



# STAR – giving Smell sense To Agricultural Robotics



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2022 Joint Call  
Kick-off Projects Seminar  
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Polytechnic University of Bari - Italy

**RML** Robotic Mobility Lab



Fraunhofer- Institute for Intelligent Analysis and Information Systems IAIS - Germany



TODOS Technologies - Israel

**Period:** 2023-26 (36 months)

**Overall Budget:** 700 kEuro

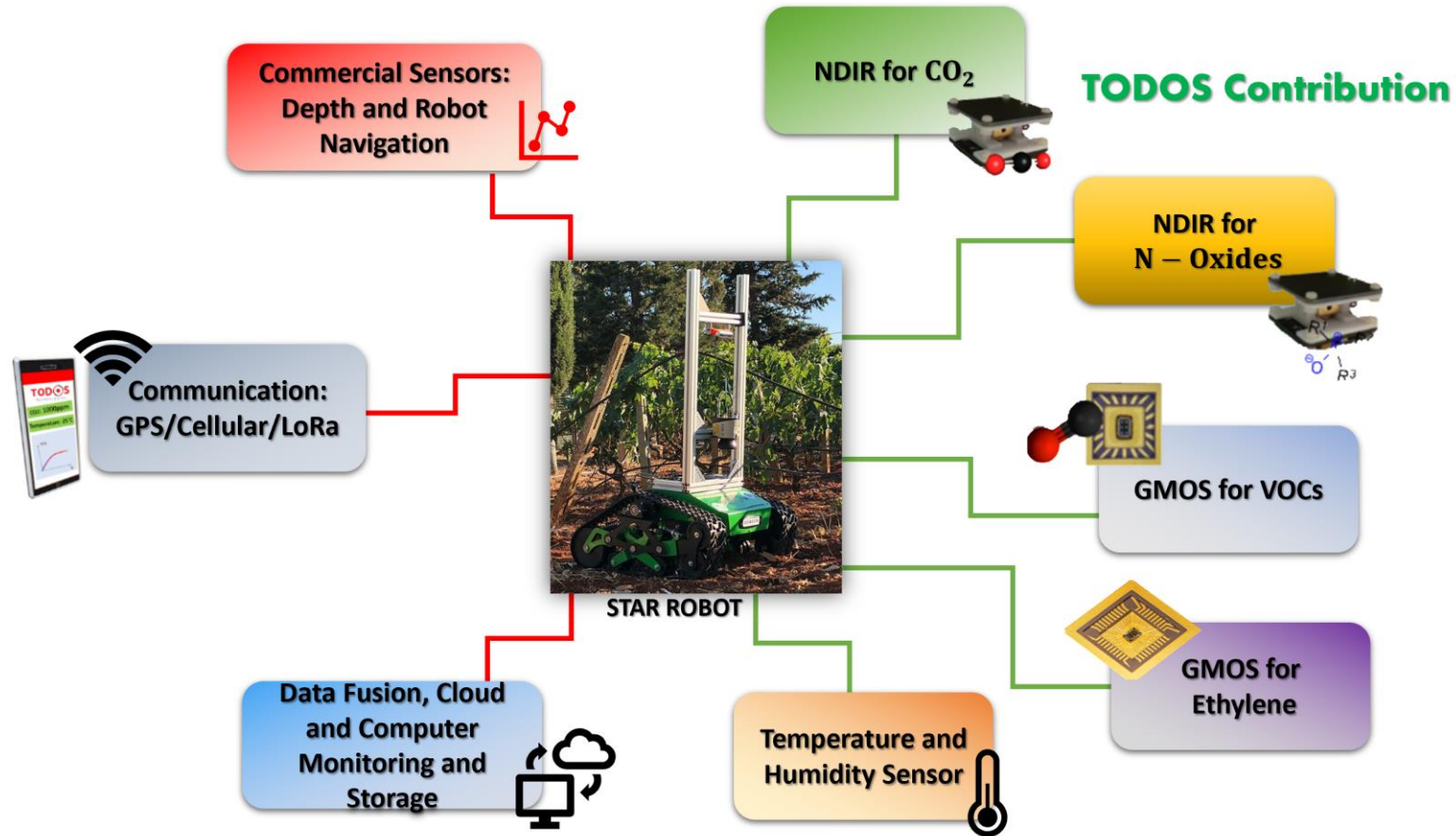
# Objective

- to single out healthy fruits/plants from those with problems
- to selectively start the harvesting or apply a remedy without wasting resources or contaminating the environment
- to combine different sensor modalities that include standard (e.g., RGB-D cameras) with novel sensors (e.g., gas sensors), methods for creating accurate maps
- to facilitate operations on a narrow scale with a smaller environment footprint
- to develop artificial intelligence algorithms for data processing and decision support

# Main project activities and challenges



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# Expected results and potential impact

United Nations Sustainable Development Goals

SDG 3: Good Health and Well Being

SDG 8: Decent Work and Economic Growth

SDG 13: Climate Action

▶ **Economical aspects:** The application of fertilizers, pesticides and herbicides where and when needed will result in optimal amounts of inputs, applied, without losses. STAR will demonstrate the integration of robotics technology into the digital agricultural workflow, thus leading to a larger applicability of robotics technology in agriculture

▶ **Environmental aspects:** The precise application of pesticides and herbicides is expected to reduce the amount of agrochemicals applied into the soil and ground and surface water resources, EU framework directive for “A thematic strategy on the sustainable use of pesticides” (COM(2006)372, COM(2006)778)

▶ **Societal aspects:** Securing clean of pesticides and herbicides will reduce the risk to human health, and lead to improving food safety. Furthermore, the technology developed in STAR will make robotics accessible to traditional farming environments, making farming more attractive for the young and tech-affine generation, and thus counteracting the emerging shortage of young, skilled workers.

# LET'S KEEP IN TOUCH!

Please feel always free to reach out to us.

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## WEBSITE

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# Thank you for your attention!