

## Stakeholders help defining the WeLASER system specifications

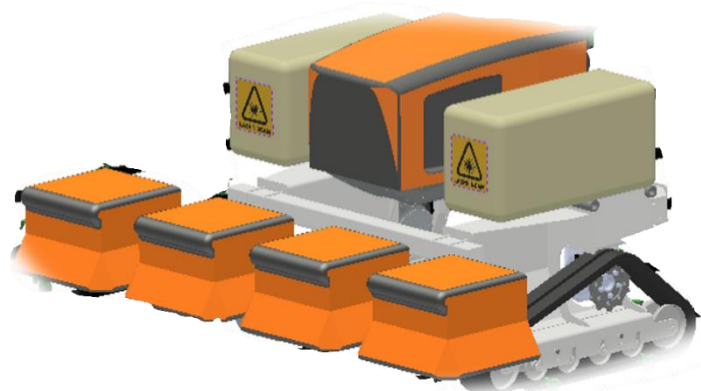
### Opportunities

The First WeLASER Stakeholder Event was held on 26/11/2020 gathering over 60 participants including farmers, research and agriculture institutions, civil societies-NGOs, policymakers, the REA project officers and the project partners. The event was an opportunity to involve the stakeholders in the project and in the definition of the system characteristics.

### Preliminary system characteristics

The consortium is committed to build a prototype demonstrated in operational environments (TRL-7), which will consist of an autonomous robot to carry a laser-based weeding implement -an AI-vision system; a meristem targeting system; and a high-power laser source. With the expected technologies by 2023, the system will feature:

- Dimensions: 2.4 × 2.1 × 1.65 m
- Clearance: 0.25 m
- Weight: ~1243 Kg
- Tracks distance: from 1.26 m to 2.40 m
- Treatment efficiency: ~65%
- Treatment speed: ~2 Km/h
- Treatment rate: ~4.8 Ha/day –  
Only one half of the implement will be built



### Stakeholder's practical recommendation

Stakeholders' recommendations are summarized in (a) defining every subsystem to be also exploited individually, (b) to use a 3-point hitch to allow the use of the implement with robots and conventional tractors, (c) to increase the implement width up to twice the initial width and reach an efficiency of about 10 Ha/day, and (d) endow the system with sustainable power supplies e.g. solar panels. Definitely, stakeholders' participation will ease the way for the final commercialization of the system.

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