



IBM Digital Credentials

Table of contents

Ensuring trust in the 21st century.....	3
IBM Digital Credentials	5
IBM Digital Credentials in action.....	7
Get started today.....	10



Ensuring trust in the 21st century

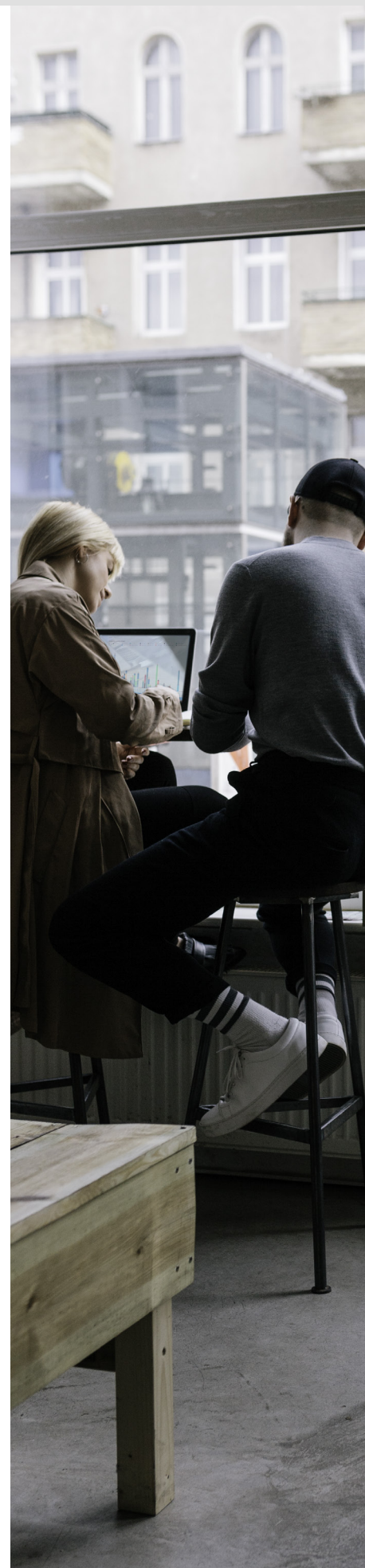
How trust is determined and measured in the 21st century is undergoing a digital transformation. Changes in consumer sentiment and calls by consumer privacy advocates make it inevitable that governments and enterprises will adopt technologies and policies that assure trusted, secure, and self-sovereign interactions, whether at the football game, the office, or when boarding an airplane.

Smartphones, watches, tablets, and other personal connected devices have made our lives easier. They provide us with 24/7 access to our contacts, schedules, photos, and friends — and, increasingly, to our private records through health cards and bank accounts. As the world embraces digital transformation, it is now commonplace to share our personal identity and credentials across countless networks and systems, disregarding how sensitive information is being used, stored, or shared. Nearly all of our identity and data fingerprints are controlled by unknown third parties, exposing individuals and organizations to costly security and privacy risks.

IBM Digital Credentials enables a better way for the world to securely exchange information. Individuals and organizations need the tools to control how they own, manage, share, and preserve their own identity and information. A standards-based decentralized identity system gives individuals and organizations self-sovereign ownership of their data.

Working with leading industry organizations, partners, and communities, IBM is driving how trust, digital identity, and verifiable credentials can re-invent existing processes to assure a higher level of trust and privacy. Critical to the widespread adoption of these new experiences and concepts is the adherence to global & industry-specific standards like the Decentralized Identity Foundation and W3C Verifiable Credentials. Based on those standards, the IBM Digital Credentials platform is optimized to allow enterprises to quickly adopt decentralized identity and credentialing processes and workflows internally and externally, with vendors or customers, in a safe and secure manner.

Start reinventing your enterprise's approach to trust and data exchange by working with the IBM's Digital Credential platform, assets, networks, and integrations or innovate with IBM to design a new future for your users.





76%

of public sector leaders perceive digital technology to be disrupting the public sector.



41%

are satisfied with their organization's current reaction to digital trends."¹

Foundationally designed and built on open-source technology and industry standards; focused on scale, security, and interoperability, IBM Digital Credentials is a platform for innovators to quickly realize new experiences enabled by the decentralized exchange of verifiable credentials.

With the infrastructure, security, and administration of the solution ready to go, organizations can focus on the user experience and creating new and innovative applications.

To accelerate this innovation, the platform provides a suite of enterprise tools and assets that allow organizations to define intelligent credentialing workflows, manage their users and organizations, and provide integration options for internal and external applications. Additional capabilities like AI-enhanced analytics and reporting, monitoring, and notifications simplify the issuance and management of credentials and accelerate the digital transformation.

With the infrastructure, security, and administration of the solution ready to go, organizations can focus on the user experience and creating new and innovative applications. IBM Digital Credentials provides the high-speed, secure rail system to reimagine the trusted exchange and ownership of information.

IBM Digital Credentials

Credentials are used every day for any number of reasons. A driver's license is used to assert the age of a customer. University degrees can be used to assert levels of education of a job candidate. These everyday interactions face the same two broad challenges — verifying that the information presented is authentic and protecting the privacy of the individual who is presenting the information.

Secure, verifiable credentials

Utilizing W3C open standards for decentralized identity, built on IBM Public Cloud, and supporting multiple blockchain technologies; IBM Digital Credentials can issue and verify credentials across industries and use cases. The issued credentials are verifiable, which means the authenticity of the credential can be cryptographically proven without needing to confirm with the original Issuer or an intermediary.

Since the credential itself is verifiable, no credential information needs to be captured or stored by the IBM Digital Credentials platform. Organizations can be assured that the credential only exists either in the Issuer's system of record or in the individual's digital wallet.

- **Issue** tamper-proof, verifiable credentials and simplifies the management of credentials for individuals and organizations
- **Verify** instantly whether a credential is authentic and valid
- **Exchange** credentials through secure verifiable presentations
- **Revoke** credentials without revealing credential information

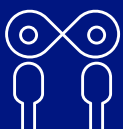
Meeting participants' core needs:



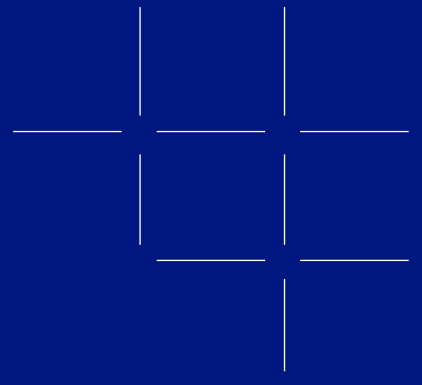
Credential issuers can issue credentials, business licenses, identity cards and immunizations to the platform.



Credential verifiers can search, receive or validate permissioned credentials and request to view additional details from credential holders.



Credential holders can set permissions for sharing credentials and quickly receive and respond to requests.



Privacy preserving protocols

IBM Digital Credentials enforces privacy preserving protocols, guided by the principles of decentralized identity.

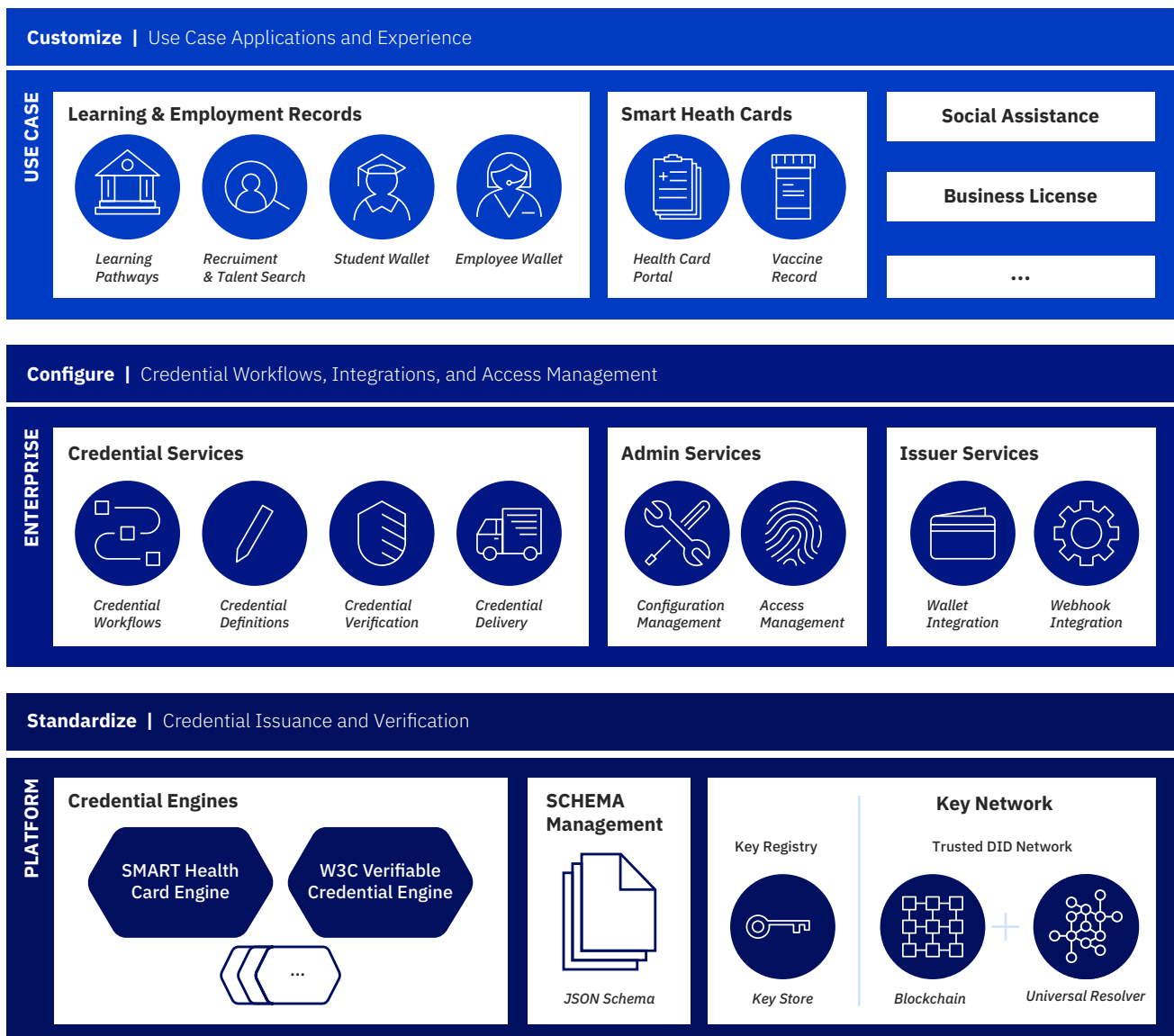
- **Minimize** the disclosure of identity information
- **Selectively disclose** the minimal information required to verify the credential
- **Control** the credential information and ensure it remains with the individual or in the original system of record

Interoperability through open standards

The full value of digital credentials is realized with scale. IBM Digital Credentials is built on open-source technologies and complies with credentialing standards so it is interoperable with other solutions.

- **Export** a credential to another system through open standards
- **Share** credential schemas across industries
- **Connect** with other credential networks and system

IBM Digital Credentials conceptual architecture



IBM Digital Credentials in action

Learning and employment record: A use case for the skills-based economy.

Demand for skilled labor has never been higher. There are great jobs waiting for great candidates, but it's difficult to match people, skills and jobs. For employers, identifying skills based on resumes isn't sufficient. And inconsistent and siloed data about skills, certificates and credentials makes it difficult to help learners and job seekers manage their careers. Many job seekers, especially those switching careers, need to document skills acquired from training like online courses or coding camps, and they need a simpler way to find out what new skills they need and where to get them.

IBM and its partners have developed a trusted and secure approach to facilitate the management and exchange of credentials for all stakeholders. Built on IBM Digital Credentials, the Learning Credential Network helps learners, job seekers, employers and educators work together to develop skilled workers and get the right people in the right jobs.

- Colleges, universities and other training institutions can issue verified credentials and build learning pathways to help learners identify skill gaps and determine appropriate training.
- Job applicants use digital wallets to provide a permanent, verifiable record of their skills and manage their own credentials, curating and sharing their skills profiles with potential employers.
- Employers can search for job candidates based on skills to find applicants who best match their requirements.



Managed by its community of users, the Learning Credential Network provides an efficient and trusted way for employers, learners and educators to work together for the benefit of everyone.

[Read the solution brief to learn more.](#)

Vaccine record: A smarter way to get back to business.

The urgency to reopen all areas of the economy safely — and stay open — has highlighted the need for digital health credentials. With IBM Digital Health Pass, powered by IBM Digital Credentials:

- Pharmacies, labs and healthcare providers can issue verifiable credentials, such as test results or vaccine certificates, and send them to an individual's smartphone.
- Individuals receive health credentials, load them into an encrypted wallet on their smartphone, and share with an organization through a secure QR code as proof of health status.
- Organizations can verify credentials of employees, sports fans, travelers and students upon entrance to a location, without having to access an individual's underlying personal data used to generate the credential.

The State of New York, with its Excelsior Pass based on IBM Digital Health Pass, is a leader in digital credentials to support the safe reopening of businesses and return to public places.

Participation in the Excelsior Pass is voluntary. But with more than one million downloads in just the first two months since its launch, New York residents are demonstrating they are ready for a convenient solution that enables them to return to their favorite activities, while remaining in control of their own personal data. Available in 11 languages, the Excelsior Pass is stored digitally on an individual's smartphone with the Excelsior Pass Wallet app, available for free from the Apple App Store and Google Play Store.

The broader impact? The open, secure architecture of IBM Digital Health Pass allows other states to join the effort, which could provide the foundation for a secure and interwoven ecosystem enabling governments, businesses and people nationwide to confidently get back to business.

[Take the product tour.](#)



Digital identity wallet: Prove that you are you, without the paper and hassle.

Many of the activities that individuals engage in require proof that we are who we say we are. Driving, airline travel, ordering a glass of wine, applying to college, staying in a hotel, renting a car, applying for a job, visiting the doctor — the list goes on and on.

Usually this entails some sort of paper documentation and keeping track of multiple cards as proof of identity and credentials. A digital identity wallet based on IBM Digital Credentials is already in use today, simplifying operations and bringing convenience to all parties involved — issuers, individuals and organizations.

Consider hotel check-in for business travelers, typically a manual, paper-intensive process that requires physical interaction. Lack of digital evidence of billing information, identity and proof of employment has been a barrier to making this a completely contactless, streamlined process, until now. With a digital identity wallet:

- Participating companies provide the hotel with digital evidence of the invoicing address of the company.
- Employees are issued credentials they load into an encrypted digital identity wallet on their smartphone, showing they are an employee of the company that will be paying business expenses. When they make a reservation, employees simply share their credentials with the hotel.
- At check-in, hotel staff have all the information they need and can provide a fully digital check-in experience.

Other identity documents can be added to the digital identity wallet, including student IDs and employee badges.

As we look to the future, there is unlimited potential for secure, tamperproof, auditable digital credentials to make life easier for everyone.

Imagine...

- The convenience and cost savings of digital driver's licenses and passports
- A trusted way to quickly validate professional and occupational licenses in regulated professions such as healthcare, accounting, law and cosmetology.
- A smart way for citizens and businesses to keep permits and licenses current

...all powered by IBM Digital Credentials.



Get started today

Start your journey with the infrastructure that delivers a secure, trusted and robust environment to enable business processes.

Why IBM?

- Take advantage of IBM's market-leading blockchain capabilities so you can unleash innovation with the confidence that what you're doing is anchored in trust, security and privacy.
- Accelerate your initiative based on our years of experience collaborating with technical and industry communities to build multiple successful blockchains and our deep understanding of how to govern blockchain-based ecosystems.
- Transport data on secure and privacy-preserving rails so you can make it available to other applications that want to use it.

Why IBM Digital Credentials?

- **Interoperability:**
IBM Digital Credentials uses open-source technology and industry standards so you can augment the technology and resources you already have in place.
- **Flexibility:**
Pick and choose the level of capabilities you need – platform layer, enterprise layer, use case layer or some combination.
- **Industry expertise:**
IBM has dedicated experts with deep domain and industry expertise to help you design a path for success, along with services to offload day-to-day maintenance and support.

Realize your vision for a trusted credential solution that transforms processes core to your organization and makes life easier for the people you serve.

[Schedule a discussion to connect with our experts.](#)

*Limited availability



© Copyright IBM Corporation 2021.

IBM Corporation
New Orchard Road
Armonk, NY 10504

Produced in the United States of America
August 2021

IBM, the IBM logo and ibm.com are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

Sources:

- 1 Deloitte, "Digital Government Transformation." 2021. (<https://www2.deloitte.com/global/en/pages/public-sector/articles/digital-government-transformation.html>)

