**Study Results of four components:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Participant #** | **ca-bubble** | **ca-grid** | **vsup-bubble** | **vsup-grid** |
| 1 | 5 | 2 | 4 | 4 |
| 2 | 8 | 6 | 6 | 8 |
| 3 | 8 | 8 | 8 | 8 |
| 4 | 5 | 6 | 7 | 7 |
| 5 | 5 | 5 | 6 | 5 |
| 6 | 4 | 2 | 8 | 8 |
| 7 | 4 | 6 | 8 | 7 |
| 8 | 6 | 5 | 6 | 6 |
| 9 | 7 | 7 | 8 | 7 |
| 10 | 5 | 4 | 7 | 5 |
| 11 | 6 | 5 | 7 | 6 |
| 12 | 5 | 6 | 6 | 5 |
| 13 | 6 | 5 | 6 | 3 |
| 14 | 8 | 4 | 7 | 2 |
| 15 | 8 | 7 | 8 | 8 |
| 16 | 3 | 3 | 5 | 2 |
| 17 | 6 | 4 | 7 | 7 |
| 18 | 7 | 7 | 8 | 8 |
| 19 | 3 | 2 | 7 | 6 |
| 20 | 3 | 7 | 7 | 8 |
| 21 | 5 | 5 | 4 | 7 |
| 22 | 6 | 6 | 6 | 8 |
| 23 | 5 | 3 | 6 | 6 |
| 24 | 6 | 6 | 5 | 7 |
| 25 | 4 | 6 | 5 | 5 |
| 26 | 5 | 1 | 6 | 6 |
| 27 | 7 | 7 | 8 | 7 |
| 28 | 3 | 5 | 6 | 6 |
| 29 | 0 | 3 | 6 | 4 |
| 30 | 8 | 4 | 7 | 5 |
| 31 | 6 | 6 | 6 | 6 |
| 32 | 5 | 7 | 6 | 7 |
| **Avg** | **5.4** | **5** | **6.5** | **6.1** |

**System Usability Scale (SUS):**

**Questions:**

A picture containing text

Description automatically generated

**Results:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Participant # | Q#1 | Q#2 | Q#3 | Q#4 | Q#5 | Q#6 | Q#7 | Q#8 | Q#9 | Q#10 |
| 1 | 3 | 2 | 4 | 2 | 5 | 4 | 4 | 2 | 5 | 3 |
| 2 | 3 | 2 | 4 | 3 | 5 | 1 | 3 | 1 | 4 | 1 |
| 3 | 5 | 3 | 5 | 5 | 5 | 1 | 5 | 2 | 5 | 1 |
| 4 | 5 | 1 | 5 | 1 | 5 | 1 | 5 | 1 | 5 | 1 |
| 5 | 3 | 4 | 3 | 2 | 4 | 1 | 3 | 4 | 4 | 1 |
| 6 | 5 | 4 | 5 | 2 | 5 | 1 | 5 | 1 | 5 | 1 |
| 7 | 4 | 2 | 5 | 3 | 4 | 1 | 5 | 1 | 4 | 1 |
| 8 | 4 | 2 | 4 | 2 | 4 | 1 | 5 | 2 | 5 | 2 |
| 9 | 3 | 4 | 4 | 1 | 5 | 1 | 4 | 3 | 3 | 1 |
| 10 | 3 | 2 | 3 | 2 | 5 | 1 | 5 | 2 | 4 | 2 |
| 11 | 3 | 2 | 3 | 2 | 4 | 1 | 4 | 3 | 3 | 1 |
| 12 | 5 | 2 | 4 | 2 | 4 | 3 | 3 | 3 | 4 | 1 |
| 13 | 5 | 2 | 3 | 1 | 4 | 2 | 4 | 1 | 4 | 1 |
| 14 | 4 | 3 | 4 | 1 | 5 | 1 | 5 | 2 | 5 | 3 |
| 15 | 4 | 2 | 3 | 1 | 4 | 2 | 5 | 2 | 4 | 1 |
| 16 | 1 | 5 | 1 | 5 | 2 | 3 | 3 | 5 | 1 | 4 |
| 17 | 3 | 2 | 2 | 1 | 4 | 3 | 5 | 4 | 5 | 5 |
| 18 | 5 | 3 | 5 | 3 | 4 | 4 | 5 | 1 | 5 | 2 |
| 19 | 4 | 2 | 4 | 4 | 5 | 3 | 4 | 4 | 4 | 4 |
| 20 | 5 | 1 | 5 | 1 | 5 | 1 | 5 | 1 | 2 | 1 |
| 21 | 4 | 3 | 3 | 3 | 4 | 1 | 4 | 3 | 4 | 3 |
| 22 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 5 |
| 23 | 4 | 4 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 4 |
| 24 | 5 | 1 | 4 | 1 | 5 | 1 | 5 | 4 | 4 | 1 |
| 25 | 3 | 4 | 2 | 5 | 5 | 3 | 2 | 4 | 2 | 5 |
| 26 | 3 | 4 | 3 | 2 | 4 | 2 | 4 | 3 | 2 | 1 |
| 27 | 4 | 2 | 4 | 3 | 5 | 1 | 3 | 1 | 4 | 1 |
| 28 | 4 | 3 | 3 | 2 | 4 | 3 | 4 | 4 | 4 | 3 |
| 29 | 4 | 3 | 2 | 1 | 5 | 3 | 2 | 4 | 3 | 2 |
| 30 | 5 | 1 | 5 | 2 | 4 | 1 | 5 | 1 | 5 | 4 |
| 31 | 4 | 3 | 4 | 3 | 5 | 3 | 5 | 3 | 3 | 4 |
| 32 | 3 | 2 | 5 | 2 | 5 | 1 | 5 | 4 | 5 | 2 |
| **Avg** | **3.9** | **2.6** | **3.7** | **2.4** | **4.5** | **2** | **4.2** | **2.6** | **3.9** | **2.3** |

**Nasa-Tlx:**

**Questions:**

Timeline

Description automatically generated with medium confidence

**Results:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Participant #** | **Q#1** | **Q#2** | **Q#3** | **Q#4** | **Q#5** | **Q#6** |
| 1 | 13 | 9 | 8 | 15 | 16 | 3 |
| 2 | 20 | 1 | 7 | 17 | 17 | 1 |
| 3 | 16 | 15 | 3 | 22 | 14 | 1 |
| 4 | 20 | 3 | 1 | 20 | 11 | 1 |
| 5 | 20 | 1 | 1 | 22 | 15 | 15 |
| 6 | 12 | 1 | 1 | 17 | 10 | 1 |
| 7 | 7 | 1 | 1 | 19 | 1 | 1 |
| 8 | 3 | 1 | 2 | 18 | 4 | 1 |
| 9 | 13 | 2 | 1 | 20 | 16 | 12 |
| 10 | 16 | 3 | 11 | 16 | 19 | 14 |
| 11 | 8 | 3 | 4 | 12 | 8 | 1 |
| 12 | 11 | 1 | 6 | 22 | 7 | 4 |
| 13 | 9 | 1 | 4 | 21 | 6 | 3 |
| 14 | 18 | 17 | 6 | 18 | 9 | 7 |
| 15 | 7 | 2 | 8 | 19 | 13 | 7 |
| 16 | 18 | 12 | 7 | 12 | 12 | 15 |
| 17 | 16 | 21 | 10 | 18 | 17 | 1 |
| 18 | 11 | 13 | 14 | 19 | 20 | 5 |
| 19 | 14 | 17 | 15 | 18 | 10 | 8 |
| 20 | 5 | 18 | 8 | 22 | 7 | 2 |
| 21 | 17 | 3 | 11 | 14 | 16 | 2 |
| 22 | 20 | 20 | 19 | 20 | 22 | 5 |
| 23 | 16 | 17 | 21 | 12 | 16 | 9 |
| 24 | 18 | 4 | 6 | 14 | 13 | 2 |
| 25 | 22 | 1 | 1 | 12 | 22 | 15 |
| 26 | 11 | 1 | 4 | 12 | 15 | 6 |
| 27 | 15 | 7 | 1 | 16 | 6 | 1 |
| 28 | 15 | 2 | 5 | 17 | 14 | 9 |
| 29 | 17 | 7 | 19 | 12 | 12 | 8 |
| 30 | 20 | 19 | 11 | 20 | 16 | 7 |
| 31 | 20 | 21 | 18 | 19 | 18 | 12 |
| 32 | 20 | 6 | 11 | 17 | 5 | 2 |
| **Avg** | **14.6** | **7.8** | **7.7** | **17.3** | **12.7** | **5.7** |