



SIRIUS
FEDERAL
TERRITORY



Sirius
Educational Center



Sirius
University of Science
and Technology



November 28-29, 2025

YOUNG SCIENTISTS HACKATHON 2025



SIRIUS
FEDERAL
TERRITORY



Sirius
Educational Center



Sirius
University of Science
and Technology



CASE - 2

Background

Scientists actively secure funding from various foundations through grant competitions. However, the implementation of scientific projects involves numerous organizational tasks — such as budget planning, monitoring fund allocation, reporting to grantors, and coordinating with implementing organizations. These processes demand considerable resources, reducing the overall efficiency of research.



To address this, we propose developing a software tool that leverages smart contract technology and integrates with the Mir payment system. This solution will minimize the administrative burden on researchers by enabling transparent, secure, and controlled financial transactions among grantors, executors, and research organizations.

Key features will include identification mechanisms, targeted transfers, and transaction analytics.

In the future, this infrastructure will also allow commercial banks to participate in grant operations—supporting functions such as bank guarantees and letters of credit.

About the Case

┌ SmartGrant: Grant Fund Management ┐

Goal:

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

Core Functional Requirements

1. **Develop a Smart Contract Mechanism** to automate the lifecycle of grant funding — from creation and execution to monitoring — ensuring transparency, control, and compliance.
2. **Mir Payment System API Integration** to facilitate the following operations within the smart contract framework:
 - Participant Identification,
 - Targeted Transfers and Settlements,
 - Transaction Tokenization and Analytics construction to track a participant's historical performance and reliability.
3. **Automated Compliance & Monitoring** for the targeted use of funds

Plan

Checkpoint 1: Architecture & Interface Design

**Design the platform
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, Smart Contract Executable Development

**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 & System Testing

**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.