Introduction to Ethical Considerations

Our project is a smoking cessation app designed to track users' smoking habits, notify them when entering smoking areas, and provide peer support for users on the same journey to quit smoking. The ethical considerations ensure system can respect users' privacy, autonomy, and well-being while promoting sustainable healthy behaviour change. This assessment will help identify potential ethical risks and impacts of the design's adoption.

Key Ethical Frameworks Applied

• Interaction Design Framework (Loke&Matthews, 2020)
• Ethical Disclaimer Canvas

Ethical Risks & Challenges

Data Privacy and Security
• Location Tracking: Ensuring users are aware of location data collection and its purposes can be critical towards our design. We should ensure the data collected is solely used for notification function purposes and is not shared without consent.
• Data Collection: Smokeing habits and cessation progress are both sensitive. The system must encrypt all user data and never share without explicit consent.
• Anonymity & Confidentiality: Users who prefer to keep their profiles or smoking status private must be given full anonymity. This is especially important for the peer-support function by safeguarding their identity and personal info.

User Autonomy
• Voluntary Participation: Participating in any section of the system should be completely voluntary. The users can opt to use or not use any of the functions included in the system.
• Informed Consent: The users should be fully notified and comprehend any aspects of the system, which includes but is not limited to functions, data collection, or potential consequences. Any progression of the system must acquire users' informed consent as a prerequisite.

Peer Pressure and Emotional Well-being
• Balanced Peer Supervision: Though peer-support features can be encouraging, over-reliance or pressure risks do exist. The system should ensure users won't feel pressured by other user's cessation progress.
• Emotional Well-being: Failing cessation or repetitive notifications when entering smoking areas may cause negative feelings for the users, the system must emphasize positive encouragements instead of punishments.

Accessibility and Inclusivity

- Equity in Access: The system should take users' various technological familiarity and physical abilities into consideration. It should consider barriers such as limited access to technology or those may experience stigma for using a quitting app.
- Inclusivity: The design should be accessible to different user groups, such as users with disabilities.

Potential Implications of Widespread Adoption

- Social Impacts: If the system has been widely adopted, user data can be utilised by third parties such as advertisers. Protecting against this is critical to maintain user trust and privacy.
- Environmental Impacts: Considering the design is integrated with other equipment (mobile phones), energy consumption can be a critical consideration. The system designed should be usable while efficient to reduce the influence on the environment.
- Long-term Behaviour Influence: Assessing the influence on users' long-term behaviour change should be carefully executed. While encouraging smoke quitting is positive, we should avoid user reliance on the technology.

Mitigation Strategies

- Transparency: Ensure users understand all data collected, their purposes, and the safeguards in place. Regular notifications should inform users about how their data is handled.
- User Consent & Control: The users should take full control of the interactions with the system, including opting to quit any functions taking place or error prevention.
- Inclusive Design: We consider having accessibility features such as simplifying interfaces to achieve inclusive designs.

Ethical Guidelines for Future Development

- Our team will continue to prioritize ethics by incorporating feedback loops for continuous iterations by maintaining user testing that focuses on ethical concerns.
- We plan to introduce physical artefacts in future development, and the decision may bring more ethical concerns, especially in user privacy, data security, and product autonomy/

Conclusion

Our project, especially the location notification function and peer-support function, requires users to interact not only with the system but also with real-world scenarios and online interactions with others, making it particularly sensitive to ethical concerns. The context of smoking cessation itself makes our designs more controversial than others. Therefore, all aspects of ethical considerations must be thoroughly addressed before releasing the product

to the public. We are committed to ensuring that our product adheres to high standards of privacy protection, user autonomy, and overall user experience in every iteration.