2024 Identity & Payments Summit

Biometrics

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- Prashant Sharma

- Arun Vemury

- Teresa Wu

IDENTITY & PAYMENTS
SUMMIT

Biometric Payments.

A new way to
pay in store.

Note: Future capabilities of biometrics are under development; features and timelines are subject to change at the Bank's sole discretion.

Consumer expectations
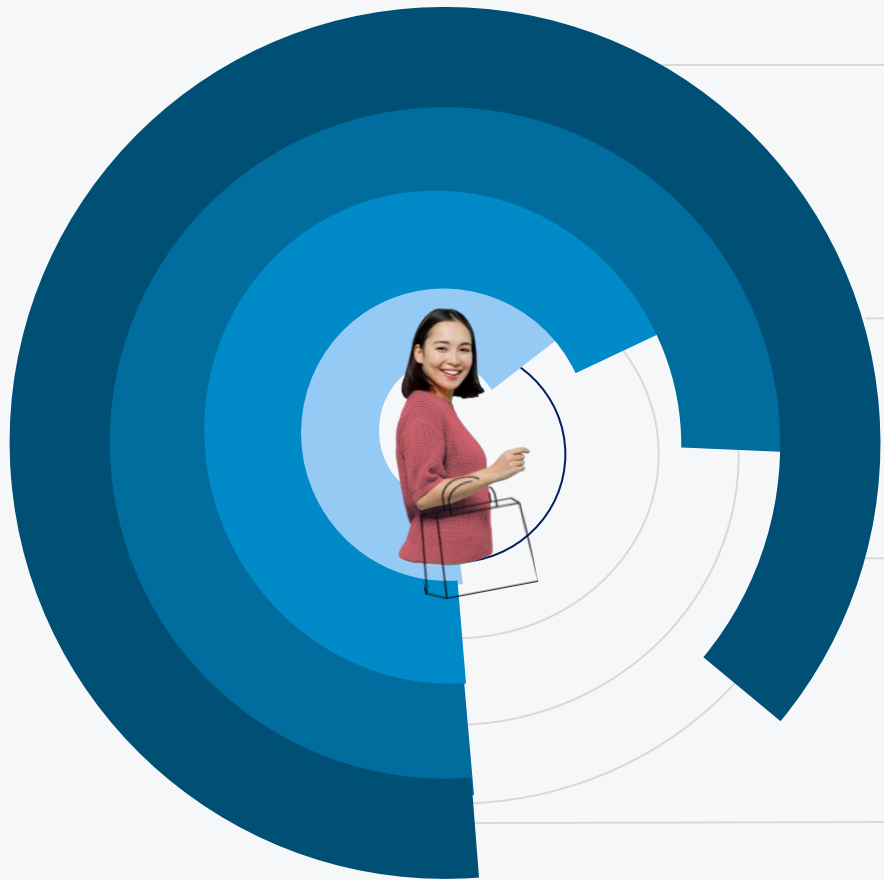
89% will disengage from a brand that breaches their trust[1]

71% expect personalized experiences[2]

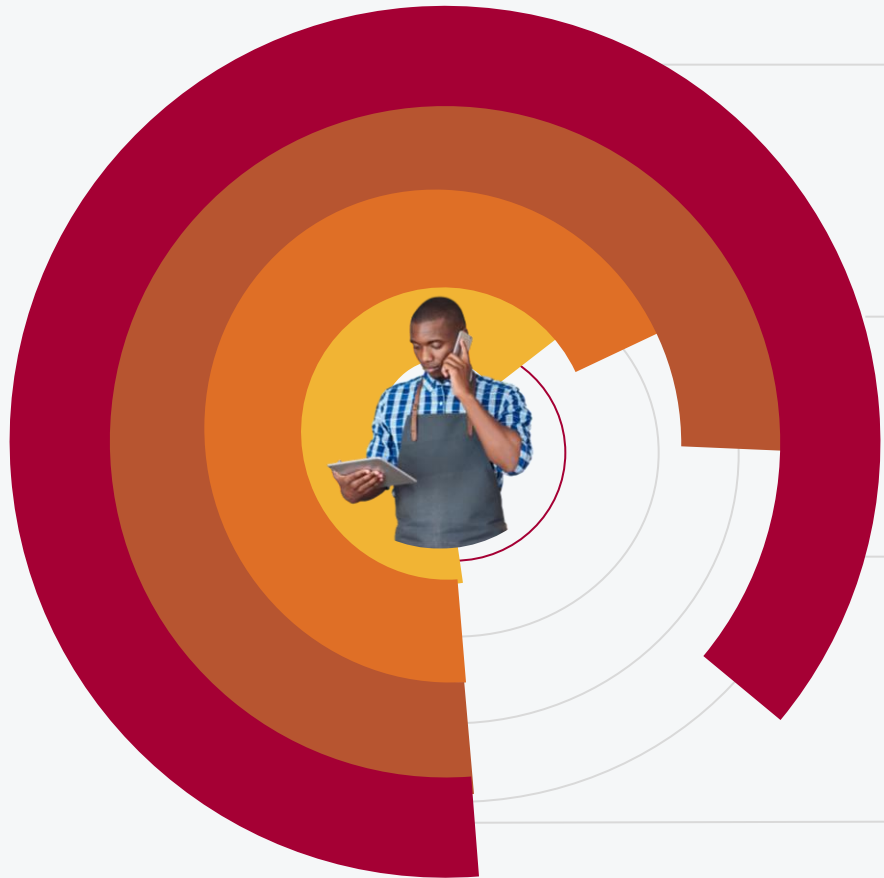**65%** expect frictionless checkout[3]

56% likely to change stores if the primary difference is a better checkout experience[4]

[1] Gartner, "Brand Strategies Focused on Dependability Score Highest on Customer Trust," December 2020. [2] McKinsey & Company, Next in Personalization Report 2021, November 2021.
[3] Klarna, "Retailers and shoppers out of sync on the value of physical stores," October 2021. [4] Forrester Research, Inc., "The State of Global Online Grocery Retail, 2018," March 2018.

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Merchant challenges

$37B revenue lost due to long checkout lines[1]

$8.8B total amount of reported revenue lost due to fraud in 2022[2]

**45%** view frictionless checkout as necessary[3]

15% prioritize personalized experience[4]

[1] 451 Research/Adyen, "Retail Reimagined," April 2018. [2] Federal Trade Commission, "New FTC Data Show Consumers Reported Losing Nearly $8.8 Billion to Scams in 2022," February 2023.
[3] Klarna, "Retailers and shoppers out of sync on the value of physical stores," October 2021. [4] McKinsey & Company, "Personalizing the customer experience: Driving differentiation in retail," April 2020.
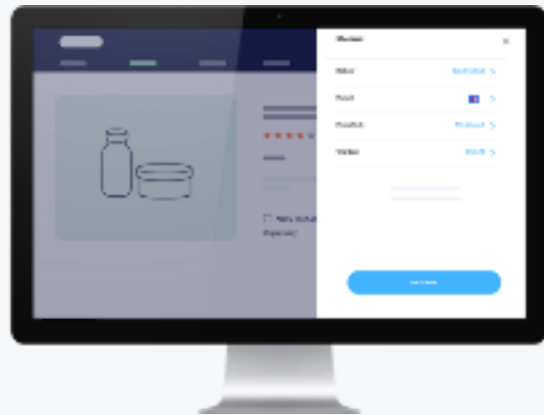
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The evolution of consumer technology has created new expectations for shopping
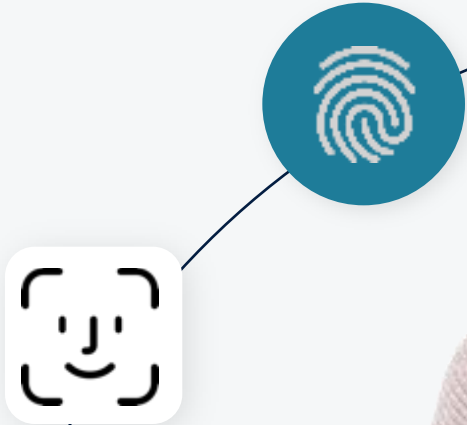
70% of consumers view biometric payments as an easier way to pay[1]

86% of consumers are willing to adopt biometric payments[2]

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Source: Security Magazine

Store experiences must adapt to new shopper expectations

Consumer expectations driven by online shopping innovation

60% of shoppers worldwide are irritated with long checkout lines
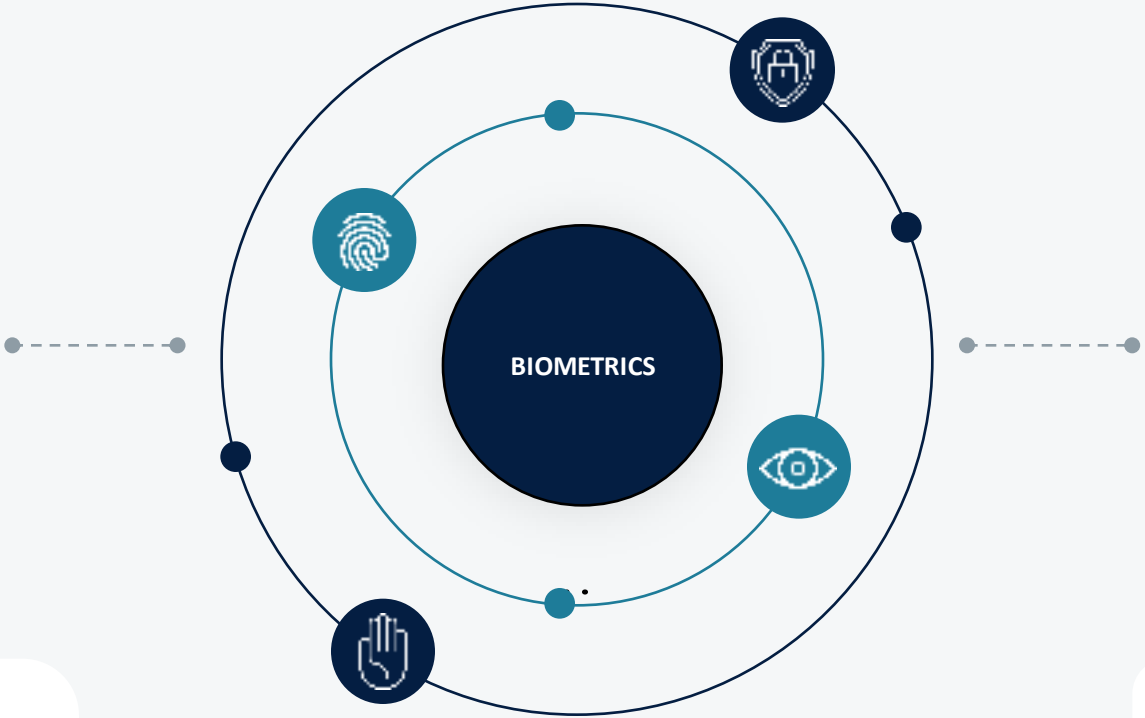
In-store shopping faces unique challenges

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Biometrics are a win-win for consumers and merchants
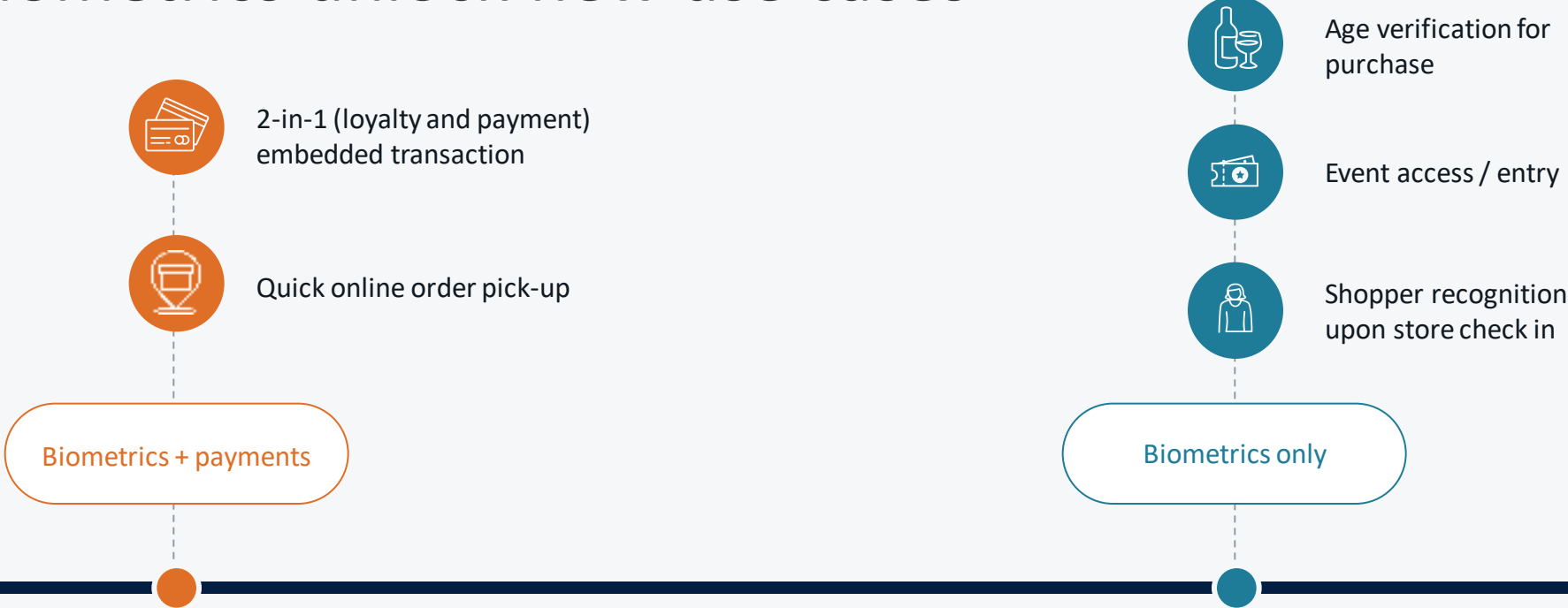
CONSUMERS

CONNECTED VALUE PROPOSITION

MERCHANTS

BIOMETRICS

- Embedded loyalty
- Fast and simple checkout
- Phone-free & contactless payment
- Private and secure transactions

- Sales and loyalty growth
- Fast and simple checkout
- Cost reduction

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Biometrics unlock new use cases

2-in-1 (loyalty and payment) embedded transaction

Quick online order pick-up

Biometrics + payments

Age verification for purchase

Event access / entry

Shopper recognition upon store check in

Biometrics only

And remove friction at counter & kiosk

7–35 sec. Reduction in transaction time

2x – 3x Increase in loyalty usage

4% Increase in average ticket size

Biometrics payments solution, powered by J.P. Morgan

- Cultivate loyalty by delivering fast, secure and simple checkout experiences to consumers

- Reduce costs per transaction

- Deliver modern payment experiences with the J.P. Morgan difference

TRUSTED INNOVATOR

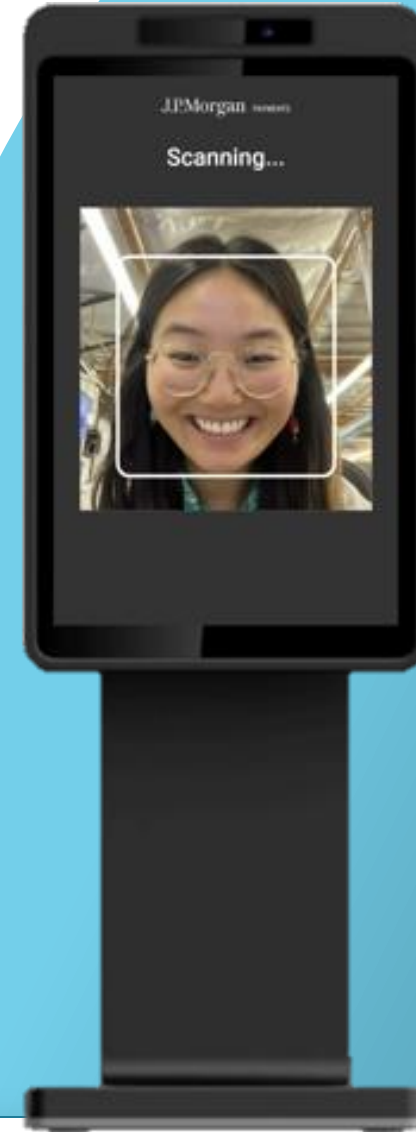Meet shopper expectations without compromising security and reliability

PARTNERSHIPS

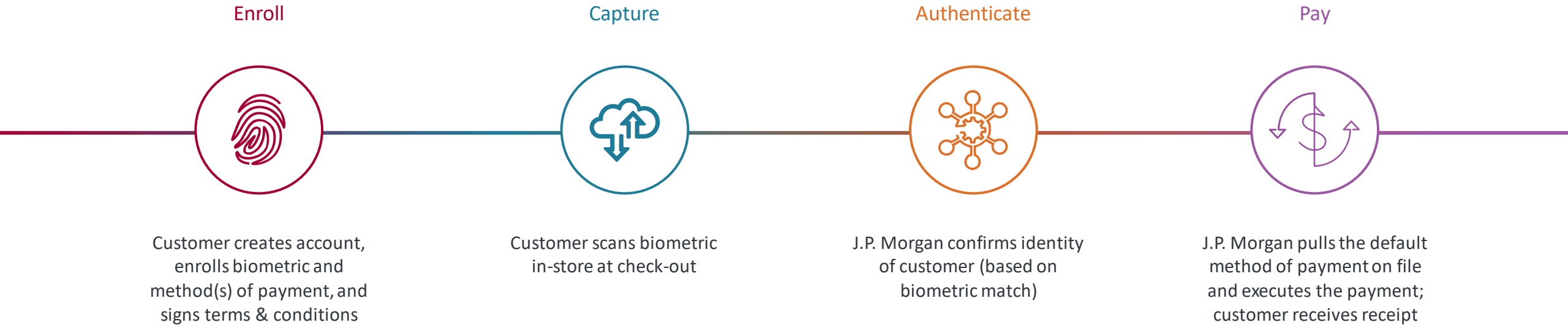Build your business in new, flexible, and innovative ways with advisory services and ecosystem partners

SCALE

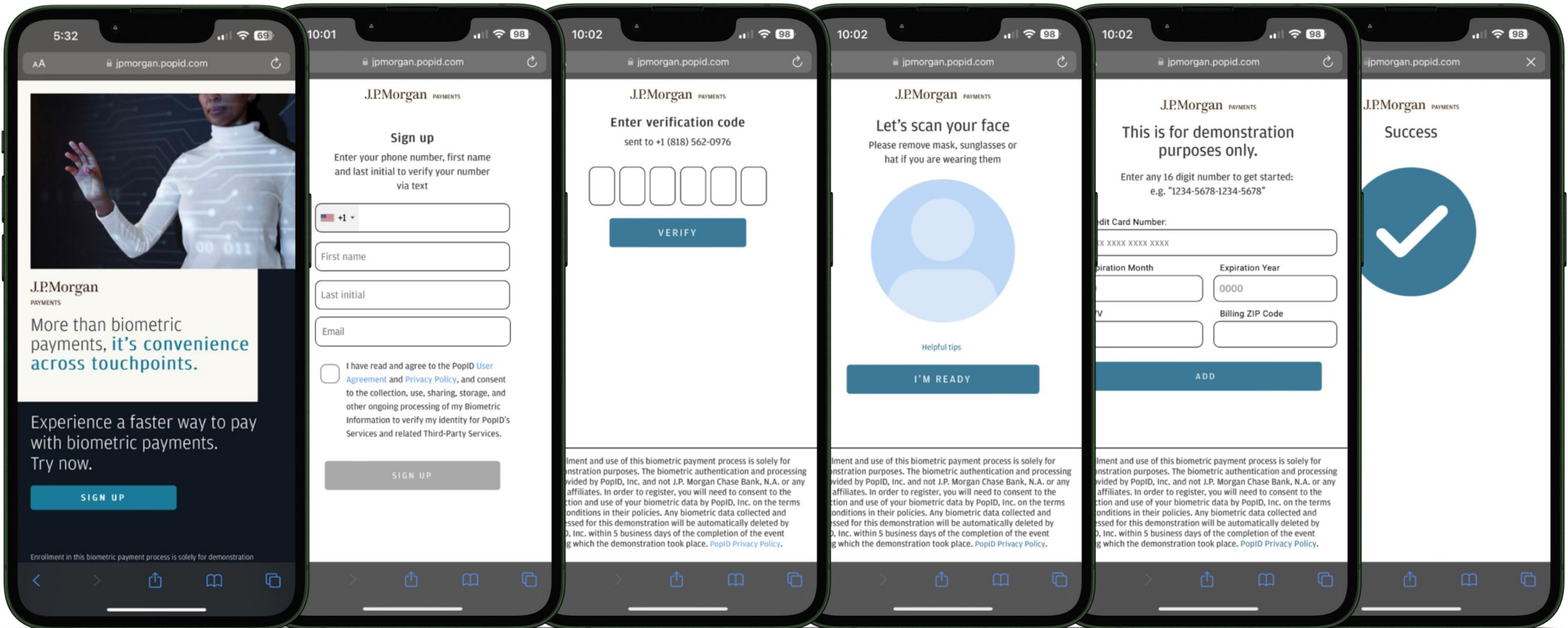Benefit from J.P. Morgan's experience supporting sellers in 120+ countries

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We want to be the trusted party of choice for biometrics that enable a safe and seamless checkout experience for consumers and merchants

How Biometrics enable fast, convenient, secure, and contactless payments

Enroll	Capture	Authenticate	Pay

Customer creates account, enrolls biometric and method(s) of payment, and signs terms & conditions

Customer scans biometric in-store at check-out

J.P. Morgan confirms identity of customer (based on biometric match)

J.P. Morgan pulls the default method of payment on file and executes the payment; customer receives receipt

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Consumer Enrollment

Consumer Check In And Check Out

We believe that

every payment speaks volumes.

Let's talk payments.
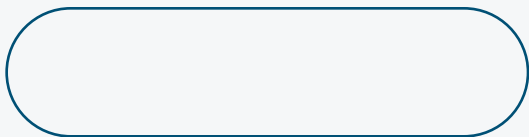
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Cloud-based Face Biometrics for Remote Onboarding and Authentication

Ajay Amlani, SVP Americas,
iProov

Welcome to iProov

Please register

Register

Already have an account? - Log in

Licenses   Contact Us   Privacy
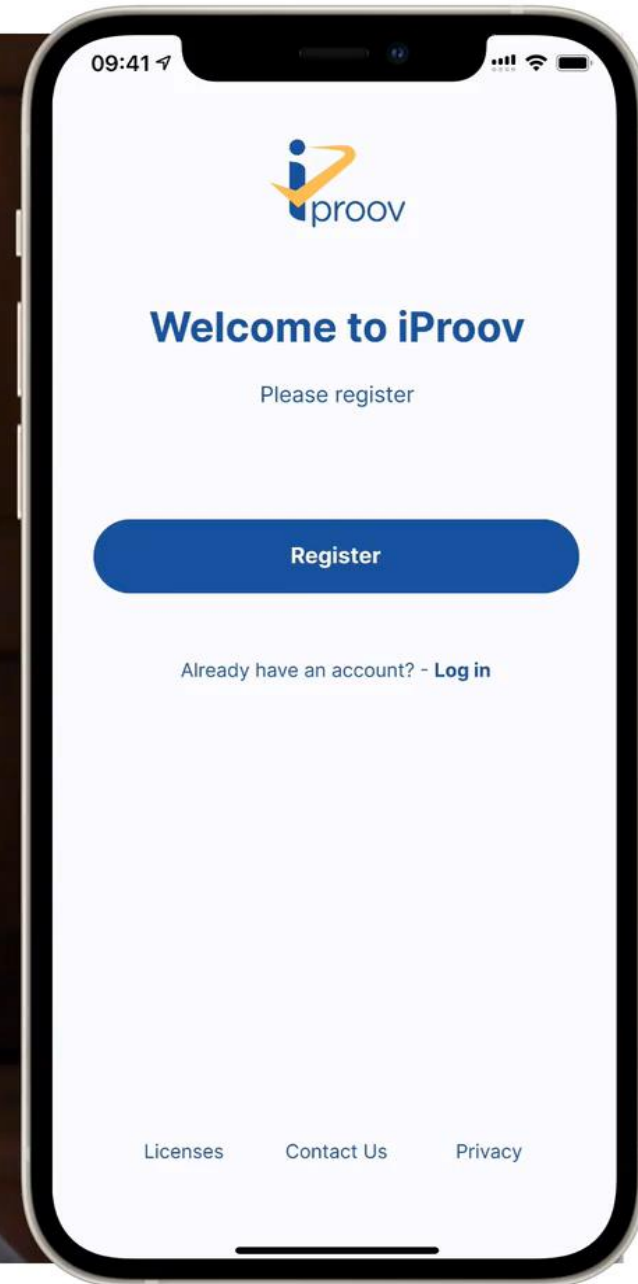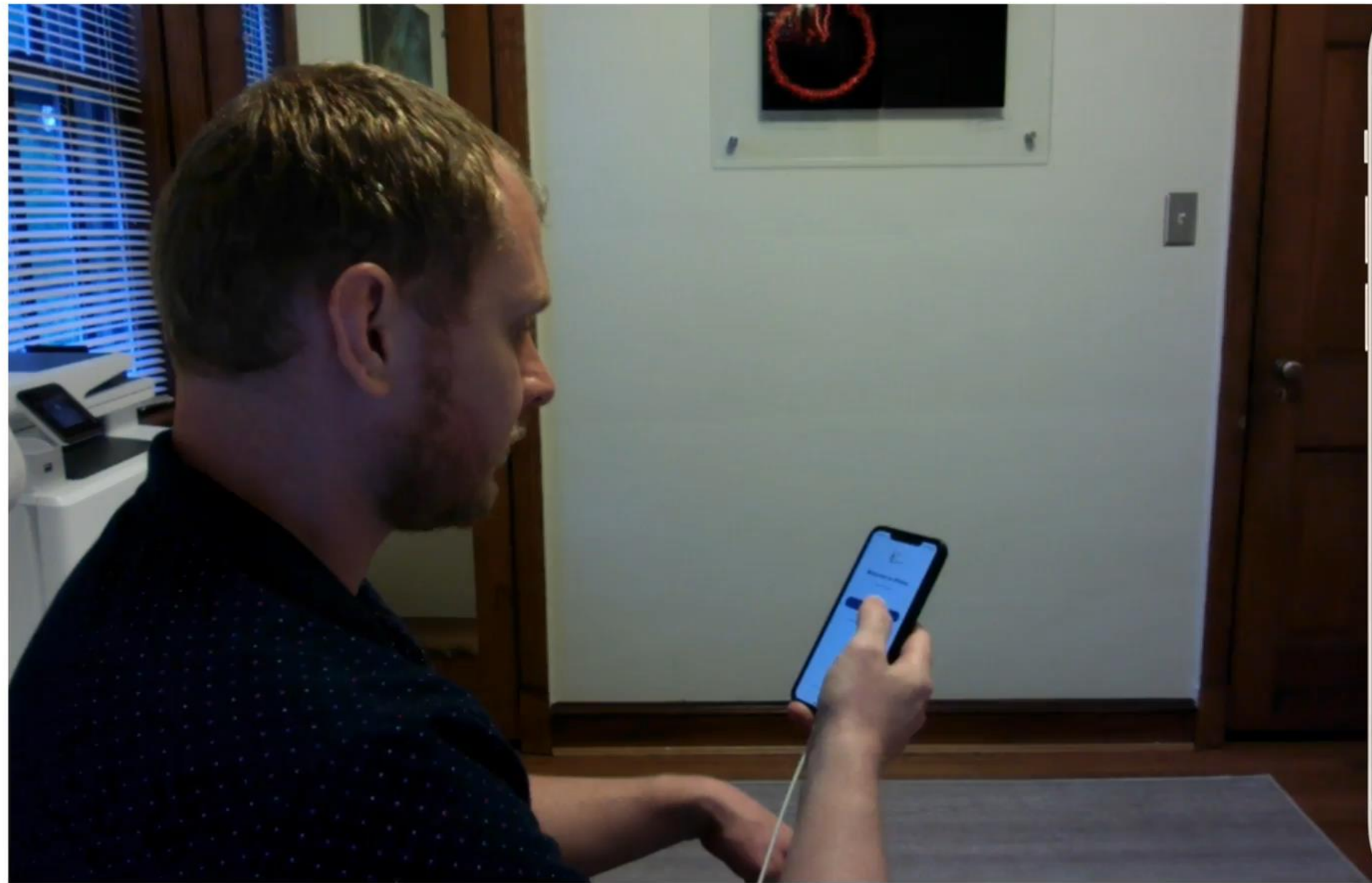
Cloud-based Face Biometric Authentication Use Cases

Registration

Sign in

Account Recovery
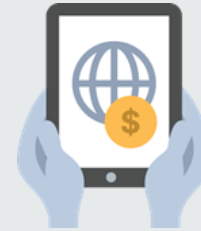
Step-up or MFA

New Applications

Face Biometrics with Liveness is Key for Frictionless User Experience and Consistent Performance

Balancing Performance, Accessibility and Security

Accessibility
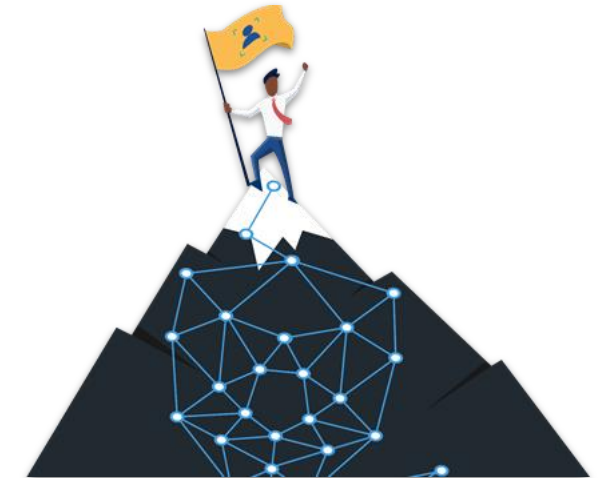
✅ WCAG 2.2 AA and Section 508 accredited

✅ Passive, effortless experience

✅ Device agnostic

Bias Mitigation

✅ Balanced datasets

✅ New component testing

✅ Operational system testing

Performance

✅ Attempts to pass: 1.08 - 1.22
Pass rate: Over 98%

✅ Mitigates abandonment, improves completion rates

The World's Most Accredited Biometric Vendor

iBeta
Accredits SDK-deployed solutions for Presentation Attack Detection to the standard SO 30107-3.

Independent Red Teaming (Outflank and AIS)
Depth of security is achieved through exposure.

eIDAS (Electronic Identification and Trust Services)
eIDAS Levels of Assurance refers degree of confidence in the claimed identity of a person.

NIST (National Institute of Standards and Testing)

Federal Reserve Synthetic ID Fraud Mitigation Vendor
iProov is the only best-of-breed face verification vendor to be listed.

WCAG 2.2 AA and Section 508 compliant

Certified to ISO/IEC 27001:3012 Information Security Management

Accredited for SOC 2 Type II

Named industry leader by Gartner and KuppingerCole

Proven Global Market Leadership at Scale

Government Services

Borders & Travel

Digital ID for citizens

Banks and Financial Services

Thank you

Genuine Presence Assurance

Right person, Real person, Right now

Ajay Amlani,

Ajay.amlani@iproov.com

Biometrics & Frictionless Experience?

Achieving a frictionless experience **requires addressing both technical and non-technical** aspects of biometric authentication.

FRICTION ZONE

How do we solve for friction?

Authentication **Intention**

1.

2.

Authentication **Outcome**

Technical (algorithm)

Non-Technical (UX)

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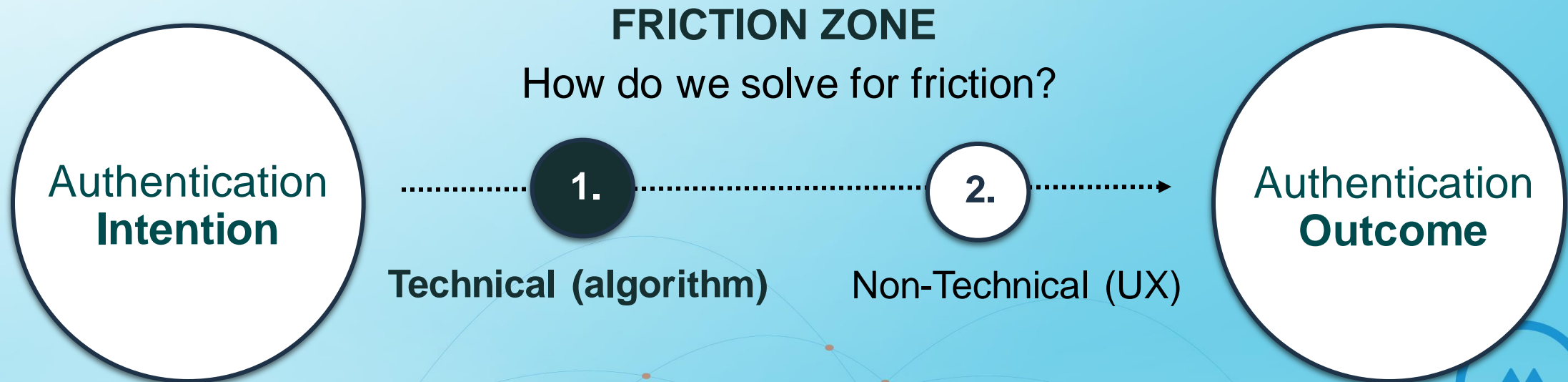
Biometrics and Authentication

Multi-Factor Authentication(MFA)

Something You Know

Something You Have

Something You Are

Behavioral Analytics

- Time of Day Services are Activated
- Location Services are Activated

Behavioral Biometrics

- Swipe/Scroll Patterns
- Angle & Hand Used to Hold Device

Biometrics

- Passive Liveness
- Active Liveness

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Key Areas for Algorithmic Excellence

TRANSPARENCY

Algorithm with **independently validated** and **published performances**

ACCURACY

Constantly Improved accuracy + Variation of datasets

EXPERIENCE

Have in-depth **understanding** of the deployment environment and end-users feedback loop

ETHICS

Research conducted with **ethically sourced** and **equitable training sets**

SECURITY

To build stakeholders' trust such as adequate **data protection** to enable **privacy enhancing** functionality

ROBUSTNESS

Ability to **productize** lab algorithm for real life operations with **inclusive** development principles, put importance on **accessibility** and **usability**

Biometrics Plays a critical role during the Mobile ID Enrollment
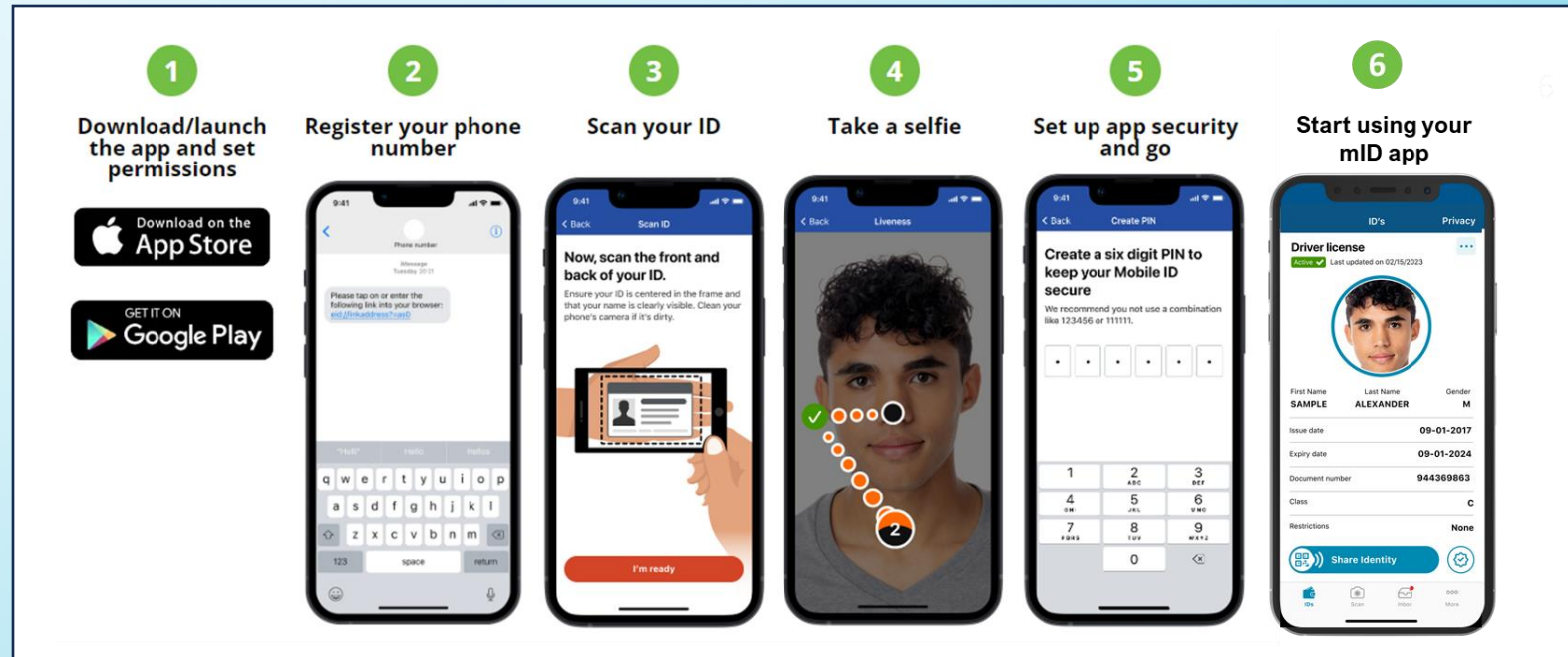
Enrollment

User's download their state's Mobile ID app from the App Store or Google Play and then complete the multi-step process to identify who they are.

License Photo – Users are required to take a picture of the front and back of their physical driver license. The DL image is validated to ensure it is a valid document.

Selfie Liveness – Users capture a selfie by moving their head slightly to connect the dots, ensuring a live person is being photographed. The image is then matched against the photo that exists in the state system of record (SOR).

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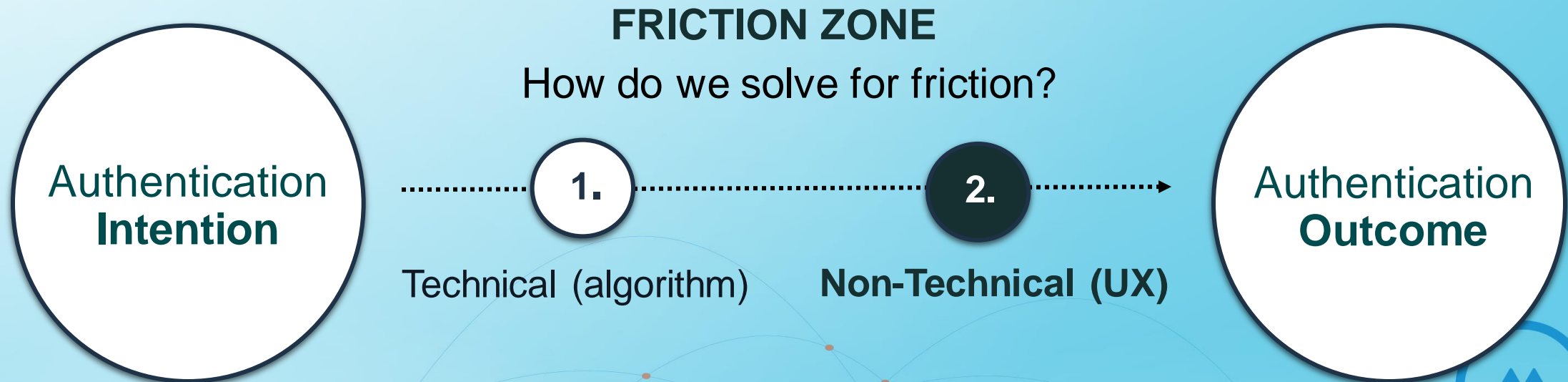
Reduce Friction Zone for Optimum UX

ACCESSIBILITY

Take a human-centered design approach. Keep your users at the core of the product to increase efficiency and minimize friction.

RESEARCH

Validate designs through user testing and research. Research helps eliminate bias, uncover friction points and increase usability.

INTEGRATED FEEDBACK

Leverage an integrated feedback portal for end-user collaboration.

MULTIPLE BIOMETRICS

Provide more than one biometric modality, to eliminate biometric-specific edge cases.

NON-BIOMETRIC OPTION

Provide one non-biometric authentication option to ensure all users have access.

UX CULTURE

Create a culture of UX to integrate human-centered design concepts at every stage of product development and to optimize UX efforts and initiatives.

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Accessibility is for Everyone.

DRIVES INNOVATION

New accessibility requirements create unique solutions.

INCREASES EFFICIENCY

Developing for disabilities creates a streamlined experience for everyone.

IS AN EQUALIZER

Provides an equitable solution for everyone. Inclusion by design.

How do you develop accessible solutions?

PRIORITIZE ACCESSIBILITY

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Increasing Accessibility = Decreasing Friction

MULTIPLE BIOMETRIC MODALITIES

Provide more than one biometric modality, to eliminate biometric-specific edge cases.
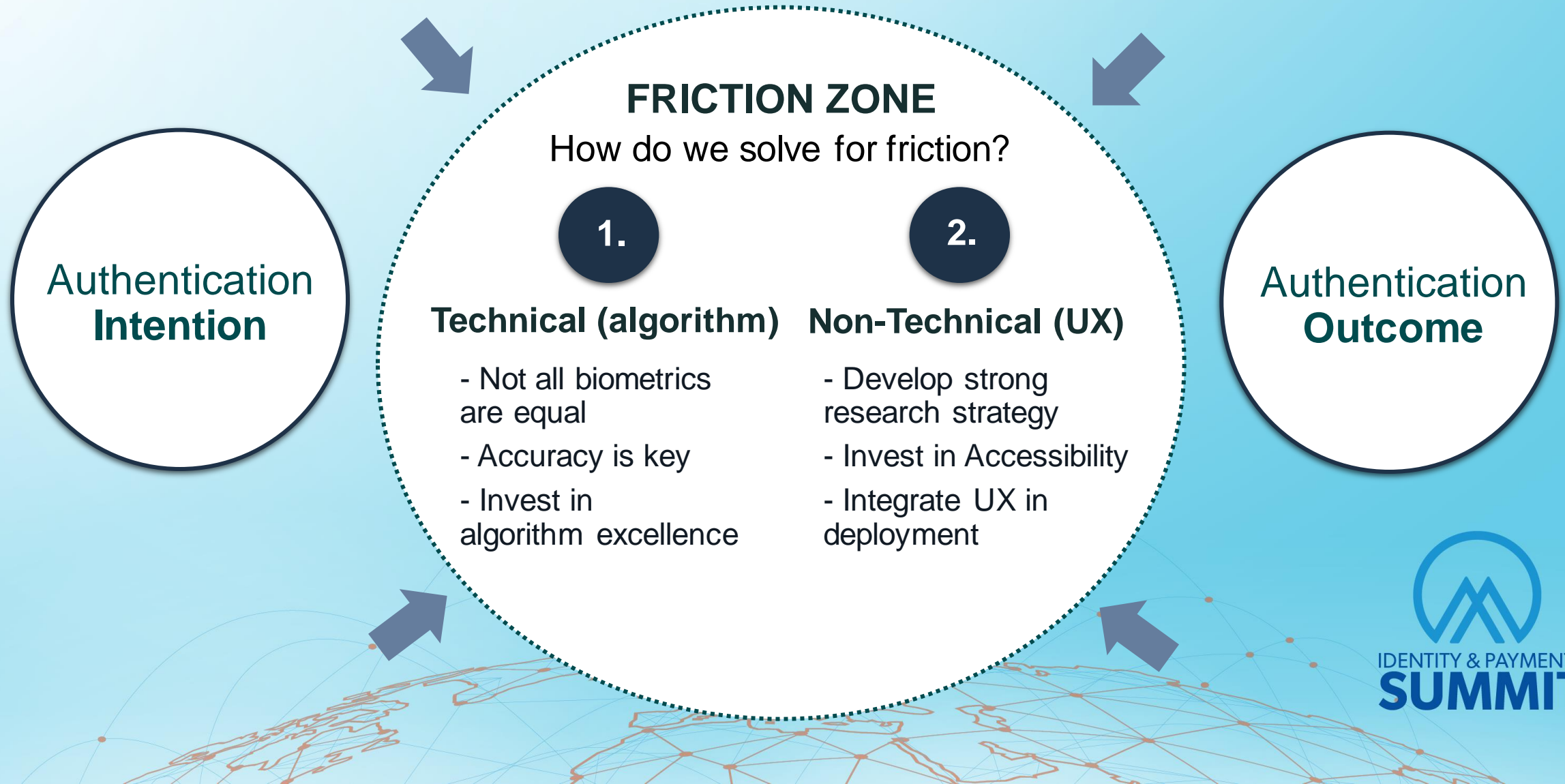
PROVIDE NON-BIOMETRIC OPTION

Provide one non-biometric authentication option to ensure all users have access.

INTEGRATED FEEDBACK

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How to Rollout Frictionless Biometrics

Authentication Intention

FRICTION ZONE
How do we solve for friction?

1.

2.

Technical (algorithm)

- Not all biometrics are equal

- Accuracy is key

- Invest in algorithm excellence

Non-Technical (UX)

- Develop strong research strategy

- Invest in Accessibility

- Integrate UX in deployment

Authentication Outcome

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Integrate UX in Deployment Plan

How to "Level-up" the UX team's role in deployment.

EMBED UX INTO PROJECT FRAMEWORK

Integrate UX into your project framework. UX should be a part of planning, stand-up, and retro.

FLEXIBLE FRAMEWORK

Involve UX early, and provide them with extra time to effectively design, test and validate before production.

TRAINING & EDUCATION

Create UX training for cross-functional roles, to optimize UX involvement and improve team collaboration.

REAL-WORLD FRAMEWORK

Leverage performance data, by having UX test the live product (I.e MVP) after launch, to obtain real-life feedback and insight.

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Questions?

THANK YOU!