Agenda

Why Mobile?

Why Invest?

What Options are Available?

- Lenel Integration
- HID Fargo Connect
- App-Based Mobile Technology Partners
- Wallet

Where to Start?

Why Mobile?

Value it delivers to your campuses

Powering the trusted identities of
the world's people, places & things

HID

Why Not Mobile?
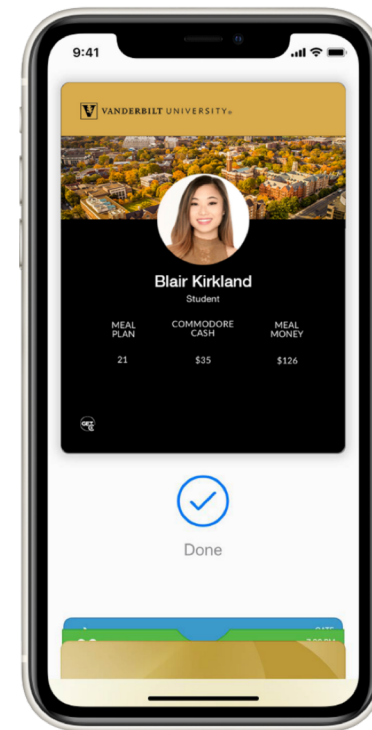
Phone always with them

Most secure credential they have

Digital transformation happening

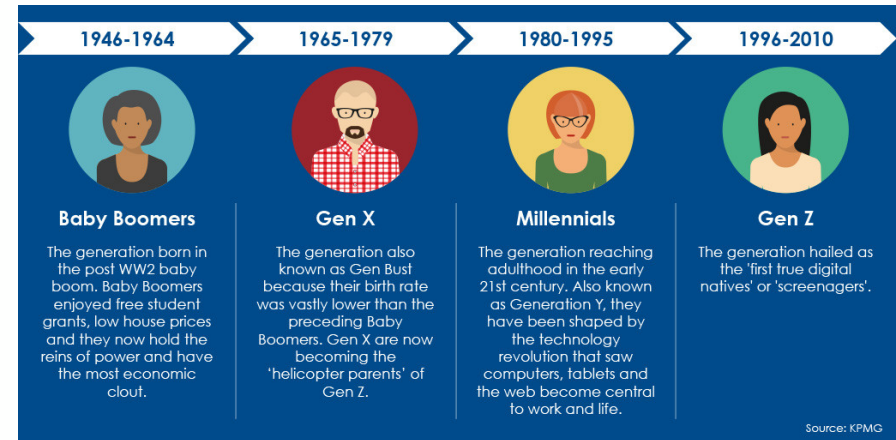Expectation on User Experience

Can still use cards

Gen Z & beyond

Gen Z and Beyond

- Gen Z will DRIVE demand today
  - Decision makers tomorrow
- Gen Z App World vs Carrying Plastic
  - Immersed in app centric world
- Gen Z much more environmentally focused
  - Gen Z making career choices on ESG initiatives
- Gen "Alpha" next after Gen Z
  - Super Users of Mobile
  - Enter Universities in 5 years

1946-1964	1965-1979	1980-1995	1996-2010
Baby Boomers	**Gen X**	**Millennials**	**Gen Z**
The generation born in the post WW2 baby boom. Baby Boomers enjoyed free student grants, low house prices and they now hold the reins of power and have the most economic clout.	The generation also known as Gen Bust because their birth rate was vastly lower than the preceding Baby Boomers. Gen X are now becoming the 'helicopter parents' of Gen Z.	The generation reaching adulthood in the early 21st century. Also known as Generation Y, they have been shaped by the technology revolution that saw computers, tablets and the web become central to work and life.	The generation hailed as the 'first true digital natives' or 'screenagers'.

Source: KPMG

GEN ALPHA

Market growth trend for mobile credentials

OMDIA 5 year forecast for access credentials (unit shipments)

(CAGR) compound annual growth rate is the annualized average rate of revenue growth between given years

Physical Credentials

4.5% CAGR

Mobile Credentials

45.8% CAGR
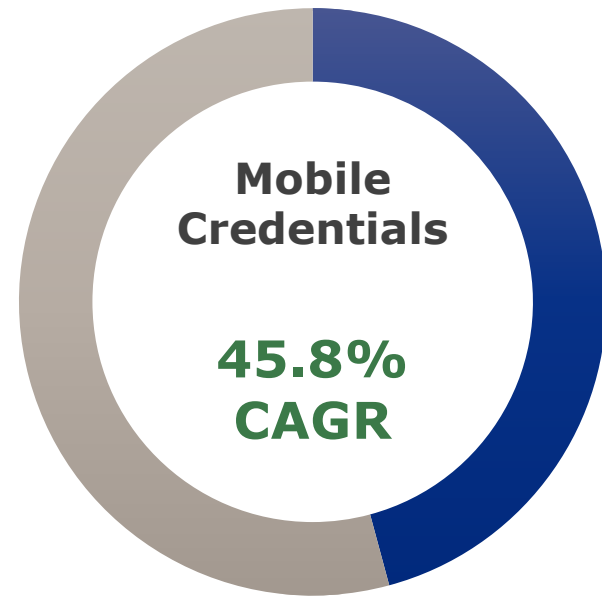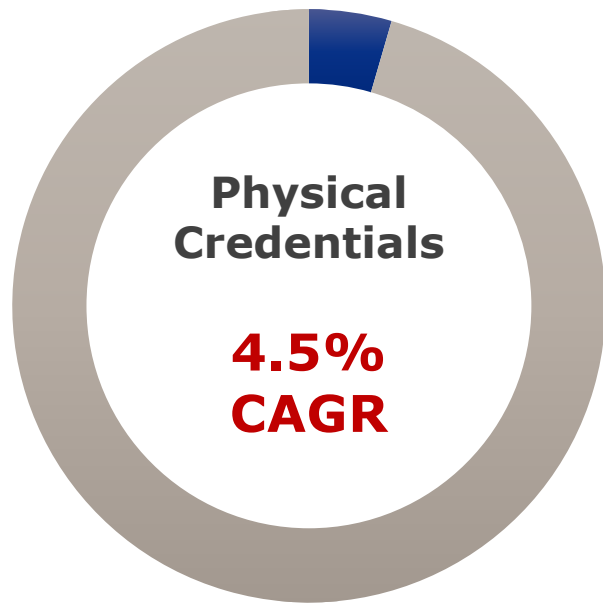
"No other equipment type in access control is expected to experience a comparable growth rate during the forecast period." – OMDIA Analyst

The role of mobile on the digital campus

- A more **convenient, efficient, secure** way of accessing places and spaces

- **Data-based insights** that help secure and optimize facilities

- Contribution to **sustainability objectives** and accreditation

- Support for **lean operations**

- Drive adoption of Apps designed to **attract, retain, and engage**
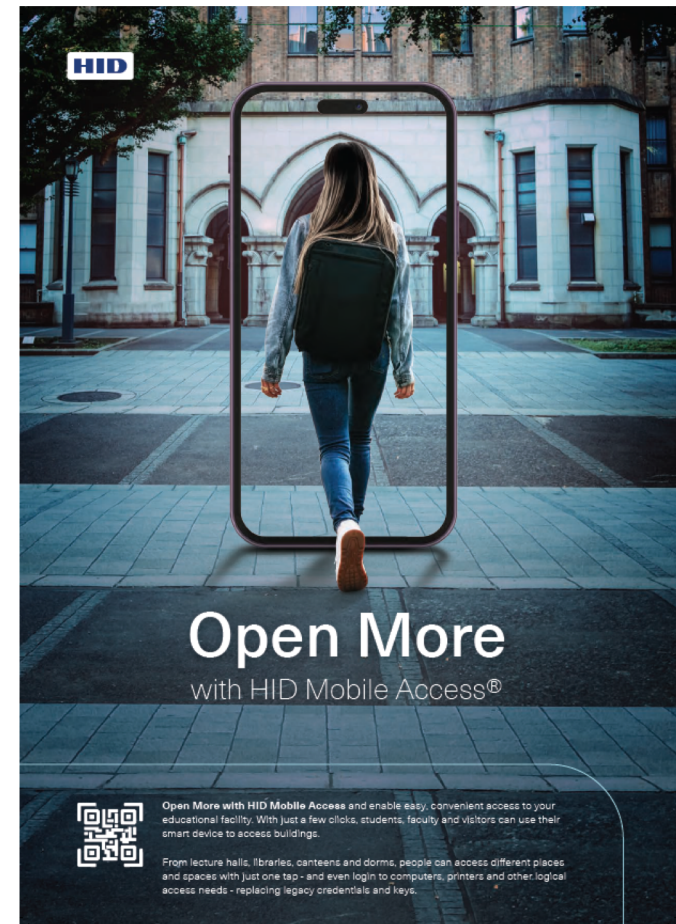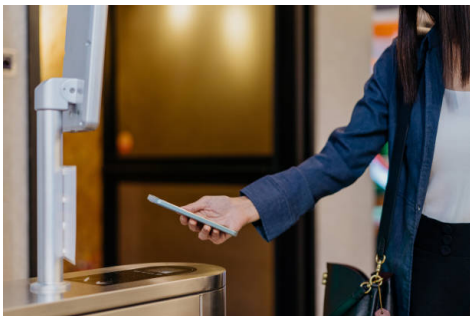
Use Cases for Mobile

Physical Access

Elevator

Smart Lockers

Vending

Turnstiles

Secure Print

EV Charging

Time - Attendance

Access everything from doors to data.

On your floor, in your building, or across the campus.

HID

Secured Printers
Protect sensitive documents from theft by ensuring they're only released when the user's employee badge in Apple Wallet is presented.

Elevators
Grant access to elevators and specific doors on a user-by-user basis without worrying about lost cards or PINs, thanks to technology that's already integrated with existing solutions.

Secure Areas
From access to conference rooms to VIP lounges, access can be provisioned granularly — so the right person, has the right access, at the right time.

Time and Attendance
Clocking in and out is convenient — and accurate — with the one device employees are unlikely to lose or lend their iPhone or Apple Watch.

Entry Doors
Unlock building doors with just an iPhone or Apple Watch, no key or app required. With power reserve enabled, staff can even get in without a charge.

Visitor or Employee Check-In
Seamlessly tap iPhone or Apple Watch against embedded readers to check employees and visitors into the facility

Turnstiles
Authorized employees flow through turnstiles without congesting lobbies, thanks to employee badge in Apple Wallet's fast read speed and simple user experience.

ps and ...stations
...omplicated passwords to log-in ...esks or while working remotely, ...n unlock access to laptops, ...s and workstations simply and

HID
Powering Trusted Identities

Part of ASSA ABLOY

Why Invest?

Is there truly an ROI?

Powering the trusted identities of
the world's people, places & things

HID

Alignment with campus initiatives e.g., Climate Action

Reduction of carbon footprint vs plastic cards, which can have a footprint of up to 100 grams CO_2 equivalent each.

Signo readers use Intelligent Power Mode to reduce building energy consumption.

Reader Environmental Product Declarations support BREEAM and LEED building ratings.

HID is a member of the US Green Building Council.

HID Mobile Access is an accredited WiredScore solution.

Sustainability is integrated in everything we do

Code of Conduct
Download sustainability report
Environmental targets

Science Based Targets initiative

On 16 November, 2022 ASSA ABLOY has received validation by the Science Based Targets initiative (SBTi) for the company's emission reduction targets.

We believe that science-based targets will be beneficial for our business on several levels. By setting a net-zero target in line with a 1.5°C future, we are making a critical contribution to limiting the worst impacts of climate change.

- We will halve Scope 1 and Scope 2 emissions in our own operations by 2030
- We will reduce the footprint of our wider value chain, including raw materials, logistics and products by 28% by 2030, thereby addressing our Scope 3 footprint
- We commit to net zero emissions across the whole value chain no later than 2050

SCIENCE BASED TARGETS
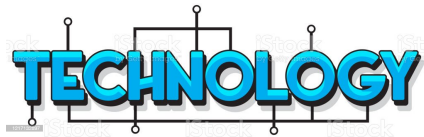
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Helping maximize program ROI

Save Money, Transform Operations, Align with End User Objectives, Reduce Risk

What does your institution value?

PORTRAY

REALITY – CREDENTIAL

HID Mobile Access™

Value it delivers to your campuses

Powering the trusted identities of
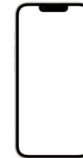the world's people, places & things

An extendible and open solution

Comprised of the components below, HID Mobile Access
enables virtual credentials on mobile devices that securely authenticates to readers
for physical access control and other extended access applications

| HID Origo Management Portal & API's | Mobile IDs | HID Mobile Access App HID Origo App & SDK | Readers |

Choice with an open and flexible solution
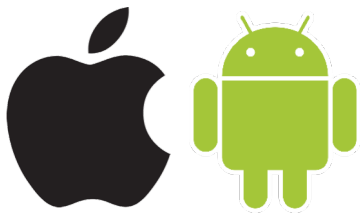
Platform Neutrality

Demonstrated solution design and device manufacturer relationships that offer long-term, cross-platform support

Technology Independence

HID Mobile Access is designed to offer customers and the market freedom to evolve with the rapidly changing mobile device industry

Open Channel

Non-proprietary solution with the broadest channel/distribution network and technology partnerships in the physical security industry

Mobile Communications Basics

Name	Frequency	Range
BLE (BlueTooth Low Energy)	2.4 GHz	Up to 30'
NFC (Near Field Communications)	13.56 MHz	Up to 4"

- All HID SE and Signo readers support NFC communications
- All Signo readers support BLE communication, and SE readers with a BLE expansion module

- All Wallet credentials are restricted to NFC communications

HID Mobile Access

Physical Reader Ecosystem

- **HID Signo™** readers have the ability to support Mobile IDs as well as conventional credentials, such as cards

  - Support HID Mobile Access via both NFC and Bluetooth
  - Enhanced Tap routine improves user performance
  - ECP / Enhanced Contact Polling – Future proof

- **HID iCLASS SE** and **multiCLASS SE** readers may already support Mobile Access or be upgradeable!
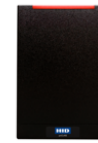
| Signo 20 | Signo 20K | Signo 40 | Signo 40K |

Reader Manager

| R10 | R15 | R40 | RK40 | RM40 | RMK40 | R90 |

HID Mobile Access

Extended Access Reader Solutions

- Support mobile credentials via Bluetooth and NFC

- Support Seos and DESFire alongside legacy technologies

- Include Apple's Enhanced Contactless Polling (ECP) application to support credentials in Apple Wallet

- Integrated by hundreds of non-PACS solution providers

OMNIKEY 5427CK Gen2
USB Desktop Reader

OMNIKEY 5127 Mini
Housed & Unhoused
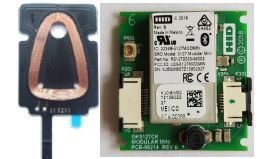
OMNIKEY 5127
Reader Core

iCLASS SE
Embedded Reader Module

iCLASS SE
Processor Chip

HID

Powering the trusted identities of
the world's people, places & things

What are options are available?

Mobile on Your Terms!

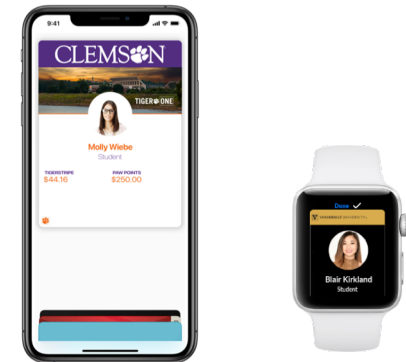# Capabilities & models to match campus objectives

HID Mobile Access

Off the shelf mobile access
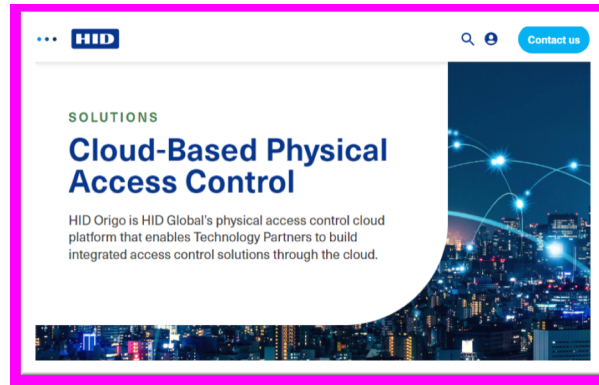
Partner and Custom Apps

Digital engagement Apps with integrated mobile access

Student ID in Apple Wallet

The premium mobile access experience

HID Origo Integration – Lenel OnGuard

- Supported 7.6 with update 2 to current versions.

- Support Mobile ID revocation from OG 8.1 & beyond

- Support multiple part numbers, multiple credential per user and Bulk Issuance
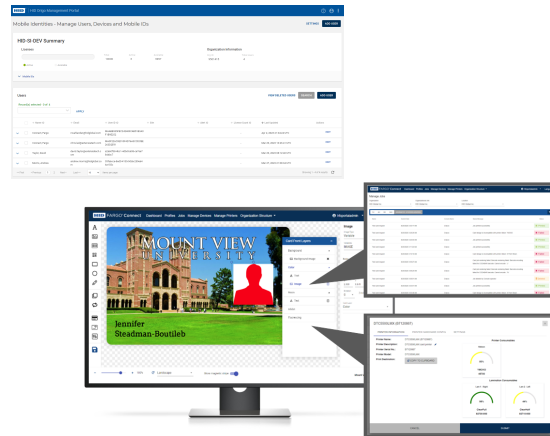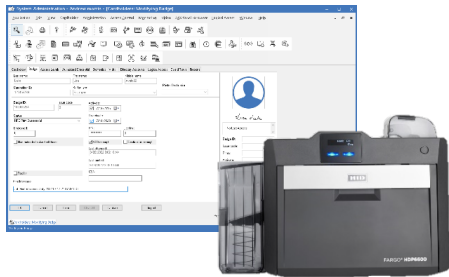
- Additional Info – Contact Lenel

Balancing an open campus with physical security
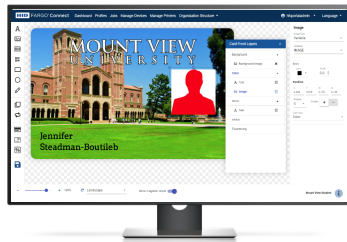
Win Back The Day with HID Integrated Solutions

Win Back The Day with HID FARGO Connect

Ease of Design → **Ease of Issuance** → **Cost Savings**

HID FARGO Connect– LenelS2 OnGuard

-Leverages OAAP
-Supported on 7.4, 7.5, 7.6, 8.0+

-Issue directly through OnGuard

No client software

Centralized visibility

Secure remote issuance

- Decoupled printers from workstation

Issue from anywhere

- Utilize printers at any location from any workstation or browser

Distributed inline personalization

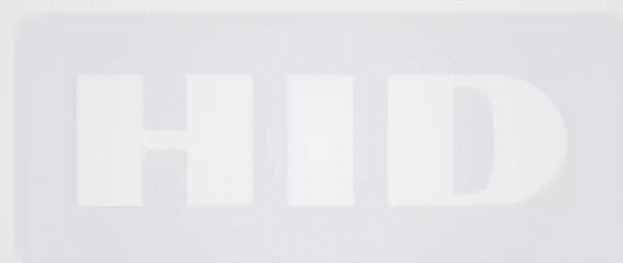- Read and write any smart card encoding. Including multi-technology

HID® FARGO® Connect™
Single Click Credential Issuance

1   **HID FARGO Connect (HFC) issues physical card and communicates to Origo Portal**

2   **HID Mobile Access invite sent to student or employee**

3   **Mobile Credential enrolled to one card or PACS solution by HFC**

App-Based Mobile Access

HID Introduces Technology Partner Program Dedicated to Companies Developing Mobile-Enabled Solutions

HID Origo™ Technology Partner Program is Designed to Help Technology Partners Meet Their Customers' Needs Faster and More Efficiently

Powering the Digital Campus Experience

Hundreds of the world's leading universities and companies trust Modo to power their student and employee app experiences on over 10 million devices in more than one hundred countries.


San Francisco State University
Stanislaus State
Cal Poly Humboldt.
NEW YORK INSTITUTE OF TECHNOLOGY
UND NORTH DAKOTA
UTA
FRESNO STATE. Discovery. Diversity. Distinction.
UCONN UNIVERSITY OF CONNECTICUT
FAMU
THE UNIVERSITY OF RHODE ISLAND
OHIO UNIVERSITY

NAU NORTHERN ARIZONA UNIVERSITY
CSUN.
UNIVERSITY OF MARYLAND
CSUDH CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS
University of Massachusetts Amherst
RISD

UNIVERSITY OF NOTRE DAME
TEXAS A&M
PRINCETON UNIVERSITY
MIT
PennState
LSU
Berkeley UNIVERSITY OF CALIFORNIA
The University of Akron
UMSL

Tufts UNIVERSITY
NYU
University of CINCINNATI
Cypress College
UH
UCF
DeAnza College
UF FLORIDA UNIVERSITY of
COWLEY COLLEGE

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MODO

Digital Access

Apple Wallet / Digital IDs / HID

Description	Students can add their digital student card to their Apple Wallet and use their iPhone and Apple Watch to access buildings on campus, purchase meals, enter campus recreation facilities, student events and more.
Outcomes	• No need to remember your physical card • Easily access buildings, check in for events, purchase meals, view balance • NAU example: 21k active Jackscard users

MODO
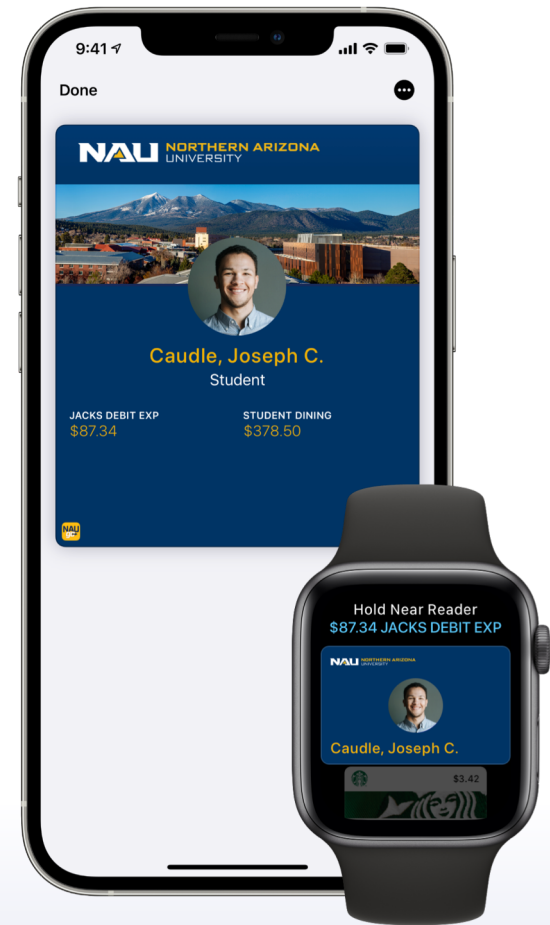
ColorID's Mobile Solution
- Mobile for All -

- Built from CardExchange Cloud & HID Mobile Access
- Integrated with HID Origo [API]
- Secure
  - Regardless of chosen modality (BLE/NFC), security is built-in.
  - Session-based keys, secured, signed, encrypted by AES 128/SHA-256
- CardExchange Cloud Suite
  - Issue digital or physical ID's
- Credential Issuance via Fargo Connect or other printer options.
- 'Stand' App
  - Mobile Credential Works in Background
  - Not required to open App
- Cards, Mobile or Both
- BLE on iOS/Android, NFC Android

University – App Based Mobile

HID Credentials in Wallet

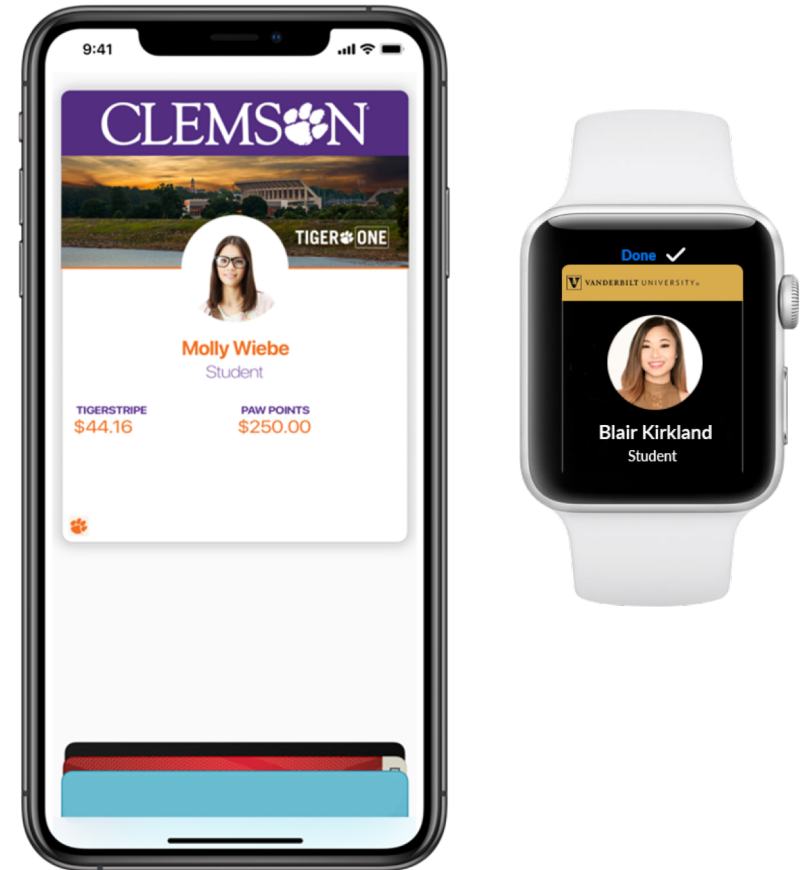Powering the trusted identities of
the world's people, places & things

Student ID in Apple Wallet

Overview

Users at participating institutions can add access cards to Apple Wallet on iPhone and Apple Watch

- **User Convenience** - Uses Near Field Communication (NFC) technology
- **Hardware Security** - Leverages same secure element as payment and transit cards in Apple Pay

Student ID in Apple Wallet

Power Reserve Mode

When low on battery, iPhone will enter Power Reserve mode. On the latest iPhone models, the Pass may still be used for up to five hours in Power Reserve mode when the battery needs to be charged.
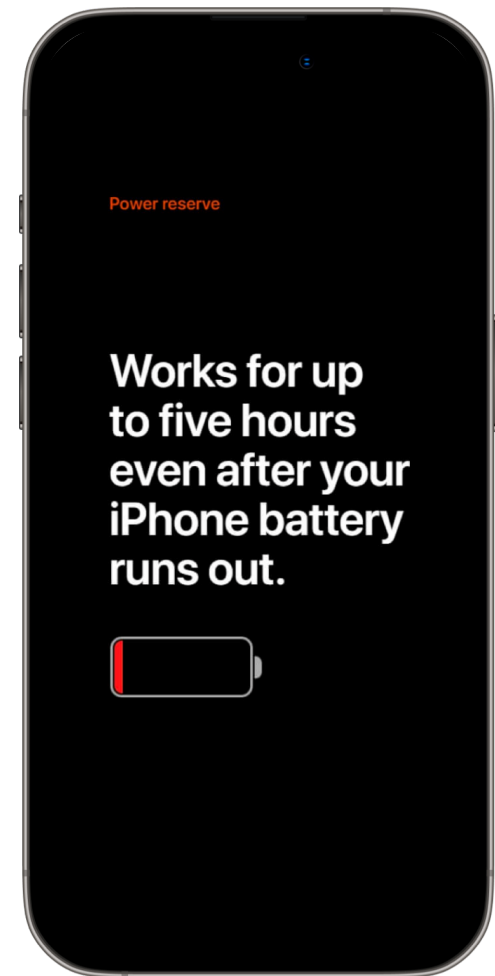
Student ID in Apple Wallet

Self-Service with Lost/Stolen Devices

HID credentials work seamlessly with the Find My ecosystem, allowing users to easily suspend the use of the credential, or completely remove the credential from the device, even when the device is offline.

Student ID in Apple Wallet
User-Driven, App-Based Provisioning

A user, who is eligible for mobile access, downloads a mobile app and authenticates in-app using their organization's Single Sign On and Multi-Factor Authentication platform. After successful authentication, a pass (digital credential) is instantly and securely delivered to their device, activated with all proper entitlements across the organization.

- Requires HID Origo API/SDK integration

- Requires mobile app integration with SSO/MFA

- Requires entitlements systems (e.g., PACS head end) integration

9:41

Mobile ID

Add your TigerOne card to Apple wallet

Available for
iPhone and Watch

Student ID in Apple Wallet

100% Use Case Requirement

To ensure a remarkable user experience, Apple requires that all reader applications which support the plastic card must also support mobile credentials in Apple Wallet*
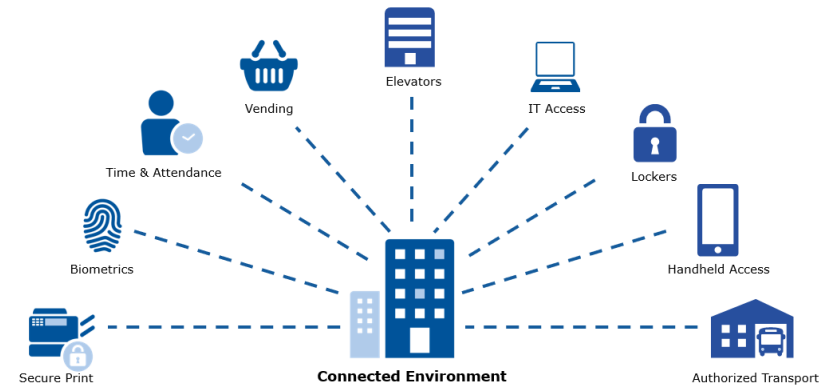
*Secure sector reads only. In accordance with privacy best practice, Apple requires credentials use random (not static) ISO14443A UID (aka CSN). Therefore, CSN or insecure, unauthenticated reads are not supported.

Vending

Elevators

IT Access

Time & Attendance

Biometrics

Lockers

Handheld Access

Secure Print

Connected Environment

Authorized Transport

Your Commodore Card is now available on your iPhone & Apple Watch

Student ID in Apple Wallet

OneCard Providers

cbord®

itc SYSTEMS

atrium

touchnet®
A Global Payments Company

TRANSACT

Recap

APP BASED MOBILE ACCESS

- BLE – IOS/ANDROID
- NFC – ANDROID ONLY
- *NFC - IOS NOT AN OPTION*
- NETWORK OF PARTNERS
  - Lenel OEM
  - HID Fargo Connect
  - Origo Technology Partners

WALLET BASED MOBILE ACCESS

- NFC ONLY
- ONECARD PROVIDERS
  - Atrium
  - CBORD
  - ITC Systems
  - Touchnet
  - Transact

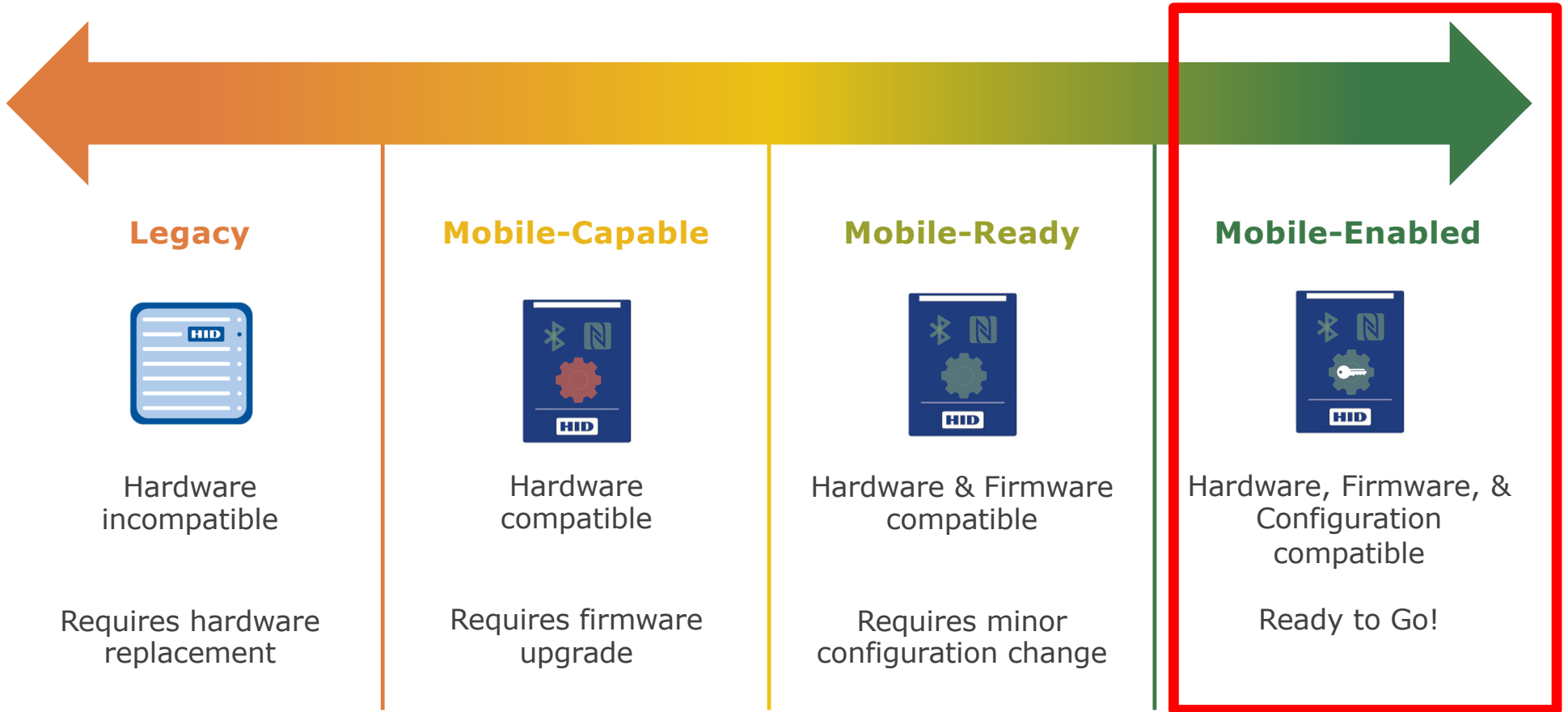# Mobile Onboarding - MOBKey

Link to Self On Boarding: HID Origo Management Portal
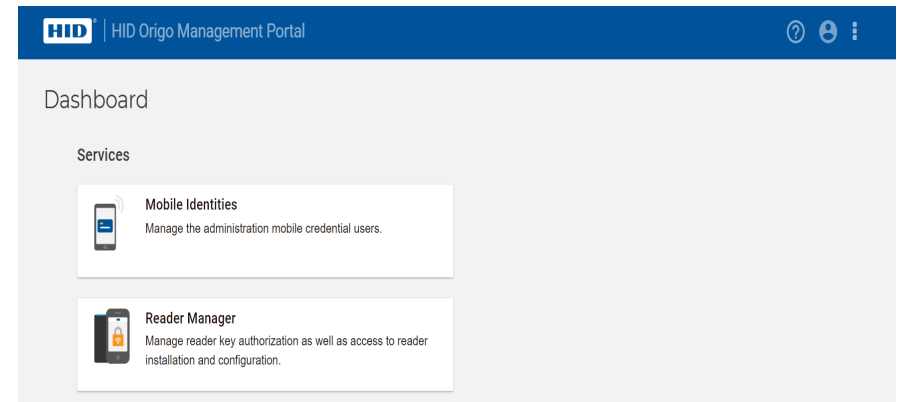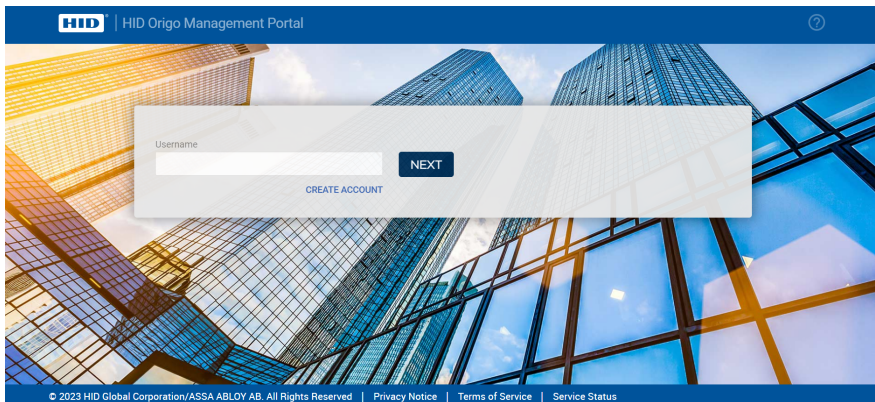
Evaluating Your Reader Terminals

Legacy

Hardware incompatible

Requires hardware replacement

Mobile-Capable

Hardware compatible

Requires firmware upgrade

Mobile-Ready

Hardware & Firmware compatible

Requires minor configuration change

Mobile-Enabled

Hardware, Firmware, & Configuration compatible

Ready to Go!

Recommendations & Next Steps

Collaboration on:

Use Case Assessment

Stakeholder Meetings

Business Case

Partner Teamwork

With the objective of:

Replacing Legacy Technologies

Implementing a Mobile Adoption Roadmap

Identifying a Champion

Leadership Buy-In

To deliver an exceptional campus experience, aligned with strategic goals

HID Powering Trusted Identities

Thank You!

Part of ASSA ABLOY