

**CSE6224 SOFTWARE REQUIREMENTS ENGINEERING**

**Elicitation Documentation**

By TT2L Group F

Lecturer: Nur Haifa binti Mohd Fathil

|  |  |
| --- | --- |
| **Student Name** | **Student ID** |
| Chia Kai Jun | 1211111053 |
| Wee Jia Sheen | 1211110222 |
| Yap Wei Jian | 243UC246NA |
| Tang Zhi Qian | 243UC246NP |

**Table of Content**

[**1.0 Introduction** 2](#_Toc199026523)

[**1.1 Purpose** 2](#_Toc199026524)

[**1.2 Scope** 3](#_Toc199026525)

[**2.0 Elicitation Method** 3](#_Toc199026526)

[**2.1 Questionnaire** 3](#_Toc199026527)

[**2.2 Stakeholders** 4](#_Toc199026528)

[**2.3 Elicitation Plan Using Kano Model** 4](#_Toc199026529)

[**2.3.1 Explanation of Kano Categories** 5](#_Toc199026530)

[**3.0 Questionnaire Design** 6](#_Toc199026531)

[**3.1 Sample** 6](#_Toc199026532)

[**3.2 Questionnaire Sections Aligned with Kano** 6](#_Toc199026533)

[**3.3 Questionnaire Distribution** 7](#_Toc199026534)

[**4.0 Critical Success Factors** 7](#_Toc199026535)

[**5.0 Benefits** 8](#_Toc199026536)

[**6.0 Conclusion** 8](#_Toc199026537)

# **Introduction**

## **1.1** **Purpose**

This elicitation plan seeks to collect accurate, relevant, and user-centric requirements for the development of an integrated campus carpooling and parking system. The system is designed to simplify the carpooling process among students, faculty, and staff while managing and optimizing limited campus parking spaces.

This program uses a questionnaire to collect potential users' information about their current commuting habits, parking challenges, acceptance of carpooling, and expectations for digital platform functionality. The data collected will help identify functional and non-functional requirements, prioritize user needs, and guide system design decisions.

## **1.2 Scope**

The purpose of this elicitation plan is to collect requirements for an integrated campus carpooling and parking system for university students, faculty and staff. The system aims to address parking shortages, ease campus traffic congestion, and promote environmentally friendly transportation.

The scope of this solicitation includes understanding current transportation challenges, user preferences for carpooling features, needs for parking reservation or tracking features, and integration requirements with existing campus systems such as student portals or campus identity services. The information collected will help define core features such as carpool service, parking allocation, and real-time parking notifications.

# **2.0 Elicitation Method**

## **2.1 Questionnaire**

**Justification**

Questionnaire able to help us gather user due to system information within 2 minutes by filling the forms. This not only saves us time in collecting system requirements but also saves users time in filling out questionnaires. The most important purpose is to enable us to collect users' system requirements in a short period of time.

In addition, questionnaires are also convenient for college students or staff to send questionnaires to more friends via mobile phone text messages to get more responses. This questionnaire method is also very convenient for us to analyse quantitative and qualitative data to more accurately determine the requirements needed for the system.

## **2.2 Stakeholders**

|  |  |  |
| --- | --- | --- |
| **Classification** | **Users** | **Justification** |
| Primary | Student | Direct users of carpooling features |
| Staff | Direct users of carpooling and parking features |
| Admin | Control users of carpooling and parking features |
| Secondary | IT Services | Provides technical infrastructure and support for campus systems. |
| Security | Ensures the safety of people and vehicles on campus, monitors parking areas, and handles incidents or violations. |

## **2.3 Elicitation Plan Using Kano Model**

User requirements for campus carpooling and parking integration system were collected and categorized using Kano model which helps to distinguish different types of user requirements such as dissatisfier, satisfier and delighter.

This approach ensures that the system not only meets the functional requirements but also the drivers of user satisfaction.

### **2.3.1 Explanation of Kano Categories**

**Dissatisfier**

These are the basic features users expect by default. These features must be applied inside system requirements and presented. If these features are missing, users will be frustrated.

|  |  |
| --- | --- |
| **Features** | **Description** |
| Reserve parking | Reserve parking functionality |
| Request carpool | Request carpool functionality |
| Login secure | Authenticated safely |
| View parking | Clear display of parking rules and regulations. |

**Satisfier**

These features directly influence user satisfaction. The better these features are implemented, the more satisfied the user becomes. If these features are implemented with performance poorly, the user’s dissatisfaction due to the system will increase.

|  |  |
| --- | --- |
| **Features** | **Description** |
| Real-time parking | Real-time parking spot availability updates. |
| Matching carpool route and time | Efficient carpool matching based on route and time. |
| Low carpool cost | Estimated cost savings from carpooling. |
| Reduce carpool matching time | Reduce wait time to find a carpool driver. |

**Delighter**

These features are unexpected that surprise users. These features are not demanded, it doesn’t cause dissatisfaction, but their presence can greatly increase satisfaction.

|  |  |
| --- | --- |
| **Features** | **Description** |
| Carpool points | Reward points for regular car-poolers. |
| Shortcut recommendation | Smart suggestions for frequent destinations. |
| Carpool schedule | Integration with carpool schedule. |
| Carpool favourite and messenger | Ability to favourite and message previous carpool drivers. |

# **3.0 Questionnaire Design**

In order to capture these Kano categories, the questionnaire is designed with two types of questions. Each key features is paired with the Functional and Dysfunctional questions.

## **3.1 Sample**

|  |  |
| --- | --- |
| **Types** | **Example** |
| Functional | How do you feel if this feature is present? |
| Dysfunctional | How do you feel if this feature is not present? |

**Response answer**

Each question is offering the following response.

|  |  |
| --- | --- |
| **No** | **Response** |
| 1 | I like it that way. |
| 2 | I expect it that way. |
| 3 | I am neutral. |
| 4 | I can live with it that way. |
| 5 | I dislike it that way. |

## **3.2 Questionnaire Sections Aligned with Kano**

|  |  |  |
| --- | --- | --- |
| **Sections** | **Example Question** | **Kano Focus** |
| System background | Users and system background | Dissatisfier |
| About system requirements | Parking reservation, display real-time data, parking distribution | Satisfier or Dissatisfier |
| Admin rights | Track system activity, right control against users. | Delighter |

**Target Respondents**

**Primary stakeholders:** Students, faculty, and staff.

**Sample size goal:** Minimum 30+ responses from diverse campus roles.

## **3.3 Questionnaire Distribution**

|  |  |
| --- | --- |
| **Types** | **Description** |
| Email Invitations | Send personalized emails through official university mailing lists. |
| Social media | Share links via official university Facebook, Instagram, WhatsApp, Telegram, and student council groups. |

**Timing Strategy:** Keep the questionnaire open for 7 to 14 days.

# **4.0 Critical Success Factors**

|  |  |
| --- | --- |
| **Factor** | **Critical Reason** |
| Clear stakeholder identification | Ensures all relevant perspectives are included |
| Clear Documentation and Communication | All elicitation results must be well-documented, summarized in tables or charts where appropriate, and shared with the development team. |
| Well-designed survey questions | Captures accurate and meaningful data |
| Sufficient response rate | Provides statistically meaningful insights |
| Accurate Kano classification | Supports correct prioritization of system features |
| Stakeholder engagement | Builds trust and ensures alignment with actual needs |

# **5.0 Benefits**

|  |  |
| --- | --- |
| **Benefits** | **Description** |
| User centered design | Ensures that the system addresses actual user needs and expectations. |
| Requirement prioritization | Kano analysis helps focus on features that impact satisfaction most |
| Enhanced User Satisfaction | Systems that align with user needs and expectations from the kano model are more likely to be effective and appreciated. |
| Foundation for Continuous Improvement | Well-documented elicitation data creates a baseline for future system upgrades. |
| Stakeholder Engagement | the project builds early trust by referring questionnaire response and ensures that diverse perspectives are considered. |
| Save cost and time | Using free resource like google form to generate the questionnaire. Save time to conduct interview with users to gather the system requirement information. |

# **6.0 Conclusion**

The elicitation plan provides a structured and systematic approach to gathering accurate and meaningful requirements for the Campus Carpooling and Parking Integration System. By employing the questionnaire method in conjunction with the Kano Model, the project team can classify and prioritize features based on actual stakeholder preferences and expectations.

The Key stakeholder groups such as students, faculty, IT services, and campus security have been actively considered to ensure the system reflects a wide range of user needs and expectation. The process was carefully designed to include preparation, execution, and follow-up stages, supported by data analysis and stakeholder validation.

This requirements elicitation plan ensured that the functional requirements were user oriented, prioritized, and clearly documented, laying a solid foundation for system development. It also reduced the risk of inconsistencies and rework, laying the foundation for building an efficient, acceptable, and sustainable system in a campus environment.