CSE3CAP/CSE5IDP Project Proposal Template

Project Title: *Improving Greenfleet's impact and productivity through AI*

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Executive Summary: This project aims to enhance the productivity at Greenfleet Australia, a not-for-profit organisation that plants legally protected native forests to restore nature and remove carbon. By integrating artificial intelligence (AI) into its operations, Greenfleet seeks to optimise planning, execution, and monitoring of reforestation projects, enhance supporter engagement, as well as increase general productivity across the organisation. AI-powered solutions will streamline data collection, automate analysis, and improve decision-making, leading to more effective carbon sequestration and restoration efforts.

Background: Greenfleet restores native forests each year, expanding on the 550 forests we have planted since 1997. Traditional methods of site selection, reforestation implementation and monitoring areur-intensive and time-consuming. AI-driven automation and predictive analytics offer a pathway to improve efficiency, reduce costs, and maximise ecological benefits.
Key drivers for this initiative include:

- Limited human and financial resources necessitating efficiency improvements.
- Advances in AI and machine learning enabling smarter, data-driven decision-making.
- Stakeholder expectations for measurable, transparent environmental outcomes.

Objectives: (key functional requirements) *The project should focus on the following functional requirements:*

- **AI-Powered Site Selection:** Utilise AI to improve management processes and geospatial analysis to identify optimal sites for revegetation.
- **Automated Monitoring & Reporting:** Implement AI-based remote sensing and drone technology for monitoring and reporting performance of projects.
- **Process Automation:** Reduce manual data entry and reporting burdens (meeting minute taking) through AI-driven automation tools.
- **Stakeholder Engagement & Transparency:** Create AI-powered dashboards to visualise project progress and carbon removal metrics for supporters, government bodies, and the public.

Constraints and Limitations: *A description of any technical requirements in order to integrate with existing systems or organisational needs.*

- **Integration with Existing Systems**: The AI tools must seamlessly integrate with current databases, GIS platforms, and project management software.

- **Data Availability & Quality**: AI effectiveness depends on access to high-quality environmental data, which may require additional investment in data collection infrastructure.
- **Technical Expertise**: Greenfleet may need to upskill staff or partner with AI specialists to develop and maintain the system.
- **Regulatory Compliance**: AI applications must adhere to data privacy laws and environmental regulations.
- **Financial Constraints**: Budget limitations may impact the scope and speed of AI adoption.

Scope (A list of prioritised, must-haves, nice-to-haves and optional outcomes):

- ***Must-Haves:***
  - AI-powered site selection tool in the context of improving our internal approach to site selection, which has a number of filters/layers. Ideally, how can we improve our management of these processes to more efficiently assess and select the sites we work on?
  - AI adoption and usage policy – not just specific to above tool but more generic for organisation use.
  - Automated environmental monitoring using drones and sensors.
  - Process automation/implementation for reporting and data management (including retention and disposal). Ensuring data stays in Australia.
  - Advanced visualisation tools for stakeholder interaction/engagement
- ***Nice-to-Haves:***
  - Machine learning models for adaptive reforestation tactics/methods based on changing climate conditions.
- ***Optional Outcomes:***
  - AI-driven social media analytics to enhance outreach and supporter engagement.
  - Creating a custom AI chatbot to serve alongside your existing web content