Trustvestor

INFRASTRUCTURE PARTNER CAPABILITY STATEMENT

HORIZON EUROPE: CLUSTER 1 (HEALTH)

Trustvestor Ltd. operates as the **"Digital Notary"** for the European Health Data Space (EHDS). We provide **QTSP-grade infrastructure** (Qualified Trust Service Provider) to issue, verify, and preserve high-assurance health attributes. We solve the "Trust Deficit" in secondary use of data by securing the entire chain-of-custody using **Local EU Hardware Security Modules (HSMs)**, ensuring data sovereignty and immunity from non-EU jurisdictions (US Cloud Act).

THE SOVEREIGNTY & TRUST GAP

Health consortia face critical infrastructure vulnerabilities under **eIDAS 2.0** and **EHDS**:

- **Data Sovereignty Risk:** Reliance on US-headquartered cloud HSMs (AWS/Azure) undermines the legal validity of sensitive health data storage.
- **GDPR "Black Box":** AI models trained on patient data often lack an auditable chain of consent (Article 9 GDPR).
- **Interoperability Failure:** Biobanks struggle to connect legacy LIMS with new patient-centric **Solid Pods**.

OUR INFRASTRUCTURE SOLUTION

Trustvestor deploys **physically sovereign HSMs** (Utimaco, Thales) hosted in EU data centers to secure your Work Packages:

- **Qualified Compliance Attestations:** We issue legally binding "proofs" of patient consent and ethical compliance.
- **Local Key Custody:** Cryptographic keys never leave the EU.
- **Compliance-as-Code:** Automated mapping of regulatory requirements (EHDS, AI Act) into machine-readable rules.

MODULE A: OpenZKA & Ethics

Target Topics: STAYHLTH-03 (Trust), TOOL-03 (NAMs)

Domain: Privacy-Preserving AI & Patient Anonymity

Value Proposition:

- Implements **Zero-Knowledge Proofs (ZKP)** to validate patient eligibility for clinical trials without revealing PII.
- Enables **Blind Statistical Aggregation** for research on sensitive cohorts (Mental Health, Rare Diseases).
- **Ethical "Mission Lock":** Open-source middleware guaranteeing transparency.

Tech: Circom Circuits, W3C Verifiable Credentials

MODULE B: Trust4Life Gateway

Target Topics: IND-03 (Reg. Science), DISEASE-03

Domain: Biobanking, SoHO & EHDS Interoperability

Value Proposition:

- **FHIR-Solid Bridge:** Semantic adapter connecting Hospital FHIR servers to patient Solid Pods for **Dynamic Consent**.
- **Qualified Preservation:** Long-term eIDAS archiving of research datasets.
- **RegFlex™ Engine:** Automated check of cross-border regulatory deviations.

Tech: HL7 FHIR R5, Solid Protocol, X-Road

TECHNICAL STACK ALIGNMENT (TRL 6 READY)

Cryptography:	Utimaco/Thales Local HSMs (FIPS 140-3 L3) • Post-Quantum Ready
Standards:	eIDAS 2.0 ARF • HL7 FHIR • W3C DID • ISO 27001
Deployment:	EU Sovereign Cloud (OVH/IONOS) • NIS2 Compliant • Kubernetes

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