



Workforce Identity Verification

An Authentication Prerequisite



Password-Based Authentication: The Identity Verification Gap

Passwords are the weakest form of authentication and do not identify the user who leverages them.

81%

of breaches involve brute force or the user of lost or stolen credential.

90%

of social engineering attacks are phishing attacks intended to steal users' credentials, including passwords.

60%

of employees in the U.S. have reported sharing credentials with other employees.

Passwords are memorized secrets that can be lost, stolen or shared.

For this reason, it is utterly impossible to identify for a fact who is authenticating with a username and a password.

To that effect, passwords only reach the lowest level of identity assurance per the NIST 800-63-3 guidelines, or IAL1. In other words, leveraging a password infers that no user identity evidence is collected in the process.

Identity Service Providers: The Identity Verification Gap

Identity service providers create, maintain, and manage identity information for users and also provide authentication services to relying applications within a federation or distributed network. They bring a level of convenience to employees who needs to access enterprise applications throughout the day to conduct business effectively and without having to enter credentials each time. See it as a "one-click access to all enterprise apps."

Identity service providers are not in the business of proofing the identity of a user

To comply with any level of identity assurance per the NIST 800-63-3 Guidelines is the responsibility of the user. So, what does it mean? The employee who leverages a single sign- on (SSO) platform to access enterprise applications must use a solution that not only verifies in an indisputable fashion his identity but that also integrates with the platform itself. This is why SSO platforms only reach the lowest level of identity assurance per the NIST 800-63-3 guidelines, or IAL1.



Identity service providers that leverage passwords expand the risk of identity compromise

Since there is no certainty about who is on the other side of the communication there is really no security, since there is no way of irrefutably identifying who's truly logging into an SSO platform account.

Moreover, the use of a password at any point in time during the authentication process puts the user at risk of being the victim of an identity compromise. After all, 81 percent of data breaches are caused by poor password management. So, password-based single sign-on is a very bad idea.

When authenticating an employee, SSO platforms do not integrate any details about how the employee can be identified.

Identity Service Providers: The Identity Verification Gap

To mitigate the risks of identity compromises and consequently of data breaches, some organizations have eliminated passwords from their authentication processes and gone passwordless.

How truly reliable are passwordless solutions?

To reach the highest levels of identity and authentication assurance to mitigate any risk of identity compromise, passwordless solutions for workforce authentication need to integrate an application that proves the identity of an employee.

Interestingly enough, when you take a close look at the identity and access management market, you instantly realize that it is extremely siloed. Identity proofing solutions, MFA applications, passwordless solutions, and finally single sign-on platforms operate independently from one another. In other words, those silos do not talk to one another.

Most passwordless solutions for workforce authentication, including those that leverage basic user biometrics like Touch ID and Face ID, do not verify the identity of the users.

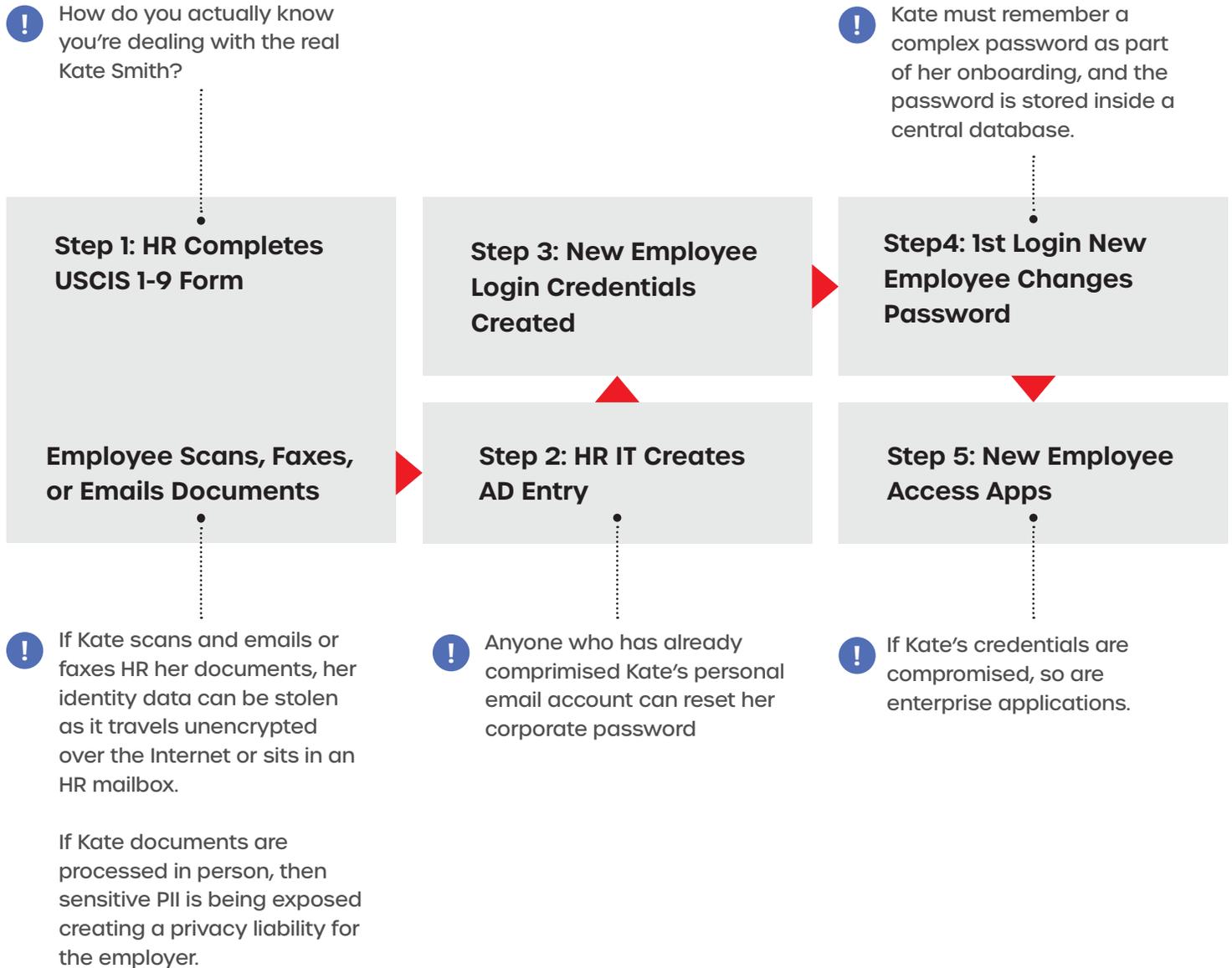
So, as much as password mismanagement related issues are not a concern any longer for a company that has gone passwordless, passwordless authentication is only reliable if, and only if, the process also includes identity proofing.

And a great majority of passwordless authentication solutions do not verify a user identity, which prevents organizations from knowing who is on the other side of the communication, when there is a request to access their systems and enterprise applications.



New Employee Onboarding: The Identity Verification Gap

Risk of identity compromise during the onboarding of a new employee



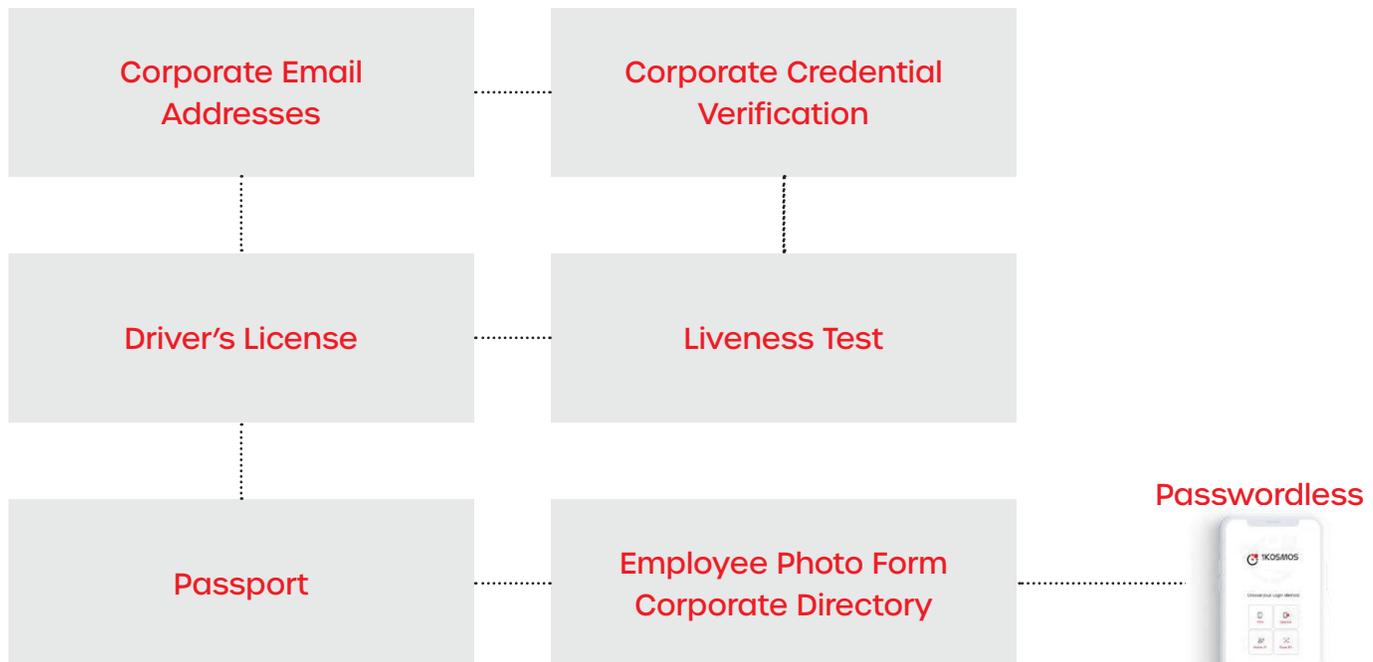
Employee onboarding in the digital age is a true identity security nightmare, which has been compounded with the sharp increase in remote hires since the beginning of the COVID-19 pandemic. The onboarding of a new employee includes key phases, from the verification of the new hire's identity for USCIS compliance purposes to the new employee's first login and corporate password reset, and during this journey there are five main opportunities for identity compromise.



Verify for Workforce

Workforce Identity Verification: The Steps

To reach a higher level of identity assurance per the NIST 800-63-3 Guidelines, or IAL2, it is imperative for employers to verify the validity of an employee's corporate information, the validity of his or her government-issued documents and leverage a form of advanced, unspoofable biometrics called a liveness test. The latter proves that the individual indeed exists.



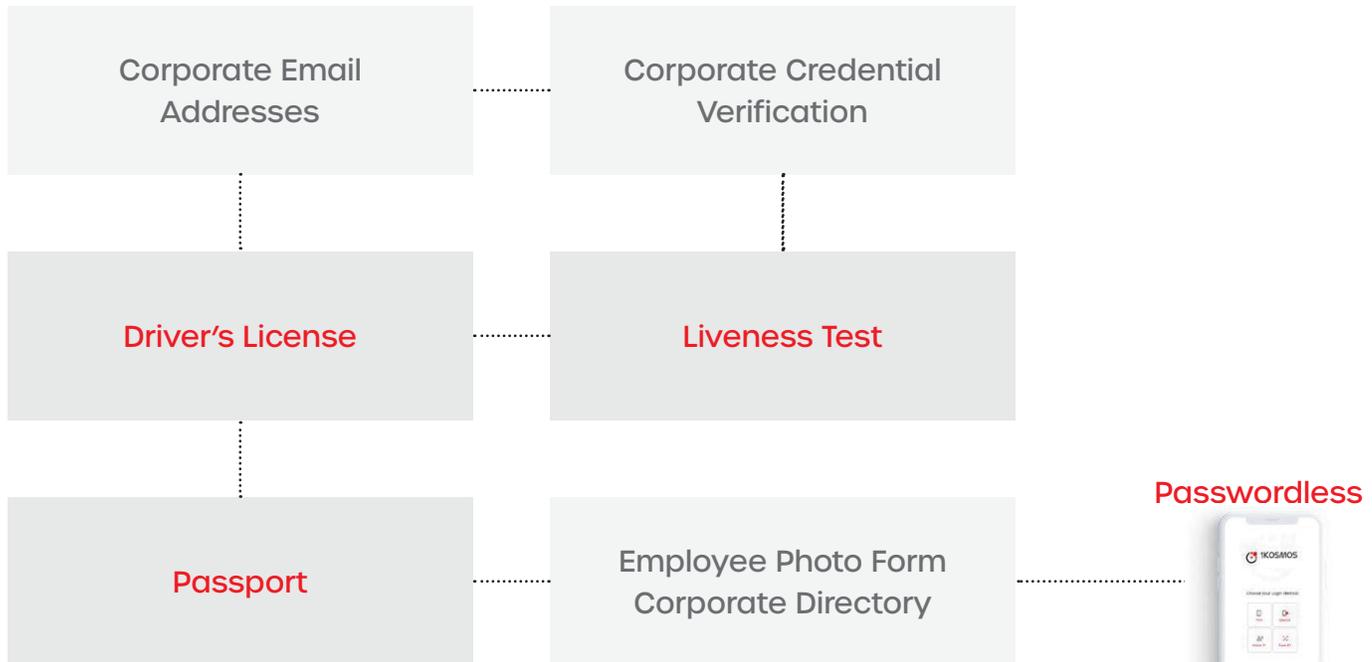
The employee's corporate information to verify can include Kate's corporate email address, the credentials associated to her Active Directory entry, and whether the result of her liveness test does indeed match the photo her employer has on file. Governmentissued documents can include the employee's driver's license and passport, which must be verified against the proper issuing administration. Finally, the liveness test is performed to verify if the biometric traits of the employee are from a living person rather than an artificial or lifeless person.



Verify for Workforce

New Employee Onboarding: Eradicate Identity Compromises

To make sure that the new hire is who she says she is, it is imperative to follow a process that not only proves the identity of the new recruit, while protecting her personally identifiable information (PII), but that also offers the new hire a frictionless experience.



The new hire performs a liveness test that is then matched with enrolled government-issued documents and also leveraged for authentication, once the enrollment process is complete.

Then, the new employee enrolls government-issued documents, like her driver's license and passport, which must be verified against the proper issuing administration.

Once validated, the information is used to fill the USCIS Form-I9. The new hire's first name, last name and unique identifier are transmitted from the HR application into the account provisioning (IGA) system.



Verify for Workforce

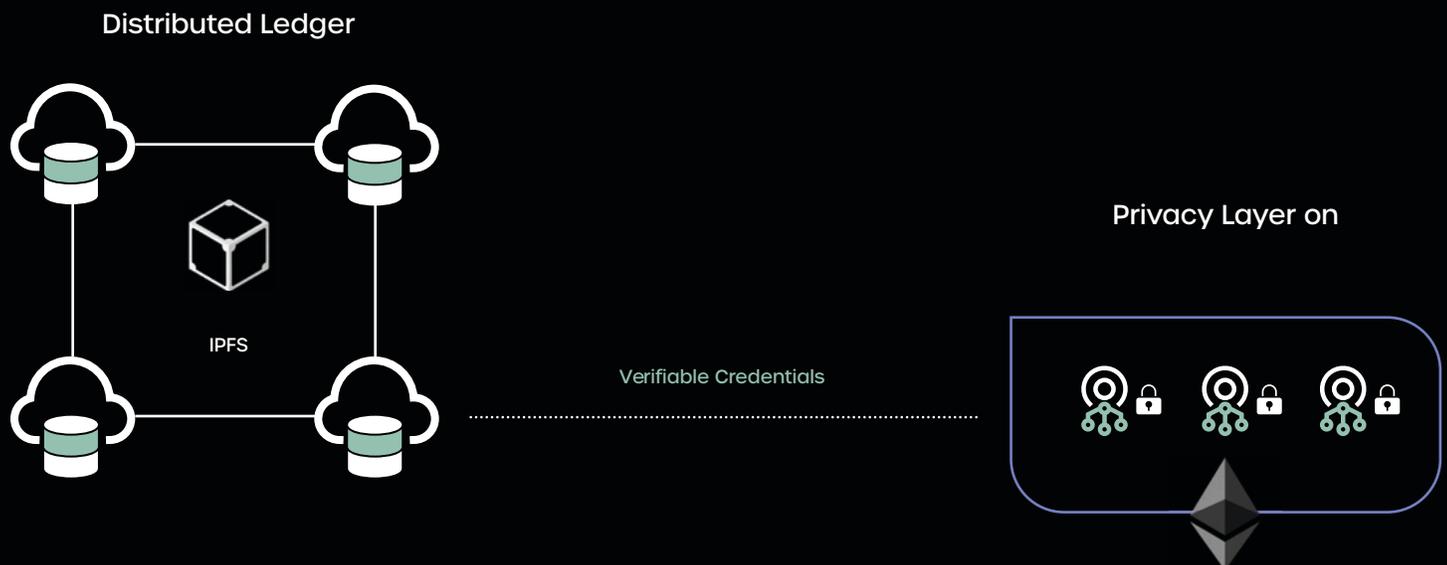
Securing Identity Employee Data: The Blockchain Ecosystem

1Kosmos leverages a Distributed Ledger to securely store employees' identity information, with access controlled by the employee (GDPR compliant) as well as a layer of privacy built around Ethereum to execute smart contracts. This is the 1Kosmos Private Blockchain ecosystem.

1Kosmos is the only passwordless solution to store users' data encrypted in a decentralized ledger.

Each user's information is encrypted using their own unique cryptographic key pairs, with their private key stored securely on their own mobile devices. That means there are literally thousands of separate and unique encryption keys and mobile devices protecting the identity data, which makes it impervious to hacking (W3C compliant).

1Kosmos solutions automatically and seamlessly handle all interactions with the Blockchain – No Blockchain knowledge or expertise is required by anyone on the employer's team to enjoy all of its benefits. It couldn't be any easier.





About 1Kosmos

1Kosmos enables remote identity verification and passwordless multi-factor authentication for workers, customers and residents to securely transact with digital services. By unifying identity proofing, credential verification and strong authentication, the 1Kosmos platform prevents identity impersonation, account takeover and fraud while delivering frictionless user experiences and preserving the privacy of users' personal information. 1Kosmos performs millions of authentications daily for government agencies and some of the largest banks, telecommunications, higher education, and healthcare organizations in the world.