

# Bringing Verified Identity and Passwordless to the Masses



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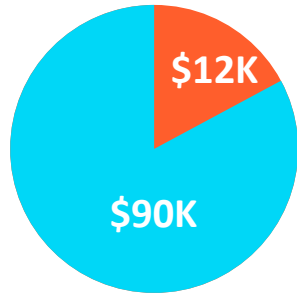
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Shanley**

**Principal – AWS Identity**  
**Amazon Web Services**

# Agenda

- The Challenge of Customer Identity
- Redefining Modern Identity
- Passwordless: Landscape and Adoption Issues
- Recommendations

# Customer Identity Challenges

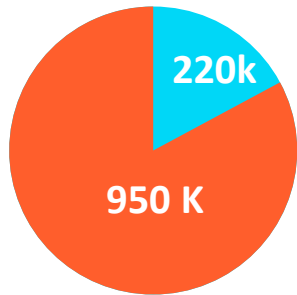


Average Cost per Incident

Ransomware and Business Email Compromise

**Banks, other lenders lost ~\$20 bn to SID fraud in 2022**

Over 3-fold increase from 2016



Total Number of Incidents

ACCOUNT TAKEOVER FRAUD PUNISHES CONSUMERS, MERCHANTS

**ATO Fraud costs consumers & merchants ~\$11.4 bN/yr**

ATO fraud attempts up 4-fold since 2020

■ Synthetic Identity Fraud ■ Account Takeover Fraud

# Digital Identity Has Recently Been Redefined

Three tools that can fix UX challenges and reduce fraud

**Document  
Scanning &  
Verification**

**Digital Wallets**

**Passwordless**

# Identity Onboarding & Auth Standards

## ONBOARDING & KYC

### NIST 800-63-3 IAL

Prove who someone is

### ESTABLISHES IDENTITY

How do you remotely  
PROOF and VERIFY someone?

- 2 forms of identity documentation
- Matched to REAL biometrics
- Data & biometric triangulation enhance confidence



**Identity-Based  
Authentication**

## AUTHENTICATION

### NIST 800-63-3 AAL & FIDO

Grant them (and only them)  
to your systems

### ENFORCES AUTHENTICATION

How do you remotely  
AUTHENTICATE someone?

- A private key, given to the user
- Matched to REAL Biometrics



#identiverse

# The Current State: Legacy 'Identity' Onboarding

## IDENTITY ONBOARDING



One-time or infrequent  
'Proof' of a user's  
identity.

Data is painfully entered manually

### YOUR PERSONAL INFORMATION

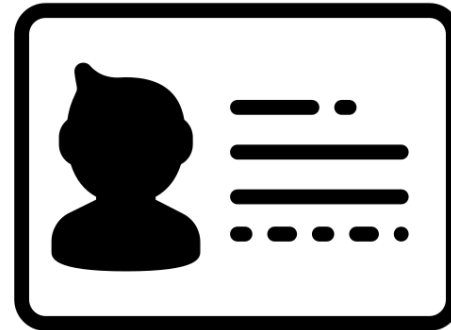
First Name	Last Name	
Date of Birth (MM/DD/YYYY)	Social Security Number or ITIN	
Address		
<input type="text"/>		
Apt./Ste./Other (Optional)		
City	State <input type="text"/>	ZIP Code
Email	Mobile Phone Number	
ID Type	ID Number	
State Issued		
Select State <input type="text"/>		
Citizenship		
United States <input type="text"/>		

This data can be bought for pennies

# Document Scanning

This tool isn't just for KYC

Billions of Users have a ***phone*** and a license. Use them!





# Demo – License Scanning for a better UX



## Order Placed

Thank you for choosing us

[Continue Shopping](#)



# The Current State: 'Hope-Based' Authentication

## USER AUTHENTICATION



Ask a user for secrets,  
passwords &  
secondary factors



Password



**CANNOT** be linked to the onboarded identity

Can be intercepted, coerced or shared

A **FRUSTRATING** user experience

# The importance of Passwordless – by the numbers

**100%** of respondents recognized the value of going passwordless

**99%** had not yet implemented passwordless.

**83%** admit their organization is unsure how to implement

**33%** say a lack of experience is a barrier to adoption.

**>50%** “By 2025, more than 50% of the workforce and  
**>20%** more than 20% of customer authentication  
transactions will be passwordless.”<sup>2</sup>

# Passwordless for the masses

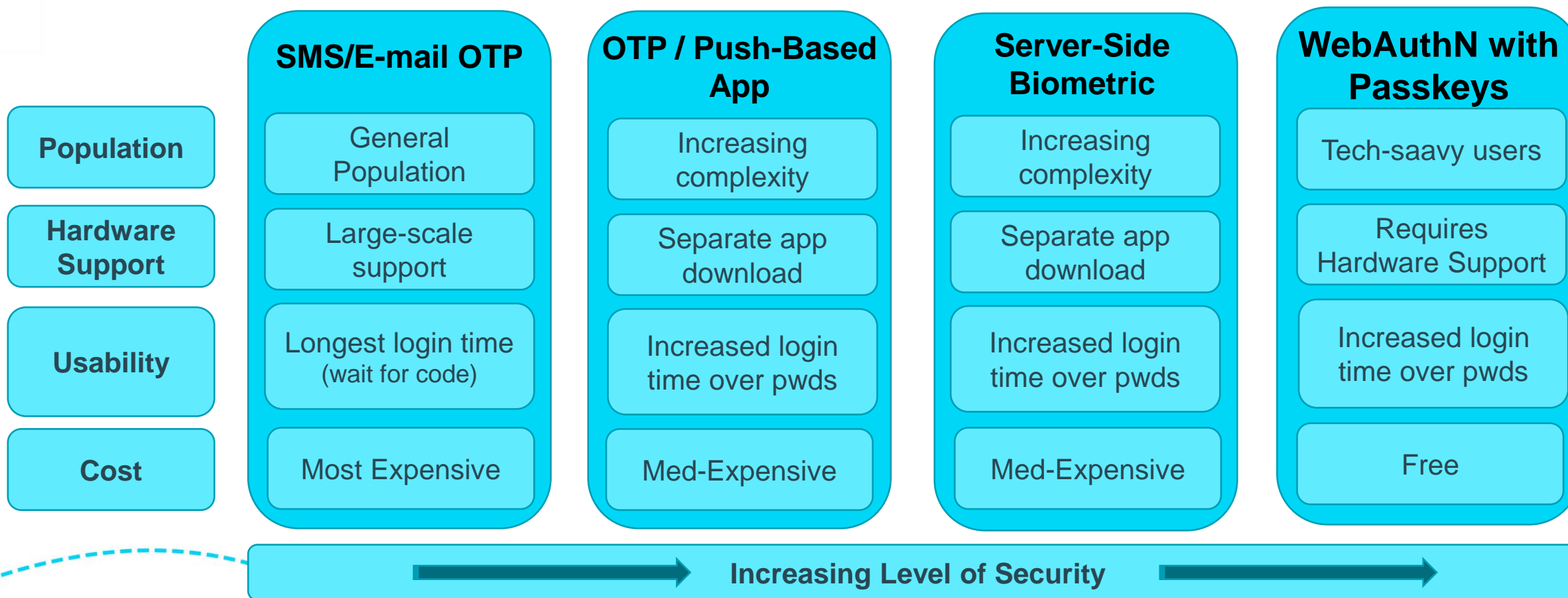
Breaking down the types of passwordless-authentication

## What is Passwordless?

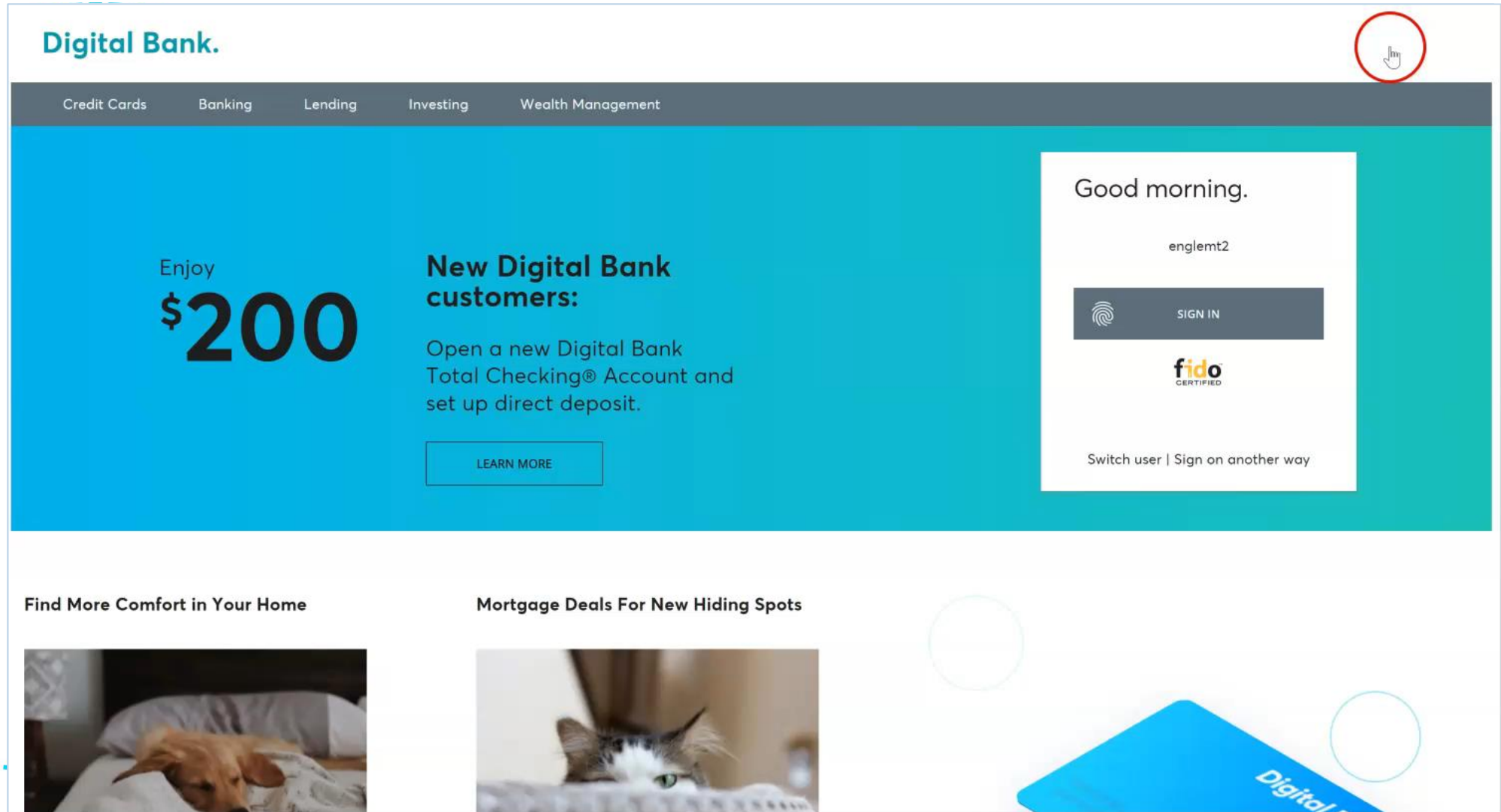
- **WebAuthN: TouchID, FaceID** [ Device-Based ]
- **SMS/Email-OTP/Magic Link** [ Account-Based ]
- **Push-based Authentication** [ App-Based ]
- **Server-side Biometric** [ Account/App-Based ]

# Passwordless for the masses

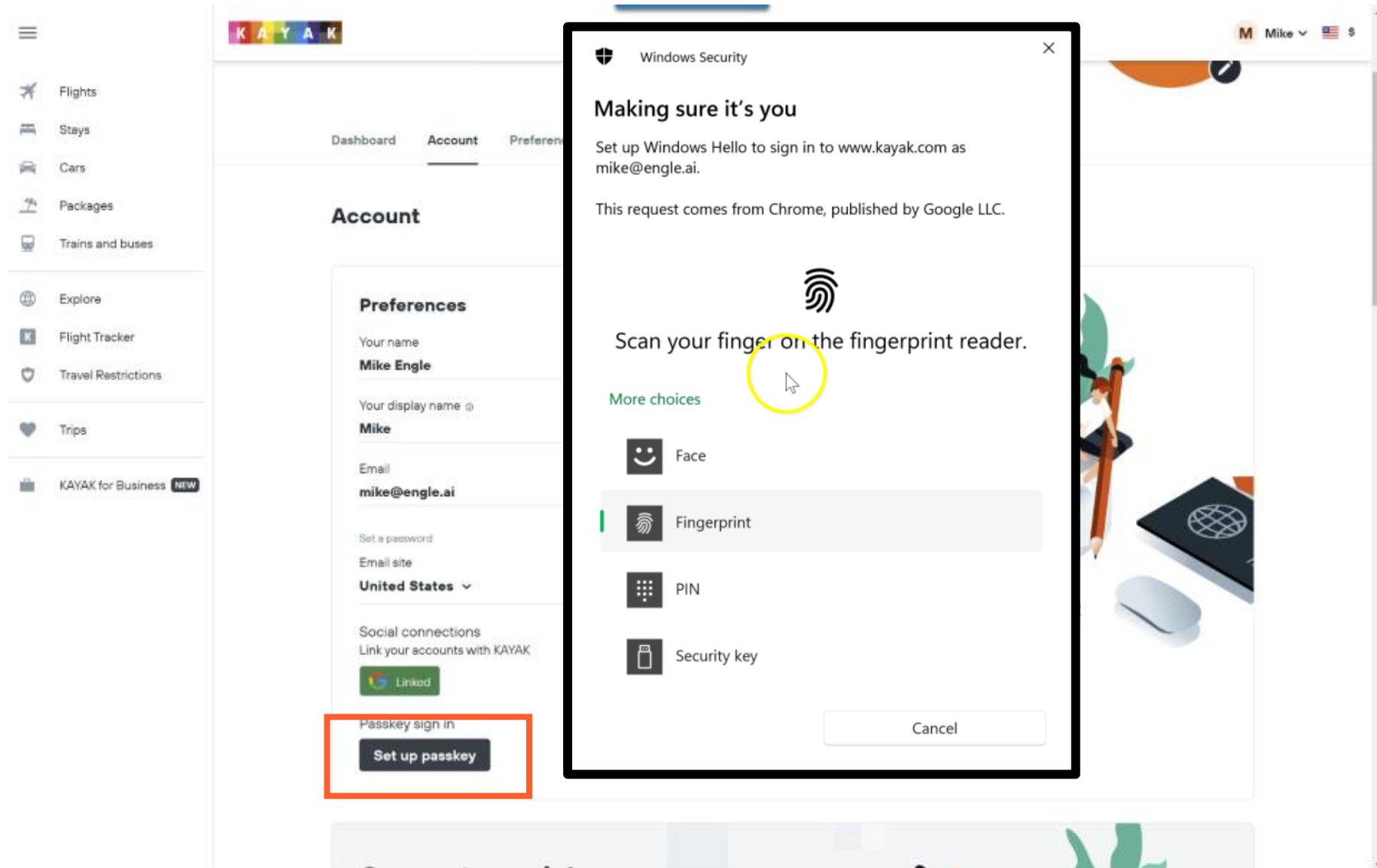
Depends on business requirements and user populations



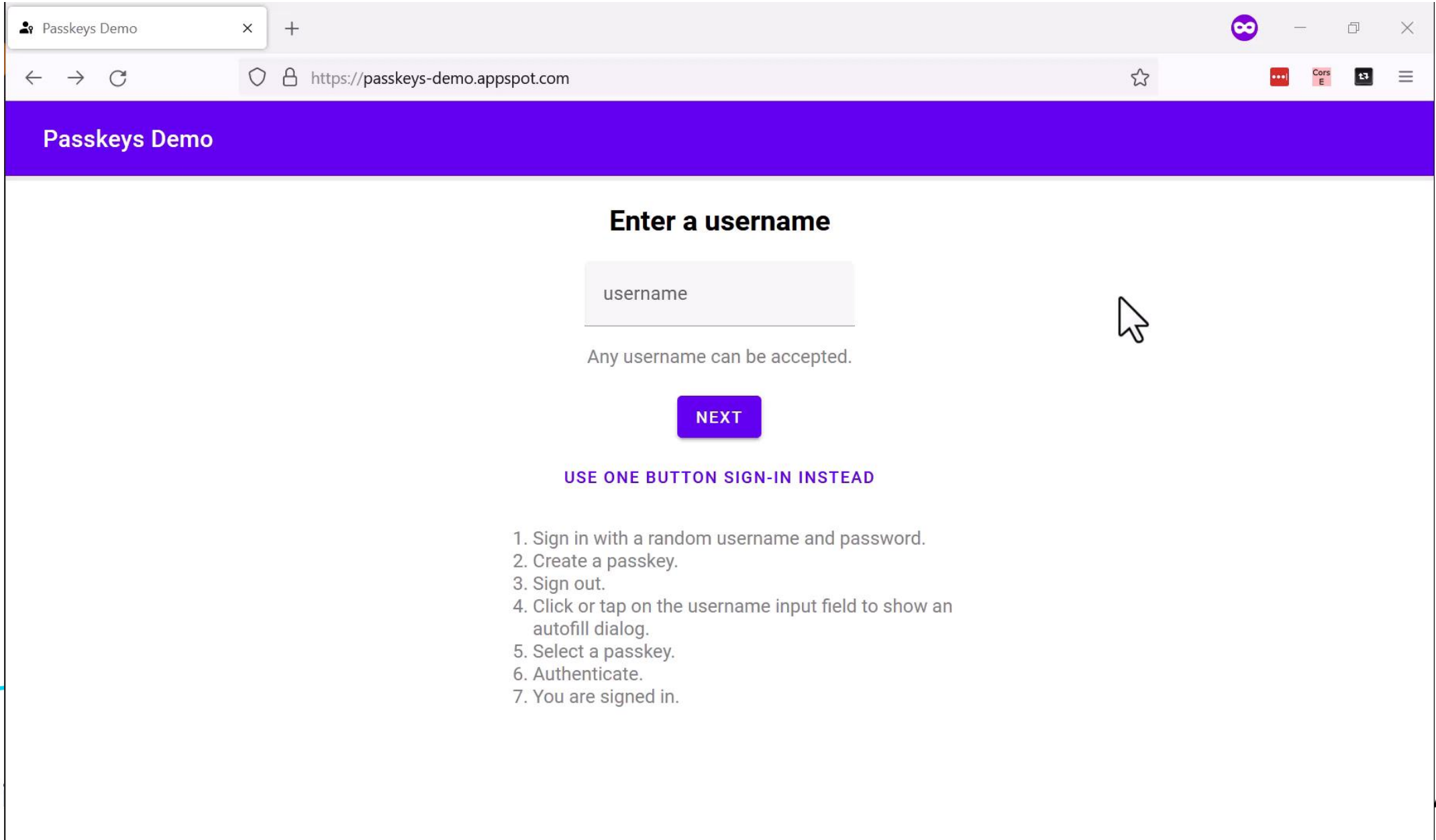
# Demo – FIDO Passwordless Registration and AuthN



# Getting started with little risk:



# How things can go wrong...



The screenshot shows a web browser window with the title 'Passkeys Demo' and the URL 'https://passkeys-demo.appspot.com'. The page has a purple header bar with the text 'Passkeys Demo'. The main content area is white and contains the following elements:

- A heading 'Enter a username'.
- A text input field with the placeholder text 'username'.
- A message 'Any username can be accepted.'
- A purple button labeled 'NEXT'.
- A heading 'USE ONE BUTTON SIGN-IN INSTEAD'.
- A list of 7 steps:

1. Sign in with a random username and password.
2. Create a passkey.
3. Sign out.
4. Click or tap on the username input field to show an autofill dialog.
5. Select a passkey.
6. Authenticate.
7. You are signed in.

A mouse cursor is pointing at the 'NEXT' button.





# How things can go wrong...

## Chrome's passkey support summary

Operating systems	Android	macOS	iOS/iPadOS	Windows	Linux
Local user verification	✓	✓	✓	✓	✗
Passkey sync	✓	🕒 <sup>1</sup>	✓ <sup>1</sup>	✗ <sup>3</sup>	✗
Autofill	✓	✓	✓	✓ <sup>2</sup>	✗
Can sign in with a phone	🕒	✓	✓	✓	✓

✓ : Supported, 🕒 : Planned, ✗ : No plans

<sup>1</sup>: Syncs with iCloud Keychain <sup>2</sup>: Requires Windows 11 22H2 <sup>3</sup>: Depends on Windows Hello

**Source:** <https://developers.google.com/identity/passkeys/supported-environments>

# How things can go wrong...

## macOS

Chrome on macOS stores passkeys in a local profile and doesn't synchronize them to other devices as of May 2023. Passkeys from iCloud Keychain aren't yet available in Chrome on macOS.

When a user tries to sign in to a website for the first time on Chrome on macOS, they should scan a QR code with another device that already has a passkey. After that, they can register a passkey on the local macOS device for future use there.

**Source:** <https://developers.google.com/identity/passkeys/supported-environments>

# Passwordless Recommendations

- Get Started!
- Choose one or more Passwordless technologies that will resonate with your users [not one-size fits all]
- Give options, but provide an orchestrated experience with guardrails
- Allocate time for “user training” [depends on login frequency]
- Deprecate older methods over time
- Success is not defined as a 100% migration

Success is “Better than Before”

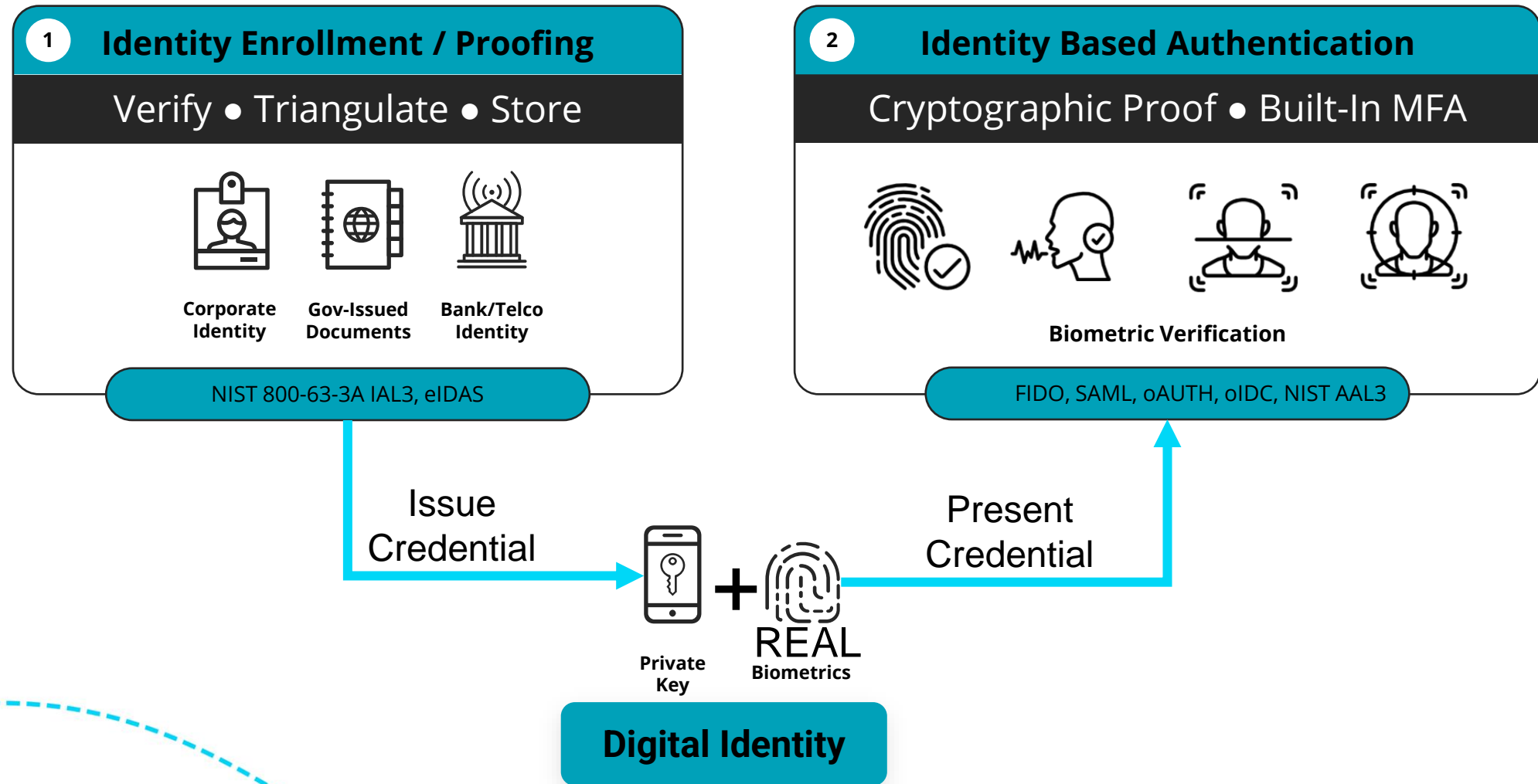
# What about Digital Wallets?

What is a digital wallet anyway? And why do we need them?

**A digital wallet is the same as a physical or real wallet.**

- ✓ You can use it for payments (ApplePay, GooglePay)
- ✓ You can store cards on it (Loyalty, Payment, Gift)
- ✓ Distributed Identity vs. Verifiable Identity
- ✓ Next Frontier: You can store identity in a wallet
  - State / Federal Identity
  - Bank Identity
  - Reach out to your own wallet to fulfill a credential request

# Wallet-enabling technologies





# THANK YOU!