Table 3: Example of Pairwise Comparison Matrix for a Seven-Criteria AHP Analysis. The Water-APT user populates only the upper right; the lower left is calculated automatically.

| **Criterion** | **Water Efficiency** | **Long term Effec-tiveness** | **Public Safety** | **Life Cycle Cost** | **Aesthetic Issues** | **Customer Accep-tance** | **Waste Manage-**  **ment** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Water Efficiency** | 1 | 3 | 9 | 5 | 1/3 | 1 | 9 |
| **Long-term Effectiveness** | 1/3 | 1 | 3 | 1 | 1/3 | 1/5 | 1 |
| **Public Safety** | 1/9 | 1/3 | 1 | 1/5 | 1/7 | 1/9 | 9 |
| **Life Cycle Cost** | 1/5 | 1 | 5 | 1 | 5 | 3 | 3 |
| **Aesthetic Issues** | 3 | 3 | 7 | 1/5 | 1 | 3 | 5 |
| **Customer Acceptance** | 1 | 5 | 9 | 1/3 | 1/3 | 1 | 1 |
| **Waste Management** | 1/9 | 1 | 1/9 | 1/3 | 1/5 | 1 | 1 |

Table 6: Example of Technology Judgement Matrix with Seven Criteria and Five Feasible Remediation Technologies

| **Technology** | **Water Efficiency** | **Long-term Effectiveness** | **Public Safety** | **Life Cycle Cost** | **Aesthetic Issues** | **Customer Acceptance** | **Waste Management** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Pipe Replacement | 5 | 4 | 5 | 1 | 4 | 2 | 5 |
| Intermittent Flushing | 2 | 4 | 4 | 4 | 4 | 4 | 2 |
| Continuous  Flushing | 1 | 4 | 4 | 2 | 3 | 3 | 1 |
| Flushing with an Additive | 2 | 2 | 3 | 3 | 3 | 3 | 1 |
| POU/POE | 5 | 5 | 4 | 1 | 3 | 2 | 4 |

Table 7: Technology Priorities Under Several Scenario Variants. Values in parentheses denote the priority calculated with the closest perfectly consistent criteria comparison matrix.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Technology | Initial Case | With Cost | With Cost, for a School | With Cost and Waste Management |
| Pipe replacement | **3.75 (3.76)** | 3.20 (3.3) | 3.48 (3.43) | **3.43** **(3.48)** |
| Intermittent flushing | 3.57 (3.55) | **3.51 (3.49)** | 3.77 (3.76) | 3.42 (3.39) |
| Continuous flushing | 2.69 (2.67) | 2.36 (2.40) | 2.86 (2.87) | 2.33 (2.31) |
| Flushing with additive | 2.70 (2.69) | 2.68 (2.66) | 2.71 (2.71) | 2.60 (2.58) |
| POU/POE | 3.39 (3.40) | 3.00 (3.11) | **4.57 (4.57)** | 3.16 (3.24) |

Table 8: Alternate Pairwise Comparison Values for Customer Acceptance.

| **Criteria** | **Customer Acceptance** |
| --- | --- |
| Water Efficiency | 1/3 |
| Long-term Effectiveness | 1/7 |
| Public Safety | 1/9 |
| Life Cycle Cost | 1 |
| Aesthetic Issues | 1 |

Table 9: Judgement Matrix Life Cycle Cost and Customer Acceptance Scores for a School.

| **Technology** | **Life Cycle Cost Score** | **Customer Acceptance Score** |
| --- | --- | --- |
| Pipe Replacement | 3 | 2 |
| Intermittent Flushing | 5 | 4 |
| Continuous Flushing | 4 | 3 |
| Flushing with Additive | 3 | 3 |
| POU/POE | 5 | 5 |