Mithril Protocol

Funding Proposal Summary | Q1 2027

Section 1 - Project Overview

Executive Summary

Mithril solves one of Cardano's most pressing infrastructure challenges: the cost and complexity of securely accessing and verifying blockchain state. As today full node synchronisation is slow and light clients rely on centralized trust. Mithril addresses this by using stake-based threshold multi-signatures to certify Cardano state in a trustless way, enabling nodes and applications to verify state rapidly without relying on the entire chain.

Track Record

Teragone Factory, in close collaboration with IOG, has been directly involved in the development of the Mithril protocol for over ~4 years. This gives our team not only deep technical expertise, but also critical context on architectural decisions, trade-offs, and roadmap evolution. As a result, we are uniquely positioned to continue advancing Mithril with minimal ramp-up time, lower delivery risk, and strong continuity with the protocol’s original vision.

Proposal Duration

This proposal is just for Q1 2027.

Section 2 - Alignment to Strategy Framework

Alignment with Cardano Pillars

Pillar	Alignment	How Mithril Contributes
Pillar 1: Infrastructure & Research Excellence	Fully aligned	● State proofs strengthen cross-chain interoperability.
Pillar 2: Adoption & Utility	Fully aligned	● Faster sync times lower onboarding friction and unlock new tooling for exchanges, wallets, and monitoring.
Pillar 3: Governance	N/A	N/A
Pillar 4: Community & Ecosystem Growth	Fully aligned	● Mithril enables community-built tools (bridges, light wallets, full wallets, light clients, monitoring tools) to emerge around Cardano.
Pillar 5: Ecosystem Sustainability & Resilience	N/A	N/A

Why those pillars?

Cardano is entering a period of heightened governance activity, ecosystem expansion, and scaling pressure. Without fast, verifiable, and trustless infrastructure, the network risks growing dependency on centralized indexers and hosted APIs. Funding Mithril's continued development ensures Cardano scales while preserving its core decentralization guarantees.

KPIs

Cardano 2030 KPIs (Adoption)	Alignment	KPI Alignment Narrative
Reliability: Monthly Uptime (6 epochs)	N/A	

Operational Resilience: Voting Power Distribution of Controlling Stake	N/A	
Operational Resilience: Alternative Full Node Clients	Yes - Directly	● It will be easier and faster to Sync Nodes.
Revenue / Adoption: Annual Protocol Revenue	Yes - Directly	● Adoption will increase thanks to better sync-times and query tools.
Governance: Drep Participation Rate	N/A	
Scalability: Throughput Capacity per day	N/A	

Section 3 - Proposer

Proposer Name

Teragone Factory.

Proposer Social Media

linkedin.com/company/teragone-factory
https://teragone-solutions.com/

Email an Intersect admin can use for contacting

leroy@teragone-factory.com

Section 4 - Proposal Details

ADA to USD conversion rate for proposal

$0,20 USD = 1 ADA

Name of this Work Package

Mithril Protocol Continuous Development

Work Package at a high level

Mithril protocol improvements for further decentralization, cardano integration and node diversity.

Core Objectives and Expected Value

- Faster node syncing and trustless state verification: Bootstrap in minutes instead of hours and no centralized trust required.
- Node diversity: Enhance Cardano network resilience, decentralization, and security through multiple software implementations.
- Faster onboarding: Users are able to setup their Mithril Relay and Aggregator with less friction with a guided-experience.

Metrics

KPI	Target
SPOs setup Relay and Aggregator faster.	● Current: 30-60 min. ● Goal: ~5 min guided experience.
Rust-based node implementation embeds our library and produces valid Mithril signatures that an aggregator accepts on a test network.	● Example on the repository where anyone can start an example signer built with the library.
Ledger state certified by Mithril	● A client can download and verify the ledger state.

New initiative or a continuation of an existing one?

Continuation of existing one.

Primary nature of this work proposalama

Technical

Work Package Delivery

Milestones	Deliverable	Duration	AC	Cost
Cardano Node Ledger state certification - MVP	A new certification type for the deterministic ledger snapshot implemented in the Cardano node.	Q1 2027 12 weeks	Certificates are produced for the ledger state of the Cardano node at least once per epoch on a testing network and with a rollout path on the Mithril networks.	~~₳~~514,445
Mithril Signer Rust Library	Rust library for the Mithril signer that exposes a well-defined API and that is published on crates.io, allowing it to be directly embedded into new Rust-based node implementations and facilitating reuse, maintainability, and long-term evolution.	Q1 2027 8 weeks	The signer library is embedded in an external binary, which an end-to-end test proves to be fully functional. The library is scheduled for release on crates.io and doc.rs with the next distribution.	~~₳~~408,889
Enhance setup tooling for Relay	Following the completion of the one-command SPO onboarding for the signer, a new ‘relay’ subcommand is added to setup the Mithril squid relay by walking through an interactive prompt.	Q1 2027 6 weeks	Confirm that the setup relay sub-command provides an interactive guide to the user to configure and install the Mithril squid relay correctly.	~~₳~~303,333
Enhance setup tooling for Aggregator	Following the completion of the one-command SPO onboarding for the signer a new ‘aggregator’ subcommand is added to setup the Mithril aggregator by walking through an interactive prompt.	Q1 2027 6 weeks	Confirm that the setup aggregator sub-command provides an interactive guide to the user to configure and install the Mithril aggregator correctly.	~~₳~~303,333
Debt reduction and Maintenance	Continuous improvement of the codebase, bug fixes and creation of new distributions.	Q1 2027 6 weeks	Verify that all critical and high-severity bugs reported during the quarter are resolved. Check that the newest versions of the Cardano node are supported.	~~₳~~303,333
Infrastructure for	Hosting of the Mithril	During	N/A	~~₳~~416,667

production and testing of Mithril	aggregators for the testing and production networks, the SNARK provers, and serving of the artifacts used for fast bootstrap of the Cardano node. Leios warmup.	Q1 2027		
Delivery subtotal				~~₳~~2,250,000
Intersect delivery fee				~~₳~~67,500
Total				**~~₳~~2,317,500**

Budget for the Work Package

~~₳~~ 2,317,500

Section 5 - Budget Summary

Will any portion of the requested funds be returned to the Cardano Treasury?

At this stage, no fixed or contractual portion of the requested funds is planned to be returned to the Cardano Treasury.

Mithril is a core open-source infrastructure project that strengthens the Cardano ecosystem by improving node synchronization, accessibility, and decentralization. As such, it does not generate direct revenue that could be shared back with the Treasury.

However, Teragone is committed to acting responsibly and in alignment with the interests of the Cardano community.

In practice, our approach is guided by three simple principles:

- If the ADA price increases significantly and results in a material surplus compared to the initial budget, we commit to returning a fair portion of that surplus to the Cardano Treasury.
- If part of the allocated budget remains unused, we will return the corresponding amount to the Cardano Treasury.
- If the ADA price decreases significantly, we will prioritize maintaining high quality standards while adjusting the number or pace of milestones if needed. In such a case, we may deliver fewer milestones while maintaining the same level of quality and reliability. We also remain open to discussing with the community alternative approaches, including maintaining the full set of milestones with potential additional funding if deemed appropriate.

If applicable, under what circumstances would repayment occur?

Repayment to the Cardano Treasury would occur in the following situations:

- **Unused budget:** If a material portion of the allocated funds is not used during the project, this amount will be returned to the Cardano Treasury.
- **Favorable ADA price variation:** A significant increase in ADA price may result in a surplus relative to the initial budget. In such a case, Teragone commits to returning a fair portion of this surplus to the Cardano Treasury.

Conversely:

- **Adverse ADA price variation:** If the ADA price decreases significantly, Teragone will focus on delivering fewer milestones if necessary, while maintaining the same level of quality and reliability. In such a case, we may deliver fewer milestones while maintaining the same standards of quality. We also remain open to discussing with the community alternative approaches, including maintaining the full scope of milestones with potential additional funding if deemed appropriate. In this scenario, no repayment would apply, as funds would be fully used to ensure meaningful and high-quality delivery.

Have you previously received funding from Cardano or related ecosystem programs?

Yes

Section 6 - Budget Administration

Who will be the administrator for this budget proposal if approved?

IntersectMBO

Are you applying as a company or as an individual?

Company

Who is the primary contact for this proposal?

Julien Leroy

What is the primary contact email address?

leroy@teragone-factory.com

What is the transaction hash for your treasury donation?

TBD

How will independent audits or assurance be handled for this proposal?

Independent audit and assurance will be handled through collaboration with Dquadrant, led by CEO Ronald Span.

Dquadrant has an established track record with the Mithril project and has historically been responsible for auditing its deliverables. Their familiarity with the architecture, cryptographic components, and overall system design makes them particularly well-suited to ensure continuity and high-quality assurance.

As part of this proposal, Dquadrant will provide independent validation of key deliverables, including (but not limited to) cryptographic components, protocol implementations, and critical infrastructure elements. Their role will be to ensure that all outputs meet the expected standards in terms of security, correctness, and robustness before milestone acceptance.

This approach ensures both independence and continuity, while maintaining a high level of confidence for Intersect, DReps, and the broader Cardano ecosystem.