

FIT 5120: Product Document

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Team number: TA21

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1. Overview

1.1 Background

Australian gardening has long been regarded as a way of improving wellbeing, strengthening community connections, and contributing to food security. However, climate change has fundamentally transformed the way gardening must be approached. With unpredictable weather patterns, hotter summers, and shifting seasons, traditional gardening methods are no longer reliable, making it increasingly difficult to select appropriate plants, maintain healthy growth, or adapt to environmental change.

At the same time, many Australians are turning to climate-conscious lifestyle by embracing eco-friendly gardening, which lowers carbon footprints, enhances biodiversity, and reduces climate change impacts. However, there is still a lack of accessible, evidence-based resources that can assist gardeners in making well-informed decisions that are tailored to their local conditions. Therefore, Plant'X was created to address this issue. It is an evidenced-based, user friendly digital platform that guides gardeners with practical guidance at every step of their gardening journey.

1.2 Product

Product name: Plant'X

Purpose: Plant'X is an online, web-based platform designed to simplify eco-friendly gardening and make it more accessible and meaningful. With this tool, Australian gardeners can adapt to changing climate conditions, enhance plant health, and make informed choices that support biodiversity and sustainability. This product goes beyond simple plant databases, it provides users with end-to-end guidance from plant selection, identification to disease diagnosis, care and ongoing garden planning.

Key Features:

- **Plant Recognition:** Users can upload photos of plants they are unsure of to identify them and access care instructions.
- **Location-based Recommendations:** The platform provides tailored plant suggestions based on local climate, soil, and weather conditions.
- **Diagnostics and treatment guidance:** Users can detect common plant issues, such as nutrient deficiencies or diseases, and receive treatment guidance before discarding affected plants.
- **Garden care tips:** Practical advice on watering, sunlight, soil health, and seasonal planting helps users maintain a thriving garden throughout the year.
- **Sustainability and biodiversity insights:** This platform shows how gardening choices can support biodiversity by recommending native and pollinator-friendly species.
- **Education tools:** Interactive maps, visualisations, and resources help users understand biodiversity patterns, climate trends, and the broader impact of their gardening choices.

User Benefits:

- Reduces trial and error by offering evidenced-based, location-specific planting advice.
- Contributes to biodiversity conservation and sustainable gardening practices.
- Provides early detection of plants problems before they become more serious.
- Offer continuous learning and adaptation through climate-aware gardening tools.
- Builds confidence for beginners while offering valuable insights for experienced gardeners.

Target Audience:

Plant'X is designed for home gardeners, hobbyists, and members of community gardens across Australia. It is particularly beneficial for gardeners for those seeking to create gardens that are resilient, environmentally sustainable, and aligned with climate action goals.

Value Proposition:

Plant'X eliminates guesswork and empowers users to make informed, climate-aware decisions throughout their gardening journey. By combining diagnostic tools, plant care insights, and sustainability-focused recommendations, it enables Australians to cultivate healthy, thriving gardens while contributing to broader environmental outcomes.

2. Ethical Canvas

Plant'X was created with a commitment to ethics, privacy, and the public benefit. It is designed to provide gardeners with reliable, data-driven insights without replacing their personal judgement or traditional knowledge. The platform aims to deliver clear, accessible, and sustainable guidance, while protecting user privacy at all stages.

We are aware that Plant'X has several potential risks. These include incorrect plant or disease identification, over-reliance on the platform's recommendations, and the exclusion of users with limited digital access. Privacy concerns may also arise from the use of location and image data, and there is a risk of unintentionally promoting species that could harm biodiversity if data is inaccurate or outdated.

To address these concerns, Plant'X incorporates the following safeguard:

- Recommendations are presented clearly with plain-language explanations so users understand the reasoning behind the system's suggestions.
- Location data is optional and approximate, and any uploaded images are deleted immediately after processing.
- Invasive species are flagged and native species are prioritized by default.
- The platform is designed for easy navigation, mobile-friendly, and ensure accessibility for a wide range of users.
- Plant'X supports informed decision-making without replacing human expertise, functioning as a helpful guide alongside users' own knowledge and experience.

2.1 Alignment with ACS code of conduct

ACS Principle	How Plant'X aligns	Examples of Implementation
1. Primary of the public interest	Prioritises public and environmental benefits over commercial gains.	Encourages eco-friendly gardening practices, supports diverse ecosystems, and protects user privacy.
2. Enhancement of quality of life	Provides users with information that support environmental health, sustainability and community well-being.	Promotes reduced waste, improved gardening success, and community engagement in climate initiatives.
3. Honesty	Maintains transparency about the platform's limitations and capabilities.	Clearly explains how are generated and provides realistic expectations about the system's accuracy.
4. Competence	Ensures the accuracy, relevant, and up-to-date information.	Uses reliable sources, regularly review datasets and thoroughly test features before deployment.
5. Professional Development	Demonstrates a commitment to continuous improvement and ethical awareness.	Records key decisions, stays updated on technical and ethical developments, and integrates user feedback into updates.
6. Professionalism	Maintains privacy, inclusivity, accountability and fairness in all activities.	Implements strong data protection policies, restricts access to essential personnel, and conducts regular accessibility and security evaluations.

2.2 Compliance with the Australian Privacy Principles (APPs)

Australian Privacy Principles (APPs)	Importance	How Plant'X complies
APP 1- Open and Transparent Management	The purpose and types of data collected must be clearly disclosed to users.	Platform features such as plant identification and tailored recommendations, clearly indicate what type of data (e.g. images or location) is being used. Before using those features, users can make an informed decision about whether they wish to share this information.
APP 2 - Anonymity and pseudonymity	Users should be able to access the platform's features without disclosing their personal details.	Personal information is not required to use the platform, and providing an approximate location is entirely optional.
APP 3 - Collected of Solicited Information	Only the data necessary to deliver services should be collected.	Plant'X collects only essential data for its services, primarily images for plant identification, and if provided, location data to improve recommendations.
APP 5 - Notification of Collection	Users must be notified before their data is collected.	User consent is required before uploading images or sharing location information.
APP 6- Use or Disclosure of Information	Data must only be used for the purposes for which it was collected.	All data collected is used exclusively to generate gardening insights and recommendations, and is never disclosed to third parties.
APP 10- Quality of Personal	Data must be accurate,	Plant'X regularly reviews and

Information	up-to-date, and relevant.	updates its datasets to ensure that information remains accurate, relevant, and reliable.
APP 11 - Security of Personal Information	Personal data must be protected and removed when no longer needed.	All stored data is encrypted and images are processed temporarily and automatically deleted after use.
APP 12 & 13 - Access to and correction of personal information	Users must be able to access and correct their personal data if required..	Users can request the deletion or correction of their stored data through a formal and transparent process.

3. Future Sponsors

Future partnerships are essential to ensuring Plant'X continues to grow and create meaningful impact. Collaboration with potential sponsors like Planet Ark, Community Gardens Australia (CGA), and Heartscapes (Melbourne Pollinator Corridor Project) will help expand the platform's reach, enhance its features, and strengthen its role in climate action. The missions of these organizations closely align with Plant'X's goal of promoting sustainable gardening, biodiversity, and environmental awareness.

Partnering with Plant'X enables these organisations to extend their existing initiatives into digital space, engage a broader audience, and provide ongoing support for eco-friendly gardening practices. Meanwhile, sponsorship will also allow Plant'X to expand its services, develop new features, and deliver greater environmental and social outcomes.

4. Team Information

Our team information can be found here [01_Team Photos](#) [05_Team Discipline](#)

5. Build Details

Our build link: <https://www.plantx.me/>

Password: GROUP21password!

Our product video:

Leankit: <https://monashie.leankit.com/board/2334429820>

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