

# Digital Credentials in SA



PrivySeal® was founded to make genuine qualifications & licensing visible.

The problem of fraudulent qualifications remains significant.

National Qualifications Framework Amendment Act creates two registers.

Credentials take different forms - currently most are PDF / printed (think of the current driver's license, regulatory licensing and graduation certificates).

PrivySeal® has been helping Issuers like SAQA, ZAQA, SACAP, SACQSP, SACSSP and many others to migrate to digital credentials since 2016.

The migration process from paper / PDF to digital requires the buy-in of the Issuers.

Do not forget that the Issuers will continue to be key in any credential issuing process.

# Digital credentials



Making credentials visible is important for many reasons.

**Scan the QR code** on the example PrivySeal® (micro-credential) to access the encrypted digital certificate (credential).





CD(SA)<sup>®</sup>

[Redacted Name]

INSTITUTE OF DIRECTORS  
SOUTH AFRICA

09:11 AM (Africa/Johannesburg) on 01 Mar 2022



SOCIAL WORKER

[Redacted Name]

09:09 AM (Africa/Johannesburg) on 01 Mar 2022



PROFESSIONAL QUANTITY SURVEYOR

[Redacted Name]

09:03 AM (Africa/Johannesburg) on 01 Mar 2022



PROFESSIONAL ARCHITECT

[Redacted Name]

09:00 AM (Africa/Johannesburg) on 01 Mar 2022




PrivySeal<sup>®</sup> are added to email footers, websites, documents, Financial statements, Plans...

QR codes links to real-time digital credential.

**SACAP** requires Architectural Professionals to add their PrivySeal<sup>®</sup> to their Plans **to reduce fraud.**

# Real-time credentialing - confirming genuine qualifications & licensing



This serves to certify that

[REDACTED]

ID/Passport No: 010\*220\*250\*2


has been elected by Council as a(n)

**Student Member (StMSAIIIE)**


of the Southern African Institute for Industrial Engineering

Membership No: [REDACTED]

Date of issue:  
05 September 2021



President



POWERED BY PRIVYSEAL®

*A vibrant, learned society representing and promoting Industrial Engineering in Southern Africa*

Expiry date: 05 September 2022. SAIIE has confirmed the above information, for digital certification and sharing by PrivySeal Limited, at 10:46 AM (Africa/Johannesburg) on 17 Feb 2022.



UNIVERSITY OF KWAZULU-NATAL™  
INYUVESI YAKWAZULU-NATALI

**EXTENDED LEARNING**

This is to certify that

[REDACTED]

has successfully completed the

**MANAGEMENT DEVELOPMENT PROGRAMME**

February 2021



CEO UKZN EXTENDED LEARNING



DEAN & HEAD  
GRADUATE SCHOOL  
OF BUSINESS & LEADERSHIP

CERTIFICATE NUMBER  
UEL3002217

DATE ISSUED  
11 November 2021




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UKZN Extended Learning has confirmed the above information, for digital certification and sharing by PrivySeal Limited, at 09:22 AM (Africa/Johannesburg) on 18 Feb 2022.



**THE SOUTH AFRICAN COUNCIL**  
for the  
**QUANTITY SURVEYING PROFESSION**

Established in terms of the Quantity Surveying Profession Act 2000 (Act No 49 of 2000)

This is to certify that

[REDACTED]

is registered as a

*Candidate Quantity Surveyor*


and is entitled to use the abbreviation **CandidateQS**

Registration No. [REDACTED]

in terms of the Quantity Surveying Professional Act (Act No 49 of 2000)


with effect from  
**N/A**  
valid until  
**2022-03-31**

**Ms P.N. More**  
Registrar



POWERED BY PRIVYSEAL®

**Dr D.R. Letchmiah**  
President



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SACQSP has confirmed the above information, for digital certification and sharing by PrivySeal Limited, at 10:53 AM (Africa/Johannesburg) on 17 Feb 2022.



# Issuer buy-in

Issuers must be able to trust that their data is not going to be compromised and that they will be able to securely update or even revoke the digital credential.

Currently PrivySeal® clients control their data centrally and the credentials change in real-time as they update their records. This gives Issuers comfort as their control over the credential is increased.

Further tightening controls by using cryptographic keys, allows the Issuer to trust a new de-centralised architecture, where the cryptography potentially “underwrites” the risk of fraud.

Data Interoperability builds confidence (PrivySeal® suggests open standards such as JSON).

Data Privacy can further reassure the Issuer that the new credentials will not be abused.

Issuers of such a cryptographic credentials may agree to using a decentralised infrastructure where they do not have the same degree of control.

# Data interoperability learnings

- Beware bespoke (platform specific) data schemas.
- Consider using the tried and tested JSON open standard (ISO/IEC 21778:2017).
- Use APIs to collect data & avoid having to parse data (f/n=firstname..).
- Beware IT protocols that are contested.

# Data privacy questions

- Does PSET CLOUD have the data subjects express permission to process & generate data?
- Does PSET CLOUD use data in the normal course, as the data subject would expect?
- Does PSET CLOUD combine different datasets when processing data?
- How intrusive, predictive or potentially damaging is the data modelling?
- Consider engineering safeguards to avoid unintended consequences.