Digital 4 Business

D4.7 Weekend Workshops & Guest Lectures

Akkodis Weekend Workshop & Guest Lectures

Blockchain Technology

1. PREMISE

The purpose of this document is to provide all partners with a tool supporting them in the planning and organisation of the Weekend Workshops & Guest Lectures planned in the project.

To this end, please consider the following:

- all info requested must be filled in;
- this template must be sent filled in and sent back **90 days before** the starting date of the event planned. In case you are unable to follow this time constraints, send an email to the task leader (Adecco) to schedule a 1to1 meeting.

2. ABOUT THE EVENT

2.1 General data/info

Partner managing the event	*AKKODIS*
Overall Period	*March 06, 2026*
Venue	*Milano - Via Tolmezzo, 15, Milano, 20132, Italia*

2.2 Overall description

Key Contents: *Our goal is to present concrete examples of how blockchain technology is used. We also believe that the core of any solid business is solving problems and creating value for people and organizations.*

With these case studies, we present solutions and experiments that deepen the analysis of specific problems and seek appropriate solutions. We want to avoid buzzwords, narratives, and forced adaptations, focusing instead on how the tool itself (blockchain, smart contracts, etc.) can be applied in service of the solution.

The cases are therefore meant to encourage open discussions on real implementations, adaptations, and ideas. We envision presenting these cases to stimulate the circulation of ideas, generate new proposals across different sectors, and foster brainstorming.

3. WORKSHOPS

Workshop 1	
Workshop title	*Case 1: Energy Efficiency Certification*
Topic	***Objectives:*** *Certify data related to energy efficiency on a broad scale to facilitate reporting and transparency, in order to obtain incentives or avoid disputes.* ***Implementation:*** *IoT integration with a hybrid blockchain (private for real-time sensor data, public for cryptographic fingerprints); description of a platform for immutable notarization with unique digital IDs.* ***Benefits:*** *Legal reliability of data, reduced audit costs, automated reporting, dispute prevention; opens the door to tokenization of energy savings.* ***Challenges:*** *System integration and interoperability, cybersecurity risks (mitigated through encryption and audit logs).* ***Insights:*** *Ideas to extend to smart cities and climate-focused municipalities; smart contracts for self-triggering incentives.*
Presented by	*Daniele Pregnolato, Luca Tomatis.*
Duration (hours)	*45 min*

Workshop 2	
Workshop title	*Case 2: Document Notarization for Consortia*
Topic	***Objectives**: Certify information exchanges for public tenders, reducing disputes and fostering trust among consortium members.* ***Implementation**: Hybrid blockchain (private for data flows, public for hashes); the platform notarizes emails/documents with cryptographic receipts, digital IDs, and seamless IT integration.* ***Benefits**: Faster verification (from hours to minutes), smoother collaboration, resource savings in disputes, transparent integration.* ***Challenges**: Reconstructing document history (timelines and audit logs), evidentiary value.* ***Insights**: DAOs for governance; supply chain tracking.*
Presented by	*Daniele Pregnolato, Luca Tomatis.*
Duration (hours)	*45 min*

Workshop 3	
Workshop title	*Case 3: Energy Grid Stabilization (e.g., Texas ERCOT Grid)*
Topic	***Objectives:** Use Bitcoin miners to absorb surplus renewable energy, balancing the grid and reducing waste.* ***Implementation:** Miners (e.g., Riot, Marathon) balance production peaks by consuming electricity to mine BTC and then reduce consumption during demand peaks. In Texas, 41 GW of mining integrated with ERCOT (the state's main grid operator).* ***Benefits:** Grid stabilization, cost reductions (18B USD saved in Texas), lower emissions compared to peaker plants, support for renewables by absorbing excess energy.* ***Challenges:** Increased energy demand (risk of negative reserve margins in 2025), short interconnection timelines, regulatory tensions (e.g., PUC vs. Attorney General lawsuits).* ***Insights:** Ethical questions around Proof of Work; ideas to integrate mining with other forms of energy surplus*
Presented by	*Daniele Pregnolato, Luca Tomatis.*
Duration (hours)	*45 min*

Workshop 4	
Workshop title	*Case 4: Purchase of a Copy of the U.S. Constitution (ConstitutionDAO)*
Topic	***Objectives:** Acquire an original copy of the U.S. Constitution through decentralized crowdfunding, demonstrating the power of DAOs for collective assets.* ***Implementation:** DAO on Ethereum; raised USD 47M in ETH from over 17,000 contributors in a few days; bid placed at a Sotheby's auction (2021).* ***Benefits:** Highlights the potential of DAOs for large-scale coordination; inspired future DAOs and gave tangible value to online and pseudo-anonymous communities.* ***Challenges:** Lost the auction; complex refunds due to Ethereum gas fees.* ***Insights:** Applying DAOs to cultural assets, political parties (primaries), or internal decision-making in communities*
Presented by	*Daniele Pregnolato, Luca Tomatis.*
Duration (hours)	*45 min*

Workshop 5	
Workshop title	*Case 5: Securing Communications Between Satellites (NASA)*
Topic	***Objectives:*** *Explore blockchain for multi-sensor satellite constellations, enabling secure communications, autonomous planning, and distributed operations management.* ***Implementation:*** *Architecture using Hyperledger Fabric (permissioned, Node.js chaincode) and private Ethereum (Geth/Web3.js); integration with STK for simulations and AWS for hosting; use cases include data exchange, C&C logging, and event triggering.* ***Benefits:*** *Security (immutability, encryption), resilience (no single point of failure, PBFT consensus), scalability (automated observations, command routing); trustless operation foruntrusted ground stations.* ***Challenges:*** *Consensus latency (e.g., PoW), ledger growth (archiving downtime), slow SQL integration, performance issues with high-latency peers; need for realistic tests with simulated hardware.* ***Insights:*** *Integrating blockchain into space IoT; ideas for smart contracts in autonomous missions.*
Presented by	*Daniele Pregnolato, Luca Tomatis.*
Duration (hours)	*45 min*