NICOPA

TIIAME
NATIONAL RESEARCH UNIVERSITY

Co-funded by the
Erasmus+ Programme
of the European Union

"APPROVED"
Rector of "TIIAME" NRU

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PASO (Precision Agriculture Service Office)
Business Plan

Erasmus+ Project
New and Innovative Curricula in Precision Agriculture / (NICOPA)
597985-EPP-1-2018-1-KZ-EPPKA2-CBHE-JP

Tashkent, 2023

CONTENT

Introduction

Precision Agriculture Service Office: Mission and objectives.

Mission: The main mission of the PASO office is to create conditions to ensure the sustainability of the project results after its completion and the receipt of funds to maintain the functioning of the office and its further development.

Tasks:

- Analysis of the compliance of competencies/skills of agricultural graduates with the requirements of employers;
- Marketing of the educational services market;
- Marketing analysis of the labor market in the region;
- Establishing contacts with industry representatives, enterprises, research centers, government organizations and institutions;
- Analysis of the requirements of potential employers;
- Marketing needs in the field of implementation and use of precision farming technologies;
- Development and implementation of training courses and/or advanced training different target groups;
- Analysis of the needs of agricultural enterprises in professional training for the agricultural industry, search for interested organizations;
- Development of questionnaires for agricultural organizations in order to determine expectations and requirements for potential employees (for example, graduates, students, future students, students, other social groups);
- Providing information support.

Section 1. Brief summary of the business idea

The Tashkent region is one of the main agricultural regions of Uzbekistan, contributing significantly to the country's agricultural output. A considerable portion of the region's working population, around 30%, is employed in agriculture.

The region's agricultural sector plays a crucial role in supplying food to urban centers like Tashkent and other nearby cities. It serves as a key provider of agricultural products for domestic consumption and export.

Tashkent region has a diverse agricultural landscape, with a focus on both crop production and livestock farming. Crop cultivation is predominant, with a significant portion of arable land dedicated to grain crops, fruits, and vegetables.

Grain crops are among the main agricultural products of the region, with a substantial portion of the total sown area in Uzbekistan allocated for their cultivation. The region's fertile soil and favorable climate contribute to its high productivity in grain production.

In terms of agricultural processing, the region is actively involved in value-added activities, such as food processing and packaging. The manufacturing industry, including agro-industrial processing, plays a vital role in the region's economy, contributing to employment and economic growth.

Uzbekistan's agricultural sector faces challenges related to the shortage of skilled personnel. There is a growing demand for specialists and workers in various agricultural fields, including crop production, livestock farming, and agricultural technology.

Uzbekistan's agricultural industry is also witnessing a trend towards digitalization and technological innovation. There is an increasing emphasis on adopting modern farming practices, utilizing advanced machinery and equipment, and integrating digital technologies to improve efficiency and productivity in agriculture. This shift towards technology-driven agriculture aims to enhance the sector's competitiveness, sustainability, and environmental friendliness.

All of the above determined the relevance of the functioning of the PASO office at "TIIAME" National Research University.

The uniqueness of the business idea lies in the fact that there is a need to constantly familiarize the target audience, consisting of students and undergraduates in agricultural specialties, teachers of specialized disciplines, as well as agricultural producers, with modern precision farming technologies in the production of

agricultural crops to obtain maximum yield, minimize capital investments, maximize financial benefits and minimizing environmental impact.

Section 2. Brief Description of Products and Services

The PASO office will provide the following consulting and educational services to students and undergraduates of agricultural specialties, teachers of specialized disciplines, as well as agricultural producers of the Tashkent region:

- analysis of the compliance of competencies/skills of agricultural graduates with the requirements of employers;
- marketing of the educational services market;
- implementation of marketing analysis of the labor market in the region;
- analysis of the requirements of potential employers;
- marketing of needs in the field of implementation and use of precision farming technologies;
- development and implementation of training courses and/or advanced training
- different target groups;
- analysis of the needs of agricultural enterprises in professional training for the agricultural industry, search for interested organizations;
- providing information support.

Section 3. Competitor analysis

In Tashkent, one of the higher educational institution that trains personnel for the agricultural sector of the region is the "TIIAME" National University.

Accordingly, for the PASO office, operating on the basis of "TIIAME" National University, the level of competition in the market for educational and consulting services in the field of precision agriculture in the Tashkent region is low.

Section 4. Target market analysis

In the process of analyzing the target market, potential clients of the PASO office were identified and grouped into three groups of listeners:

- workers of agricultural enterprises, farmers;
- undergraduate, graduate and doctoral students in agricultural fields of study;
- university teachers

Section 5. Marketing section of the business plan

Services will be provided primarily for agricultural producers producing agricultural products, as well as operating in rural areas. This activity is promising, since competition in this area is still low, and the need for services is high.

The marketing strategy of the PASO office is aimed at increasing the volume of services provided by maintaining high quality of services provided. Thus, the required level of profit will be maintained due to the unique offer on the market of courses and training, which will keep prices at a sufficient level without trying to reduce them.

To ensure a sufficient flow of clients, the head of the PASO office plans to enter into partnerships with other partner universities of the consortium, and it is also planned to attract specialized agricultural colleges. A separate point is to increase the recognition of the PASO office through promotional events.

A SWOT analysis of the position of the PASO office in the market of educational and consulting services was conducted (Table 1).

Table 1. A SWOT analysis of the position of the PASO office in the market of educational and consulting services

	Positive influence	Negative influence
Internal environment	Strengths	Weaknesses
	Availability of a strong teaching staff	The customer base has not been formed
	The customer base has not been formed	
	The presence of teachers with extensive practical experience in production among the teaching staff	
	Convenient location of the PASO	

	office in the main building of the university in the city center	
External environment	Opportunities	Threats
	Development of promising new courses	Competition

Section 6. Production section of the business plan

The PASO office is located in the 11th building of "TIIAME" National Research University on the fifth floor, room 508.

The PASO office staff member is a full-time university faculty member.

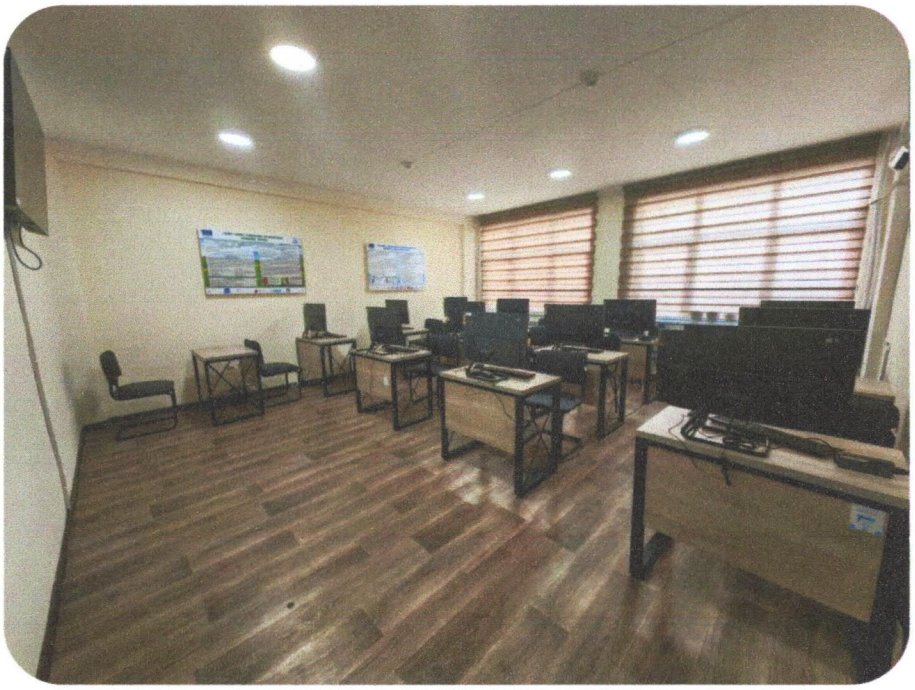
The PASO office is equipped with equipment purchased with project funds and placed on the balance sheet of the university (Table 2).

Table 2. Equipment installed in the PASO office

Name	Quantity, pcs.
Personal computer All in one (Lenovo IdeCentre 27IMB05 i5 10400T/8Gb/256Gb/DVDRW/Mouse/KB/27"/Win 10	12
Mobile workstation (Lenovo Thinkpad P1 i7 10750H/16Gb/512Gb/T1000 4Gb Quadro/Win 10/15,6)	1
Printer (Color MFD A3, Epson L14150)	1
Printer (Monochrome MFD A4, Canon i-SENSYS MF443dw)	1
Personal Cloud Storage(Zyxel NAS326+2*10Tb HDD)	2
Digital Camera (CANON EOS 4000D Kit)	1
Smart board SB480	1
Projector Epson EB-580	1
Smart TV (Artel 55AU20H	1
UPS (AVT 1500VA Line Interactive EA615)	1
Network switch (24 port Gigabit Switch, TENDA TEG1024)	1
Sensor (IMETOS® IMT280 base station with precipitation gauge, air temperature and humidity sensor (hygroclip), anemometer (mechanical), pyranometer)	1
Sensor (ECH874EXT External interface for connecting 1x soil water volume sensor from Pessl Instruments or Meter Group, 4x Watermark tensiometer sensors + 1x soil temperature with 5m cable)	1
Sensor (SEN-SDI12 Internal interface for connecting 2x profile sensors for volumetric water content in soil such as Sentek or Aquacheck)	1
Sensor (IM5041D Universal Soil Temperature Sensor with PI Sensor Part)	1
Sensor (PI54-D/5 Soil volumetric water content sensor from Pessl	1

Instruments with 5m cable)	
MD510SM Watermark strain gauge with 3.5m cable	1
TNS107 Tensiometer Irrometer 90cm, without pressure gauge	1
SE1200S Profile sensor for volumetric water content in soil manufactured by Sentek D&D Triscan 120 cm: 12x temperature, 12x soil humidity and 12x soil salinity, with 5m cable	1



IMETOS® IMT280 base station with a precipitation gauge, air temperature and humidity sensor (hygroclip), anemometer (mechanical), pyranometer is installed in the educational farm of the university.

A full range of autonomous monitoring systems under the iMETOS® brand and FieldClimate cloud platform is used in all climate zones.

Table 3 presents the total costs associated with operating a PASO office.

Table 3. Total costs

Name	Amount of costs per month, UZS
Office employee salary	3 000 000
Equipment depreciation	100 000
Utility bills	75 000
Other expenses	340 000

Section 7. Financial section of the business plan

The forecast monthly revenue will be 5 000 000 UZS, costs – 3 000 000 UZS. Annual revenue growth is projected to be within 10%.

Services will be provided throughout the entire calendar year.

Table 4. Profit and loss statement, thousand UZS

	2024	2025	2026	2027	2028
Revenue from services	60 000	66 000	72 600	79 860	87 846
Expenses	36 000	39 600	43 560	47 916	52 707
Gross profit	24 000	26 400	29 040	31 944	35 139

Project risk assessment

Table 5. Possible risks and ways to eliminate and minimize them

№	Name of risk	Risk assessment	Methods for eliminating and minimizing negative consequences
External risks			
1	Entry into the market of a strong competitor	Medium	Maintaining a high level of quality of services provided
2	Probability of decreased demand as a result of market oversaturation	Medium	Differentiation of services
Internal risks			
1	Decrease in quality services provided, as a result low level of qualifications of teaching staff	Low	Training current teaching staff
2	Lack of own funds for self-financing of the project	Low	Low Search for alternative sources of replenishment of office funds

Conclusion

According to the results of the analysis, it can be concluded that the PASO office will become self-sustaining within a year. An increase in the services provided is predicted due to increased demand. The risks of the project are low, since at the moment there is practically no competition.