

Digital Credentials / the DCC

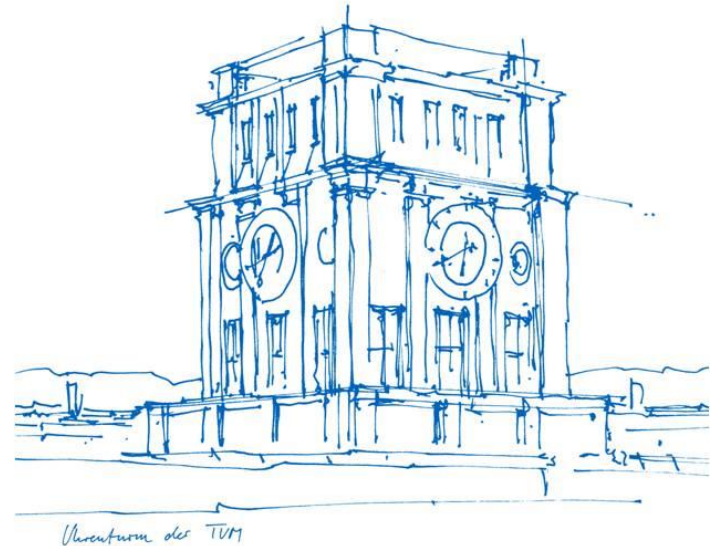
Dr. Hans Pongratz

Senior Vice President (CIO), pongratz@tum.de

Technical University of Munich (TUM)

German credential services to meet SDG

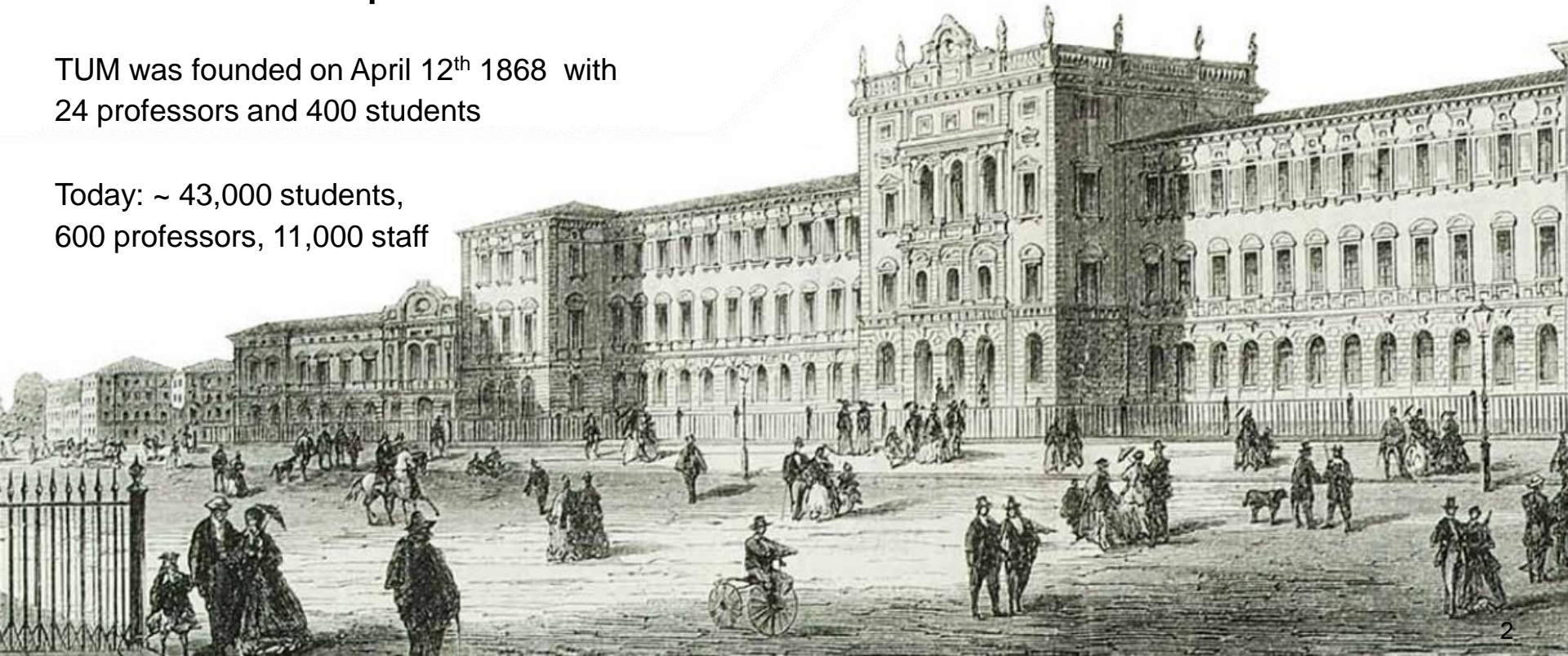
Zoom, September 9th 2020



A look in the past

TUM was founded on April 12th 1868 with
24 professors and 400 students

Today: ~ 43,000 students,
600 professors, 11,000 staff



Long-term leitmotif: The Digital University

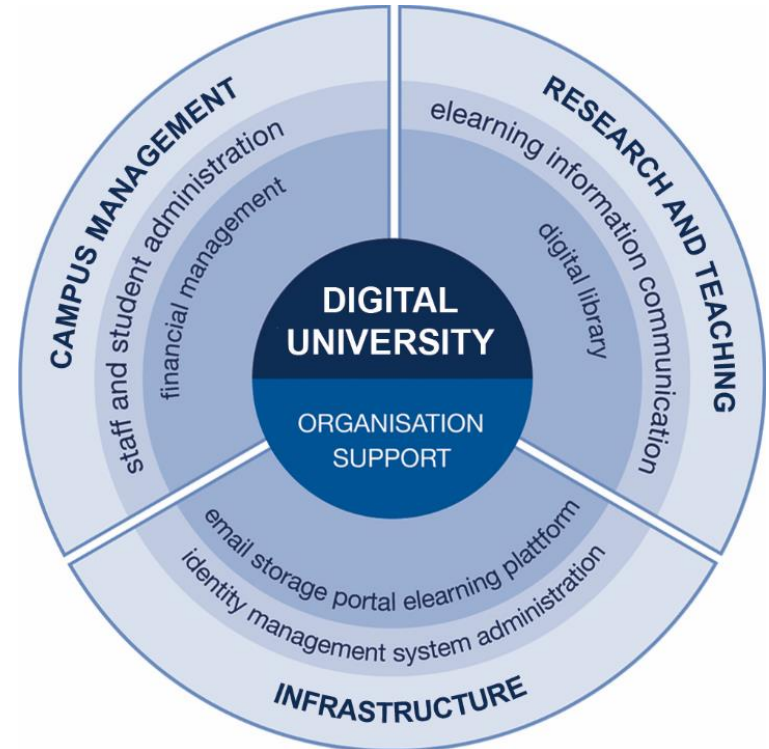
Baseline:

»A customer-friendly and smoothly integrated ICT infrastructure for research, teaching and administration«

Mantras Digital Transformation:

- User-focused (personalized & individualized)
- At any time and from anywhere

Levels of Digitalization:



Fraud: TUM edX Certificate

Supplier Verification Request (14124-7301792-3)





Contact Us



996284301



996284301

Mon ~ Sat (GMT+8)
am. 08:00 ~ 12:00
pm. 14:00 ~ 18:00

Free Email Sample

[Click Here](#)

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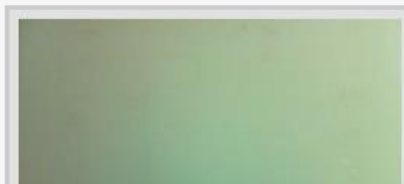
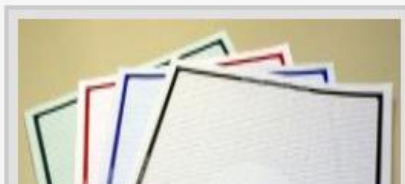
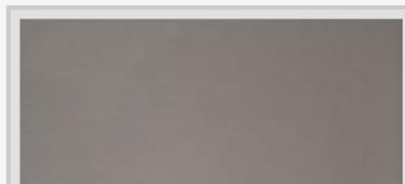
Frequently Asked Questions

- Why Choose fakecertificatemall?
- No Substitution of Schools or D
- What's the guarantee that I will
- How long will I receive the cer
- How Does This Work?

Real Customized Raised and Embossed Seals



Papers





Nine universities team up to create global infrastructure for digital academic credentials

Researchers set sights on a new standard for issuing, sharing, and verifying academic credentials.


Suzanne Day | Office of Open Learning
April 23, 2019

▼ Press Inquiries

PRESS MENTIONS

While digital technology has started to transform education by enabling new learning pathways that are customized to each individual's needs, the way that educational institutions issue and manage academic credentials has not changed much. Nine leading universities announced that they have formed the Digital Credentials collaboration in order to create a trusted, distributed, and shared infrastructure standard for issuing, storing, displaying, and verifying academic credentials.

"Currently, those who successfully complete a degree from an institution must go back to that institution — sometimes by mail or even in person — each time there is a need to verify the academic credentials earned," says Sanjay Sarma, MIT vice president for open learning. "This

 Research scientist Philipp Schmidt speaks with *Inside Higher Ed* reporter Lindsay McKenzie about the Digital Credentials Collaboration, which is creating a worldwide standard and shared infrastructure for digital academic credentials. "Universities are interested in providing their graduates with credentials that are useful and digital, but also secure," Schmidt explains.

INSIDE
HIGHER ED

DCC DIGITAL
CREDENTIALS
CONSORTIUM



**Digital
Credentials
Consortium**

The Digital Credentials Consortium

Our mission is to create a trusted, distributed, and shared infrastructure that will become the standard for issuing, storing, displaying, and verifying academic credentials, digitally.

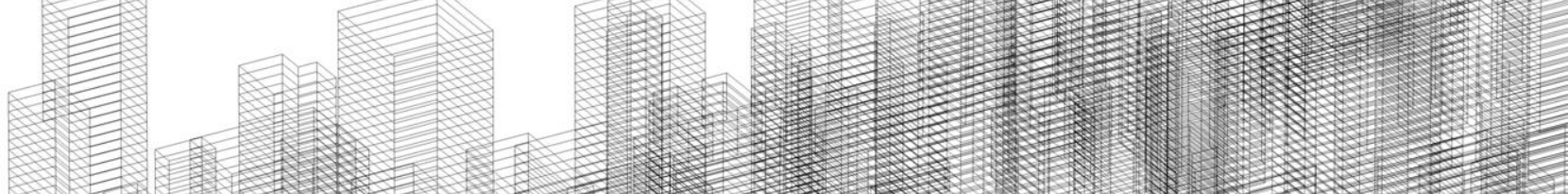
Digital Credentials Consortium

- 12 universities
- Committed to standards-based, learner-centric credentials
- Published [white paper](#) outlining our principles and approach (Feb 2020)
- Use case driven; phase 1 pilots underway now

Founding Members

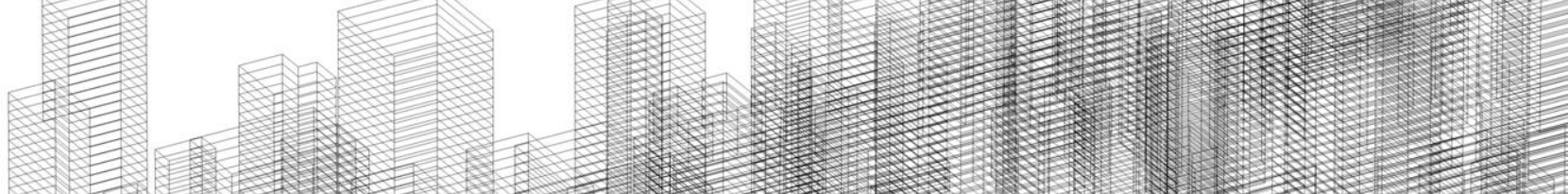
Delft University of Technology (The Netherlands)
Georgia Tech (USA)
Harvard University (USA)
Hasso Plattner Institute, University of Potsdam (Germany)
Massachusetts Institute of Technology (USA)
McMaster University (Canada)
Tecnologico De Monterrey (Mexico)
TU Munich (Germany)
UC Berkeley (USA)
UC Irvine (USA)
University of Milano-Bicocca (Italy)
University of Toronto (Canada)





Our Focus

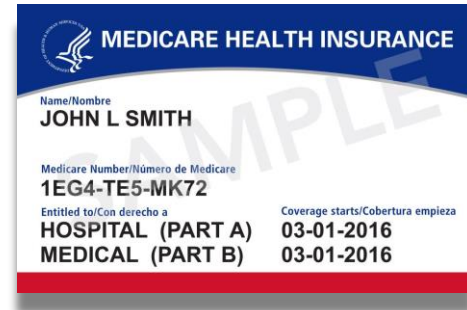
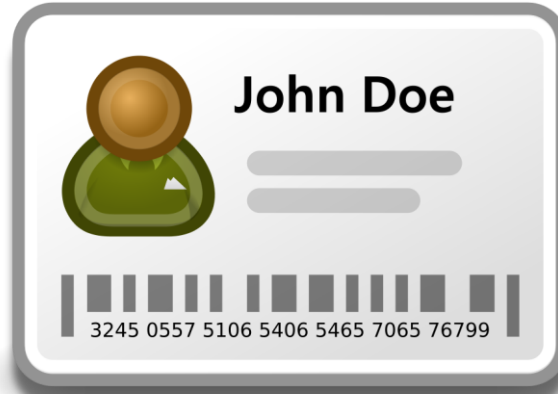
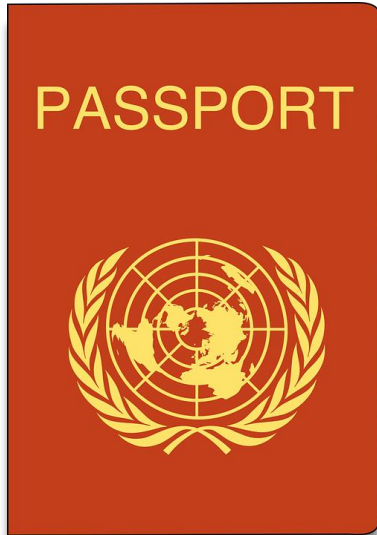
- Primary focus is use cases in higher education
- But we are part of a broader effort to bridge post-secondary and lifelong learning
- Goal: contribute to an education landscape that increases learner agency and promotes more equitable learning and career pathways



Approach

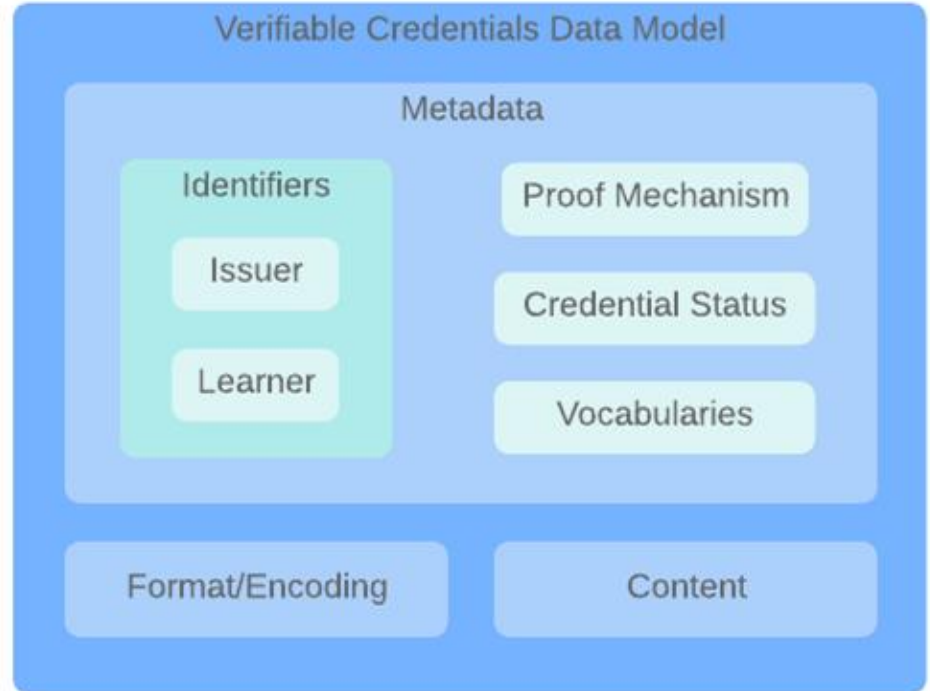
- Based on emerging standards
 - W3C Verifiable Credentials
 - W3C Decentralized Identifiers
- Push forward missing pieces
 - Standards and protocols
 - Learner-focused tools/standards
- Work with SDOs
- Work with broader ecosystem to ensure interoperability and viability

What is the “Credential” in Verifiable Credentials?

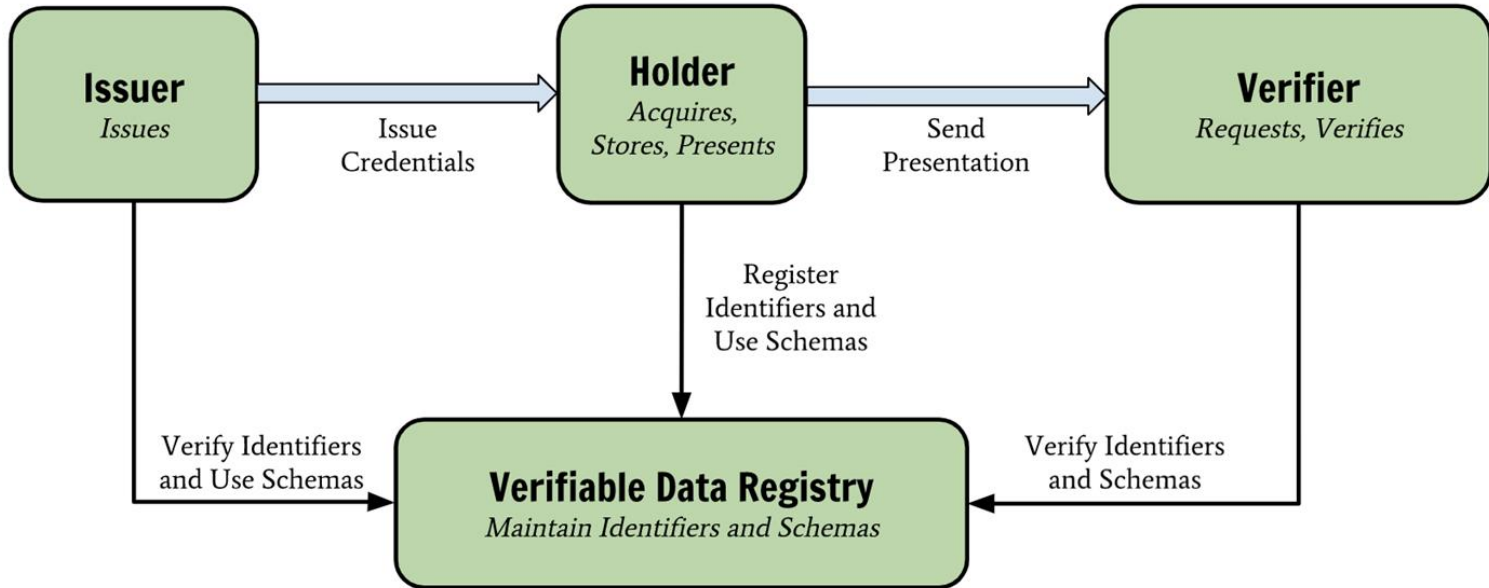


W3C Verifiable Credentials

- Verifiable wrapper; standard set of metadata:
 - How to verify the credential
 - Whether the issuer is authentic
 - How to verify the learner
 - Credential status information
 - Vocabulary/taxonomies used in the credential
- “Envelope”
- Note: basis for the ILR wrapper



W3C Verifiable Credentials Ecosystem



Expand on previous efforts

- Privacy-by-design and privacy-by-default
 - Attention to regional legal frameworks such as the GDPR
 - Applying lessons learned from earlier blockchain-based solutions
- Push forward ecosystem standards and protocols
 - Credential exchange
 - Secure storage
- Digital identities of issuers and learners
- Flexible schemas, linked data
- More direct learner agency, control over one's lifelong learning record
- Development of a transparent governance model that keeps the learner's rights at the center

How we work

- Entirely driven by institutions of higher education
- Open source/standards
- W3C Verifiable Credentials for Education Task Force
- Collaborate with standards groups and networks
- Working with partners to create a vital ecosystem of options
 - Technology companies
 - Online learning platforms
 - Employers
 - IT vendors

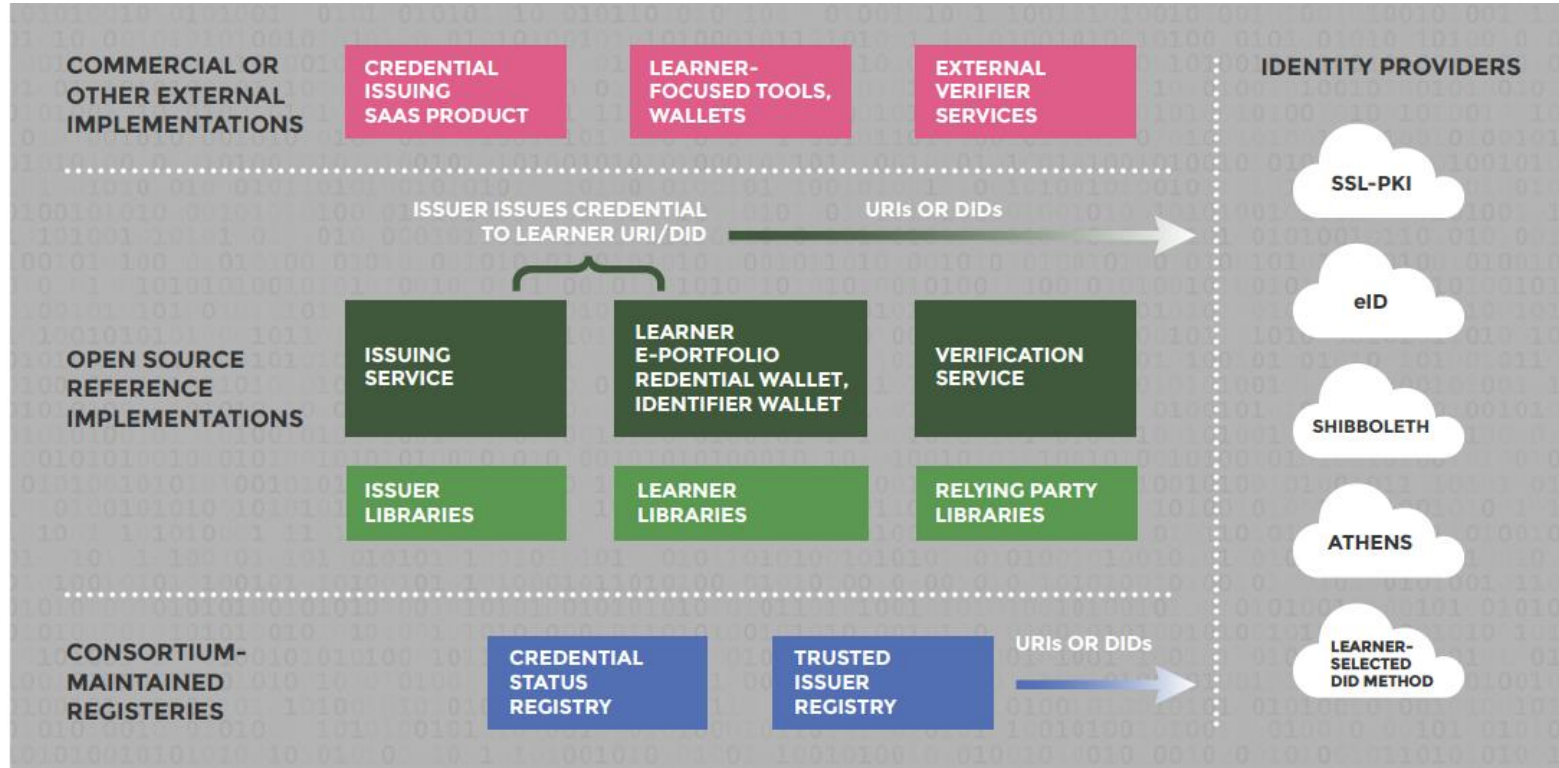


EDCI, EBSI, Europass2, ESSIF



XHEIE, PIM, BMBF ...

Simplified Architecture Diagram



Learn More

- W3C Verifiable Credentials for Education Task Force
 - Meets every second Monday
 - Free, open to the public
 - Join us: <https://w3c-ccg.github.io/vc-ed/>

- DCC Resources
 - Website: <https://digitalcredentials.mit.edu/>
 - White paper: <https://digitalcredentials.mit.edu/wp-content/uploads/2020/02/white-paper-building-digital-credential-infrastructure-future.pdf>