Empowering Data Privacy and Security in Untrusted Environments

European Big Data Value Forum
WITDOM is your solution to protect the privacy and security of your data before outsourcing to the cloud!!

- Cloud framework for **end-to-end** data protection.
- **Crypto** and **non-crypto** composable protection mechanisms.
- Flexible architecture.
- **Big Data** infrastructure.
- **2 scenarios** of high privacy and security.
WITDOM concept

**Trusted domain (i.e.: private cloud):**
- Internal users
- Protected data
- Operations Requests

**Untrusted domain (i.e.: public cloud):**
- External users
  - End-users
  - 3rd parties
  - Public Institution
  - Regulator

**IT DEPARTMENT**

**CLOUD PROVIDER**
WITDOM use cases

eHealth scenario

1. Variant annotation
2. Genome Alignment

Financial Services scenario

1. Credit Risk Scoring
2. Cash Flow Forecasting
3. Credit Fraud Detection
WITDOM elements

- **Core components**
  - Broker
  - Protection Orchestrator

- **Protection components**
  - Anonymization
  - Data masking and desensitization
  - Secure Signal Processing
  - Secure Computation (HE)
  - End-to-end encryption
  - Integrity and consistency verification

- **Deployment on the Cloud**
  - Docker
  - Cloudify
Partners

Contact

Elsa Prieto (Atos)
WITDOM coordinator
elsa.prieto@atos.net

witdom.eu
https://twitter.com/W1TD0M
https://www.linkedin.com/groups/8257514

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 64437. This work was supported in part by the Swiss State Secretariat for Education, Research and Innovation under contract No. 15.0098. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the European Commission or the Swiss Government.