The Criteria to follow for decision making based on a Priority Levels

1. This step is to consider if the task is safe for human or not.

    - If it is not safe it should be assigned to the robot.
    - If it is safe, it should go down to the next step (2).

2. This step is to consider if the environment to carry out the task is safe for the human.
    - If it is not safe it should be assigned to the robot.
    - If it is safe, it should go down to the next step (3).

3. This step is to consider if the task as been tagged as “Mandatory for Human-MFH”.

    - If it is defined as MFH it should be assigned to the Human.
    - If it is not, it should go down to the next step (4).

4. This step is to determine whether both Agent will be available at the instance to perform a task or not depending on the already allocated tasks.

    - If only one agent is available, that agent is assigned the task.
    - If none is available, the next available agent will be assigned the task.
    - If both are available or become available at the same, it should go down to the next step (5).

5. This step is to determine the collaborative nature of the task or the need for collaboration.

    - If the job as been defined as collaborative, both agents are assigned the task.
    - If it is not collaborative in nature, it should go down to the next step (6).

6. This step is to calculate and compare using a cost function of the weighted sum of the completion time of an agent to complete the task and operating costs of an agent to perform the tasks.
    - The agent will the lower cost is assigned the task.
    - If it they have the same cost, it should go down to the next step (7).

7. The Final step if the task passes through this Algorithm and fails to be assigned. It should use a random assignment considering the following factors.

    - If this is the first instance in the plan generation, the task can be assigned randomly to any agent.
    - The next instances should follow an alternative approach where the task is assigned to the other agent.