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TERMS OF REFERENCE

Job Title:	Independent consultant to evaluate 2016 MICS projects for innovation and tech transfer in fresh fruits
Type of Contract:	Individual Contract (IC)
Duty Station:	Remote
Expected workload:	up to 10 w/d
Expected duration of assignment:	October – December 2016, with possibility of extension

BACKGROUND

UNDP Moldova, with support of the Government of the Republic of Moldova, is implementing the Innovative Business Development for Sustainably Economic Growth project that aims to spur innovation into SMEs at national level through transfer of knowledge, technology and innovative solutions for increased competitiveness of business sector. As part of such project, support in technological transfer is provided to SMEs in the fresh fruits sector as well, one of the most dynamic HVA sectors with an important impact on human development. In doing so, the Project is implementing the Moldova Innovation Challenge Scheme (MICS).

Main objectives of the MICS are:

- to stimulate development of innovations within Moldovan SMEs, local business associations, potential entrepreneurs with innovative ideas and expansion motivation, business incubators' graduates, by providing financial awards for market-oriented new or improved products, services and technologies with high commercialization potential;
- to pilot and evaluate an innovation support mechanism as an exercise of interventions stipulated in the National Strategy on Innovations (2013 – 2020), providing the basis for scaling-up at Government level, and thereby providing insights, lessons learned and best practices for future governmental innovation-support programs.

The preferred projects applying to the MICS are the **innovation projects encompassing development and other pre-commercial activities implemented by established** Moldovan SME's. The supported projects are in phase of innovation development and are based on a comprehensive business plan, addressing the specific identified challenges and demonstrating high potential in terms of access to market and company competitiveness and growth. The projects should already have previously developed an innovative concept or prototype which demonstrates a clear technological and economic viability. The innovative concept should represent considerable novelty to the national or global market: e.g. new products, processes, services or market application.

Under the current call, companies coming from **the fresh fruit production, processing and exports sector** are eligible to apply with innovative solutions to one of the following challenges:

Lot 1. Combating the damage caused to cherries and similar commodities by rain /hail and other external factors.

Annually fruit producers incur losses because of the negative effects of hail, which affects harvest during April-June, when cherries ripen and are harvested. Almost every year more than 60% of cherries are affected by hail stone. The damaged harvest can only be sold to the fruit processing industry at a minimum price, hence reducing substantially the profits of the fresh fruit producers and influencing negatively the further development of the business.

The damages caused by rains are not as critical as the damages caused by hail. However, the quality of cherries is reduced and hence the price the producers can sell the harvest goes down. The low quality of cherries also affects the exported quantity of crops, as external markets accept only products of high quality. While the demand of cherries on external markets is very high, Moldovan producers cannot meet it fully, because of the losses caused by hail stone and heavy rains.

The specific challenge under the Lot 1 is to find an innovative solution to stop the damages caused to cherries by rains and hail in order to increase the annual quantity of high quality cherries sold at a reasonable price, as well as to increase the quantity of exported products. As a result of the intervention, it is expected to considerably increase the revenues and profits of the company, as well as to share knowledge about innovative practices in the fresh fruits sector.

Lot 2. Reducing the deterioration of apples during the harvesting process.

Apple orchards in Moldova cover a total area of over 70,000 ha and yield more than 300,000 tons of apple per year. Although apples are the most exported type of fruits from Moldova with a share of 50% of total fruit export, it becomes more and more difficult to compete with other European producers on external markets. Besides good taste and high quality of fruits, external markets have rigorous requirements set for the appearance of apples as well. A significant part of Moldovan apples gets damaged during the harvesting process because of the old technologies which are used. Their appearance does not allow producers to export them and they are forced to sell apples on the local market at lower prices.

The specific challenge under the Lot 2 is to find an innovative solution to improve the harvesting process of apples that will reduce damages and will preserve the market aspect of apples. This intervention will allow fruit producers to become more competitive on the existing external markets and will help them to win other markets. A wider share of apples directed to export will contribute to an increase of company's revenues and to a further development of the companies in the sector.

Lot 3. Modernization of the crops' fertilization and irrigation process

The most used at the moment irrigation method by Moldovan fruits producers is the sprinkling irrigation which consists of spraying the water all over the orchard. Sprinkling irrigation has several disadvantages such as: loss of water because of evaporation during irrigation, leaf burning when temperature is higher than 35 °C, poor efficiency under high wind condition, and being rather expensive in operation because of high consumption of energy.

Fertilizers are commonly used for growing all types of crops. The classical methods to apply fertilizers are in solid and liquid forms. About 90% of fertilizers are applied in solid form. Solid fertilizers present the following disadvantages: it takes a long time till fertilizers infiltrate into the soil, sometimes the period is too long for crops to benefit from their effect; solid fertilizers also need special climate conditions to produce their effect such as warm temperature, moisture, etc.

The challenge under the Lot 3 is to modernize the irrigation and fertilization process in order to remove the negative effects of the current systems, used by fruits producers. A modern system must be less expensive in operation and contribute to the increase of annual quantity of harvest and the quality of fruits. It must be more efficient and profitable than the existing one. Altogether it will contribute to an increase of company's revenues and profit.

Lot 4. Automatization of the products' traceability process

Food safety is an extremely important criterion to place products on a market, especially when it comes to accessing external markets. Food safety could be successfully proved if producers had a well-established traceability system, which would track the products through all stages of production, processing and distribution. It is vital that when a company identifies a risk it can trace it back to its source in order to swiftly eliminate the problem and prevent contaminated products from reaching consumers. All certifications (ISO, Global GAP, GMP, etc.), which attest the good quality of products, require a well-established traceability system in place. From the 175 members of the Moldova Fruct Association, at this moment only 9 have started the process of Global Gap certification.

Moldovan fruit producers use a paper-based traceability system of products, which takes more time and is less accurate. A hardcopy record-keeping process sometimes lacks important elements or processes, or gets them in a wrong way.

The challenge under the Lot 4 is to find an innovative solution to ensure the establishment of a modern and effective traceability system. This intervention will allow producers to facilitate the process of obtaining international quality certifications, which are mandatory for accessing the EU markets and supplying products to big retailers.

METHODOLOGY

The consultant will provide independent evaluation of the applications under 2016 MICS for technological transfer and innovation in the fresh fruits sector – Eol 01322. The methodology to be followed by the consultant is described in details under the MICS manual. The consultant will evaluate both the Concept Applications received by the set deadline on www.inobiz.md and the Full applications, against the set criteria:

- A. Is the level of innovativeness for the local or global market of proposed new product/service/process/solution described in a satisfactory manner?
- B. Is real market potential for the proposed new product/service/solution concisely and reasonably described and justified?
- C. Is the company strategy and business model described in a convincing way explaining plans commercialization of the innovation?
- D. Is the capacity of the company and the development team to implement the proposed project (people and their references) clearly described?

OBJECTIVES AND EXPECTED DELIVERABLES OF THE ASSIGNMENT

Key deliverables:

Deliverables	Deadlines
1. Evaluate the concept applications under Eol 01322	By 19 October 2016
2. Evaluate the full applications for MICS 2016 for transfer of technologies in fresh fruits sector	By 27 October 2016

ORGANIZATION CONTEXT

Under the guidance of the Project Manager, the consultant will be responsible to provide the above enlisted deliverables. The consultant will sign a declaration by which he/she agrees to be neutral in relation to the various technological solutions available and will disclose any potential conflict of interest with potential vendors and suppliers of ready-to-use solutions on the market. The Project will provide needed logistical support. Reporting on hours worked will be performed based on the UNDP timesheet.

SKILLS AND EXPERIENCE REQUIRED

Academic Qualification

- University degree in Economics, Agriculture, Social Science or other relevant fields;

Experience

- At least 3 years of relevant professional experience in the **fresh fruit production, processing and exports sector** and proven knowledge and experience in technological transfer and innovation in agricultural sector, specifically in fruits production and processing field.
- At least 2 years of experience in technological mentorship, monitoring and evaluation of similar innovative projects developed by SMEs

Competencies

- Strong analytical, drafting and training skills.
- Knowledge of technologic transfer principles/ requirements, actual trends and innovative technological solutions typical for fruits production and processing sector;
- Ability to analyze, plan, communicate effectively with stakeholders and present ideas clearly and effectively;
- Demonstrated interpersonal and diplomatic skills.
- Ability to enter new environments, adapt quickly and produce immediate results.
- Computer literacy - competent user of the main Microsoft Office programs.
- Proven commitment to the core values of the United Nations, in particular, respecting differences of culture, gender, religion, ethnicity, nationality, language, age, HIV status, disability, and sexual orientation, or other status.

Language requirements

- Fluency in written and spoken Romanian or Russian. Knowledge of English would be an asset.

UNDP Moldova is committed to workforce diversity. Women, persons with disabilities, Roma and other ethnic or religious minorities, persons living with HIV, as well as refugees and other non-citizens legally entitled to work in the Republic of Moldova, are equally encouraged to apply.

PERFORMANCE EVALUATION

Contractor's performance will be evaluated against timeliness, responsibility, initiative, communication, accuracy, and overall quality of the delivered products.

FINANCIAL ARRANGEMENTS

Payments will be disbursed in installments, upon submission and approval of deliverables, and certification by UNDP Moldova Project Manager that the services have been satisfactorily performed.