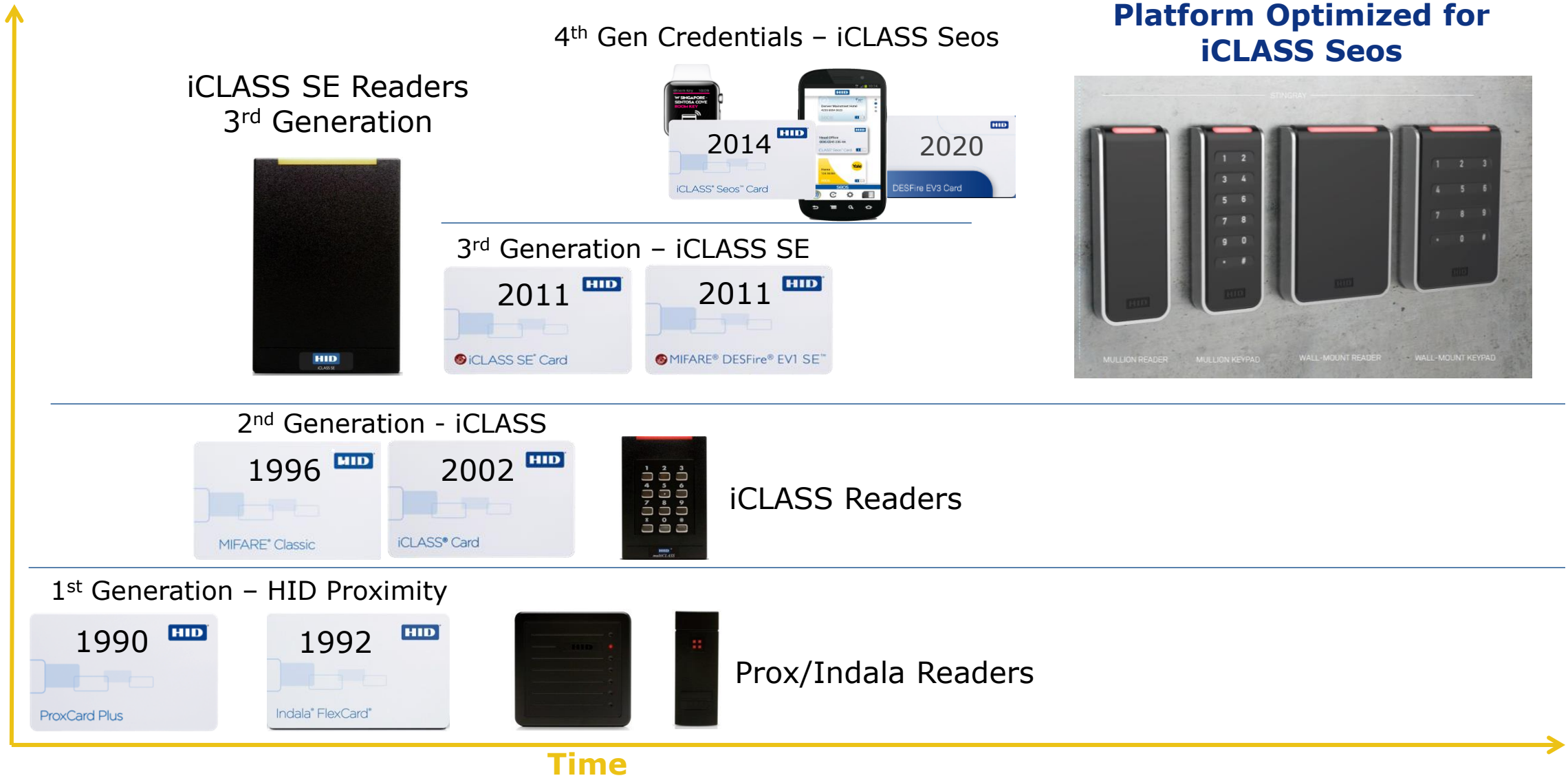
Key Considerations

1. What is being secured and the level of security required
2. The credential ecosystem. Can one credential be used for:
 - a. Access control
 - b. Electronic locking
 - c. Vending/food service/timekeeping
 - d. Identification
3. Open technology to “futureproof” the solution.



The Credential Continuum

Security & Application



HID Signo 4th Generation Reader Platform Optimized for iCLASS Seos



CLONEABLE



VULNERABLE



SECURE



1st
GENERATION

125kHz Proximity -
No Encryption

2nd
GENERATION

13.56 MHz
Smartcard - Card
Encryption

3rd & 4th
GENERATION

13.56 MHz
Smartcard - Card
Encryption w/ SIO

125 kHz PROX TECHNOLOGY IS CLONEABLE

ONLINE
Card Cloners

WEB SERVICES
e.g. clonemykey.com

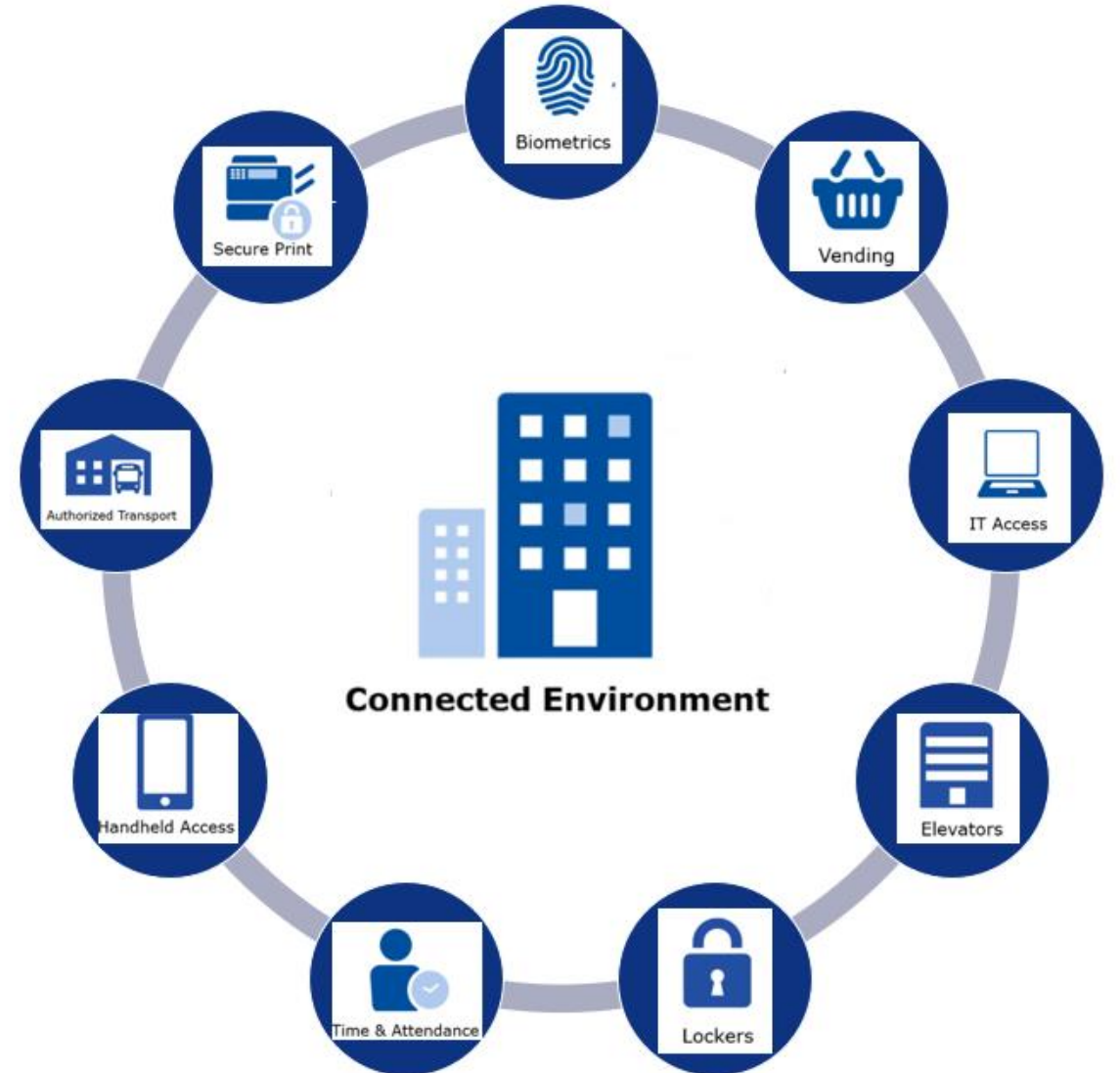
KIOSKS
In Your Neighborhood





**DOES YOUR
CARD DO MORE
THAN JUST
OPEN DOORS?**

THINK ABOUT DOWNSTREAM SYSTEMS





Mobile Access

MOBILE ACCESS

Key Benefits of Mobile Access



Increase Convenience

Access facilities with a mobile device by simply using "Tap" or "Twist & Go" gestures



Boost Efficiency

Using our online management portal, administrators can create, manage, issue and revoke credentials through the cloud



Maximize Security

Delivered through a highly secure and reliable cloud platform, the solution is powered by Seos credential technology



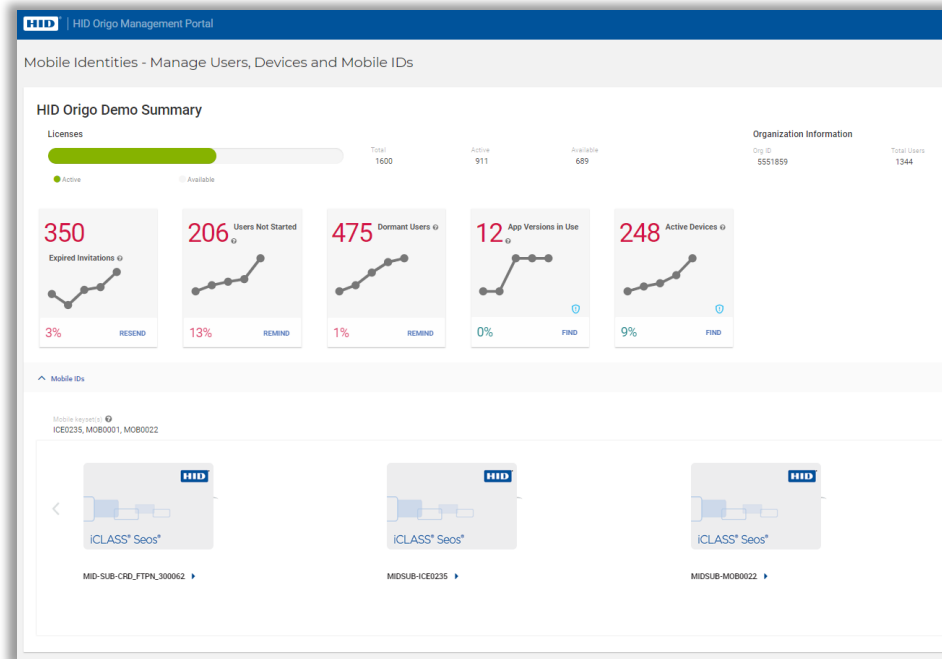
Native Touchless

Keep employees and staff safe through over-the-air provisioning and native touchless functionality

SIGNO readers come mobile ready

SE readers may have upgrade options

Mobile Access – System Level View



1) Administrator manages users, issues/revokes Mobile IDs via the Secure Identity Services portal



4) Reader sends credential data to panel

3) Tap or Twist and Go



2) Mobile IDs are transferred into device over the air



Mobile Access – The App, Registration and Credential

FW: Your HID Mobile Access Invitation code
Today at 9:27 PM

Dear Frank Stark

Welcome to HID Mobile Access®,

Your organization has decided to embrace a new method of access control. Once enrolled, your Android™ or iOS® mobile device can be used for building and gate access by holding it close to or “tapping” it on the reader. Your organization may also have chosen to activate a long range read option. If this option has been enabled, you may have the opportunity to open doors and gates with the Twist and Go gesture as you approach the door. This can be confirmed by your Security Administrator. Please follow these simple steps to prepare your mobile device, receive your Mobile ID and make the move to mobile:

Step 1: Please download the HID Mobile Access App:

- From the [App Store for iOS](#);
- From [Google Play for Android](#);

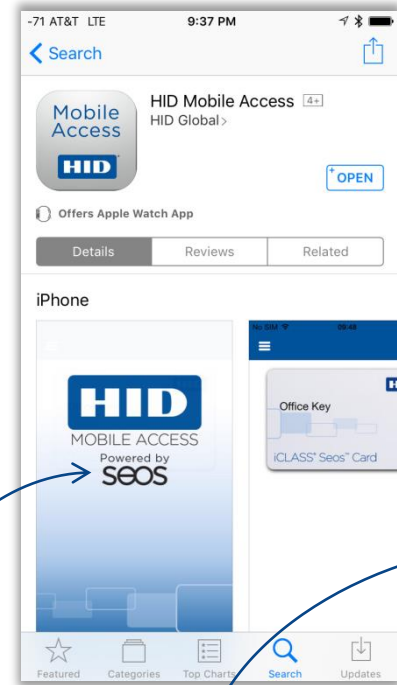
Step 2: Enter the invitation code when prompted, and get your device ready for Mobile Access.

Step 3: Your Security Administrator will issue a Mobile ID that will be visible when you open the HID Mobile Access app

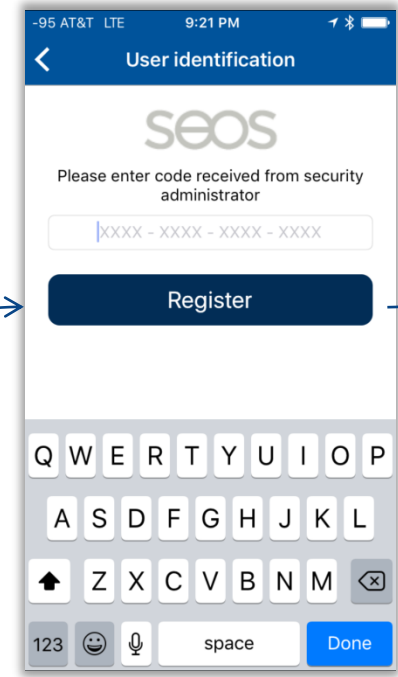
Step 4: Your Security Administrator will grant access rights.

Your invitation code is [AUXI-RZEA-B2AQ-NSYT](#), it expires on 23 Nov, 2016 13:13 UTC.

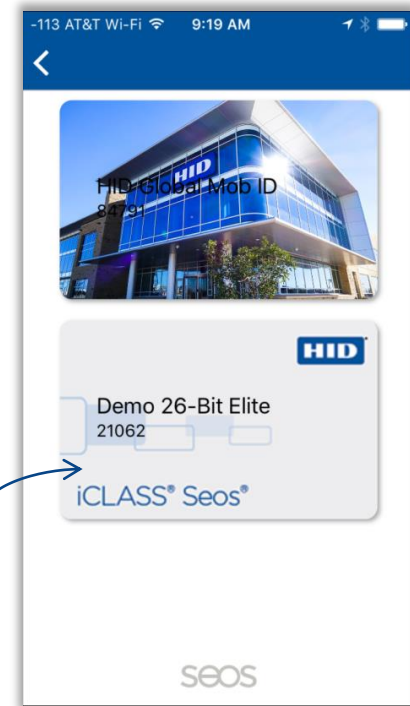
Depending on your organization's process, the



1



2



3

Keyset Options

STANDARD KEYS

Universal keysets that offer maximized compatibility by keying readers and cards with matching security for use in the general population. This allows for maximized compatibility because readers and cards are not keyed on a per site/company basis but rather all keyed the same. This offers the advantage to the integrator as a standard stock of readers and cards will interoperate for a variety of sites/companies, rather than needing different stocks of readers and cards for each individual site.

ELITE KEYS

Hold Your Own Key – **HYOK**

Manufacturer provides end-user customers with a unique authentication key to increase their existing security. The custom authentication key protects the card number within the access control application of the card. Only matching cards and readers will work together, prohibiting cards and readers from foreign populations to enter and function within the company's secured population.

PRIVATE KEYS

Bring Your Own Key – **BYOK**
Control Your Own Key – **CYOK**

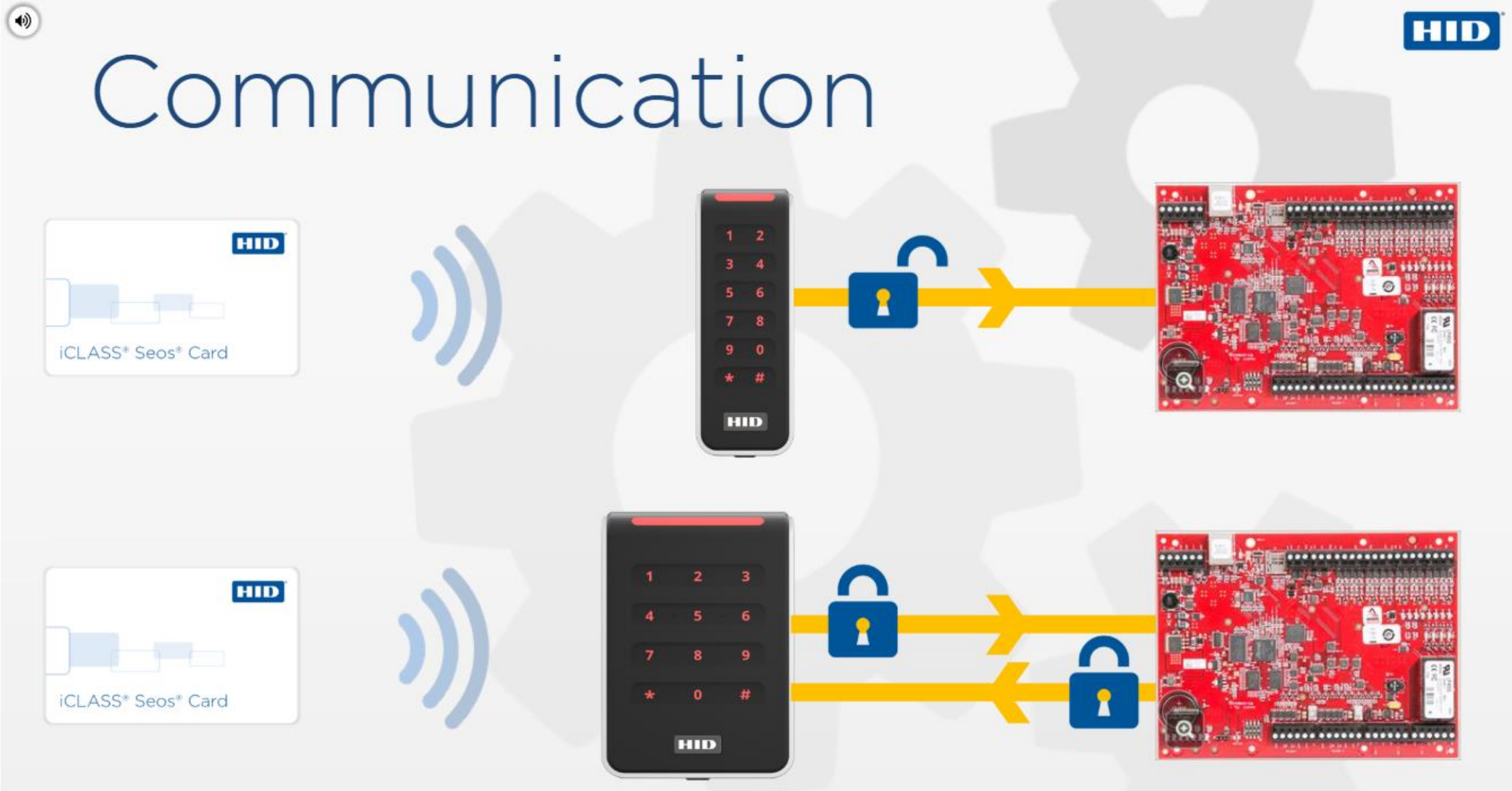
Same benefits of the **HYOK** model, but the end user creates their own unique authentication key. This can be shared securely with the manufacturer with a “key ceremony” to embed the key in readers and credentials (**BYOK**) or done on site with encoders to readers and credentials configured to accept the private keys (**CYOK**).

Biometric Authentication & Verification

Biometrics have rapidly expanded into our daily lives, as millions of people utilize fingerprints to unlock their mobile phones, or access cash through ATMs. Using fingerprint biometrics, iris and facial recognition for physical access security offers customers convenience as biometrics are unique, cannot be forgotten, lost or stolen.



Reader to Panel Communications



Reader to Panel Communications Protocols



Comparing Standards

OSDP	Wiegand
Adopted by SIA in 2011	Adopted by SIA in 1996
Secure <ul style="list-style-type: none">• Supervised connections (to indicate reader malfunctions)• Encrypted using Secure Channel Protocol (v2)	Unsecure <ul style="list-style-type: none">• Unsupervised• Unencrypted
Bi-directional	Uni-directional
Centralized management for configuration and firmware upgrades	Manual configuration and firmware upgrades
Multi-drop cabling can be used	“Home-run” cabling required
4000ft cable limit	500ft cable limit
All reader functions performed by 2 data wires using the RS485 protocol	Additional wires required for other functions

ASSA ABLOY



HID's Broad Portfolio

Physical Access Control Solutions



Physical access control products and services - credentials, readers and controllers

Secure Issuance



Identity issuance, card personalization and encoding solutions

Extended Access Technologies



Desktop and embedded biometric, RFID and contactless readers

Identity and Access Management Solutions



Identity lifecycle management, multi-factor authentication, credential management and digital certificates

Citizen Identity Solutions



End-to-end portfolio of highly secure custom government-to-citizen physical, mobile and biometric ID solutions

Identification Technologies



Tags, beacons and services to identify, track and add trust to activities and assets



Powering
Trusted Identities



Thank you

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UPSTATE NY and NEW ENGLAND