

TASK 03: USE CASE SPECIFICATION OF MONITORING BY DRONES

| <u>ACTORS</u> | <u>USE CASES / SERVICES</u> |
|----------------------|---|
| DRONE | -take several images by multispectral camera -record the imagery data |
| INTERNAL SYSTEM | -overlap the pictures -produce a high-resolution map of health of entire field (i.e 2400 times more detailed than satellite imagery) |
| FARMER | -set up drone path over the field to be mapped -look into map using reflectance property -observe how well plants are reflecting the light from the Sun -use the analyzed information from Agronomist for the better growth. Like when and where to apply fertilizer or pesticide or how to manage irrigation. |
| AGRONOMIST | -scout and take samples of plant and soil (from the areas that are under some kind of stress) using drone data -analyse the samples -inform the farmer about the analysis |

MAP DETAILS:

These maps give us an early warning and allow us to solve the problems.

- plants in green areas of map are extremely healthy
- plants in red areas of map are facing serious issues like drainage problems, pest infestation, etc.
- plants in yellow-orange areas of map are suffering unhealthiness from early stage which human eye cannot identify that easy

