

ISO/IEC mdoc for eHealth – Introduction to ISO/IEC 18013-5



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Topics

- Introduction to the ISO/IEC 18013-5 mdoc concept
 - mdoc communication protocols
 - mdoc security protocols
 - mdoc privacy aspects
- ISO-compliant mdoc for eHealth: micov
 - DocType and NameSpace
 - Vaccination, test, recovery records <> attestation
- Discussion



Scope and purpose of ISO/IEC 18013-5

- Interface requirements to facilitate ISO-compliant driving licence functionality on a mobile device.
- Intended to enable verifiers not affiliated or associated with the issuing authority to request, receive and authenticate the information.
- Enable the holder of the driving licence to decide what information to release to a verifier, while keeping control over their own device.
- Enables updating information frequently and authenticating information at a high level of confidence
- **Strong focus on security, privacy and interoperability**



Scope and purpose of ISO/IEC 18013-5

The standard was designed to support:

- a protocol for two devices to establish a **secure wireless communication** channel and exchange structured request and response messages;
- **identification** of the mdoc holder (**user binding**)
- selective release of data elements by the mdoc holder (**data minimization**)
- a protocol to retrieve mdoc data directly from the mobile device of the mdoc holder, **purely offline**, facilitating **availability** and **non-traceability**
- an **optional** protocol to retrieve mdoc data from the issuing authority
- a mechanism to establish **integrity** and **authenticity** of the mdoc data
- a mechanism to confirm **device binding** (signing at transaction time)

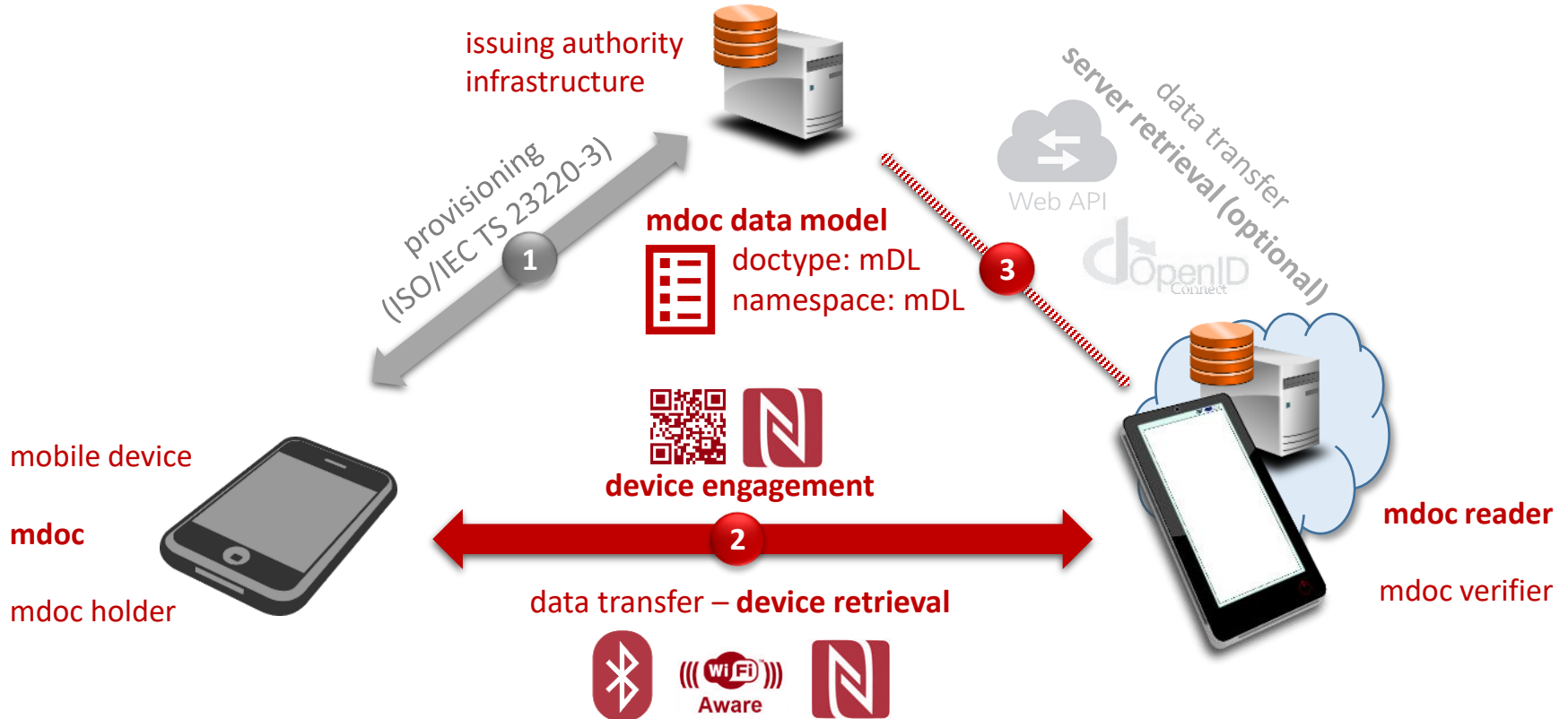


Scope and purpose of ISO/IEC 18013-5

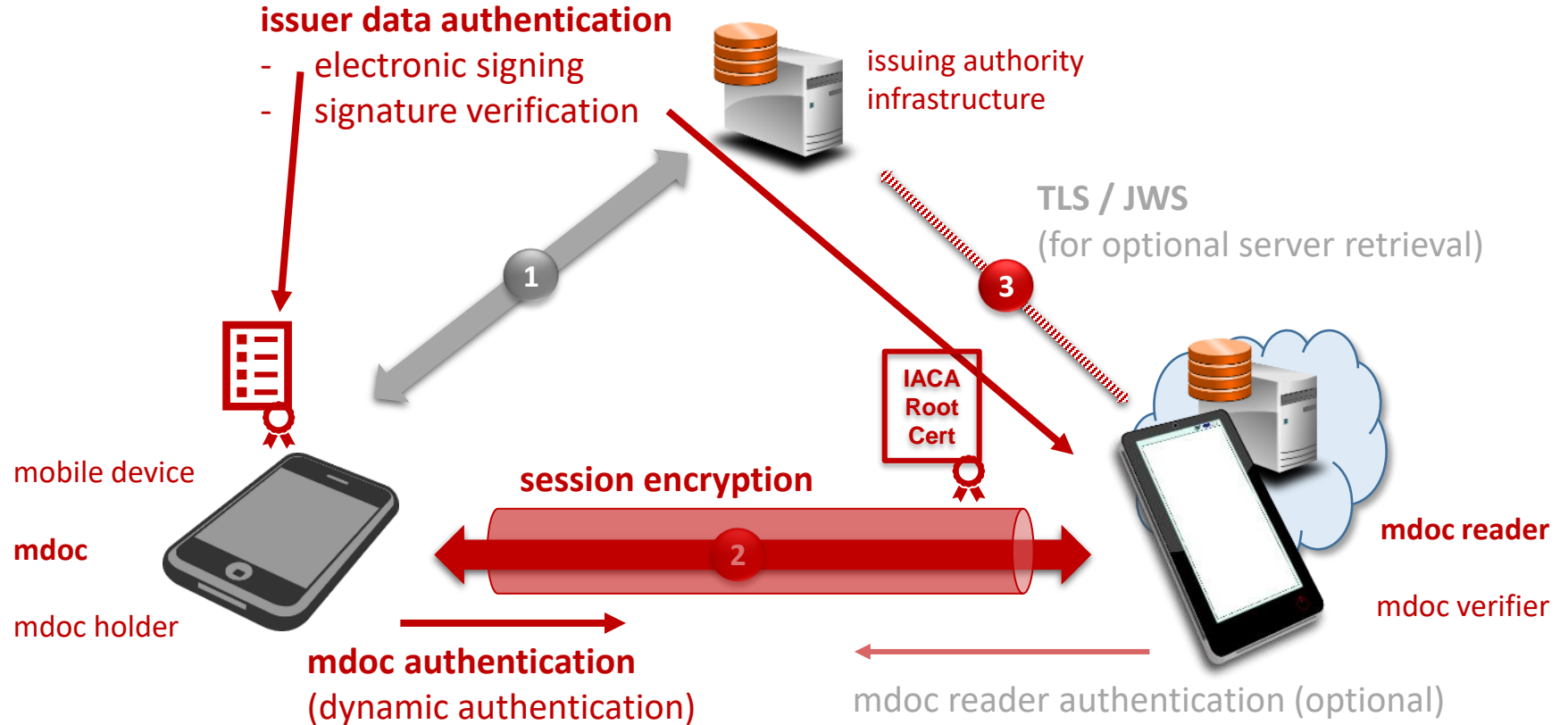
- Facilitates international interoperability (ISO mDL doctype and namespace)
- Supports domestic needs (domestic namespace)
 - Custom data elements
 - Local units of measurement
 - Non-Latin alphabets
- Generic transaction protocols and security mechanisms for use with any doctype or namespace.
- Legal and policy matters remain with issuers and lawmakers



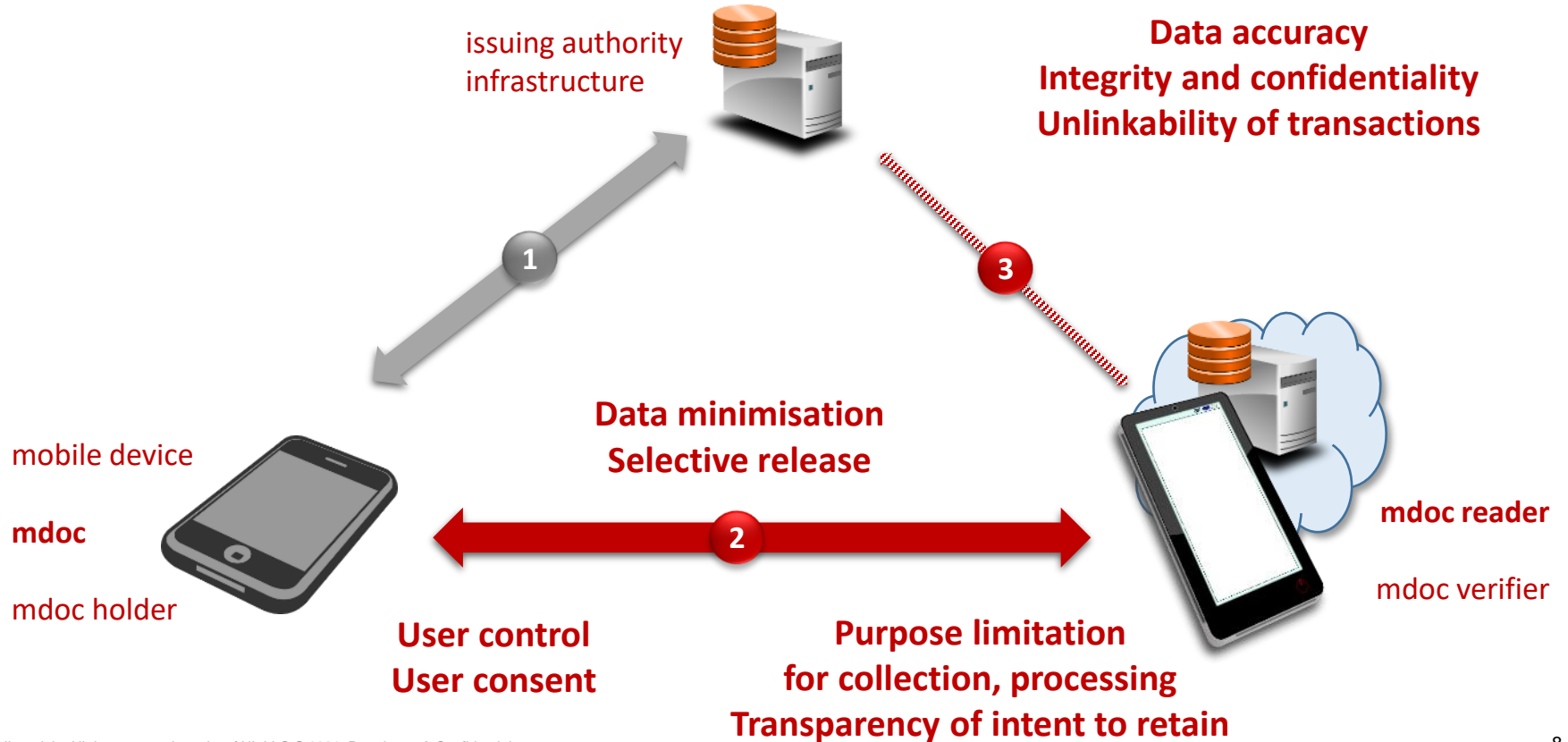
ISO/IEC 18013-5 mdoc transaction protocols



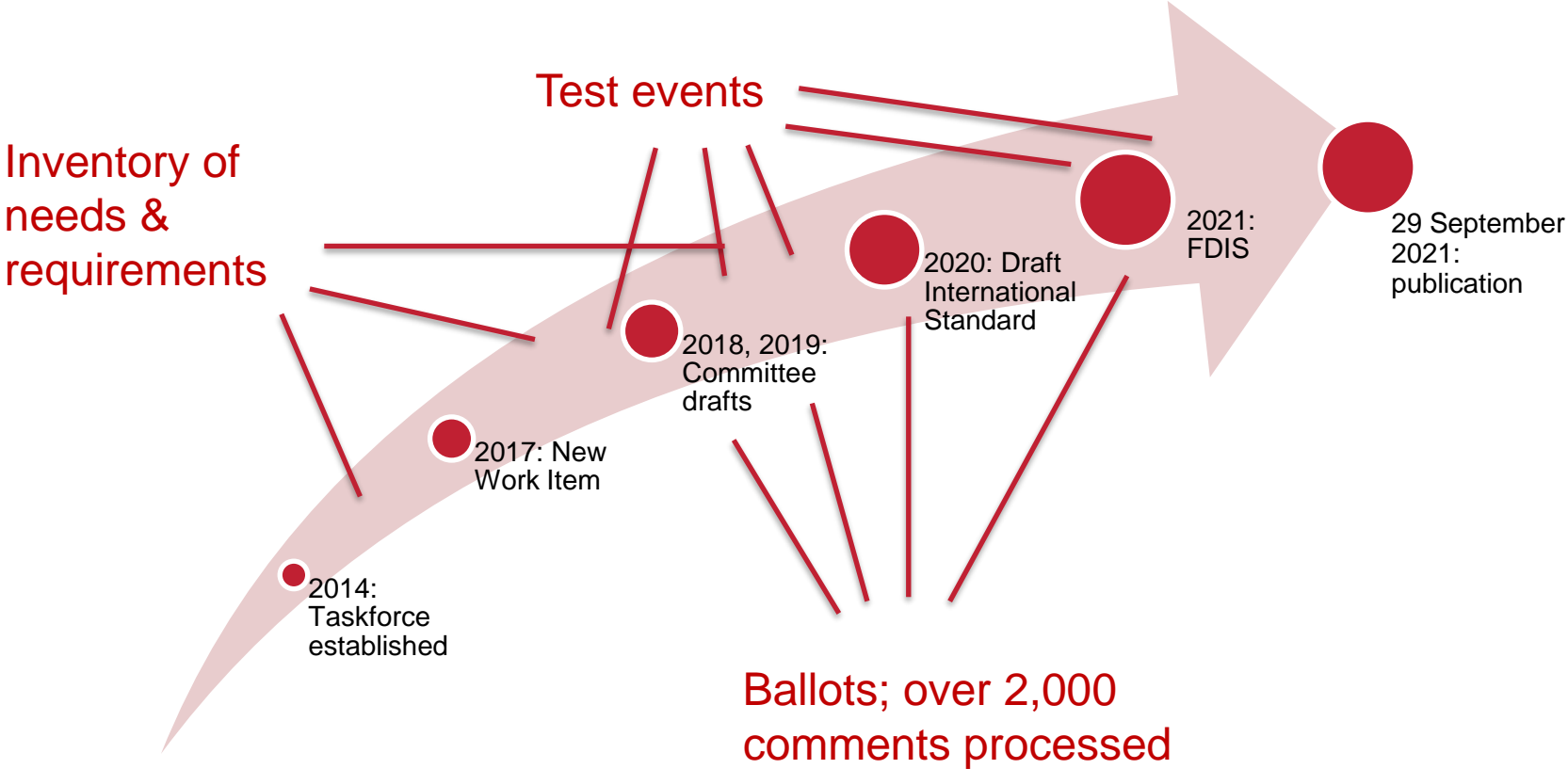
ISO/IEC 18013-5 mdoc security mechanisms



Privacy enhancing use of ISO/IEC 18013-5



Development of ISO/IEC 18013-5



Coordination with regional authorities | interop test events



RDW



Whitepaper on ISO-compliant mdoc for eHealth

- <https://github.com/18013-5/micov>

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ISO/IEC JTC 1/SC17/WG4-WG10 JAG on ISO-compliant mdoc for eHealth

Release Candidate 2, 2021-09-14

Please provide feedback by 2021-10-16 to arjan.geluk@ul.com

White Paper

Guidelines for developing
an ISO-compliant mdoc for
eHealth



mDoc for eHealth – DocType and NameSpaces

- work title: micov – mobile international certificate of vaccination
- The whitepaper specifies the following DocType for a micov:
“org.micov.1”
- The whitepaper specifies the following three namespaces:
 - “org.micov.**vtr**.1” – for vaccination, test and recovery data
 - “org.micov.**attestation**.1” – for attestation data
 - “org.micov.**fhir**.1” – for Fast Healthcare Interoperability Resources (FHIR) data



WHO DDCC and EU DCC based vtr data elements

- **Name(s), date of birth, ...**
- **Person ID**, referring to an identification document held by the micov holder
 - Example identifiers: “pid_DL”, “pid_PPN”

Record	Vaccination	Test	Recovery
contents	info on a vaccination the holder received	info on negative test results for the holder	info on diseases the holder has recovered from
example identifiers	“v_RA01_1”, “v_RA01_2”, “v_1D47”	“t_RA01_1”	“r_RA01”

2 COVID-19 records;
1 Yellow Fever record



attestation data elements

- **[ICD11DC]_vaccinated, [ICD11DC]_tested, [ICD11DC]_recovered**
 - Attest (bool statement) + additional data if necessary
 - Example identifiers: “1D47_vaccinated”, “RA01_tested”
- **safeEntry_Leisure, safeEntry_Travel**
- **Face image**
- **Partial name / partial birthdate**





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welcome



Europe's first mDL Prototype Interoperability Party
Rotterdam the Hague Airport, 12-13 October 2021

ENDORSED BY



First multi-document experiments during test events in Rotterdam (Oct) and Houston (Nov):

- mobile Driving Licence
- mobile Vehicle Registration
- mobile Vaccination Certificate

Whitepaper and Sample data set used during the test events are available from:

<https://github.com/18013-5/micov>

Thank you!

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