Project “Modular robotic platform for modern greenhouses”

**PROJECT MILESTONES AND SCOPE OF WORK**

Planned results: design and implementation of an MVP of a robot for indoor use

Target product: autonomous robot on an omnidirectional platform, capable of monitoring indoor greenhouse facilities

Target intellectual property: code base, datasets, patent for the robot

*R&D - Research Development*

*IP - Intellectual Property*

*BD - Business Development*

|  |  |  |
| --- | --- | --- |
|  | **ACTIVITIES** | **EXPECTED OUTCOMES** |
| ***Q2, 2023*** | | |
| R&D | Computer vision system development, data transport/architecture development, ROS2 migration | Marked data, trained neural network models, refined data transport modules (code) |
| IP |  |  |
| BD | Search for potential customers alternative to Agroinvest AG | Summary of alternative potential customers (in free format) |
| ***July, 2023*** | ***Quarterly reporting*** | |
| ***Q3, 2023*** | | |
| R&D | Setup of new sensors (incl. cameras with global shutter), data transport implementation, suspension system redesign. Robot design improvement: softer lines, appealing exterior. | Refined computer vision subsystem, capable of capturing sharp images while moving. Refined suspension |
| IP | Arranging the IP-related processes and action | Definition and agreement of the strategy for protecting the results of the intellectual activity with the Knowledge Transfer Office |
| BD |  |  |
| ***October, 2024*** | ***Quarterly reporting*** | |
| ***Q4, 2023*** | | |
| R&D | Wheel blocks redesign, localization module development, camera pole development. Prototype development. Planning of the production line: place, instruments, suppliers | Refined wheel blocks, camera pole. Refined prototype. Miniseries production line sketch |
| IP | Start of patent application writing | Patent application draft |
| BD | Attendance of the course on innovation and entrepreneurship by D. Kulish, preparation a Skolkovo residency application proposal under his guidance | Skolkovo residency application draft. Possibly submitted in this period |
| ***February, 2024*** | ***Summing up the results for 1st year (Demo Day)*** | |
| ***Q2, 2024*** | | |
| R&D | Localization module completion, trajectory following implementation, cooling & isolation measures development. Electric subsystem development, high-level control and logging development. Planning the mini-series production. | Cooling and isolation of the ECU implemented, localization, trajectory following implemented. Electric subsystem refined, high-level control implemented. |
| IP | Finalization of the patent application | Patent application ready for submission |
| BD | Participation in business networking events | New business contacts. Skolkovo residency application certainly submitted. |
| ***April, 2024*** | ***Quarterly reporting*** | |
| ***Q2, 2024*** | | |
| R&D | User interface development, automatic charging implementation. MVP finalization | User interface, automatic charging. MVP ready. |
| IP | Possibly responses to potential concurring patent claims; specification of distinctions | Addressed concurring patent claims |
| BD | Participation in business networking events | New business contacts. Possibly by now acquired positive feedback on the Skolkovo residency application. If not, refine the draft and make a new attempt in the next period |
| ***July, 2024*** | ***Quarterly reporting*** | |
| **Q3*, 2024*** | | |
| R&D | Extensive testing, refinement, documentation, application for TRL 6 confirmation papers | TRL 6 confirmation papers acquired |
| IP | Possibly responses to potential concurring patent claims; specification of distinctions | Addressed concurring patent claims |
| BD | Company registration. If necessary, refined Skolkovo residency application draft. Renewed submission | Skolkovo residency application resubmitted if applicable. Company registered. If not, then in the next period |
| ***October, 2024*** | ***Quarterly reporting*** | |
| **Q4*, 2024*** | | |
| R&D | Extensive testing, refinement | Whole platform polished |
| IP |  | Possibly at least an A1 patent |
| BD | We count on the positive outcome of the Skolkovo residency application by this period. If not, reattempt and register a company afterwards upon, hopefully, a positive assessment outcome. Communication with customers | Company registered or Skolkovo residency renewed attempt and company registration afterwards. Possibly production and delivery contracts |
| ***February, 2025*** | ***Final reporting*** | |

*Please, list all key activities and expected deliverables for each current quarter in accordance with section*