**GRANT PROPOSAL  
Project Title:  
Digital Tree Tracking System for Climate Monitoring and Reforestation Impact**

**1. Introduction**

This proposal outlines the scope, objectives, and budget for developing a mobile application to support the digital tracking of tree planting activities. The application will enable organizations and communities to log and manage data on tree planting locations, species, growth stages, and estimated carbon credits. Designed for non-profits, environmental organizations, and CSR programs, this solution will enhance the monitoring, validation, and impact reporting of reforestation efforts.

**2. Executive Summary**

We are seeking funding to support the operational costs of a digital tree tracking solution built using Microsoft Power Apps. The application empowers users to track tree growth, monitor planting efforts, and support data-driven environmental reporting. With development led by volunteers, the requested grant will cover essential operational needs such as cloud storage, hosting, and system maintenance. This cost-effective platform will improve transparency and enable communities to participate meaningfully in climate action.

**3. Problem Statement**

Tree planting initiatives often lack centralized and scalable tools to track progress and measure outcomes. Current manual tracking methods—such as paper records and spreadsheets—are prone to errors, difficult to consolidate, and inadequate for long-term environmental impact assessments. Without standardized digital solutions, accountability and reporting to funders and stakeholders remain limited.

**4. Objectives**

* Digitally track tree planting and growth by species, location, and planting entity.
* Enable data verification through geo-tagged photos and time-stamped entries.
* Facilitate carbon credit estimation and transparent reporting to donors.
* Provide real-time dashboards for stakeholders and community groups.
* Support scalability, including future integration with satellite or drone data.

**5. Proposed Solution**

We propose a mobile-friendly application developed using Microsoft Power Apps. Key features include:

* Logging new trees with GPS location, species, date, and planting team.
* Uploading photos and growth updates.
* Visualizing planted trees on maps using Azure Maps.
* Storing data securely in Microsoft Dataverse or SharePoint.
* Optional integration with Power BI for advanced dashboards and reporting.

The app leverages Microsoft’s low-code ecosystem, minimizing development costs and enabling volunteer contributions.

**6. Scope of Work**

**Phase 1: Planning and Design**

* Define requirements and prioritize features.
* Create wireframes and UI/UX designs for mobile and web interfaces.

**Phase 2: Development**

* Build Android app with:
  + User registration (email/phone)
  + Tree logging form (species, GPS, planting date, number of trees)
  + Photo uploads and growth updates
  + Basic carbon credit calculations
* Develop backend services including:
  + API integrations
  + Admin web panel for user and data management, reporting

**Phase 3: Testing and Deployment**

* Conduct internal QA across multiple Android devices
* Address bugs and optimize performance
* Deploy to Google Play Store (optional)

**Phase 4: Post-Deployment Support**

* Provide one month of bug-fixing support
* Offer ongoing maintenance and enhancement services

**7. Activities and Timeline**

|  |  |  |
| --- | --- | --- |
| Phase | Activities | Duration |
| 1 | Volunteer-led development & testing | 1 month |
| 2 | Data onboarding and community pilot | 2 weeks |
| 3 | Rollout to additional groups & training | 1 month |
| 4 | Reporting and ongoing optimization | Continuous |

**8. Budget (Annual)**

|  |  |  |
| --- | --- | --- |
| Item | Monthly (USD) | Annual (USD) |
| Power Apps Per App Plan | $5 | $60 |
| Dataverse Storage (Baseline) | $10 | $120 |
| Azure Maps (Free tier) | $0 | $0 |
| SharePoint / OneDrive (Microsoft 365) | Included | $0 |
| Miscellaneous (Backups, Monitoring) | $5 | $60 |
| Total | $20 | $240 |

Amount Requested: $240 USD per year

**9. Sustainability Plan**

The long-term strategy involves integrating with organizations already using Microsoft 365, allowing the app's operational costs to be absorbed into existing licenses. As participation scales, data can be used for carbon credit applications, generating income streams to support sustainability. Additional support will be sourced from IT student volunteers and Microsoft Power Platform community contributors.

**10. Team and Partnerships**

* Project Lead: Collins Owino
* Volunteer Developer: Moses Mtengo
* Community Partners: Local CBOs, schools, youth groups
* Technical Stack: Microsoft Power Apps, Dataverse, Azure Maps

**11. Conclusion**

With just $240 annually, this initiative offers a cost-effective and scalable digital solution for environmental tracking and accountability. The platform enables real-time monitoring, supports data validation, and promotes transparency in reforestation efforts. By empowering local communities and leveraging volunteer expertise, this project contributes meaningfully to climate resilience and sustainable land restoration.

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