Microsoft Security

Decentralized Identity

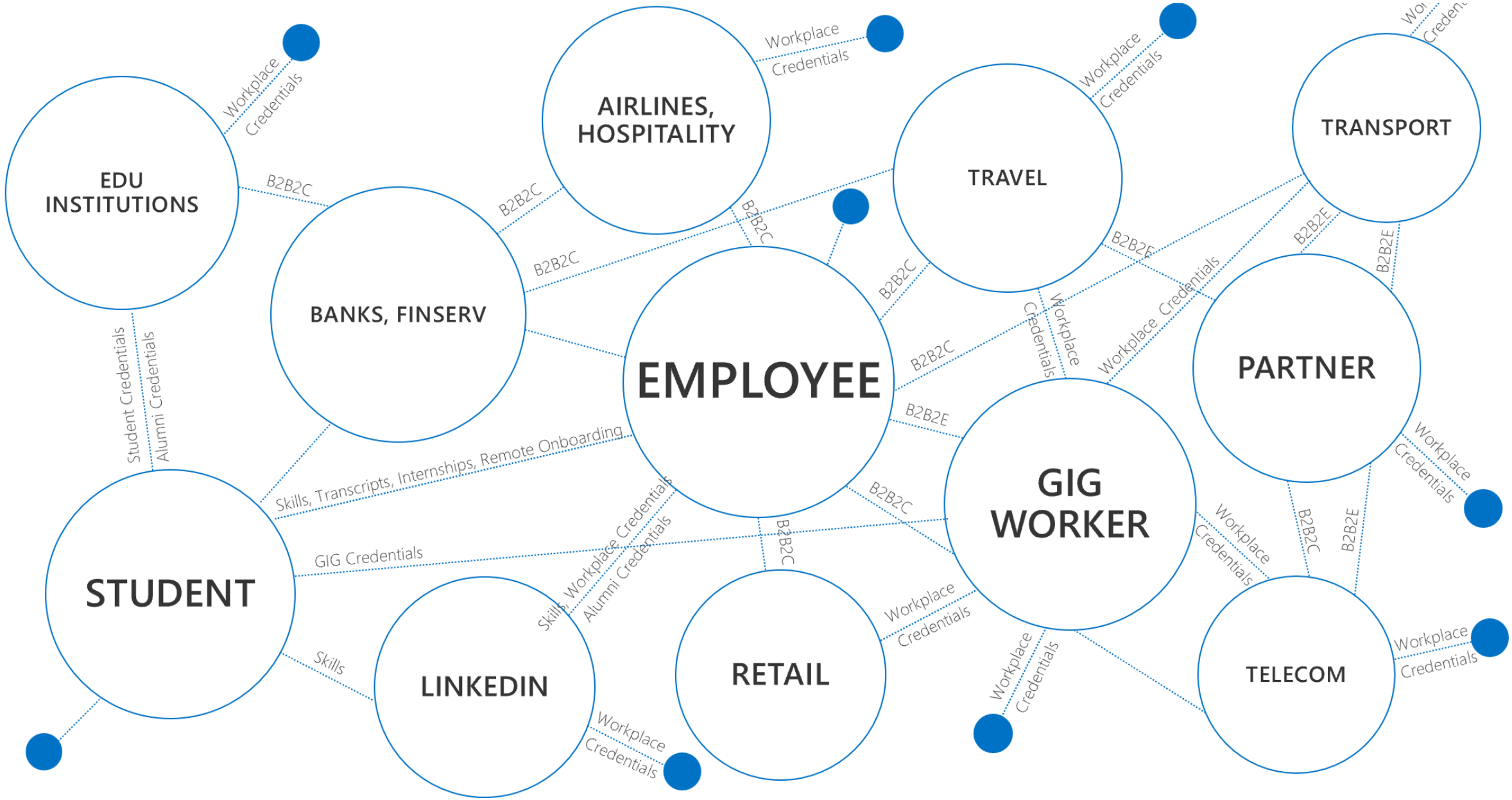
at Microsoft

2018: Incubation hypothesis

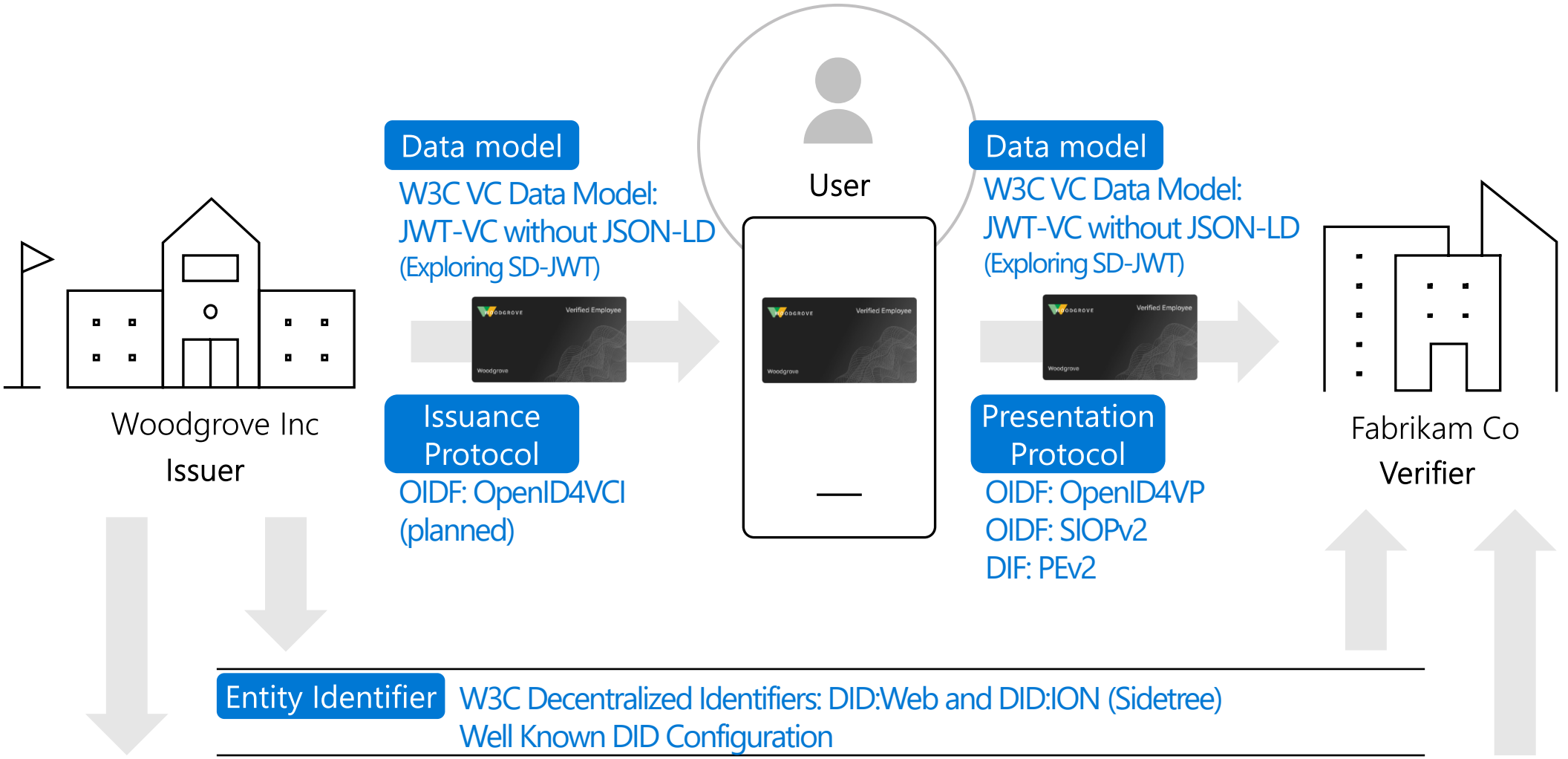
2022: First Release!

> Each of us needs digital identity we own and control, one which securely and privately stores all elements of our digital identity.
>
> This self-owned identity must seamlessly integrate into our lives and give us complete control over how our identity data is accessed and used.

Credentials to power the trust fabric for the internet



Standards used



92%

of organizations perform identity verification today

Onboarding for employees, contractors, customers

Access to high-value apps and resources

Self-service account recovery

Source Microsoft, survey of 3000 US-based companies, greater than 500 users

82% of organizations wish there was a better way

More protection against breaches
Credentials verified by reliable parties
Meeting regulatory requirements by default

Safer

No custom integration
No need to store users PII
No wait times for id verification

Faster

Lower cost
As easy using digital cards
Verify once, use everywhere

Easier

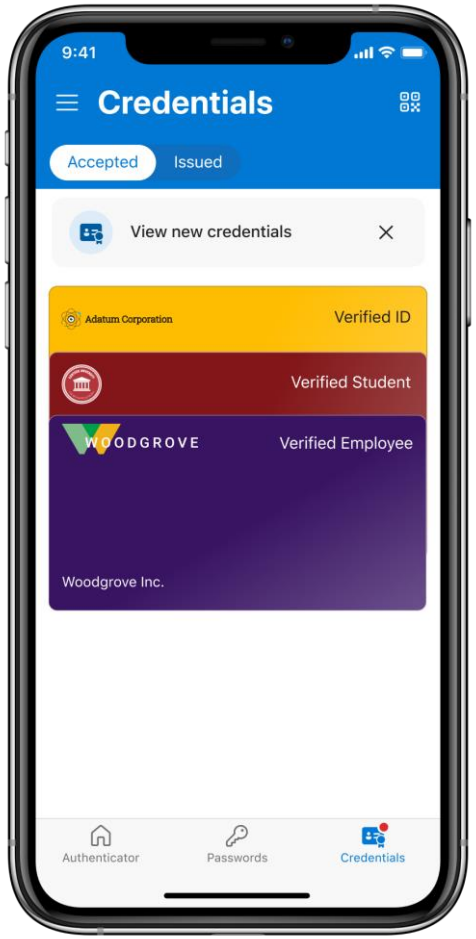
Source Microsoft, survey of 3000 US-based companies, greater than 500 users (2021)


Microsoft Entra
Verified ID

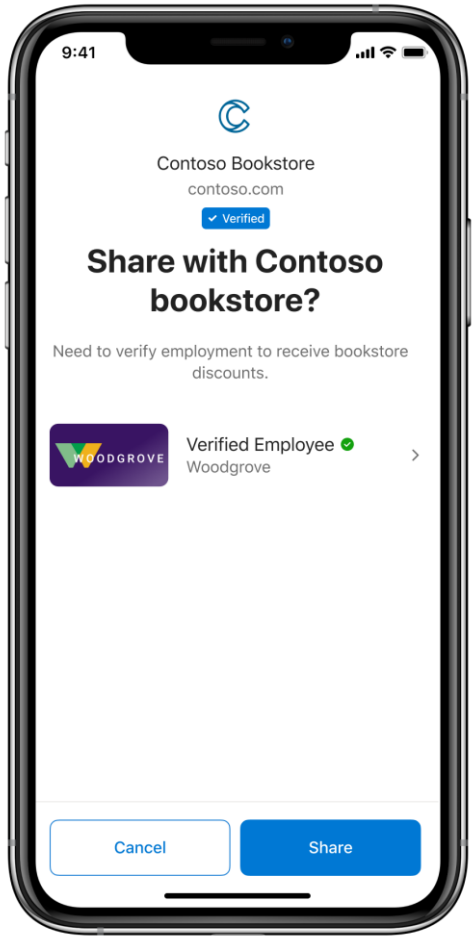
Demonstration:
ID verification based on open standards

http://aka.ms/diddemo

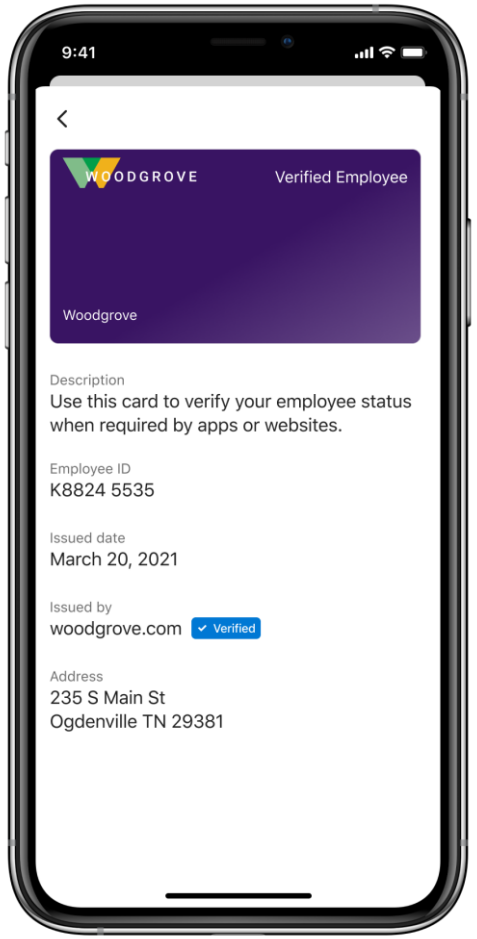
Entra Verified ID: a better way to verify



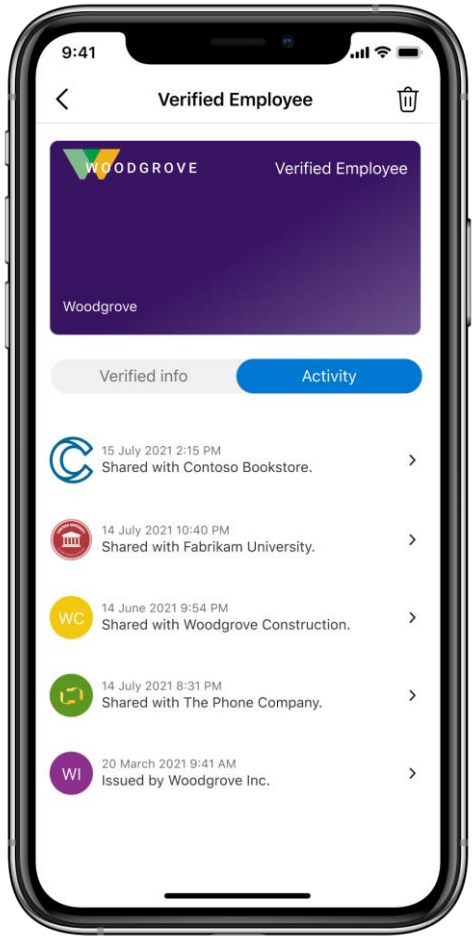
Easy to use and secure



Verifiable

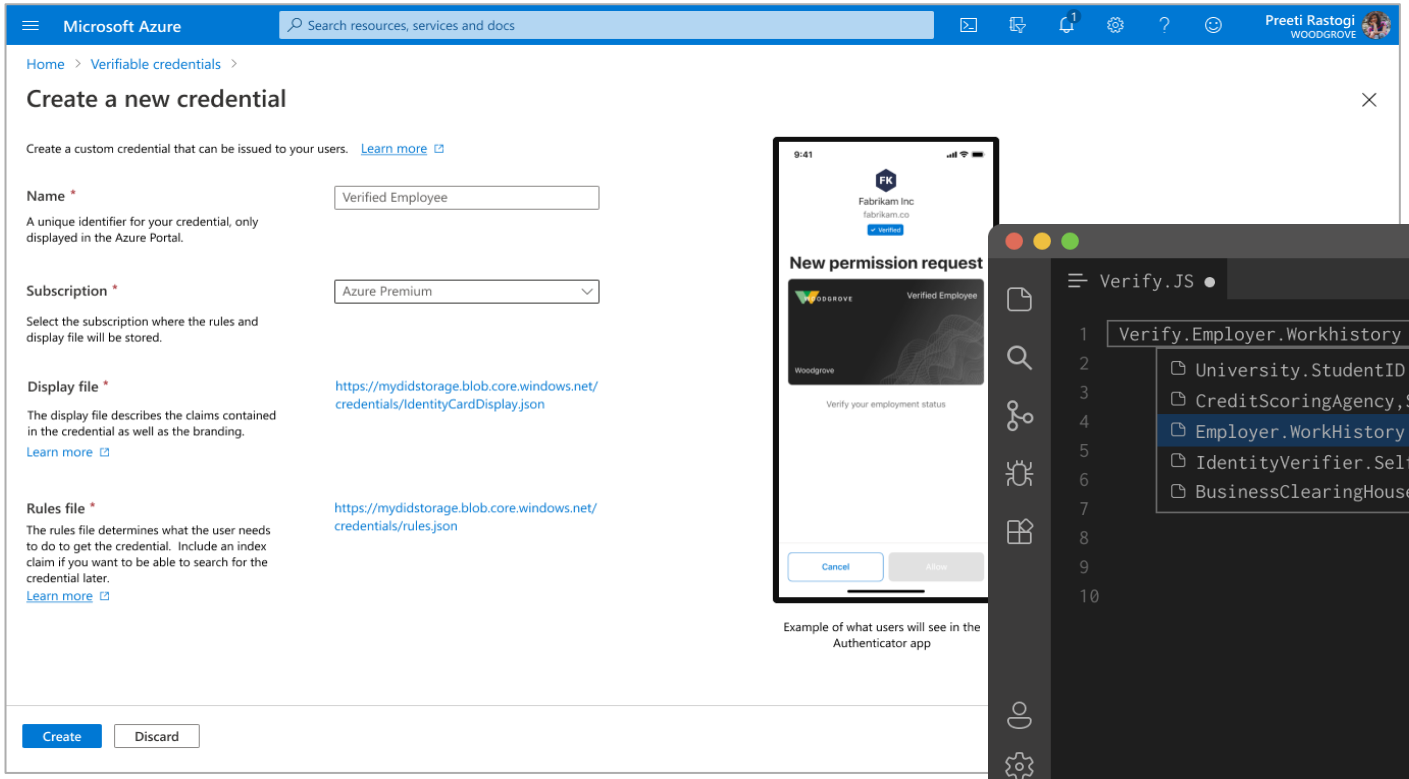


Transparent

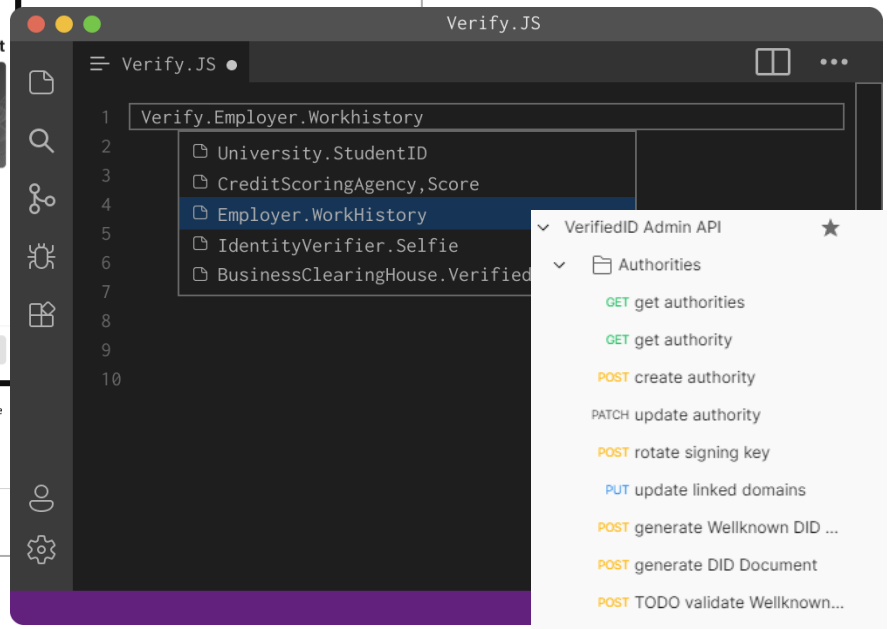


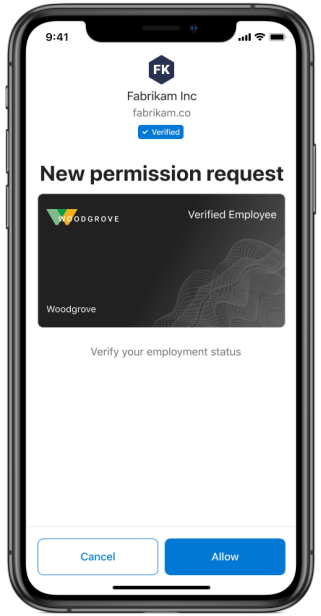
Convenient

Decentralized Identity Platform by Microsoft



Example of what users will see in the Authenticator app





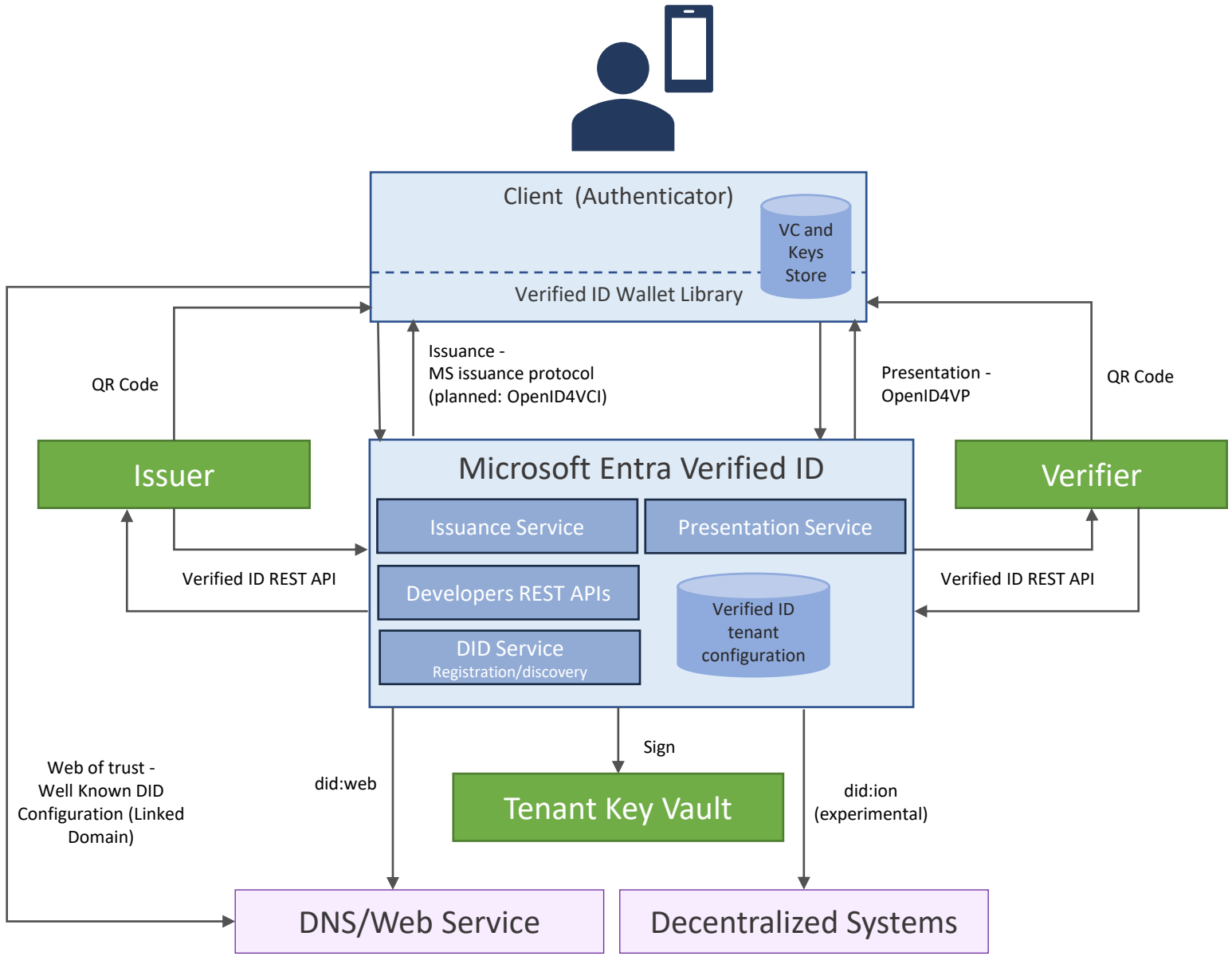
Issuer interface
(Entra Verified ID)

Developer tools
(SDK + API)

End user wallet
(Microsoft Authenticator)

Architecture goals:

1. Decentralized system to request and verify credentials at scale
2. Ensure interoperability as standards and partnerships evolve
3. Simple APIs to ensure consistent interactions that abstract standards and cryptography



Verified ID

Enable more secure interactions while respecting privacy with an industry-leading global platform.

Fast remote onboarding

Validate identity information for trustworthy self-service enrollment and reduced time-to-hire.

More secure access

Quickly verify an individual's credentials and status to grant least-privilege access with confidence.

Easy account recovery

Replace support calls and security questions with a streamlined self-service process to verify identities.

Custom business solutions

Easily build solutions for a wide range of use cases with our developer kit, APIs, and documentation.

Ongoing value journey: Worker productivity

Accepts job offer

Visits employer portal to complete pre-onboarding

Identity validated by network partner

Receives **verifiable credential** with proven identify attributes

First day of work

Uses verifiable credential to **remotely access** and set up new account

Receives **workplace credential,** enabling access & benefits

Completes **trainings**, attested to workplace credential for **compliance** and access

Efficient access to **employee perks** and ongoing life tasks

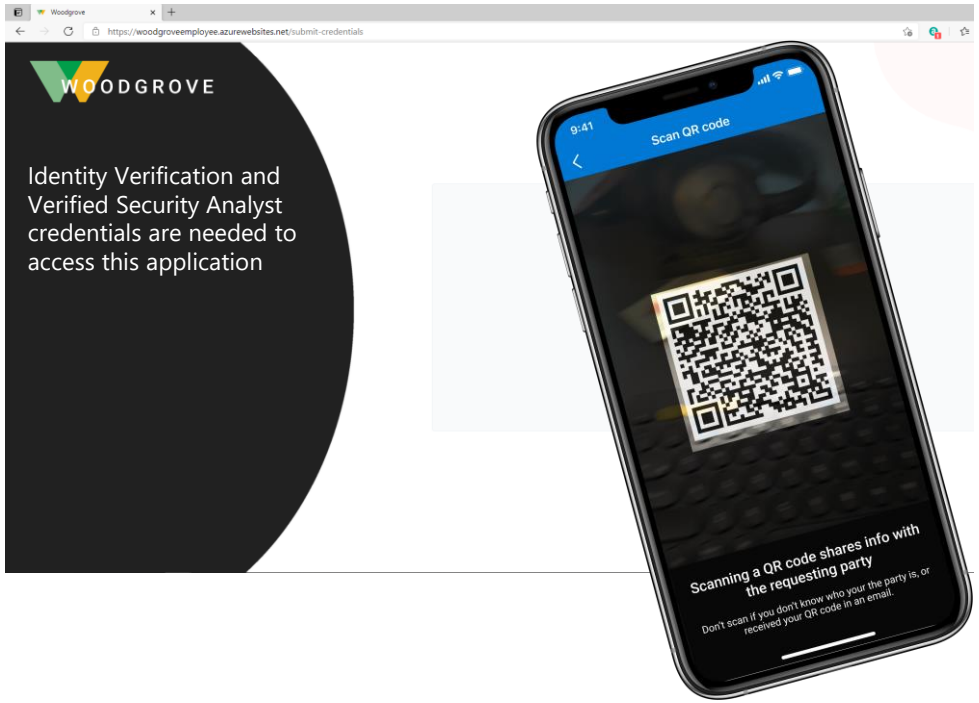
Secure access to applications

Quickly verify credentials and get access to sensitive resources that have advanced security requirements

Start

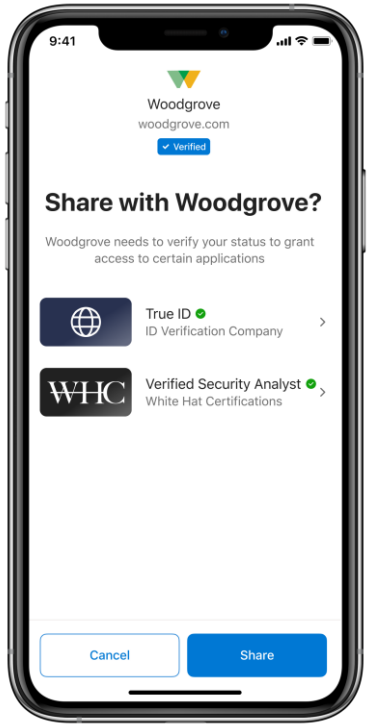
Sign in

User attempts to sign in to a high-privilege app at Woodgrove



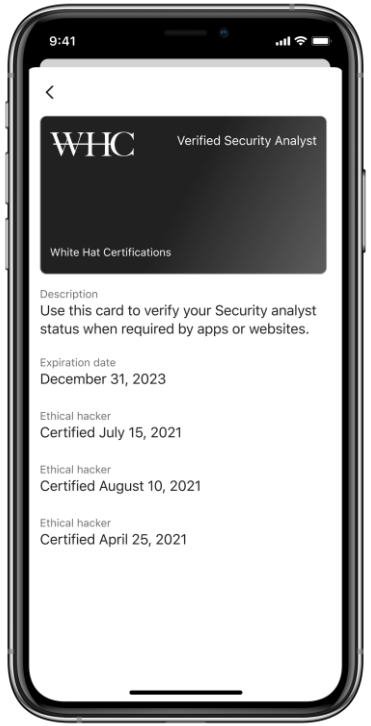
Presentation

User shares the requested verifiable credentials



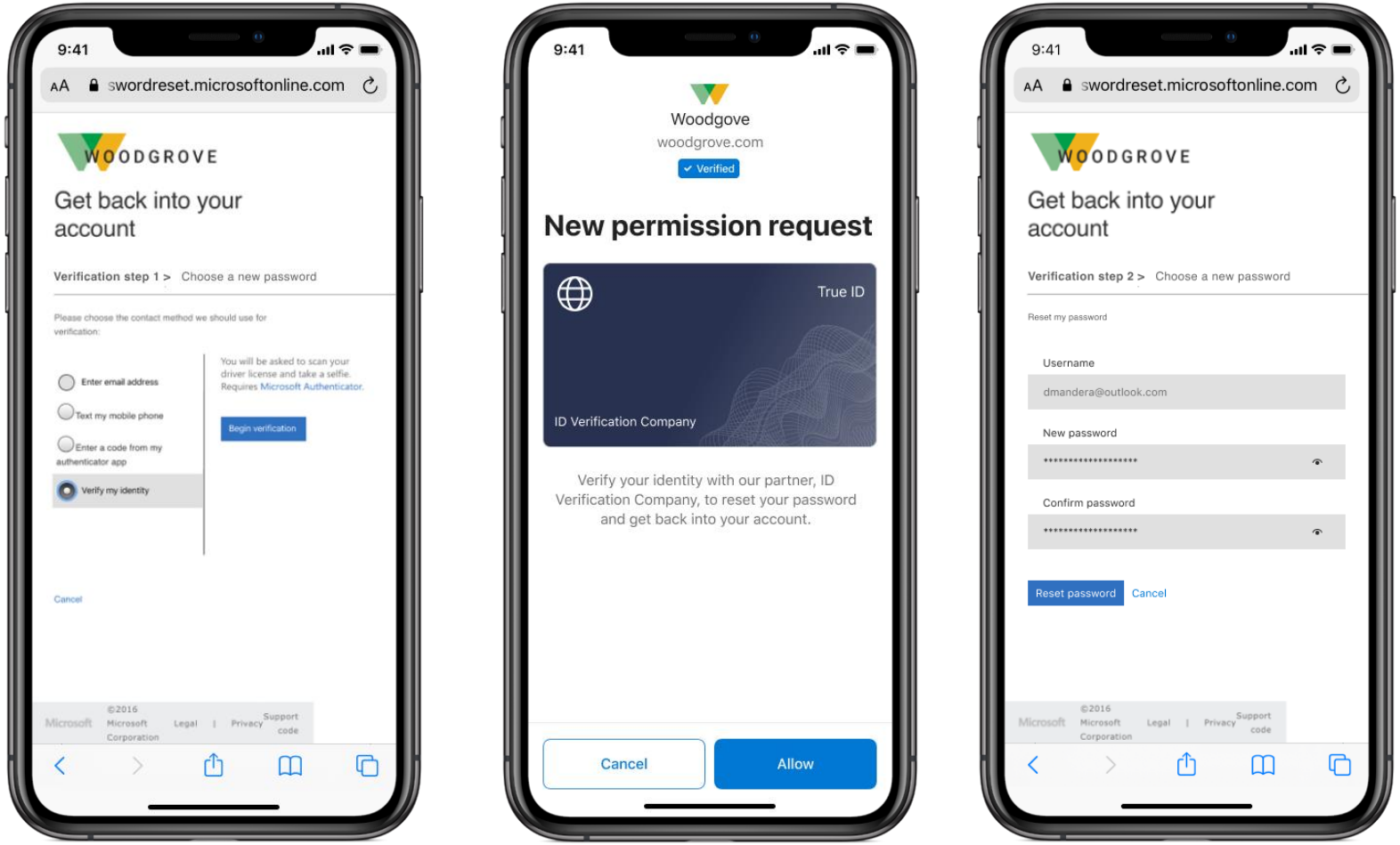
Detailed view

User confirms which claims are being shared



Account Recovery

Reduce support phone calls and security questions with a simpler, more secure process to verify identity.



Trustworthy, faster, cheaper way to verify

Onboard employees, partners, customers

Trustworthy self-service enrollment and faster onboarding by digitally validating information with industry leading ID verification providers.

Access to high-value apps and resources

Quickly verify credentials and get access to sensitive resources that have advanced security requirements

Self-service account recovery

Reduce support phone calls and security questions with a simpler, more secure process to verify identity.

Customer stories

Keio University

National Health Service

Government of Flanders

and many more...

Next steps

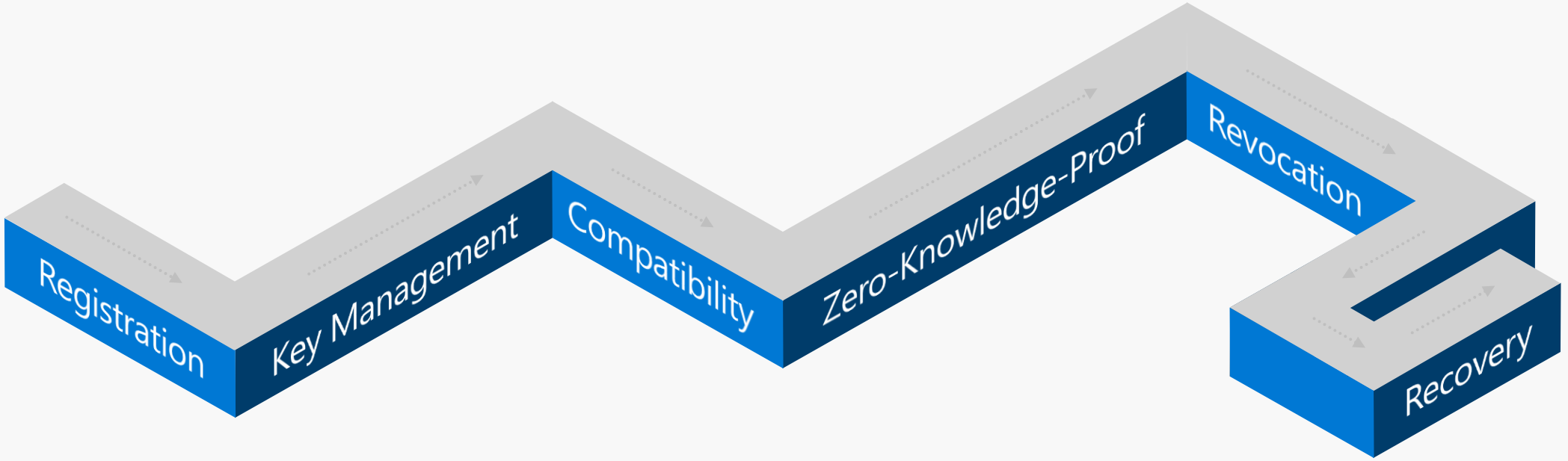
Microsoft

The next 3 steps to making the ecosystem real

1. **Ease of use**
   - ✓ Registration
   - ✓ Key management
   - ✓ Interoperability

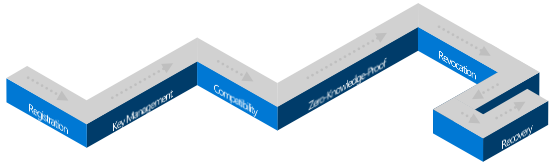
   Recovery and revocation

   Selective Disclosure & Zero-knowledge-proof



The next 3 steps to making the ecosystem real

1. Ease of use



2. Performance & Scale

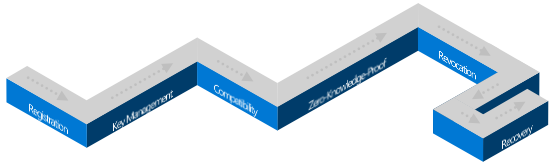
✓ DID:Web

DID:ION (public preview)

Other methods?

The next 3 steps to making the ecosystem real

1. Ease of use



2. Performance & Scale

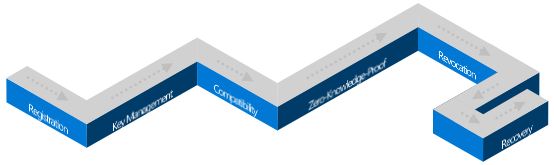
3. Join, collaborate, and contribute

DIF

TIERION IDEO Microsoft Gem BLOCKSTACK uport evernym IBM HYPERLEDGER LINK-E ID2020 VERIDIUMID PingIdentity civic accenture DANUBE TECHNOLOGIES NETKI RSA Consent BIGCHAIN DB sovrin IOTA pillar dominode mooti r3. Authenteq validatedID BAYONET EQUINIX KYC-CHAIN JOLOCOM onfido BLOCKPASS Ockam NuID MetaX DIID nuggets TRUSTED KEY R_BLOCK ONTology meeco enigma

The next 3 steps to making the ecosystem real

1. Ease of use



2. Performance & Scale

3. Join, collaborate, and contribute

Thank you.

Microsoft

Resources

1. http://identity.foundation Industry working group for all things Decentralized ID (DID)
2. http://aka.ms/didwhitepaper White paper by Microsoft: approach for DID + Verifiable Credentials
3. http://aka.ms/didexplained Quick overview
4. https://youtu.be/Whc9Im-U0Wg Overview for developers: scenario walk-through and how-to
5. http://aka.ms/didfordevs Developer documentation
6. http://aka.ms/azuread/did -> Blogs (including scale and performance and self-owned key recovery)
7. https://aka.ms/vcinterop VC Interop profile
8. https://aka.ms/diddemo Demo site

Microsoft

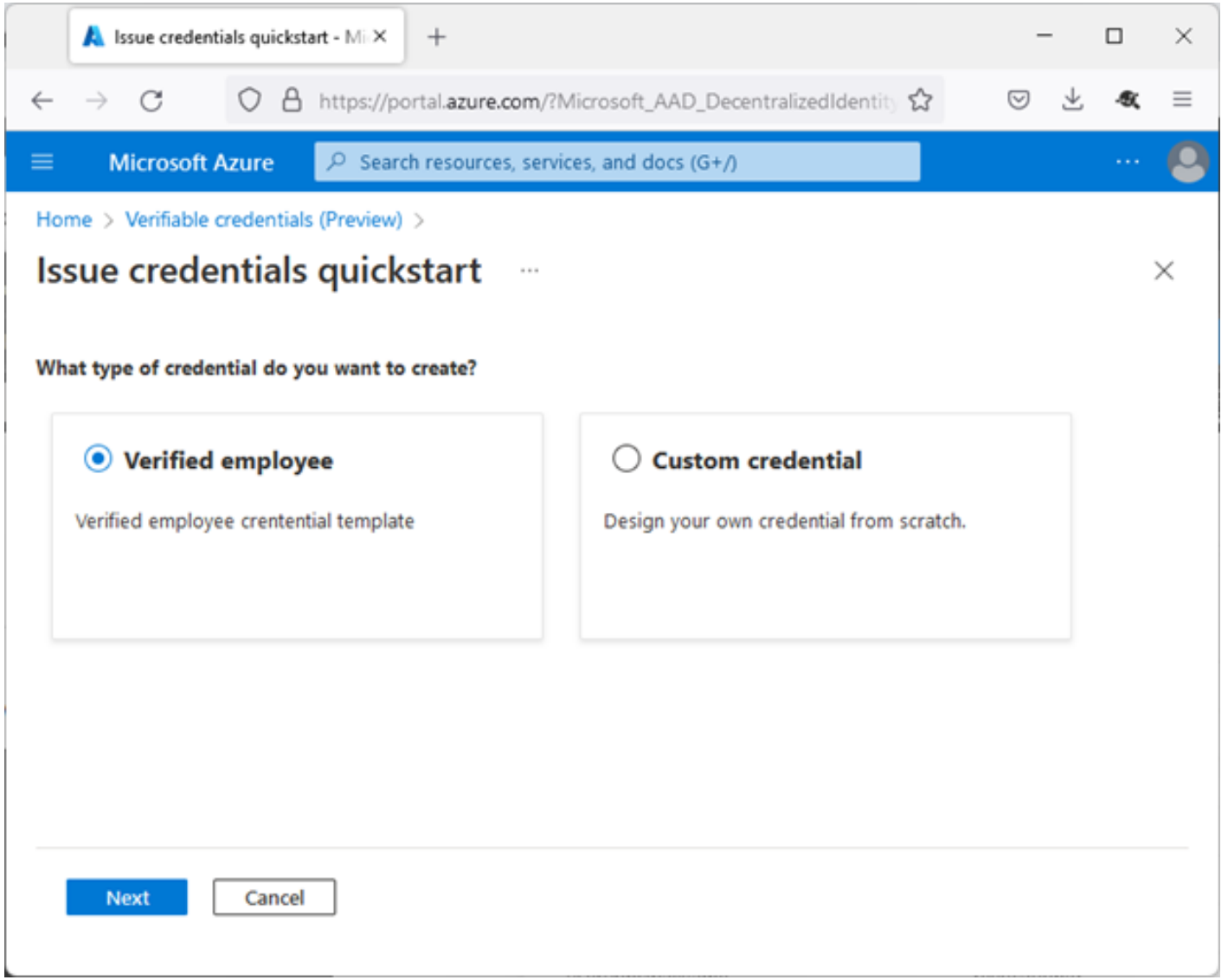
http://aka.ms/vcdetails

@AzureAD

Thank you

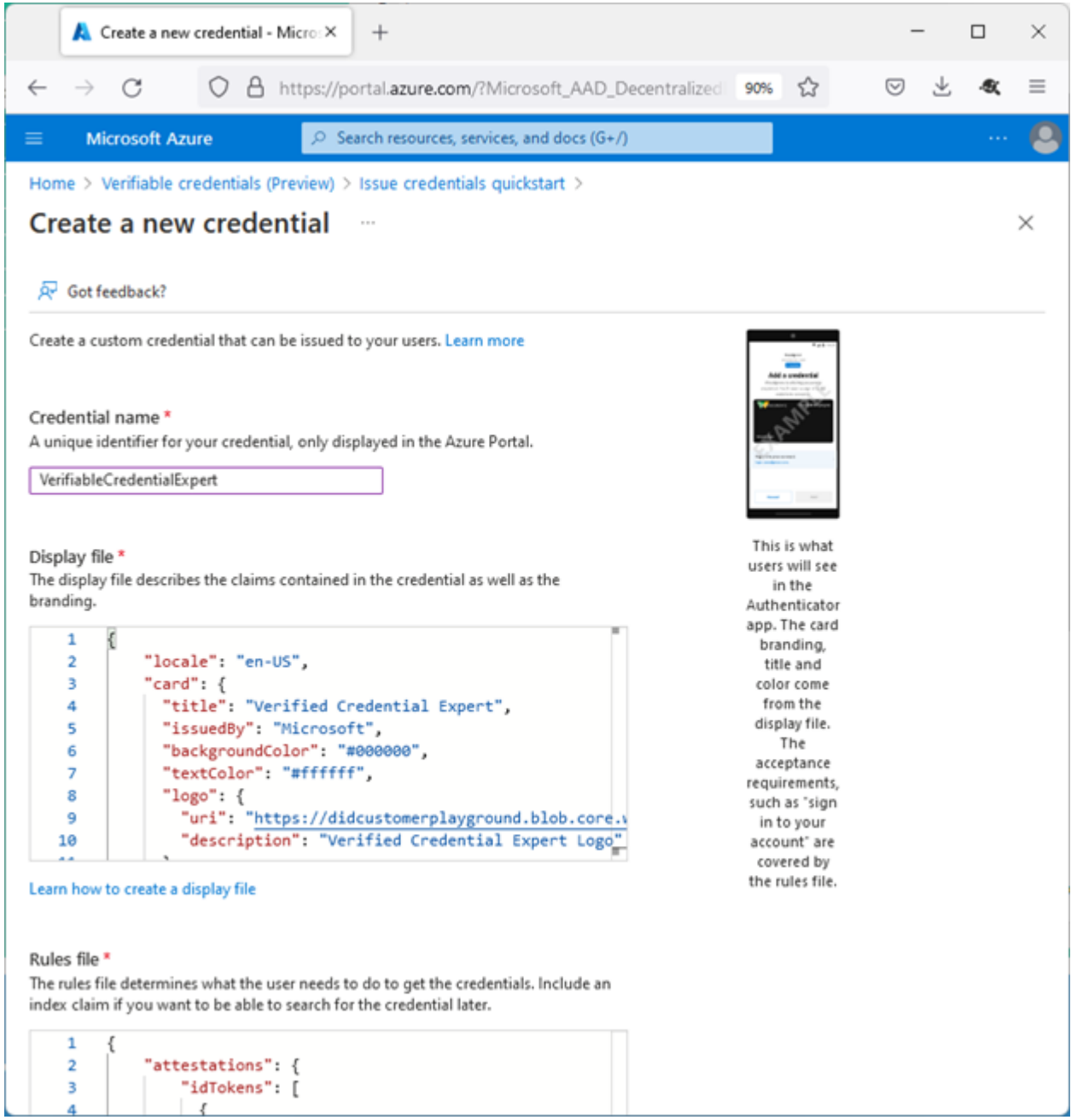
Quickstart for Directory based claims

Effortlessly create a credential where the claims come from a user profile in the directory of the **Azure AD tenant**



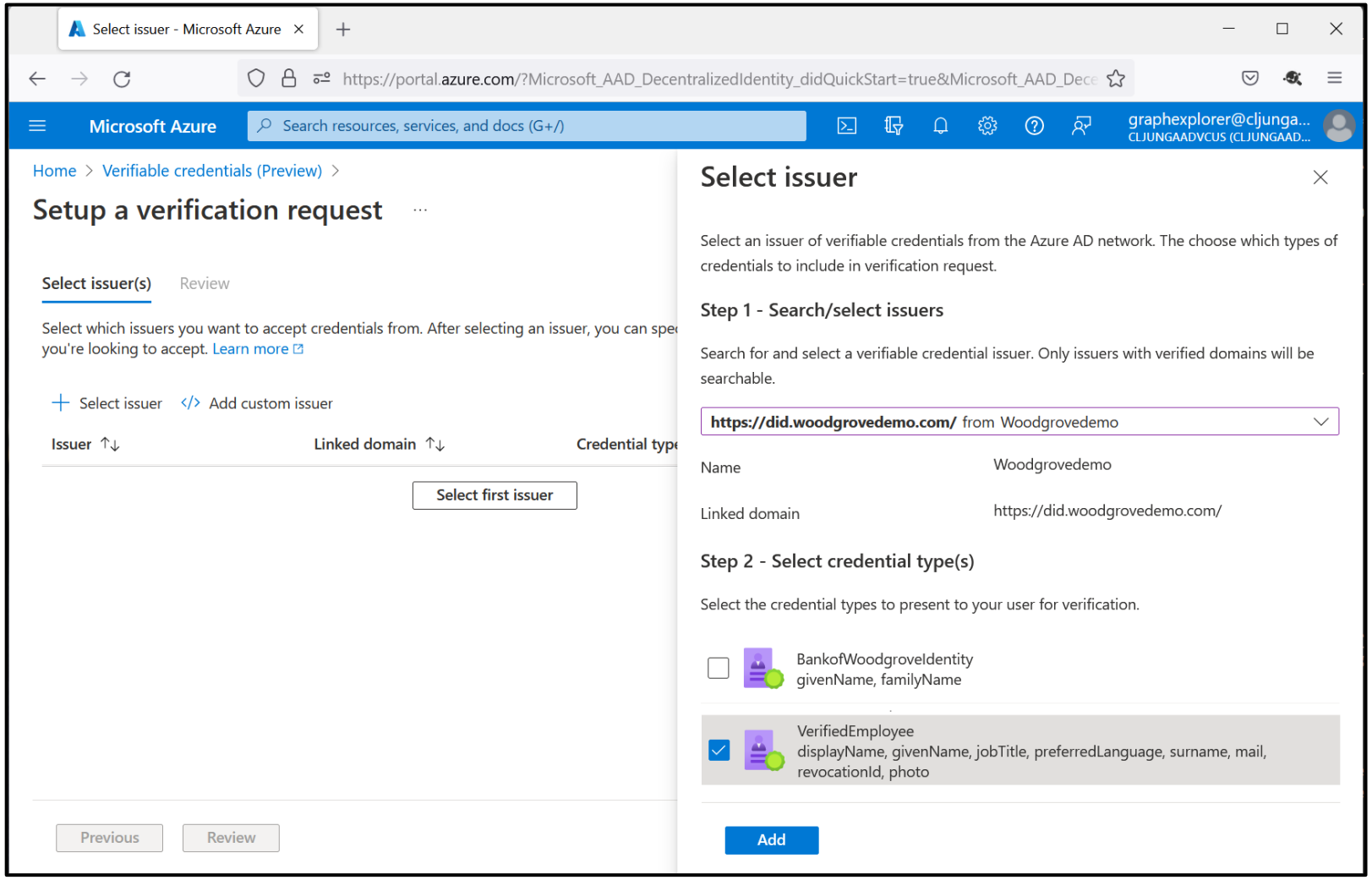
Quickstart for Custom credentials

When using the Quickstart, just enter all details in the Azure portal and create a custom credential on a single page



Microsoft Entra Verified ID Network

Search for published credential types and schemas in the Entra Verified ID Network to easily generate a presentation request



Verifying credentials using Microsoft Entra Verified ID Network

Jumpstart with partners

Leading Identity verification partners

Acuant

Au10tix

Jumio

Idemia

Lexis Nexis

Onfido

Socure

VU Security

Accelerate adoption with a growing ecosystem of partner solutions

+ 27 partners…and growing!

192 Countries

6000 Identification documents

1000's Organizational attributes

Millions Individual ID attributes

Decades of experience to go from idea to implementation in hours

Entitlement Management with Verified ID

- Verify granular attributes from a wide set of issuers
- Reduce approval fatigue
- Automatically revoke access when VC is revoked
- Better compliance posture