

Crafting Interoperable Wallets in a Vendor-Locked World

tnc24

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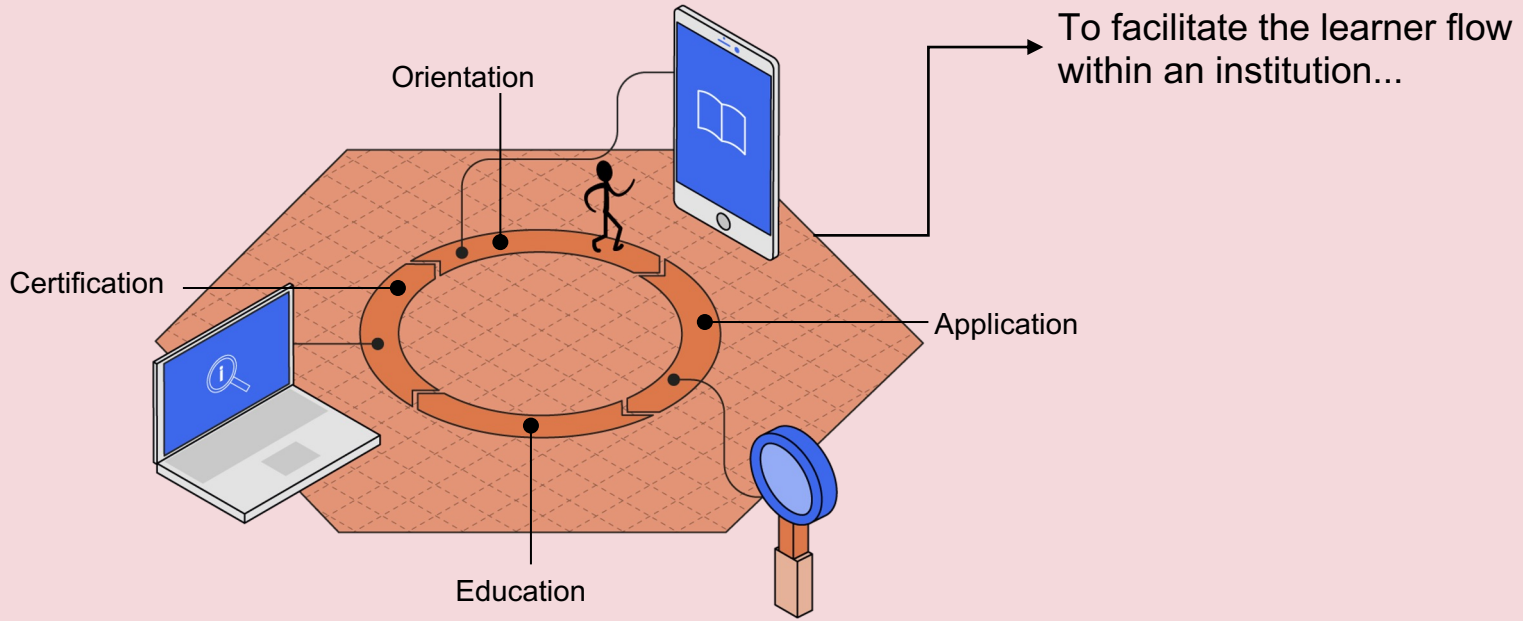


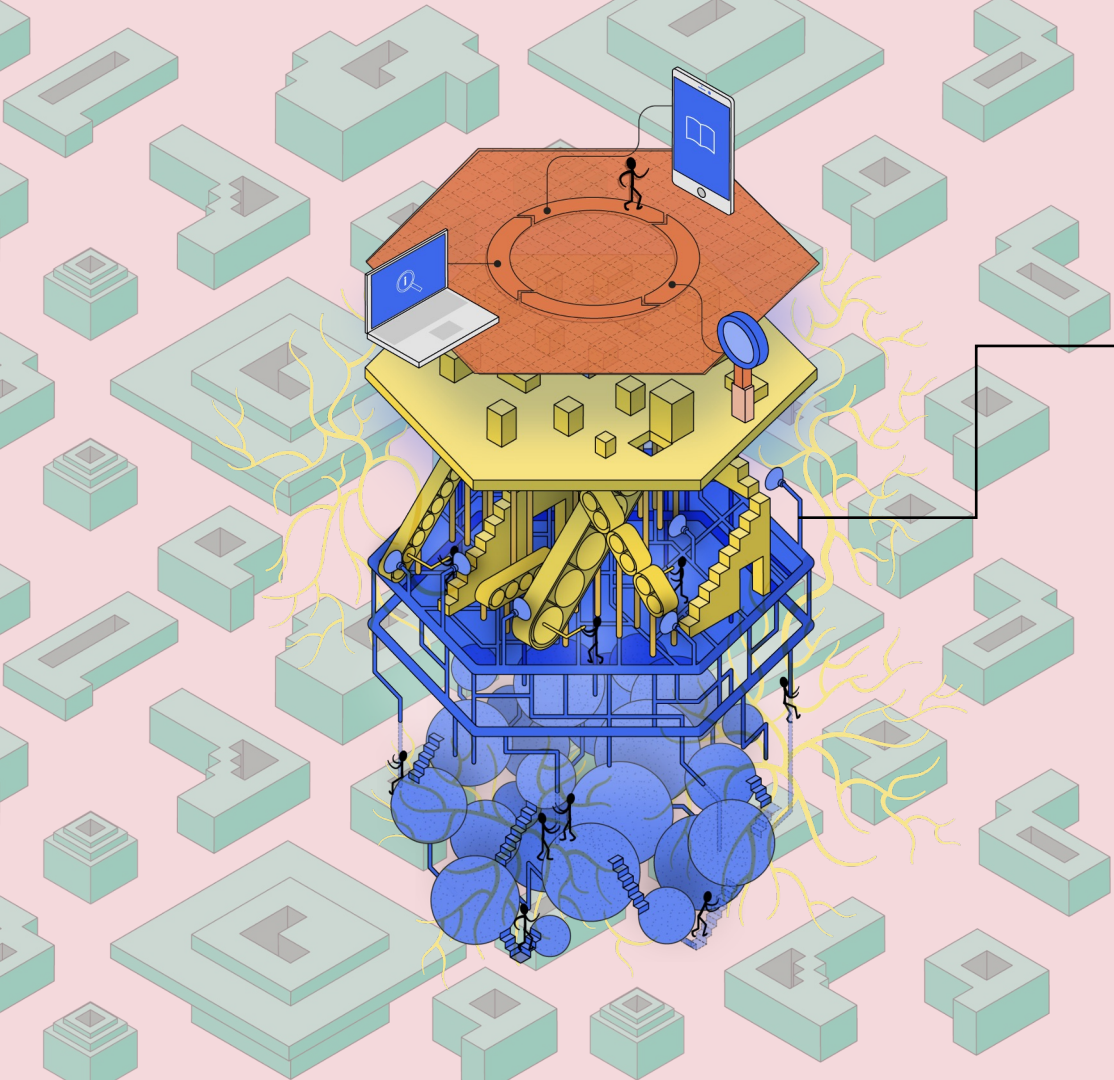
Introduction

"How can we as NREN community ensure that we have public-private relationships that don't end up in vendor lock-in?"

PAST: A Short History of the Diploma...

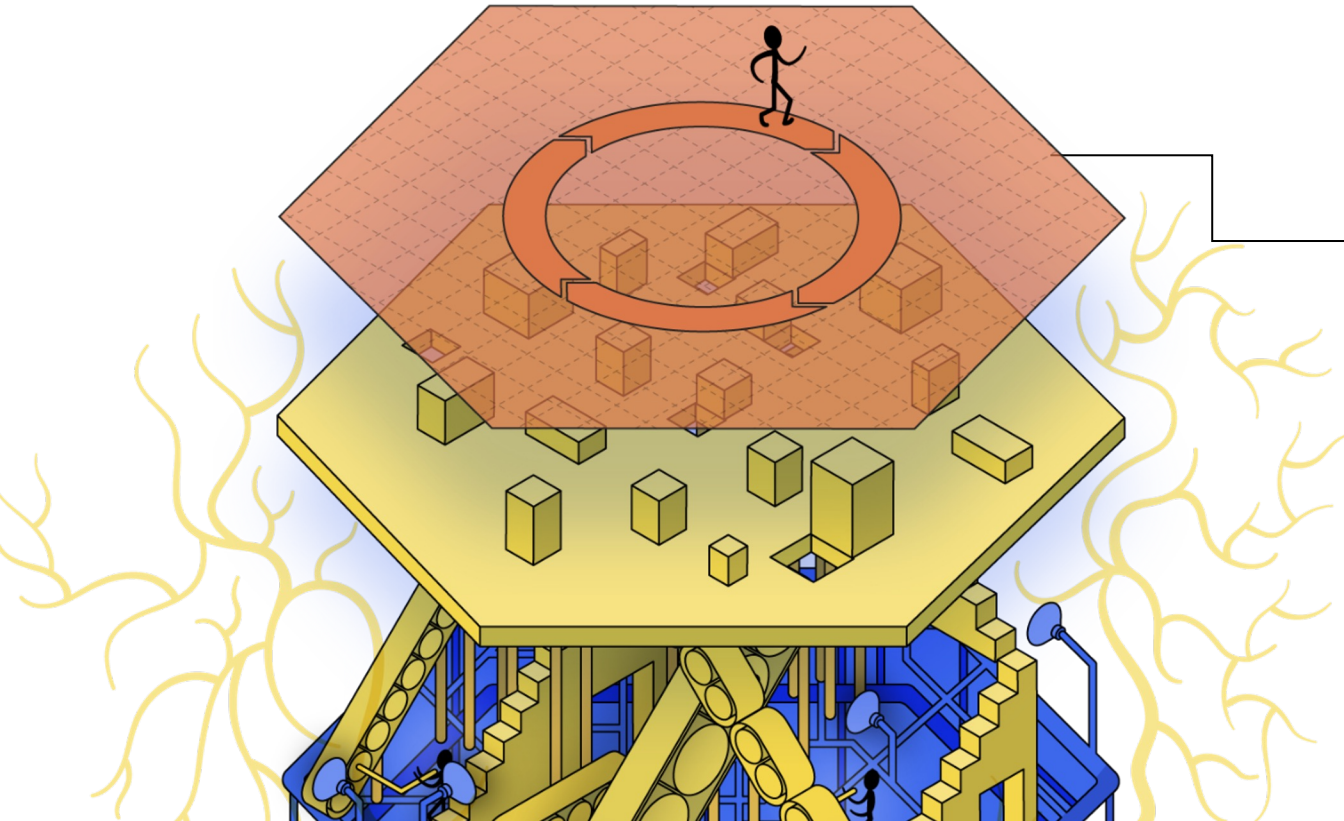






... a whole underground ecosystem is needed

This ecosystem consists of four layers

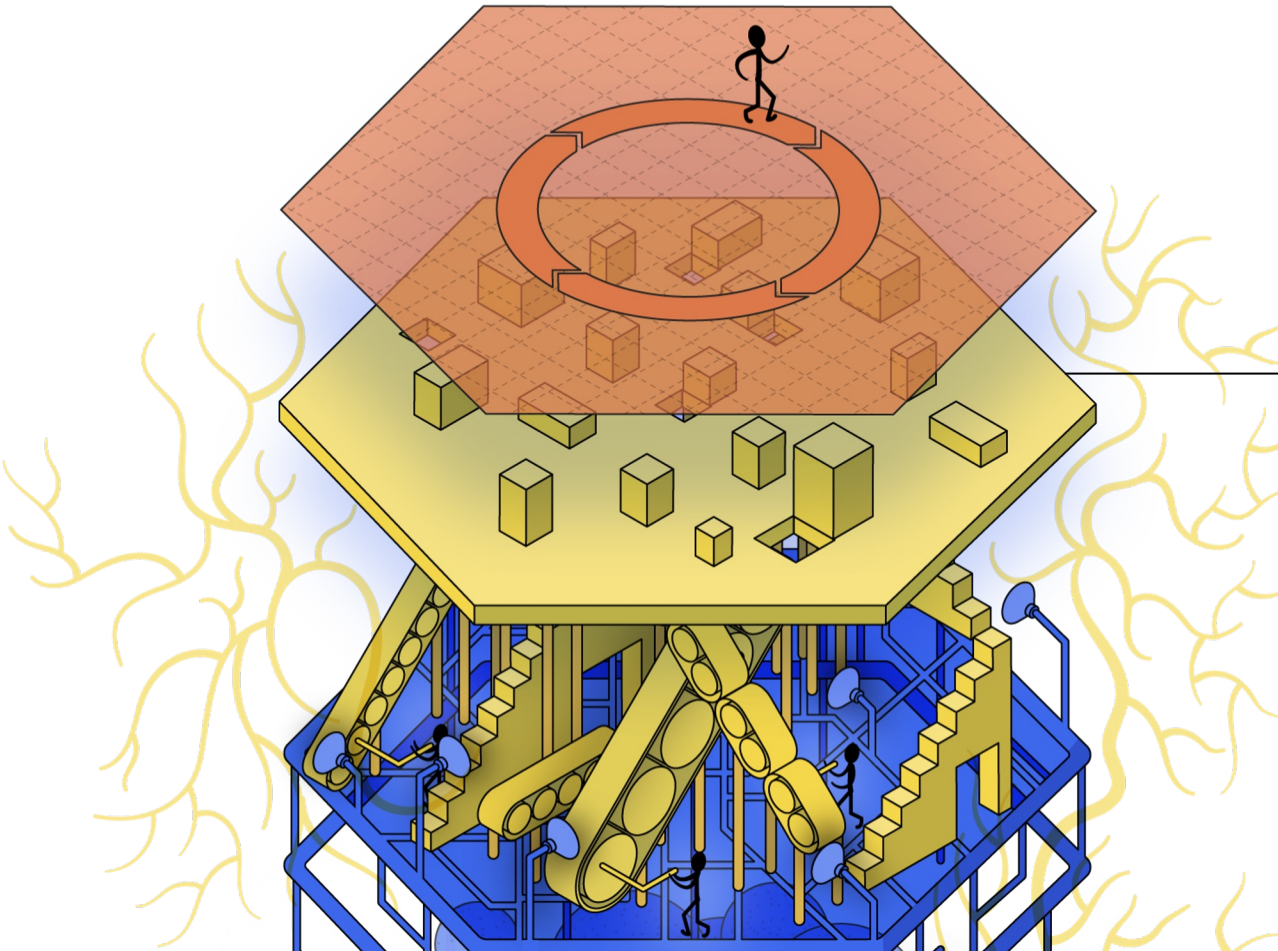


Users & Services

● Learner, teacher and staff work on their own device and want a smooth user experience.

Examples:

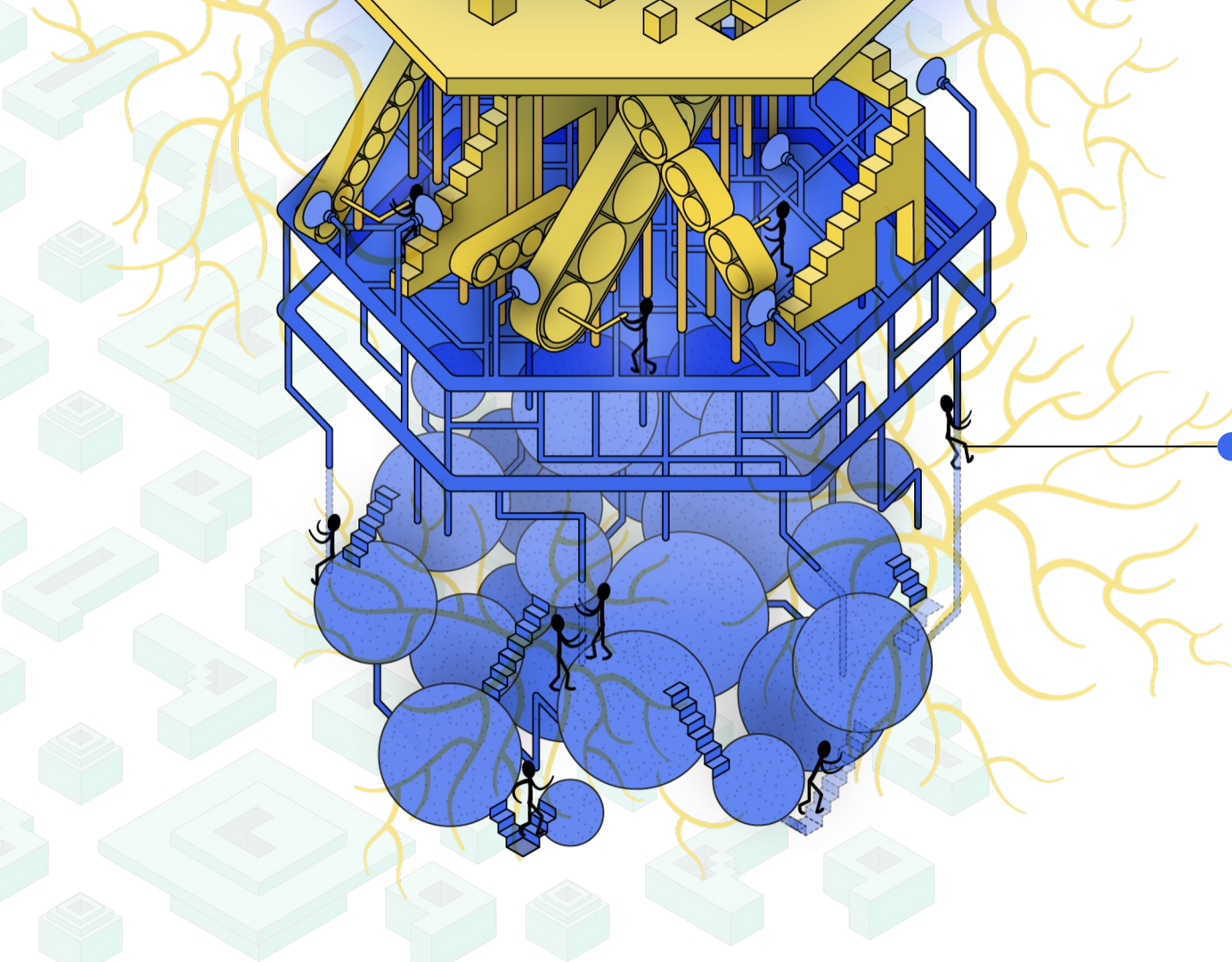
- *The learner searches for their favourite courses.*
- *Teachers can easily adjust their curriculum for next year's course.*



Organisation & Processes

Where the administrators and functional application managers work in the back-end of the systems.

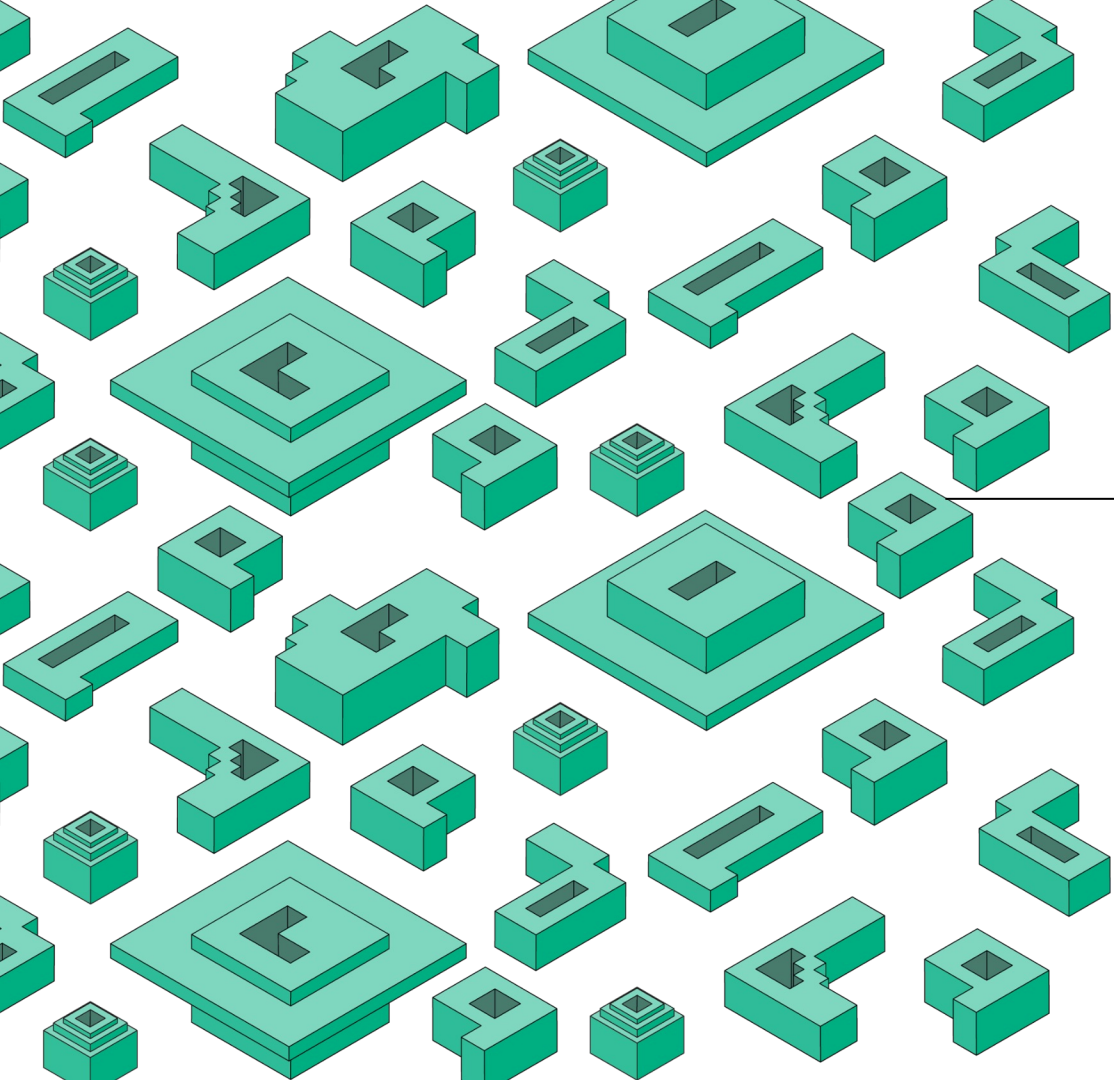
*Example:
The functional application manager makes sure the right courses are in the catalogue.*



Applications & Information

Where IT staff manage identities, access and databases.

*Example:
The identity & access manager ensures that users have correct permissions and roles to work within the system.*



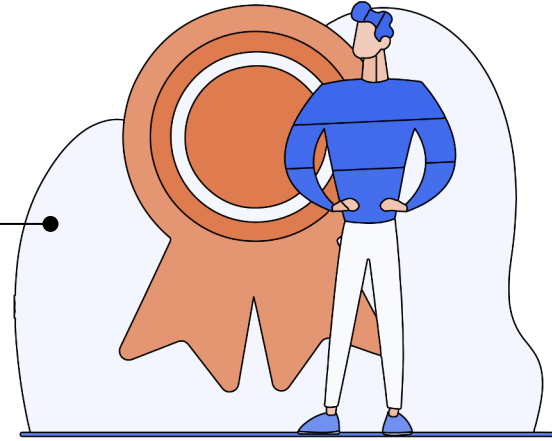
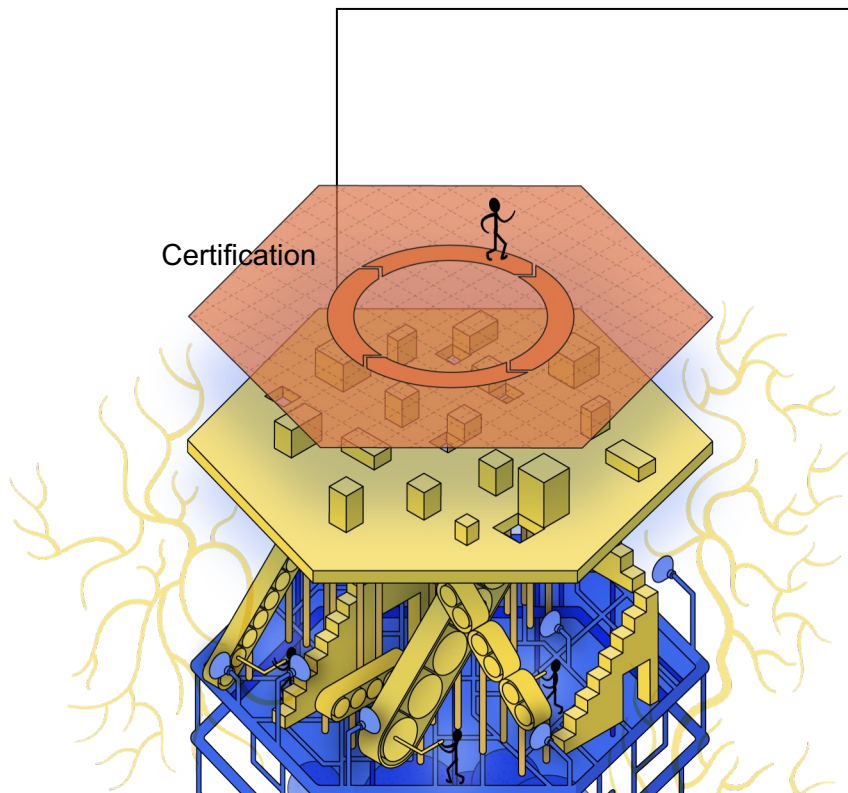
Standards & Technology

Where IT staff manage connectivity, computing, and storage, and oversee operations.

*Example:
The architects assess which (open) standards are suitable for the desired landscape based on the IT vision of the institution.*

Use case 6 (Digital education Hub)

Earn credential



The digital management of educational credentials (issuance, verification, revocation), affirming the achievements from diverse learning experiences.

Micro-credentials

Portable credentials



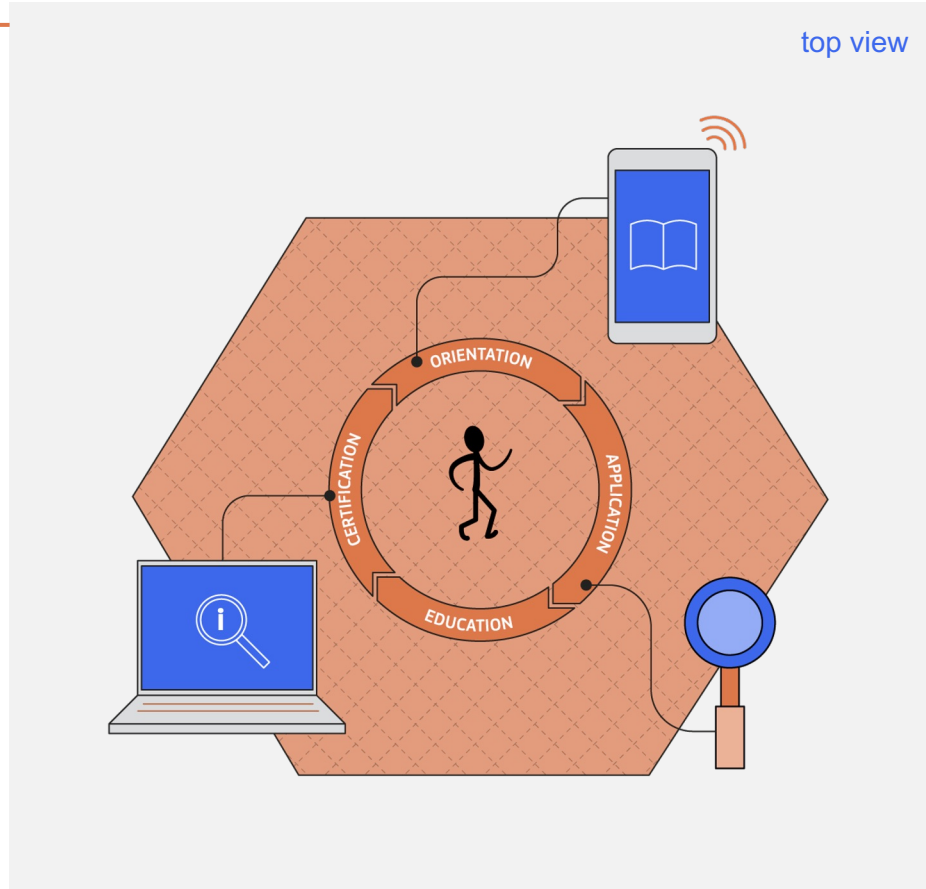
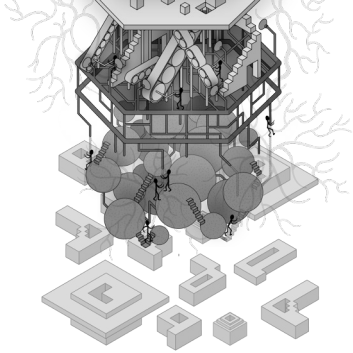
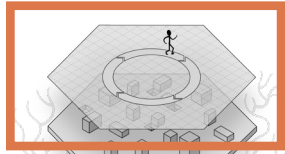
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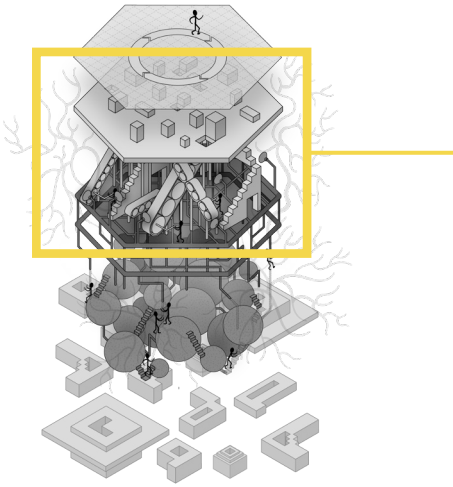
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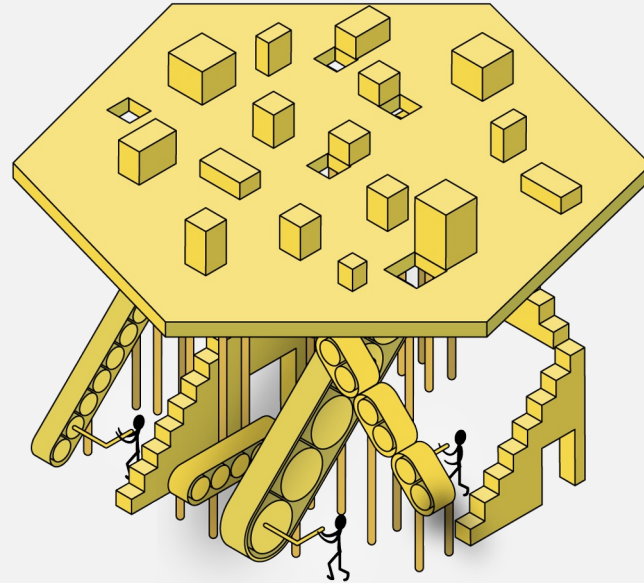


What does the user experience?

Sending and receiving emails



3d view

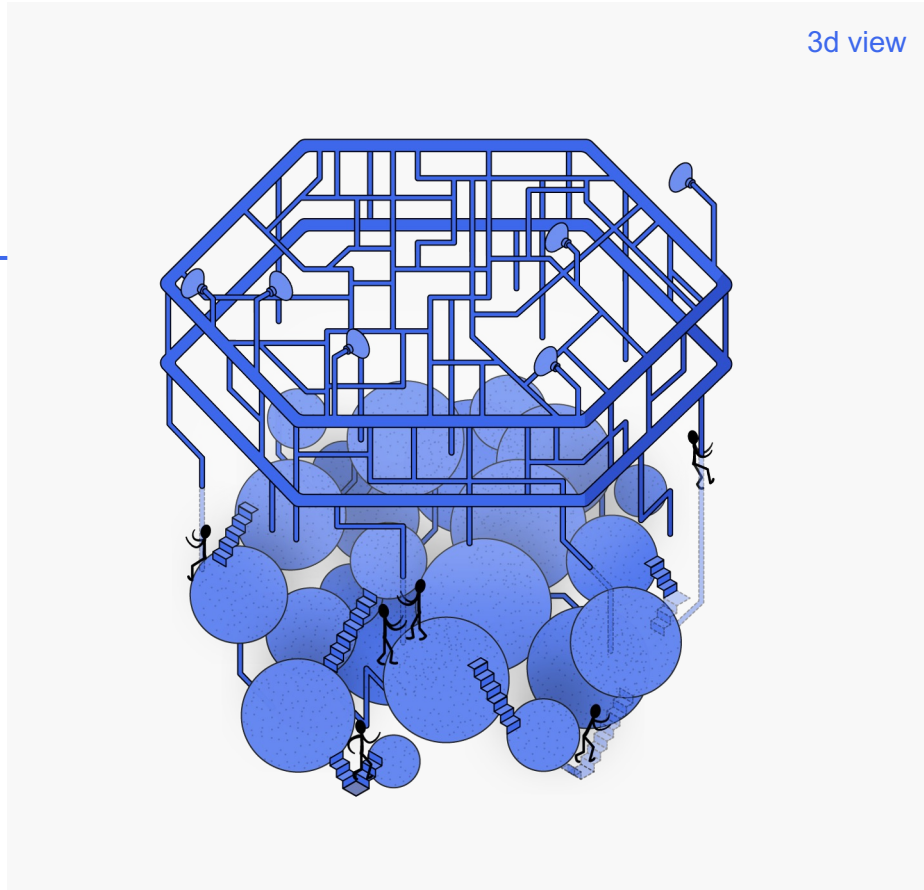
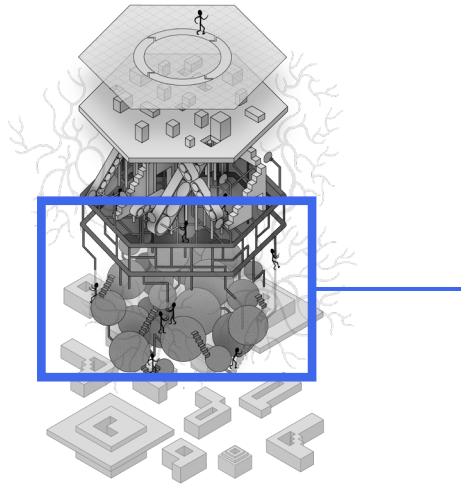


What processes are involved on organisational level?

Sharing and presenting information

Identification

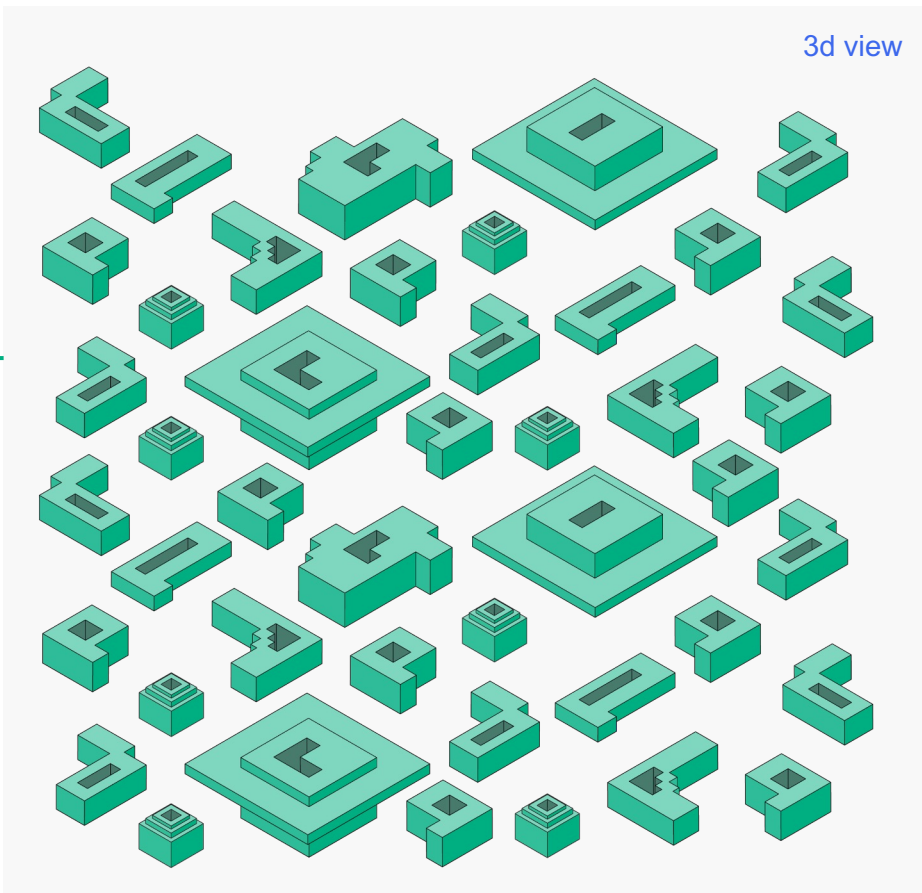
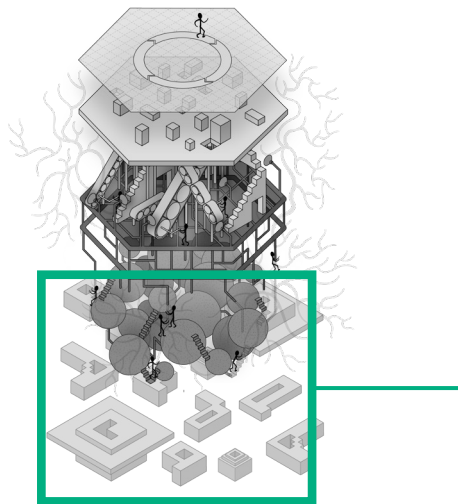
User tracking?



Which applications and information is involved?

Servers and clients

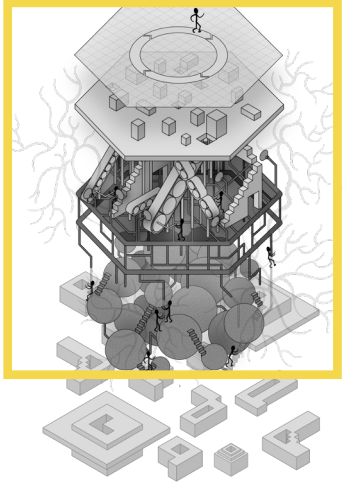
Text messages as emails



Is there a standard in use?

Content = Internet Message Format (IMF)

Delivery = SMTP, POP & IMAP



What governance and legislation is involved?

Domain Name System (DNS)

Credential interoperability & trust and scalability



Governance
Verifiable data Registries

Users & Services

Receiving and presenting credentials

Organisation & Processes

Issuing and verifying information

Applications & Information

Issuers, holders & verifiers

Attributes as credentials

Standards & Technology

Content = E.g. SD-JWT

Delivery = OpenID4VCI & OpenID4VP

Regulation

APPLE / TECH / IOS

Apple offers to open iPhone NFC payments to third-party providers after EU investigation



Illustration: The Verge

/ Under the proposals, Apple will allow developers in the European Economic Area to access iPhone NFC payment features that were previously exclusive to its own Apple Pay and Wallet software.

By [Jon Porter](#), a reporter with five years of experience covering consumer tech releases, EU tech policy, online platforms, and mechanical keyboards.

Jan 19, 2024, 2:56 PM GMT+2



20 Comments (20 New)

<https://www.theverge.com/2024/1/19/24043965/apple-iphone-nfc-payments-open-up-third-party-developers-european-union-antitrust>

Public pressure

POLICY > DIGITAL ECONOMY | March 4, 2024 | updated 06 Mar 2024 11:29am

Apple reverses decision to ban progressive web apps following user backlash

The tech giant has reversed updates that would kill off progressive web apps (PWA) following complaints from EU users.

By Tech Monitor Staff



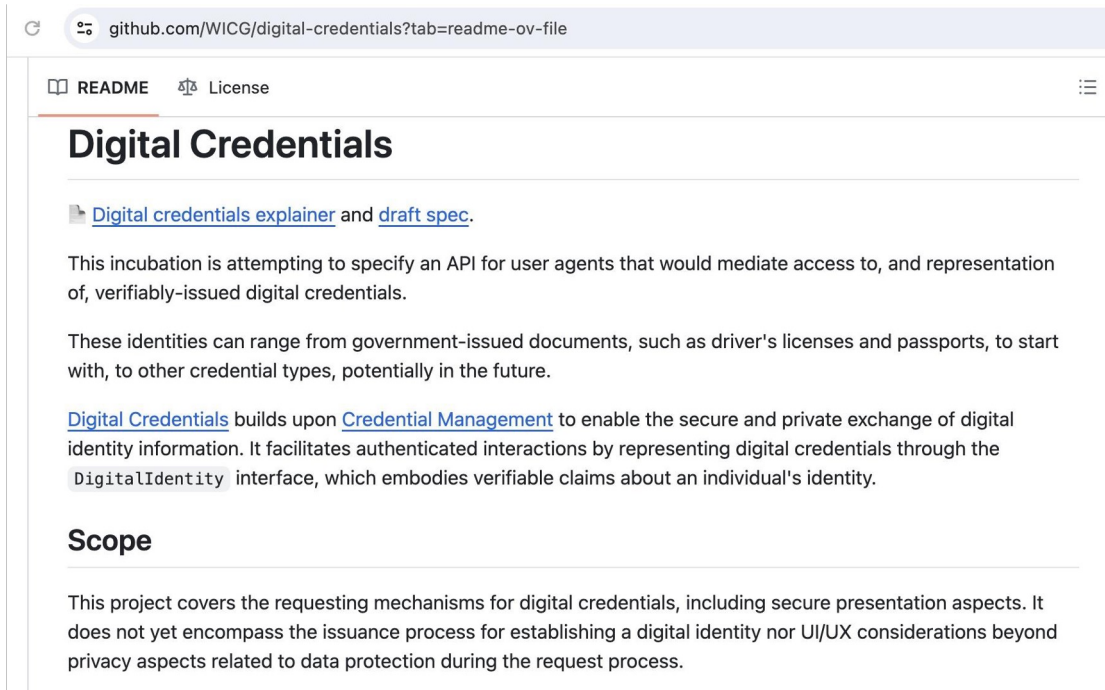
Apple has reversed decisions that would shut down progressive web apps (PWA), following complaints from its EU users. The tech firm had originally asserted that removing apps which bypass [Apple's own appstore](#) was necessary to comply with the [Digital Markets Act](#) (DMA).



Tech Monitor Staff

<https://techmonitor.ai/policy/big-tech/apple-reverses-decision-to-ban-progressive-web-apps-following-user-backlash>

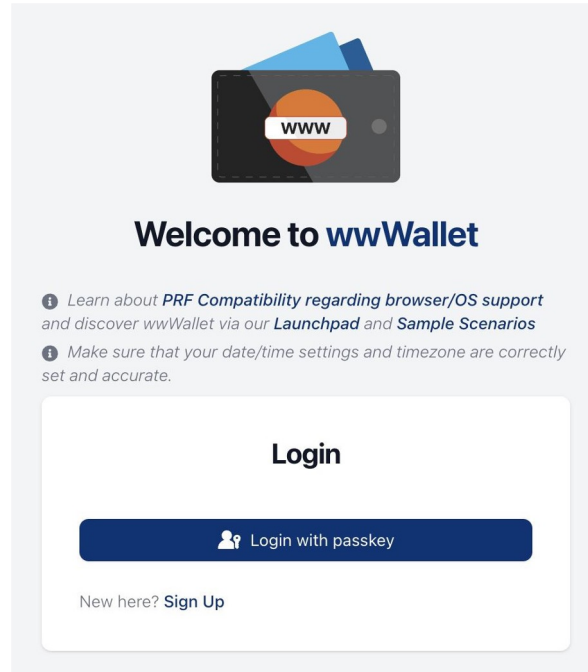
Public/private collaboration



The screenshot shows a GitHub repository page for 'digital-credentials'. The browser address bar displays 'github.com/WICG/digital-credentials?tab=readme-ov-file'. The repository navigation bar includes 'README' and 'License' tabs. The main heading is 'Digital Credentials'. Below the heading, there are links to 'Digital credentials explainer' and 'draft spec.'. The text describes an API for user agents to mediate access to and representation of verifiably-issued digital credentials. It mentions that these identities can range from government-issued documents like driver's licenses and passports to other credential types. The text also states that 'Digital Credentials' builds upon 'Credential Management' to enable the secure and private exchange of digital identity information, facilitating authenticated interactions through the 'DigitalIdentity' interface, which embodies verifiable claims about an individual's identity. A 'Scope' section follows, stating that the project covers the requesting mechanisms for digital credentials, including secure presentation aspects, but does not yet encompass the issuance process for establishing a digital identity or UI/UX considerations beyond privacy aspects related to data protection during the request process.

<https://github.com/WICG/digital-credentials>

Digital identity wallets



<https://wwwwallet.org/>

Trust in the past, present and future

	Exchange mechanism	Trust in content
Past	Postal service / courier	Stamped & signed / special paper
Present	Email + authentication	Signed or sealed PDF
Future I	Vendor-locked (e.g., Apple Wallet)	Vendor trust required
Future II	Open interoperable wallet	Verifiable credentials

Thank you
Any questions?

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