



# Unlocking Digital Micro and Macro Credentials

An introduction to the importance of embracing both micro and macro digital credentials to future-proof academic and recognition.



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## Mortensen

Co-founder of Diplomasafe

- Diplomasafe work to help universities unlock and navigate the complex landscape of credentialing standards and future-proof their recognition systems.
- Background in digital identity, national eID systems, cryptography, and privacy infrastructure
- Our mission is to cut through the complexity and provide universities with the tools and expertise to embrace both micro and macro credentials, aligning with global digital credential verification methods and authentication empowering thier students lifelong career and learner journey.

# Building the EU Credential Infrastructure



## **EBSI-VECTOR**

Implementing European Blockchain Services Infrastructure (EBSI) at 9 Danish universities



## **MCEU Hospitality**

Pioneering EU micro-credentials in hospitality education via Erasmus+ pilot



## **EBSI Network Expansion**

Expanding validator nodes to strengthen decentralised EBSI ecosystem



## **Autocredify**

Reskilling & upskilling automotive workers with micro-credentials



**Let's  
unlock  
this  
together!**





# **Institutional Pains!**

**Why old fashioned paper and pdf  
credentials are so..... 1999**





**Manual verification is hard**

# **Fake diplomas thrive, paper and PDFs pose risks**

**100,000+ fake diplomas sold every year**

**Typical price of \$1,000 for fake credentials**

**Real parchment, seals & watermarks used - indistinguishable from real ones**

**No ID or academic proof required - just ^pay and receive**

**\$5M worth of fake degrees sold by one busted operation**



# Printing issues





**Handwritten signing of diplomas**

# Slow & Cost Inefficient







**Missed branding opportunity - Paper diplomas rarely go viral - digital ones do!**



**Stackability &  
Learning  
Pathways:  
Not possible**

# Skills Tagging: Not possible

Position

Managed by  ▼

Skill 

x UX Testing

x Product Design

x Tech Support

x JIRA

x Product

x Project Management

x QA

x CustDev

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# No support for Skills based hiring

## Skills-Based Hiring

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- ✔ Prioritizes specific skills and competencies
- ✔ Talent pool is broader, includes non-traditional candidates
- ✔ High job fit, as candidates are evaluated based on job-relevant skills
- ✔ Promotes DEI by removing educational barriers
- ✔ Prioritizes learning and adaptability, suitable for dynamic roles

## Traditional/ Degree-Based Hiring

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- ✘ Emphasizes formal educational qualifications and degrees
- ✘ Limited to candidates with specific academic credentials
- ✘ Job fit may vary, as academic qualifications don't always reflect job skills
- ✘ May unintentionally exclude diverse candidates
- ✘ Focuses on established knowledge, may lack emphasis on adaptability

SIEMENS  
energy



Walmart



J.P.Morgan

# So let's face it, there are too many **Limitations** of Analog Credentials

- **Costly to produce**

Printing, paper, and frames add significant costs

- **Expensive to distribute**

Packaging, postage, and handling drive up distribution costs

- **Resource-intensive**

Manual labor, office space, and printers require substantial resources

- **Require physical storage**

Filing systems, archive rooms, and off-site storage needed to manage physical documents

- **Reissuance costs**

Staff time and material costs to replace lost or damaged credentials

- **Slow to issue**

Can take weeks post-graduation to receive physical credentials

- **Time-consuming to verify**

Manual lookup and response to requests for verification

- **No automation**

Requires full manual workflows, no digital automation

- **Delays impact opportunities**

Delays in receiving credentials can hinder students' job or study opportunities

- **Vulnerable to fraud**

Physical documents are susceptible to forgery and fraud

- **Not mobile-friendly**

Physical credentials are difficult to access and share on digital platforms

- **Lack of interoperability**

Not compatible with skills-based hiring systems or cross-border recognition

- **Misalignment with initiatives**

Not aligned with the EU Skills Agenda, EBSI, Europass, or Digital Identity Wallet

# The Maze of Standards - what to do?



**W3C**

for credential data  
structure



**Europass**

for EU alignment



**EBSI**

EU Blockchain for a  
trusted EU  
infrastructure



**eIDAS**

for legal digital  
signatures



**EUDI Wallet**

the learner's  
portable, official  
store



**Blockcerts**

Verifiable  
Blockchain-based  
Digital Credentials



# Micro and Macro Credentials: Two Sides of the Same Strategy

## Macro-credentials

Still essential, but must be digital and verifiable

## Micro-credentials

Agile, stackable, skill-based, mobile, sharable and digital verifiable

## Living on the Same Infrastructure

Both macro and micro credentials should live on the same infrastructure

# Why You Should Care?



**Student Expectations**

**Costs are rising**

**Fraud is Real**

**Skills based hiring is a thing**

# Your 'customers' have expectations!



## Visibility

Want credentials that show skills and achievements to potential employers



## Increased Job Prospects

**80% of learners** believe digital credentials increase their chances of finding a job



## Low effort, high impact

**95% are motivated** to receive digital credentials; **80%** find them easy to use



## Career Advantages

**96% of learners** say digital credentials are valuable for their career development



## Structured learning

**96% expect clear pathways** to develop skills - yet most institutions fall short



## Empowerment

**84% of learners** want their digital credentials to be shareable and accessible via directories, LinkedIn etc.



# **The Impact of Adopting Digital Credentials in Higher Education**













# A Happy Eco-System

University

Students

Employers



# Financial and Strategic Impact for Universities

## Automated issuing, reissuing, and verification

**90% reduction in admin time**, freeing up staff and lowering operational costs

## Elimination of physical printing, postage, and packaging

**€25 - €100 saved per credential**, leading to significant savings for institutions issuing thousands of credentials annually

## Instant online verification

Streamlining the verification process, **saving staff up to 30 minutes per request and reducing annual costs by up to €50,000** for universities handling thousands of inquiries, with response times slashed from days to seconds.

## No long-term physical storage

**Eliminate physical credential storage** and time to retrieve documents manually **saving Universities up to €15,000 per year**

## Improved student experience and brand value

**+20 - 50 point Net Promoter Score (NPS)** improvement among graduates, 25% of graduates sharing their credentials online, generating ~500 views each - **equivalent to 125,000 brand impressions** per 1,000 students

## Faster credential delivery

Digital credentialing enables **instant credential delivery**, in as little as seconds after graduation, compared to the many days and often months it requires for traditional paper-based processes

A teal-colored teardrop-shaped graphic with a rounded bottom and a pointed top, containing white text. The text is arranged in three lines: "WHAT", "DO WE", and "DO?".

WHAT  
DO WE  
DO?

**“Digital  
transformation  
doesn't have to be  
complicated.”**

**KIM STEENKJÆR MORTENSEN**



# Where should You Start?

- **Start small**

Start small by focusing on a specific program type, such as a micro-credentials, short courses, executive training, to build experience and gather feedback.

- **Align academic, legal, and IT**

Ensure key stakeholders across your institution, including academic, legal, and IT teams, are aligned on the goals and process for implementing digital credentials.

- **One platform policy**

Invest in one platform only for all your credential types and ensure your digital credentials align with the relevant standards and will be future compatible with the evolving credential standards, reducing the noise and ensuring a seamless student experience.

- **Ensure Compatibility**

Issue truly digital (data), at that will keep you future proof and enable adoption of any digital credential standard in the future. And if in the EU, make sure to choose a setup that is or will be EUDI Wallet compatible, as this will be the learner's official digital briefcase and the key to maintaining relevance across Europe & Globally.

- **An ISO certified partner is a must**

Work with **ISO 27001 certified** platforms only! Without this certification, institutions risk data breaches, loss of student trust, non-compliance with privacy regulations, and reputational damage. Consequences that can be far more costly than investing in a secure, certified provider from the start.



# KISS

Keep It Simple, Smart.

Because simplicity, done right, scales; And that's exactly what digital credentialing needs right now!



**Kim Steenkjær Mortensen**

Co-Founder at Diplomasafe - I help  
universities digitise for the future of credent...



# Digital Micro and Macro Credentials unlocked

The presentation emphasises the importance of universities embracing digital micro and macro credentials to future-proof their credentialing strategies. By aligning with EU-wide developments like the EUDI Wallet, universities can reduce administrative workloads, improve fraud resistance, and increase learner satisfaction and international visibility.