

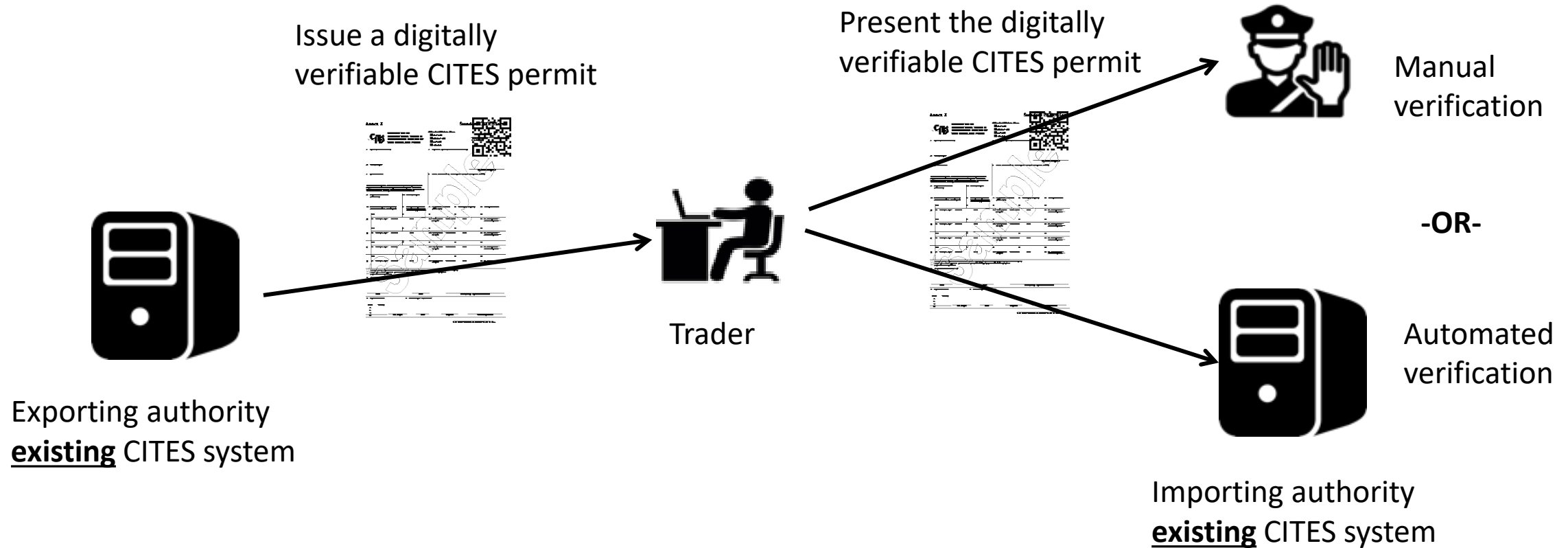


VCs for CITES

Verifiable Credentials (VCs) offer the lowest cost, most scalable, and highest integrity digitisation framework for CITES permits.



A better, faster, cheaper eCITES is possible



Using some new technology standards

From the world's leading web standards body:



Two key technology standards

Verifiable Credentials

<https://www.w3.org/TR/vc-data-model/>

Decentralised Identifiers

<https://www.w3.org/TR/did-core/>

And from the world's leading digital trade standards body:



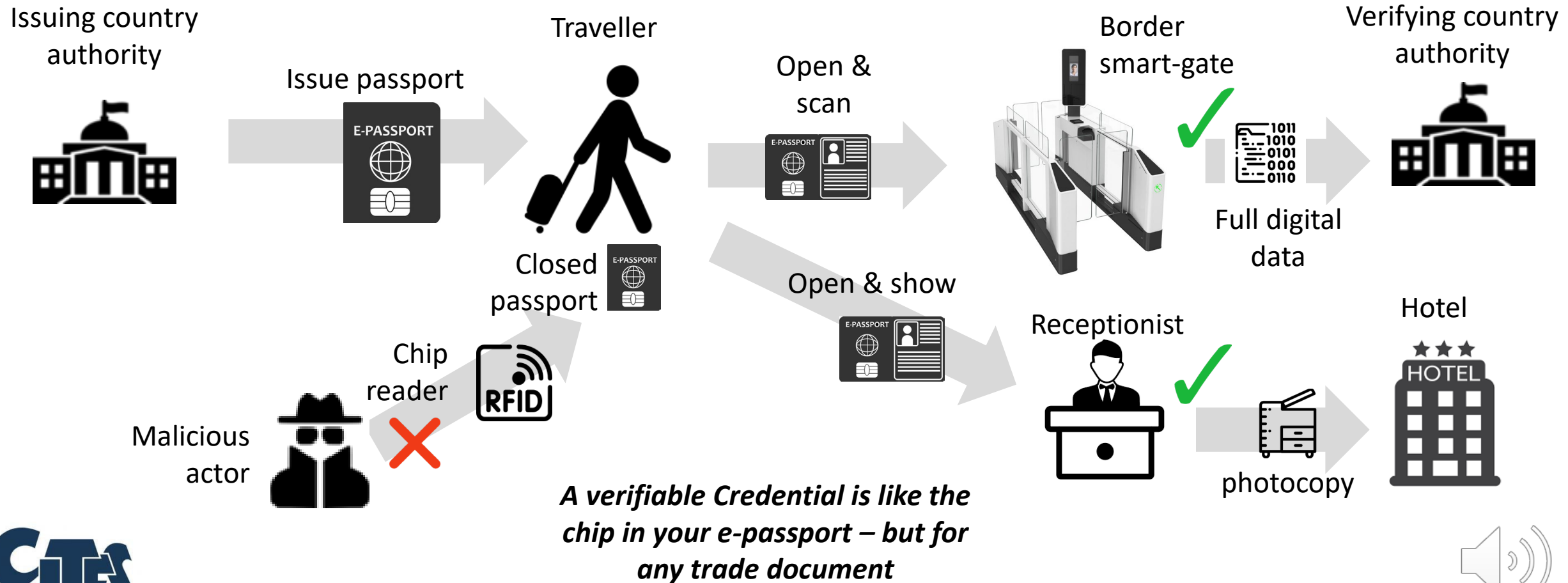
A white paper that explains why they are important and how to use them

VCs for cross border trade

https://unece.org/sites/default/files/2022-09/WhitePaper_VerifiableCredentials-CBT.pdf

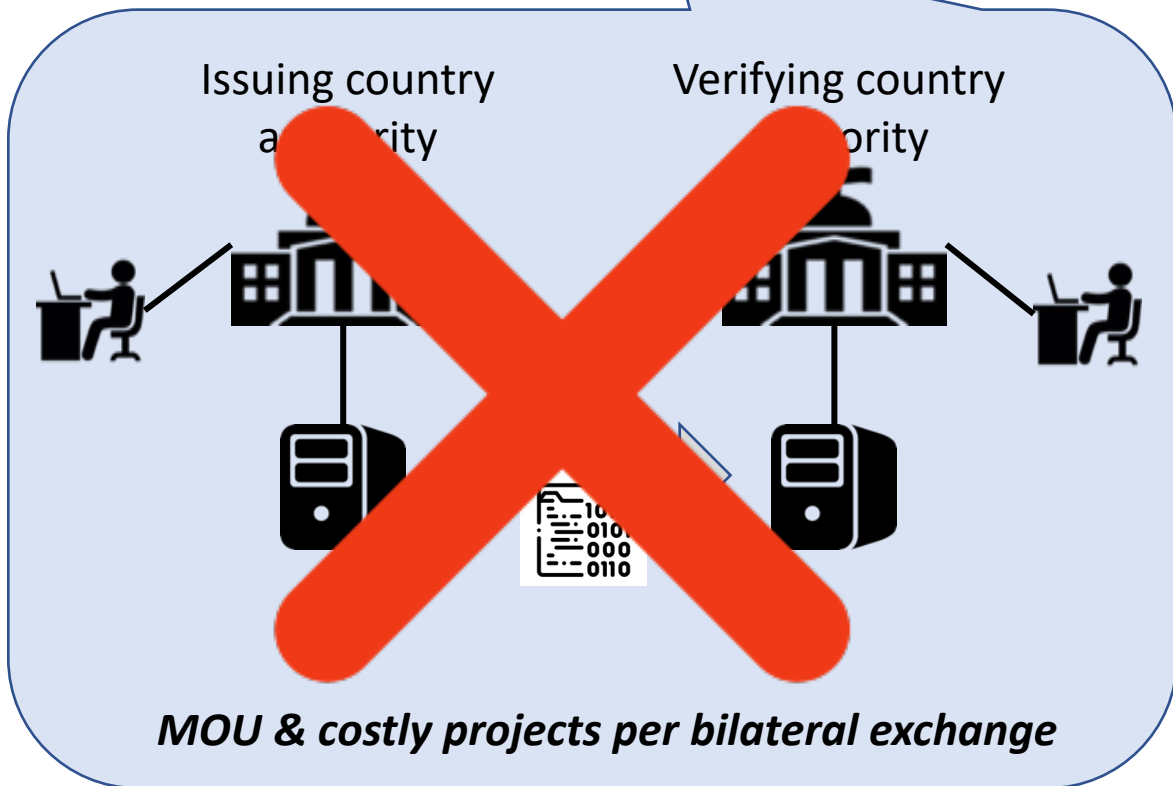


Which are best understood with an analogy

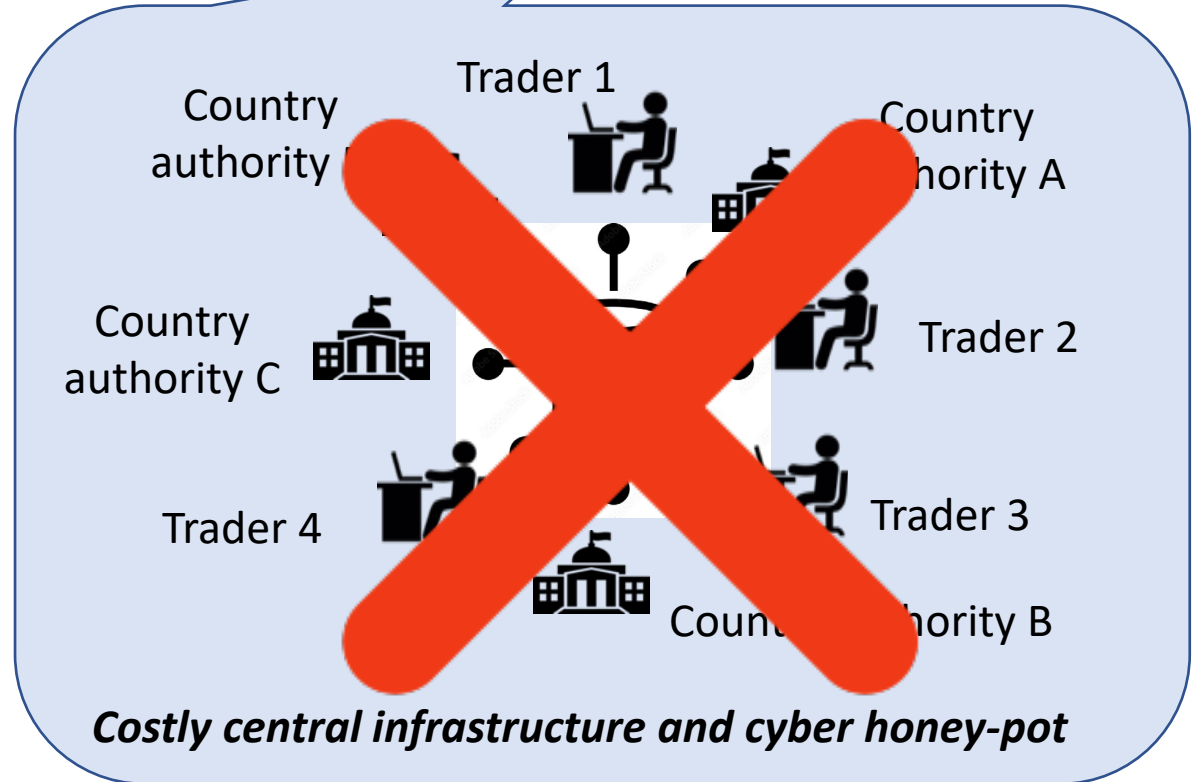


They are cheaper and simpler than alternatives

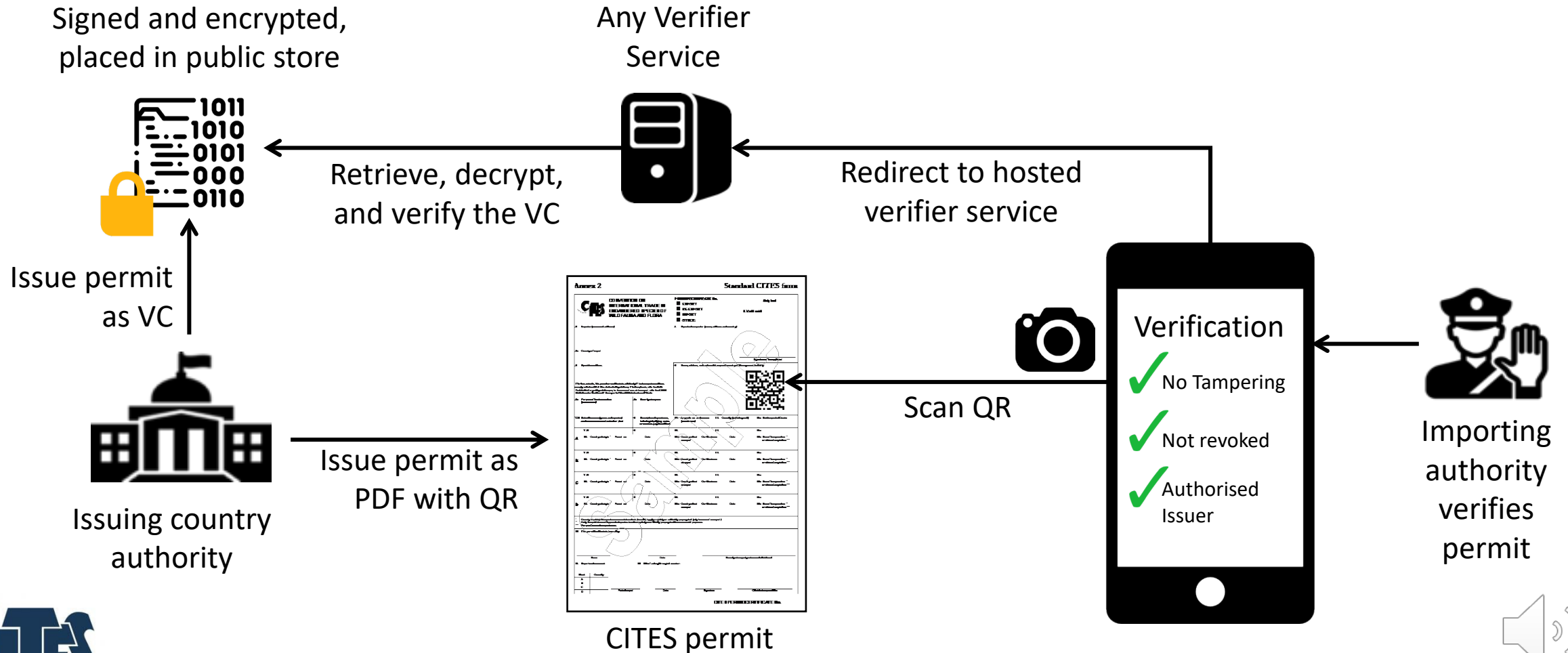
The EDI pattern



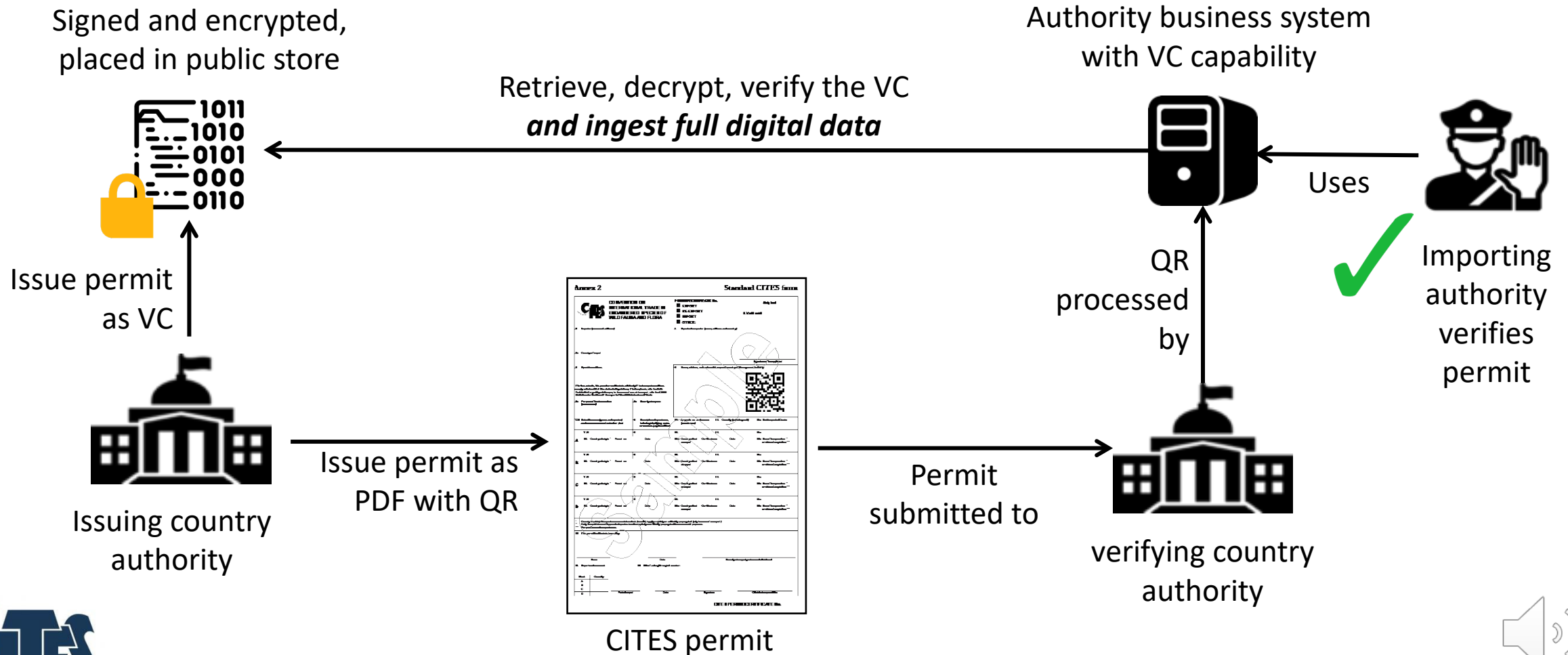
The Hub pattern



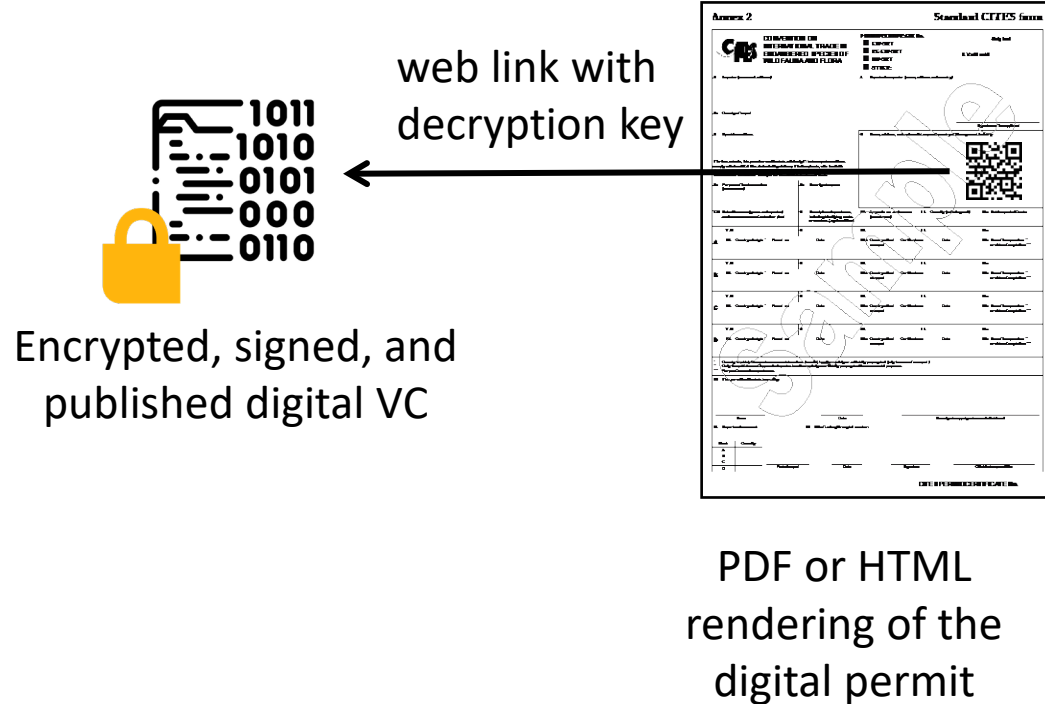
VCS can be verified simply by scanning a QR



But advanced verifiers can still get all the data.

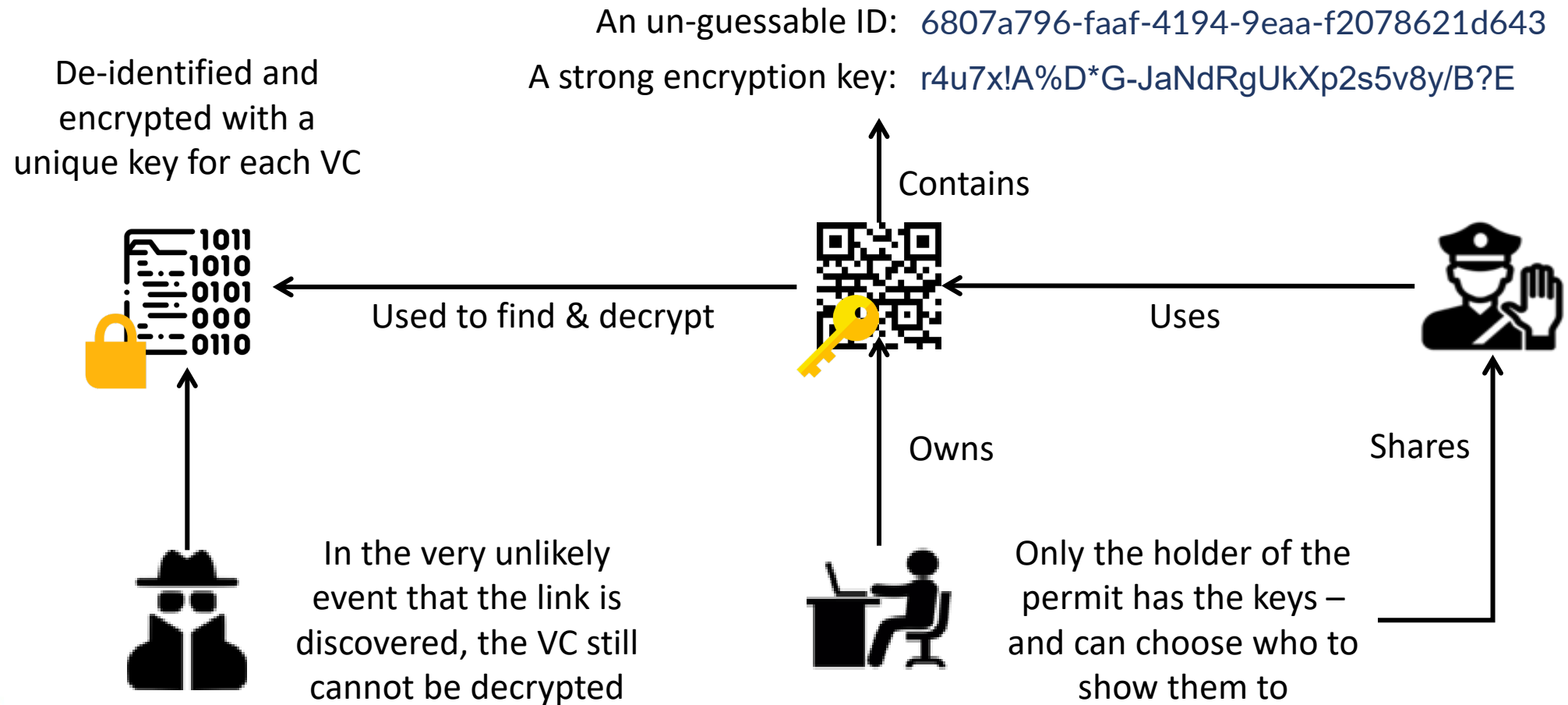


Wait, the same permit is both paper and digital?



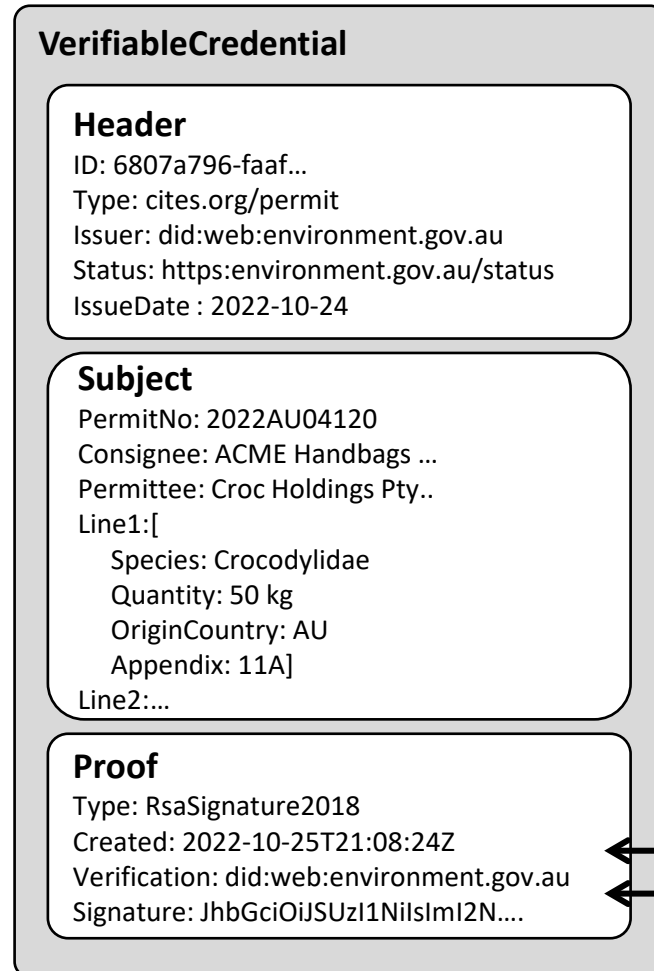
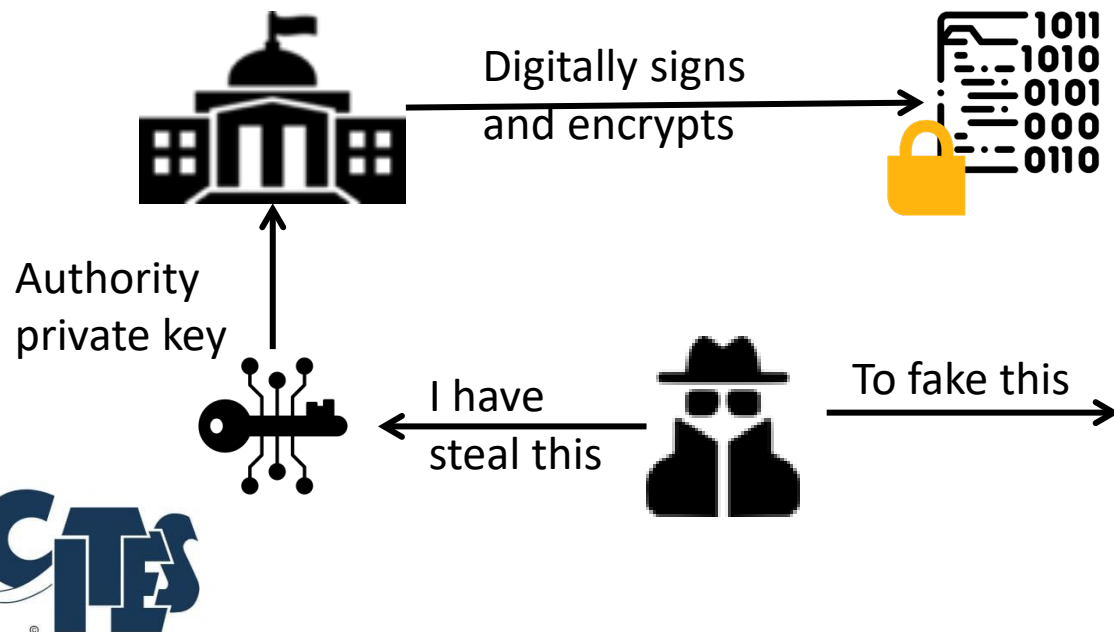
Yes! – and this is the key to scalability. You can go 100% digital without any dependency on verifier digital maturity

Published & public? But what about privacy?



And how can I be sure that the VC is genuine?

Because it is digitally signed
by someone you trust



Any tampering
of this data will
invalidate the
signature

Trusted issuer
Signature



OK, what is it going to cost me to issue these?

Very little..



Use free software from UN or any compatible commercial VC toolkit

<https://github.com/uncefact/project-vckit>

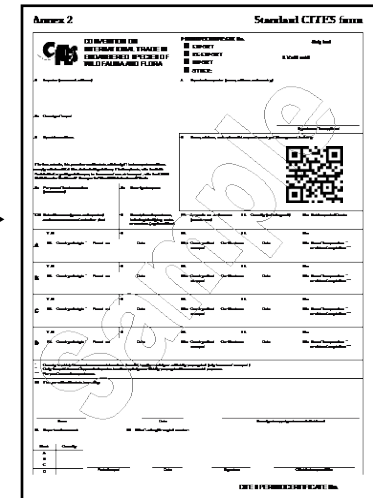
VC software plus
standard CITES schema



Your existing CITES
permit management
system

VC issuing /
verifying
software

New VC capability that
you need to plug-in to
your CITES system

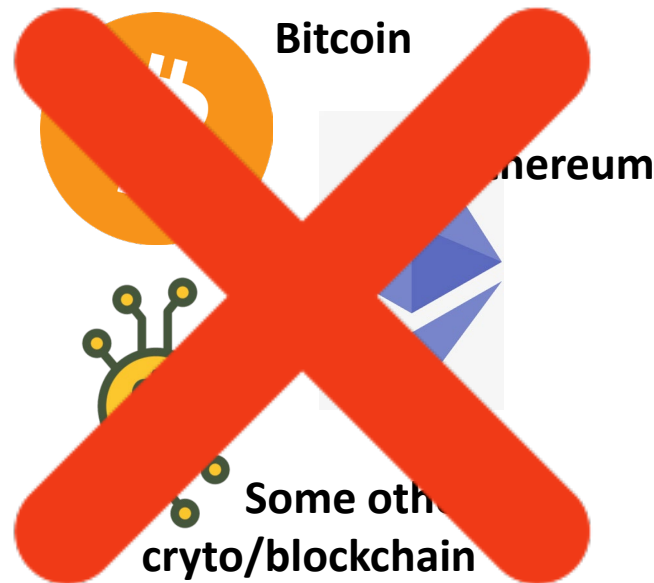


Your e-CITES permits as VCs



Wont I need some blockchain stuff?

Some VC solutions do use some blockchain – but it adds very little value.



**NOT
NEEDED !**

Lets see it working – scan these QR codes

A Valid Certificate



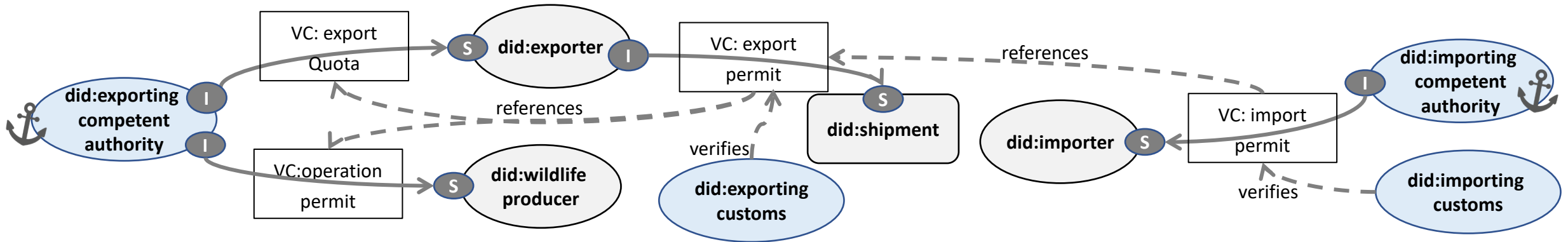
An Invalid Certificate



Note : We use a certificate of Origin as the sample – but could equally be a CITES permit



An advanced topic to close – trust graphs



VCs can be linked together to form chains of trust. For example an importer permit linked to an export permit that is linked to a quota license and to an authorised wildlife producer. We call the linked set of credentials a **trust graph**. Valuable trust graphs are traceable to a **trust anchor**.



In summary – it's the best way forward

Verifiable Credentials for global e-CITES

- ✓ Scalability – Go 100% digital without dependencies
- ✓ Cost – No central infrastructure and free software
- ✓ Privacy – No honeypot cyber-threat
- ✓ Integrity – cryptographically verifiable trust



VCs for CITES

Thank you!

Contact me:

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Track the UN VC project:

<https://github.com/uncefact>

