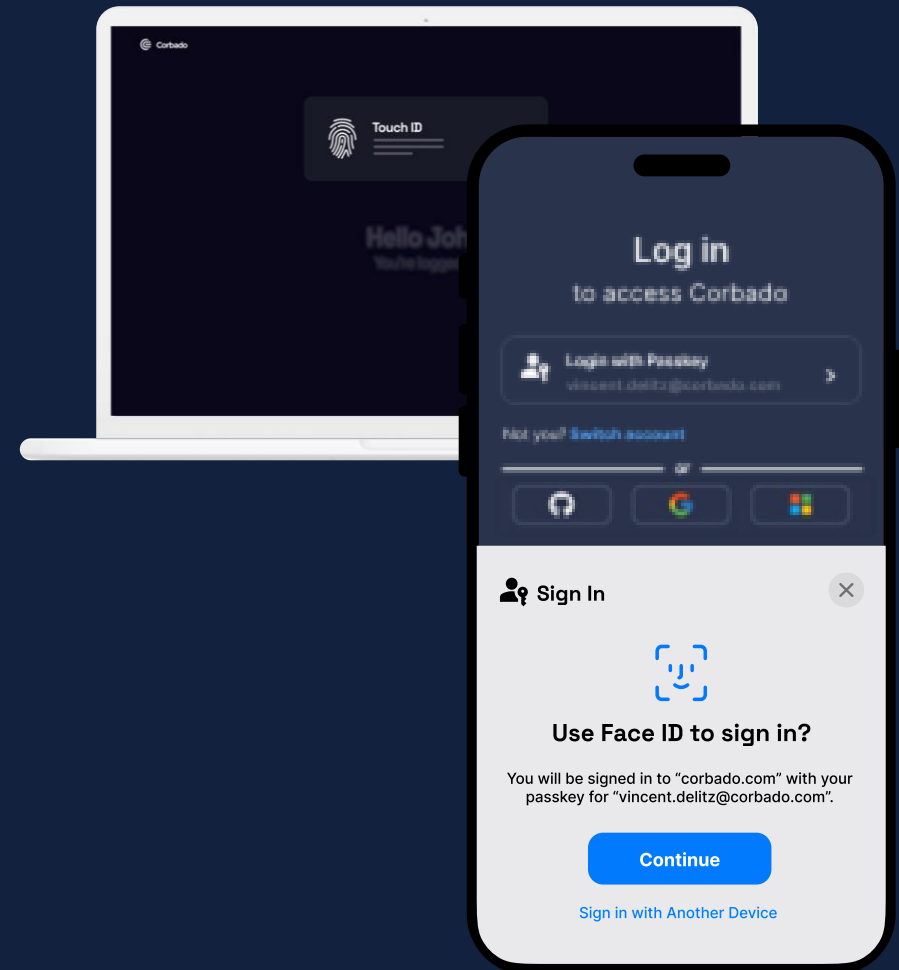# Corbado

Corbado Product Deck

We help you offer passkeys to your customers. Our Passkeys-as-a-Service plugin enables quick integration: no user migration, 10x adoption & less costs.

fido ALLIANCE™

aws PARTNER

Corbado is part of the FIDO Alliance and AWS Partner.

Touch ID

Hello Joh

Log in
to access Corbado

Login with Passkey
vincent.delitz@corbado.com

Not you? Switch account

Sign In

Use Face ID to sign in?

You will be signed in to "corbado.com" with your passkey for "vincent.delitz@corbado.com".

Continue

Sign in with Another Device

Executive Summary

Why now?
The new passwordless login standard

✓ **Constant threat of breaches:** Data breaches continue to soar and it's only a matter of time until your customers are under threat.

✓ **Passkeys become mainstream:** Passkeys have reached a major inflection point & are globally rolled out by major organizations.

Enterprise Approach
Get a customized passkey solution that suits your needs

✓ **Seamless passkey deployment:** Solve adoption challenges, integrate with IAM systems and cutting operational costs

✓ **Five-step approach:** ensures success, driving high adoption, security and reduced operational overhead.

Corbado Connect
Passkey platform for enterprise needs

✓ **Passwordless authentication journey:** Get a seamless passkey layer, phased adoption without user migration, ensuring compliance and high engagement

✓ **Enterprise-grade features:** Things like analytics, fraud protection and managed rollouts help maximize adoption, cut costs and enhance security in just 4-8 weeks.

Why Corbado
The passkey leader that understands you

✓ **SMS OTP Cost Reduction:** Cut SMS OTP costs by 30%-50% in the first year, reaching up to 80%-90% savings over three years.

✓ **ROI Timeline:** Strategic phased roll-out to maximize adoption across key applications, ensuring ROI within 6-12 months after full rollout.

Agenda

1. Introduction to Passkeys
2. Why integrate Passkeys now?
3. Our Approach for large Enterprises
4. Corbado Connect: the Enterprise Passkey Platform
5. Why Corbado?
6. Start your Passkey Journey

1. Introduction to Passkeys

Passkeys are a form of passwordless multi-factor authentication
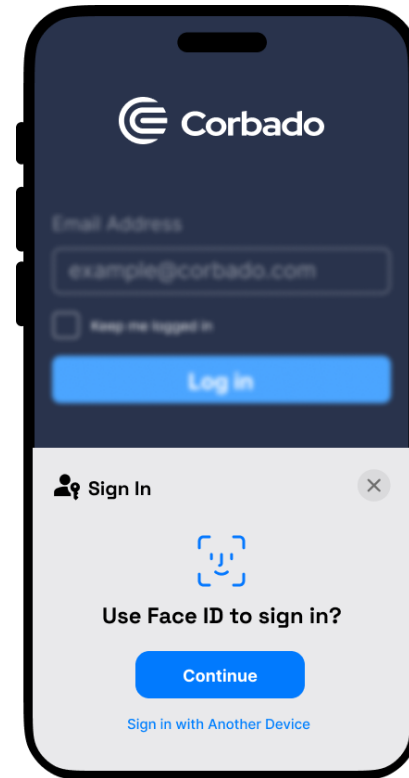
1. What are passkeys?

Secure alternative to passwords

Enabling users to authenticate using **cryptographic key pairs** stored on their devices

Works seamlessly with **biometrics** (e.g., Face ID, Touch ID) or PINs for **secure and fast access**

2. Why are passkeys better?

Security:
- ✓ **100%** phishing-resistant
- ✓ Eliminates password vulnerabilities

User Experience:
- ✓ **200%** faster and simpler login
- ✓ Increased conversions with a **400% higher login success rate**

Cost Savings:
- ✓ Reduces reliance on SMS OTPs
- ✓ **80%** lower operational costs over time

⟁ Corbado

Email Address

example@corbado.com

Keep me logged in

Log in

⟁ Sign In   ✕

Use Face ID to sign in?

Continue

Sign in with Another Device

Find more information and a passkey demo at https://passkeys.eu. You can test here if your device allows the usage of passkeys.

Passkeys are phishing-resistant and prevent credential-related threats

3. Why are passkeys secure?

Phishing Resistance

✓ Passkeys rely on **public-key cryptography**, generating a unique key pair for each service.

✓ The **private key remains on the user's device**, never exposed to the service provider, ensuring **phishing resistance.**

No Central Password Storage

✓ **Service providers store only public keys**, not passwords, eliminating the need for central password storage.

✓ Even if a provider's database is breached, **attackers cannot obtain user credentials**.

No Password Reuse

✓ Since passkeys are **unique for each service**, there's **no risk of password reuse** across different sites

Local Authentication

✓ Authentication is performed locally on the user's device, **reducing the risk of credential interception** during transmission

Multi-Factor-Authentication (MFA)

✓ Passkeys can be used **MFA** by combining something the user has (the **private key**) with something the user is (**biometrics**).

Passkeys are the only viable phishing-resistant MFA for consumers

4. How do passkeys compare against other authentication methods?

	Password	Password + SMS OTP (MFA)	Password + Authenticator App TOTP (MFA)	Passkeys (MFA)
Security: Protects against				
Guessing	✗	✓	✓	✓
Brute-force	✗	✓	✓	✓
Credential reuse	✗	✓	✓	✓
Device theft	✓	⚠	⚠	✓
Phishing	✗	✗	✗	✓
Server leaks	✗	✗	✗	✓
Man-in-the-Middle	✗	✗	✗	✓
SIM swapping	n/a	✗	n/a	n/a
UX: Allows the user to				
Stay on one device	✓	⚠	⚠	✓
Quickly login	⚠	✗	✗	✓
Stay within app context	✓	✗	✗	✓

⚠ **Passkeys** are the **only** viable authentication method for consumers to **fullfill all criteria**.

2. Why integrate Passkeys now?

Huge organizations were breached – the next breach is a matter of time

Recent data breaches pose a significant risk worldwide

Your customers next?

AT&T (July 2024)

Breached Data:
Names, phone numbers, email addresses, location

110m
Customers impacted

DELL (May 2024)

Breached Data:
Names, physical addresses, order information

49m
Customers impacted

Ticketmaster (May 2024)

Breached Data:
Names, email addresses, phone numbers, payment card information (including card numbers and expiration dates)

560m
Customers impacted

Your organization?

Breached credentials is available on the darknet and it's **only a matter of time** until criminals will use them to log into user account via credential stuffing attacks

x millions
Of your customers under threat

Your **customers' credentials are already stolen** & available on the darknet. It's **only a matter of time** when they are used to breach your customers' accounts.

Passkeys have reached a major inflection point & are globally rolled out

What's the adoption of passkeys?

Widespread recognition

- By mid-2024, passkeys have become **widely recognized** as **phishing-resistant MFA**
- **+95%** of global devices are **passkey-ready**
- Organizations and users benefit from **enhanced security & convenience**, making them the preferred choice for protecting users

Regulatory enforcement

- End of 2023 / early 2024, **regulatory bodies** recognize passkeys as the new standard and only way for **phishing-resistant MFA** for consumers
- **Essential Eight Framework, CISA** and **NIST** strongly recommend passkey integration

Growing adoption

- Throughout 2023, more **large, digital-first** services and applications **integrate passkeys**
- Driven by **demand** for **stronger** and **more user-friendly** authentication
- This period saw significant **progress in standardization and interoperability**, making passkeys more accessible to a broader audience.

Passkey introduction

- In 2022, **Big tech** (Apple, Google & Microsoft) **announce support** for passkeys as part of their commitment to FIDO Alliance
- **Devices, operating systems & browsers** get support for **passkeys**

2022   2023   2024   2025

3. Our Approach for large Enterprises

Corbado helps large enterprises successfully launch passkeys at scale

Current passkey challenges

Poor user adoption
- No tested UX, leading to confusion
- Inconsistencies across devices & browsers
- Unknown edge cases and lack of user messaging

Complex implementation
- High development efforts required
- Integration challenges with existing IdPs / CIAMs
- Keeping up with WebAuthn changes

ROI uncertainty
- Increased support calls due to UX friction
- No guaranteed SMS cost savings
- Fraud and phishing threats still present

Compliance & security risks
- Regulatory uncertainty (e.g., PSD2 compliance)
- New potential security attack vectors
- Device sharing and passkey syncing concerns

Corbado objectives & solutions

10x higher passkey adoption
- Proven UX that drives adoption across all segments
- Optimized device & browser compatibility
- Clear user guidance to reduce confusion

Integration in weeks, not months
- Seamless connection to existing IdPs / CIAMs without migration
- Lightweight implementation that avoids complex setup
- Future-proofed solution that evolves with WebAuthn
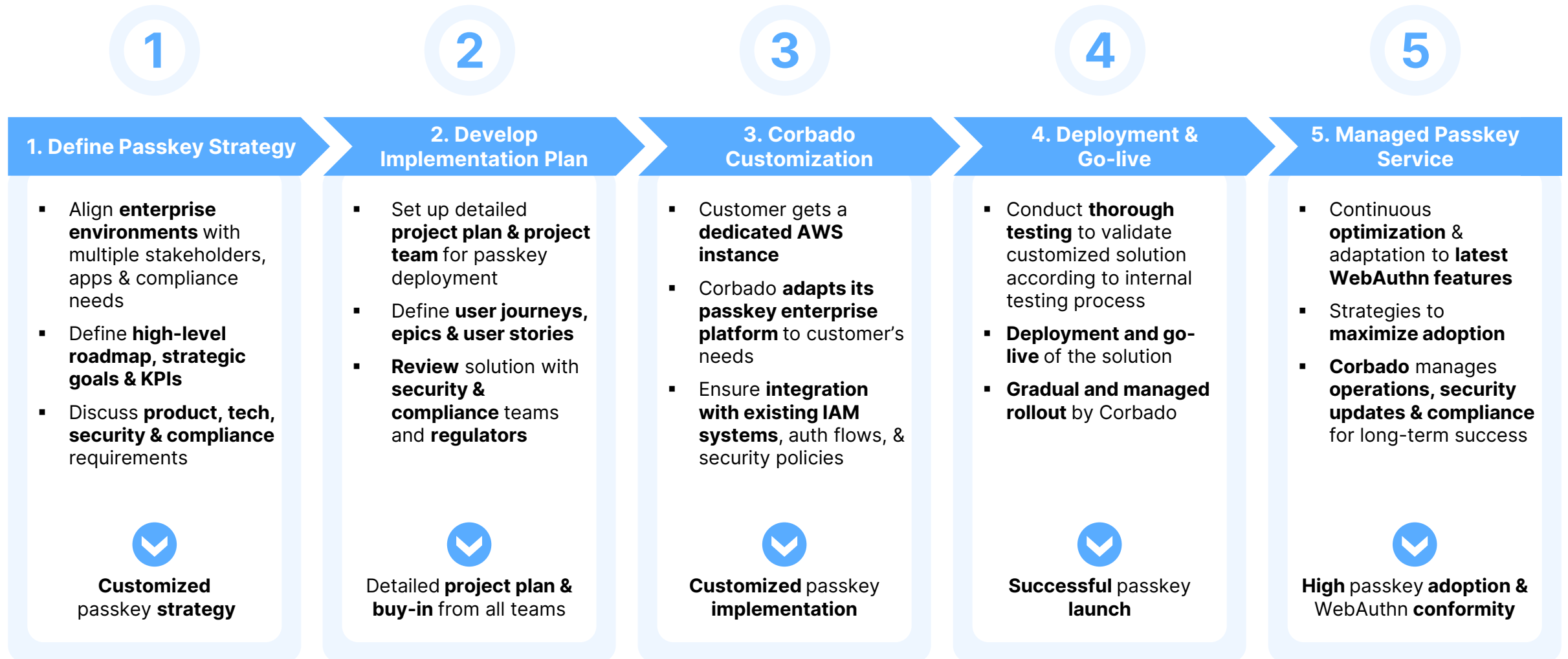
Cut costs by up to 70%
- Eliminates SMS OTP costs, leading to immediate ROI
- Reduces support costs by minimizing login friction
- Lowers fraud and phishing risks, preventing financial loss

Enterprise security & compliance
- Fully phishing-resistant MFA solution
- Built for highly regulated industries
- Supports compliance with regulations (e.g. PSD2)

Five steps to ensure seamless passkey rollout & high passkey adoption

1 **2** **3** **4** **5**

1. Define Passkey Strategy	2. Develop Implementation Plan	3. Corbado Customization	4. Deployment & Go-live	5. Managed Passkey Service
▪ Align **enterprise environments** with multiple stakeholders, apps & compliance needs	▪ Set up detailed **project plan & project team** for passkey deployment	▪ Customer gets a **dedicated AWS instance**	▪ Conduct **thorough testing** to validate customized solution according to internal testing process	▪ Continuous **optimization** & adaptation to **latest WebAuthn features**
▪ Define **high-level roadmap, strategic goals & KPIs**	▪ Define **user journeys, epics & user stories**	▪ Corbado **adapts its passkey enterprise platform** to customer's needs	▪ **Deployment and go-live** of the solution	▪ Strategies to **maximize adoption**
▪ Discuss **product, tech, security & compliance** requirements	▪ **Review** solution with **security & compliance** teams and **regulators**	▪ Ensure **integration with existing IAM systems**, auth flows, & security policies	▪ **Gradual and managed rollout** by Corbado	▪ **Corbado** manages operations, security updates & compliance for long-term success
⌄	⌄	⌄	⌄	⌄
Customized passkey **strategy**	Detailed **project plan & buy-in** from all teams	**Customized** passkey **implementation**	**Successful** passkey **launch**	**High** passkey **adoption &** WebAuthn **conformity**

4. Corbado Connect:
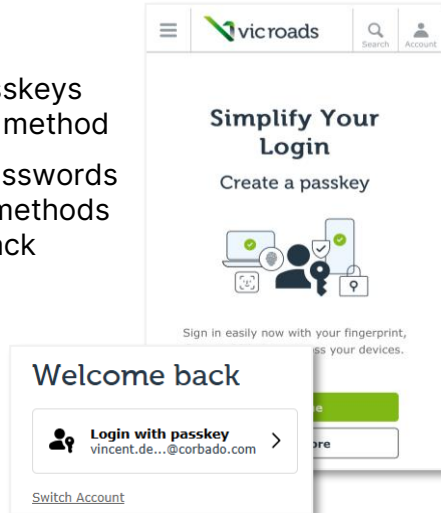# The Enterprise Passkey Platform

Corbado Connect guides you on the entire passwordless journey

Passwordless journey

Phase I

- Add passkeys as login method
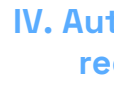- Keep passwords / other methods as fallback

Phase IV

- Self-service account recovery
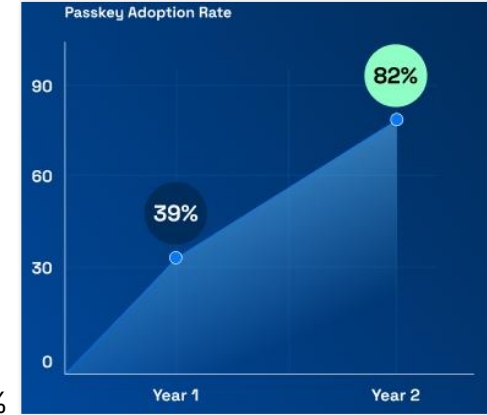- Usage of liveness check and IDs

Phase II

- Get more users to create & use passkeys
- Passkeys as default login method
- Reach critical adoption number, e.g. 80%

Phase III

- Remove passwords from accounts where passkeys are used all the time
- Push users to remove passwords with confidence

I. Add passkeys

II. Get passkey adoption up

IV. Automate recovery

III. Go passwordless

Add a passkey layer to your IdP / CIAM without user migration

Corbado Connect

What's Corbado Connect?

- **Passkey enterprise platform:** Enterprise-grade WebAuthn server with several components

- **Zero user migration:** Connect to existing IdPs / CIAMs without any user data migration

- **Passkey layer:** Works alongside current authentication stack providing enterprise-grade passkey features

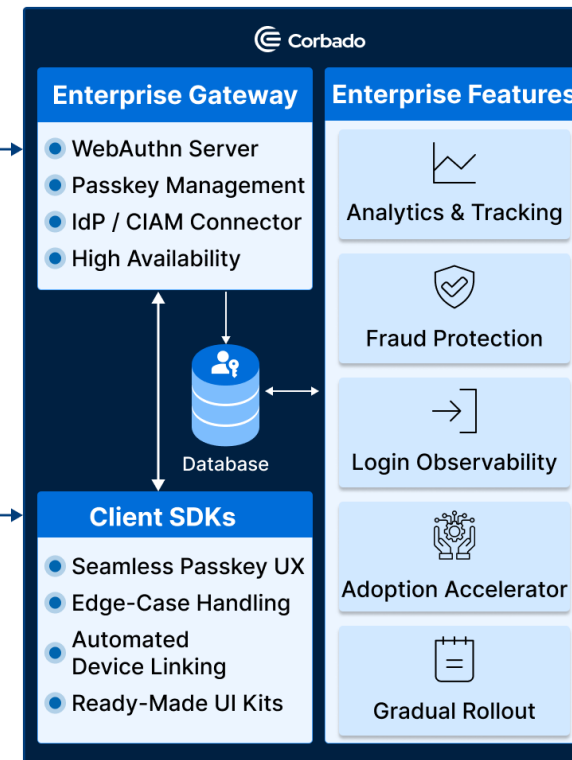- **Passkey-optimized UX:** Pre-built frontend components to ensure best passkey experience

Enterprise Features

- **Comprehensive analytics:** Track user engagement

- **Fraud protection:** Prevent fraudulent login attempts

- **Login observability:** Monitor login events & activity

- **Adoption accelerator:** Optimize for higher adoption

- **Riskless rollout:** Gradual and managed rollout

Architecture

Customer Application

IdP / CIAM database

http://www.example.com

Desktop

Mobile Web

Login

Native App

Corbado Connect

Corbado

Enterprise Gateway
- WebAuthn Server
- Passkey Management
- IdP / CIAM Connector
- High Availability

Database

Client SDKs
- Seamless Passkey UX
- Edge-Case Handling
- Automated Device Linking
- Ready-Made UI Kits

Enterprise Features

Analytics & Tracking

Fraud Protection

Login Observability

Adoption Accelerator

Gradual Rollout

fido ALLIANCE

aws PARTNER Well-Architected Partner Program

Login data is passed from components to Frontend & Backend API

Corbado Connect artefacts

1. Components:

- Embedded as JavaScript in your Frontend
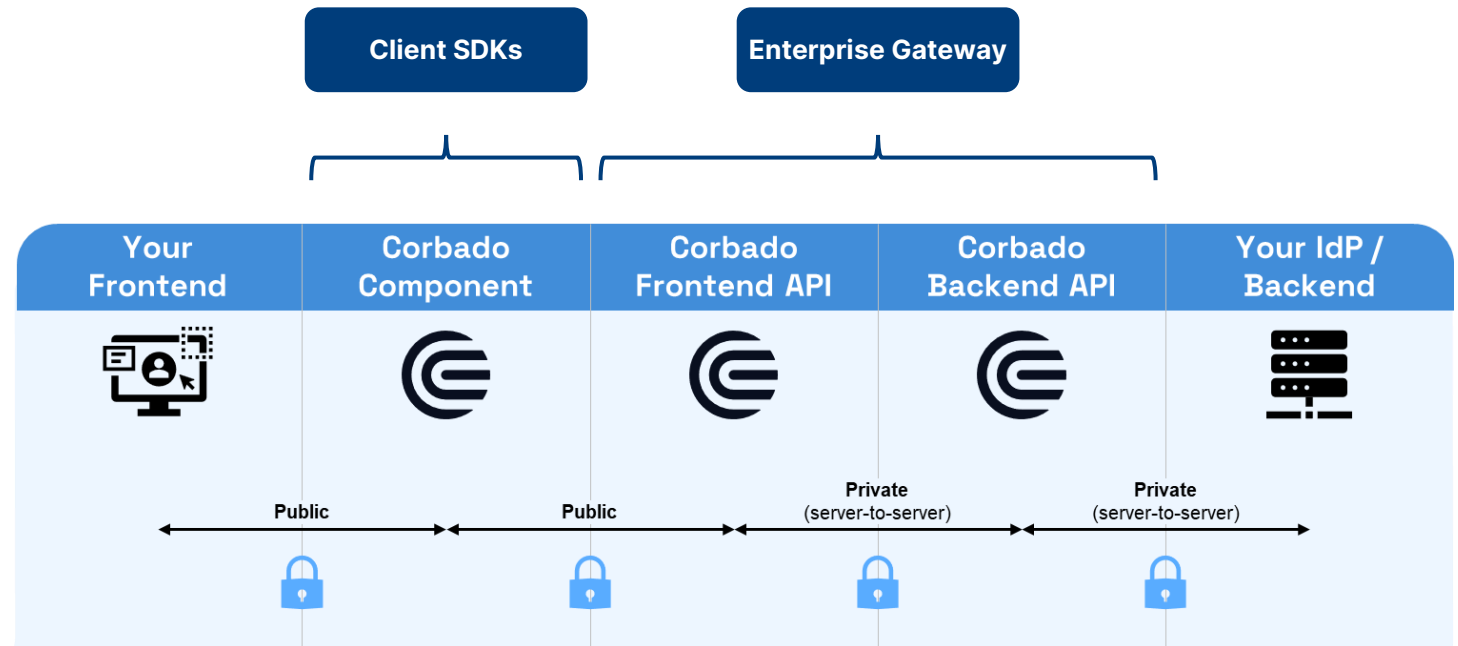- Components communicate only with Corbado Frontend API

2. Frontend API:

- Frontend API is a public API
- Receives calls from public clients (e.g. Corbado Component)
- Communicates securely and via private channel with Backend API
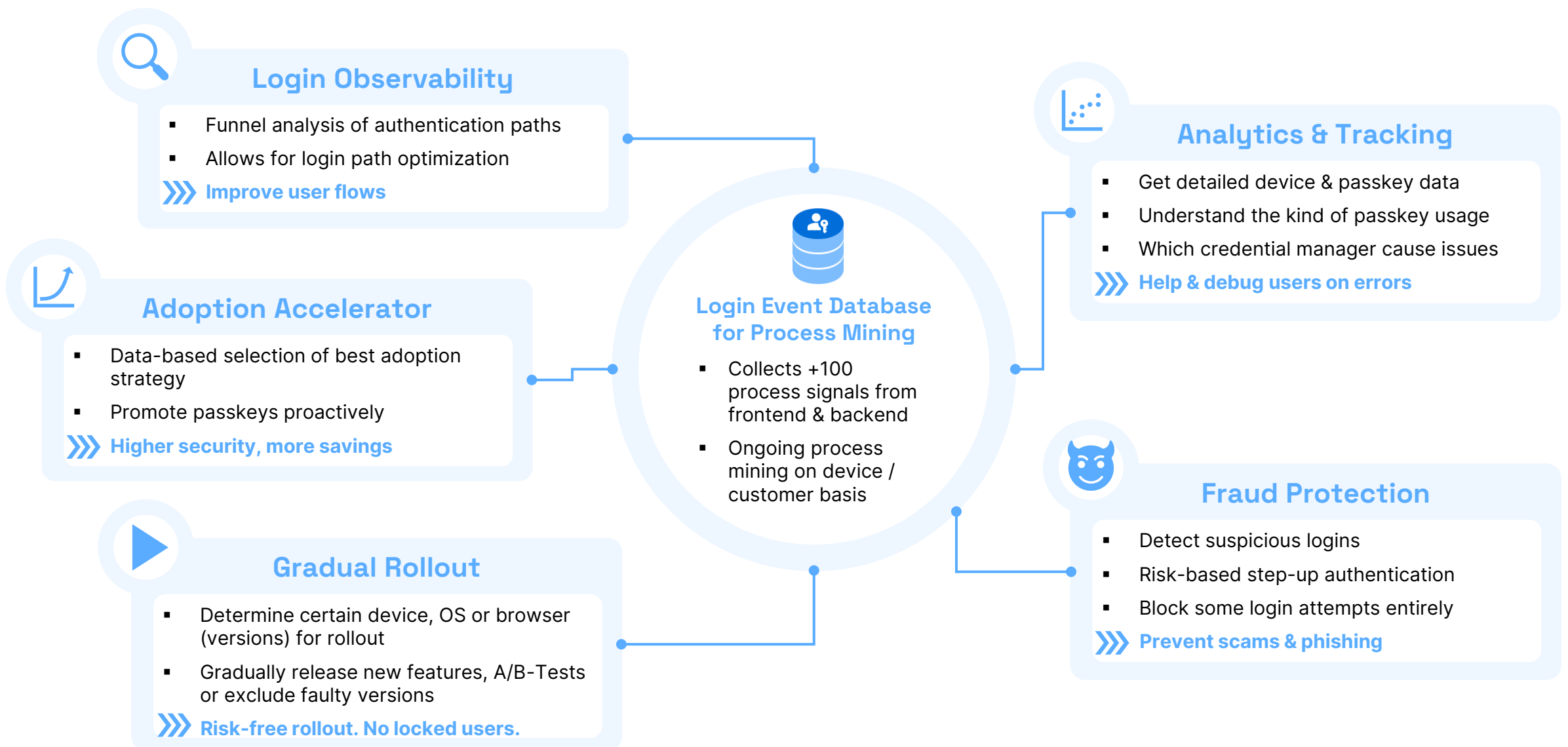
3. Backend API:

- Connects securely to your IdP / Backend
- Communication only via private server-to-server calls

Data flow chart

Login event database is central data source for all enterprise features

Login Observability
- Funnel analysis of authentication paths
- Allows for login path optimization

>>> **Improve user flows**

Analytics & Tracking
- Get detailed device & passkey data
- Understand the kind of passkey usage
- Which credential manager cause issues

>>> **Help & debug users on errors**

Adoption Accelerator
- Data-based selection of best adoption strategy
- Promote passkeys proactively

>>> **Higher security, more savings**

Login Event Database for Process Mining
- Collects +100 process signals from frontend & backend
- Ongoing process mining on device / customer basis

Gradual Rollout
- Determine certain device, OS or browser (versions) for rollout
- Gradually release new features, A/B-Tests or exclude faulty versions

>>> **Risk-free rollout. No locked users.**

Fraud Protection
- Detect suspicious logins
- Risk-based step-up authentication
- Block some login attempts entirely

>>> **Prevent scams & phishing**

The end-to-end passkey solution for enterprises

What's included in Corbado Connect?

Infrastructure

- ✓ **Server Infrastructure:** Reliable and available system to securely manage user credentials.
- ✓ **Scalability:** Ensure the solution scales with user growth
- ✓ **Security:** Proper implementation is critical to avoid vulnerabilities.

Backend

- ✓ **Passkey Intelligence:** User, device & passkey management
- ✓ **Integration into Existing Systems:** Build backend for smooth integration
- ✓ **Cross-Device Auth:** Implement support for cross-device cases
- ✓ **Passkey Delete:** Handle passkey deletion on server
- ✓ **Automatic** passkey **upgrades** via Conditional Create

Frontend

- ✓ **Check Device Compatibility:** Ensure the system works across devices & browsers
- ✓ **Address all applications:** Web & existing apps
- ✓ **Client-Side WebAuthn:** Implement required WebAuthn API calls
- ✓ **Conditional UI:** Passkey autofill
- ✓ **Fallbacks:** Offer fallback auth
- ✓ **Update & deletion** of passkeys via WebAuthn Signal API

UX

- ✓ **Passkey User Journeys:** Pre-defined user flows
- ✓ **Passkey messaging:** Adjusted passkey messaging
- ✓ **Passkey Management Settings:** Enable users to self-manage their passkeys
- ✓ **Promote passkey:** Use upgrade popups
- ✓ **Upcoming:** Self-service recovery

Testing

- ✓ **Automated Testing:** E2E testing and continuous monitoring of functionality including FBN
- ✓ **CI/CD Integration:** Integration of test suite into FBN CI/CD pipelines
- ✓ **Test suite:** Unit, integration, system and end-to-end tests

Management UI

- ✓ **Analytics and Reporting:** Monitor performance and user engagement
- ✓ **Feature Toggle:** Add support to switch off passkeys in case of emergency
- ✓ **Rollout Cockpit:** No-code rollout of device types

General

- ✓ **Maintenance**: Ongoing updates and support are essential (the standard is evolving), covering edge cases, browser updates, and security patches
- ✓ **Monitoring:** Continuous health check and optimization of passkey system

Optimize large passkey deployments with the Management Console

Management Console

- **Boost passkey adoption** with customizable rules

- Optimize **passkey intelligence** for seamless authentication

- **Debug user login issues** with real-time insights

- **Analyze login patterns**, identify bottlenecks and use **login process mining** to improve UX

- Track adoption trends and **quantify SMS OTP cost savings**

Example

Funnel analysis

Process search

Customize pre-built frontend components to match your brand & flow
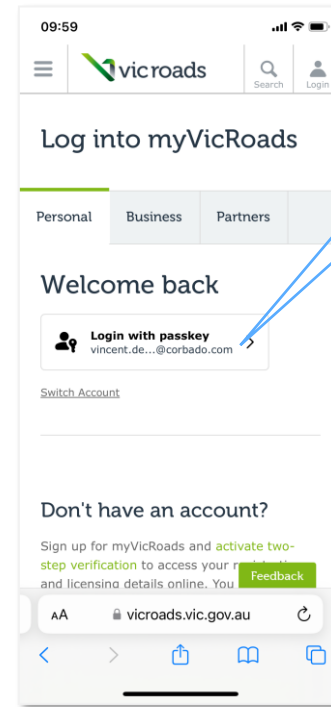
Frontend components

Example

- **Fully customizable styling** to match your brand

- **Pre-configured logic & flows** to avoid building from scratch

- **Optimized error handling & copy** designed for high passkey adoption

- **Boost adoption** by getting more users to create and use passkeys
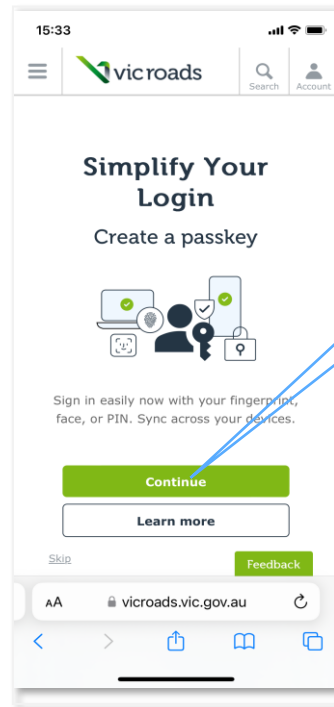
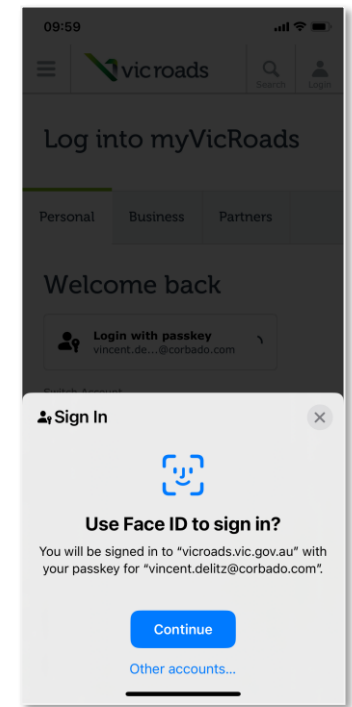In login flow

1-Tap passkey login

1. Create passkey   **2. One-tap button**   **3. Login**

Seamless rollout & compliance with Corbado's enterprise agreement

Enterprise Agreement Benefits

Integration & Rollout

- 4-8 weeks **integration support** by dedicated Corbado team
- **End-user onboarding** communication support
- **Managed rollout** with Corbado to maximize passkey adoption
- **Training your staff** for best user support

Operations

- Full compliance with **local privacy & residency laws**
- **High availability** and **disaster recovery**
- **Custom SLA, 24/7 support** & incident management

Compliance

- **Certifications, regulatory & 3rd-party** audits: ISO & SOC2
- **Audit rights** to access and **break-glass** admin to AWS account
- **Escrow agreement** (proof of deployability)
- **Penetration testing**
- Exit strategy & **data portability** provisions

Reporting & Control

- **Audit logs & session replay** for error tracing
- Central **management cockpit** to steer your passkey rollout
- **Comprehensive analytics & KPIs** for informed decision-making

5. Why Corbado?

Minimum risk. Minimum integration effort. Maximum passkey adoption.

Benefits of Corbado

I. Fully managed solution

- ✓ **Nothing to worry** about: managed passkey product
- ✓ **End-to-end passkey** implementation & maintenance
- ✓ Get latest **WebAuthn updates** automatically

No operational overhead. Save internal resources

II. Highest passkey adoption

- ✓ **Proven expertise** in increasing passkey adoption (largest vendor-driven passkey rollout worldwide)
- ✓ **Passkey intelligence** to drive adoption
- ✓ Highest adoption = **highest cost savings**

10x higher passkey adoption compared to DIY

III. WebAuthn / Passkey know-how

- ✓ Built +3 years to create the **most user-centric passkey** solution
- ✓ **Solves all edge cases:** compatibility across OS & browsers (+versions)
- ✓ **100% passkey solution** (no 80/20 gaps or issues)

Best passkey UX saves IT support costs

IV. Risk-averse passkey rollout

- ✓ Know-how in **product, tech, security & compliance** (+banking auth)
- ✓ Successful rollouts **without user confusion**
- ✓ **Avoid user lockouts** & increased support requests

Risk-free rollout. No surprises, no failed logins

V. Login observability & optimization

- ✓ **Predict passkey adoption** & login rates
- ✓ **Clear ROI** calculation
- ✓ **Process mining** of login behavior
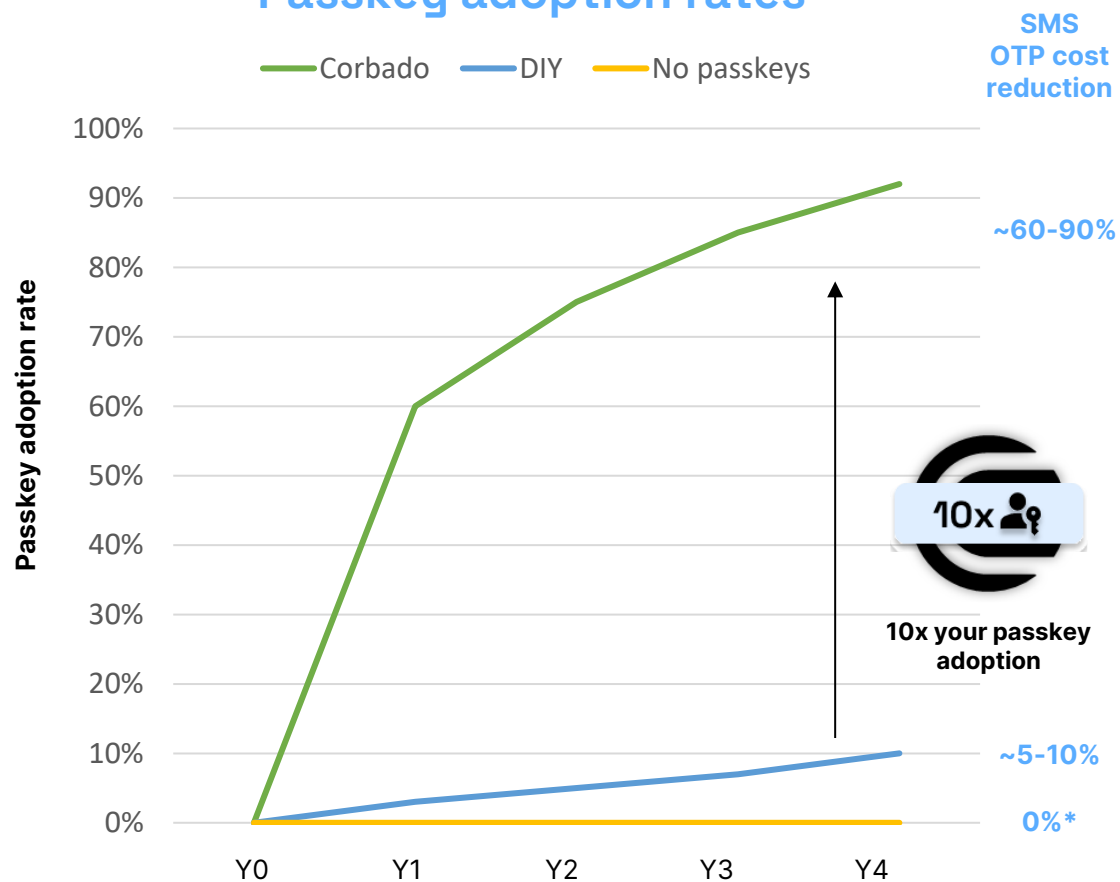- ✓ **Support of 100+** OS & browser (+versions) **combinations**

Full transparency to understand user flows

Corbado saves you money from day 1 and has a ROI in <12 months

Passkey adoption rates

SMS OTP cost reduction

— Corbado — DIY — No passkeys

Passkey adoption rate

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

~60-90%

10x

10x your passkey adoption

~5-10%

0%*

Y0   Y1   Y2   Y3   Y4

Business impact with Corbado

+90%
passkey adoption

<12 months
ROI

100%
phishing-resistant

70%
Lower operational costs

4x
Faster logins

75%
Faster time-to-market

GDPR   NIST   CERTIFIED ISO/IEC27001 PROKS CERTIFICATION   CISA CYBERSECURITY & INFRASTRUCTURE SECURITY AGENCY   aws Qualified Software   fido ALLIANCE

Corbado successfully deployed passkeys to almost 5m VicRoads users

Customer Success Story: VicRoads

VicRoads
- Vehicle registration and driver licensing authority in Victoria, Australia.
- Registers +6m vehicles annually and licenses +5m million drivers.
- Web platform and two native iOS / Android apps

Country: Australia

Industry: Government

Challenge

Expensive & suboptimal UX with SMS MFA

- Traditional passwords & SMS OTPs led to high costs & provided a suboptimal user experience
- High adoption of passkeys needed to justify investment
- Needed seamless integration with existing CIAM without user migration
- Locality of user data in Australia

Solution

Corbado's no-risk, passkey-first auth

- Integrated passkeys on top of existing CIAM – no user data migration required
- Dedicated AWS instance in Australia
- Passkey-first solution with fallbacks for non-passkey-ready devices
- Phased rollout starting with small share of devices and continuously increasing it
- Passkey-optimized, identifier-first approach

Results

High passkey adoption & SMS savings

- 50% passkey adoption within weeks – industry-leading rates
- Phishing-resistant, customized login experience for every users
- Significant lower SMS OTP costs in weeks
- Rollout without any additional passkey-related customer support case

6. Start your Passkey Journey

We provide you a customized passkey solution that meets your goals

4. Protect your users & save costs
Offer phishing-resistant MFA to your users, see passkey adoption grow and costs decline

3. Implement & go live
Embed Corbado's pre-built components, SDKs & Enterprise Gateway to go live with passkeys

2. Get free passkey expert assessment
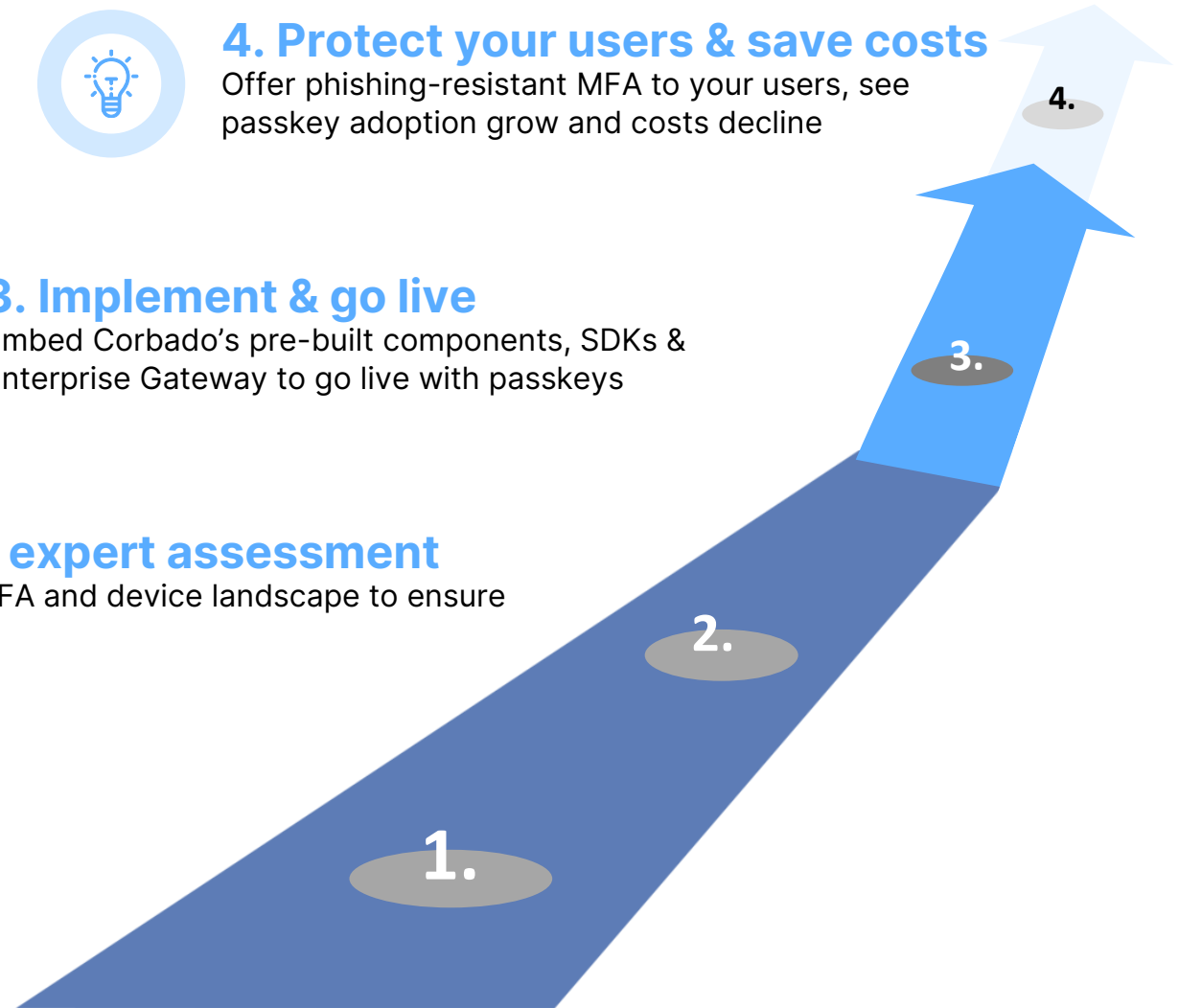We assess your IdP / CIAM, MFA and device landscape to ensure a seamless rollout

1. Schedule a call now
Tell us about your setup and security needs – we will guide you through the best approach

Corbado

We help you 10x your passkey adoption rate

At Corbado, we are dedicated to revolutionizing user authentication with passkeys that enhance user experience, increase security and boost conversion rates.

For more information, visit us at www.corbado.com or read our blog www.corbado.com/blog

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