**OPERATIONS ANALYTICS**

**DIGITAL ASSIGNMENT -1**

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**Identify which location is the best to start new an ATM Centre in VIT Chennai Campus using AHP**

**Questionnaire preparation**

**Criteria:**

**C1 🡪 Security:**

Evaluates the level of security provided by the ATM centre, encompassing features like surveillance cameras, well-lit surroundings, and measures to prevent theft or fraud.

**C2🡪 Accessibility:**

Assesses how easily individuals can reach the ATM centre, considering factors such as proximity to populated areas, availability of parking, and overall convenience for users.

**C3🡪 Reliability:**

Measures the consistency and dependability of the ATM service, including factors like historical.

**C4 🡪 Visibility:**

Examines the visibility and prominence of the ATM centre in its location, considering elements like clear signage, well-lit surroundings, and a noticeable location to enhance user awareness.

**C5 🡪 Maintainability:**

Evaluates the regularity and effectiveness of maintenance procedures, considering factors such as scheduled inspections, preventive maintenance tasks, and response times to technical issues, to ensure optimal functioning of the ATM machine based on usage patterns.

**Alternatives:**

L1🡪 At VIT Main Entrance

L2🡪 Near Girl Hostel B/ AB2

L3🡪 In Gazebo

**Table 1: Questionnaire for Alternatives- Security Criteria (C1)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Alternative | Relative Importance | | | | | | | | | Alternative |
|  | 9 | 7 | 5 | 3 | 1 | 1/3 | 1/5 | 1/7 | 1/9 |  |
| L1 |  |  |  |  |  |  |  |  |  | L2 |
| L2 |  |  |  |  |  |  |  |  |  | L3 |
| L1 |  |  |  |  |  |  |  |  |  | L3 |

**Table 2: Questionnaire for Alternatives- Accessibility Criteria (C2)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Alternative | Relative Importance | | | | | | | | | Alternative |
|  | 9 | 7 | 5 | 3 | 1 | 1/3 | 1/5 | 1/7 | 1/9 |  |
| L1 |  |  |  |  |  |  |  |  |  | L2 |
| L2 |  |  |  |  |  |  |  |  |  | L3 |
| L1 |  |  |  |  |  |  |  |  |  | L3 |

**Table 3: Questionnaire for Alternatives- Reliability Criteria (C3)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Alternative | Relative Importance | | | | | | | | | Alternative |
|  | 9 | 7 | 5 | 3 | 1 | 1/3 | 1/5 | 1/7 | 1/9 |  |
| L1 |  |  |  |  |  |  |  |  |  | L2 |
| L2 |  |  |  |  |  |  |  |  |  | L3 |
| L1 |  |  |  |  |  |  |  |  |  | L3 |

**Table 4: Questionnaire for Alternatives- Visibility Criteria (C4)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Alternative | Relative Importance | | | | | | | | | Alternative |
|  | 9 | 7 | 5 | 3 | 1 | 1/3 | 1/5 | 1/7 | 1/9 |  |
| L1 |  |  |  |  |  |  |  |  |  | L2 |
| L2 |  |  |  |  |  |  |  |  |  | L3 |
| L1 |  |  |  |  |  |  |  |  |  | L3 |

**Table 5: Questionnaire for Alternatives- Maintainability Criteria (C5)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Alternative | Relative Importance | | | | | | | | | Alternative |
|  | 9 | 7 | 5 | 3 | 1 | 1/3 | 1/5 | 1/7 | 1/9 |  |
| L1 |  |  |  |  |  |  |  |  |  | L2 |
| L2 |  |  |  |  |  |  |  |  |  | L3 |
| L1 |  |  |  |  |  |  |  |  |  | L3 |

**Table 6: Questionnaire for Criteria**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Criteria | Relative Importance | | | | | | | | | Criteria |
|  | 9 | 7 | 5 | 3 | 1 | 1/3 | 1/5 | 1/7 | 1/9 |  |
| C1 |  |  |  |  |  |  |  |  |  | C2 |
| C1 |  |  |  |  |  |  |  |  |  | C3 |
| C1 |  |  |  |  |  |  |  |  |  | C4 |
| C1 |  |  |  |  |  |  |  |  |  | C5 |
| C2 |  |  |  |  |  |  |  |  |  | C3 |
| C2 |  |  |  |  |  |  |  |  |  | C4 |
| C2 |  |  |  |  |  |  |  |  |  | C5 |
| C3 |  |  |  |  |  |  |  |  |  | C4 |
| C3 |  |  |  |  |  |  |  |  |  | C5 |
| C4 |  |  |  |  |  |  |  |  |  | C5 |

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