

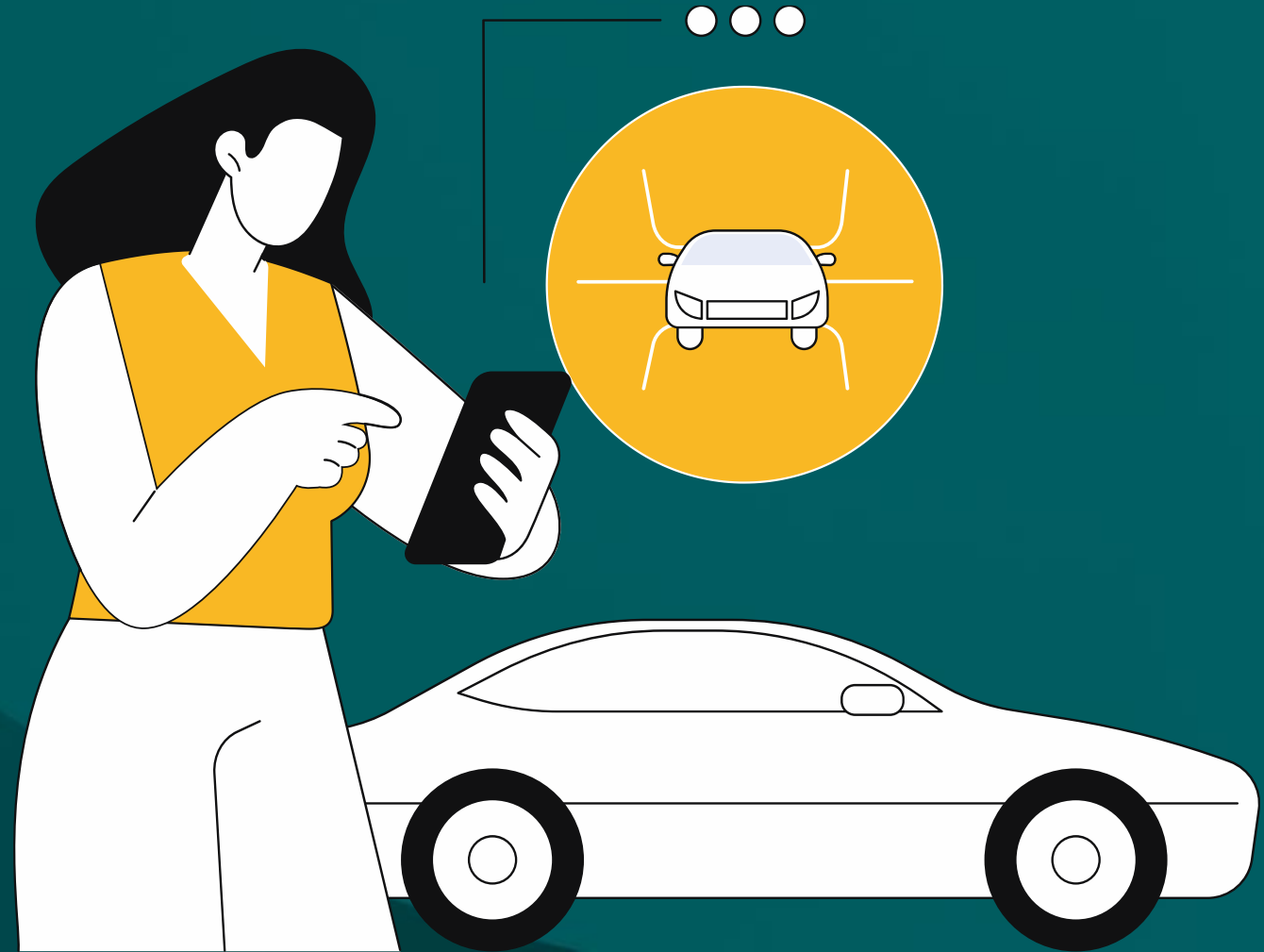
COVESA



Andrew Shikiar, Executive Director & CEO, FIDO Alliance
The Passwordless Imperative for
Automotive: From Manufacturing to In-
Vehicle Applications

The Passwordless Imperative for Automotive

Andrew Shikiar
FIDO Alliance



Passwords – a child of the 1960's

With new services like car payments coming, the need for robust, secure and easy to use authentication is more critical than ever



The foundation of authentication is fundamentally flawed

When our primary factor is passwords...

81%

of hacking-related breaches are caused by weak or stolen passwords
(Ping Identity)

43%

Gave up on a purchase because they forgot their password
(FIDO Alliance)

76%

Rise in direct financial loss from successful phishing attacks from 2022-2023
(Proofpoint)

64%

either use weak passwords or repeat variations of passwords
(Keeper)

Easily phished or socially engineered, difficult to use and maintain

Generative AI adds fuel to the phishing fire

967%

Rise in credential phishing
in particular since Q4 2022

(Slashnext)

1265%

Rise in malicious phishing
emails since Q4 2022

(Slashnext)

54%

Of consumers have noticed
phishing messages become more
sophisticated in last 60 days

(FIDO Alliance)

FIDO since 2013: Simpler and stronger



Open standards for simpler, stronger authentication using **public key cryptography**

- Single Gesture –
- Possession-based –
- Phishing-resistant –
- Authentication –

What *is* the FIDO Alliance?



The FIDO Alliance is an open industry association with a focused mission: ***reduce the world's reliance on passwords.***

To accomplish this, the FIDO Alliance promotes the development, use and compliance with standards for authentication and device attestation.

Backed by global tech leaders



+ Sponsor members

+ Associate members

+ Liaison members

+ Government members

The FIDO Alliance works to fulfill its mission through...



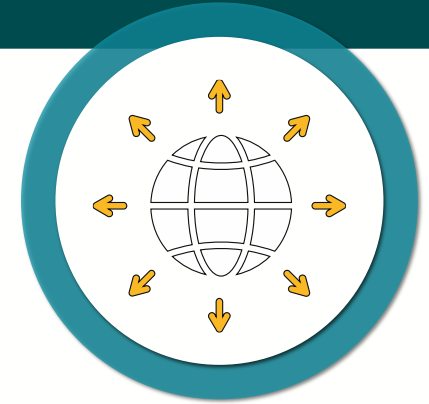
Technical Specifications

Define an open, scalable, interoperable set of mechanisms that reduce the reliance on passwords



Industry Certification Programs

Ensure interoperability, security and usability of products, services and components



Market Adoption Programs

Promote the use of FIDO globally to drive adoption and education

What is a passkey?

Passkey

/ˈpas, kē/ noun

Passkeys are a password replacement based on FIDO protocols that provide faster, easier, more secure sign-ins to online services.

A passkey may be synced across a secure cloud so that it's readily available on all of a user's devices, or it can be bound to a dedicated device such as a FIDO security key.

4x simpler

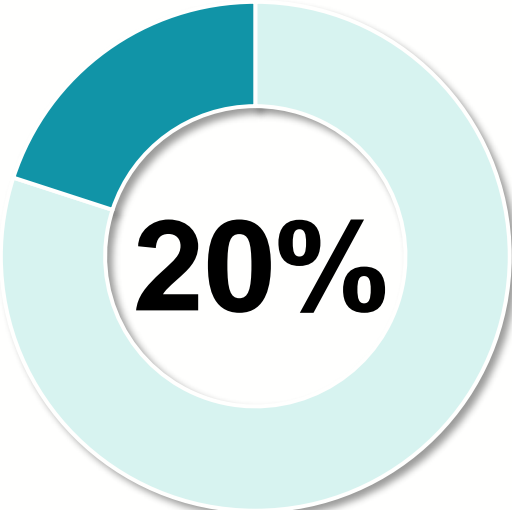
Passkeys are 4x simpler to use since they don't need to be remembered or typed. You just use your fingerprint, face scan, or screen lock to sign in across all your devices and platforms.

Source: Google

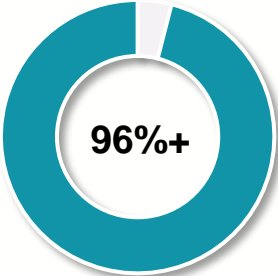


Passkey adoption by the numbers

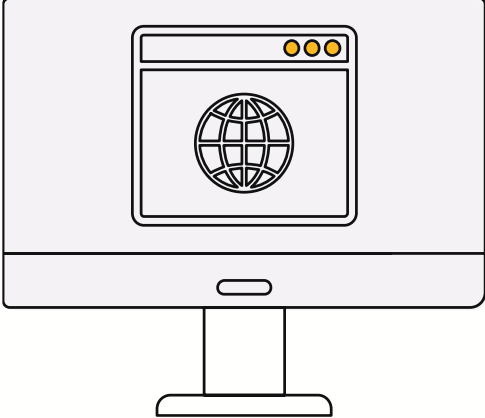
(Since October 2022)



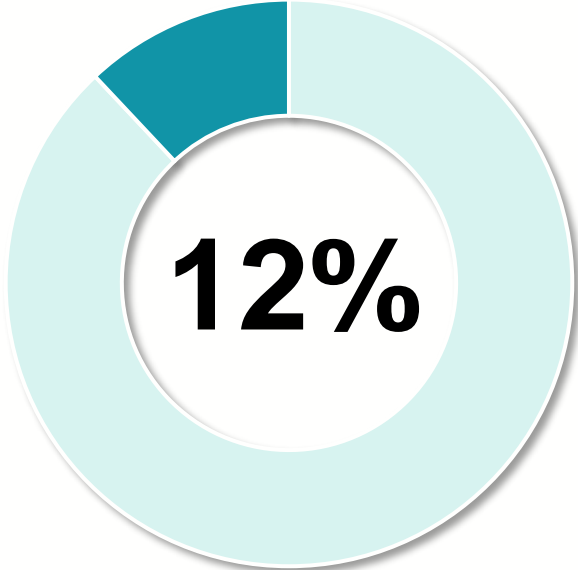
of the world's top 100 websites and services



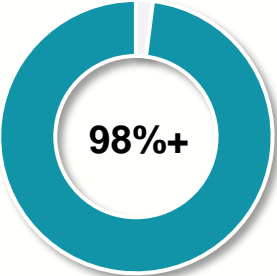
of active browsers



More than **13B** accounts can now leverage passkeys for sign in



of the world's top 250 websites and services



of mobile devices

Why FIDO for automotive?

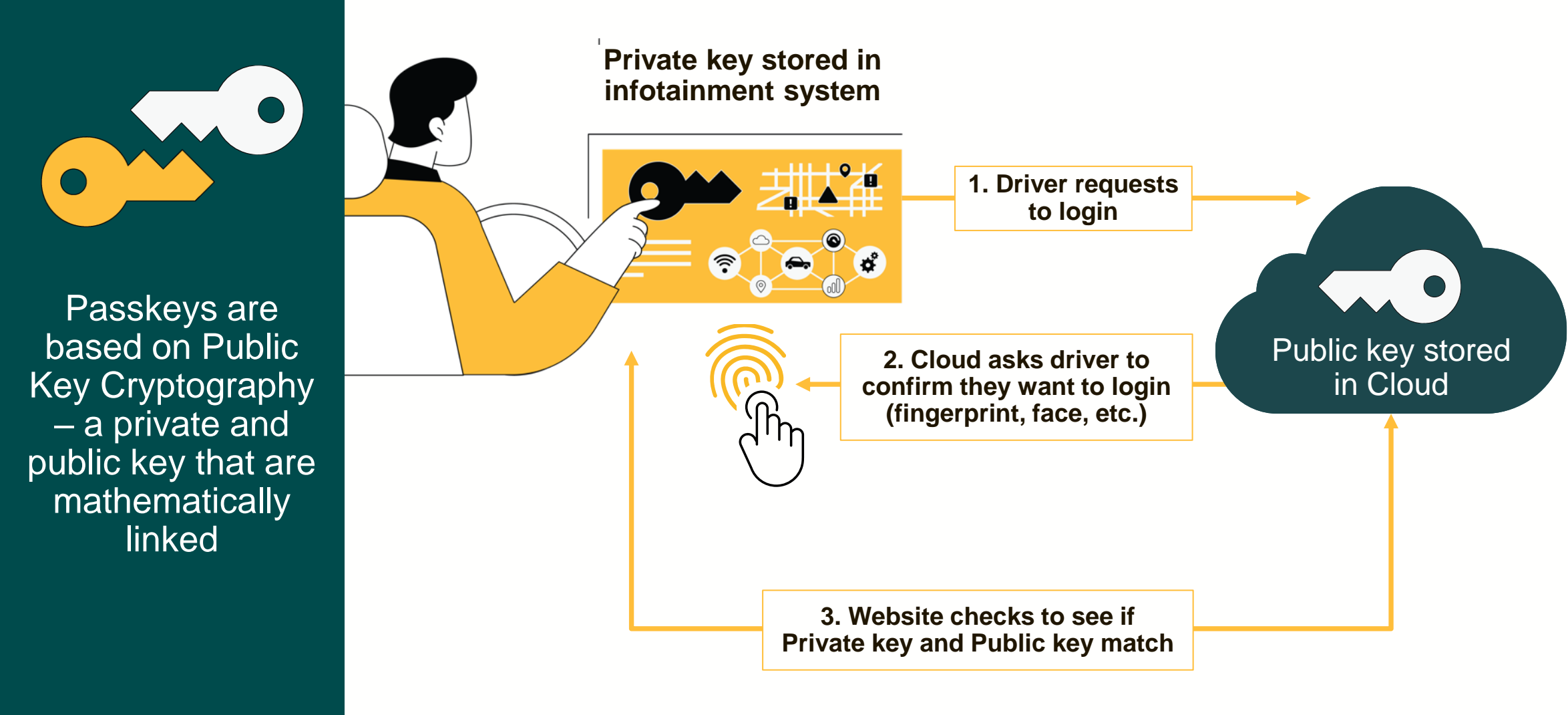
Reduce Passwords: Traditional passwords are vulnerable, hard to remember, and difficult to use - especially in vehicles.

Increase Resilience Across the Automotive Industry: Automobiles, dealerships, and manufacturers are a target. A recent cyberattack kept thousands of U.S. dealerships offline for days.

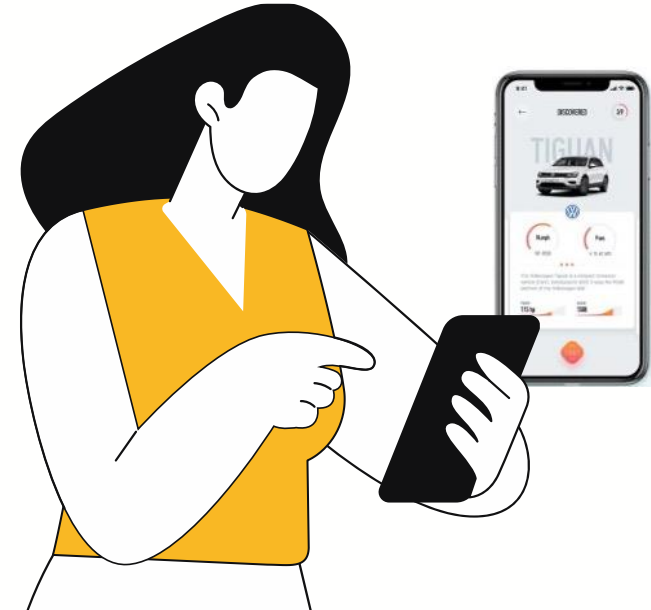
Improve UX: An easier and more seamless sign-in experience is needed for accessing personalized in-vehicle services.

FIDO Device Onboarding (FDO) simplifies Software Defined Vehicle (SDV): An open onboarding standard well suited to securely onboarding ECUs and Zone Controllers.

Sample passkey usage in automotive



FIDO fit for Application Authentication



**Passwordless
access to
mobile apps**

fido
CERTIFIED

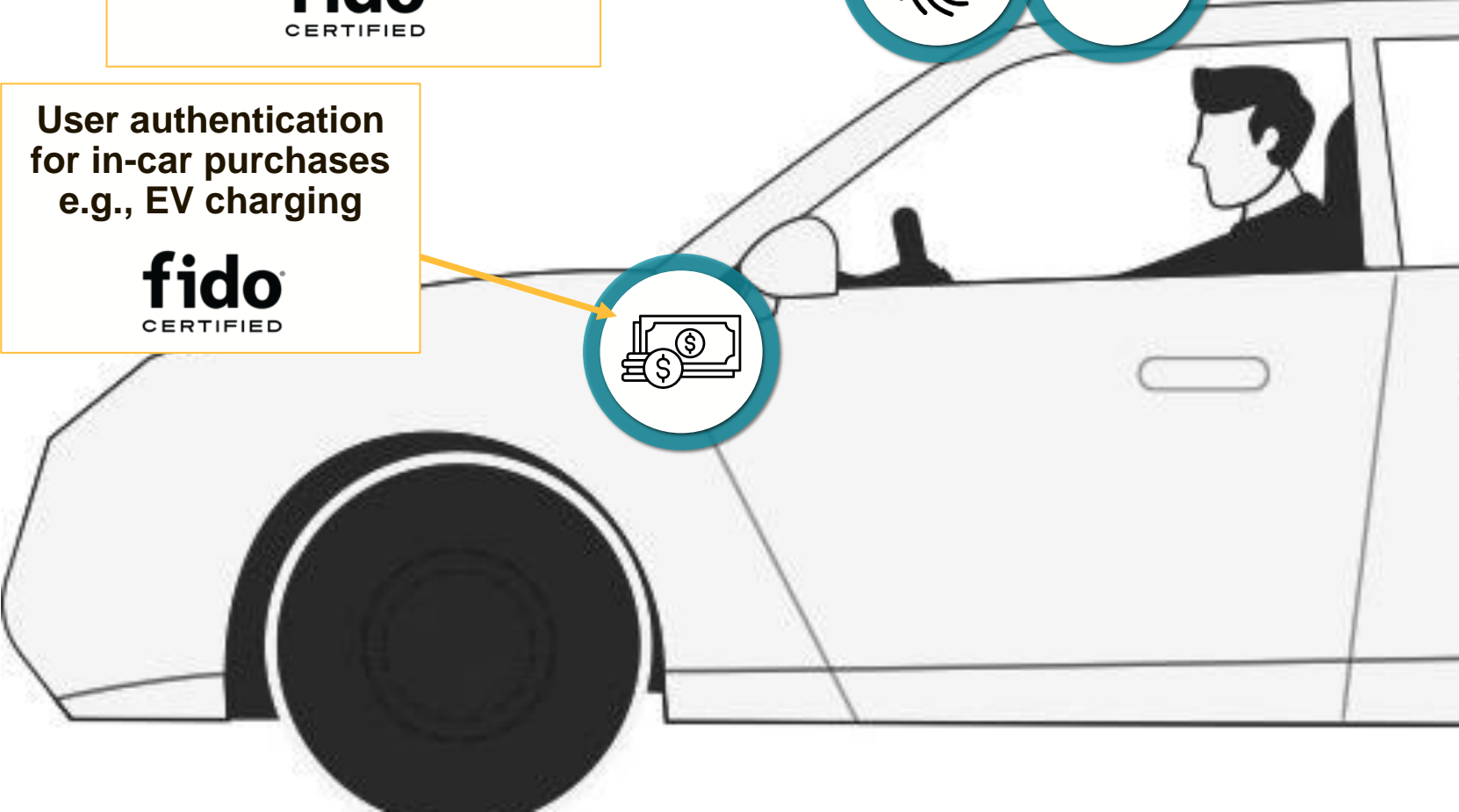
**Ensures strong
performance of biometric
components for
in-vehicle services**

fido
CERTIFIED



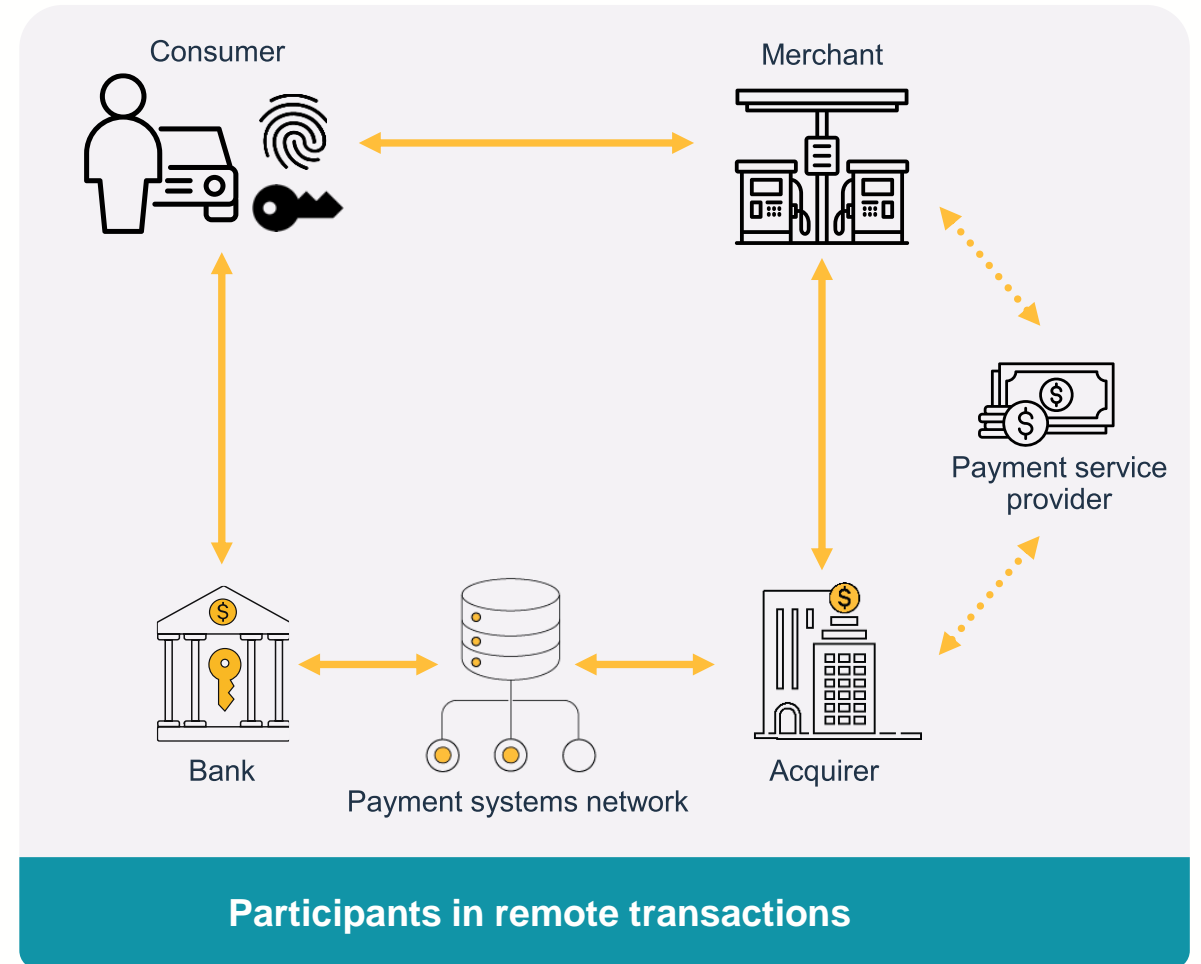
**User authentication
for in-car purchases
e.g., EV charging**

fido
CERTIFIED

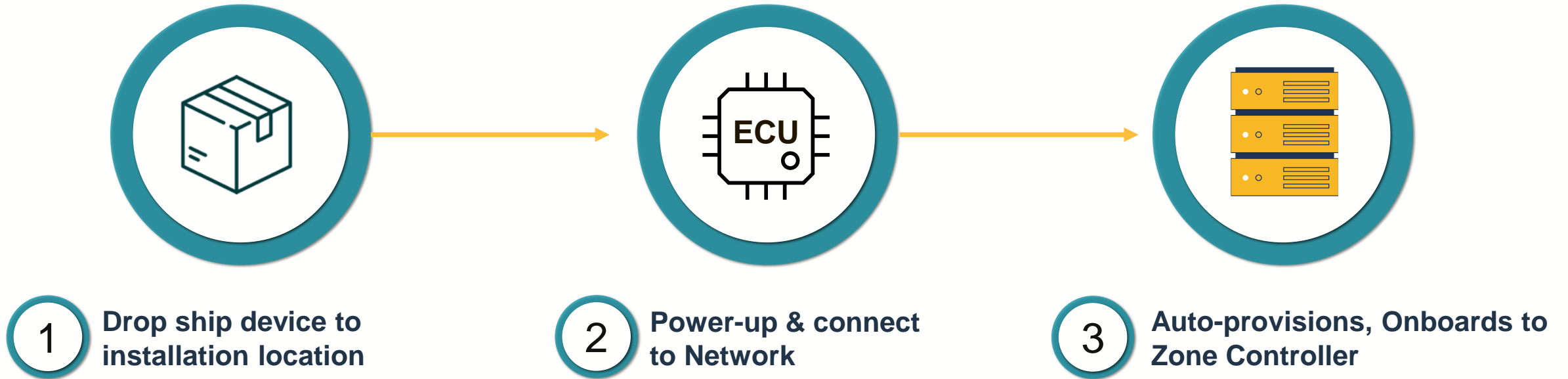


Passkeys as part of in-car payment authentication

- Secure, reliable & easy-to-use payment authentication is key for in-car commerce
 - Fuel, convenience items, toll fees, etc.
- FIDO in payment solutions is primarily for Secure Customer Authentication.
 - SCA mobile digital banking, 3DS SCA, and delegated authentication respectively.
- FIDO Board Members include Visa, American Express, Mastercard



FIDO Device Onboard (FDO)



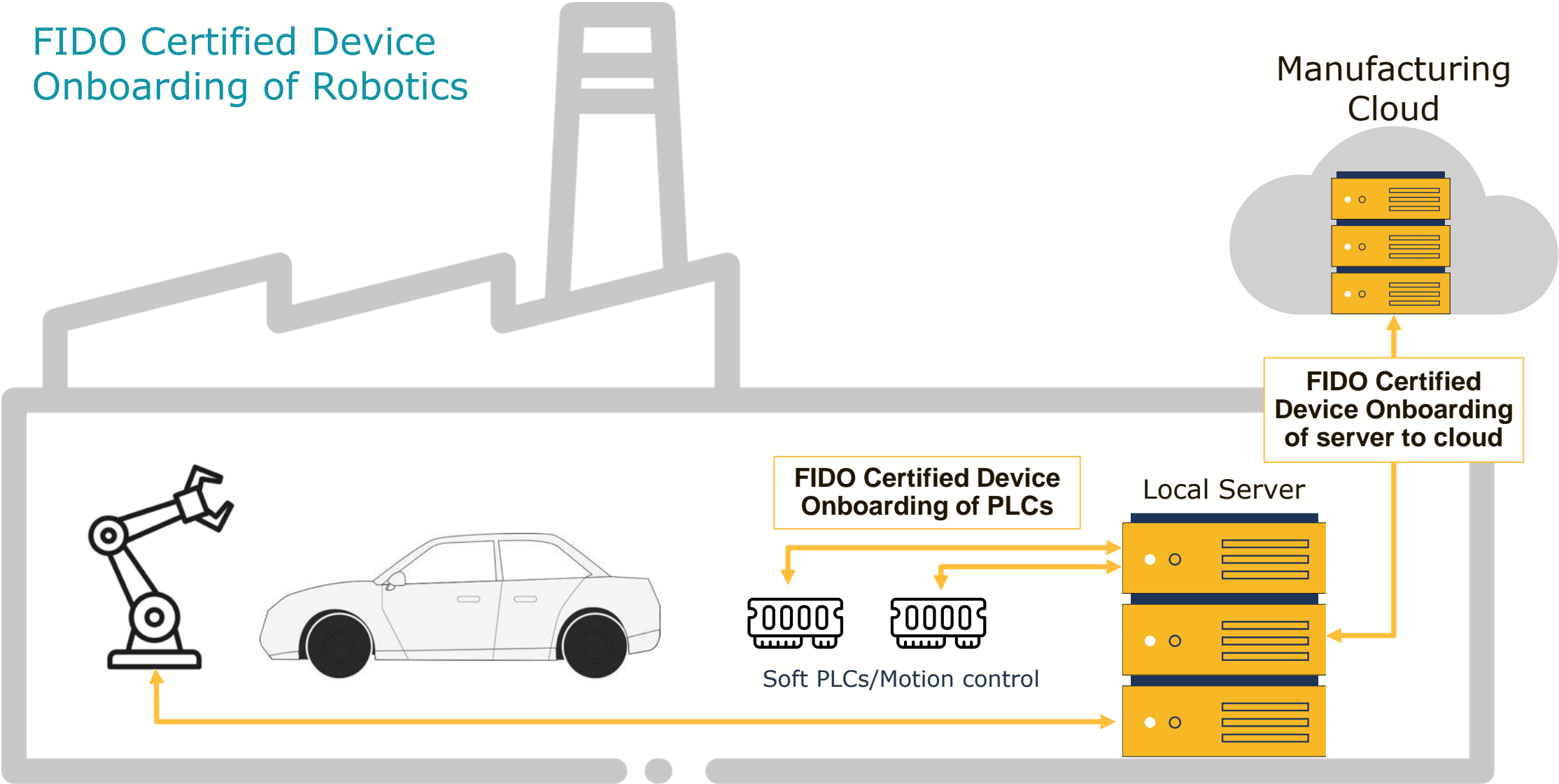
Fast, Scalable Device Provisioning, Onboarding & Activation

- **Zero touch onboarding** – integrates with existing zero touch solutions
- **Fast & more secure** – ~1 minute
- **Hardware flexibility** – any hardware - ARM MCU to Intel® Xeon®
- **Any cloud** – internet, intranet & closed network, multi-tenant
- **Late binding** – reduces number of product SKUs needed
- **Multiple implementations** – 5 implementations in various programming languages
- **Certification program** – Available from FIDO Alliance

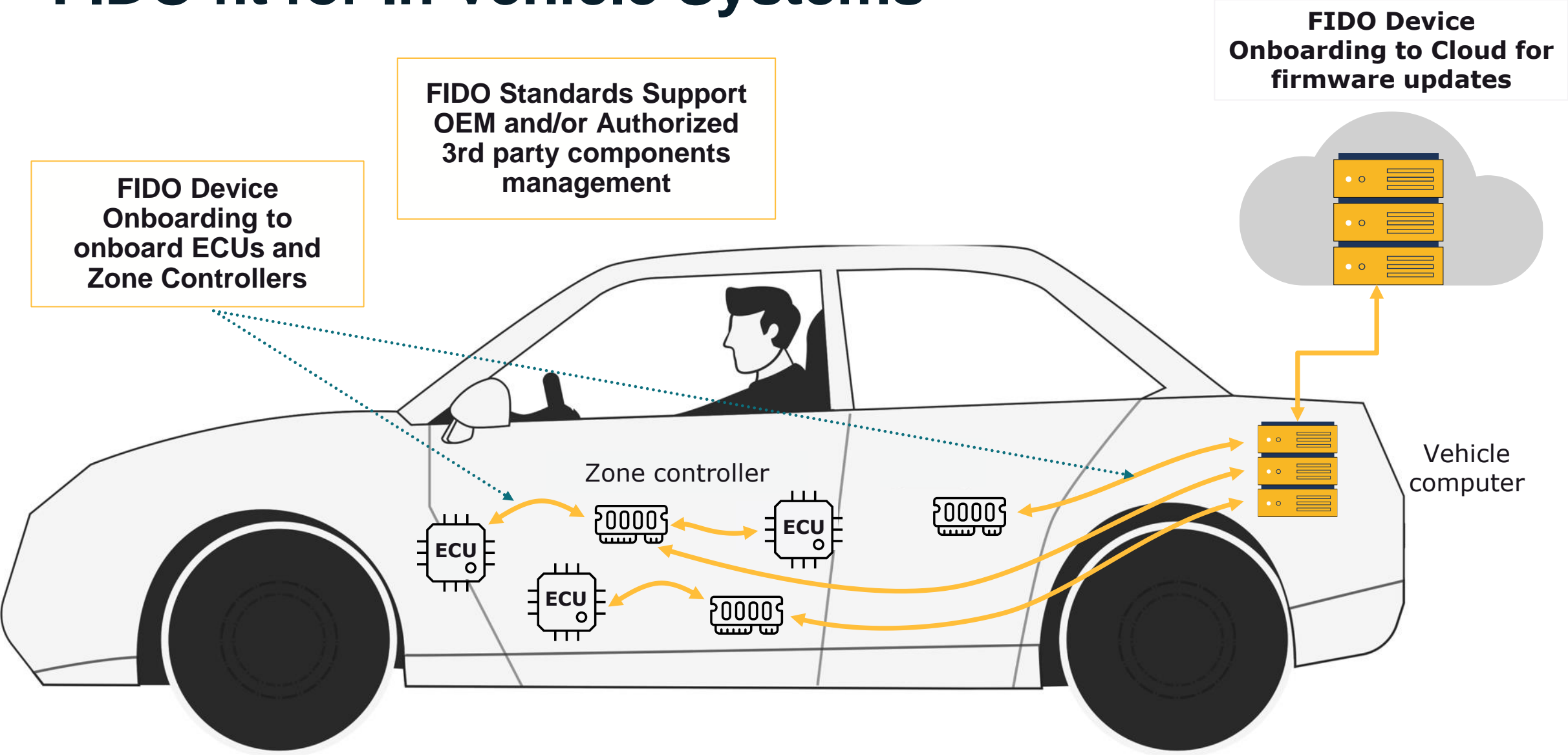
1. No product or component can be absolutely secure

FIDO fit for Automotive Manufacturing

FIDO Certified Device
Onboarding of Robotics



FIDO fit for In-vehicle Systems





FIDO Certification Programs

User Authentication

- Functional Certification
- Authenticator Level Certification

Identity Verification

- Face Verification Certification
- Document Authenticity Certification

Biometric Components

- Biometric Component Certification

Device Onboarding

- FIDO Device Onboard Certification

New: FIDO Certified for Automotive Industry

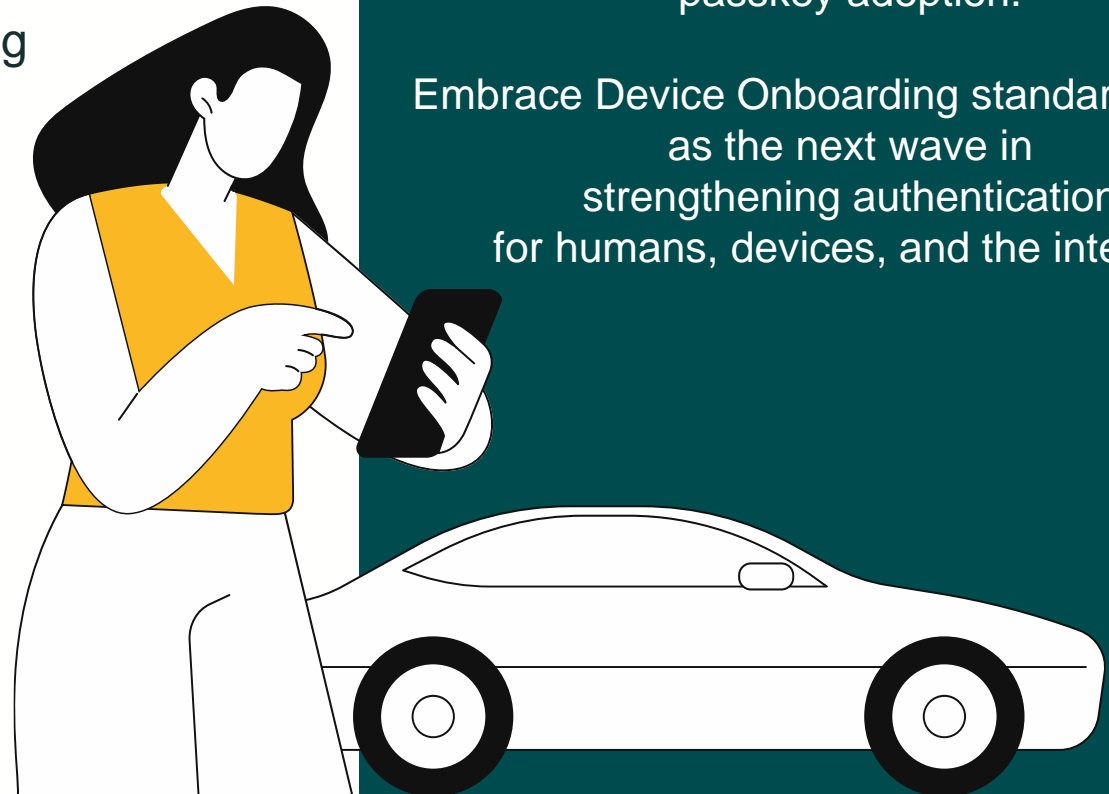
- Applicable programs
 - Conformance and interop testing for in-vehicle authenticators
 - Biometric performance testing for in-vehicle components
 - Authenticator security level assessments
- Development of pre-defined “Automotive Profiles”
 - *Work In Progress; ETA 2025-2026*

Your feedback is wanted!



Take Action!

- Passkeys eliminate the risk and friction of passwords – enabling user-friendly MFA in a single gesture.
- Biometric certification compliments passkeys for in-car personalization and payments.
- FDO can be broadly applied in manufacturing and in-car.
- Certification drives interoperability, security, and performance.



We need your sector expertise!

Contact us to review the proposed Automotive specifications and provide feedback.

Get engaged in the Alliance in advancing passkey adoption.

Embrace Device Onboarding standards (FDO) as the next wave in strengthening authentication for humans, devices, and the internet.



Thank you