

# Joint Project: Capacity Building in the Field of Higher Education ERASMUS+ 2018

## New and Innovative Courses for Precision Agriculture (NICOPA)

**Regional coordination meeting with Uzbekistan universities**

National University of Uzbekistan, 20 November 2018



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

**Presenter: Arnold Sterenharz**

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## NICOPA FACTS

### Theme for cooperation

Modernization of curriculum by developing and innovative courses and methodologies using ECTS, the three cycle system and the recognition of degrees.

**Project duration: 3 years**

### **Project type:**

Joint project, cross-regional

### **Budget size (Tempus Grant)**

**999.847,- EUR**

### **Selection results of Call 2018**

**EAC/A05/2017**

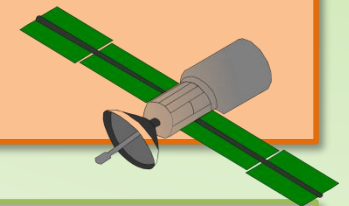
**874 applications received**

**147 (16,82%) proposals recommended for funding**

### Target countries / priorities

•This application addresses priorities in curricula reform: KAZAKHSTAN, TURKMENISTAN, UZBEKISTAN

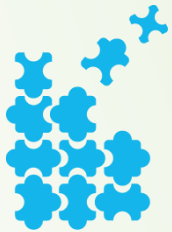
•Agricultural sector



**Consortium size: 21 organisations**



# BOLOGNA PROCESS



EUROPEAN  
Higher Education Area



## Official sources:

- ❖ Standards and Guidelines for Quality Assurance in the European Higher Education Area 2015 (ESG)
- ❖ ECTS User's Guide 2015
- ❖ National standards/law of education of partner countries





## Project Objectives

- ✓ improve the quality of higher education and enhance its relevance for the labour market and society, the level of competences and skills in HEIs by developing new and innovative education programs; support the modernisation and internationalisation of the HE in precision agriculture in the targeted Universities in KZ, RU and BY through innovation of two cycles curricula



- ✓ bring the HEIs of PC closer to the Labour Market

- ✓ analyse the educational needs in precision agriculture through problem and job analysis and review the current curricula
- ✓ update the current curricula in precision agriculture;
- ✓ develop, implement and accredit curricula including ECTS



# Main goals



## 9 core curricula/modules

- ✓ Remote Sensing and Application of Earth and Environment related PA
- ✓ Using of SENTINEL 1-2-3 imagery for agricultural field monitoring
- ✓ Global Navigation Satellite Systems (NAVSTAR, GLONASS, GALILEO, etc.)
- ✓ Optimizing computer vision algorithms and real-time implementations
- ✓ Web technologies (Agro SDI, Geo-portals, Geo-services, Geo-analytical systems)
- ✓ Basics of the Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources
- ✓ Yield sensors for Precision Agriculture
- ✓ Soil physical properties and its measurement
- ✓ Application of Precision Agriculture for crops growing

## 3 Transferrable curricula

- ✓ Start up initiatives for future engineers
- ✓ Management and Decision Making in Precision Agriculture
- ✓ Intensive course to leverage acceptance of the new technologies “in-field”

## Updated current curricula in the target field

### Linking to the labor market

- ✓ Establishing PASO

### New supporting learning environment

- ✓ Joint web based platform
- ✓ PAL and VCR





## List of partners

### EU partners

Technische Universität Berlin	<a href="http://www.tu-berlin.de">www.tu-berlin.de</a>	Germany	Berlin
The Agricultural University Plovdiv	<a href="http://www.au-plovdiv.bg">www.au-plovdiv.bg</a>	Bulgaria	Plovdiv
Czech University of Life Sciences	<a href="http://www.czu.cz">www.czu.cz</a>	Czech Republic	Prague
ECM Space Technology GmbH	<a href="http://www.ecm-space.de">www.ecm-space.de</a>	Germany	Berlin

### Target universities/partner countries

S.Seifullin Kazakh Agro Technical University	<a href="http://www.kazatu.kz">www.kazatu.kz</a>	Kazakhstan	Astana
Shokan Ualikhanov Kokshetau State University	<a href="http://www.kgu.kz">www.kgu.kz</a>	Kazakhstan	Kokshetau
North Kazakhstan State University Named After Manash Kozybayev	<a href="http://www.nkzu.kz">www.nkzu.kz</a>	Kazakhstan	Petropavlovsk
Turkmen Agricultural University Named after S.A. Niyazov		Turkmenistan	Ashgabat
The Turkmen state architecture and construction institute		Turkmenistan	Ashgabat
Turkmen Agricultural Institute		Turkmenistan	Dashoguz
National University of Uzbekistan	<a href="http://www.nuu.uz">www.nuu.uz</a>	Uzbekistan	Tashkent
Tashkent University of Information Technologies	<a href="http://www.tuit.uz">www.tuit.uz</a>	Uzbekistan	Tashkent
Tashkent Institute of Irrigation and Agricultural Mechanization Engineers	<a href="http://www.tiame.uz">www.tiame.uz</a>	Uzbekistan	Tashkent



## List of partners

### Associated partners

North-Kazakhstan agricultural experimental station		Kazakhstan	Chagly
National Agrarian Scientific- Educational Centre of the Ministry of Agriculture of the Republic of Kazakhstan		Kazakhstan	Astana
State Committee of the Republic of Uzbekistan on Land Resources, Geodesy, Cartography and State Cadastre	<a href="http://www.ygk.uz">www.ygk.uz</a>	Uzbekistan	Tashkent
Centre of Technologies of Academy of sciences of Turkmenistan		Turkmenistan	Ashgabat

### National authorities

Ministry of Education and Science	<a href="http://www.edu.gov.kz">www.edu.gov.kz</a>	Kazakhstan	Astana
The state inspection for supervision of quality in education	<a href="http://www.tdi.uz">www.tdi.uz</a>	Uzbekistan	Tashkent
Ministry of Education of Turkmenistan		Turkmenistan	Ashgabat



## Work Plan Activities

Activities		Start	End
Ref.nr/ Sub-ref nr	Title		
1.1 Prep.	Review of the current curricula for BA/MSc in target area in PC HEIs.	15.11.2018	30.04.2019
1.2 Prep.	Agreement on instructional strategy and guidelines for BA/MSc curricula design including the use of new Educational Technologies	15.11.2018	31.03.2019
2.1 Dev.	a) Prepare a set of new core curricula and transferable modules inclusive innovative teaching/ learning facilities; develop syllabi; b) adopt on institutional level c) accredit on national level	a) 01.12.2018 b) 01.10.2019 c) 01.10.2020	a) 30.03.2020 b) 30.09.2020 c) 31.08.2021
2.2 Dev.	A) Prepare a set of documentation for PAL and VCR ; B) purchase the equipment incl. software; install the equipment	a) 01.02.2019 b)01.03.2019	a)30.09.2019 b)30.01.2020





## Work Plan Activities

2.3 Dev.	a)Casting criteria for participants and retraining program for academic teachers. b) Retrain academic teachers in new curricula using innovative teaching/ learning facilities and agreed instructional strategies	a)01.01.2019 b)01.09.2019	a)30.03.2019 b)31.08.2020
2.4 Dev.	To update the current BA/MSc curricula/create updated programs in the target area according to the Bologna requirements and the new developments	01.04.2019	30.09.2020
2.5 Dev.	Master Classes in new curricula /pilot operation of PAL and VCR	01.09.2020	30.04.2021
2.6 Dev.	Pilot teaching/operation of PAL and VCR	01.08.2020	14.11.2021
3.1 Quality	The Quality assurance strategy/Q Plan of each PC university including internal/external Quality evaluation/reports according to Q Plan	15.11.2018	14.11.2021



## Work Plan Activities

4.1 Diss.	Project DISS& EXP /communication plan using a Set of Promotional Materials; Dissemination Events, Joint WEB based platform, “NICOPA+” Agreement	15.11.2018	14.11.2021
4.2 Diss.	Full media coverage of the project activities inclusive developing and maintenance of Joint WEB based platform	15.11.2018	14.11.2021
4.3 Diss.	Develop a set documentation on PASO with stakeholders support /purchase /install equipment /establish	01.02.2019	30.04.2020
4.4 Diss.	Staff training for PASO, establishing Regional /International PASO network, pilot operation	01.04.2020	30.09.2021
4.5 Diss..	Refresh training courses for graduates in PASO	01.09.2020	31.07.2021
4.6. Diss..	International BA/ MSc Summer Schools	01.04.2020	31.04.2021
5.1. Manag.	Management of the project including Project management online, daily project administration and coordination	15.11.2018	14.11.2021
5.2. Manag.	Coordination meetings	15.11.2018	14.11.2021



## Important Milestones 1<sup>st</sup> Project Year

1. **Review of the current curricula for BA/MSc in target area in PC HEIs:**  
Till 30.04.2019
2. **Delivery of the a set of teaching materials (resp. EU partners) for development of new curricula and modules in PC HEIs:**  
  
1<sup>st</sup> Part till 30.04.2019  
2<sup>nd</sup> Part till 30.08.2019
3. **Prepare a set of documentation for PAL and VCR in PC HEIs**  
  
Start: 01.02.2019  
End: 30.09.2019
4. **Casting criteria for participants in retraining programs for academic teachers**  
Till 30.03.2019
5. **Web-page of the project: in function**  
[www.nicopa.eu](http://www.nicopa.eu)



## Important Milestones 2<sup>nd</sup> Project Year

1. Develop set of new core curricula and transferable modules inclusive innovative teaching/ learning facilities; develop syllabi; adopt them on institutional level
2. Retrain academic teachers in new curricula using innovative teaching/ learning facilities and agreed instructional strategies; Staff training for PASO
3. To update the current BA/MSc curricula/create updated programs in the target area according to the Bologna requirements and the new developments
4. Start of master-classes in new curricula /pilot operation of PAL and VCR
5. Purchase the equipment incl. software; install the equipment





## Important Milestones 3<sup>rd</sup> Project Year



1. Adopt the set of new core curricula and transferable modules inclusive innovative teaching/ learning facilities at the national level
2. Continuation of Master Classes in new curricula /pilot operation of PAL and VCR
3. Start on 1 September 2020: Pilot teaching new/modernized curricula/operation of PAL and VCR / Refresh training courses for graduates in PASO



## Work Plan Overview

### Disseminations & Sustainable Activities

- DISS&EXP action plan, timetables for publications, information and sustainability meetings by each partner
- Activities by PASO
- Involvement in project activities of representatives from stakeholders and universities outside the consortium
- "NICOPA Plus" agreement.



- Conferences & workshops
- Project web portal
- Involving stakeholders
- Finding and attracting sponsors
- Commercialization of results





# Work Plan Overview

## Project Quality Control

Project Quality control will be implemented on the basis of the Quality Assurance Plan/Strategy and the target university's quality assurance systems.

### **Internal/external evaluation:**

This system includes development of templates for reporting implementation of project activities. A report template should be developed every six months by ECM and sent to consortium partners with the indication of deadlines for the completion of reports and presentations.

ECM analyzes them and reports the results of the analysis to the partners. The analysis takes into consideration compliance of the implemented activities of partners with the timetable of the project activities and the LFM.

ECM reports to the project coordinator and regional and local coordinators and together with them develops recommendations for each of the partners.

External evaluation will be carried out by a selected external expert; the expert will work on sub-contract basis



## Work Plan Overview

### Project Management

**Project Management Board (PMB) – Project Council**  
- will be formed as a strategic decision-making body inclusive one representative from each consortium member who at the same time will operate as local coordinators in their institutions. The local coordinator will lead the special formed Local Project Team (LPT) of his institution.

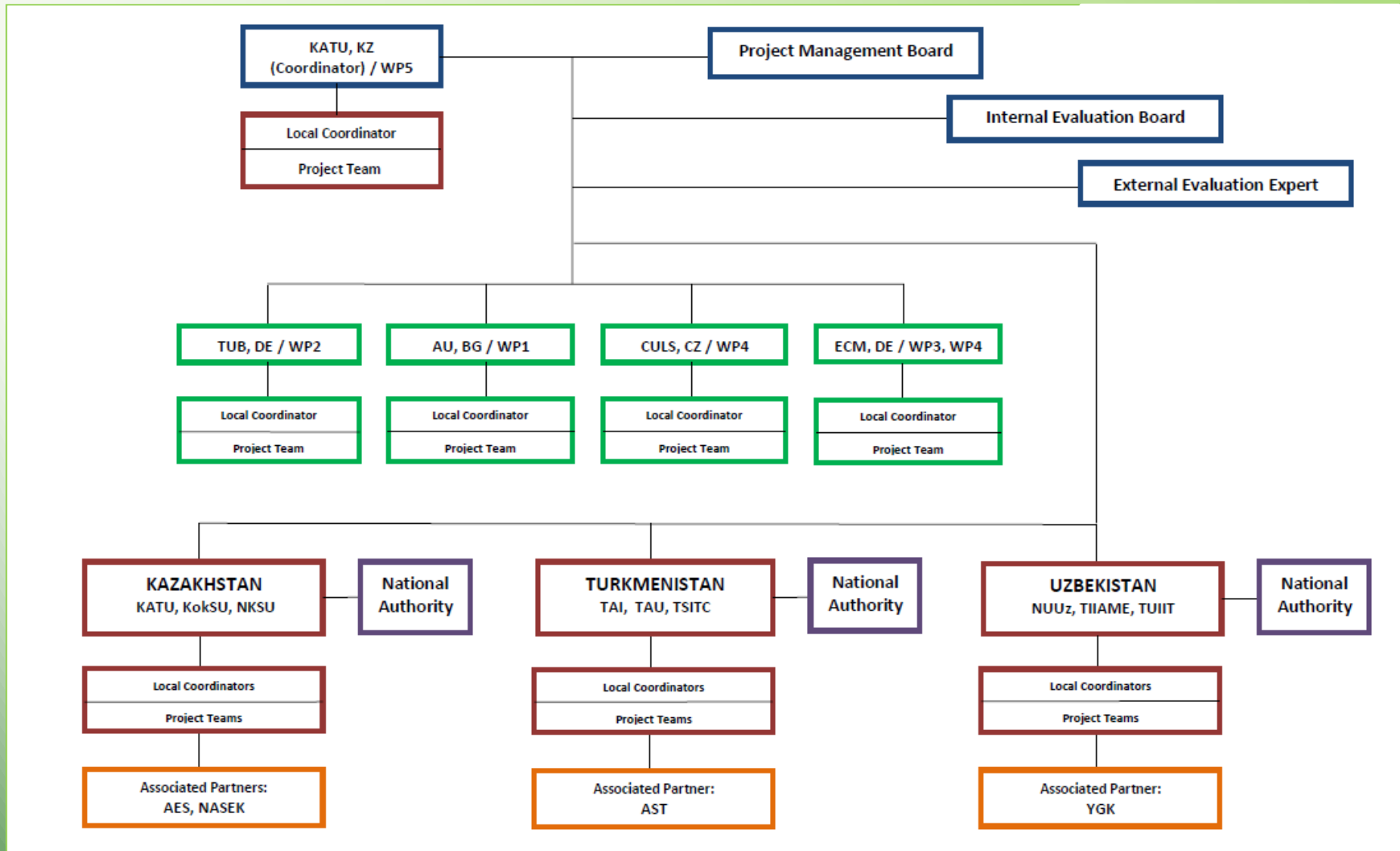
**Coordination meetings:** International, regional and local/hosting coordination meetings.

**Daily project administration and coordination:**  
project management, administration and coordination will be carried out by the coordinator (KATU) and project manager (ECM)





# NICOPA Organigram





## NICOPA Budget

PROJECT COSTS		€
I	Staff costs	399.842,00
II	Travel costs	115.980,00
III	Costs of stay	157.560,00
IV	Equipment	295.965,00
V	Subcontracting	30.500,00
<b>PROJECT FINANCE</b>		<b>999.847,00</b>



## Staff costs

### Purpose

To cover the costs of staff necessary for the achievement of project results and on the condition that their salary for the same tasks is compensated only once.

- **Administrative** or **academic** tasks:
  - Curricula development/implementation
  - Project administration/management
  - Dissemination

### Contractual rules

- A duly filled in, signed and stamped joint declaration (Annex 1 of these guidelines) for each person employed in the project
- Time-sheets (the date, number of hours worked on these dates, tasks performed (short description)).
- Proof of payment if staff is remunerated by the project directly (full-time, part-time, occasional or top-up of regular salary (i.e. bank transfer))
- Employment contract



## Travel costs

### Required documents

To cover the costs of travel of staff for mobility:

- teaching/training assignments, retraining of staff, master classes
- update of courses
- short visits for coordination and planning
- dissemination
- based on unit costs/principle of the "triggering event"
- prove that activities have been **actually and properly** implemented
- expected outputs have been produced but they will not have to **justify the costs actually incurred.**
- flexibility in the way they manage the funds
- necessary for the implementation of the activities concerned





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## Distance Calculator

<b>Distance band</b>	<b>Unit cost per participant</b>
Between 100 and 499 KM	180 EUR
Between 500 and 1999 KM	275 EUR
Between 2000 and 2999 KM	360 EUR
Between 3000 and 3999 KM	530 EUR
Between 4000 and 7999 KM	820 EUR
8000 KM or more	1100 EUR



## Equipment: 28.945,00 Euro for each PC university

### Purpose

- to cover the costs of equipment directly relevant to the project's objectives such as:
  - books, e-books;
  - PAL and VCR: PC Pool & Interactive Learning Room; Lab equipment; Software set;
  - PASO: PC, HD-Projector, MFD, Software;

### Contractual rules

- The equipment must:
- be exclusively universities usage and integrated into study process
  - be recorded in the inventory of the institution where it is installed
  - Upon prior approval of the coordinator



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# QUESTIONS?





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# THANK YOU FOR YOUR ATTENTION!

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