

ORIGINAL



**Agreement of Scientific and Technological Cooperation
on Project Sustainable Agriculture:
Energy-Efficient Unmanned Technologies for Precision Farming ("Agreement")**

I. Identification of Contracting Parties

Party A:

Fly4Future s.r.o. (F4F)

Registered Office: Přemyslovců 992/52, 709 00 Ostrava, Czech Republic

Company ID: 066 32 581 Tax ID: CZ06632581

Represented by: [REDACTED], Managing Director

Email: [REDACTED]

Phone: + [REDACTED]

Party B:

University of South Bohemia in České Budějovice (FAT USB)

Registered Office: Branišovská 1645/31a, 370 05 České Budějovice, Czech Republic

Company ID: 60076658

Tax ID: CZ60076658

Represented by: Prof. Ing. Pavel Kozák, Ph.D., Rector

Party C:

National Yang Ming Chiao Tung University (NYCU)

Registered Office: Daxue Road 1001, Hsinchu City, East Dist. 300093, Taiwan (Province of China)

Tax ID: 87557573

Represented by: [REDACTED] D

Party D:

Industrial Technology Research Institute (ITRI)

Registered Office: Sec. 4, Chung Hsing Rd. 195, Chutung Hsin-Chu, 31040, Taiwan (Province of China)

Tax ID: 02750963

Represented by: [REDACTED]

(hereinafter jointly referred to as the "Contracting Parties").



II Preamble

The Contracting Parties agree to collaborate on the project "Sustainable Agriculture: Energy-Efficient Unmanned Technologies for Precision Farming." The Research Goal of the project is to develop an assistive autonomous aerial system for fast and energy-efficient surveying and monitoring of crop fields and grasslands, focusing first on automated detection and localization of wildlife for their rescue before haymaking. The system will be capable of autonomous navigation over a defined area, accurate real-time detection and localization of objects of interest (e.g., young roe deer) using onboard sensors and computers only, and in-flight decision-making based on detected objects and perceived state of the environment. Reliable, safe, and efficient deployment independent of environmental characteristics will be achieved by developing energy-efficient trajectory planning, obstacle detection, and collision avoidance modules.

III Subject of the Agreement

1. Definition of mutual rights and obligations in cooperation on the project implementation.
2. Regulation of rights and obligations regarding the project implementation and its results.

IV Terms of the Agreement

1. Parties A, B and C agree to adhere to the principles outlined in the Common Proposal.
2. Parties A, B and C solve the project in accordance with the tender documentation, which is approved by the provider in the given country, i.e. for Parties A and B from the Czech Republic, the contractual relationship and instructions of the Technology Agency of the Czech Republic are binding, for Party C from Taiwan, the project documentation and agreements concluded with the National Science and Technology Council (NSTC) are binding.
3. Parties A, B and C declare that they are familiar with the terms of the support program and commit to complying with them.
4. The Parties will act in a manner that complies with the project's implementation as set forth in this Agreement.

IV Project Tasks

The Contracting Parties agreed to jointly implement the project by performing tasks and each party's effort is reflected in the proportion specified in paragraphs 1-8. This clause is merely an outline of the efforts that each Party is to contribute to perform each task. The final version of the tasks that are to be implemented by each Party is to be set out in a separate written agreement/ in Annex A attached to this Agreement.

1. Task 1:

Energy-efficient planning and optimization of multi-rotor UAV trajectories in precision agriculture

- a. Software for energy-efficient trajectory planning and optimization of multi-rotor UAV trajectories in precision agriculture. The software will generate energy-efficient paths and trajectories for both large-area monitoring and navigation to local goals. The software will leverage the identified energy consumption model of the UAV to maximize the efficiency of its deployment. This model will be parameterized such that the software applies to arbitrary UAV platforms.
- b. Participation and ownership of the Contracting Parties in the project results in the proportion:

F4F: ■■■■

FAT USB: ■■■■

NYCU: [REDACTED]

ITRI: [REDACTED]

2. Task 2:

System for young deer real time detection in grasslands

a. The output will be a system for detecting young deer in grassland, using advanced computer vision algorithms to automatically find the tracked objects, correctly identify them and simultaneously send information about their coordinates to the UAV operator, who will ensure their relocation to a safe area, thus preventing their death during haying. The primary inputs to the software will consist of high resolution RGB images and low-res thermal camera image data for the initial detection of ROI.

b. Participation and ownership of the Contracting Parties in the project results in the proportion:

F4F: [REDACTED]

FAT USB: [REDACTED]

NYCU: [REDACTED]

ITRI: [REDACTED]

3. Task 3:

Modular UAV multi-rotor for visual monitoring of fields

a. The functional sample of modular multi-rotor helicopter platform for assistive monitoring of crop fields and other relevant agricultural applications. The platform will be equipped with a variety of sensors applicable in agricultural applications and sensory equipment providing sufficient perception capabilities for prevention of collisions. The designed platform will be energy-efficient, reliable and will possess sufficient computational resources for intended applications including GPU.

b. Participation and ownership of the Contracting Parties in the project results in the proportion:

F4F: [REDACTED]

FAT USB: [REDACTED]

NYCU: [REDACTED]

ITRI: [REDACTED]

4. Task 4:

Research publication

a. Selected results of the project will be published in at least one publication – a professional article in a journal with an impact factor. The research content of the publication will be related to the outputs of V3. It will deal with the theoretical concept of developing a platform for detecting small roe deer in grassland. A significant part will be related to using machine vision principles and efficient planning of flight missions.

b. Participation and ownership of the Contracting Parties in the project results in the proportion:

F4F: [REDACTED]

FAT USB: [REDACTED]

NYCU: [REDACTED]

ITRI: [REDACTED]

5. Task 5:

System for the detection of power line wires during the flight of the drone

a. The system for detecting power line wires and safely descending the drone will be designed to allow the drone to operate near power lines and other obstacles without risk of collision. The system will combine several key components, the important is a high-resolution RGB camera for visual wire detection, it will be possible to integrate sensors for spatial mapping, such as ultrasonic sensors, which measure distances to nearby objects, or stereo cameras that provide depth information.

b. Participation and ownership of the Contracting Parties in the project results in the proportion:

F4F: [REDACTED]

FAT USB: [REDACTED]

NYCU: [REDACTED]

ITRI: [REDACTED]

6. Task 6:

Mobile application for automatic display of coordinates of detected roe deers on maps

a. The mobile app for locating found roe deer is designed to make the work of teams that locate fawns and move them to safety before field mowing much more accessible. The app will have a very simple GUI with map integration that will allow users to automatically view the location of found roe deer obtained from the detection system. The map background will be based on online map services such as Google Maps or OpenStreetMap, allowing the location to be displayed in different modes.

b. Participation and ownership of the Contracting Parties in the project results in the proportion:

F4F: [REDACTED]

FAT USB: [REDACTED]

NYCU: [REDACTED]

ITRI: [REDACTED]

7. Task 7:

Open dataset of RGB and thermal images of roe deer in grasslands

a. This open dataset will contain a comprehensive collection of RGB and thermal images of roe deer in meadows to support R&D of roe deer detection technologies and will be part of output V2. The dataset will include thousands of images taken under different conditions - at different times of day and in different weather conditions. An important part of the dataset will also include detailed annotations that mark the exact locations of roe deers in the images using bounding boxes or pixel masks.

b. Participation and ownership of the Contracting Parties in the project results in the proportion:

F4F: [REDACTED]
FAT USB: [REDACTED]
NYCU: [REDACTED]
ITRI: [REDACTED]

8. Task 8:

Assistive aerial system with modular capabilities for monitoring of crop fields during ground harvesting and other agriculture-related applications

- a. An assistive aerial system with modular capabilities for monitoring crop fields during ground harvesting and other agriculture-related applications. The system will consist of a sensor-equipped UAV platform with software modules enabling safe autonomous navigation in environments with obstacles and detection of objects of interest and a portable device with an integrated mobile application providing the user interface for communication and interaction between the UAV and human personnel.
- b. Participation and ownership of the Contracting Parties in the project results in the proportion:

F4F: [REDACTED]
FAT USB: [REDACTED]
NYCU: [REDACTED]
ITRI: [REDACTED]

V Intellectual and Industrial Property

1. Except as set forth in this Agreement, legal relations concerning intellectual property will be governed by the relevant agreements between each party and their respective funding agencies.
2. The Parties will mutually grant rights to use intellectual property for project purposes, provided the rights granted shall adhere to each Parties internal regulations and domestic laws
3. Intellectual property rights developed from the performance of this Agreement ("Arising IP") shall be solely owned by the Party that has generated them. In case of jointly generated intellectual property rights, the Parties that have generated them shall have co-ownership. Co-ownership of the Arising IP will be determined based on creative contributions. The parties agree to consult and determine the details of ownership and usage rights in accordance with their respective agreements with the funding agencies, and will be set out in a separate written agreement.

VI Protection of Research and Development Results

1. All contracting parties are bound by an obligation to maintain confidentiality during the term of this Agreement and for 2 years after the project's conclusion. "Confidential Information" means information or material disclosed and designated as "confidential" or "proprietary".

The party that receives Confidential Information ("Receiving Party") shall hold the Confidential Information of the party that discloses, delivers or transmits ("Disclosing Party") in confidence and shall not disclose it to any third party. The Receiving Party may only disclose Confidential Information to its employees, representatives, or

consultants (in whole or in part referred to as "Authorized Representatives") on a need-to-know basis, and only to the extent necessary to perform the projects. The Receiving Party shall ensure that Authorized Representatives are aware of the confidential nature of Confidential Information and undertake substantially same obligations as assumed by Receiving Party hereunder. In the event that any Authorized Representative of the Receiving Party violates this Article, it shall be deemed as a violation of the Receiving Party itself.

Any Confidential Information shall remain the property of the Disclosing Party, and the Receiving Party will return or confirm the destruction in writing such Confidential Information, within 30 days after receipt of the Disclosing Party's request, the accomplishment of the Project, or the termination or expiration of this Agreement.

This confidentiality obligation shall not apply to information if the information: (a) is known to the Receiving Party at or prior to disclosure by the Disclosing Party; or (b) is or becomes part of the public domain by publication or otherwise through no fault of the Receiving Party; or (c) is lawfully obtained by the Receiving Party from third parties without accompanying secrecy obligations; or (d) is independently developed by the Receiving Party without using or referring to any of the Disclosing Party's Confidential Information; or (e) has been approved for disclosure in writing by the Disclosing Party.

In case of a judicial or other governmental order, the Receiving Party may disclose the Confidential Information only in accordance with such order, provided that the Receiving Party must give the Disclosing Party reasonable notice as early as practically possible, to allow the Disclosing Party a reasonable opportunity to seek a protective order or equivalent. Such judicial or other governmental order shall not affect or release the Receiving Party from the obligation of confidentiality under this Agreement in any way.

2. All contracting parties agree to seek all contracting parties' consent prior to the use of the Arising IP for publication by any contracting party, as part of activities related to the qualification growth of persons participating in the project solution and as part of the marketing activities of the project participants, provided such use does not conflict with the intellectual property rights ownership and licensing agreements between each party and their respective funding agencies, and confidentiality obligations. The Party wishing to use the Arising IP for publication shall provide the other Party with a draft manuscript of any such publication or presentation at least 30 days prior to the submission or presentation to any third party.

VII Liability

1. All Parties are liable for damages caused by breach of this Agreement. Party D's liability under this Agreement shall in no event exceed USD 100,000.

2. ANY INFORMATION, DOCUMENTATION, COMPONENTS OR MATERIALS THEREOF PROVIDED BY EACH PARTY HEREUNDER ARE PROVIDED ON AN "AS IS" BASIS. EACH PARTY DISCLAIM ANY AND ALL WARRANTIES EACH OTHER, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY WARRANTIES OF NON-INFRINGEMENT OF ANY PROPRIETARY RIGHT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

VIII Duration of the Agreement

1. This agreement becomes effective on the date of signing and remains valid for the duration of the project.


IX Final Conclusions

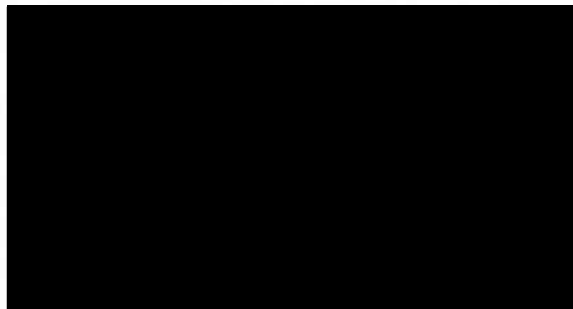
1. Any amendments and supplements to this agreement must be made in writing.
2. This agreement is executed in four copies, one for each Contracting Party.

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SIGNATURE PAGE 1:

For Party A:
Fly4Future s.r.o.

Name: 
Position: CEO
Date: 27/6/2025



SIGNATURE PAGE 2:

For Party B:

University of South Bohemia in České Budějovice

Name: Prof. Ing. Pavel Kozák Ph.D.

Position: Rector

Date:



02-07-2025

**JIHOČESKÁ UNIVERZITA
V ČESKÝCH BUDĚJOVICÍCH
REKTORÁT (20)
Branšovská 31a
370 05 České Budějovice**

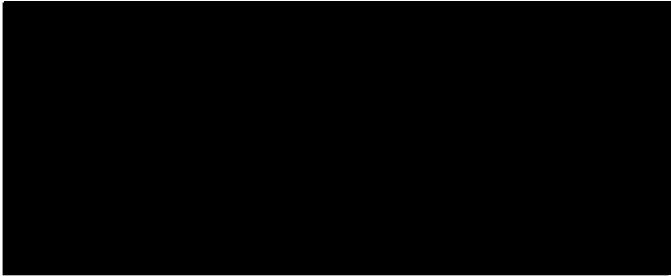
SIGNATURE PAGE 3:

For Party C:
National Yang Ming Chiao Tung University



SIGNATURE PAGE 4:

For Party D:
Industrial Technology Research Institute



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