

# ***Astrea*** Project Charter - 5. Operation

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# 1 Planning of the project

## 1.1 Identification of the tasks and description of the tasks

| ID  | Work Package           | Biref task description list                                                                                                                                                         |
|-----|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.1 | Communication protocol | Study the existing communication protocols. Adapt the existing protocols or create new ones.                                                                                        |
| 5.2 | Ground station         | Determine the number of ground stations needed.<br>Study the market of available ground stations that fulfil the needs of the project.<br>Choose the more suitable ground stations. |
| 5.3 | End of life strategy   | Study the existing end of life protocols.<br>Choose the protocol that applies to the satellites.                                                                                    |

## 1.2 Interdependency relationships among tasks and human resources and level of effort

| ID  | Work Package           | Time (h) | Prelations          |
|-----|------------------------|----------|---------------------|
| 5.1 | Communication protocol | 15       | BF - 3.2.1          |
| 5.2 | Ground station         | 10       | BF- 5.1<br>BF - 3.3 |
| 5.3 | End of life strategy   | 15       | BF - 3.2.1          |

## 2 Budget

### 2.1 Engineering hours budget

| Work Package               | Time (h)  | Labour cost (eur) |
|----------------------------|-----------|-------------------|
| 5-Operation                |           |                   |
| 5.1-Communication protocol | 15        | 300               |
| 5.2-Ground station         | 10        | 200               |
| 5.3-End of life strategy   | 15        | 300               |
|                            |           |                   |
| <b>Total</b>               | <b>40</b> | <b>800</b>        |
| <b>Total estimated</b>     | <b>40</b> | <b>800</b>        |

### 2.2 Preliminary total cost budget

| Work Package               | Product cost(eur)    | Time (h)  | Labour cost (eur) |
|----------------------------|----------------------|-----------|-------------------|
| 5-Operation                |                      |           |                   |
| 5.1-Communication protocol | 0                    | 15        | 300               |
| 5.2-Ground station         | ¿5000? per GS        | 10        | 200               |
| 5.3-End of life strategy   | 0                    | 15        | 300               |
|                            |                      |           |                   |
| <b>Total</b>               | <b>¿5000? per GS</b> | <b>40</b> | <b>800</b>        |
| <b>Total estimated</b>     | <b>¿5000? per GS</b> | <b>40</b> | <b>800</b>        |