T-01: Identity & Credential Layer

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W3C DID 1.1
Decentralized Identifiers. Every participant (human, organisation, AI agent, IoT sensor) has a DID. CTH uses `did:web` for organisations and `did:key` for ephemeral agent sessions.

cth:FPICCredential (CTH-original)
A W3C VC 2.0 credential encoding Free Prior and Informed Consent. Fields: `territoryId` (links to official IGN cadastral ID), `permittedPurposes[]` (e.g. ['eudr','csrd']), `benefitSharingTerms` (hash of signed agreement), `revocable: true`. The community council holds the signing key — stored in their own HSM or managed key service, not CTH infrastructure.

W3C VC 2.0 with BBS+ Selective Disclosure
Verifiable Credentials allow coffee buyers to prove EUDR compliance without revealing GPS coordinates to competitors. BBS+ signatures enable selective disclosure — present only the fields the verifier needs.

OID4VP (OpenID for Verifiable Presentations)
Presentation protocol used by the compliance export API. EU customs systems can request a Verifiable Presentation containing only the EUDR-relevant fields, verified against the issuer DID.

Credential Type	Issued By	Held By	Expires	Revocable
cth:SubmitterCredential	CTH Accreditation Svc	Data Submitter	12 months	Yes — by CTH Steward
cth:ValidatorCredential	CTH Accreditation Committee	Accredited Validator	24 months	Yes — by Governance Board
cth:CommunityCredential	CTH + Community Council	Community Sovereign	Indefinite	Yes — by Community only
cth:StewardCredential	Governance Board	CTH Staff Member	12 months	Yes — by Board vote
cth:AuditorCredential	CTH (on regulatory mandate)	Regulator	Audit scope only	Yes — auto-expires
cth:AgentCredential	Delegating human DID	AI Agent / Script	Human session	Yes — immediate

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