SIRIUS FEDERAL TERRITORY

Sirius Educational Center

Sirius University of Science and Technology

DECADE OF SCIENCE AND TECHNOLOGY

November 28–29, 2025

YOUNG SCIENTISTS HACKATHON 2025

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CASE - 2

Background

Scientists actively attract funding from various foundations through grant competitions. In the course of implementing scientific projects, organisational tasks arise — budget planning, monitoring the targeted use of funds, reporting to grantors, and interaction with implementing organisations. These processes require significant resources, reducing the efficiency of research activities.

It is proposed to develop a software tool that reduces the burden on researchers by using smart contract technology and the capabilities of the Mir payment system. Integration with the Mir ecosystem will enable transparent, secure, and controlled settlements between grantors, executors, and research organisations, including mechanisms for identification, targeted transfers, and transaction analytics. In the future, this interaction will allow commercial banks to connect to grant operations regarding the functionality of bank guarantees and letters of credit.

About the case

SmartGrant: Grant Fund Management

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Goal: To develop a software tool for creating smart contracts for the effective management of grant funds.

Core Functional Requirements

1. Develop a mechanism for the creation, execution, and monitoring of smart contracts that describe the stages of grant implementation, as well as funding conditions and limits.

2. Ensure integration with the Mir payment system API for:
   Participant identification.
   Targeted transfers and settlements.
   Transaction tokenisation and analytics construction to demonstrate a participant's track record in fulfilling obligations.

3. Implement automated reporting and monitoring of the targeted use of funds.

Work Plan

Checkpoint 1: Architecture and Interface Design

Goal: Design the platform's architecture and interface for grant fund monitoring and reporting.

Expected Outcome:

- ★ Description of the smart contract interaction process for all key participants
- ★ Demonstration of the UI logic for user registration and configuring spending limits.

Checkpoint 2: Backend, UI, and Smart Contract Executable Development

Goal: Develop and deploy the platform.

Expected Outcome:

- ★ Implemented backend and user interface.
- ★ Deployed smart contract with core functions: parameterization, condition setting, and status updates.
- ★ Completed integration tests for all components.

Checkpoint 3: Demonstration and System Testing

Goal: Final revision of the teams' decisions

Expected Outcome:

- ★ A ready-made solution demonstrating the core functionality (transaction) – managing the process of grant application and execution.