

THE PASSKEY REALITY CHECK

Addressing 2025's Biggest Misconceptions

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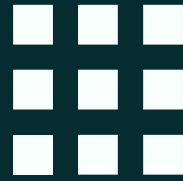
Principal Engineer
Cisco

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The Passkey Ecosystem



Users



Browsers
& Apps



Devices
& OSes

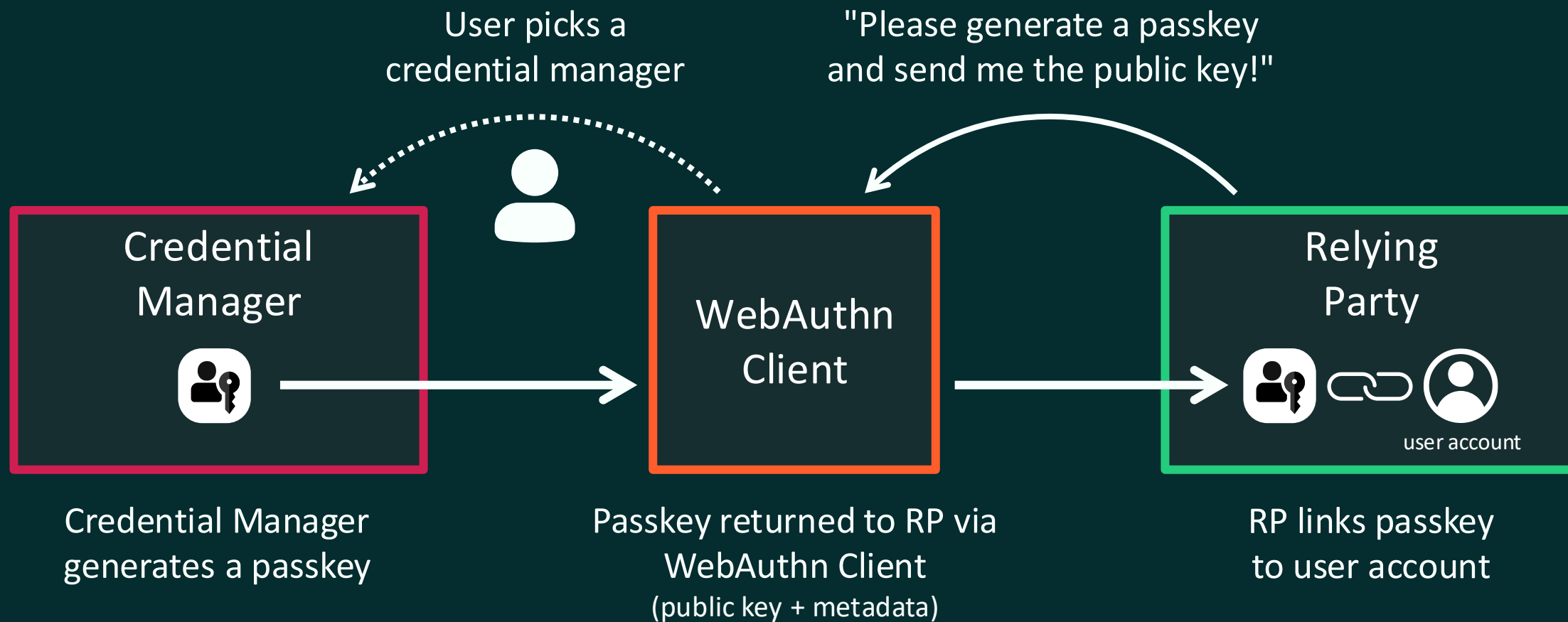


Credential Managers
(Authenticators)



Relying
Parties

Bring Your Own Key



Misconceptions



“

*Passkeys are a way for
Big Tech to lock users
into their ecosystem.*

”

MISCONCEPTION

“Passkeys are a way for Big Tech to lock users into their ecosystem.”

REALITY

The passkey ecosystem is open, and users can use whichever Credential Manager they wish!

Devices need to come with a Credential Manager out of the box.



“

My passkeys will get stuck on my iPhone if I switch to Pixel!

”

MISCONCEPTION

“My passkeys will get stuck on my iPhone if I switch to Pixel!”

REALITY

Credential Exchange allows a user to **securely** and **reliably** move passkeys (and other credentials) between Credential Managers.



“

*Passkeys don't protect
against remote attacks.*

”

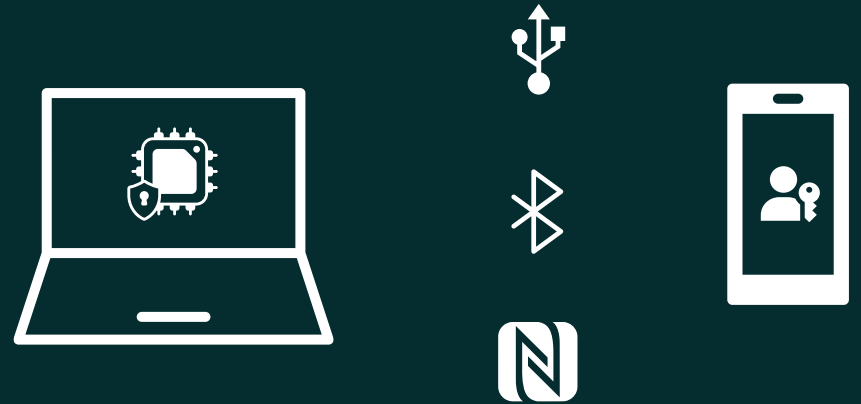
MISCONCEPTION

“Passkeys don’t protect against remote attacks.”

REALITY

FIDO2 mandates user control of the authentication device. Typically, this is the same as the access device.

FIDO ***Cross-Device Authentication*** allows a **nearby** device to be used for authentication but still enforces proximity.



“

*The ‘QR code flow’ is
phishable!*

”

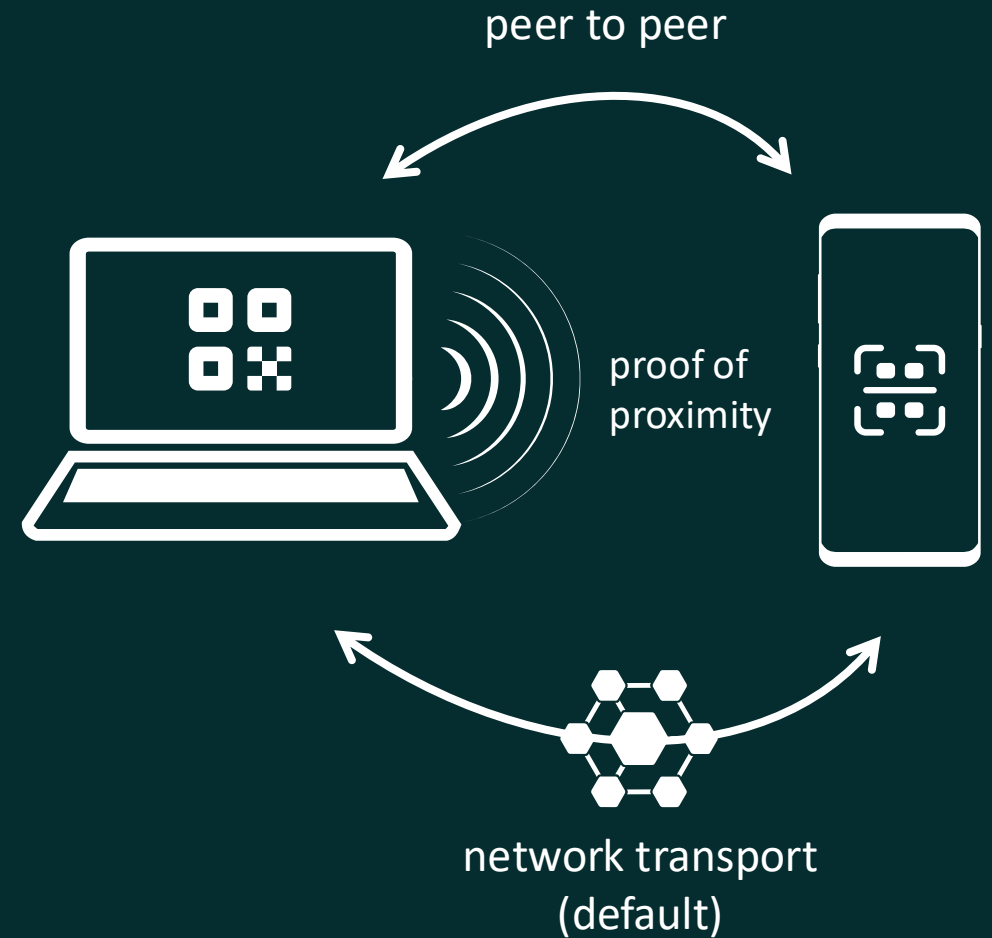
MISCONCEPTION

“The ‘QR code flow’ is phishable!”

REALITY

Cross-Device Authentication can use a QR code to bootstrap a secure connection between two devices.

Proof of proximity is required for the two devices to begin communicating either over the network or peer to peer.



“

*Passkeys are not suitable
for workforce use.*

”

MISCONCEPTION

“Passkeys are not suitable for workforce use.”

REALITY

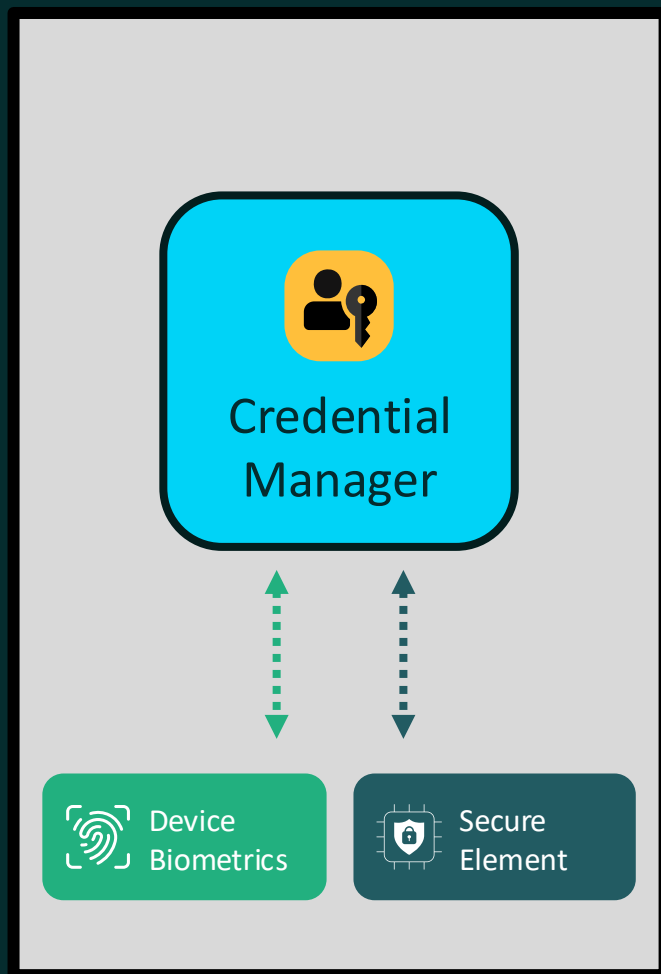
There are more options there ever before for workforce usage!

Device-Bound Passkeys on Security Keys



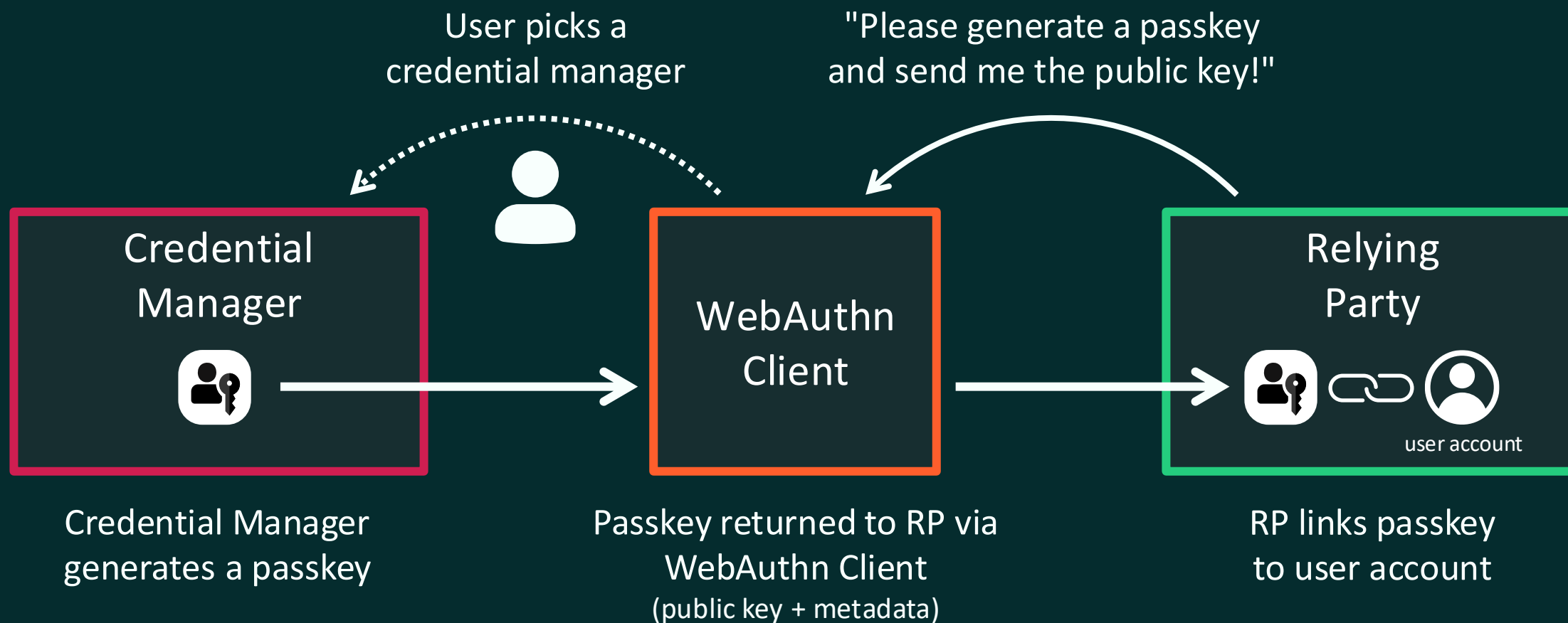
- Attested, device-bound passkeys
- Usable on multiple devices via USB and/or NFC
- Many form factors to choose from
- Great for both bootstrapping and day to day sign in
- “Gold standard”

Device-Bound Passkeys in Managed Credential Managers



- Attested, device-bound passkeys
- Private key protected by the device's secure element
- User verification can leverage (or even require) device biometrics
- In-band (WebAuthn) or out-of-band enrollment (CM to RP)

Bring Your Own Key



Provide ~~Bring~~ Your Own Key

Credential Manager
generates a passkey
(user or admin initiated)



Credential Manager
sends passkey to
Relying Party

(public key + metadata)



RP links passkey
to user account

Synced Passkeys in Workforce

For users with access to only their own data

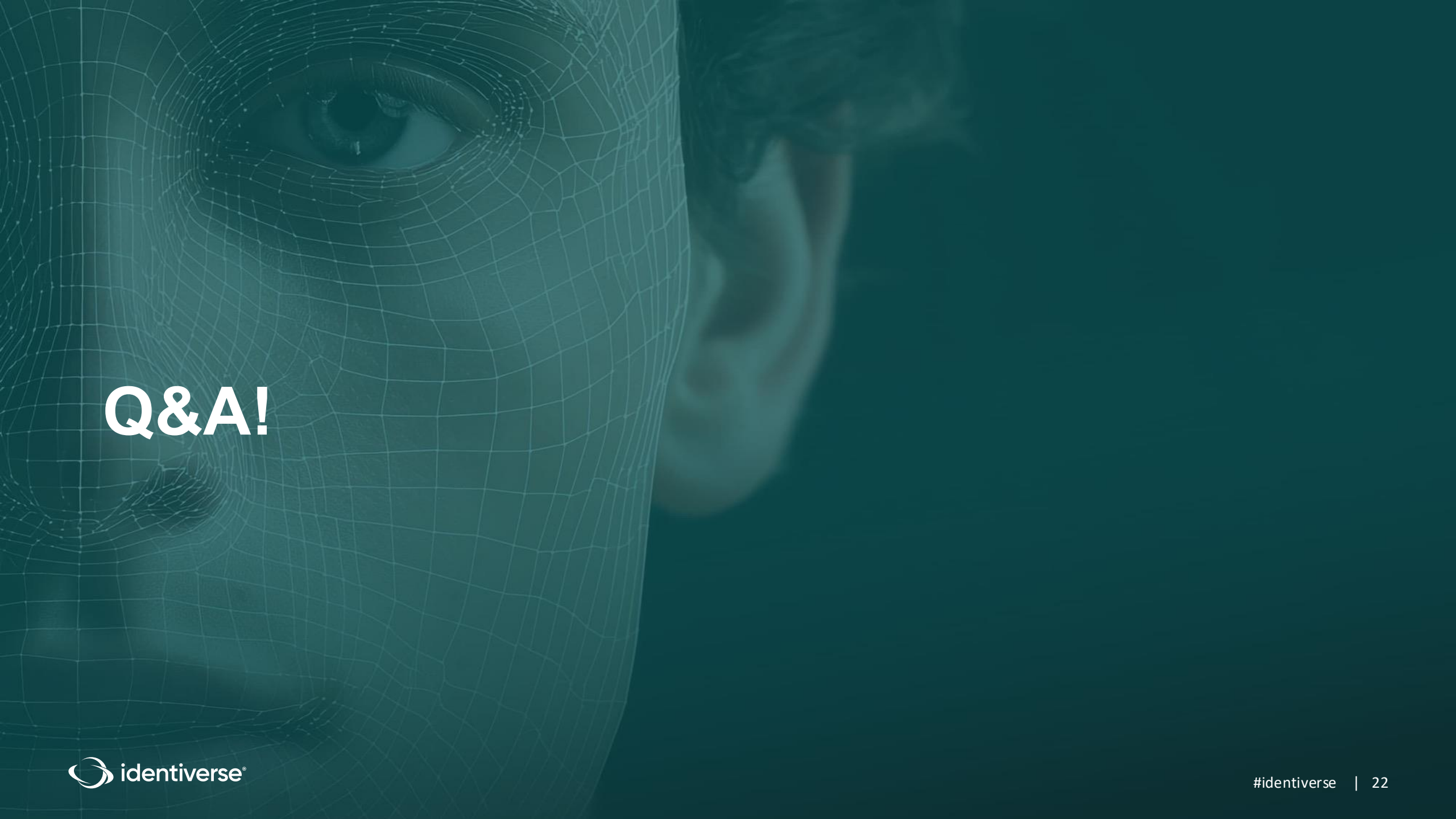
(*timecards, pay checks, class schedules*)

For all users in scenarios where passwords are still in use

(*s/password/passkey*)

For a recovery factor

(*synced passkey + additional factor*)



Q&A!

Thank You!